

# Stormwater Management

## A Guide for Auto Recycler Owners and Operators



### Stormwater Protection Starts With You

The facility operator's attitude toward stormwater management can make all the difference. It's your responsibility to communicate to your employees that stormwater management is a priority. Make sure your employees understand why stormwater management is important, both to your business and to the environment. Start by having them review the enclosed video and fact sheet.

#### Protecting stormwater can benefit your business in several important ways:

- **Professionalism and pride in your business** – Both workers and customers appreciate a clean and responsible facility.
- **It's the law** – Not complying with stormwater rules can put your business in jeopardy. Regulators and environmental groups across the country are increasingly targeting auto dismantlers for stormwater violations.
- **Environmental protection** – We all want clean streams, rivers, lakes, bays, and oceans for our families and for our future. Your business can protect the environment by following some straightforward and commonsense practices.



The following practices describe options that your facility can implement to help address its stormwater issues. Although following all of the practices described below may help improve performance with regard to stormwater management, it does not guarantee that your facility will be in compliance with all applicable stormwater rules. Check with your state regulatory agency or EPA for more information.

#### The Stormwater Permit

All vehicle dismantling facilities in the United States (except those in a combined sewer service area or facilities that do not discharge stormwater from their property) are required by the Clean Water Act to obtain a stormwater permit either from the U.S. Environmental Protection Agency or from an appropriate state agency. You must first file a Notice of Intent (NOI) with the appropriate state agency. You must also prepare a Storm Water Pollution Prevention Plan (SWPPP) to describe how you will address your facility's stormwater issues.

The practices below are organized by facility area or activity. Links and contact information to obtain additional information about stormwater and other environmental issues related to auto dismantling are listed at the end of this document.

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## What are Best Management Practices (BMPs)?

The term “BMP” is used to describe management practices that many different industries use to address a range of environmental issues. We’ll use BMP to describe the practices that you can implement to address your auto dismantling facility’s stormwater issues.

### > Training

**Employee training is critical!** Train appropriate employees on relevant stormwater management procedures, especially during the wet season and prior to rain or snow events. All employees must be trained upon their initial hire and at least once per year thereafter. Be sure to document employee training. Also, place signs around activity areas as reminders to your workers; for example, “No fluids in the drain” or “Sweep up loose absorbent daily.” Make up your own signs that make sense for your operation.



### > Incoming Vehicles

**Inspect all incoming vehicles for leaking fluids and unwanted materials as they enter your facility.** Promptly contain leaks with drip pans or absorbent materials.

### > Fluid Removal

**Establish a procedure for processing vehicles and stick to it.** First, before any vehicle is placed in the yard for long-term storage or crushed, and before fluid-containing parts are dismantled, drain the following fluids from the vehicle in the order that best fits your operation:

- Fuel
- Motor oil
- Transmission fluid
- Brake fluid
- Antifreeze
- Freon

Draining these fluids before placing the vehicle in the yard reduces **1)** the possibility of spills when parts are removed later, and **2)** time and cost to your business of cleaning up leaks and spills.



### > Fluid Draining and Vehicle Dismantling Area

**Ideally, these activities should be conducted in the same area, which should be covered with a roof.** Your fluid draining and vehicle dismantling areas have more potential to contaminate stormwater than any other areas of your facility. Properly covering this area can eliminate contact with rainfall and is a great way to get a big bang for your buck in preventing stormwater pollution. Rain or snow can carry harmful materials like oil or gasoline into the soil and nearby streams, rivers, and lakes. Roofs not only keep out rain and snow, but also make the work area more comfortable for your workers.

If you don't currently dismantle fluid-containing parts and drain fluids under cover, you don't necessarily have to put up an entirely new and expensive building. One low-cost roofing option available is the "VersaTube" offered by Tuff Shed. (See <http://www.tuffshed.com/versatube.htm> or call (800) BUY-TUFF for more information.)

Another option includes building your own temporary cover using low-cost materials. Plans and materials for such temporary roofs can be obtained from vendors like South Bay Canopy (408) 998-8280.

You should also have a concrete pad in the draining and dismantling area, and you should drain all vehicles on this surface. Draining over concrete makes spills and leaks easier to clean up and minimizes the chance of environmental harm. Use appropriate fluid removal and handling equipment, such as suction systems, drain racks, and funnels for the containers.



Prevent stormwater pollution by minimizing the exposure of dismantling and fluid removal activities to stormwater. In addition to overhead cover, possible options include installing intercept trenches, berming the perimeter of the area, or using channels, swales, or grade breaks to divert the flow of stormwater around these areas.

## > Fluid Storage

**Storing fluids properly helps cut down on the amount of contaminants that end up in stormwater.** When you remove fluids, transfer them to the

proper container. Confine fluid storage to designated areas that are covered and have adequate secondary containment. Keep drums containing fluids away from storm drains; consider storing fluids near the location where fluids are drained. Maintain good integrity of all storage containers. Do not leave open drain pans that contain fluids around the shop.

You are responsible for ensuring that your fluids are handled by an authorized processor, transporter, and treatment/disposal facility.

## > Spill Cleanup

**Clean up spills promptly and thoroughly.** Keep appropriately sized and stocked "spill kits" available in the areas where you conduct the following activities:

- Dismantling and fluid removal
- Fueling
- Fluid storage
- Equipment maintenance
- Battery and parts storage

For smaller spills, use shop rags and oil dry. Used absorbents should be placed in a designated container for proper disposal.

What should be in your spill kit?

- Absorbent socks or booms
- Disposal bags or other containers
- Absorbent pillows and pads
- Safety goggles
- Oil dry
- Plastic gloves
- Broom and shovel

- **Never use vehicle fluids for dust control!**
- **Don't mix your used oil with solvents, brake cleaner, or antifreeze.** This creates a hazardous waste, which can't be recycled and is very expensive to get rid of.
- **Don't pour fluids into your septic system, sanitary sewer, dry well, on the ground, or in the trash.**

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## > Parts Storage

Store engines, transmissions, and other oily parts (resale, core, or scrap) in a way that avoids exposure to rain or snowfall. This can include:

- 1) Storing parts indoors
- 2) Storing parts under a permanent roof on impervious surface
- 3) Storing parts in weather-proof, leak-proof, covered containers
- 4) Placing parts in vehicle bodies
- 5) Providing temporary cover (like tarps) for these parts as an interim measure

*Lead acid battery components are toxic and corrosive and can contaminate the soil and water if handled improperly.* Store batteries inside a building or outside in covered, non-leaking containers. Separate batteries from other wastes like paper, rags, garbage and flammable or hazardous chemicals. Monitor your battery storage area for leaks or deterioration, and take quick action to address any spills or leaks. Lime can be used to neutralize spilled battery acid. *Never pour battery acid on the ground or into a storm drain!*

Radiators removed from vehicles should be stored under a roof, tarp, or other cover, and raised up off the ground such that there is no contact with rainfall and surface drainage.



## > Crushing

**Never crush a vehicle without draining all the fluids and removing gas tanks, tires, and batteries.** Capture and properly dispose of residual fluids released during crushing. You're responsible for ensuring fluids are captured and don't run off your property, even if you use a contractor to crush your vehicles.

## > Vehicle Storage

If engines or fluid-containing parts remain in the vehicle when it is placed in the yard, place a hood or other cover, such as a well-secured tarp, over the vehicle engine. Use drip pans under stored vehicles with leaks.

Don't place vehicles on the ground where there is a heavy stormwater flow or close to a storm drain.

After vehicles are moved, scrape up dirt or gravel that was stained from leaks and drips. Manage the contaminated material in accordance with applicable regulations.

- **Never wash spills into storm drains!**

- **Sweep up absorbent material and properly dispose at least daily.**

## > Equipment Maintenance

**Schedule and perform periodic inspections of equipment.** Regular maintenance of equipment such as forklifts reduces risk of breakdown and fluid release. Check for leaks and spills and for malfunctioning, worn, or corroded parts. Equipment maintenance should be done indoors or, where practical, on an impervious surface. If maintenance can't be done under cover, take adequate spill control and/or cleanup measures.

## > Fueling

**Pave refueling areas with concrete** to prevent contamination of the soil and to enable cleanup. Don't leave vehicles unattended while fueling.

## > Housekeeping

**Sweep and clean paved surfaces daily to reduce sediment and contaminant buildup.** Routine housekeeping is important. Catchments, inlets, oil-water separators, oil booms, waddles, tarps, and other pollutant-collecting materials need to be maintained regularly or they can become ineffective. Clean out drain inlets periodically, especially before the wet season, during the wet season, and after the wet season ends.

## > Erosion Control

**Tackle TSS!** You may have heard of TSS or total suspended solids – in other words, dirt. Controlling the amount of dirt that runs off your property is important because metals and other harmful pollutants can attach themselves to the dirt particles and end up flowing off the property with stormwater. Eroded soil can also smother aquatic life.

**Implement appropriate vegetative, structural, or stabilization measures** such as basins, sediment traps, geotextiles, buffer strips, or filter berms in areas without much vegetation where soil erosion is evident.

## > Non-Stormwater Discharges

**Wash water from equipment, work areas, or shop floors cannot come into contact or mix with rainfall or surface drainage, or drain offsite.** Vehicle and hand wash water is OK to be discharged to the sanitary sewer where allowed (be sure to check with your local sanitary sewer district). Most states prohibit all non-stormwater discharges from your property, including, but not limited to, discharges of wash water, rinse water and spilled fluids. If you are permitted to use sewers, make sure your drain is connected to the sanitary sewer. If this is not possible in your area, the wash water must be managed on-site. Management options include recycling, re-use, or off-site disposal. If you let the water soak into the ground (infiltration), take appropriate steps to prevent groundwater contamination and infestation by mosquitoes or other pests. For additional information consult your local regulatory agency.



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- Residues from dried wash water cannot come into contact with rainfall or surface drainage.

- **Know where your drains go. Plug any floor drains that would let a spill run into septic systems or storm drains.**

Automotive fluids and solvents can contaminate drinking water if they end up in drains that discharge to soil.

- Following washing, collect and clean up any accumulated sediments, oil deposits, debris, and paint particles.
- Do not steam clean or pressure wash parts without proper wash water management.
- Do not hose down the shop floor if water will run into a storm drain or off the property.

## > Stormwater Filter Systems

**Inexpensive filter systems or absorbents can provide an extra level of defense** against stormwater pollution.

Examples include: absorbent socks or booms, silt fences, straw bales, rock filters, and inlet filters.

Regular maintenance of these products is essential – if they're not maintained, they won't work. Further, these measures are not a substitute for good stormwater management practices.

## > Inspection

**Inspect your site regularly** to ensure all appropriate BMPs are being implemented. Increase inspections during periods of rainy weather. Based on permit or management needs, maintain a record of visual inspections.

Inspect oil containers, fresh water systems, irrigation lines, fueling areas, and other piping systems for leaks. If evidence of leaks is found, promptly repair or replace damaged parts to prevent polluted runoff and non-stormwater discharges.

## > Customer Education

**Inform customers who remove parts to do so properly and to appropriately dispose of fluids.** For example, make fluid receptacles readily available, post signs that require the use of drip pans for parts removal, and prohibit waste generating activities like vehicle maintenance in parking lots.

## Mercury Switches

Mercury switches are an important issue. Many older vehicles contain mercury, which is highly toxic and can cause learning disabilities and mental retardation in newborn children. When vehicles are crushed and mercury remains inside, it can get onto the ground and into waterways. Also, mercury can be released into the air and water bodies after scrapped vehicles go to the shredder.

### What to do about mercury

Mercury switches are commonly found under vehicle hoods and trunks and less frequently in automatic braking systems (ABS). These switches can easily be removed to prevent contamination of the environment and human health problems.

Some states require mercury switches to be removed before vehicles are crushed. Some auto dismantlers remove the switches even if they are not required to do so. If you choose to address this important environmental issue and remove mercury switches before your vehicles are crushed, store the switches in a leak-proof, clearly marked, closed container. Also take care to ensure that the switches do not break during handling or storage. A licensed metals recycler that reclaims mercury can dispose of the switches. Contact your state environmental agency for more information.

Information on removing mercury from vehicles is available online at:

[epa.gov/glnpo/bnsdocs/hgsbook/auto.pdf](http://epa.gov/glnpo/bnsdocs/hgsbook/auto.pdf)

[epa.gov/region5/air/mercury/autoswitch.htm](http://epa.gov/region5/air/mercury/autoswitch.htm)  
[switchout.ca](http://switchout.ca)

You  
>> **CAN** <<  
Make a Difference!

Auto recyclers do their part to conserve natural resources by recycling valuable materials. Build on this good work and protect the environment from polluted runoff by implementing the BMPs described in this fact sheet. Make sure that your employees understand that stormwater management is important and are trained to implement your BMPs.

Remember,  
stormwater protection  
starts with YOU!

**"It's critical for owners to set an example and be actively involved in implementing BMPs."**

– Brian Werth, Select Auto & Truck Recyclers

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## Where to find more information

Check out the following sources for additional information on BMPs for auto recyclers:

### Manuals

- An Environmental Compliance Workbook for Automotive Recyclers, Florida DEP  
[www.dep.state.fl.us/central/home/ps/asyc/fl\\_gyb.pdf](http://www.dep.state.fl.us/central/home/ps/asyc/fl_gyb.pdf)
- Environmental Compliance Guide for Motor Vehicle Salvage Yards, OH Small Bus. Assistance Office  
[www.epa.state.oh.us/other/sbao/salvageguide.pdf](http://www.epa.state.oh.us/other/sbao/salvageguide.pdf)
- Vehicle Recycling Manual: A Guide for Vehicle Recyclers, Washington State Department of Ecology  
[www.ecy.wa.gov/pubs/97433.pdf](http://www.ecy.wa.gov/pubs/97433.pdf)
- Automotive Recyclers Guide to a Cleaner Environment, New York DEC  
[www.dec.state.ny.us/website/reg8/press/autorec/autorec0.pdf](http://www.dec.state.ny.us/website/reg8/press/autorec/autorec0.pdf)
- Certified Auto Recycler (CAR) Guidance Manual, Automotive Recyclers Association  
[www.autorecyc.org](http://www.autorecyc.org) (Available to members only)

### Other Sources

- The National Compliance Assistance Clearinghouse is your guide to compliance information on the Internet. It provides quick access to compliance tools and contacts from EPA and other compliance assistance providers. The clearinghouse has an entire section devoted to the auto salvage industry.  
[cfpub.epa.gov/clearinghouse](http://cfpub.epa.gov/clearinghouse)
- A list of state and local environmental contacts can be found on the internet at:  
[www.epa.gov/epapages/statelocal/envrolst.htm](http://www.epa.gov/epapages/statelocal/envrolst.htm)
- The EPA Small Business Ombudsman can help you understand environmental regulations, or refer you to local contacts. Their toll-free small business hotline provides regulatory and technical assistance information: (800) 368-5888

## Vendors

Call for catalogs or more information

### Low-Cost Roofs:

Tuff Shed (800) BUY-TUFF  
South Bay Canopy (408) 998-8280

### Fluid Removal and Storage Equipment:

Hy-Tec Environmental (800) 336-4499  
Spill Cleanup Direct (800) 356-0783

### Spill Kits and Absorbent Materials:

Stormtech (888) 549-5374  
New Pig (800) 468-4647

*Note: Sustainable Conservation and U.S. EPA do not endorse any of these products.*

*This list is not complete: other vendors may provide similar or identical products and services.*

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