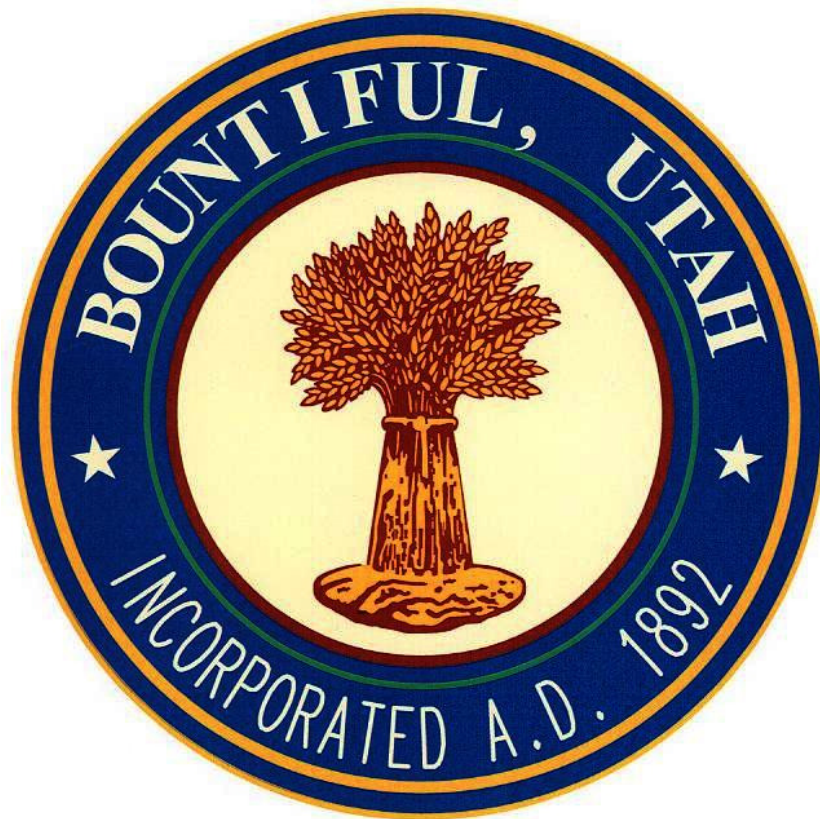


STANDARD OPERATING PROCEDURES

Bountiful City

adapted from Davis County Storm Water Coalition SOPs



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SPILL INCIDENT – Response and Reporting

- Spill is observed or Report of Spill comes in
 - ◇ Does the incident pose an immediate threat to life or health?
 - Yes – Call 911 (give description of material, amount, and extent)
 - describe incident in spill log
 - No – move to next step
 - ◇ Are you able to safely contain the spill with tools and/or material at hand?
 - Yes – Contain the spill and secure the area, then ensure clean up is done
 - report according to the reporting list below, and
 - describe incident in spill log
 - No – move to next step
 - ◇ Is it during regular working hours?
 - No – Call 911 (give description of material, amount, and extent)
 - describe incident in spill log
 - on next working day report according to reporting list below
 - Yes – report according to reporting list below
 - describe incident in spill log

Bountiful City Environmental Compliance Team Member (Environmental Engineer)
should be contacted after any spills and should assist in making appropriate calls
801-298-6125

Pollutant Description

Pollutant releases to water (surface or ground water)
Hydrocarbons (fuel, oil), release of 25 gallons or more
Radiological Materials, any spill or release
Extremely Hazardous chemicals, 2.2 lb. or more
(e.g. Cyanides, Arsenic, Chlorine)

Other Hazardous chemicals, 220 lb. or more
Underground Storage Tank, any leaking or release

Report to:

Davis Co., UDEQ, & NRC
Report to Davis Co. and UDEQ
Report to Davis Co. and UDEQ
Report to Davis Co. and UDEQ

Report to Davis Co. and UDEQ
Report to UDEQ

Other spills, particularly those contained and cleaned up, do not need to be reported

Phone Contact List:

Emergency	911
Bountiful Environmental Engineer	801-298-6125
Davis County Environmental Health	801-525-5100
National Response Center (NRC)	800-424-8802 (24 hour)
Utah Dept. of Environmental Quality (UDEQ)	801-536-4123 (24 hour)
Utah Division of Solid and Hazardous Waste	801-538-6170
Utah Hazmat Response Officer	801-538-3745 (24 hour)



DISCHARGE/SPILL Inspection Report

REPORTED INFORMATION

Reported by _____ Date _____

Location of Discharge _____

Description of Discharge _____

Amount of Discharge (estimated) _____

Report Taken by _____

INVESTIGATION INFORMATION

*Complete and attach **Field Sheet***

Date Investigation Began _____ Was Source of Discharge Found? Yes No

Any Discharge to Storm Drain? Yes No

Method(s) Used to Discover Source of Discharge _____

Agencies Discharge was Reported To: _____ Date: _____

_____ Date: _____

_____ Date: _____

ILLICIT DISCHARGE REMOVAL INFORMATION

Description of Actions Taken to Remove the Discharge _____

Has Illicit Discharge Been Eliminated? Yes Date _____

No

Future Scheduled Follow-Up Action: _____ Date: _____

ENFORCEMENT INFORMATION

List Enforcement Action(s) Taken

Date: _____ Enforcement Action _____

Date: _____ Enforcement Action _____

STANDARD OPERATING PROCEDURES



GENERAL – Debris Disposal

1. Preparation
 - a. Know the location of the approved disposal facilities:
 - i. Debris Disposal Area – bermed Area northwest of the Water Dept. Building, southwest of the Parks storage bays
 - ii. Truck Bed Wash Pit – for waste material with free liquids
 - iii. Bountiful Sanitary Landfill – 1600 N Pages Ln., West Bountiful
 - iv. Other facility as arranged for specific project, and approved by Public Works Director
 - b. Check and secure load as necessary to minimize loss of debris during transport;
2. Process
 - a. Transport the material to one of the above-listed facilities
 - b. Unload the debris into the facility
3. Clean-up
 - a. Clean off loose material* from vehicle

*Loose Material is that which can be removed by scraping it up with a square-nose shovel



GENERAL – Inlet Protection

1. Preparation
 - a. Have inlet protection material on hand, and make sure it is in good condition
 - i. gravel bags (preferred), or
 - ii. wattles
 - b. Determine best location for placing the inlet protection, typically at the nearest downstream inlet(s) subject to receiving flow from the activity
 - i. Note: in some cases, inlet protection may be placed in gutter upstream of inlet if it is subject to receiving flow from activity
2. Process
 - a. Place inlet protection in a way to avoid unintended bypass of flow; wattles may need to be weighed down
 - b. Periodically check the inlet protection for placement and condition, particularly after receiving runoff; replace if it is not in good working condition
 - c. Remove accumulated sediment
3. Clean-up
 - a. Clean accumulated sediment and debris; dispose according to *SOP: GENERAL – Debris Disposal*
 - b. Remove Inlet protection when activity is completed



GENERAL – Transporting Saturated Soils

1. Preparation
 - a. Determine destination, truck to use, and a haul route

2. Process
 - a. Load and Transport in manner to minimize spillage & tracking of material
 - i. Clean surface between tailgate and truck bed to allow good seal to minimize leakage
 - ii. Load truck such that the top of the saturated soils is at least one foot below bed walls
 - iii. Clean off loose material* from outside of truck that may fall on road during transport
 - iv. Drive slowly to prevent spillage when turning, slowing, and accelerating
 - b. Haul the material utilizing one route

3. Clean-up
 - a. Clean any spilled material from loading area
 - b. Examine transport route; arrange for cleaning of any loose material* along route
 - c. *NOTE: For Washing Truck see SOP: GENERAL – Vehicle and Equipment Washing*

*Loose Material is that which can be removed by scraping it up with a square-nose shovel



GENERAL – Transporting Unsaturated Soils

1. Preparation
 - a. Determine destination, truck to use, and haul route

2. Process
 - a. Load Truck
 - b. Clean off loose material* from outside of truck that may fall on road during transport
 - c. Utilize one route for transporting multiple loads

3. Clean-up
 - a. Clean loading area
 - b. *NOTE: For Washing Truck see SOP: GENERAL – Vehicle and Equipment Washing*

*Loose Material is that which can be removed by scraping it up with a square-nose shovel



GENERAL – Vehicle and Equipment Storage

1. Preparation
 - a. Take notice of fluids on parking areas that may indicate a leak
 - b. Provide drip pans and sorbents for leaking vehicles

2. Process
 - a. Whenever possible, store vehicles inside where floor drains are connected to sanitary sewer system
 - b. When inside storage is not available, park vehicles and equipment in designated areas
 - c. When a leak is detected, place a drip pan under the leaking vehicle to collect the drip, and arrange to get the leak repaired as soon as possible

4. Clean-up
 - a. Clean up any spills using dry cleanup methods: sorbent materials and sweeping; dispose of soiled sorbents in the garbage



GENERAL – Vehicle and Equipment Washing

1. Preparation
 - a. Be aware that washing must be done in designated locations only:
 - i. Wash Bay – Bay marked “10”, along the North end of the streets storage yard
 - ii. Truck Bed Wash – West of the storage bays along the North end of the streets storage yard
 - iii. Any commercial wash bay
 - iv. Mower Wash – Bountiful Ridge Golf Course Wash Station
 1. Lawn mower cleaning may also be done on the lawn, provided the wash water does not run off
 - v. Note: Other inside bays may also be used if it is know that the floor drain flows to a separator that is connected to a sanitary sewer
 - b. If vehicle or equipment is too large for washing in one of the above locations, a commercial truck wash may be used
 - i. *Location: Flying J Travel Plaza – I215 and Redwood Road*
 - c. Transport vehicle/equipment to one of the approved locations
2. Process
 - a. Clean the vehicle/equipment inside the designated area
 - b. Take care to avoid wash water from running away from wash-area drain
3. Clean-up
 - a. Clean the wash area after use by spraying dirt/debris into the wash drain



IDDE – Outfall/Discharge Inspection and Characterization

1. Preparation
 - a. Make sure you have the following supplies for the field work:
 - i. Camera, flashlight, 1st aid kit, nitrile gloves, waterproof boots or waders, tape measure, phone or 2-way radio, watch (with stopwatch), GPS, and map(s) showing drainage system and outfalls in the area you plan to screen
 - ii. pH and ammonia testers, thermometer, clear sample bottle(s), ziplock bags, and caulk or plumbers' putty
 - iii. copies of *Field Sheet* (such as Appendix D-3 of the Center Watershed Protection's Illicit Discharge Detection and Elimination Guidance Manual)
 - b. Notify private property owners whose property you'll need to be crossing
2. Process
 - a. Upon arrival at each outfall/discharge, take photo(s), and gather information to complete *Field Sheet*
 - b. Use the data observed, collected and recorded on *Field Sheet* and guidelines on *Field Sheet* to characterize the outfall/discharge as an "unlikely," "potential," "suspect," or "obvious" point of illicit discharge. Consider these as indicators: pH ≤ 6 or pH > 8, severity of 2; pH ≤ 5 or pH > 9, severity of 3; Ammonia ≥ 1.0, severity of 3.
 - i. if outfall is non-flowing and characterized as "obvious," "suspect," or "potential," place a caulk dam and schedule a return visit to attempt to collect a sample
 - ii. if characterized as "obvious," follow *spill incident response and reporting procedures* and assist responders in containing the discharge. Then initiate *SOP – IDDE Tracing Source of Discharges*
 - iii. if outfall is flowing and characterized as suspect, initiate *SOP – IDDE Tracing Source of Discharges* within two working days.
3. Clean-up
 - a. Place used gloves and other waste in bag and carry-out for disposal into waste bin.
 - b. If any hazardous waste is produced (eg. used detergent/surfactant reagent), carry out and arrange for delivery to a hazardous waste facility
 - i. Contact: Veolia Environmental Services
709 N. Taylor Way Suite 1
North Salt Lake, UT 84054, US
(801) 232-0976
4. Documentation
 - a. Record any further actions taken for potential, suspect, and obvious illicit discharges
 - b. Note any discrepancies in the storm drain system maps from what is found in the field. Make sure that the maps get updated to correctly reflect actual conditions



IDDE – Tracing Source of Discharges

1. Preparation
 - a. Review map(s) showing drainage system and area contributing to location of the discharge
 - b. Bring traffic –control devices and safety equipment for entering manholes and inlet boxes
 - c. Bring water-quality screening equipment and sample containers

2. Process
 - a. Drive around the streets of the area contributing to the discharge point and look for anything that may help reveal the source of the discharge (if the source is found, skip to step c.)
 - b. From the point of discharge, check the nearest up-stream manhole or inlet box for a similar discharge.
 - i. Put on safety equipment and set up traffic controls according to MUTCD, part 6
 - ii. Remove manhole or box cover (if necessary). Make an observation of any flow present. Use water-quality screening equipment and sample containers, if needed, to determine whether the discharge is similar in nature to the discharge present below.
 - iii. Progress up the system, repeating the previous step until the source of the discharge is found or the segment of the drainage system where the discharge enters the system is isolated
 - iv. If the source is not found, yet the segment of the drainage system where the discharge enters is isolated, make arrangements to get a video with distance measurements of that segment of the drainage system to trace the source.
 1. If further investigation is needed, consider using smoke tests, dye testing, sampling for additional water quality parameters, and requesting assistance from the Davis County Health Department
 - c. Determine whether the source is an illicit discharge and if so, report according to *Spill Incident Response and Reporting Procedures* and implement *SOP – IDDE Removing Illicit Discharges*

3. Documentation
 - a. Add relevant information to *Discharge/Spill Inspection Report*
 - b. Note any discrepancies in the storm drain system maps from what is found in the field. Make sure that the maps get updated to correctly reflect actual conditions



IDDE – Removing Illicit Discharges (not associated with construction activity)

1. Preparation
 - a. Make sure reporting has been done according to *spill incident response and reporting procedures*
 - b. Begin completing a *Discharge/Spill Inspection Report*

2. Process
 - a. If the discharge is due to a sewer cross connection:
 - i. Determine the responsible party for the discharge
 - ii. Issue a Notice of Violation to the violator requiring the problem to be corrected within two weeks to avoid further enforcement action
 - b. For other discharges contact the Davis County Health Department - Environmental Division for removing the discharge and bringing enforcement action to violator
 - i. Assist county personnel as needed in determining the responsible party, providing utility information, and providing other screening or investigation information gathered regarding the discharge
 - c. Offer technical assistance to the violator; help them understand how to go about correcting the problem
 - d. Follow-up as needed to ensure that the discharge has been removed. If violator fails to remove the discharge bring criminal enforcement action
 - e. If unable to immediately contain and/or cease the discharge, record the circumstances and submit a written rationale to the Division of Water Quality (see 2010 MS4 permit 4.2.3.6)

3. Documentation
 - a. Complete *Discharge/Spill Inspection Report* and/or obtain a copy of the discharge report from the Davis County Health Department - Environmental Division
 - b. If unable to immediately contain and cease the discharge, write a rationale describing the circumstances and submit it to the Utah Division of Water Quality (e.g. for failing septic system)



INSPECTION/ENFORCEMENT – Inspecting Construction Sites

1. Preparation
 - a. Plan to inspect sites once per month (bi-weekly for hi-priority sites)
 - b. Schedule the inspection; generally notify the contractor of the inspection and schedule a time when contractor will be there
 - c. Review information about SWPPP and previous inspections that are on-file

2. Process
 - a. Use the State Inspection Form as a guide to conduct the inspection
 - b. Upon arrival at site, locate the SWPPP and review it to determine site requirements
 - c. Inspect condition of BMPs, general site cleanliness, and compliance
 - d. Take photos
 - e. Complete and certify the report; note any corrective actions needed for compliance and give the contractor a deadline for the corrective action items. Request that contractor sign the report.
 - f. Email a copy of the completed inspection report to the contractor

3. Follow-Up
 - a. Return to check corrective action items shortly after any deadline given to the contractor
 - b. Implement *SOP: INSPECTION/ENFORCEMENT – Enforcing Construction Site Requirements* as needed to ensure compliance

4. Documentation
 - a. File photos and inspection reports
 - b. Document enforcement actions taken



INSPECTION/ENFORCEMENT – Enforcing Construction Site Requirements

1. Preparation
 - a. Make sure that any problems needing corrective action have been documented
 - b. Review previous inspections, warnings given, and other enforcement actions taken

2. Process
 - a. Use these escalating enforcement actions:
 - i. Warning: give the contractor a warning to correct problems with a reasonable deadline to complete corrections. Skip this step if the problems pose a serious threat to human safety or the environment. Inspect condition of BMPs, general site cleanliness, and compliance.
 - ii. Stop-Work Order: if problems are not corrected by the deadline, or if the problem is re-occurring, issue a stop-work order (with supervisor's approval). Also provide another deadline before pursuing additional enforcement action.
 - iii. Correct Problem and Bill Contractor*: city crews can be utilized at \$500/hr (one hour minimum)
 - iv. Criminal Charges: coordinate with City Prosecutor for criminal charges

3. Follow-Up
 - a. Return to check corrective action items shortly after any deadline given to the contractor.
 - b. Take photos
 - c. Implement further escalating enforcement action as needed to ensure compliance

4. Documentation
 - a. File photos and inspection reports
 - b. Document enforcement actions taken

** Normally this action is to be used for projects where the city has leverage to collect the expenses, such projects needing final approval from the city and projects for which a storm water bond has been posted*



INSPECTION/ENFORCEMENT – Inspecting Long-Term Controls (private)

1. Preparation
 - a. Check Records; review terms of maintenance agreement (if any), information about the design and function of the control, and previous inspections that are on-file
 - b. Schedule the inspection; plan to inspect each control annually unless inspection is done by a third party, in which case inspect the control at least once every 5 years
 - c. Notify the owner of the inspection and schedule a time when owner (or owner’s representative) will be there if feasible

2. Process
 - a. Use the Long-Term Control Inspection Form as appropriate for the type of control to be inspected
 - b. Inspect condition of control according to the inspection form (whether adequately maintained, operating as designed, etc.)
 - c. Take photos
 - d. Complete the inspection report; note any corrective actions needed for compliance and give the owner a deadline for the corrective action items. If owner (or owner’s representative) is available, request that they sign the report.
 - e. Email a copy of the completed inspection report to owner

3. Follow-Up
 - a. Return to check corrective action items shortly after any deadline given to the owner
 - b. Implement *SOP: INSPECTION/ENFORCEMENT – Enforcing Long-Term Control Requirements* as needed to ensure compliance

4. Documentation
 - a. File inspection reports, photos, and notes on corrective actions performed
 - b. Document enforcement actions taken



INSPECTION/ENFORCEMENT – Inspecting Long-Term Controls (public)

1. Preparation
 - a. Check Records; review information about the design and function of the control, and previous inspections that are on-file
 - b. Schedule the inspection; plan to inspect each city-owned long-term structural control annually

2. Process
 - a. Use the Long-Term Control Inspection Form as appropriate for the type of control to be inspected
 - b. Inspect condition of control according to the inspection form (whether adequately maintained, operating as designed, etc.)
 - c. Complete the report; note any corrective actions needed and schedule these to be completed within a reasonable time.

3. Follow-Up
 - a. Return to check corrective action items shortly after scheduled time for completion
 - b. Note any corrective actions performed

4. Documentation
 - a. File inspection reports and notes on corrective actions performed



INSPECTION/ENFORCEMENT – Enforcing Long-Term Control Requirements

1. Preparation
 - a. Make sure that any problems needing corrective action have been documented
 - b. Review maintenance agreement, previous inspections, warnings given, and other enforcement actions taken

2. Process
 - a. Use these escalating enforcement actions:
 - i. Warning: give the owner a warning to correct problems with a reasonable deadline to complete corrections. Skip this step if the problems pose a serious threat to human safety or the environment.
 - ii. Notice of Deficiency: if problems are not corrected by the deadline, or if the problem is re-occurring, issue a Notice of Deficiency by certified mail or hand delivery (with supervisor's approval). Also provide another reasonable deadline before pursuing additional enforcement action.
 - iii. Correct Problem and Bill Owner: city crews can be utilized at \$500/hr (one hour minimum)
 - iv. Collection of Charges: coordinate with City Prosecutor and City Treasurer for collection of charges

3. Follow-Up
 - a. Return to check corrective action items shortly after any deadline given to the owner.
 - b. Take photos
 - c. Implement further escalating enforcement action as needed to ensure compliance

4. Documentation
 - a. File photos and inspection reports
 - b. Document enforcement actions taken



INSPECTION/ENFORCEMENT – Inspecting Maintenance and Storage Yard - Weekly

1. Preparation
 - a. Plan to inspect sites once per week;
 - b. Review information about previous weekly inspections. Notice any previous corrective action needed that has not been documented as complete.

2. Process
 - a. Use the Weekly Stormwater Inspection Form as a guide;
 - b. Inspect each item listed on the inspection form according to the standards as described on the form;
 - c. Complete the report; note any corrective actions needed.

3. Follow-Up
 - a. Schedule any necessary corrective actions to be completed within a reasonable time;

4. Documentation
 - a. File inspection report.
 - b. Note and date all corrective actions performed on the Weekly Stormwater Inspection Form.



INSPECTION/ENFORCEMENT – Inspecting Maintenance and Storage Yard - Quarterly

1. Preparation
 - a. Plan to inspect sites once per calendar quarter and schedule each inspection accordingly;
 - b. Review information about previous weekly inspections, quarterly comprehensive inspections, and quarterly visual monitoring events. Notice any previous corrective action needed that has not been documented as complete.

2. Process
 - a. Use the Drainage System Inspection Form as a guide;
 - b. Inspect each item listed on the inspection form according to the standards as described on the form;
 - c. Complete the report; note any corrective actions needed.

3. Follow-Up
 - a. Schedule any necessary corrective actions to be completed within a reasonable time;

4. Documentation
 - a. File inspection report.
 - b. Note and date all corrective actions performed on the Drainage System Inspection Form.



INSPECTION/ENFORCEMENT – Quarterly Visual Monitoring for Maintenance Yard

5. Preparation
 - a. Plan to conduct visual monitoring once per calendar quarter;
 - b. Watch the weather; visual monitoring should be done within the first 30 minutes of when a storm event (> 0.1” precipitation) produces runoff, yet not within 72 hours of a previous storm that produced runoff; plan to perform the visual monitoring from these storms that occur during regular working hours.
 - c. Know the sampling locations which are shown in the SWPPP – Site Map Appendices.

6. Process
 - a. Use the Visual Monitoring Requirements form as a guide;
 - b. Collect enough of a sample into an open, clear container to get a good identification of color, clarity, odor, and other parameters on the form;
 - c. Complete the report including the assessment portion.

7. Follow-Up
 - a. Schedule any necessary corrective actions to be completed within a reasonable time;

8. Documentation
 - a. File completed visual monitoring report;
 - b. Note and date all corrective actions performed in the Assessment portion of the visual monitoring form.



PARKS – Chemical Application Pesticides, Herbicides, Fertilizers

1. Preparation
 - a. Be certified; only those certified in landscape chemical use may apply the pesticide, herbicide, or fertilizer
 - b. Calibrate chemical application equipment to avoid excessive application.
 - c. Read the label; time and apply the application of chemical to coincide with the manufacturer's recommendation
 - d. Know the weather conditions. Do not use the chemicals if rain is expected. Apply only when wind speeds are low (less than 5 mph).

2. Process
 - a. Always follow the manufacturer's recommendations for mixing, application and disposal. ("Read the Label").
 - b. Do not mix or prepare chemicals for application near storm drains, preferably mix inside a protected area with impervious secondary containment (preferably indoors) so that spills or leaks will not contact soils.
 - c. Employ techniques to minimize off-target application (e.g. spray drift, over broadcasting.) of pesticides, herbicides and fertilizers.

3. Clean-up
 - a. Sweep pavements or sidewalks where solid chemicals have fallen back onto grassy areas before applying irrigation water
 - b. Triple rinse containers, and use rinse water as product
 - c. Place unused chemical in designated locked storage room

4. Documentation
 - a. Keep copies of MSD sheets for all pesticides, fertilizers and other hazardous products used.
 - b. Record pesticide application activities.



PARKS – Mowing and Trimming

1. Preparation
 - a. Make sure equipment is properly maintained; schedule preventative maintenance

2. Process
 - a. Mow and trim such that clippings are blown back onto lawn with the equipment (where possible)
 - b. Blow clippings from pavement back on to grass areas

3. Clean-up
 - a. Periodically scrape/brush dry spoils from mowers – sweep up the scrapings and dispose in waste bin or according to SOP: GENERAL – Debris Disposal
 - b. Wash equipment according to SOP: General – Vehicle and Equipment Washing
 - c. Check equipment for any fluid leaks or damage needing repair



PARKS – Planting Vegetation (Starters)

1. Preparation
 - a. Call the Blue Stakes Center of Utah (Dial 811 or 1-800-662-4111) at least 2 working days before any digging will be done to reveal the location of any underground utilities
 - b. Decide where any spoils will be taken.

2. Process
 - a. Dig holes; place spoils near the hole where they may easily be placed back around roots. Avoid placing spoils in the gutter.
 - b. Bring each plant near the edge of the hole dug for it.
 - c. Check the depth of the hole, and adjust the depth if necessary. The depth of the hole for a tree should be as deep as the root ball, so that the top of the root ball is level with the top of the hole.
 - d. Carefully remove pot or burlap.
 - e. Place the plant in the hole.
 - f. Backfill the hole with existing spoils, compost, and a little fertilizer if desired. Do not use excessive amendments.
 - g. Water the plant.
 - h. Stake the plant, if necessary, to stabilize it.

3. Clean-up
 - a. Move any extra spoils into truck or trailer. Place the spoils on a tarp if there is likelihood that some of the dirt would be lost through openings in the bed.
 - b. Sweep dirt from surrounding pavement(s) into the planter area
 - c. Transport spoils to their designated fill or disposal area.



PARKS – Planting Vegetation (Seeds)

1. Preparation
 - a. Call the Blue Stakes Center of Utah (Dial 811 or 1-800-662-4111) at least 2 working days before any digging will be done to reveal the location of any underground utilities.
 - b. Decide on the application rate, method, water source, and ensure adequate materials are in possession.
 - c. Grade and prepare the soil to receive the seed. Place any extra soil in a convenient location to collect.

2. Process
 - a. Place the seed and any cover using the pre-determined application method (and rate).
 - b. Lightly moisten the seed.

3. Clean-up
 - a. Move any extra spoils into truck or trailer. Place the spoils on a tarp if there is likelihood that some of the dirt would be lost through openings in the bed.
 - b. Sweep dirt, seed, and any cover material from surrounding pavement(s) into the planter area
 - c. Transport spoils to their designated fill or disposal area.



STREETS/STORM DRAIN – Cleaning Catch Basins and Drainage Pipe

1. Preparation:
 - a. Plan cleaning route(s) that progresses down the system (if applicable)
 - b. Set up traffic controls, as necessary
 - c. Clean sediment and trash from grate.

2. Process
 - a. Remove grate/manhole cover
 - b. Check to make sure grate, frame and box is in good repair
 - c. Clean sediment and debris from the box, manhole, and/or pipe
 - d. Replace cover; make sure it is secure

3. Clean-up
 - a. Remove traffic controls
 - b. Dispose of debris and waste water removed according to SOP: GENERAL – Debris Disposal

4. Documentation
 - a. Record catch basins cleaned in storm drain maintenance log
 - b. Note any apparent problems and report them to superintendent



STREETS/STORM DRAIN – Curb Painting

1. Preparation
 - a. Calculate the amount of paint required for the job
 - b. Set up traffic and pedestrian control, as necessary
 - c. Prepare surfaces to be painted using dry methods (e.g. scraping, brushing)

2. Process
 - a. Use drop clothes in areas of mixing paints and painting
 - b. Paint curb carefully to prevent over-spraying of paints
 - c. Store latex paint rollers and brushes in air tight bags to be reused later with the same color.
 - d. Have available absorbent material ready in case of an accidental paint spill

3. Clean-up
 - a. Paint out brushes and rollers as much as possible. Squeeze excess paint from brushes and rollers back into the containers prior to cleaning them.
 - b. Pour excess paint from trays and buckets back into the paint can containers and wipes with cloth or paper towels. Dispose of the towels according to the recommendations on the paint being used.
 - c. Remove traffic and pedestrian controls at appropriate times
 - d. Rinse water-based paint brushes in the sink after pre-cleaning. Never pour excess paint or wastewater from cleanup of paint in the storm drain.
 - e. Clean applicators of oil based paints with paint thinner using buckets; never clean oil based brushes in a sink or over a storm drain. Store used solvents in closed buckets indoors. Dispose at a hazardous waste disposal facility.
 - i. Contact: Veolia Environmental Services
709 N. Taylor Way Suite 1
North Salt Lake, UT 84054, US
Manager: Bob Wally (801) 232-0976



STREETS/STORM DRAIN – Detention Pond Cleaning

1. Preparation:
 - a. Plan pond cleaning activities to occur during dry weather; do not clean detention ponds during wet weather unless there is an urgent need
 - b. Remove sediment and trash from grates.
 - c. Check to make sure grates and other features are in good working order

2. Process
 - a. Clean debris and accumulated sediment from pond in a manner that prevents sediment and debris from going downstream
 - i. for Bountiful's typical dry ponds, this means performing the work during dry weather
 - b. Load sediment and debris into a truck for disposal

3. Clean-up
 - a. After cleaning basins, clean off any pavement and loading areas
 - b. Dispose of sediment and debris according to SOP: GENERAL – Debris Disposal

4. Documentation
 - a. Record detention ponds cleaned in storm drain maintenance log
 - b. Note any apparent problems and report them to superintendent



STREETS/STORM DRAIN – Slurry Seal

1. Preparation
 - a. Check that drainage problems have been addressed, and that any potholes have been patched
 - b. Plan to conduct slurry seal activities during dry weather; reschedule if precipitation is anticipated
 - c. Notify residents at least one day in advance of the planned maintenance
 - d. Remove weeds from the road
 - e. Sweep pavement surface (according to SOP: STREETS/STORM DRAIN – Street Sweeping) and allow it to dry
 - f. Set up traffic controls according to MUTCD, part 6
 - g. Cover Manhole and valve covers, and mark their locations on the curb

2. Process
 - a. Apply slurry material uniformly*
 - b. Do not allow slurry material to run into the gutter

3. Clean-up
 - a. Remove any excess emulsion and spill materials are removed from the site and disposed of according to SOP: GENERAL – Debris Disposal
 - b. Remove traffic controls

4. Documentation
 - a. Make a record of the work done
 - i. Include name of street/parking lot and amount of surface treated

*Select slurry and place slurry seal material according to APWA standards



STREETS/STORM DRAIN – Asphalt Paving

1. Preparation
 - a. Plan to pave when weather will be at least 50 degrees F; during dry weather
 - b. Make sure surface is pre-treated as follows:
 - i. large cracks are sealed
 - ii. alligator cracks and potholes are removed and patched
 - iii. rutted areas are milled level
 - c. Sweep pavement surface (according to *SOP: STREETS/STORM DRAIN – Street Sweeping*) and allow it to dry
 - d. Mark locations of manhole and valve covers on the curb
 - e. Set up traffic controls according to MUTCD, part 6
 - f. Apply uniform tack coat on surface
2. Process
 - a. Place hot mix asphalt uniformly to surface*
 - b. If raising manhole and valve lids during paving, carefully remove the material from the lid before taking the lid off of the frame, and carefully remove lid to avoid spilling the material into the manhole or valve box
 - c. After the riser is in place, carefully replace the manhole lid without pushing asphalt material into the manhole or valve box.
 - d. Compact the asphalt to minimum 95% of Marshall density*
3. Clean-up
 - a. Remove excess asphalt material from surface at start and stop points with shovels
 - b. Remove Traffic Control
 - c. Clean gutters from loose material
 - d. Dispose of excess asphalt according to *SOP: GENERAL – Debris Disposal*
 - e. Clean equipment according to *SOP: GENERAL – Vehicle/Equipment Washing*
 - f. Return within 2 days to sweep per *SOP: STREETS/STORM DRAIN – Street Sweeping*

*Select, place, and compact hot mix asphalt according to APWA standards



STREETS/STORM DRAIN – Crack Seal

1. Preparation
 - a. Plan to conduct slurry seal activities during dry weather; reschedule if precipitation is anticipated
 - b. Set up traffic controls according to MUTCD, part 6
 - c. Remove weeds from the road
 - d. Air-blast the cracks to remove sediment and moisture from the cracks

2. Process
 - a. Maintain temperature and apply crack seal according to manufacturer's specification

3. Clean-up
 - a. Remove excessive sealant
 - b. Remove Traffic Control
 - c. Initiate the self-cleaning process on the crack seal equipment

4. Documentation
 - a. Make a record of the work done



STREETS/STORM DRAIN – Concrete Work

1. Preparation
 - a. Identify a location, near the worksite, for the concrete truck to washout and to clean tools; the washout location must not allow the washout to runoff into the gutter
 - i. (backhoe bucket is an acceptable location)
 - b. Plan to conduct concrete work during dry weather conditions; do not place concrete if precipitation is expected before concrete is expected to set up
 - c. Set up traffic controls according to MUTCD, part 6

2. Process
 - a. Remove old concrete, soil, and any other spoils; load them into a truck to be hauled away
 - b. Place and compact base material*
 - c. Form concrete to be placed**
 - d. Place concrete**

3. Clean-up
 - a. Direct concrete truck driver to washout concrete truck at pre-determined washout location
 - b. Clean finishing tools at pre-determined washout location or on lawn
 - c. Clean street, gutters, and sidewalk from loose soil
 - d. Remove traffic control
 - e. Dispose of material removed and concrete wash according to SOP: GENERAL – Debris Disposal
 - f. For grinding activities: concrete chips and dust is to be swept up, placed in a garbage sack, and removed from the site.

4. Documentation
 - a. Record work done using the completed work form

*Select, place, and compact base according to APWA and Bountiful City specifications

**Select, form, place, and cure concrete according to APWA and Bountiful City specifications



STREETS/STORM DRAIN – Snow Removal and De-icing

1. Preparation
 - a. Store de-icing material under a covered storage area
 - b. Understand city policy to keep roads open and free of snow or ice pack from any storm, in a way that uses a minimum amount of salt without compromising motorists' safety
 - c. Wash out vehicles (if necessary) in approved washout area according to SOP – GENERAL Vehicle and Equipment Washing
 - d. Calibrate spreaders to minimize amount of de-icing material used and still be effective

2. Process
 - a. Load material into trucks minimizing spillage
 - b. Distribute the minimum amount of de-icing material to be effective on roads
 - c. Park trucks with de-icing material inside when possible

3. Cleanup
 - a. Sweep up all spilled de-icing material around loading area
 - b. Clean out trucks after snow removal duty according to SOP: GENERAL – Vehicle and Equipment Washing
 - c. Sweep up residual from streets when weather permits



STREETS/STORM DRAIN – Street Sweeping

4. Preparation
 - a. Keep street cleaning equipment in good condition by performing preventative maintenance and services
 - b. Determine the route to be cleaned

5. Process
 - a. Drive street sweeper safely and pickup debris

6. Clean-up
 - a. Dispose of the collected waste according to SOP: GENERAL – Debris Disposal
 - b. Clean the street sweepers according to SOP: GENERAL – Vehicle and Equipment Washing

7. Documentation
 - a. Record streets swept and parking lots swept in storm drain maintenance log



WATER – Planned Waterline Excavation Repair/Replacement

1. Preparation
 - a. Call the Blue Stakes Center of Utah at least 2 working days before any digging will be done, to reveal the location of underground utilities: 811 or 1-800-662-4111
 - b. Set up temporary traffic control - see Part VI of the MUTCD
 - c. Determine whether there will be a discharge and where the discharge will flow
 - d. Place inlet protection per *SOP: GENERAL – Inlet Protection*
 - e. Saw cut pavement in area needing excavation
 - f. Clean loose material* from gutters leading to receiving inlet
 - g. Isolate waterline to be worked on by turning off valves

2. Process
 - a. Drain line as much as possible from a hydrant or drain valve
 - b. Direct any discharge to protected inlet (determined in step 1 c.&d.),
 - c. Backfill and compact excavation
 - i. Remove as much saturated soil as feasible
 - ii. Place and compact backfill in lifts no deeper than one foot
 - iii. Place and compact top lift to make it blend with surrounding pavement

3. Clean up
 - a. Clean up area around excavation
 - b. Clean up any material caught by inlet protection
 - c. Remove inlet protection
 - d. Haul off excess soil and debris according to *SOP: GENERAL – Debris Disposal*

4. Documentation
 - a. Complete Work Order
 - b. Complete Excavation Permit
 - c. Report any pavement patching needed to the Streets Dept., and any Concrete replacement necessary to the Engineering Dept.



WATER – Emergency Waterline Excavation Repair/Replacement

1. Preparation
 - a. Isolate waterline to be worked on by turning off valves
 - b. Make sure service trucks are equipped inlet protection materials such as wattles or gravel bags
 - c. Set up temporary traffic control - see Part VI of the MUTCD
 - d. Call the Blue Stakes Center of Utah to notify them of the need to dig for an emergency repair: 811 or 1-800-662-4111

2. Process
 - a. Drain line as much as possible from a hydrant or drain valve
 - b. Inspect flow path of discharged water
 - c. Place inlet protection per *SOP: GENERAL – Inlet Protection*
 - d. Follow appropriate repair procedures in making the repair.
 - e. Backfill and compact excavation
 - i. Remove as much saturated soil as feasible
 - ii. Place and compact backfill in lifts no deeper than one foot
 - iii. Place and compact top lift to make it blend with surrounding pavement
 - f. Haul excess soils according to *SOP: GENERAL – Debris Disposal*

3. Clean-up
 - a. Repair eroded areas as needed
 - b. Clean up loose material from apparent tracking or spills along travel path of trucked material
 - c. Clean up any material caught by inlet protection
 - d. Remove inlet protection
 - e. Haul off excess soil and debris according to *SOP: GENERAL – Debris Disposal*

4. Documentation
 - a. Complete report for time spent on the job by crew members, equipment, and materials used
 - b. Report any pavement patching needed to the Streets Dept., and any Concrete replacement necessary to the Engineering Dept.



WATER – Waterline Flushing for Routine Maintenance

1. Preparation
 - a. Determine flow path of discharge to inlet of waterway
 - b. Clean flow path
 - c. Place inlet protection per *SOP: GENERAL – Inlet Protection*

2. Process
 - a. If it appears that flushing straight from the hydrant or blow-off valve may cause a problem (such as erosion, or splash on vehicles), connect a hose or diffuser to the discharge fitting
 - b. Turn on the valve to flush the water, and leave it on until enough time has passed to allow adequate flushing of the line to occur
 - c. Turn off the water

3. Clean-up
 - a. Clean up any material caught by inlet protection and dispose according to *SOP: GENERAL – Debris Disposal*
 - b. Remove inlet protection



WATER – Waterline Flushing after Construction/System Disinfection with Discharge to Storm Drain

1. Preparation
 - a. Determine chlorine content of discharged water for utilizing appropriate de-chlorination equipment
 - b. Determine flow path of discharge
 - c. Clean the flow path
 - d. Place inlet protection per *SOP: GENERAL – Inlet Protection*

2. Process
 - a. Place de-chlorination equipment on point of discharge according to manufacturer's recommendation
 - b. If it appears that flushing straight from the hydrant or blow-off valve may cause a problem (such as erosion, or splash on vehicles), connect a hose or diffuser to the discharge fitting
 - c. Allow water to run until line is adequately flushed, then turn off and remove de-chlorination equipment
 - d. Have a sample taken for a chlorine residual test

3. Clean-up
 - a. Clean up any material caught by inlet protection and dispose according to *SOP: GENERAL – Debris Disposal*
 - b. Remove inlet protection
 - c. Remove equipment from flush point

4. Documentation
 - a. Record result of chlorine-residual test



WATER – Waterline Flushing after Construction/System Disinfection with Discharge Collected and Hauled to Off-Site Location

1. Preparation
 - a. Determine appropriate location for application of the chlorinated water
 - b. Estimate the amount of water to be flushed, and select tanker to use and number of trips that will be necessary

2. Process
 - a. Flush to tanker
 - b. Haul the chlorinated water to the pre-selected location
 - c. Apply the chlorinated water to the soil such that the water does not run off of the site
 - d. Have a sample taken for a chlorine residual test

3. Documentation
 - a. Record result of chlorine-residual test



WATER – Chemical Handling/Transporting and Spill Response

1. Preparation
 - a. Understand MSDS for handling and storage of product
 - b. Determine best location to handle product at destination site
 - c. Have necessary containment and spill kits at handling place, suitable for the material to be handled

2. Process
 - a. Make connections
 - b. Begin transfer process
 - c. Discontinue operations if spill or leaking occurs, and repair before continuing
 - d. Disconnect and store handling equipment

3. Clean-up
 - a. Respond to and report spills according to procedure: *SPILL INCIDENT – Response and Reporting*
 - b. Ensure that any spills are cleaned up. If spilled material is hazardous, it must be handled by a licensed hazardous waste handler and disposed at a hazardous waste disposal site
 - i. Contact: Veolia Environmental Services
709 N. Taylor Way Suite 1
North Salt Lake, UT 84054, US
Manager: Bob Wally (801) 232-0976

