

City Of DeLand SWAT

(Stormwater Advocate Team)

STORMWATER MANAGEMENT

Newsletter Volume I

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Check out our webpage @

<http://www.deland.org/public/stormwater.htm>

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EPA, Stormwater and You

The Environmental Protection Agency (EPA) is concerned about stormwater runoff and its effect on our environment. Stormwater runoff may be precipitation from either rain or snowmelt that flows over the ground. As it flows, it can pick up debris, chemicals, dirt, and other pollutants and deposit them into a storm sewer system or water body. Anything that enters a storm sewer system ultimately finds its way to the waterbodies such as lakes and rivers that we use for swimming, fishing, and for providing drinking water. EPA regulates this storm water runoff to protect these waterbodies and minimize pollution that enters them. In March of 2003, the EPA began enforcing "Phase II" of its stormwater rules which cover much smaller urban communities, such as City of DeLand, and all construction sites 1 acre and larger. The Phase II regulations require that an education program be implemented to educate the public about the impacts of storm water discharges on waterbodies and the steps that can be taken to reduce pollutants in storm water runoff.



What is Stormwater Management?

Storm water management is the management of rainfall within urban areas to reduce pollution and land damage. Rainfall in urban areas can often cause harm and start to distort nature's natural water cycle because rain that falls on industrialized areas generally picks up grease, chemicals, trash, and other pollutants before flowing back into our lakes and streams. Water can also cause damage to land under construction, or land that is improperly vegetated, by washing away soil and sediment. Federal and state regulations require that certain practices be followed by construction organizations, large public entities, and cities. These regulations help to prevent pollution and degradation, are used to monitor ways in which sewer systems and drainage systems are built and maintained, and how construction sites may operate.



Source: <http://www.dehs.umn.edu/iead/stormwater/whatis.html>

Common Causes of Stormwater Pollution

✓ Motor Oil, Oil Filters, Detergents, Antifreeze & Transmission Fluid

Washing cars and degreasing auto parts can send detergents and other contaminants through the storm sewer system. Dumping automotive fluids into storm drains has the same result as dumping the materials directly into a body of water. Repair auto leaks and dispose of used auto fluids at designated collection locations. Contain and clean up spills immediately.

✓ Pesticides and Fertilizers, Yard Waste and Excessive Dirt

Excess fertilizers and pesticides applied to lawns and gardens wash off and pollute streams.

Pesticides and fertilizers should be used sparingly, while organic mulch or safer pest control methods should be used whenever possible. Don't over water lawns and consider using a soaker hose instead of a sprinkler. Lawn clippings and leaves can wash into storm drains and contribute nutrients and organic matter to streams. Sweep up yard debris rather than hosing down areas. Compost or recycle yard waste when possible. Cover up piles of dirt or mulch being used in landscaping projects.



✓ **Paint and Solvents**

Clean paint brushes in a sink, not outdoors. Properly dispose of excess paints through a hazardous waste collection program. Hazardous waste disposal for University processes only is through the Environmental Health and Safety Office. The City of Norman has annual Household Hazardous Waste Days where citizens can take household hazardous wastes for disposal.



✓ **Pet Waste**

Pet waste can be a major source of bacteria and excess nutrients in local waters. When walking pets, remember to pick up the waste and dispose of it properly. Flushing pet waste is the best disposal method. Leaving pet waste on the ground increases public health risks by allowing harmful bacteria and nutrients to wash into the storm drain and eventually into local waterbodies.

✓ **Trash**

Make sure all outside trash receptacles are covered and anchored properly. **DO NOT LITTER!** Trash can pollute ground and surface water. Rainwater washes over trash and percolates into groundwater. Report illegal dumping to the proper authorities (City of DeLand concerns, call 386-740-6870, for statewide concerns; contact the Florida Department of Environment Protection @ 850-245-2929).

The Effects of Pollution:

Pollution in stormwater runoff can have many adverse effects on plants, fish, animals, and people.

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels. Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.
- Debris such as plastic bags, six-pack rings, bottles, and cigarette butts washed into waterbodies can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous wastes like insecticides, pesticides, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish and shellfish or ingesting polluted water.
- Polluted storm water often affects drinking water sources. This, in turn, can affect human health and increase drinking water treatment costs.

Source: http://www.undeerc.org/watman/stormwater/press/afterthestorm_press.pdf

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