

STORMWATER BMPS: UTILITY INSTALLATION IN ROADWAYS

AFFECTED FACILITIES

These BMPs apply at any utility installation in a public roadway.

BACKGROUND

Utilities such as sewer and water lines are generally installed in the roadway by a public agency or its' contractors, except in new developments, where they may be installed by a developer and later deeded over to the agency. Public utility companies also hire contractors to install electrical, gas and telecommunication lines and structures in the public right-of-way. Utility work involves saw-cutting and breaking pavement, trenching, laying the lines in gravel or slurry fill, backfilling, and road repair. For sewer and water utilities, the work may include constructing and repairing drain inlets, laterals and manholes.

These BMPs will ensure that utilities are installed with stormwater protection in mind. All employees and contractors involved with utility installation shall review these BMPs as a training tool, and make every effort to keep pollutants from going down the storm drain by putting the following BMPs into practice.

BEST MANAGEMENT PRACTICES

Storm Drainage Systems

- Protect or block storm drain inlets, open manholes and roadside ditches during utility activities.

Concrete Washout Area

- Designate a Concrete Washout Area at each job site.
(A concrete washout area is a shallow excavation with a small perimeter berm to isolate concrete truck washout operations. Excavated material shall be utilized in perimeter berm construction.)
- Signs may be necessary at the washout area to clearly indicate the location of the concrete washout area to operators of concrete trucks and pump rigs.
- Inspect washout area routinely. The concrete washout area must be repaired and enlarged or cleaned out as necessary to maintain capacity for wasted concrete.
- At the end of construction, all concrete shall be removed from the site and disposed of at an approved waste site.

Materials Handling Areas

- Contain water and wastes generated during saw-cutting activities as well as during cleaning and flushing of equipment. Use booms and inlet protection, vacuum wastes or allow the area to dry before un-covering storm drain inlets.
- Construct secondary containment around areas where materials are stored, handled, or transferred routinely. Make sure this containment is adequate to contain the maximum quantity of the single largest probable spill or leak plus a simultaneous heavy rain fall.
 - Store maintenance supplies including cement bags, sand, sealants, and tar under cover (such as a tarp) and away from drainage areas.
 - Ensure that temporary storage of soil, sand and other materials is conducted to minimize stormwater pollution.

- Do not store piles of materials in street, near storm drains or gutters unless BMPs are used to protect storm drains from sediment run off. Cover stockpiles and contain within berms.
- Where consistent with safety and space considerations, excavated material should be placed on the uphill side of trenches.

Dewatering

- Trench dewatering devices must discharge in a manner that will not affect streams, wetlands, drainage systems, or off-site property.
- Discharge from the trench shall be free of any sediment.
- A riprap pad shall be placed at the discharge end of the hose to prevent any additional erosion.
- If water is discharged to landscaping, a permit from CPDHE is not needed but BMPs must be followed. If, however, water will enter “waters of the state”, a permit must be obtained. <http://www.cdphe.state.co.us/wq/PermitsUnit/Industrial/>

Street Cleaning

- Streets shall be kept clean throughout the life of a project. In the event of accidental tracking of mud on streets, the mud shall be cleaned immediately using a vacuum-type street sweeper, a brush-type street sweeper with dust control, or manually using shovels and brooms. If a large quantity of mud needs to be cleaned up, initial removal may take place using a small road grader or loader, but care shall be exercised to avoid damage to the roadway. DO NOT wash materials into the storm sewers.
- Daily sweeping (either mechanical or manual) of any mud tracked out onto paved areas should be performed.

Sanitary Facilities

- Sanitary facilities (“port-a-potties”) shall be located in the stabilized area, away from drainage ways. Sanitary facilities must always be staked down and never be placed near storm drain inlets.

Contracting

- Insert language in all contracts signed with construction or maintenance contractors that requires them to implement all applicable BMPs during all municipal or county projects.

Erosion Control during Construction

- Block storm drain inlets (within 25 feet and down gradient from) during construction work. Place covers, rock wattles, sand bags, filter fabric or bags around or over inlets to protect them from entry of sediment, wastes, dusts, overspray or slurry.
- Inspect sediment controls daily and during and after any storm event and make repairs or clean out as necessary.
- Control erosion to the maximum extent possible. Provide permanent erosion control that will remain effective for the life of the street.
- Inspect and maintain all erosion or sediment control devices or equipment installed in erosion-prone areas in road construction projects.

- Ensure that projects over 1 acre have the proper Stormwater Discharge Permits (See <http://www.cdphe.state.co.us/wq/PermitsUnit/Industrial/>) and Stormwater Management Plans.
- Utilize BMPs to reduce erosion from the site. (See [UDFCD Volume 3](#) and [KICP's Erosion Control Field Manual](#)).

Spill Response

- Develop and implement a spill prevention and control plan. Agencies, contractors, and other commercial entities that store, handle, or transport fuel, oil, or hazardous materials should develop a spill response plan. Post spill response procedure information in a conspicuous place(s) and have persons trained in spill handling on site and/or on call at all times. Materials for cleaning up spills should be kept on site and made easily available.
- Spills should be cleaned up immediately and the contaminated material properly disposed. Spill control plan components should include:
 1. Identify and stop the source of the spill.
 2. Contain any liquid.
 3. Cover the spill with absorbent material such as kitty litter or sawdust. Dispose of the used absorbent properly.
 4. Be prepared to notify 911 if spill enters storm drain system.
- A release of any chemical, oil, petroleum product, sewage, etc., which may enter waters of the state of Colorado (which include surface water, ground water and dry gullies and storm sewers leading to surface water) must be reported immediately to CDPHE at 1-877-518-5608. Any accidental discharge to the sanitary sewer system must be reported immediately to the local sewer authority and the affected wastewater treatment plant.
- For additional information regarding releases to water, please see "Guidance for Reporting Spills under the Colorado Water Quality Control Act and Colorado Discharge Permits" at <http://www.cdphe.state.co.us/op/wgcc/Resources/Guidance/spillguidance.pdf>
- Releases of petroleum products and certain hazardous substances listed under the Federal Clean Water Act (40 CFR Part 116) must be reported to the National Response Center as well as the CDPHE. Spills that pose an immediate risk to human life shall be reported to 911. Failure to report and clean up any spill shall result in fine.

Waste Management Areas

- Ensure all waste areas and dumpsters are covered and are not leaking.
- Keep all container lids closed at all times unless adding or removing material.
- Arrange for wastes to be picked up regularly and disposed at approved disposal facilities. If waste generation exceeds the capacity of waste containers, either obtain more containers or increase the frequency of pick-ups.

REQUIRED EMPLOYEE AND CONTRACTOR TRAINING

- Train all current employees and contractors who do road or utility construction work on this BMP.
- Train all new hires and job transferees who do road or utility construction work on this BMP.
- Conduct refresher training on this BMP for all employees and contractors as needed.
- All contracts must stipulate that contracted employees are trained in stormwater pollution prevention BMPs.
- All contracts should include stormwater pollution prevention language.
- Train all employees and contractors who might be required to clean up a spill or leak on proper spill clean-up procedures. See *BMP: Spill Clean Up*.
- Train all employees and contractors who work outdoors on good housekeeping and proper storage. See *BMPs: Good Housekeeping & Spill Prevention* and *Outdoor Container Storage*.

REQUIRED MAINTENANCE

- None

RECORDS

- Keep records of employees trained.

REFERENCES

1. *Colorado's Phase II Municipal Guidance*, October 2001
2. *California Stormwater BMP Handbook*, January 2003
3. *Knoxville (TN) BMP Manual, Activities & Methods*, January 2001
4. *City of Tacoma: Surface Water Management Manual (Vol. IV Source Control BMPs)*, January 2003
5. *Municipal Facility Runoff Control Plan* (City of Lakewood, CO)
6. *Best Management Practices for Industrial Storm Water Pollution Control* (Santa Clara Valley, CA)
7. *City of Centennial Grading, Erosion, and Sediment Control Manual* (City of Centennial, CO)

