

# Stormwater Training

## “Only Rain in the Storm Drain”

Stormwater is water from rain or melted snow. It runs off our properties and travels into roads, drains, and gutters (collectively called **stormwater conveyances**). Eventually stormwater reaches our rivers, lakes, streams, and oceans or it percolates through the ground and becomes groundwater. Stormwater is not treated before it reaches these water bodies, so it carries with it anything that it has picked up along its travels. For this reason, it is important to allow “Only Rain in the Storm Drain”. The following information will help you to keep stormwater free of pollutants and keep non-stormwater out of stormwater conveyances.

## Preventive Maintenance

Regular maintenance should be performed to prevent polluted runoff from leaving your property. Inspect your facility at least annually, preferably before the rainy season begins, and after every rain event.

Irrigation systems:

- Check for worn or inefficient equipment.
- Check for and repair leaks regularly.
- Install filters to prevent equipment from clogging.
- Install pressure regulators.
- Make sure irrigation water does not overflow and discharge into stormwater conveyances.
- Perform a uniformity evaluation to ensure even delivery of water and avoid overwatering.

Rain gutters and downspouts:

- Direct flow away from contaminated areas (animal, manure storage, material storage, parking, and work areas) and toward pervious areas.

Recovery ponds (irrigation tailwater can be collected and reused):

- Line ponds to prevent the movement of water soluble chemicals to groundwater and to stormwater (ponds must have an appropriate separation from the base of the pond and the seasonal high groundwater mark).

- Make sure there are no connections from irrigation ponds to stormwater conveyances.
- Have a backup plan in place to prevent overflow.

Drains and other conveyances:

- Polluted water should not enter storm drains or other water conveyances such as natural stormwater channels, creeks, streams, or rivers.
- Signs warning that there is a storm drain can be placed near stormwater conveyances.

Fuel and fertilizer tanks:

- Check fuel and fertilizer tanks, nozzles, and fittings for leaks.
- Store properly to prevent contact with rain and stormwater flows

Sediment and erosion control:

- Sandbags, silt fences, straw wattles, or straw bales, mulch, strips of vegetation, and devices to prevent off-site tracking of sediment can help to slow the movement of water and keep sediment on the property.

Material storage:

- Store materials off the ground and under cover to prevent their contact with rainwater.

## Good Housekeeping

Keeping your property clean of debris, litter, waste, and other materials will help to keep these materials from moving offsite with stormwater.

- Remove and dispose of debris, litter, waste, leaves, cut grass, and other materials from the site and especially from stormwater conveyances.
- Each day, clean areas where work is actively conducted.
- Use dry clean-up methods such as sweeping, wiping, vacuuming, raking, or using absorbents.
- If you must use wet clean-up methods, take necessary precautions to prevent the discharge of wash water into the stormwater conveyance system.
- Locate trash receptacles away from stormwater conveyances.
- Make sure trash is disposed of in clean, leakproof containers. Always keep trash containers covered with a lid and make sure you have enough trash containers for your daily and weekly needs.

- Protect stormwater inlets during loading, unloading, fueling, and other work activities. Designate a place for loading and unloading activities.

## Proper Waste Disposal and Non-Stormwater Disposal Alternatives

Waste stored on site has the potential to be moved offsite by stormwater. Waste must be stored to prevent contact with rain and stormwater flows. Storage may require wastes to be kept off the ground and under cover, or stored with secondary containment. Never dispose of waste in waterways or stormwater conveyances. Follow these precautions to keep waste onsite and disposed of properly:

- Berm or enclose solid waste storage areas.
- Dispose of hazardous waste properly. Hazardous waste (such as batteries, fluorescent lamps, and used oil) should not be disposed of in the trash. (See Resources.)
- Animal waste from large animals should be bermed or curbed to contain it; if this isn't possible, the waste should be cleaned up at least twice weekly and composted or properly stored.
- Clean loose aggregate, mortar, and dust by sweeping and vacuuming.
- Slurries are prohibited from being disposed of in stormwater conveyances.
- Rinse water must be captured to allow for solids to be removed and disposed of. Rinse water from the cleaning of portable toilets must be contained and disposed of at a service facility or disposed of in a sanitary sewer.
- Irrigation tailwater may be directed to landscaped areas or used to keep dust down on dirt roads. Animal wash rack water may drain to approved sanitary sewer or landscaped locations.

## Equipment and Vehicle Maintenance and Repair

Vehicles and equipment threaten water quality when they are improperly maintained because they contain oils, fluids, and debris that can end up in storm drains and conveyances.

To prevent the release of equipment and vehicle fluids and debris into the storm drain system, follow these practices:

- Keep all equipment clean to avoid the build up of grease and oil.
- Follow routine maintenance schedules for vehicles and equipment and inspect them regularly to ensure they are functioning properly.
- Do not wash vehicles and equipment near drains that connect to storm drains. In some cases, vehicles and equipment may be washed on a pervious surface where the wash water and rinse water is filtered through the ground.
- Do not use hose off or single use degreasing chemicals for the cleaning of engines unless the chemicals and rinse water are captured and disposed of properly.
- Drain all of the fluids of any retired vehicles or equipment.
- Whenever possible, do repair and maintenance work indoors or under cover. If work must be done outside, other management practices should be used to prevent pollutant discharges.

## Spill Response, Containment, and Recovery

Proper procedures should be in place in order to respond quickly to spills. Have these practices in place in order to readily respond, contain, and recover from an accidental spill:

- To prevent spills, secondary containment must be around all hazardous materials and hazardous wastes that have the potential to discharge.
- Keep materials for spill response accessible. These materials can include an absorbent material, personal protective equipment such as gloves and eyewear, a dust pan and broom, and a garbage bag to aid in clean up. Chemical specific industrial spill response kits are also available.
- Make sure to check the spill kit at least annually so that all the materials necessary for prompt spill cleanup are ready to be used.
- Tell your employees and operators where the spill kit is located and how to use your particular spill response kit.
- After cleanup, dispose of the waste in accordance with federal, state, and local laws.
- Know when to report a spill. Spills, releases, or discharges to receiving waters or the stormwater conveyance system are required to be

reported in accordance with federal and state laws. If the spill is a potential threat to health, safety, or the environment, report the spill to the Stormwater Hotline at 888-846-0800.

## Recycling

Where possible, implement pollution prevention strategies to reduce your overall impact on the environment. By decreasing the amount of pollutants on the property, you can reduce the likelihood pollutants will be released into our waterways. Pollution prevention strategies include:

- Reducing the amount of water used. Using efficient irrigation practices such as drip irrigation, irrigating more often but for a shorter duration, installing low flow emitters, reducing hand watering and overhead sprinklers, and avoiding excessive leaching, can reduce the total amount of water used. This reduces the potential for water runoff and reduces the potential that pollutants will be carried off the property.
- Reusing water. Water recovery systems and tailwater return ponds can help to control water runoff and sediments, nutrients, and other contaminants the water may hold. There are certain restrictions on the design of tailwater return ponds. (See Resources.)
- Reducing fertilizer applications and using slow release fertilizers can minimize the amount of nitrogen washed off the property with rain.
- Using integrated pest management techniques. Strategically using pesticides, fertilizers, beneficial insects, and other strategies, can reduce the potential for pollution. Whenever possible, the least toxic alternative should be used.
- Composting of green waste. Green waste can be used as mulch thereby slowing the movement of water off the property and reducing erosion.
- Composting of manure. Manure can be composted and used as a soil amendment thereby reusing the nutrients it contains.
- Reusing and recycling materials such as metals, plastics, oils, and anti-freeze, can reduce the chance for these materials to be carried off the property by runoff and can reduce your impact on the environment.
- Reducing energy use can also lessen your impact on the environment.

## BMP Maintenance

**Best management practices** (BMPs) are types of pollution prevention measures and are all of the practices discussed in the previous sections.

BMPs generally slow the movement of water from the property, direct water to pervious areas, and hold water on the property. BMPs must be maintained so that they function as they were designed. If they fail, they should be replaced as soon as possible. Inspect all BMPs at least annually, preferably before the rainy season begins, and after every rain event. An additional plan and monitoring may be necessary if the BMPs used do not prevent discharges to stormwater conveyances.

## Resources

County Department of Agriculture, Weights and Measures, 858-614-7786, or email [AWQ.AWM@sdcounty.ca.gov](mailto:AWQ.AWM@sdcounty.ca.gov)

Hazardous Waste Disposal, County Department of Environmental Health and Quality, Hazardous Materials Division, 858-505-6880.

Irrigation, Erosion Control Best Management Practices, and Tailwater Return Ponds, Natural Resources Conservation Service, 760-745-2061, [raul.alvarado@usda.gov](mailto:raul.alvarado@usda.gov)

Irrigation Efficiency Tests and Environmental Information, Mission Resource Conservation District, 760-728-1332, [lance@missionrcd.org](mailto:lance@missionrcd.org)

University of California Cooperative Extension (County of San Diego Farm and Home Advisor), Ag Water Quality Program, Grower's Resources, webpage, at [www.cesandiego.ucdavis.edu](http://www.cesandiego.ucdavis.edu), or call 858-822-7711.

This Stormwater Training document has been developed by the County of San Diego, Department of Agriculture, Weights and Measures, and references Title 6, Division 7, Chapter 8, of the San Diego Code of Regulatory Ordinances ([http://www.amlegal.com/sandiego\\_county\\_ca/](http://www.amlegal.com/sandiego_county_ca/)) relating to Watershed Protection, Stormwater Management and Discharge Control and Grading. This information may not be comprehensive and is meant to serve as a guide; additional training may be needed as appropriate.