

STORMWATER BMPs: OUTDOOR MATERIALS STORAGE

AFFECTED FACILITIES

These BMPs apply at all municipal and county facilities where solid, liquid or sludge materials in containers (totes, portable tanks, drums, cans, boxes, bags, jars, bottles, etc.) are stored outdoors.

BACKGROUND

Accidental releases of materials from totes, drums, cartons, bottles and bags stored outdoors present the potential for contaminating storm waters with many different pollutants. Materials that have spilled or leaked may accumulate in soils or on other surfaces and be carried away with runoff or snowmelt.

BEST MANAGEMENT PRACTICES

- All containers and dry materials must be covered and have secondary containment if they contain hazardous materials or may pose a threat to stormwater.
- Store all containers indoors whenever possible. If they must be stored outdoors, place them in a shed or under a roof overhang, if possible.
- Provide secondary containment for any hazardous substances.
- Make sure all containers are labeled sufficiently to identify the material inside. Keep materials in their original shipping container whenever possible.
- Dispense, handle and transfer materials to avoid drips, spills or accidents. Do not leave containers open for any longer than it takes to add or remove material. Re-close or seal each container securely after using it.
- When liquids are removed from container, use spigots, pumps or other dispensing devices that can be easily opened and closed without leaking. Place a drip pan under each spout, spigot or nozzle.
- Store containers where they are protected from vehicle traffic: either away from traffic or protected by crash posts.
- Place containers only on paved, impervious surfaces and as far from (or at a lower elevation than) storm drain inlets and drainage ditches if possible.
- Empty material from any container that is badly dented, significantly corroded, and structurally unsound or that cannot be securely closed.
- Provide a spill kit near storage areas. Clean up any spills, leaks or discharges promptly. Refer to *BMP: Spill Clean Up*.
- If a container is found to be leaking either empty the contents into a leak-tight container or place entire leaking container inside of a larger leak-tight container. A leaking container can often be rolled or upended temporarily to stop leaking until a leak-tight container can be located.
- Do not drain accumulated water from secondary containment structures unless approved by a supervisor. See *BMP: Dewatering of Secondary Containment* for details.

REQUIRED STRUCTURES AND EQUIPMENT

- Ensure that all containers stored outdoors are weatherproof. For 55-gallon drums, apply weatherproof caps to bung holes.
- Purchase “poly-pallets” if drums are going to be stored outside permanently.
- Provide guards, fencing or other means to prevent vandalism at facilities where containers of material are stored outdoors.

- Always place all containers on a plastic pallet or other device that elevates them off the ground or pavement and provides containment. This avoids contact with storm water run-on/run-off.
- Make sure an adequate spill kit or locker with sufficient equipment and supplies is located near each outdoor storage area where spills are possible.

INSTALLATIONS REQUIRED FOR NEW CONSTRUCTION OR RENOVATIONS

- Build impervious secondary containment structures for any new or renovated outdoor container storage areas. Secondary containment should be of sufficient capacity to hold the contents of the largest single container plus 4" of rainfall or 110% of the capacity of the potentially stored volume (not just the largest tank).
- Design the containment so that it drains to a blind sump (no outlet).

REQUIRED EMPLOYEE AND CONTACTOR TRAINING

- Train all current employees who store, handle or use containers outdoors on this BMP.
- Train all new hires or job transferees who will store, handle or use containers outdoors on this BMP.
- Conduct refresher training on this BMP for all employees who store, handle or use containers outdoors as needed.
- Train all employees who might be required to clean up a spill or leak on proper spill clean-up procedures. See *BMP: Spill Clean Up*.
- Contracts should stipulate that all contracted employees have been trained in proper stormwater management BMPs.

REQUIRED MAINTENANCE

- Inspect all containers stored outdoors regularly and after each rainstorm. Any containers that are leaking must be moved indoors immediately or placed in a leak-tight, "over-pack" container immediately.

RECORDS

- Keep records of employees and contractor trained.
- Keep copies of current MSDSs for all materials stored outdoors.

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)