



This Fact Sheet provides Best Management Practices (BMPs) that are recommended for facilities that conduct auto repair and maintenance activities.

## 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 alkalis

## Pollution Prevention

Implementation of pollution prevention measures may reduce or eliminate the need to implement other more costly or complicated procedures.

The following pollution prevention principles apply to most facilities:

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

## Best Management Practices and Procedures

### GENERAL

- ▶ If water is being used for cleaning shop floors and adjacent outdoor areas, contain the wash water and dispose of in the sanitary sewer (with permission of sewer provider) or for offsite disposal, do not dispose of in the storm drain, gutter, or street.
- ▶ Maintain facility grounds and move or cover activities and materials to prevent contact with storm water.
- ▶ Use a vehicle maintenance area designed to prevent storm water pollution – minimize contact of storm water with outside operations through berming and appropriate drainage routing.
- ▶ Inspect and clean leaks and drips routinely. Leaks are not cleaned up until the absorbent is picked up and disposed of properly.
- ▶ Manage materials and waste to reduce adverse impacts on stormwater quality.

- ▶ Label drains within the facility boundary, by paint/stencil (or equivalent), to indicate whether they flow to an oil/water separator, directly to the sewer, or to a storm drain.
- ▶ Inspect and clean if necessary, storm drain inlets and catch basins within the facility boundary before October 1 each year.
- ▶ Sweep parking lots and areas around your facility instead of washing them down with water.
- ▶ Send dirty rags to an industrial laundry.

## **AUTOMOBILE SERVICING**

- ▶ Only conduct maintenance or repair work in designated areas with spill containment.
  - Construct a berm or intercept trench at doorways to prevent the run-on of uncontaminated storm water from adjacent areas as well as stormwater runoff.
  - Avoid working over asphalt and dirt floors – surfaces that absorb vehicle fluids.
- ▶ Perform all vehicle fluid removal or changing inside or under cover, if possible, to prevent the run-on of storm water and the runoff of spills.
- ▶ Keep a drip pan under the vehicle while unclipping hoses, unscrewing filters, or removing other parts. Use a drip pan under any vehicle that might leak.
- ▶ 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 a street, gutter, or storm drain.
- ▶ 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.
- ▶ Rinse water may only be discharged to the sanitary sewer with adequate treatment and approval (with permission of sewer provider).

## **MATERIALS AND WASTE HANDLING**

- ▶ Label all hazardous wastes according to hazardous waste regulations.
- ▶ Keep lids on waste barrels and containers and store them indoors or under cover to reduce exposure to rain and prevent spills from reaching the sanitary sewer or storm drain, gutter, and street.
- ▶ 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 (e.g. 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, and paint chips from grinding, shaving, and sanding, and dispose of waste properly. Collect all dust from brake pads separately and dispose of the waste 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 biodegradable products.
- ▶ If water is used, block off storm drain or contain runoff and collect wash water to pump to the sanitary sewer, if allowed. 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 can not 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 the street, gutter, or storm drain.
- ▶ Do not use bleach or disinfectants if there is a possibility that rinse water could flow to a street, gutter, or storm drain.

## Employee Training

- Train employees on these practices.
- Train staff on the proper maintenance of the facility.
- Train employees on the facility’s spill control plan and 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.

## PHONE NUMBERS

|  |          |
|--|----------|
| San Joaquin County Stormwater Management | 468-3055 |
| San Joaquin County Sanitary Sewer Agency | 468-3090 |
| City of Stockton Stormwater Management   | 937-8791 |
| City of Stockton Sanitary Sewer Agency   | 937-8750 |



## KEEP YOUR BUSINESS SAFE FROM MERCURY

Mercury is found in a variety of items ranging from automobiles to household appliances. Be cautious of tags or labels that identify the components as containing mercury when repairing these items. It is important to keep the mercury ampules intact when repairing equipment and never rinse mercury from a broken ampule down the drain.

Mercury within the Automotive Industry can be found in many automotive applications including hood and trunk light switches, ABS braking systems switches, ride control systems, navigation displays, air bag sensors, and high intensity discharge (HID) headlamps.

Mercury may also be found in a wide variety of appliances including chest freezers, refrigerators, gas and electric stoves, washing machines, space heaters, pool heaters, commercial water heaters, and camper appliances. Mercury is often used in everyday household objects so it is important to dispose of them properly. Thermostats, Thermometers and Fluorescent Lamps are of particular concern. Proper handling and disposal and the evaluation of alternative products are the keys to minimizing mercury impacts on human health and the environment.

## THE CONCERN- MERCURY IS TOXIC.

Although mercury performs many useful functions, it is toxic and can impair the way we see, hear and function. In the environment, a percentage of mercury undergoes a biological/chemical process and is converted to methylmercury, which is a more toxic form of mercury. Mercury poisoning can attack the central nervous system in humans. Women of child-bearing age and children, especially those under the age of six, are most susceptible to mercury poisoning.

Allow only those people who are properly trained and equipped to remove, handle, and manage mercury-containing devices from appliances or automobiles.

Businesses may utilize the following resources to properly dispose of products containing mercury or to obtain further information:

San Joaquin County Household Hazardous Waste Facility: (209) 468-306  
San Joaquin County Environmental Health Department: (209) 468-3420

If you are looking for answers to your regulatory questions, call 800-72TOXIC (728-6942) or visit: <http://www.dtsc.ca.gov/HazardousWaste/Mercury/>

## PHONE NUMBERS

|  |          |
|--|----------|
| San Joaquin County Stormwater Management | 468-3055 |
| San Joaquin County Sanitary Sewer Agency | 468-3090 |
| City of Stockton Stormwater Management   | 937-8791 |
| City of Stockton Sanitary Sewer Agency   | 937-8750 |

