

# **Auto Repair and Maintenance**

The following information provides Best Management Practices (BMPs) that are recommended for auto repair and maintenance facilities.

## **POTENTIAL POLLUTANT SOURCES**

The following activities are potential sources of pollutants:

- Automobile servicing
- Parts cleaning
- Materials and waste handling
- Materials storage
- Cleaning floors

### **Pollutants may include:**

- Heavy metals (copper, lead, nickel, and zinc)
- Hydrocarbons (oil and grease, PAHs)
- Toxic chemicals (solvents, chlorinated compounds, glycols)
- Acids and alkali

## **POLLUTION PREVENTION**

Using pollution prevention measures may reduce or eliminate the need for other more costly or complicated procedures. The following pollution prevention principles apply to most facilities:

- Use alternative, safer, non-toxic, and/or recycled products;
- Redirect flows away from storm drains, gutters, and streets;
- Reduce the use of water and/or use dry methods;
- Use water-based solvents for cleaning, whenever possible;
- Recycle and reuse waste products and waste flows; and
- Provide on-going employee training.

## **GENERAL GOOD HOUSEKEEPING PROCEDURES**

- Vacuum or sweep all surfaces regularly.
- Never discharge wash water into storm drains or streets.
- Move or cover materials to prevent contact with storm water.
- Use a vehicle maintenance area to prevent storm water pollution – to minimize contact of storm water with outside operations use berms and appropriate drainage routing.
- Inspect for leaks and drips routinely. Use absorbent for spills, and dispose of properly.
- Manage materials and waste to reduce adverse impacts on stormwater quality.

- Label drains within the facility boundary to indicate whether they flow to an oil/water separator, directly to the sewer, or to a storm drain.
- Prior to rain events, inspect and clean storm drain inlets and catch basins within your facility boundary.
- Sweep parking lots and areas around your facility instead of washing them down with water.
- Send dirty rags to an industrial laundry.

## **AUTOMOBILE SERVICING**

- Conduct maintenance or repair work only in designated areas with spill containment.
- Construct berms or intercept trenches at doorways to prevent the run-off of uncontaminated storm water from adjacent areas as well as stormwater runoff.
- Avoid working over asphalt and dirt floors – surfaces that absorb vehicle fluids.
- When removing or changing vehicle fluids, do so inside or under cover, if possible, to prevent the run-on of storm water and the runoff of spills.
- Always use a drip pan under vehicles while unclipping hoses, unscrewing filters, or removing other parts.
- Use a tarp, ground cloth, or drip pans beneath the vehicle or equipment to capture all spills and drips if temporary work is being conducted outside. Collected drips and spills must be disposed, reused, or recycled properly.
- Keep equipment clean – do not allow excessive build-up of oil and grease.
- Monitor parked vehicles for leaks. Pans should be placed under any leaks to collect the fluids for proper disposal or recycling. Drain oil and other fluids first if the vehicle or equipment is to be stored outdoors. Do not allow leaking vehicles on-site.
- Avoid soldering over drip tanks. Sweep up drippings and recycle or dispose of as hazardous waste.
- Sweep or use a vacuum to clean up dust and debris from scraping or bead blasting radiators.

## **PARTS CLEANING**

- Clean vehicle parts without using liquid cleaners wherever possible to reduce waste.
- Steam cleaning and pressure washing may be used instead of solvent parts cleaning. The wastewater generated from steam cleaning must be discharged to an on-site oil/water separator that is connected to a sanitary sewer or blind sump. Never discharge wastewater from steam cleaning, or engine/parts cleaning to streets, gutters, or storm drains.
- Non-caustic detergents should be used instead of caustic cleaning agents, detergent-based or water-based cleaning systems in place of organic solvent degreasers, and non-chlorinated solvent in place of chlorinated organic solvents for parts cleaning.
- Designate specific areas or service bays for engine, parts, or radiator cleaning. Do not wash or rinse parts outdoors. Keep water from flowing to storm drains, gutters, and streets.
- Use self-contained sinks and tanks when working with solvents. Keep sinks and tanks covered when not in use.
- Rinse and drain parts over the solvent sink or tank. Use drip boards or pans to catch excess solutions and divert them back to a sink or tank.

- Inspect degreasing solvent sinks regularly for leaks and make necessary repairs immediately.
- Allow parts to dry over the hot tank. If rinsing is required, rinse over the tank as well.
- Collect and reuse parts cleaning solvents and water used in flushing and testing radiators. When reuse is no longer possible, these solutions may be hazardous wastes, and must be disposed properly.
- Discharging solvent rinse water into the sanitary sewer system is prohibited.

## **MATERIALS AND WASTE HANDLING**

- Label all hazardous wastes according to regulations.
- Keep lids on waste barrels and containers, store them indoors or under cover to reduce exposure to rain, and prevent spills from reaching sanitary sewer drains, storm drains, gutters, and streets.
- Do not pour liquid waste to floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections.
- Do not leave drip pans or other open containers lying around.
- Recycle oil.
- Store cracked batteries in a non-leaking secondary container and dispose of properly at recycling or household hazardous waste facilities.
- Store waste containers of antifreeze and oil within secondary containment. Antifreeze and waste oil should be stored separately and recycled, or disposed of as hazardous waste.
- Ask your supplier for information on less toxic chemical cleaners and other products.
- Label and track the recycling of waste material (i.e., used oil, spent solvents, batteries).

## **MATERIALS STORAGE**

- Double-contain all bulk fluids to prevent accidental discharges.
- Store new batteries securely to avoid breakage and acid spills. Store used batteries indoors and in plastic trays to contain potential leaks.

## **CLEANING FLOORS**

- Collect all metal filings, dust, paint chips from grinding, shaving, sanding, and dispose of properly.
- Collect all dust from brake pads separately, and dispose of properly. Never sweep these wastes outside.
- Use dry cleaning methods (i.e., sweeping, vacuuming) to prevent the discharge of pollutants into the storm drain conveyance system.
- If cleaning agents are used, select less toxic, biodegradable products.
- If wash water does not contain soap or other cleaning agents, discharge to a pervious surface. If wash water contains soaps or other cleaning agents and cannot be pumped to the sanitary sewer, it may need to be disposed of as hazardous waste.
- Consider using an oleophilic mop (picks up oil and not water) to reduce the volume of waste liquids you collect and reduce your cost for disposal.

## **SPILL CONTROL**

- Develop and maintain a spill response plan.
- Place an adequate stockpile of spill cleanup materials where it will be readily accessible.
- Spot clean leaks and drips routinely.
- Clean leaks, drips, and other spills with as little water as possible. Use rags for small spills, a damp mop for general cleanup, and dry absorbent material for larger spills.
- Remove the absorbent materials promptly and dispose of properly.
- Minimize the distance between waste collection points and storage areas.
- Contain and cover all solid and liquid wastes – especially during transfer.
- Keep the spill from entering streets, gutters, or storm drains.
- Do not use bleach or disinfectants if there is a possibility that rinse water could flow to streets, gutters, or storm drains.

## **EMPLOYEE TRAINING**

- Train employees on these practices.
- Train staff on the proper maintenance of your facility.
- Train employees on your facility's spill control plan, proper spill containment and cleanup procedures.
- Establish a regular training schedule, train all new employees, and conduct annual refresher training.
- Use a training log or similar method to document training.

Sources:

The Texas Commission on Environmental Quality ([www.tceq.state.tx.us](http://www.tceq.state.tx.us))

The United States Environmental Protection Agency ([www.epa.gov](http://www.epa.gov))