

Operation and Maintenance (O&M) Manual

for:

Springville City Buildings and Grounds Department

Buildings and Grounds Department Operation and Maintenance (O&M) Manual

Table of Contents

- I. Introduction
- II. Pollutant Sources
- III. Facilities Locations, Activities and Pollution Control Measures
 - 1. City Operations Compound
 - 2. Parks
 - 3. Canyon Parks
 - 4. Cemeteries
 - 5. Buildings
- IV. Field Activities and Control Measures
- V. Spill Prevention
- VI. Inspections
- VII. Employee Training

Appendices

Appendix A – Site Maps

Appendix B – BMPs Specifications and Details

Appendix C – Training Log

Appendix D – Spill Reports

Appendix E – Corrective Action Log

Appendix F – Visual Inspection Log

Appendix G – Quarterly Comprehensive Inspections

Buildings and Grounds Department Operation and Maintenance (O&M) Manual

I. Introduction

This manual is designed to assist Springville City personnel on how to properly implement Best Management Practices (BMP's) on City owned facilities and field activities as part of the municipal stormwater management program.

This manual will identify the potential pollutants and activities that can contribute to the pollution of storm waters as well as the BMP's used to ensure that the potential for these pollutants affecting storm water is diminished to the maximum extent practicable.

II. Potential Pollutant Sources

A variety of pollutants are associated with stormwater pollution due to municipal activities including: sediment, nutrients, bacteria and viruses, oxygen demanding substances, oil and grease, metals, toxic pollutants and floatables (Table 1). The impacts of these pollutants on water quality along with a discussion on municipal activities which can potentially contribute to their introduction into stormwater runoff are presented in the following subsections.

- A) Sediment. Sediment is a common component of stormwater, and is considered to be one of the most damaging pollutants in Utah. Sediment fills in streams, lakes, rivers, wetlands and road drainage ditches, and can affect aquatic life by smothering fish larvae and eggs. Suspended soil particles can cause water to look cloudy or turbid. Excessive turbidity reduces light penetration in the water, impairing the sight of feeding fish; clogs fish fills, and increases drinking water treatment costs. Fine sediment also acts as a vehicle to transport other pollutants including nutrients, trace metals and hydrocarbons to nearby surface waters. Significant sediment-borne pollutants are associated with highway runoff; originating from pavement wear, vehicles and other road maintenance. Other sources of sediment include erosion from new development and construction sites.
- B) Nutrients- nutrients, especially nitrogen and phosphorus, can cause algae blooms and excessive aquatic plant growth in water bodies. These conditions can impair many important uses of these waters, including recreation, fish habitat, and water supply. Nitrogen and phosphorus associated with stormwater runoff come mostly from fertilizer application. Phosphorus has also been associated with application of sand and salt of roads. Nutrients are a result of yard debris, garbage, as well as fertilizer and pesticide use.
- C) Metals- Trace metals are a water quality concern because the toxic effects they can have on aquatic life. Metals can also be a health hazard to humans through direct ingestion of contaminated water or through eating contaminated fish. The most common trace metals found in

- stormwater runoff in urban areas are lead, zinc, copper, cadmium, nickel and other metal sources originating from body rust, brake lining wear steel highway structures, tire wear, steel fabrication and vehicle maintenance.
- D) Oxygen-demanding substances- oxygen-demanding substances tend to deplete the dissolved oxygen levels in streams and lakes. The depleted oxygen supply can result in the reduction of aquatic life. Oxygendemanding substances are found in yard waste (such as leaves and lawn clippings), animal wastes, street litter and organic matter.
- E) Bacteria and Viruses- bacteria and viruses are the most common microorganisms found in surface water runoff. Bacteria and viruses often carry diseases which can be transferred to animal life and to humans. The main sources of these contaminants are animal excrement and sanitary sewer overflows.
- F) Oil, Grease and Hydrocarbons- oil grease and hydrocarbons contain a wide array of compounds, some of which are toxic to aquatic organisms at low concentrations. The main sources of oil and grease are leakage from engines and waste oil disposal. Hydrocarbons typically come from spills, leaks, lubricants and asphalt surface leachate. Hydrocarbon levels are highest from parking lots, roads and service stations.
- G) Floatables- floatables (garbage) are pollutants that may be contaminated with heavy metals, pesticides and bacteria. Typically resulting from street refuse or industrial yard waste, floatables also create an eye sore in water ways and detention basins.

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

Table 1 Potential pollutants of concern associated with municipal activities.

Table 1 Potential pollutants of concern associated with municipal activities.									
	Primary Pollutant			bases)	lerbicides		sesr	Solids	emicals
Sources of Pollution	Sediment	Nutrients	Heavy Metals	pH (acids and bases)	Pesticides & Herbicides	Oil & Grease	Bacteria & Viruses	Trash, Debris,	Other toxic Chemicals
Clearing, grading, excavating, and unstabilized areas	1							J	
Paving operations	1					/		1	
Concrete washout, stucco and cement waste			J	1				J	
Structure construction, painting, cleaning			J	1				J	J
Demolition and debris disposal	1							J	
Material Delivery and storage	1	1	1	1		1		1	1
Solid waste disposal								1	J
Hazardous Waste, contaminated spills			1	1	1	1			1
Sanitary waste		1		1			1		
Vehicle/equipment fueling, maintenance, use and storage						J		1	J
Landscaping operations	J	1			1			1	J
Vehicle washing (Not allowed at this location)									

III. Facilities Locations, Activities and Control Measures

1. City Operations Compound (High priority)

Location- Located at 909 East 400 South is shared with the Water, Streets-Solid Waste, and Fleet Departments.

Activities- The Parks department yard area of the compound is used for employee and equipment parking, storage of equipment attachments, new park equipment (benches, pick nick tables, sign posts, etc), pipe and wood. The Parks department buildings are used for the mower, supplies storage and small engine service and repairs. The most common supplies stored in the building are:

herbicides fertilizer insecticide snow and ice melt bug repellent pipe glue paint thinner spray paint paint solvent gasoline grease vehicle fluids oil propane equipment spare parts

Control Measures SOPs

Good House Keeping. Good housekeeping practices offer a practical and cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with storm water. Good housekeeping practices also help to enhance safety and improve the overall work environment.

- Indoor work areas will be kept clean and organized.
- Outdoor storage areas will be maintained clean and organized.
- Trash and litter are to be picked up from work areas daily. All trash is to be disposed of in approved dumpsters on site, make sure the dumpster lids are closed.
- The yard will be walked to pick up and dispose of litter weekly
- The paved surfaces around the building will be swept as needed and the storm drain inlet in the area boundary will be kept clean at all times.
- Fuel, oil, fertilizers, herbicides, paint, solvents and other chemicals will be stored indoors neatly organized; containers must be properly labeled, hazardous chemicals will be stored in a locked container.
- Concrete wash out activities are not allowed at this facility.

Vehicle and Equipment Parking Areas

- Vehicles and equipment will be parked on the approved designated areas
- If any leaks are discovered, a drip pan will be used to collect the fluids and vehicle will be scheduled for repairs.

 Any leaks or spills that do wind up on the pavement will be cleaned using dry methods (absorbent material, sweep when dry and dispose in the garbage can)

Vehicle and Equipment Cleaning Areas

- No washing is allowed outdoors.
- There are no wash facilities at this location. All major washing is done at:
 - o local commercial carwashes
 - White Head Power Plant
 - Waste Water Treatment Plant drying beds
- Minor washing is done inside the shop were floor drains go to the sanitary sewer.
- Snow removal equipment is washed at the waste water treatment plant drying beds.

Vehicle and Equipment Maintenance Areas

- All major repairs and maintenance activities are conducted at the City Shop located at 909 East 400 South.
- Activities such as adding oil to engines, transmissions and differentials are done indoors.
- Oils and other automotive fluids are neatly and cleanly stored.
 Secondary containment will be used under the used oil container and other bulk oil containers.
- Equipment that is stored outside will be inspected to make sure that all drips are contained and/or repaired.

Mower and Small Equipment Maintenance

- Equipment will be kept in good operating and clean conditions.
- Mowing, trimming, edging equipment will be cleaned using high pressure air or manual devices when possible. Debris from such cleaning will be swept and disposed of in proper waste container.
- Mowing, trimming, or edging equipment may be hosed of on grass areas as long as no detergents or solvents are used in the process.
 All debris from such cleaning must remain on grass or be deposited into a proper waste container.
- All other cleaning will take place in specified and approved equipment cleaning wash bay that drains to the sanitary sewer.
- Equipment should be kept free from leaks of any sort. All leaks will be caught in a catch pan or have absorbent materials applied. Caught items will be properly disposed of at a materials reclamation area.
 Absorbent materials will be disposed of in a proper waste container.
- Blade Sharpening, grinding activities- floors are swept after project has been completed.
- All used oil and other vehicle fluids are collected in 5 gallon containers labeled used oil and are taken to the Springville Fleet Department to be recycled.
- Oil filters are drained into the used oil collection container and after 24 hours of draining time they are placed in the dumpster.

2. Parks

Locations.

Art Wing Park	150 North 950 West	5 acres
Arts Park	700 South 1300 East	14 acres
Bartholomew Park	2900 East 1100 South	32 acres
Big Hollow Park	350 East Evergreen Drive	4 acres
Bird Park	1100 East 900 South	8 acres
Child Park	200 South 1300 East	3 acres
Clyde Park	1200 East 1200 South	6 acres
Community Park	700 North 950 West	49 acres
Conover Park	600 East 1000 South	1 acre
Freedom Park	650 North 250 West	1 acre
Hendrickson Park	1500 North 300 East	1 acre
Heritage Park	1100 North Main	1 acre
Hobble Creek Park	1250 South 2200 East	6 acres
Holdaway Park	550 East 400 North	4 acres
Kelvin Grove	1500 South 1400 West	6 acres
Kolob Park	600 South 700 East	4 acres
Memorial Park	200 South 600 East	9 acres
Spring Creek Park	700 North 800 East	9 acres

Activities

- Mowing Grass
- Fertilizer application
- Herbicide treatment
- Facilities clean up and maintenance (bathrooms, parking lots, etc)
- Garbage collection
- Mulching

Control Measures SOPs

Lawn Mowing and/or trimming

- Mowing/trimming operations will occur weekly, twice weekly, or as necessary at each location.
- All mowing/trimming equipment will be properly fueled at a proper fueling location. Any spilled fuels will have absorbent materials applied to absorb them. Absorbent materials will be disposed of in a proper trash container.
- Mowers will have mulching type decks that are kept in good repair with all guards and deflectors in place.
- Trimmers will have all deflectors in place and in good repair.
- All materials resulting from mowing/trimming operations should remain on grass.
- Trimmings that are found on hard surfaces will be blown or swept back on to the grass.

 Trimmings that cannot be swept or blown back on to grass will be swept and deposited into appropriate waste container.

Fertilizer application

- City will order and consume fertilizer as needed. Generally fertilizer will not be stored.
- If fertilizer is stored, it will be inside of a building.
- Fertilizer will be applied once or twice annually as needed.
- All fertilizer applications will be supervised by a Certified Pesticide Applicator.
- Fertilizer will be applied in accordance to manufacturer's instructions.
- Fertilizer will be transported to site in bags.
- Fertilizer spreaders will be filled at the site where the use is intended.
- Bags will be opened individually and dumped into spreader.
- Any spilled fertilizer will be swept and returned to spreader or spread on grass.
- Fertilizer that lands on hard surfaces will be swept or blown back onto grass.
- Fertilizer bags will be disposed of in a proper waste container.
- Any errant fertilizer found in vehicle will be swept and spread on grass.

Herbicide/Pesticide Application

- Will be purchased and consumed as needed. Minimal pesticides will be stored.
- Stored product will be kept in a separate cabinet with locked doors.
- Product applications will be supervised by a Certified Applicator.
- Product will be mixed and applied according to manufacturer's directions.
- Product will be applied as needed when weather conditions allow.
- Appropriate PPE will be worn when mixing and applying products.
- Product will be mixed in an area and manner to avoid spillage.
- If a spill occurs, absorbent materials will be applied to spill. Absorbent materials will be disposed of in appropriate waste container.
- Empty product containers will be disposed of in appropriate waste containers.
- Product sprayers will be secured in vehicles when transported.
- All mixed products will be applied to plants or other appropriate locations.
 Surplus materials may not be deposited into storm drain or sanitary sewer.

Restroom Maintenance

- All restrooms will be cleaned in accordance to minimum acceptable standards.
- Restroom floors will be swept. Swept materials will be collected and disposed of in a proper waste container.
- Restroom floors and walls may be hosed. All water from such activities must drain into the sanitary sewer, or onto landscaped areas. No such water may enter the storm drain.

- Restroom floors will be mopped. All water from such activities will be put into the sanitary sewer or dumped onto landscaped areas. No such water shall be allowed to enter the storm drain.
- All cleaning chemicals shall be used in accordance to manufacturer's specifications.
- Cleaning chemicals shall be mixed in accordance to SOP for cleaning chemicals.
- Weekly visual inspections and repaired problems will be logged on the appropriate reports located on the appendices section of this manual.

Pavilion Cleaning and Maintenance

- Pavilions will be cleaned as necessary to accommodate reservations or to maintain minimum acceptable standards.
- Pavilions may be blown off. All trash and debris shall be collected and deposited into an appropriate waste container.
- Pavilions may also be hosed or pressure washed. All water resulting from such activities must go onto landscaped areas. No such water may enter the storm drain.
- Any debris resulting from hosing or pressure washing shall be collected and deposited into an acceptable trash container.
- Weekly visual inspections and repaired problems will be logged on the appropriate reports located on the appendices section of this manual.

Sidewalks, Parking Lots, and Trails in and around Parks and Public Facilities.

- Parking lots will be swept by Public Works annually or as needed.
- Trails and sidewalks will be kept free of debris as necessary.
- Trails and sidewalks will be blown off as needed. Debris will be blown onto grass or planted areas.
- Curbs and gutters around parking lots will be blown out or swept as needed. Debris will be blown onto grass or planted areas when possible. When not possible, debris will be collected and deposited into proper waste container.
- Garbage and other debris will be removed from catch basins.
- Weekly visual inspections and repaired problems will be logged on the appropriate reports located on the appendices section of this manual.

Snow Melt/ Road Salt storage and use

- All snow melt materials will be kept in bags and stored in a storage building until they are consumed.
- Road salts will be stored in a proper road salt storage location. Road salts will be stored in a manner to be protected from storms and to allow minimal dissolving of salts.
- Snow melt and road salt materials will be loaded into spreading devices as needed and as can be consumed. Materials will not remain in spreading devices if unused. Unused road salts will be returned to stockpile.
- Snow melt and road salts will be applied to parking lots and walkways as needed using minimal necessary materials. Materials may be reapplied only as needed for public safety.

- Any spillage of snow melt material or road salts will be returned to the spreading device and applied to appropriate areas. Spilled materials may also be swept and deposited in appropriate waste container.
- Snow melt or road salts that are not dissolved will be blown or swept of parking lots or walkways as needed. Removed materials will either be blown to landscaped areas or collected and deposited in an appropriate waste container.
- Snow removal equipment is washed at the waste water facility drying beds.

3. Canyon Parks and Shop (shop is a high priority area)

Locations

The canyon parks offer picnicking, camping, pavilion rentals, and winter recreation. Jolley's Ranch has a camp ground with over 50 campsites for RVs and tent camping. Most campsites have water and electricity hook ups and there are restrooms (flush toilets) on site. There are no showers or sewage facilities available.

Kelly's Grove Hobble creek canyon road 20 acres Jolley's Ranch Right Hand Fork 100 acres Rotary Park Left Hand Fork 15 acres

Activities

The maintenance area at the entrance to the parks consists of a building, shed and fenced yard area, the outdoor area is used to store equipment, fuel, lumber, sprinkler pipes and other supplies. The storage sheds are used to store fertilizer and deicer granules and other supplies. The maintenance building activities include vehicle parking, equipment maintenance and supplies storage, the most common supplies found inside the building include:

Paint Solvent Cleaning supplies

Oils Grease Herbicides

Pesticides

Control Measures SOPs

In addition to the ones mentioned below, all of the Parks control measures SOPs apply to the Canyon Parks as well.

General Cleanliness

- Indoor work areas will be kept clean and organized.
- Trash and litter are to be picked up from work areas daily. All trash is to be disposed of in approved dumpsters on site, make sure the dumpster lids are closed.
- The yard will be walked to pick up and dispose of litter weekly
- The paved surfaces around the building will be swept as needed.

Vehicle and Equipment Parking Areas

- Vehicles and equipment will be parked on the approved designated areas
- If any leaks are discovered, a drip pan will be used to collect the fluids and vehicle will be scheduled for repairs.
- Any leaks or spills that do wind up on the pavement will be cleaned using dry methods (absorbent material, sweep when dry and dispose in the garbage can)

Vehicle and Equipment Cleaning Areas

- No washing is allowed on hard surfaces in doors, outdoors or near water ways.
- There are no wash facilities at this location. All major washing is done at the local commercial carwashes.
- Snow removal equipment is washed at the waste water facility drying beds.

Vehicle and Equipment Maintenance Areas

- All major repairs and maintenance activities are conducted at the City Fleet Department shop.
- Activities such as adding oil to engines, transmissions and differentials are done indoors.
- Oils and other automotive fluids are neatly and cleanly stored.
- Equipment that is stored outside will be inspected prior to use to make sure that all drips are contained and/or repaired.

Mower and Small Equipment Maintenance

- Daily mower cleaning will be done with air to blow all debris from the machines. The floors will then be swept and all debris will be place in the dumpster.
- Blade Sharpening, grinding activities- floors are swept after project has been completed.
- All used oil and other vehicle fluids are collected in 5 gallon containers labeled used oil and are taken to the Springville Fleet Department shop to be recycled. These containers will be placed on a secondary containment tub.
- Oil filters are drained into the used oil collection container and after 24 hours of draining time they are dumped in the garbage.

4. City Cemeteries

Locations

City Cemetery 200 West 400 South 9 acres Evergreen Cemetery 1997 South 400 east 34 acres

Activities

- Excavation and back fill of graves
- Mowing Grass
- Fertilizer application
- Herbicide treatment
- Facilities clean up and maintenance (bathrooms, paved areas, etc)
- Garbage collection

Control Measures SOPs

All of the Parks control measures SOPs apply to the City Cemeteries as well.

5. Buildings

Locations

Springville City Hall	110 South Main Street
Springville City New Library	45 South Main Street
Springville Museum of Art	126 East 400 South
Springville Senior Center	73 East 200 South
Carnegie Library-DUP Museum	175 South Main Street
Springville Community swimming pool	1015 East 900 South
Community Services Building	443 South 200 East
Rodeo Grounds	1600 South 700 West
Springville Fire Station 41	75 West Center Street
Springville Fire Station 42	442 South Canyon Road

Control Measures SOPs

Parking lot sweeping and snow removal are the same as the Parks section.

<u>Swimming pool</u>- the swimming pool gets drained every 12 to 15 years depending on water quality.

- Water is neutralized the chlorine by adding sodium thionutriate until the Ph reading reaches a reading of 7.2 on the testing unit.
- Water is then pumped on to the grass area surrounding the west side of the building.
- The pumping operation usually takes about 3 days to allow the grass to absorb it.

Cleaning Chemicals

- All cleaning chemicals are to be mixed in accordance to manufacturer's directions.
- All cleaning chemicals are to be mixed in an area with adequate ventilation and an area that has a drain that connects to the sanitary sewer.
- If no connection to a sanitary sewer is available, cleaning chemicals are to be mixed on grass or other landscaped area.
- All appropriate PPE shall be work when mixing cleaning chemicals.
- Any spills will be immediately contained with absorbent materials.
 Absorbent materials will be disposed if in a proper waste container.
- Excess mixed materials will be stored in a properly marked and appropriate container, and in a closed cabinet or storage space. Excess materials should be consumed as soon as possible through appropriate cleaning activities.

IV. Field Activities and Control Measures

Activities and Control Measures

- Tree removal or pruning as needed- All tree removal materials are ground up and hauled to green waste facility, all debris from the work area are cleaned up by the end of each work day.
- Plant trees- trees are planted through out the year; a back hoe is used to excavate the holes, trees are brought in to the work area on a flat bed trailer or truck, street and gutters are swept by the end of each work day.
- Sprinkler repair- is an as needed activity, any dirt that is placed on the street, gutters or parking lot will be removed from these hard surfaces by the end of each work day.
- Snow removal of City facilities sidewalks and parking lots. Salt and de-icing chemicals are used in limited amounts any over application gets cleaned up.

Other Control Measures

Good house keeping. Pick up garbage from the work sites, sweep work areas after work is completed.

Material management; keep stock piled materials from entering the storm drain system.

Art City Days Carnival and Parade

Every year around the second weekend in June, the City hosts a three-day festival called Art City Days. Typically, this festival is hosted at the various locations along with carnivals and rides, entertainment from community residents, food vendors, boutique booths, fireworks, and a parade. The parade is usually held on Saturday, morning. The parade route is from 700 East and 400 South to 200 North and Main. Parade participants include floats from various organizations and municipalities, marching bands, cars hosting various dignitaries, etc.. There are an estimated 30-45,000 people who watch the parade along its route. The biggest effect on the City storm water system from this activity is the litter and trash left behind by the spectators and possible animal waste. In an attempt to curb the amount of litter left in the street, 55gallon trash receptacles are placed along the parade route and the youth council hands out plastic garbage for the attendants to put their garbage in and then place these bags in the bigger container. Following the parade, these receptacles are emptied and hauled away. Also following the parade, City employees are charged with walking the parade route picking up any trash or litter left behind. Shortly thereafter, street sweepers follow to give a final cleanup of the parade route.

V. Spill Prevention and Response Procedures

Hazardous Material	Location of Spill	Reportable Quantity
Gasoline, Diesel Fuel and Oils	Land/Water	25 gallons or visible
		sheen

Each facility, work area or service vehicle has a spill response kit. Most spills can be cleaned up following the product manufacturer recommendations or for liquid spills using absorbent/oil dry materials. Absorbent/oil dry, sealable containers, plastic bags, and shovels/brooms are suggested minimum spill response kit.

1st Priority: Protect all people

2nd Priority: Protect equipment and property

3rd Priority: Protect the environment

- 1. Make sure the spill area is safe to enter and that it does not pose an immediate threat to health or safety of any person.
- 2. Stop the spill source
- 3. Check for hazards (flammable material, noxious fumes, cause of spill) if flammable liquid, turn off engines and nearby electrical equipment. If serious hazards are present leave area and call 911. LARGE SPILLS ARE LIKELY TO PRESENT A HAZARD.
- 4. Call co-workers and supervisor for assistance and to make them aware of the spill and potential dangers
- 5. If possible, stop spill from entering drains (use absorbent or other material as necessary)
- 6. Stop spill from spreading (use absorbent or other material)
- 7. If spilled material has entered a storm sewer; contact the City Storm Water Department.
- 8. Clean up spilled material according to manufacturer specifications, for liquid spills use absorbent materials and do not flush area with water.
- 9. Properly dispose of cleaning materials and used absorbent material according to manufacturer specifications.

Emergency Numbers

801-491-5600
801-489-9421
801-489-2745

VI. Inspections

Personnel from the Buildings and Grounds Department and Parks Division will conduct inspections of the assigned areas and document with the appropriate report. Inspection reports and logs are located on the appendices section of this manual.

- Weekly visual inspections for:
 - o Parks (include buildings and parking lots).
 - Buildings and parking lots.
- Quarterly Comprehensive Inspections for:
 - City Operations Compound

Weekly visual inspections will be tracked in the log attached on appendix F, quarterly comprehensive inspections will be documented on appendix G; spills will be cleaned up immediately and documented on a spill report located on appendix D.

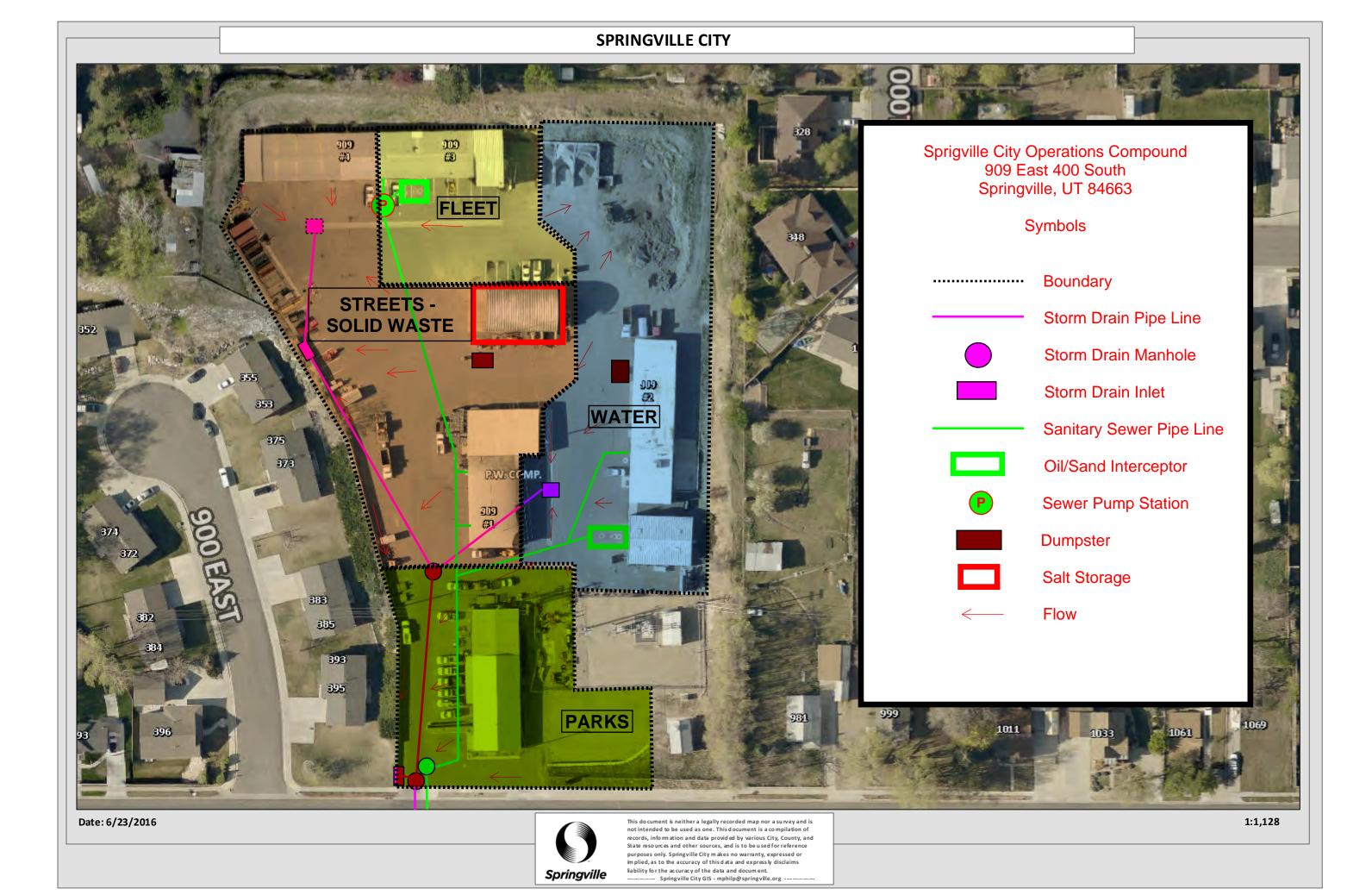
Deficiencies will have to be corrected with in one week of being reported. All inspections and follow up actions will be documented and kept within this O&M Manual. Corrective Action Log Appendix E

VII. Employee Training

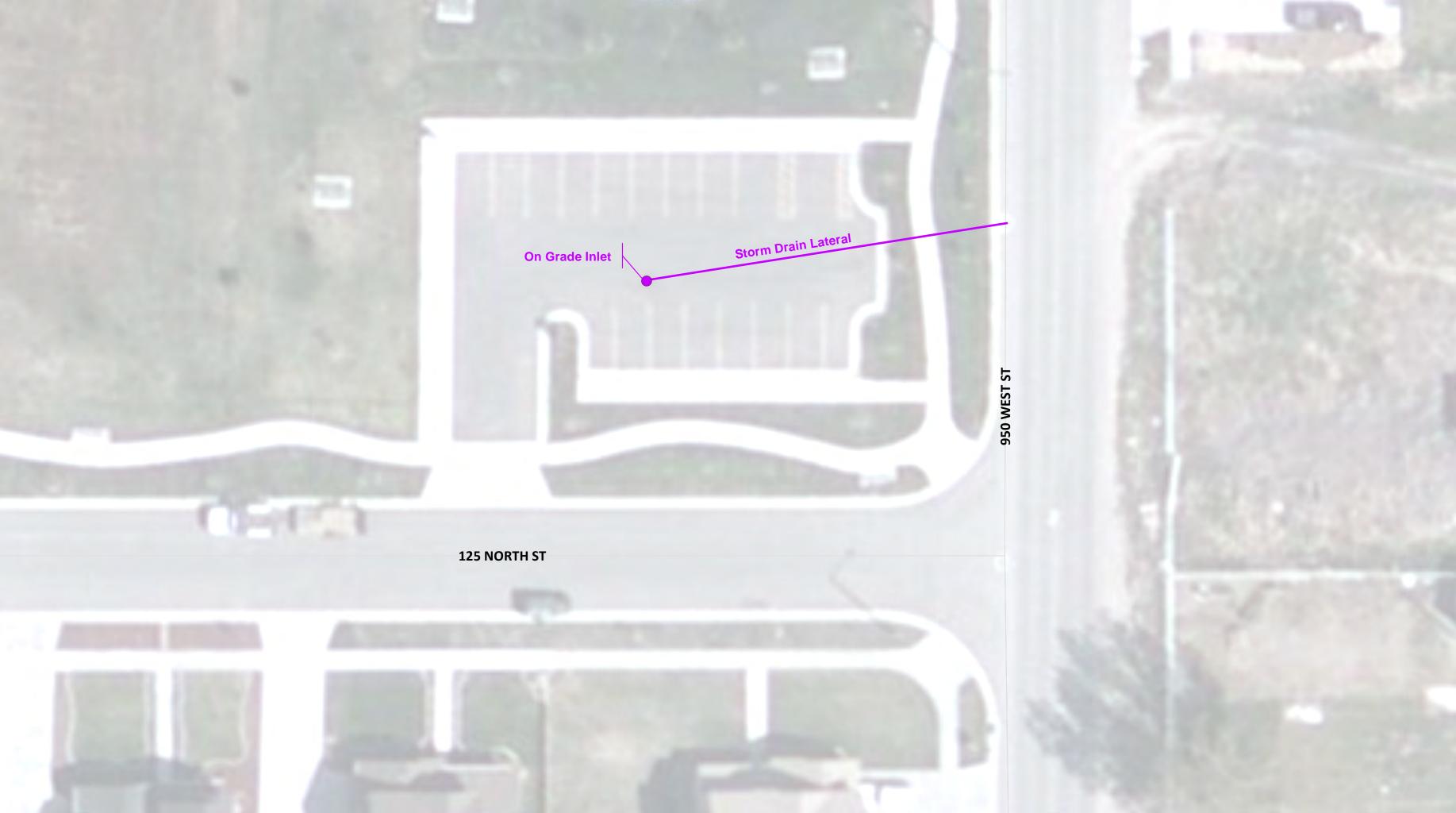
All of the Golf Course employees will receive training regarding this O&M Manual at least annually. The training will cover the following subjects:

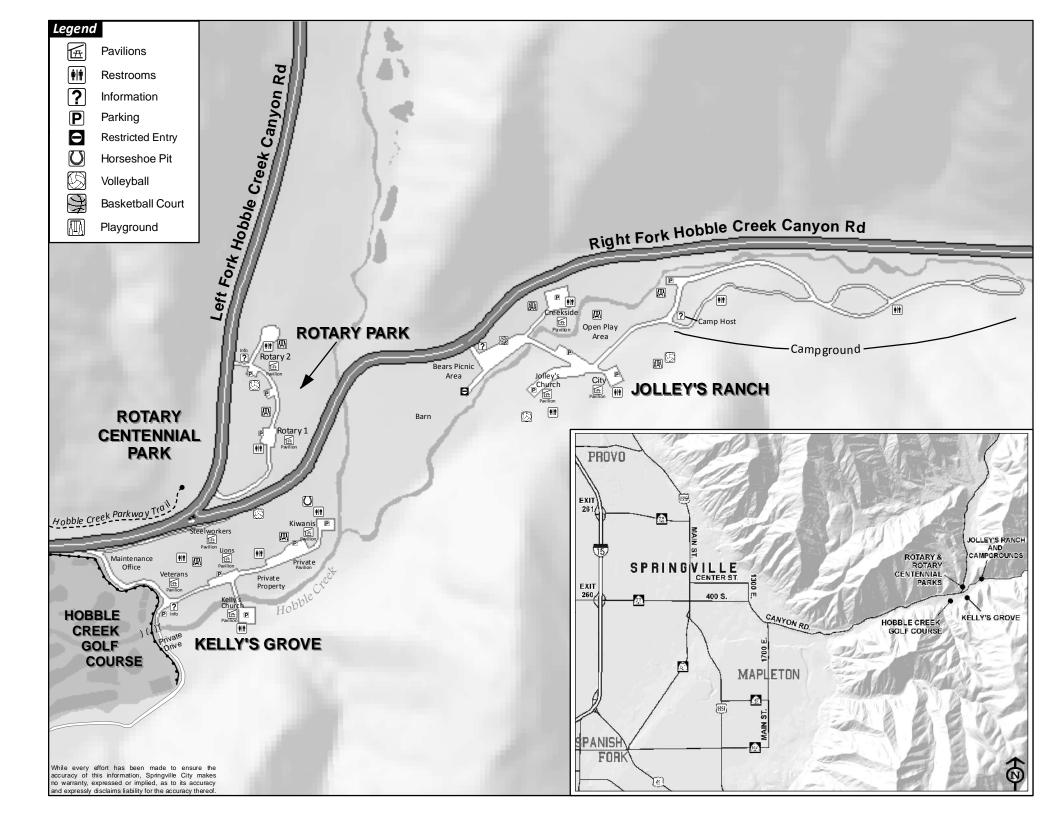
- · Impacts associated with illicit discharges;
- Proper disposal and management of wastes;
- Proper maintenance of indoor and outdoor working areas including parking lot surfaces:
- Spill response; and
- Inspections training.

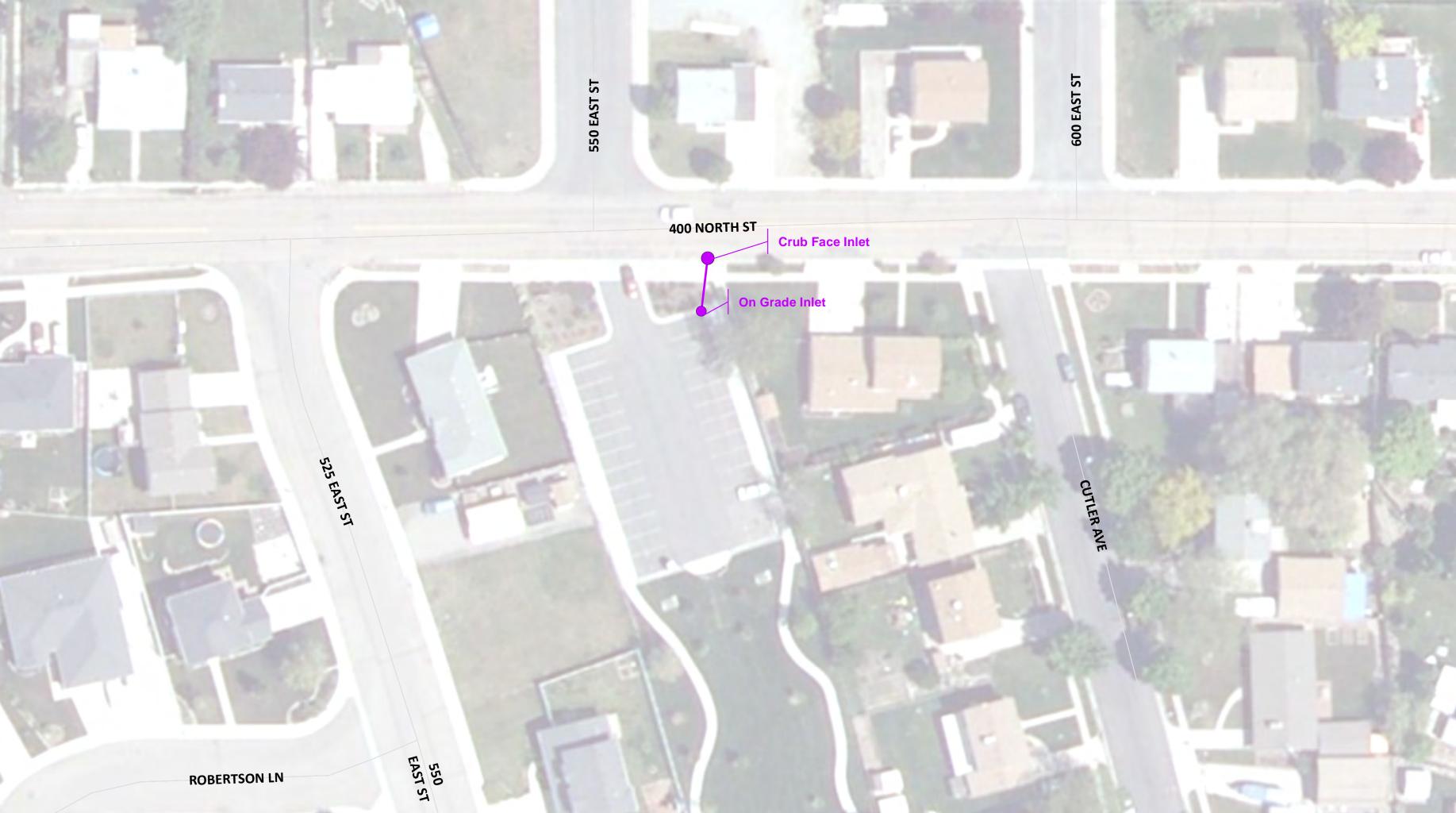
Appendix A Site Maps

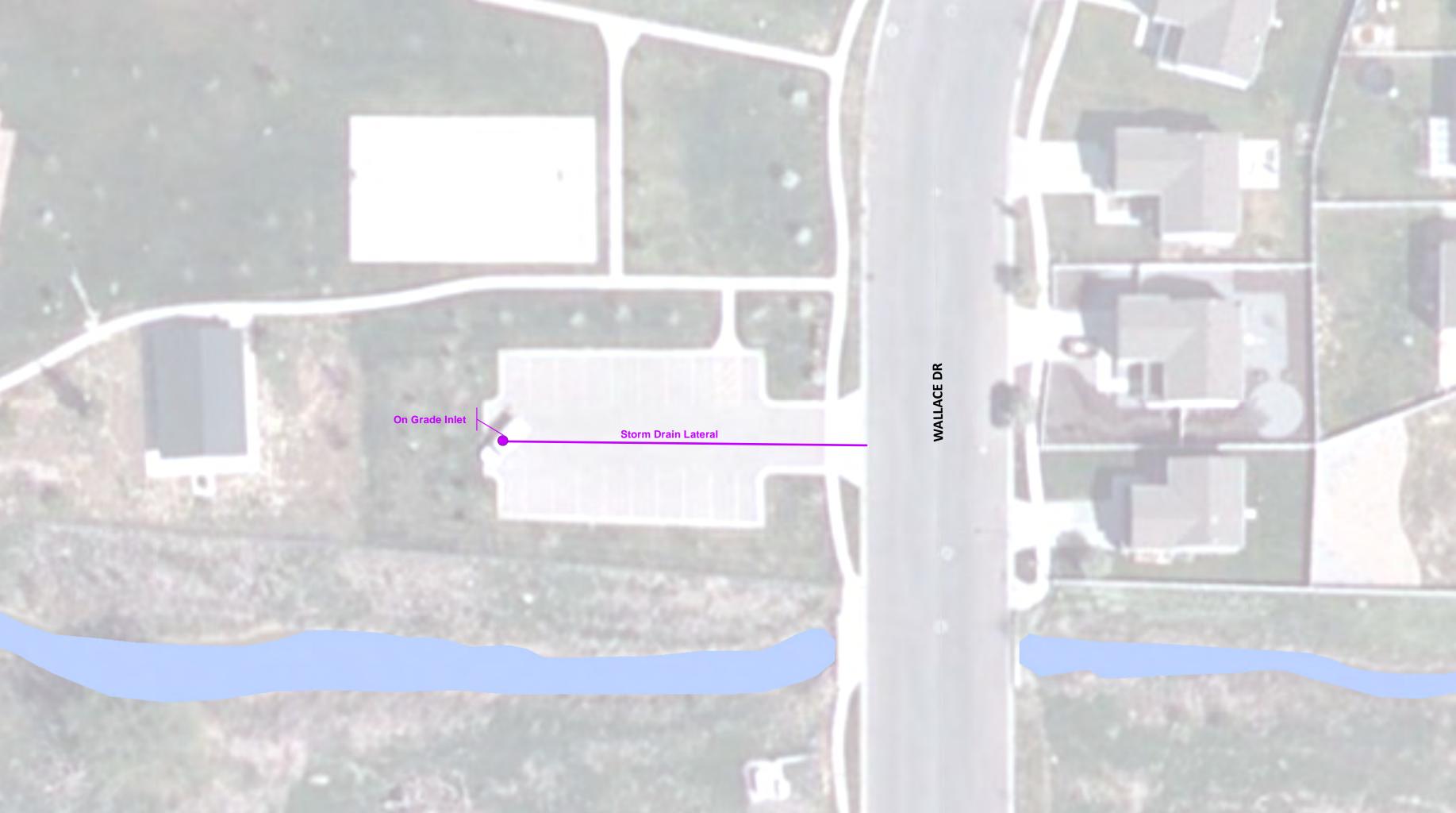














Appendix B

BMPs Specifications and Detail Sheets



Area control procedures involve practicing good housekeeping measures such as maintaining indoor or covered material storage and industrial processing areas. If the area is kept clean, the risk of accumulating materials on footwear and clothing is reduced. In turn, the chance of left over pollutants making contact with stormwater polluting surface water is minimized.

APPROACH:

Area control procedures can be used at any facility where materials may be tracked into areas where they can come in contact with stormwater runoff. Areas can include material handling areas, storage areas, or process areas.

Effective practices include the following:

- Cover garments, foot mats, and other devices used to collect residual material near the area should be cleaned regularly.
- Brush off clothing before leaving the area.
- Stomp feet to remove material before leaving the area.
- Use floor mats at area exits.
- Use coveralls, smocks, and other overgarments in areas where exposure to
 material is of greatest concern (employees should remove the overgarments
 before leaving the area).
- Post signs to remind employees about these practices.

LIMITATIONS:

May be seen as tedious by employees and therefore may not be followed.

MAINTENANCE:

Materials storage areas and industrial processing areas should be checked regularly to ensure that good housekeeping measures are implemented.

APPLICATIONS

- Manufacturing
- Material Handling
- Vehicle Maintenance
- Construction
- Commercial Activities
- Roadways
- Waste Containment
- Housekeeping Practices



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

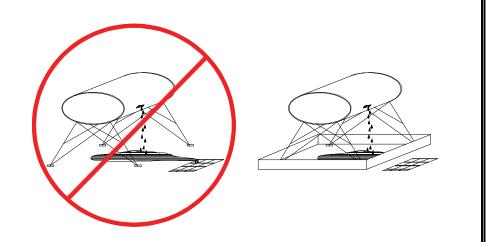
- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- · Oil & Grease
- Floatable Materials
- Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training

■ High • Medium • Low

Materials Adopted From Salt Lake County Engineering Division Guidance Document



Prevent or reduce the discharge of pollutants to stormwater from aboveground storage tanks by installing safeguards against accidental releases, installing secondary containment, conducting regular inspections, and training employees in standard operating procedures and spill cleanup techniques.

The most common causes of unintentional releases are:

- Installation problems,
- Failure of piping systems (pipes, pumps, couplings, hoses, and valves),
- External corrosion and structural failure,
- Spills and overfills due to operator error, and
- Leaks during pumping of liquids or gases from truck to a storage tank or vice versa.

APPROACH:

- Integrate efforts with existing aboveground petroleum storage tank programs through the local Fire Department and Health Department, and area and business emergency response plans through the City, County, or Fire District.
- Use engineering safeguards to reduce the chance for spills.
- Perform regular maintenance.

LIMITATIONS:

For larger spills, a private spill clean-up company or Hazmat team may be necessary.

MAINTENANCE:

Maintenance is critical to preventing leaks and spills. Conduct routine weekly inspections and:

- Check for external corrosion and structural failure,
- Check for spills and overfills due to operator error,
- Check for failure of piping system (pipes, pumps, flanger, coupling, hoses, and valves),
- Check for leaks or spills during pumping of liquids or gases from truck to storage facility or vice versa.
- Periodically, integrity testing should be conducted by a qualified professional.

APPLICATIONS

- Manufacturing
- Material Handling
- Vehicle Maintenance
- Construction
- Commercial Activities
- Roadways
- Waste Containment
- Housekeeping Practices



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

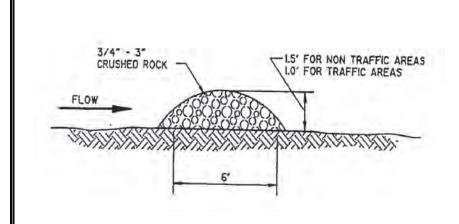
- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- Oil & Grease
- Floatable Materials
- · Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training

■ High • Medium • Low

Materials Adopted From Salt Lake County Engineering Division Guidance Document



A rock filter is made of rock 3/4 - 3" in diameter and placed along a level contour. A brush filter is composed of brush (usually obtained during the site clearing) wrapped in filter cloth and anchored to the toe of the slope. If properly anchored brush or rock filters may be used for sediment trapping and velocity reduction.

APPLICATION:

- As check dams across mildly sloped construction roads.
- Below the toe of slopes.
- Along the site perimeter.
- In areas where sheet or rill flow occurs.
- Around temporary spoil areas.
- At sediment traps or culvert/pipe outlets.

INSTALLATION/APPLICATION CRITERIA:

- For rock filter, use larger rock and place in a staked, woven wire sheathing if placed where concentrated flows occur.
- Install along a level contour.
- Leave area behind berm where runoff can pond and sediment can settle.
- Drainage areas should not exceed 5 acres.

LIMITATIONS:

- Rock berms may be difficult to remove.
- Removal problems limit their usefulness in landscaped areas.
- Runoff will pond upstream of the filter, possibly causing flooding if sufficient space does not exist.

MAINTENANCE:

- Inspect monthly after each rainfall.
- If berm is damaged, reshape and replace lost/dislodged rock.
- Remove sediment when depth reaches 1/3 of berm height, or 1 ft.

OBJECTIVES

- Housekeeping Practices
- · Contain Waste
- Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- Control Site Perimeter
- Control Internal Erosion



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

- High Impact
- Medium Impact
- Low or Unknown Impact

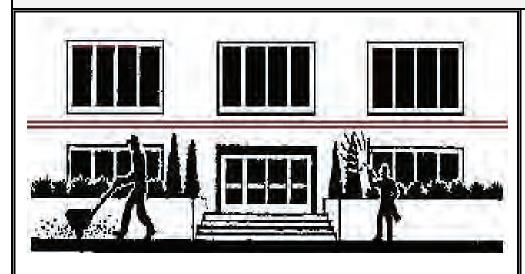
Sediment

- Nutrients
- Toxic Materials
- · Oil & Grease
- Floatable Materials
- Other Waste

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training
- High Medium Low

Materials Adapted From Salt Lake County Engineering Division Guidance Document



Prevent or reduce the discharge of pollutants to stormwater from buildings and grounds maintenance by washing and cleaning up with as little water as possible, preventing and maintaining the stormwater collection system.

Buildings and grounds maintenance includes taking care of landscaped areas around the facility, cleaning of parking lots and pavement other than in the area of industrial activity, and the cleaning of the storm drainage system.

APPROACH:

- Preserve existing native vegetation to reduce water, fertilizer, and pesticide needs.
- Carefully use pesticides and fertilizers in landscaping.
- Integrate pest management where appropriate.
- Sweep paved surfaces.
- Clean the storm drainage system at appropriated intervals.
- Properly dispose of wash water, sweepings, and sediments.

LIMITATIONS:

Alternative pest/weed controls may not be available, suitable or effective in every case.

MAINTENANCE:

The BMPs themselves relate to maintenance and do not require maintenance as they do not involve structures.

APPLICATIONS

- Manufacturing
- Material Handling
- Vehicle Maintenance
- Construction
- Commercial Activities
- Roadways
- Waste Containment
- Housekeeping Practices



Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

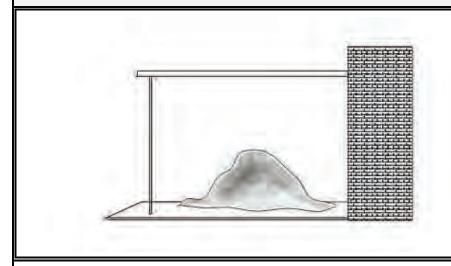
- High Impact
- Low or Unknown Impact
- Medium Impact
- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- Oil & Grease
- Floatable Materials
- Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training

■ High • Medium • Low

BMP: Covering CO



DESCRIPTION:

Covering is the partial or total physical enclosure of materials, equipment, process operations, or activities. Covering certain areas or activities prevents stormwater from coming into contact with potential pollutants and reduces material loss from wind blowing. Tarpaulins, plastic sheeting, roofs, buildings, and other enclosures are examples of covering that are effective in preventing stormwater contamination. Covering can be temporary or permanent.

APPROACH:

- Covering is appropriate for outdoor material storage piles (e.g., stockpiles of dry materials, gravel, sand, compost, sawdust, wood chips, and de-icing salt) as well as areas where liquids and solids in containers are stored or transferred.
- While it may be too expensive to cover all industrial activities, cover all highrisk areas first (e.g., chemical preparation areas, vehicle maintenance areas, and areas where salts are stored), then according to budget cover the rest of the materials.
- Evaluate the strength and longevity of the covering, as well as its compatibility with the material or activity being enclosed.
- When designing an enclosure, consider access to materials, their handling, and transfer.
- Materials that pose environmental and safety dangers require special ventilation and temperature considerations.
- Covering alone may not protect the materials. When designing, consider
 placing materials on an elevated, impermeable surface or build curbing
 around the outside of the materials to prevent problems from runon of
 uncontaminated stormwater from adjacent areas.
- Anchor all coverings with stakes, tie-down ropes, large rocks, tires or other easily available heavy objects.

LIMITATIONS:

- Requires frequent inspection.
- May pose health or safety problems if enclosure is built over certain activities.

MAINTENANCE:

Frequently inspect coverings for rips, holes and general wear.

APPLICATIONS

- Manufacturing
- Material Handling
- Vehicle Maintenance
- Construction
- Commercial Activities
- Roadways
- Waste Containment
- Housekeeping Practices



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

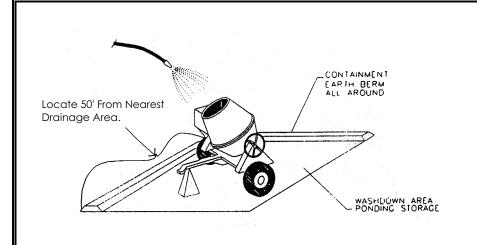
- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- · Oil & Grease
- Floatable Materials
- Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training

■ High • Medium • Low

Materials Adopted From Salt Lake County Engineering Division Guidance Document



Prevent or reduce the discharge of pollutants to storm water from concrete waste by conducting washout off-site, performing on-site washout in a designated area, and training employees and subcontractors.

APPLICATIONS:

This technique is applicable to all types of sites.

INSTALLATION/APPLICATION CRITERIA:

- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amounts of fresh concrete or cement on-site.
- Perform washout of concrete trucks off-site or in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped on-site, except in designated areas.
- When washing concrete to remove fine particles and expose the aggregate, avoid creating runoff by draining the water within a bermed or level area. (See Earth Berm Barrier information sheet.)
- Train employees and subcontractors in proper concrete waste management.

LIMITATIONS:

Off-site washout of concrete wastes may not always be possible.

MAINTENANCE:

- Inspect subcontractors to ensure that concrete wastes are being properly managed.
- If using a temporary pit, dispose hardened concrete on a regular basis.

OBJECTIVES

- Housekeeping Practices
- Contain Waste
- · Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- Control Site Perimeter
- Control Internal Erosion



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

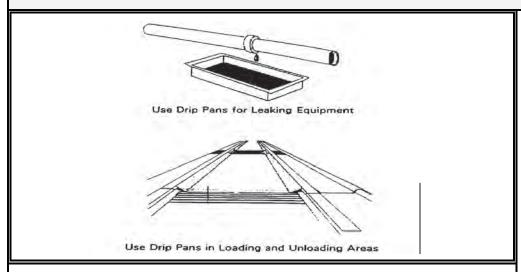
- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Toxic Materials
- · Oil & Grease
- Floatable Materials
- Other Waste

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training

■ High • Medium • Low

Materials Adoped from Salt Lake County Engineering Division Guidance Document



Drip pans are small depressions or pans used to contain very small volumes of leaks, drips, and spills that occur at a facility. Drip pans can be depressions in concrete, asphalt, or other impenetrable material. They can be made of metal, plastic, or any material that does not react with the dripped chemicals. Drip pans can be temporary or permanent.

Drip pans are used to catch drips from valves, pipes, etc. so that the materials or chemicals can be cleaned up easily or recycled before they contaminate stormwater. Although leaks and drips should be repaired and eliminated as part of a preventative maintenance program, drip pans can provide a temporary solution where repair or replacement must be delayed. In addition, drip pans can be an added safeguard when they are positioned beneath areas where leaks and drips may occur.

APPROACH:

- When using drip pans, consider the location of the drip pan, weather conditions, the type of material used for the drip pan, and how it will be cleaned.
- The location of the drip pan is important. Because drip pans must be inspected
 and cleaned frequently, they must be easy to reach and remove. However,
 take special care to avoid placing drip pans where they can be easily
 overturned or be a safety hazard.
- Secure pans by installing or anchoring them. Drip pans may be placed on platforms, behind wind blocks or tied down.
- Employees must pay attention to the pans and empty them when they are nearly full.
- Frequent inspection of the drip pans is necessary due to the possibility of leaks in the pan itself or in piping or valves that may occur randomly or irregular slow drips that may increase in volume.

LIMITATIONS:

- Contain small volumes only.
- Must be inspected and cleaned frequently.
- Must be secured during poor weather conditions.
- Contents may be disposed of improperly unless facility personnel are trained in proper disposal methods.

Materials Adopted From Salt Lake County Engineering Division Guidance Document

APPLICATIONS

- Manufacturing
- Material Handling
- Vehicle Maintenance
- Construction
- Commercial Activities
- Roadways
- · Waste Containment
- Housekeeping Practices



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- Oil & Grease
- Floatable Materials
- Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training
- High Medium Low



Employee training, like equipment maintenance, is a method by which to implement BMPs. Employee training should be used in conjunction with all other BMPs as part of the facility's SWPPP.

The specific employee training aspects of each of the source controls are highlighted in the individual information sheets. The focus of this information sheet is more general, and includes the overall objectives and approach for assuring employee training in stormwater pollution prevention. Accordingly, the organization of this information sheet differs somewhat from the other information sheets in this chapter.

OBJECTIVES:

Employee training should be based on four objectives:

- Promote a clear identification and understanding of the problem, including activities with the potential to pollute stormwater;
- Identify solutions (BMPs);
- Promote employee ownership of the problems and the solutions; and
- Integrate employee feedback into training and BMP implementation.

APPROACH:

- Integrate training regarding stormwater quality management with existing training programs that may be required for other regulations.
- Employee training is a vital component of many of the individual source control BMPs included in this manual.

PROGRAM ELEMENTS

- New Development
- Residential
- Commercial Activities
- Industrial Activities
- Municipal Facilities
- Illegal Discharges



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- Oil & Grease
- Floatable Materials
- Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Regulatory
- Training
- Staffing
- Administrative

■ High • Medium • Low

Materials Adopted From Salt Lake County Engineering Division Guidance Document



Promote efficient and safe housekeeping practices (storage, use, and cleanup) when handling potentially harmful materials such as fertilizers, pesticides, cleaning solutions, paint products, automotive products, and swimming pool chemicals.

APPROACH:

- Pattern a new program after the many established programs from municipalities around the country. Integrate this best management practice as much as possible with existing programs at your municipality.
- This BMP has two key audiences: municipal employees and the general public.
- For the general public, municipalities should establish a public education program that provides information on such items as storm water pollution and beneficial effects of proper disposal on water quality; reading product labels; safer alternative products; safe storage, handling, and disposal of hazardous products; list of local agencies; and emergency phone numbers. The programs listed below have provided this information through brochures or booklets that are available at a variety of locations including municipal offices, household hazardous waste collection events or facilities, and public information fairs.

Municipal facilities should develop controls on the application of pesticides, herbicides, and fertilizers in public right-of-ways and at municipal facilities. Controls may include:

- List of approved pesticides and selected uses.
- Product and application information for users.
- Equipment use and maintenance procedures.
- Record keeping and public notice procedures.

LIMITATIONS.

There are no major limitations to this best management practice.

PROGRAM ELEMENTS

- New Development
- Residential
- Commercial Activities
- Industrial Activities
- Municipal Facilities
- Illegal Discharges



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- Oil & Grease
- Floatable Materials
- Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Regulatory
- Training
- StaffingAdministrative

■ High • Medium • Low



Prevent or reduce the discharge of pollutants to stormwater from hazardous waste throughproper material use, waste disposal, and training of employees and subcontractors.

APPLICATION:

Many of the chemicals used on-site can be hazardous materials which become hazardous waste upon disposal. These wastes may include:

 Paints and Solvents; petroluem products such as oils, fuels, and grease; herbicides and pesticides; Acids for cleaning masonry; and concrete curing compounds.

In addition, sites with existing structures may contain wastes which must be disposed of in accordance with Federal, State, and local regulations, including:

Sandblasting grit mixed with lead, cadmium, or chromium-based paints;
 Asbestos; and PCB's.

INSTALLATION/APPLICATION CRITERIA:

The following steps will help reduce storm water pollution from hazardous wastes:

- Use all of the product before disposing of the container.
- Do not remove the original product label, it contains important safety and disposal information.
- Do not over-apply herbicides and pesticides. Prepare only the amount needed. Follow the recommended usage instructions. Over-application is expensive and environmentally harmful. Apply surface dressings in several smaller applications, as opposed to one large application, to allow time for infiltration and to avoid excess material being carried off-site by runoff. Do not apply these chemicals just before it rains. People applying pesticides must be certified in accordance with Federal and State regulations.

LIMITATIONS:

Hazardous wastethat cannot be reused or recycled must be disposed of by a licensed hazardous waste hauler.

MAINTENANCE:

- Inspect hazardous waste receptacles and area regularly.
- Arrange for regular hazardous waste collection.

Materials Adopted From Salt Lake County Engineering Division Guidance Document

OBJECTIVES

- Housekeeping Practices
- Contain Waste
- Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- Control Site Perimeter
- Control Internal Erosion



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Toxic Materials
- Oil & Grease
- Floatable Materials
- Other Waste

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training

■ High • Medium • Low



Implement measures to detect, correct, and enforce against illegal dumping of pollutants on streets, into the storm drain system, and into creeks. Substances illegally dumped on streets, into the storm drain system, and into creeks includes paints, used oil and other automotive fluids, construction debris, chemicals, fresh concrete, leaves, grass clippings, and pet wastes. All of these wastes can cause storm water and receiving water quality problems as well as clog the storm drain system.

APPROACH:

One of the keys to success is increasing the general public's awareness of the problem and to at least identify the incident, if not correct it. There are a number of ways of accomplishing this:

- Train municipal staff from all departments to recognize and report incidents.
- Deputize municipal staff who may come into contact with illegal dumping with the authority to write illegal dumping tickets for offenders caught in the act
- Educate the public.
- Provide the public with a mechanism for reporting such as a hot line.

Establish system for tracking incidents which will identify:

- Illegal dumping "hot spots",
- Types and quantities (in some cases) of wastes,
- Patterns in time of occurrence (time of day/night, month, or year),
- Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accident/spills), and
- Responsible parties.

A tracking system also helps manage the program by indicating trends, and identifying who, what, when, and where efforts should be concentrated.

LIMITATIONS

The elimination of illegal dumping is dependent on the availability, convenience, and cost of alternative means of disposal.

PROGRAM ELEMENTS

- New Development
- Residential
- Commercial Activities
- Industrial Activities
- Municipal Facilities
- Illegal Discharges



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

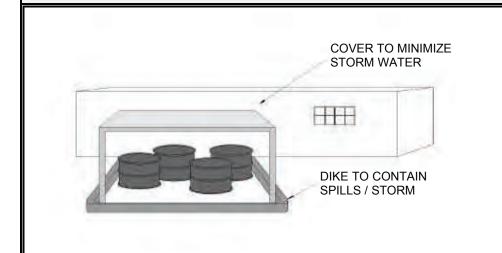
TARGETED POLLUTANTS

- Hiah Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- Oil & Grease
- Floatable Materials
- Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Regulatory
- TrainingStaffina
- Administrative
- High Medium Low

Materials Adopted From Salt Lake County Engineering Division Guidance Document



Prevent or reduce the discharge of pollutants to stormwater from outdoor container storage areas by installing safeguards against accidental releases, installing secondary containment, conducting regular inspections, and training employees in standard operating procedures and spill cleanup techniques.

APPROACH:

Protect materials from rainfall, runon, runoff, and wind dispersal:

- Store materials indoors.
- Cover the storage area with roof.
- Minimize stormwater runon by enclosing the area or building a berm around it.
- Use a "doghouse" for storage of liquid containers.
- Use covered dumpsters for waste product containers.

Storage of oil and hazardous materials must meet specific federal and state standards including:

- secondary containment,
- integrity and leak detection monitoring, and
- emergency preparedness plans.

Train operator on proper storage.

Safeguards against accidental releases:

 Overflow protection devices to warn operator or automatic shut down transfer pumps, protection guards (bollards) around tanks and piping to prevent vehicle or forklift damage, clear tagging or labeling, and restricting access to valves to reduce human error.

Berm or surround tank or container with secondary containment system:

Dikes, liners, vaults, or double walled tanks.

Some municipalities require that secondary containment areas be connected to the sanitary sewer, prohibiting any hard connections to the storm drain.

LIMITATIONS

Storage sheds often must meet building and fire code requirements.

MAINTENANCE:

Conduct routine weekly inspections.

Materials Adopted From Salt Lake County Engineering Division Guidance Document

APPLICATIONS

- Manufacturing
- Material Handling
- Vehicle Maintenance
- Construction
- · Commercial Activities
- Roadways
- · Waste Containment
- Housekeeping Practices



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- · Oil & Grease
- Floatable Materials
- Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training

■ High • Medium • Low



Practices to clean-up leakage/spillage of on-site materials that may be harmful to receiving waters.

APPLICATION:

All sites

GENERAL:

- Store controlled materials within a storage area.
- Educate personnel on prevention and clean-up techniques.
- Designate an Emergency Coordinator responsible for employing preventative practices and for providing spill response.
- Maintain a supply of clean-up equipment on-site and post a list of local response agencies with phone numbers.

METHODS:

- Clean-up spills/leaks immediately and remediate cause.
- Use as little water as possible. NEVER HOSE DOWN OR BURY SPILL CONTAMINATED MATERIAL.
- Use rags or absorbent material for clean-up. Excavate contaminated soils.
 Dispose of clean-up material and soil as hazardous waste.
- Document all spills with date, location, substance, volume, actions taken and other pertinent data.
- Contact local Fire Department and State Division of Environmental Response and Remediation (Phone #536-4100) for any spill of reportable quantity.

OBJECTIVES

- Housekeeping Practices
- Contain Waste
- Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- · Control Site Perimeter
- Control Internal Erosion



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

- High Impact
- Medium Impact
- Low or Unknown Impact
- · Sediment
- Nutrients
- Toxic Materials
- Oil & Grease
- Floatable Materials
- Other Waste

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training

■ High • Medium • Low

Materials Adopted From Salt Lake County Engineering Division Guidance Document





Signs and labels identify problem areas or hazardous materials at a facility. Warning signs, often found at industrial facilities, are a good way to suggest caution in certain areas. Signs and labels can also provide instructions on the use of materials and equipment. Labeling is a good way to organize large amounts of materials, pipes, and equipment, particularly on large sites.

APPROACH:

Signs and labels can be used at all types of facilities. Areas where they are particularly useful are material transfer areas, equipment areas, loading and unloading areas, or anywhere information might prevent contaminants from being released to stormwater.

Signs and labels should be visible and easy to read. Useful signs and labels might provide the following information:

- Names of facility and regulatory personnel, including emergency phone numbers, to contact in case of an accidental discharge, spill, or other emergency.
- Proper uses of equipment that could cause release of stormwater contaminants.
- Types of chemicals used in high-risk areas.
- The direction of drainage lines/ditches and their destination (treatment or discharge).
- Information on a specific material.
- Refer to OSHA standards for sizes and numbers of signs required for hazardous material labeling.

LIMITATIONS:

No limitations.

MAINTENANCE:

- Periodic checks can ensure that signs are still in place and labels are properly attached.
- Signs and labels should be replaced and repaired as often as necessary.

APPLICATIONS

- Manufacturing
- Material Handling
- Vehicle Maintenance
- Construction
- Commercial Activities
- Roadways
- · Waste Containment
- Housekeeping Practices



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- Oil & Grease
- Floatable Materials
- Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training
- High Medium Low

Materials Adopted From Salt Lake County Engineering Division Guidance Document

BMP: Sorbents SO



DESCRIPTION:

Sorbents are materials that are capable of cleaning up spills through the chemical processes of adsorption and absorption. Sorbents adsorb (an attraction to the outer surface of a material) or absorb (taken in by the material like a sponge) only when they come in contact with the sorbent materials.

Sorbents include, but are not limited to, the following:

- Common materials such as clays, sawdust, straw and fly ash
- Polymers polyurethane and polyolefin
- Activated Carbon powdered or granular
- "Universal Sorbent Material" a silicate glass foam consisting of rounded particles that can absorb the material.

APPLICATION:

Sorbents are useful BMPs for facilities with liquid materials onsite.

INSTALLATION/APPLICATION CRITERIA:

- Personnel should know the properties of the spilled material(s) to know which sorbent is appropriate. To be effective, sorbents must adsorb the material spilled but must not react with the spilled material to form hazardous or toxic substances.
- Apply immediately to the release area.
- Application is generally simple: the sorbent is added to the area of release, mixed well, and allowed to adsorb or absorb.
- Many sorbents are not reusable once they have been used.
- Proper disposal is required.

LIMITATIONS:

- Requires a knowledge of the chemical makeup of a spill (to choose the best sorbent).
- May be an expensive practice for large spills.
- May create disposal problems and increase disposal costs by creating a solid waste and potentially a hazardous waste.

MAINTENANCE:

No information available.

Materials Adopted From Salt Lake County Engineering Division Guidance Document

CONSIDERATIONS

- Soils
- Area Required
- Slope
- Water Availability
- Aesthetics
- Hydraulic Head
- Environmental Side Effects



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- Oil & Grease
- Floatable Materials
- Bacteria & Viruses

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training
 - High Medium Low



Prevent or reduce the discharge of pollutants to storm water from vehicle and equipment cleaning by using off-site facilities, washing in designated, contained areas only, eliminating discharges to the storm drain by infiltrating or recycling the wash water, and/or training employees and subcontractors.

INSTALLATION/APPLICATION:

- Use off-site commercial washing businesses as much as possible. Washing vehicles and equipment outdoors or in areas where wash water flows onto paved surfaces or into drainage pathways can pollute storm water. If you wash a large number of vehicles or pieces of equipment, consider conducting this work at an off-site commercial business. These businesses are better equipped to handle and dispose of the wash waters properly. Performing this work off-site can also be economical by eliminating the need for a separate washing operation at your site.
- If washing must occur on-site, use designated, bermed wash areas to prevent wash water contact with storm water, creeks, rivers, and other water bodies. The wash area can be sloped for wash water collection and subsequent infiltration into the ground.
- Use as little water as possible to avoid having to install erosion and sediment controls for the wash area. Use phosphate-free biodegradable soaps. Educate employees and subcontractors on pollution prevention measures. Do not permit steam cleaning on-site. Steam cleaning can generate significant pollutant concentrations.

LIMITATIONS:

- Even phosphate-free, biodegradable soaps have been shown to be toxic to fish before the soap degrades.
- Sending vehicles/equipment off-site should be done in conjunction with Stabilized Construction Entrance.

MAINTENANCE:

• Minimal, some berm repair may be necessary.

OBJECTIVES

- Housekeeping Practices
- Contain Waste
- Minimize Disturbed Areas
- Stabilize Disturbed Areas
- Protect Slopes/Channels
- Control Site Perimeter
- Control Internal Erosion



Springville

Springville City Corporation Public Works Department Engineering Division 110 South Main Street Springville, Utah 84663 801-491-2780

TARGETED POLLUTANTS

- High Impact
- Medium Impact
- Low or Unknown Impact
- Sediment
- Nutrients
- Toxic Materials
- Oil & Grease
- Floatable Materials
- Other Waste

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training

■ High • Medium • Low

Materials Adopted From Salt Lake County Engineering Division Guidance Document



Cleaning Chemicals

- ➤ All cleaning chemicals are to be mixed in accordance to manufacturer's directions.
- All cleaning chemicals are to be mixed in an area with adequate ventilation and an area that has a drain that connects to the sanitary sewer.
- If no connection to a sanitary sewer is available, cleaning chemicals are to be mixed on grass or other landscaped area.
- All appropriate PPE shall be work when mixing cleaning chemicals.
- Any spills will be immediately contained with absorbent materials. Absorbent materials will be disposed if in a proper waste container.
- Excess mixed materials will be stored in a properly marked and appropriate container, and in a closed cabinet or storage space. Excess materials should be consumed as soon as possible through appropriate cleaning activities.



Equipment Maintenance and Cleaning

- > Equipment will be kept in good operating and clean conditions.
- Mowing, trimming, edging equipment will be cleaned using high pressure air or manual devices when possible. Debris from such cleaning will be swept and disposed of in proper waste container.
- Mowing, trimming, or edging equipment may be hosed of on grass areas as long as no detergents or solvents are used in the process. All debris from such cleaning must remain on grass or be deposited into a proper waste container.
- All other cleaning will take place in a specified and approved equipment cleaning wash bay.
- ➤ Equipment should be kept free from leaks of any sort. All leaks will be caught in a catch pan or have absorbent materials applied. Caught items will be properly disposed of at a materials reclamation area. Absorbent materials will be disposed of in a proper waste container.



Fertilizers

- City will order and consume fertilizer as needed. Generally fertilizer will not be stored.
- If fertilizer is stored, it will be inside of a building.
- Fertilizer will be applied once or twice annually as needed.
- All fertilizer applications will be supervised by a Certified Pesticide Applicator.
- Fertilizer will be applied in accordance to manufacturer's instructions.
- Fertilizer will be transported to site in bags.
- Fertilizer spreaders will be filled at the site where the use is intended.
- Bags will be opened individually and dumped into spreader.
- Any spilled fertilizer will be swept and returned to spreader or spread on grass.
- Fertilizer that lands on hard surfaces will be swept or blown back onto grass.
- Fertilizer bags will be disposed of in a proper waste container.
- Any errant fertilizer found in vehicle will be swept and spread on grass.



Lawn Mowing and/or trimming

- Mowing/trimming operations will occur weekly, twice weekly, or as necessary at each location.
- All mowing/trimming equipment will be properly fueled at a proper fueling location. Any spilled fuels will have absorbent materials applied to absorb them. Absorbent materials will be disposed of in a proper trash container.
- Mowers will have mulching type decks that are kept in good repair with all guards and deflectors in place.
- > Trimmers will have all deflectors in place and in good repair.
- > All materials resulting from mowing/trimming operations should remain on grass.
- > Trimmings that are found on hard surfaces will be blown or swept back on to the grass.
- > Trimmings that cannot be swept or blown back on to grass will be swept and deposited into appropriate waste container.



Sidewalks, Parking Lots, and Trails in and around Parks and Public Facilities.

- Parking lots will be swept by Public Works annually or as needed.
- > Trails and sidewalks will be kept free of debris as necessary.
- > Trails and sidewalks will be blown off as needed. Debris will be blown onto grass or planted areas.
- Curbs and gutters around parking lots will be blown out or swept as needed. Debris will be blown onto grass or planted areas when possible. When not possible, debris will be collected and deposited into proper waste container.
- Weekly visual inspections and repaired problems will be logged on the appropriate reports located on the appendices section of this manual.



Pavilion Cleaning and Maintenance

- Pavilions will be cleaned as necessary to accommodate reservations or to maintain minimum acceptable standards.
- Pavilions may be blown off. All trash and debris shall be collected and deposited into an appropriate waste container.
- Pavilions may also be hosed or pressure washed. All water resulting from such activities must go onto landscaped areas. No such water may enter the storm drain.
- Any debris resulting from hosing or pressure washing shall be collected and deposited into an acceptable trash container.



Pesticides

- Pesticides will be purchased and consumed as needed. Minimal pesticides will be stored.
- Stored pesticides will be kept in a separate cabinet with doors.
- Pesticide applications will be supervised by a Certified Pesticide Applicator.
- Pesticide will be mixed and applied according to manufacturer's directions.
- Pesticides will be applied as needed when weather conditions allow.
- Appropriate PPE will be worn when mixing and applying pesticides.
- Pesticides will be mixed in an area and manner to avoid spillage.
- If a spill occurs, absorbent materials will be applied to spill. Absorbent materials will be disposed of in appropriate waste container.
- Empty pesticide containers will be disposed of in appropriate waste containers.
- Pesticide sprayers will be secured in vehicles when transported.
- All mixed pesticides will be applied to plants or other appropriate locations. Surplus materials may not be deposited into storm drain or sanitary sewer.



Restroom Maintenance

- All restrooms will be cleaned in accordance to minimum acceptable standards.
- Restroom floors will be swept. Swept materials will be collected and disposed of in a proper waste container.
- ➤ Restroom floors and walls may be hosed. All water from such activities must drain into the sanitary sewer, or onto landscaped areas. No such water may enter the storm drain.
- ➤ Restroom floors will be mopped. All water from such activities will be put into the sanitary sewer or dumped onto landscaped areas. No such water shall be allowed to enter the storm drain.
- ➤ All cleaning chemicals shall be used in accordance to manufacturer's specifications.
- Cleaning chemicals shall be mixed in accordance to SOP for cleaning chemicals.



Snow Melt/ Road Salt storage and use

- All snow melt materials will be kept in bags and stored in a storage building until they are consumed.
- Road salts will be stored in a proper road salt storage location. Road salts will be stored in a manner to be protected from storms and to allow minimal dissolving of salts.
- > Snow melt and road salt materials will be loaded into spreading devices as needed and as can be consumed. Materials will not remain in spreading devices if unused. Unused road salts will be returned to stockpile.
- Snow melt and road salts will be applied to parking lots and walkways as needed using minimal necessary materials. Materials may be reapplied only as needed for public safety.
- Any spillage of snow melt material or road salts will be returned to the spreading device and applied to appropriate areas. Spilled materials may also be swept and deposited in appropriate waste container.
- > Snow melt or road salts that are not dissolved will be blown or swept of parking lots or walkways as needed. Removed materials will either be blown to landscaped areas or collected and deposited in an appropriate waste container.



Snow and Ice Removal

- Snow and ice will be removed as necessary
- > Snow and ice will be removed from parking lots, walkways, and trails with necessary trucks, small equipment, snow blowers, shovels, or other necessary devices.
- Snow will be piled at the edges or parking lots, roads, walkways, or other areas as room allows.
- When possible, snow can be piled onto grass or other planted areas.
- ➤ Road salt and/or ice melting materials will be used moderately as necessary.
- Road salt and/or ice melting materials that are not consumed or dissolved within a reasonable amount of time will be swept or blown onto grass or other planted area.



Department of Uirbain Forestry

443 Sourth 200 East

Springville, Utah 84663

Alex Roylance, Director

Springville Heritage Trees

Rocky Mountain Juniper

435 South Main Street

Planted 1861

Horsechestnut

668 Sourth Main Street

Planted 1853



Pecan

640 South 100 East

Utah Juniper Stand

Evergreen Cemetery

Native trees present when Springville settled

Appendix C

Training Log



Employee Training Log

Training Date:			
Training Description:			
Trainer:			
Employee Name	Employee Signature		

Appendix D Spill Reports

NON-STORM WATER DISCHARGE INSPECTION REPORT

Date of Spill:	Time:	Springville
Location:	•	
Date of Investigation:	Time:	
Method of Discovery:		
REGUALTORY AGENCIES NOTIFICATION (document: date, t	time, person, agency)	
Springville City (801-491-2780):		
Utah County Health Department: (801-851-7525)		
DWQ (801-536-4300, after hours 801-536-4123):		
Other:		
Description and Quantity of Material Spilled: Gasoline Diesel Oil Antifreeze 1 to 5 Gallons 5 to 10 Gallons 10 to 25 Gallons	Other: More than 25 Gallons	
Source:		
Cause:		
Adverse environmental impact (if any):		
Any Discharge to Storm Drain and or waters of the U.S.?	Yes No Do not	know
Immediate remedial actions taken at time of spill:		
Spill Containment Sweeping Other:	Absorbent Material	Removal from site
Method of removal and verification:		
Additional comments:		
Analytical Monitoring:		
Enforcement Action:		

Signature

Date

Report prepared by:

Appendix E Corrective Action Log



Corrective Action Log

Date Completed	Describe the actions taken and note the person(s) that completed the work

Appendix F Weekly Visual Inspection Log



Weekly Visual Inspection Log Buildings and Grounds Department

	Check the box if a deficiency is observed, describe the corrective actions taken on the notes section or on the corrective action log.						
Date:	400 South Compound: Garbage can lid closed Trash picked up	Parking areas clean Spill clean up	Clean and organize shop Sweep hard surfaces	Chemicals, solvents and oils labeled and stored Materials stored indoors or covered			
	Canyon Parks Shop: Garbage can lid closed Grass clippings off hard surfaces	Parking areas clean	Trash picked up Grass clippings off hard sur	Chemicals indoors or covered			
	Parks: Garbage can lid closed	Parking areas clean	Pet waste bags	Grass clippings off hard surfaces			
	Notes:						
		served, describe the corrective	e actions taken on the notes	s section or on the corrective action log.			
Date: Name:	400 South Compound: Garbage can lid closed Trash picked up	Parking areas clean Spill clean up	Clean and organize shop Sweep hard surfaces	Chemicals, solvents and oils labeled and stored Materials stored indoors or covered			
	Canyon Parks Shop: Garbage can lid closed Grass clippings off hard surfaces	Parking areas clean	Trash picked up Grass clippings off hard sur	✓ Chemicals indoors or covered rfaces			
	Parks: Garbage can lid closed	Parking areas clean	Pet waste bags	Grass clippings off hard surfaces			
	Notes:						
7 0	•	served, describe the corrective	e actions taken on the notes	s section or on the corrective action log.			
Date: Name:	400 South Compound: Garbage can lid closed Trash picked up	Parking areas clean Spill clean up	Clean and organize shop Sweep hard surfaces	Chemicals, solvents and oils labeled and stored Materials stored indoors or covered			
	Canyon Parks Shop: Garbage can lid closed Grass clippings off hard surfaces	Parking areas clean	Trash picked up Grass clippings off hard sur	Chemicals indoors or covered			
	Parks: Garbage can lid closed	Parking areas clean	Pet waste bags	Grass clippings off hard surfaces			
	Notes:						

Appendix G

Quarterly Comprehensive Inspections



High Priority Facility SWPPP Compliance Report

Site Name:	Inspected By:						
Date of Evaluation: Start/End Time:				Existing Weather Conditions:			
Date of last rain event > .1" of precipitation:					Approximate rainfall:		
	Areas	s of In	dustria	al activ	ities and materials exposed to stormwater		
Area/Activity	Was area Inspected?		Are controls operating effectively		Describe Corrective Action Ne	eded	
	yes	no	yes	no			
Outdoors and indoor material storage areas							
Equipment and vehicle parking areas							
3. Dumpsters							
4. Paved areas							
Storm drain inlets and gutters							
Indoors working and storage areas							
7. Spill Kits							
Additional Notes:		I		1			
I certify that this document and all attachments w	ere prepare	ed under	my direc	tion. The	information submitted is, to the best of my knowledge and belief, true, according to the control of the control	curate, and complete.	
Inspector Name					Inspector Signature	Date	