



Targeted Constituents

● Significant Benefit		◐ Partial Benefit		○ Low or Unknown Benefit	
◐ Sediment	● Heavy Metals	○ Floatable Materials	◐ Oxygen Demanding Substances		
○ Nutrients	● Toxic Materials	● Oil & Grease	○ Bacteria & Viruses	○ Construction Wastes	

Description Prevent pollutants and automotive fluids from directly discharging to streams, creeks, ditches and storm drains. In addition, pollutants should be prevented from accumulating on impervious surfaces in order to improve stormwater quality and protect natural streams and creeks.

Approach Personal vehicles (cars, trucks, vans, motorcycles) have a very high potential for polluting streets, grassy areas, streams, creeks, and the air that we breathe.

- Vehicles contain large amounts of fluids that could leak slowly from the engine, or may escape from a ruptured hose. Fluids such as engine oil, transmission fluid, radiator coolant, battery acids, and brake fluid all have special properties due to their chemical formulation. All of these fluids are poisonous to plants, trees, insects, wildlife, fish, etc. and must be reduced or eliminated as much as possible. Repair automotive leaks immediately.
- Incomplete combustion of gasoline and diesel fuels is a major contributor to air pollution. There is a high level of concern in state and federal governments for air quality and ozone levels in the Great Smoky Mountains. Please keep personal vehicles in good condition to reduce air pollution. The state of Tennessee currently does not require statewide vehicle inspections or emission testing.
- Vehicles contain moving parts which wear down, such as tires and brake pads. Brakes and brake pads are designed purposely to erode and grind in a way to minimize vehicle maintenance. Small pieces of tires and brake pads (containing asbestos and metals) are continually being deposited on streets and roadways.

Prohibition to Discharge Due to federal mandates, the City of Knoxville has adopted a Stormwater and Street Ordinance to prohibit discharge of chemicals and manmade materials into creeks, streams, ditches, swales, pipes, storm drains, and any surface which drains into these waterways. See the BMP entitled RH-01 (Non-Stormwater Discharges to Storm Drains) for a list of allowable discharges; anything else is strictly prohibited.

This prohibition includes all types of automotive fluids, whether discharged directly into a stream or storm drain, or discharged indirectly upon the ground so that the automotive fluid could wash away as stormwater runoff at a later time. In addition to fines and legal action from the City of Knoxville, the state government (TDEC) can also assess severe penalties for polluting waters of the state (defined as any blue-line stream on a USGS quadrangle topographic map) or any storm drainage system.

It is also illegal to discharge automotive fluids into a sinkhole, or to allow these fluids to soak into the ground. Sinkholes and known areas of groundwater recharge are also included as waters of the state, for which both TDEC and the City of Knoxville will assess penalties and take legal actions.

Disposal Options

The City of Knoxville operates a recycling center and waste transfer station that accepts used automotive fluids, in addition to other types of common household waste and hazardous materials. The recycling center and waste transfer station are centrally located with convenient hours, and are free to all city residents. The Office of Solid Waste website has the current hours, policies, limitations, and telephone numbers for additional information. <http://www.cityofknoxville.org/solidwaste/>

Many automotive parts stores and repair shops will accept engine oil and other fluids for recycling. Ask about recycling when you purchase automotive parts and fluids.

Vehicle Repairs

It is recommended that most city residents should take advantage of commercial repair shops and oil-change facilities. Home repair and maintenance may be performed if the homeowner/resident has adequate knowledge and tools for the task, materials to control spills and leaks, and proper safeguards to properly protect natural streams, storm drains, drainage ditches and the environment in general.

Purchase the correct automobile parts when making repairs or performing regular vehicle maintenance. Consult automotive repair manuals in order to perform the work quickly and efficiently. Use a funnel whenever pouring liquids such as motor oil, brake fluid or coolant. Drain hoses prior to removing or adjusting them; in most cases the liquid can be reused. Drain pans and dropcloths are essential items when changing oil or other automotive fluids. Be sure to use some type of drain pan when unclipping hoses, unscrewing filters or removing other parts. In general, use dry methods such as rags and absorbent material (kitty litter) to clean spills and leaks. Do not wash spills onto the ground or any surface that drains to the city stormwater drainage system or to natural creeks and streams. Sweep or mop any spills or leaks promptly. Keep spill containment materials nearby.

Use non-toxic materials when possible. For instance, baking soda is used for cleaning battery terminals and clamps. Do not mix used motor oil with solvents. Do not mix chlorinated solvents with non-chlorinated solvents such as kerosene or mineral spirits.

Other Vehicle BMPs

The following AM (Activities & Methods) BMPs are applicable to everyone who operates or maintains a vehicle such as businesses, industries, homeowners, automotive dealers, repair shops and garages, etc. They contain many specific requirements and guidelines for care and maintenance of vehicles.

Table AM-01-1	Quick Reference for Disposal Alternatives
AM-07	Spill Prevention and Control
AM-08	Waste Management and Recycling
AM-15	Vehicle and Equipment Fueling
AM-16	Vehicle and Equipment Maintenance

References

19, 20, 22, 30, 31, 33, 34, 35, 43, 98, 99, 100, 103, 108, 113, 127, 138
(see BMP Manual Chapter 10 for list)