

# **Water Conservation Tips Stormwater Source Pollutants**

04/27/09  
City of Heath  
Department of Public Works



## **Day-to-Day Activities Contributing as Stormwater Source Pollutants**

Stormwater runoff occurs when rain water leaves your property by flowing into streets and into the storm sewer system. Runoff flows from rooftops, through lawns, over paved streets and sidewalks, across bare soil into our storm drains, creeks, streams, rivers, and lakes. As it flows, runoff collects and transports a variety of harmful pollutants that are part of day-to-day activities. Efforts to control stormwater pollution must be considered at the individual, household, and public levels. It will take the concerted effort of all citizens to understand and minimize the behaviors and activities that can generate pollution from these surfaces. These common individual behaviors have the potential to generate stormwater pollution:

### **1. Water Conservation Practices**


Runoff from your yard is wasted water that will not benefit your landscape or pocket book. As more water leaves your property, it enters the storm sewer system, carrying pollutants with it. The two common causes of runoff are spraying water on concrete or asphalt surfaces that lead directly to the street and watering at a rate faster than the ground can absorb it. Installing or aligning adjustable spray heads or sprinklers can fix the first problem. The second problem occurs because many water sprinkler systems have high volume heads that apply water too quickly. Fix this by installing sprinkler heads that apply less water or by running each station several times for a shorter period of time. Additional irrigation systems may also be considered.

Drip irrigation systems are very efficient at supplying water to smaller landscape areas, using up to 60% less water than traditional sprinkler systems. Drip irrigation systems can be installed by a contractor or landscaper or you can install do-it-yourself systems available at garden and home improvement centers. Even if you already have an automatic sprinkler system, drip irrigation can be added to it. Using a retrofit kit, any individual sprinkler riser can be replaced with a drip irrigation head. The simplest and least expensive example of drip irrigation is the use of soaker hoses, especially useful in flower beds and around trees. They can also be placed next to the house to stabilize soil around your foundation. When using them, turn the faucet only a quarter of a turn. Soaker hoses are pressure sensitive, and if the pressure is too high, water flows through them like an open hose. Be sure to test the time it takes water to soak to the desired depth. Once you have the timing down, this will be an easy way to use drip irrigation.

Selecting native and adapted plants and grasses for your yard will require less water, fertilizer, and pesticides.

Another water conservation alternative is to reduce watering until your lawn goes partly dormant, turning lighter green to brown, during the hottest summer months. Your lawn will resume growing when wetter weather returns. During dry spells in the summer, water as deeply and infrequently as possible by applying about 1 to 1.5 inches of water a week. An early morning with little wind is the best time to water. This will minimize water loss by evaporation. Set a rain gauge in the lawn to determine how long it takes for your yard sprinkler, whether it is an automatic or manual system or hose end, to apply about 1 inch of water. If you see runoff before your system applies 1 inch of water, you will need to make a change. Either lower the volume of water being applied or alternate watering between different sites until each has received about 1 inch of water. It will require some experimentation to get the timing right, but you will end up with an efficient watering system. Remember to turn off your irrigation systems when it rains.





## 2. Landscaping and Yard Care Practices

Did you know that blowing or sweeping grass clippings, fallen leaves, or other yard waste into the street or down the storm drain can cause storm water runoff problems? Yard waste entering a nearby storm drain can clog the storm drain and keep water from draining through. Clogged storm drains also use up tax dollars because the City is required to clean them out. This means that your tax dollars are being spent on avoidable problems, like cleaning clogged storm drains, and not on more necessary problems. Not only does blowing or sweeping yard waste into the street or nearby storm drains consume taxpayers' money, but bagging this yard waste to be hauled off to local landfills also uses valuable landfill space and costs residents more in increased taxes and service fees.

Yard waste that is not properly managed will eventually be washed into nearby water bodies during a storm or by water runoff from watering your lawn. Yard waste in a local waterway can deplete the oxygen level in the water, which is harmful to aquatic life. You can help keep your yard waste from clogging storm drains and being washed into local waterways by removing yard waste from the streets, sidewalks, and driveways. Blow or sweep grass clippings or leaves back up into the yard or into a compost pile. Leaving your yard waste on the lawn is good for your landscape. Grass clippings and leaves provide valuable natural nutrients.

Homeowners apply chemical pesticides, insecticides, fertilizers, and herbicides to their lawns each year. Runoff from these chemicals can contaminate water supplies with chemicals toxic to both humans and aquatic life. The greatest limitation to reduction of these pollutants is the perception that no alternatives to chemicals exist.

Keeping homes and gardens tidy reduces the food supply for insect pests, averting the need for pesticides. Onion, garlic, and marigold plants help keep garden pests away. You can also take the time to learn about Integrated Pest Management (IPM) programs that rely on a combination of common-sense practices. IPM programs use information on the life cycles of pests and their interaction with the environment, in combination with available pest control methods, to manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment.

Grass clippings can provide up to 25% of your lawn's total fertilizer needs, and leaves contain up to 80% of the nutrients a plant needs. To keep these nutrients where they can nourish your lawn, mulch grass clippings and leaves and leave them on the lawn, or compost them. Composting yard clippings and food scraps and spreading manure in limited amounts are other alternatives to chemical fertilizers. By supplying your lawn with natural fertilizer, you spend less money on chemical fertilizers.

If you do intend to use chemical pesticides, insecticides, fertilizers, and herbicides, never apply them before it rains or before running your sprinkler systems. The water will not help soak the chemicals into the ground, but will instead limit their effectiveness and create polluted runoff to our water bodies. Always apply chemicals sparingly and follow label instructions.

If you hired a company to care for your lawn, make sure they are using proper lawn care practices.

### **3. Littering and Disposing of Trash and Recyclables**

Always dispose of your trash and recyclables properly. Dumping in unauthorized locations is unattractive and can cause major public health and safety concerns. Unauthorized locations include creeks, lakes, storm drains, sewer systems, unauthorized use of a dumpster, and non-state regulated solid waste sites on land. State permitted landfills and collection stations are authorized dumping locations.

Dumpsites can dangerous materials and attract pests such as rats, snakes, and mosquitoes. Illegal dumping has negative economic impacts on the community, such as the cleanup cost the City endures and the negative community image an unsightly dumpsite can project.

The City currently promotes a recycling program and encourages all residents to participate. The City also administers regular bulky item, bundled and unbundled brush, and recycling pick-up programs and has prepared an index of capable companies willing to assist with hazardous waste removal.

Stopping illegal dumping is everyone's problem. Help stop illegal dumping in our City. If you see it, report it to the Heath Household Help Line 972-771-6228.

### **4. Proper Disposal of Household Hazardous Wastes**

Many products found in homes contain chemicals potentially harmful to both people and the environment. Below is just a small list of hazardous products commonly found in the home:

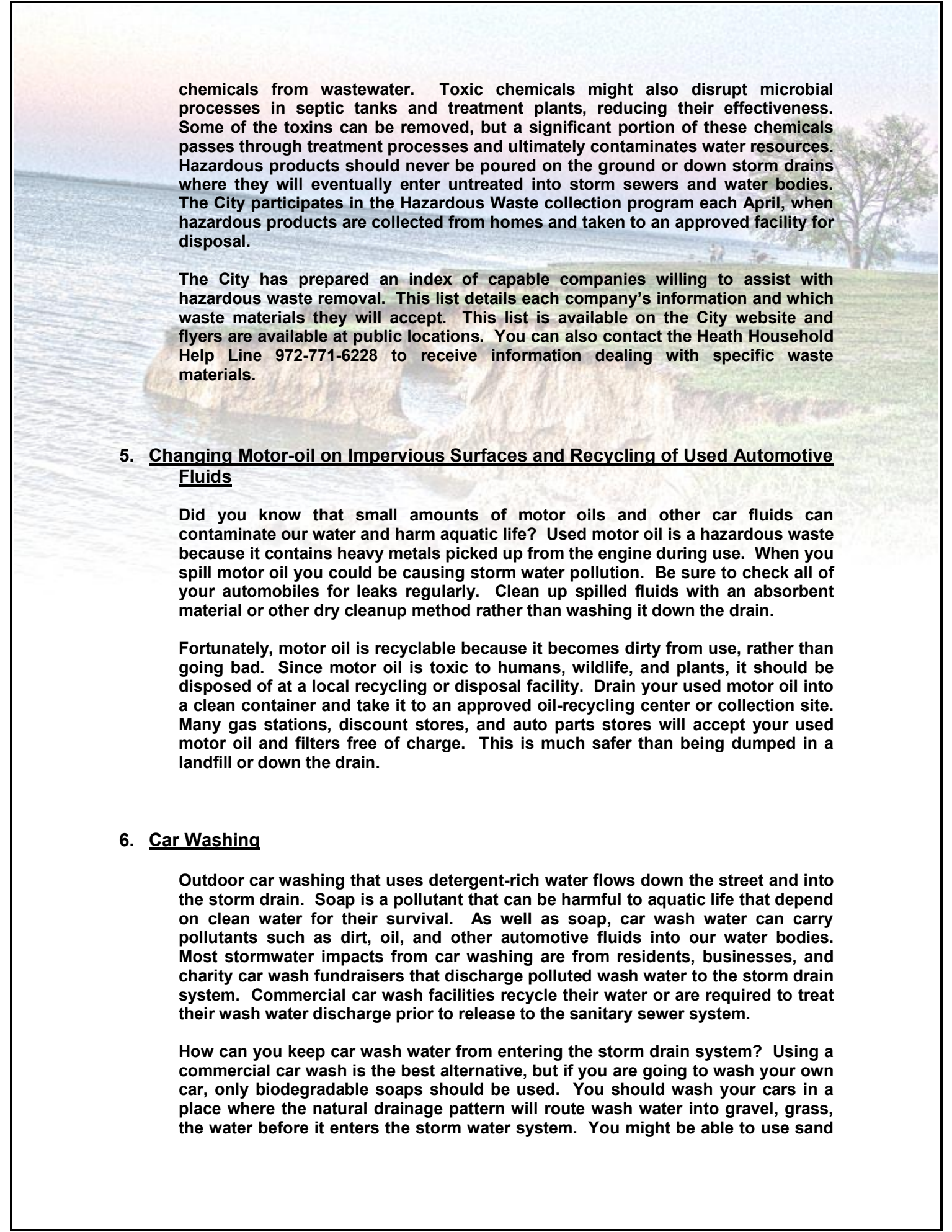
- Cleaning products: oven cleaner, floor wax, furniture polish, drain cleaner, and spot remover.
- Car care and maintenance: motor oil, battery acid, gasoline, car wax, engine cleaner, antifreeze, degreaser, radiator fluid, and rust preventative.
- Home improvement products: paints, preservatives, strippers, brush cleaners, and solvents.
- Other products labeled toxic, flammable, or corrosive, or containing lye, phenols, petroleum distillates, or trichlorobenzene.

You should know that it is best to use only those products that are absolutely necessary, and to use non-toxic alternatives whenever possible. Use water-based cleaning products when available. You can clean ovens by applying table salt to spills, then scrubbing with soda water. Rechargeable batteries are a cost-effective alternative to disposable batteries. Use recycled motor oil. There are several non-toxic alternatives for pesticides and fertilizers.

Read product labels for safe use and disposal. Keep hazardous products in their original containers and never remove labels. Residents should tightly seal all hazardous products before storing. They should be stored in a dry area in their original containers with the labels intact. They should be stored in a separate locked cabinet or other secure structure, away from children and pets, food, medical supplies, cleaning products, heat, flames, or sparks.

Disposal of home hazardous products also requires special attention. When use of hazardous household products is unavoidable, waste should not be flushed down the drain because these drains lead to either a home septic system or a municipal





chemicals from wastewater. Toxic chemicals might also disrupt microbial processes in septic tanks and treatment plants, reducing their effectiveness. Some of the toxins can be removed, but a significant portion of these chemicals passes through treatment processes and ultimately contaminates water resources. Hazardous products should never be poured on the ground or down storm drains where they will eventually enter untreated into storm sewers and water bodies. The City participates in the Hazardous Waste collection program each April, when hazardous products are collected from homes and taken to an approved facility for disposal.

The City has prepared an index of capable companies willing to assist with hazardous waste removal. This list details each company's information and which waste materials they will accept. This list is available on the City website and flyers are available at public locations. You can also contact the Heath Household Help Line 972-771-6228 to receive information dealing with specific waste materials.

#### **5. Changing Motor-oil on Impervious Surfaces and Recycling of Used Automotive Fluids**

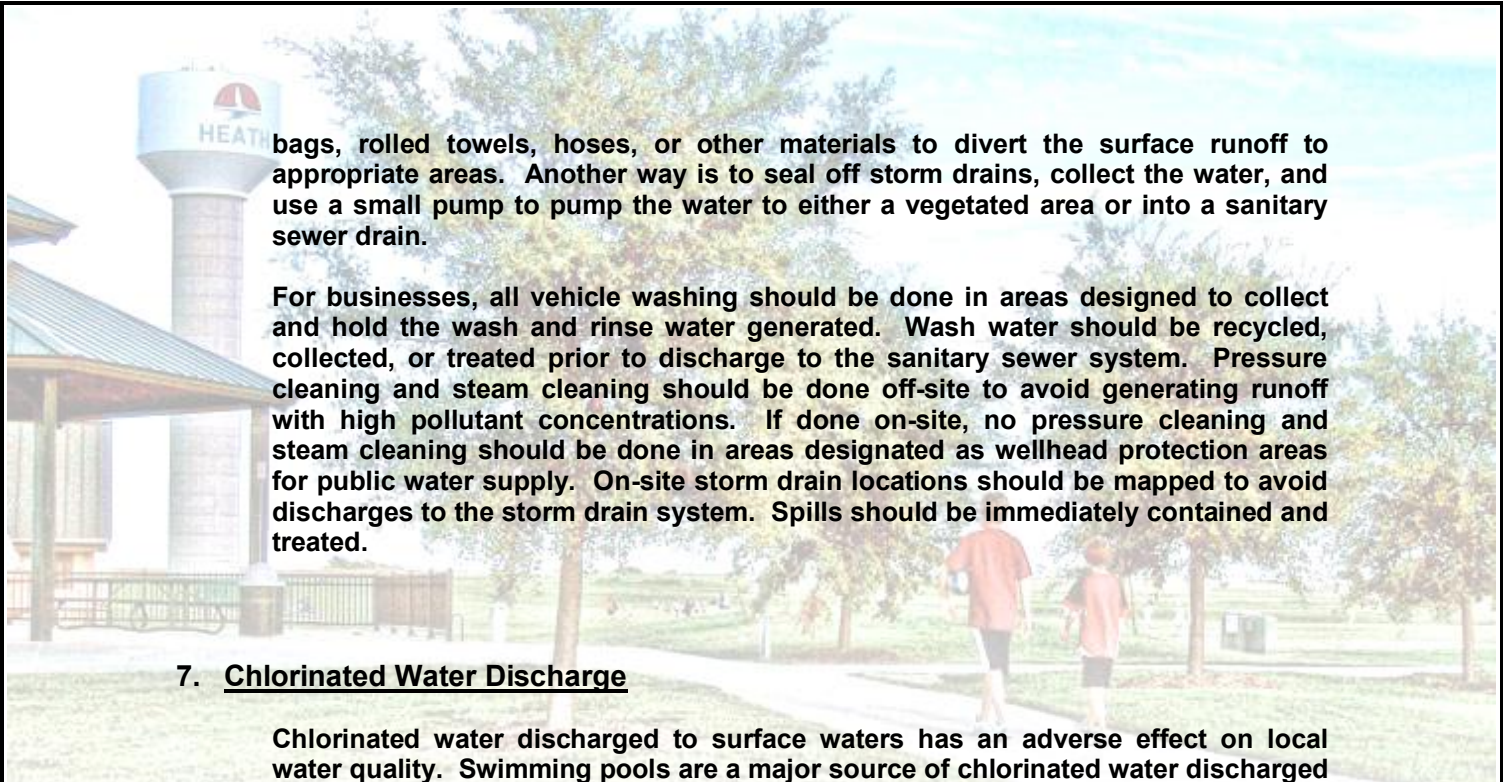
Did you know that small amounts of motor oils and other car fluids can contaminate our water and harm aquatic life? Used motor oil is a hazardous waste because it contains heavy metals picked up from the engine during use. When you spill motor oil you could be causing storm water pollution. Be sure to check all of your automobiles for leaks regularly. Clean up spilled fluids with an absorbent material or other dry cleanup method rather than washing it down the drain.

Fortunately, motor oil is recyclable because it becomes dirty from use, rather than going bad. Since motor oil is toxic to humans, wildlife, and plants, it should be disposed of at a local recycling or disposal facility. Drain your used motor oil into a clean container and take it to an approved oil-recycling center or collection site. Many gas stations, discount stores, and auto parts stores will accept your used motor oil and filters free of charge. This is much safer than being dumped in a landfill or down the drain.

#### **6. Car Washing**

Outdoor car washing that uses detergent-rich water flows down the street and into the storm drain. Soap is a pollutant that can be harmful to aquatic life that depend on clean water for their survival. As well as soap, car wash water can carry pollutants such as dirt, oil, and other automotive fluids into our water bodies. Most stormwater impacts from car washing are from residents, businesses, and charity car wash fundraisers that discharge polluted wash water to the storm drain system. Commercial car wash facilities recycle their water or are required to treat their wash water discharge prior to release to the sanitary sewer system.

How can you keep car wash water from entering the storm drain system? Using a commercial car wash is the best alternative, but if you are going to wash your own car, only biodegradable soaps should be used. You should wash your cars in a place where the natural drainage pattern will route wash water into gravel, grass, the water before it enters the storm water system. You might be able to use sand



bags, rolled towels, hoses, or other materials to divert the surface runoff to appropriate areas. Another way is to seal off storm drains, collect the water, and use a small pump to pump the water to either a vegetated area or into a sanitary sewer drain.

For businesses, all vehicle washing should be done in areas designed to collect and hold the wash and rinse water generated. Wash water should be recycled, collected, or treated prior to discharge to the sanitary sewer system. Pressure cleaning and steam cleaning should be done off-site to avoid generating runoff with high pollutant concentrations. If done on-site, no pressure cleaning and steam cleaning should be done in areas designated as wellhead protection areas for public water supply. On-site storm drain locations should be mapped to avoid discharges to the storm drain system. Spills should be immediately contained and treated.

## **7. Chlorinated Water Discharge**

Chlorinated water discharged to surface waters has an adverse effect on local water quality. Swimming pools are a major source of chlorinated water discharged into sanitary and storm sewer systems. An average swimming pool holds 19,000 gallons of highly chlorinated water, which is toxic to wildlife and fish. Many pool owners drain their swimming pools to reduce maintenance and potential damage from freezing during winter.

Instead of discharging pool water to the storm sewer system or directly into a water body, you should utilize alternative discharge options. Pool water can be discharged to land where it will not drain to local surface waters or storm sewer inlets. Pool water can also be diluted with potable water and used for irrigation of landscaped areas.

If your only option for draining pool water is to discharge directly into the environment, dechlorinate the water before draining the pool. Discharges to the environment should be directed over a land surface so that some level of filtration can occur.

## **8. Animal Waste Control**

When pet waste is improperly disposed of, it can be picked up by stormwater runoff and washed into storm drains or nearby water bodies. Since storm drains do not always connect to treatment facilities, untreated animal feces often end up in lakes and streams, causing significant water pollution.

Decaying pet waste consumes oxygen and sometimes releases ammonia. Low oxygen levels and ammonia can kill fish and other aquatic life. Bacteria, viruses, and parasites are a health hazard. Pets, children playing outside, and adults who garden are at risk of infection from these pathogens. Pet waste also contains nutrients that promote weed and algae growth making swimming and recreation unappealing or even unhealthy.



Pet waste management results in cleaner neighborhoods, with improved aesthetics and better water quality. Reducing pet waste reduces an important source of water pollution.

Pet waste should be picked up with a plastic bag and flushed down the toilet. Alternatively, the bagged waste should be placed in the trash or buried at least 6 inches deep and covered with soil. If you bury the waste, bury it in several different locations and keep it away from gardens. Pet waste is not fertilizer. Keep a supply of bags near your dog leash. Reuse old bags such as plastic newspaper bags, bread bags, or sandwich bags. Special bags can also be purchased where pet supplies are sold.

It takes individual behavior change and proper practices to control stormwater pollution. Therefore, it is important that the public is sufficiently aware and concerned about the significance of their behavior and actions regarding stormwater pollution. Through information and education, we can change improper behaviors together. Please visit the City of Heath Stormwater Management webpage at: [www.heathtx.com](http://www.heathtx.com) for more information.



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