

Keeping Oil, Grease and Fat Out of the Stormwater System...

helps protect our creeks, rivers and lakes from the unsightly and potentially toxic effects of these common byproducts of society.

Oil, grease and fat is generated as a result of food preparation, vehicle use and cleaning, oil production activities and industrial applications.

Leaking vehicles, illicit discharges, oil production, spills and sanitary sewer overflows can all contribute to the problem.

Oil and grease toxicity varies according to type (petroleum, animal or plant) and its level of refinement.

Oil and grease can prevent oxygen from entering a surface water and can also create a chemical oxygen demand which consumes dissolved oxygen thereby stressing aquatic systems.

Learn to recognize the difference between a naturally occurring organic or bacterial sheen and a petroleum based sheen representing a true pollutant. For more information, contact your local stormwater coordinator or the Oklahoma Department of Environmental Quality.

Additional Resources

Visit the Green Country Stormwater Alliance web site listed below for more details about stormwater protection, including municipal best management practices (BMPs), recycling and reuse, and more.



Green Country Stormwater Alliance
www.stormwaterok.net

Contact Information:

For information about the Green Country Stormwater Alliance, contact INCOG at 918-584-7526 or visit www.stormwaterok.net. For local information, contact your city or county stormwater coordinator.

For more information about stormwater protection, contact the Oklahoma Department of Environmental Quality (DEQ) Water Quality Division at 405-702-8100 or visit the DEQ web site at www.deq.state.ok.us/WQDnew/stormwater/index.html

For stormwater related complaints, call the DEQ statewide hotline at 1-800-522-0206. This number is answered 24 hours a day, 7 days a week. Citizens may fill out an online complaint form at the DEQ web site at www.deq.state.ok.us/ECLNew/Complaints/onlinecompl.htm and submit it electronically to the DEQ. The site also provides contact links to DEQ.



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Oil, Grease and Fat



A Closer Look at Oil, Fat and Grease



Petroleum Based Products

Petroleum based products like motor oil, fuel, lubricants, hydraulic fluid and coolants are commonly found in stormwater. Poorly maintained vehicles, accidental releases and illicit discharges can all contribute to the problem.

Petroleum hydrocarbons are generally non-polar and considered harmful to aquatic organisms. Some constituents are even toxic to humans.

- Runoff from streets and parking areas can contribute significant amounts of petroleum based materials to stormwater collection systems.
- Petroleum hydrocarbons are readily absorbed onto particulates and then washed into streams. Best management practices (BMP) that prevent particulates from entering a storm drain help reduce the presence of oil and grease in stormwater.
- Facilities working with vehicle fluids may need an oil/water separator between drains and sanitary sewers to prevent the discharge of petroleum products.
- Most discharge regulations prohibit the discharge of materials that produce a sheen on the surface of a receiving water.

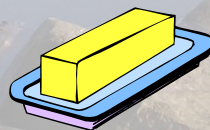


Animal and Plant Based Products

Food-handling locations (like restaurants, cafeterias, bars and kitchens) generate fats, oils and grease referred to as "FOG." When sanitary sewers get plugged or are overwhelmed by rainfall they overflow at manhole locations and FOG is discharged to stormwater systems.

These substances are made up of polar lipids and are partially soluble in water.

- Items such as meat, fish, butter, cooking oil, shortening and gravy can contain considerable amounts of FOG.
- When warm, FOG is a liquid, but if poured down a drain it can solidify in cooler pipes and trap other solids creating blockages, backups and sanitary sewer overflows.
- Commercial kitchens should have properly functioning grease traps or interceptors to capture FOG discharged to drains before it can enter a sanitary sewer.
- Grease traps and interceptors must be pumped out, cleaned and inspected on a regular basis to ensure proper function.



Keeping Oil, Grease and Fat out of Stormwater

- Don't dump oil, grease or fat down sinks, floor drains or stormwater drains. If not recycled, domestic cooking oil should be poured into a sealable container and placed in the trash.
- Cover outdoor grease and oil storage containers, locate them away from storm drains and protect dumpster contents from rain.
- Recycle petroleum products (waste motor and transmission oil, coolants, hydraulic fluid, etc.) and cooking oil and grease whenever possible.
- Place drain pans under leaky machinery and clean up oil spills promptly with absorbents.
- Don't allow oil and grease from outside washing and power washing operations (vehicles, equipment, parking lots) to enter stormwater drains or creeks.
- Inspect vehicles for fluid leaks and fix promptly if detected.

U.S. Environmental Protection Agency
National Pollutant Discharge Elimination System
<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/>

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