

STORMWATER BMPs: DEWATERING OF SECONDARY CONTAINMENT STRUCTURES

AFFECTED FACILITIES

These BMPs apply at all municipal and county facilities that have underground and aboveground containment structures that collect ground, surface or storm water.

BACKGROUND

Ground water, rain water or snow melt can accumulate in aboveground storage tanks and underground structures like sumps and utility vaults. Storm water and snow melt can also accumulate in aboveground structures like secondary containment built around chemical and petroleum tanks and solid material storage areas. This water may have to be flushed out or removed for various reasons and, if it is contaminated, it cannot be allowed to run into surface waters. Contaminants may include oils or sediments. This BMP is designed to direct the proper removal of water from underground and aboveground structures or vaults.

BEST MANAGEMENT PRACTICES

- Before draining accumulated storm water from any aboveground structure such as a secondary containment structure (such as an aboveground bulk chemical or petroleum tanks), a supervisor or designated employee must determine that the water is not contaminated. (For petroleum tanks, any visible sheen on the water is an indication of contamination.)
- If contamination is suspected, sampling and testing of the accumulated water must be completed before draining or disposal.
- If the water is clear with no turbidity, has no visible (“rainbow”) sheen and no odor, it may be drained (preferably to a grassy or pervious area).
- Water from underground structures that contains sediment (turbidity) can be filtered through fabric or sand filters (filter socks) or allowed to settle in a container or portable tank such as a “Baker tank”. Once the sediment is successfully removed, the clear water may be pumped to the storm drainage system or allowed to percolate in a vegetative area. Removed sediments should be disposed as trash.

REQUIRED STRUCTURES AND EQUIPMENT

- Provide impervious, secondary containment for all above ground storage tanks ASTs (except double-walled tanks) that is sufficient to contain the entire contents of the largest single tank plus an additional 4” of rainfall or 110% of the capacity of the potentially stored volume (not just the largest tank).
- Provide ASTs with protection from vehicle collisions such as: crash posts or concrete secondary containment structures.

INSTALLATIONS REQUIRED FOR NEW CONSTRUCTION OR RENOVATIONS

- Provide impervious, secondary containment for all above ground storage tanks ASTs (except double-walled tanks) that is sufficient to contain the entire contents of the largest single tank plus an additional 4” of rainfall or 110% of the capacity of the potentially stored volume (not just the largest tank).
- Provide ASTs with protection from vehicle collisions such as: crash posts or concrete secondary containment structures.

- Make sure an adequate spill kit or locker with sufficient equipment and supplies is available near each work area where spills are possible.

REQUIRED MAINTENANCE

- If gravel or soil surfaces are used for dewatering and/or wet debris storage, a soil sample should be collected at least once every 5 years and tested for contamination. If the site has become contaminated, the source of the contaminants should be identified and the site remediated before continuing use as a dewatering area.

REQUIRED EMPLOYEE AND CONTRACTOR TRAINING

- Train all current employees who perform dewatering on this BMP.
- Train all new hires and job transferees who will conduct dewatering on this BMP.
- Conduct refresher training for all employees who conduct dewatering as needed.
- Contracts should stipulate that all contracted employees have been trained in proper stormwater management BMPs.

RECORDS

- Keep records of employee and contractor trainings.
- Keep records of the disposal or reuse of recovered sediments.
- Keep records of any hazardous waste tests that were done on any spilled material within secondary containment areas.

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. Colorado Department of Public Health and Environment, Water Quality Control Division, Industrial Permits. <http://www.coloradowaterpermits.com>