Appendix L – Pollution Prevention/Good Housekeeping:

Standard Operating Procedures

STANDARD OPERATING PROCEDURES

Cache County Storm Water Coalition

Created: February 2010
Last Revision: July 13, 2010

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CONSTRUCTION – Pre-Construction SWPPP

Description: This section contains information and guidelines for protecting and preparing a construction site with BMPs and a SWPPP.

Applicability: Protecting construction sites and surrounding runoff areas prior to construction.

1. Preparation

    a. Conduct a pre-construction review of site and planed operations.

2. Process

    a. Plan which BMPs to implement during construction to manage runoff created from site.

    b. Incorporate in the SWPPP a set of procedures that will protect potential water quality impacts.

    c. Incorporate into the SWPPP opportunities for use of low impact design (LID) and green infrastructure when opportunities exist.

3. Clean-up

    a. None.

4. Documentation

    a. Record all construction sites that disturb greater than or equal to one acre.

    b. Keep any notes or comments of any problems.

CONSTRUCTION – During and Post Construction Site Inspection

Description: This section contains information and guidelines for protecting a construction site with BMPs and a SWPPP during and after the construction of a project.

Applicability: Protecting construction sites and surrounding runoff areas.

1. Preparation

    a. Incorporate a SWPPP in any construction project containing more than one acre in area.

2. Process

    a. Inspect construction site and surrounding area regularly for possible storm drain contamination.

    b. Follow SWPPP guidelines and checklists to verify that standards are met.

3. Clean-up

    a. Remove inlet protection.

    b. Clean flow paths.

4. Documentation

    a. Keep any notes or comments of any problems.

ILLICIT DISCHARGE – Tracing the Source of Illicit Discharge

Description: This section contains information and guidelines for identifying the source of illicit discharge into storm drain system. This also includes characterizing the nature of, and potential public/environmental threat posed by the illicit discharge.

Applicability: Identifying the source of Illicit Discharge.

1. Preparation

    a. Become familiar with the surrounding water bodies and watersheds that could become contaminated.

    b. Look for areas that might have potential to have illicit discharge.(industrial areas or older neighborhoods)

2. Process

    a. Smoke test, TV, or dye test storm drain system to trace potential or difficult to detect illicit discharges.

    b. Determine the type of illicit discharge by collecting and analyzing samples of the water.

    c. Characterize the type of illicit discharge from analyzed samples or from source.

    d. Control possible discharge during dry weather with the use of sandbags or dams.

3. Clean-up

    a. Clean any equipment used in performing detection of illicit discharge.

4. Documentation

    a. Document beginning of work, completion of work and any cleanup items performed on site.

    b. Keep logs of past and existing illicit discharges.

    c. Record the area and amount of illicit discharge.

    d. Keep any notes or comments of any problems.

ILLICIT DISCHARGE – Removing Illicit Connections and Discharges

Description: This section contains information and guidelines for stopping illicit discharges into storm drain system. This also includes characterizing the nature of, and potential public/environmental threat posed by the illicit discharge.

Applicability: Removal/Ceasing of Illicit Discharges.

1. Preparation
    a. Follow IDDE inspection schedule to check for any illicit discharges in the community.
    b. Log inspections on the IDDE inspection checklist.
    c. Locate illicit discharge.

2. Process
    a. Contact Bear River Health Department at 435-792-6500.
    b. Notify violator of offending discharge and give direction to correct the problem.
    c. Work with violator by providing technical assistance.
    d. Perform follow-up inspections and enforce legal actions if discharge is not eliminated.
    e. Elevate the enforcement action as necessary to obtain results.

3. Clean-up
    a. Stabilize all disturbed soils and surfaces.
    b. Haul all debris, sediment or contaminated soil removed from area to approved dumping site.

4. Documentation
    a. Document beginning of work, completion of work and any cleanup items performed on site.
    b. Keep logs of past and existing illicit discharges.
    c. Record the area and amount of illicit discharge.
    d. Keep any notes or comments of any problems.

MUNICIPAL – Provide Training to Employees

Description: This section informs municipalities to train employees who are likely to work/impact storm water quality.

Applicability: Training employees to protect storm water.

1. Preparation

    a. Map out storm drain system so that each employee can be aware of the network.

    b. Implement an operations and maintenance program (O & M).

2. Process

    a. Train employees on how to reduce pollutant run off from operated facilities and operations.

    b. Train employees who have primary construction operation, or maintenance job roles about standard operating procedures.

    c. Keep and inventory of operated facilities and storm water controls.

    d. Provide follow-up training as needed to address changes and procedures.

3. Clean-up

    a. None.

4. Documentation

    a. Keep record of those who have been trained

    b. Keep any notes or comments of any problems.

MUNICIPAL – Weekly and Quarterly Inspections

Description: This section informs municipalities about the types of inspections that need to be done on a regular basis.

Applicability: Inspection of storm water and drainage system.

1. Preparation

    a. Map out existing storm drain system.

    b. Watch for possible storm drain system contaminates.

2. Process

    a. Perform weekly visual inspections to minimize the potential for pollutants.

    b. Perform quarterly comprehensive inspections of "high priority" facilities, including all storm water controls, waist storage areas, dumpsters, vehicle and equipment maintenances areas, and similar pollutant generating areas.

    c. Perform quarterly visual observations of storm water discharge; by looking for any possible contaminants to the storm drain system.

    d. Look for evidence of spills and immediately clean them to prevent contact with run off.

3. Clean-up

    a. None.

4. Documentation

    a. Keep any notes or comments of any problems areas.

MUNICIPAL – Flood Control and Water Quality Impacts

Description: This section informs municipalities about assessing the water quality impacts in the design of new flood management structural controls.

Applicability: Installing new flood management devices.

1. Preparation

    a. Assess existing flood management devices to determine whether changes or additions should be made to improve water quality.

2. Process

    a. Incorporate in the SWPPP a set of procedures that will protect potential water quality impacts.

    b. Incorporate into the SWPPP opportunities for use of low impact design (LID) and green infrastructure when opportunities exist.

    c. Consider controls that can be used to minimize the impacts to site water quality and hydrology while still meeting project objectives.

3. Clean-up

    a. None.

4. Documentation

    a. Keep log of actions performed including date and individuals involved.

    b. Record the amount of materials removed or imported.

    c. Keep any notes or comments of any problems.

    d. Use “before” and “after” photographs to document activities as applicable.

MUNICIPAL – Vehicle Maintenance and Repair Activities

Description: This section is to inform municipalities about the protection of storm drain system from vehicles or equipment that may leak or drip petroleum products and that may also collect large amounts of dirt.

Applicability: Storing and washing of vehicles and equipment.

1. Preparation

    a. Store vehicles indoors where possible and in an area with no floor drains that lead to storm water system.

    b. Watch for leaking equipment and vehicles.

2. Process

    a. Use drip pans to collect leaking fluids from equipment or vehicles.

    b. Repair leaking vehicles as soon as possible to protect storm drain system.

    c. Wash vehicles and equipment in dedicated areas.

3. Clean-up

    a. Properly clean any areas that have been polluted by leaking vehicles.

    b. Discharge all wash water containing contaminates (degreasers, acids, and oil bases) to a treatment facility or sanitary sewer if it meets treatment plant standards.

    c. Do not store or wash vehicles over storm drain inlets.

4. Documentation

    a. Record location where vehicles and equipment were leaking.

    b. Keep any notes or comments of any problems.

PARKS – Chemical Application Pesticides, Herbicides, Fertilizers

Description: This section contains information on the application of Pesticides, Herbicides and Fertilizers to Parks. Including how to prepare, take care, and disposal of chemical products.

Applicability: Using chemicals in city parks.

1. Preparation

    a. Calibrate fertilizer and pesticide application equipment to avoid excessive application.

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

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

    d. Know the weather conditions. Do not use pesticides if rain is expected. Apply pesticides or herbicides 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 pesticides for application near storm drains,.

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

3. Clean-up

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

    b. Triple rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.

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

4. Documentation

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

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

PARKS – Mowing and Trimming

Description: This section contains information on mowing and trimming around drainage structures and the proper cleaning of mowing and trimming equipment.

Applicability: Mowing and trimming in city parks.

1. Preparation

    a. Locate all storm drain collection structures and inlets in the right-of-way.

2. Process

    a. Install temporary catch basin protection on affected basins

    b. Mow in a manner to minimize clippings blown toward collection structures inlets and water courses.

3. Clean-up

    a. Scraped and brush mowers at the shop – Sweep dry spoils and dispose at approved facilities.

    b. Wash equipment in approved wash station

4. Documentation

    None.

PARKS – Planting Vegetation.

Description: This section contains information on the planting of within parks and rights-of-way. This also includes cleaning of the area and how to dispose of excess soil.

Applicability: Planting in Parks and rights-of-way.

1. Preparation

   a. Call the Blue Stakes Center of Utah at least 2 working days before any digging will be performed, to reveal the location of any underground utilities.

   b. Dial 811 or 1-800-662-4111.

   c. Determine 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 or areas that may drain into drainage ways

   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 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 a 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 –Seeding

Description: This section contains information on the seeding of areas in parks and rights-of-way. This also includes cleaning of the area and how to dispose of excess soil.

Applicability: Planting in Parks and Rights-of-way.

1. Preparation

    a. Call the Blue Stakes Center of Utah at least 2 working days before any digging or grading will be done, to reveal the location of any underground utilities.

    b. Dial 811 or 1-800-662-4111

    c. Decide on the application rate, method, water source, and ensure adequate materials are in possession.

    d. 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.

    c. Adjust watering rates to minimize runoff from seeded area.

    d. Monitor site for erosion. Correct as needed.

3. Clean-up

    a. Move any extra spoils into truck or trailer. Place the spoils on a tarp if there is a 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.

4. Documentation

    a. None.

STREETS/STORM DRAIN – Catch Basins

Description: This section contains information on the cleaning of catch basins in the storm drain system. This includes the processes of disposal of excess waste and the record keeping of the amounts of waste collected.

Applicability: Cleaning catch basins or storm drains.

1. Preparation:
    a. Clean off sediment and trash off grate.
    b. Do visual inspection on outside of grate.
    c. Make sure nothing needs to be replaced.
    d. Do inside visual inspection to see what needs to be cleaned.

2. Process
    a. Clean catch basin using manual or mechanical means.
    b. For manual means, place removed material in a location protected from potential runoff.
    c. Place spoils in vehicle for transport to disposal area.
    d. Dispose of spoils in an approved location for dewatering if necessary.
    e. For mechanical cleaning use a high powered vac truck to removed sediment. When sediment is removed use a high pressure washer to clean any other sediment out of catch basin.
    f. After catch basin is clean, send the rodder of the vac truck downstream to clean pipe and pull back sediment that might have moved down stream of the catch basin.

3. Clean-up
    a. When vehicle is full of spoils take them to a contained area for drying.
    b. After drying, put it into a dump truck and take it to the landfill.

4. Documentation

   a. Keep logs of the date and number of catch basins cleaned. Record employees involved with the activity.

   b. Record the estimated amount of waste collected from each catch basin.

   c. Keep any notes or comments of any problems.

STREETS/STORM DRAIN – Curb Painting

Description: This section contains information on the painting of curbs and how to protect the drainage system from hazardous wastes. The use of BMP's in case of accidents and spills is recommended. This also includes the processes of disposal, clean up, and record keeping of any paint entering into the storm drain system.

Applicability: Curb Surface painting.

1. Preparation
    a. Calculate the amount of paint required for the job
    b. Use water based paints if possible.
    c. Determine whether the wastes will be hazardous or not and the required proper disposal of said wastes
    d. Determine locations of storm drain inlets and sewer inlets that may need to be protected. If possible, prepare surfaces to be painted without generating wastewater; eg. Use sandblasting and or scraping.
    e. If using a pressure washer to remove loose paint, place filter fabric or containment devices at entrances to storm drains or natural waterways to collect materials. (i.e. place geotextile beneath catch basin grates, use curb dyke)
    f. Use a citrus-based paint remover whenever possible, less toxic than chemical strippers
2. Process
    a. Paint curb.
    b. Prevent over-spraying of paints and/or excessive sandblasting
    c. Use drip pans and drop clothes in areas of mixing paints and painting
    d. Store latex paint rollers and brushes in air tight bags to be reused later with the same color.
    e. Have available absorbent material and other BMP's ready for 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 wipe with cloth or paper towels. Dispose of the towels according to the recommendations on the paint being used.

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

d. Cleanup oil based paints with paint thinner. Never clean oil based brushes in a sink or over a storm drain. Filter solvents for reuse if possible and/or store in approved drum for recycling.

4. Documentation

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

STREETS/STORM DRAIN – Culvert and Storm Water Pipe Cleaning

Description: This section contains information on the cleaning of storm drain culverts and pipes. This also includes what methods to use to remove sediment and debris from the structure. A record keeping procedure is also outlined for tracking the cleaning process.

Applicability: Cleaning of Culverts and Pipes.

1. Preparation:

   a. Clean sediment and trash off inlet to culvert/storm water pipe.

   b. If possible do visual inspection of inside of culvert/storm water pipe.

   c. Look for cracks, missing or broken pieces in the walls/sides of structure.

   d. Do inside visual inspection to see what needs to be cleaned.

2. Process

   a. Clean using a high powered vac truck, cleaning the sides of the structure and sucking out sediment on the bottom.

   b. Send high powered hose down culvert and pull back any sediment.

   c. Clean inlets and outlets.

   d. Move truck down to next storm drain.

3. Clean-up

   a. When vac truck is full of sediment take it to _____ to dump all the sediment out of the truck into a dry pond.

   b. When evaporates are dry, clean it up with a backhoe, put it into a dump truck and take it to the landfill.

4. Documentation

   a. Keep logs of culverts/storm water pipes wells cleaned.

   b. Record the amount of waste collected.

   c. Keep any notes or comments of any problems.

STREETS/STORM DRAIN – Sumps and Injection Wells (Includes Underground Storm Water Detention Structures)

Description: This section contains information on the cleaning of storm drain sumps and injection wells. This also includes what methods to use to remove sediment and debris from the structures. A record keeping procedure is also outlined for tracking the cleaning process.

Applicability: Cleaning of Sumps and Injection Wells.

1. Preparation:

   a. Clean sediment and trash off inlet to sump/injection well.

   b. Determine how water is supposed to drain from the structure and assess the ability of the structure to allow water to drain as designed.

   c. If possible do visual inspection of inside of sump/injection well.

   d. Look for cracks, missing or broken pieces in the walls/sides of structure.

   e. Do inside visual inspection to see what needs to be cleaned.

2. Process

   a. Clean using a high powered vac truck, cleaning the sides of the structure and sucking out sediment on the bottom.

   b. Remove fine sediments that might inhibit the drainage of water if the structure is designed such that the water drains out the bottom.

   c. Clean those places where to water drains if the structure is designed to drain out the sides of the sump/injection well.

   d. Clean inlets and overflow outlets.

3. Clean-up

   a. When vac truck is full of sediment take it to _____ to dump all the sediment out of the truck into a dry pond.

   b. When evaporates are dry, clean it up with a backhoe, put it into a dump truck and take it to the landfill.

4. Documentation

   a. Keep logs of culverts/storm water pipes wells cleaned.

   b. Record the amount of waste collected.

   c. Keep any notes or comments of any problems.

STREETS/STORM DRAIN – Detention Ponds

Description: This section contains information on the maintenance and cleaning of storm drain detention ponds and structures. This also includes what methods to use to remove sediment and debris from the structure. A record keeping process is also outlined for maintenance.

Applicability: Maintenance of detention structures.

1. Preparation:

    a. Remove any sediment and trash from grates.

    b. Do a visual inspection to make sure grates are in good shape and everything is in good working order.

    c. Pull grates, inspect inside of structures/boxes/pipes.

2. Process

    a. Provide outlet protection where feasible to minimize the amount of debris that might leave basin during cleaning process.

    b. If necessary, clean basin by using backhoe to remove silt and sediment off the bottom

    c. Place all sediment into a dump truck.

    d. Clean structures as described for in cleaning catch basins SOP.

3. Clean-up

    a. Haul and dump sediment at the landfill.

4. Documentation

    a. Keep logs of number of detention basins cleaned including date, estimated quantity of material, individuals involved in cleaning, and a description of the type of debris removed.

    b. Record the estimated amount of waste collected.

    c. Keep any notes or comments of any problems.

STREETS/STORM DRAIN – Creek Maintenance

Description: This section contains information on the maintenance and preservation of natural water courses including creeks and streams. This also includes identifying what maintenance needs to be done and the method of how it will be accomplished. Record keeping is necessary in stream maintenance.

Applicability: Maintaining any creek or stream.

1. Preparation

   a. Monitor streams on a regular basis (Monthly).

   b. Check culverts and crossings after every storm or runoff event.

   c. Maintain access to stream channels wherever possible.

   d. Identify areas requiring maintenance.

   e. Determine method of maintenance that will be least damaging to the channel.

   f. Determine what manpower or equipment will be required.

   g. Obtain necessary permits as required by the Army Corp. of Engineers or State Engineers Office.

   h. Identify access and easements to area requiring maintenance.

2. Process

   a. Follow requirements of permits as applicable.

   b. Use techniques to minimize disruption to the stream bank or channel

   c. Install clean materials free of pollutants and contaminants.

   d. Place removed materials in an area upland of the water course to prevent them from re-entering the channel.

3. Clean-up

   a. Stabilize all disturbed soils.

   b. Haul all debris or sediment removed from area to approved dumping site.

c. Remove all tracking from paved surfaces near maintenance site, if applicable.

4. Documentation

a. Keep log of actions performed including date and individuals involved.

b. Record the amount of materials removed or imported.

c. Keep any notes or comments of any problems.

d. Use "before" and "after" photographs to document activities as applicable.

STREETS/STORM DRAIN – Canal / Ditch Maintenance

Description: This section contains information on the maintenance and preservation of canals. This also includes identifying what maintenance needs to be done and the method of how it will be accomplished. Record keeping is necessary in canal maintenance.

Applicability: Maintaining canal or irrigation ditch.

1. Preparation

    a. Monitor canals on a regular basis (Monthly).

    b. Establish maintenance responsibilities with irrigation company boards and operators.

    c. Create a maintenance schedule with the irrigation company.

    d. Identify areas requiring maintenance with irrigation company annually at a minimum.

    e. Identify access and easements to canal area.

    f. Establish procedures for removal of material from canal maintenance. Including stockpiling of material removed or hauling methods.

    g. Check canal/ditch crossings on schedule, including during and after storm events.

    h. Determine what man power or equipment will be required.

2. Process

    a. Perform maintenance as outlined in agreement with irrigation company

    b. Install clean materials free of pollutants and contaminants.

    c. Place removed materials in an area upland of the watercourse to prevent them from re-entering the channel.

    d. Haul material away as outlined in agreements with irrigation company.

3. Clean-up

    a. Stabilize all disturbed soils.

    b. Haul all debris or sediment removed from area to approved dumping site.

    c. Remove all tracking from paved surfaces near maintenance site, if applicable.

4. Documentation

   a. Keep log of actions performed including date and individuals involved.

   b. Record the amount of materials removed or imported.

   c. Keep any notes or comments of any problems.

   d. Use "before" and "after" photographs to document activities as applicable.

STREETS/STORM DRAIN – Chip Seal

Description: This section contains information on the protection and maintenance of storm drain system while chip sealing roadways. This also includes guidelines for chip sealing and for the cleaning of roadways after a chip seal has been applied.

Applicability: Chip sealing roadways.

1. Preparation

    a. Remove weeds from the roads.

    b. Correct any areas with poor drainage. (i.e. rutting)

    c. Clean and dry areas where materials are to be applied. Ensure manholes and catch basins are covered to prevent oil and materials from getting inside the structures or system.

    d. Calibrate spreader to minimize excess chips from being placed on the emulsion.

    e. Review standard operating procedure with contractor if performing work.

2. Process

    a. Apply emulsion at recommended rate.

    b. Spread chips closely behind emulsion distributor.

    c. Roll chips. Rollers follow closely behind the chip spreader. Roll entire surface twice. Maximum speed 5 mph

3. Clean-up

    a. Use street sweeper to pick up excess chips.

    b. Remove excessive asphalt applications and spills.

    c. Remove covers from storm drain structures and remove debris that has entered the collection system.

4. Documentation

    a. Record location and date on the maintenance log.

STREETS/STORM DRAIN – Slurry Seal

Description: This section contains information on the protection and maintenance of storm drain system while applying slurry seal to roadways.

Applicability: Applying slurry seal to roadways.

1. Preparation
    a. Remove weeds from the roads.
    b. Clean and dry areas where materials are to be applied.
    c. Correct any areas with poor drainage. (i.e. rutting)
    d. Cover/protect catch basins and manholes.
    e. Review standard operating procedure with contractor if performing work.

2. Process
    a. Apply slurry in a smooth and uniform manner.
    b. Protect adjacent areas and storm drainage systems from slurry during spreading.

3. Clean-up
    a. Remove covers/protection from catch basins and manholes.
    b. Clean up any excess material that may have entered the storm drain.
    c. Dispose of excess materials at an approved location.

4. Documentation
    a. Record location and date on the maintenance log.

STREETS/STORM DRAIN – Overlays and Patching

Description: This section contains information on the protection and maintenance of storm drain system while the roadway is being overlaid or patched.

Applicability: Overlaying or patching roadways.

1. Preparation

    a. Correct any areas with poor drainage. (i.e. rutting)

    b. Fill pothole areas and soft spots.

    c. Seal cracks in asphalt.

    d. Manholes and catch basins are covered to prevent oil and materials from getting inside the structures or system.

    e. Surface should be clean and dry.

    f. Review standard operating procedure with contractor if performing work.

2. Process

    a. Apply tack coat uniformly at the required rate. Do not over apply.

    b. Protect area outside of work zone from overlay material.

    c. Place removed material in a truck for removal from the job site.

    d. Protect manholes and catch basins when raising covers as necessary.

3. Clean-up

    a. Remove covers from catch basins and manholes

4. Documentation

    a. Record location and date on the maintenance log.

STREETS/STORM DRAIN – Crack Seal

Description: This section contains information on the protection and maintenance of roadway and storm drain system while cracks are being sealed on roadway surface.

Applicability: Crack sealing on roadways.

1. Preparation
    a. Remove weeds from the cracks.
    b. Remove sediments from crack to a specified depth.
    c. Surface should be clean and dry.
    d. Review standard operating procedure with contractor if performing work.

2. Process
    a. Place material as specified.
    b. Minimize material from spilling outside of crack and into storm drain systems.
    c. Keep crack sealing equipment on asphalt surface to control any material spills.

3. Clean-up
    a. Remove excessive sealant or spills from roadway.

4. Documentation
    a. Record location and date on the maintenance log.

STREETS/STORM DRAIN – Shouldering

Description: This section contains information on the protection and maintenance of roadway and storm drain system while shouldering. This includes traffic control, cleaning, and record keeping of the project.

Applicability: Shouldering roadways.

1. Preparation

    a. Use traffic control devices as necessary.

    b. Install protection for storm drain system from receiving shouldering material.

    c. Determine quantity required for shouldering and distribute along roadway as needed trying to minimize stockpiles.

2. Process

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

    b. Compact as placement of material occurs to minimize erosion.

3. Clean-up

    a. Clean any loose material off asphalt or gutter by dry methods

    b. Remove protection from the storm drain system.

    c. Clean up any excess material, that has entered the storm drain system.

4. Documentation

    a. Record location and date on the maintenance log.

STREETS/STORM DRAIN – Gravel Road Maintenance

Description: This section contains information on gravel roadway maintenance and the protection of the storm drain system.

Applicability: Performing any maintenance on gravel roadways.

1. Preparation

    a. Locate drainage features along length of road to be maintained

    b. Protect drainage structures from material entering the system during maintenance activities

    c. Determine disposal site for excess materials

    d. Install traffic control as necessary.

    e. Stockpile material as necessary for the work.

    f. Install BMP's as necessary for the level of work to be performed.

2. Process

    a. Grade road to promote drainage away from the roadway.

    b. Place imported material as needed for roadway.

    c. Compact material quickly to maintain moisture content and reduce potential for erosion.

    d. Repair/revise drainage structures to collect runoff.

    e. Stabilize shoulders after completing maintenance.

    f. Install / maintain BMP's as necessary along roadway.

3. Clean-up

    a. Remove stockpiled material from work area.

    b. Stabilize any loose material or disturbed areas.

    c. Clean any tracked materials from paved surfaces.

4. Documentation

    Record location and date on the maintenance log.

STREETS/STORM DRAIN – Concrete Work

Description: This section contains information on proper concrete placement and how to clean a site to prevent excess concrete materials from entering the storm drain system.

Applicability: Performing any maintenance on roadways.

1. Preparation

   a. Train employees and contractors in proper concrete waste management

   b. Store dry and wet materials under cover, away from drainage areas

   c. Determine how much new concrete will be needed.

   d. Locate or construct approved concrete washout facility.

2. Process

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

   b. Prepare and compact subbase.

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

   d. Moisten subbase just prior to placing new concrete. Place new concrete in forms.

   e. Consolidate new concrete.

   f. Screed off surface.

   g. Let concrete obtain its initial set.

   h. Apply appropriate surface finish

3. Clean-up

   a. Perform washout of concrete trucks and equipment in approved washout area.

   b. Remove and dispose of excess concrete spilled on site. Sweep and remove concrete dust from grinding activities from the site.

4. Documentation

   a. None

STREETS/STORM DRAIN – Garbage Storage

Description: This section contains information on proper placement, installation, and cleaning of garbage dumpsters. Also, proper use and repair of damaged garbage bins to prevent leakage into drainage system.

Applicability: Garbage dumpster/bin location.

1. Preparation

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

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

    c. Install berms, curbing or vegetation strips around storage areas to control water entering/leaving storage areas.

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

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

2. Process

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

    b. Have garbage bins empted as often as needed to keep from overfilling.

    c. Keep lids closed when not actively filling dumpster.

    d. Repair any drainage improvements to prevent runoff from dumpsters from entering the storm drain system.

3. Clean-up

    a. Keep areas around dumpsters clean of all garbage.

    b. Wash out bins or dumpsters as needed to keep odors from becoming a problem.

STREETS/STORM DRAIN – Snow Removal and De-icing

Description: This section contains information on proper storage and loading of de-icing material in order to prevent materials from entering into a storm drain system.

Applicability: Snow removal or application of de-icing materials.

1. Preparation

    a. Store de-icing material under a covered storage area or in an area.

    b. Collect and deliver water coming off the de-icing materials to the sanitary sewer or reuse as salt brine.

    c. Slope loading area away from storm drain inlets

    d. Design drainage from loading area to collect runoff before entering storm water system

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

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

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

2. Process

    a. Load material into trucks minimizing spillage.

    b. Sweep loading area periodically to reduce the amount of de-icing materials exposed to runoff

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

    d. Do not allow spreaders to idle while distributing de-icing materials.

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

3. Clean-up

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

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

    c. Provide maintenance for vehicles in covered area.

4. Documentation

   a. None

STREETS/STORM DRAIN – Salt and Sand, Mixing and Storing

Description: This section contains information on proper storage and loading of de-icing material in order to prevent materials from entering into a storm drain system.

Applicability: Snow removal or application of de-icing materials.

1. Preparation

    a. Mix and store materials on impervious surface only.

    b. Mix materials in summer months.

    c. After mixing materials store in covered shed.

2. Process

    a. Mixed materials are ready for winter use.

3. Clean-up

    a. Sweep up/Clean up mixing areas.

    b. Wash out trucks/loaders in approved wash bays.

4. Documentation

    None

STREETS/STORM DRAIN – Street Sweeping

Description: This section contains information and guidelines on proper street sweeping techniques in order to prevent high rates of oils and other pollutants from getting into the storm drain system.

Applicability: Streets with a high quantity of debris and pollutants.

1. Preparation

    a. Prioritize cleaning routes to use at the highest frequency in areas with the highest pollutant loading.

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

    c. Review standard operating procedure with contractor if performing work.

2. Process

    a. Drive street sweeper safely and pickup debris.

    b. Dispose of debris at an approved street sweeper disposal location.

3. Clean-up

    a. Clean street sweepers at an approved street sweeper cleaning station

    b. Street sweeping cleaning stations shall separate the solids from the liquids.

    c. Once solids have had a chance to dry out haul to the local landfill

    d. Collected decant water and route to an approved wastewater collection system.

4. Documentation

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

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

STREETS/STORM DRAIN – Transporting Soil and Gravel

Description: This section contains information for proper site preparation and maintenance while materials are being transported to or from a site. The use of a SWPPP is also recommended.

Applicability: Removing or importing fill materials for a site.

1. Preparation

    c. Dry out wet materials before transporting to prevent spillage on the roadway.

    d. Spray down dusty materials to keep from blowing.

    e. Know and understand the SWPPP requirements for the site you will be working at.

2. Process

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

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

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

    d. Do not to overfill materials when loading trucks.

3. Clean up

    a. Clean up any materials tracked out on the roads from site with street sweeper or by hand methods.

    b. Wash mud from vehicles before leaving site.

4. Documentation

    a. Document tracked material cleanup in maintenance logs.

WATER – Planned Waterline Excavation Repair/Replacement

Description: This section contains information for proper waterline excavation. Including protection of storm drain inlets and clearing of gutters.

Applicability: Repairing or replacing waterlines.

1. Preparation
    a. Determine where discharge flow will go.
    b. Obtain dewatering permit if necessary for the project.
    c. Protect Storm drain inlet(s).
    d. Clean Gutters leading to inlet.
    e. Isolate waterline to be worked on.

2. Process
    a. Make efforts to keep water from pipeline from entering the excavation
    b. Direct any discharge to pre-determined area per permit if necessary.
    c. Neutralize any chlorine residual before discharging water to a storm drain or water course.
    d. Backfill excavation.
    e. Haul off excavated material or stock pile nearby.
    f. Stabilize any stockpiled material until installed or hauled away.

3. Clean up
    a. Clear gutter/ waterway where water flowed
    b. Clean up and stabilize all areas around excavation
    c. Clean up travel path of hauled material if necessary.

4. Documentation
    a. Document beginning of work, completion of work and any cleanup items performed on site.

WATER – Unplanned Waterline Excavation Repair/Replacement

Description: This section contains information for proper waterline excavation when an unexpected leak has occurred. Including protection of storm drain inlets and clearing of gutters.

Applicability: Repairing or replacing waterlines when unexpected leak occurs.

1. Preparation
    a. Equip leak repair equipment with filter material (Inlet Protection Filter bags)

2. Process
    a. Stop the discharge
    b. Inspect flow path of discharged water
    c. Protect water inlet areas.
    d. Follow planned repair procedures.
    e. Haul off spoils from excavation

3. Clean-up
    a. Repair eroded areas as needed.
    b. Stabilize area from further erosion.
    c. Clean traveled path of hauled material

4. Documentation
    a. Document beginning of work, completion of work and any cleanup items performed on site.

WATER – Transporting Dry Excavated Materials & Spoils

Description: This section contains information for proper transport of dry excavated materials that may have environmental contaminants.

Applicability: Transport of dry excavated materials & spoils.

1. Preparation
    a. Utilize truck with proper containment of materials
    b. Determine disposal site of excavated materials
    c. Install BMP's if necessary for operations.

2. Process
    a. Load truck with materials
    b. Check truck after loading for possible spillage. Clean up when loading operations complete for the day.
    c. Cover truck with tarp.
    d. Transport in manner to eliminate spillage & tracking.
    e. Utilize one route for transporting.

3. Clean-up
    a. Clean loading area.
    b. Clean transporting route using sweeper or dry methods.
    c. Wash off truck and other equipment at approved wash location.

4. Documentation
    a. Document beginning of work, completion of work and any cleanup items performed on site.

WATER – Transporting Wet Excavated Materials & Spoils

Description: This section contains information for proper transport of wet excavated materials that may have environmental contaminants.

Applicability: Transport of wet excavated materials & spoils.

1. Preparation
    a. Utilize truck with containment for material.
    b. Determine disposal site of excavated material.
    c. Dry materials prior to transporting if possible.
    d. Install BMP's if necessary for operations.

2. Process
    a. Load and Transport in manner to minimize spillage & tracking of material
    b. Check truck for spillage.
    c. Cover load with tarp.
    d. Utilize one route of transport

3. Clean-up
    a. Clean route of transport to provide cleaning of any spilled material
    b. Wash out equipment truck and other equipment

4. Documentation
    a. Document beginning of work, completion of work and any cleanup items performed on site.

WATER – Waterline Flushing for Routine Maintenance

Description: This section contains information for proper waterline flushing, protection of inlet structures, and maintaining a clean flow path for waterway.

Applicability: Waterline flushing for routine maintenance.

1. Preparation
    a. Determine flow path of discharge to inlet of waterway.
    b. Obtain discharge permit if necessary from State of Utah.
    c. Neutralize chlorine residual if necessary.

2. Process
    a. Clean flow path.
    b. Protect inlet structures.
    c. Use diffuser to dissipate pressure to reduce erosion possibilities

3. Clean-up
    a. Clean flow path
    b. Remove inlet protection if installed.

4. Documentation
    a. Document beginning of work, completion of work and any cleanup items performed on site.
    b. Residual tests of discharge water

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

Description: This section contains information for proper waterline flushing, protection of inlet structures, and maintaining a clean flow path for waterway after a construction project or system disinfection with discharge to storm drain.

Applicability: Waterline flushing after construction projects or after system disinfection.

1. Preparation

    a. Determine chlorine content of discharged water. Utilize de-chlorination equipment if necessary.

    b. Determine flow path of discharge.

    c. Obtain discharge permit if necessary.

2. Process

    a. Protect inlets in flow path.

    b. Sweep and clean flow path.

    c. Use diffuser to reduce velocities.

3. Clean-up

    a. Remove inlet protection.

    b. Clean flow paths.

    c. Remove equipment from flush point.

4. Documentation

    a. Document beginning of work, completion of work and any cleanup items performed on site.

    b. Residual test of discharged water.

WATER – Waterline Flushing after Construction/System Disinfection with Discharge with Haul Off (Used for Dust Control/Compaction)

Description: This section contains information for proper waterline flushing and the hauling off of the discharged water in a tanker to use for dust control and compaction

Applicability: Waterline flushing after construction projects or after system disinfection.

1. Preparation
    a. Determine chlorine content of discharged water.
    b. Neutralize chlorine content.
    c. Determine appropriate construction activity for treatment.
    d. Provide backflow prevention device.

2. Process
    a. Flush to tanker.
    b. Conform that application of water is in appropriate location.
    c. Conform to BMP's at the construction site to prevent tracking.

3. Clean-up
    a. Remove equipment from flush point.

4. Documentation
    a. Document beginning of work, completion of work and any cleanup items performed on site.
    b. Residual test of discharged water.
    c. Location of water discharged.

WATER – Chemical Handling/Transporting and Spill Response

Description: This section contains information for transporting or handling of chemicals and actions that need to be taken when a chemical spill occurs.

Applicability: Transporting or handling of chemicals and possible spill of contaminates.

1. Preparation
    a. Understand MSDS streets for handling of product.
    b. Determine proper place of handling.
    c. Have necessary containment and spill kits at handling place.

2. Process
    a. Begin transfer process.
    b. Discontinue operations if spill levels occur.
    c. Disconnect and store handling equipment.

3. Clean-up
    a. Clean up spills with proper material
    b. Dispose of contaminated material at appropriate facility

4. Documentation
    a. Report spills to Bear River Health

WATER - Swimming Pools and Spas Discharge to Storm Water System

Description: This section contains information and guidelines for the draining of swimming pools and spas into the storm drain or sanitary sewer systems.

Applicability: Pool and Spa draining into storm water or sanitary sewer systems.

Note: Pool owners may discharge their pool water and filter backwash water to the sanitary sewer. There are no limitations on chlorine content or pH levels for discharges to the sanitary sewer. It is also acceptable to discharge to the sanitary sewer if the water is cloudy discolored, or contains algae. The pool owner should contact Public Works prior to discharging water from any pool or spa regardless of where they plan to discharge the water - sanitary sewer, onto the ground, or in a manner such that it enters the storm water system. After approval has been given by the public works department, swimming pool water may be discharged into the sanitary sewer system or the storm water system. The city must ensure the sewer system can accommodate the additional swimming pool water discharge. There may be a fee associated with discharging pool or spa water into the sanitary sewer.

1. Preparation

    a. With the help of Public Works officials determine the best place to discharge the water from the pool/spa.

    b. A pool or spa may be emptied onto the ground or into the storm water system if the chlorine content is less than one part per million and free of other chemicals.

    c. The pH level of the water must be tested prior to discharge and must fall within a range of 7 to 8.

    d. The water must not be cloudy or discolored and must be free of algae or other contaminants.

    e. Do a visual inspection of the pathway the water will take to ensure contaminants, trash, or soils or other sediments will not be washed into the storm water system. Clean as needed.

2. Process

    a. Clean, as needed, any storm water structure that will be used to convey the water into and through the storm water system.

    b. Drain the pool or spa to the location determined by Public Works officials using the pool system's pumps or by gravity.

c. Carefully watch the draining process at all times to ensure the water flow is going as planned and does not overload the system.

d. Water being discharged may not cause erosion and may not go unto a neighbor's property without their express written permission.

3. Documentation

a. Keep logs of pools and spas drained.

b. Record the amount of water drained and where the water was drained to.

c. Keep any notes or comments of any problems.