



# Sector M: Automotive salvage yards

## Industrial stormwater pollution prevention

Sector M includes automotive salvage yards and similar facilities that dismantle cars for the purpose of selling secondhand parts, which are described by Standard Industrial Classification (SIC) code 5015. Auto wreckers that dismantle automobiles for scrap are Sector N: Scrap recycling and waste recycling facilities.

Activities at automotive salvage yards that can impact stormwater include vehicle dismantling; vehicle, equipment, and parts washing; vehicle and parts storage; fueling stations; equipment maintenance and storage; above ground storage tanks; and illicit connections to the storm sewer. Common pollutants are solvents, heavy metals, fuels, oil and grease.

## Pollution prevention ideas

Minnesota's industrial stormwater permit requires a written Stormwater Pollution Prevention Plan (SWPPP). Use the SWPPP to assess potential sources of pollutants at your facility and then identify practices that will minimize these pollutants in runoff from the site. This fact sheet lists pollution prevention (P2) practices that can be incorporated into your facility's SWPPP.

Keep in mind that pollution prevention is best achieved by qualifying for the No Exposure exclusion. No Exposure means that rain, snow, and runoff do not contact pollutant-containing materials or activities. Your facility can apply for the No Exposure certification as soon as you qualify, even if you already have the full permit. For more information visit the MPCA's No Exposure web page at <http://www.pca.state.mn.us/noexposure>.

## General strategies

- Keep materials and activities indoors as much as possible. Confine outdoor materials and activities to designated areas that are covered, have an impervious concrete surface, or have a system (such as berms or dikes) to prevent run-on of stormwater and runoff of pollutants.
- Regularly clean up areas used for dismantling, washing, storage, fueling and maintenance using dry methods such as sweeping, squeegee and dust pan, reusable socks, vacuums, and as a last resort, use loose granular absorbents.
- Plug drains or use diversion devices to prevent spilled materials and liquids (including wash water) from entering floor drains, sewer connections or storm drains.

## Dismantling and vehicle maintenance

- Inspect vehicles for leaks as soon as possible after they arrive. Immediately take care of vehicles that arrive with leaks.
- Drain all fluids from vehicles when they arrive, including oil filters. Drain indoors when possible or on a dedicated pad. Empty drip pans and containers daily rather than leaving them full and open around the shop.
- Segregate the fluids and properly store or dispose of them. Mark all vehicles that have been fully drained.

- Remove all mercury switches as soon as possible. Make sure not to puncture the mercury container during removal. Ship switches to End of Life Vehicle Solutions (ELVS), which manages the Minnesota Mercury Recovery Program. Remove the battery as soon as feasible after a vehicle enters the facility and send for recycling. When battery storage is necessary, store indoors.
- Remove airbags prior to crushing or other maintenance activities.
- Wet down asbestos brake shoes and clutches during handling to prevent asbestos from becoming airborne.
- Do not vent Freon to the atmosphere. Follow US Environmental Protection Agency (EPA) requirements for handling refrigerants.
- When pulling parts from vehicles in the yard, employ a catch sled or tray to contain the fluids that will be released. Place drip pans, large plastic sheets or canvas under vehicles or equipment during maintenance and dismantling.
- Designate one person to keep track of parts in the yard. As soon as a hulk is salvaged to the maximum extent possible, process it for shredding to minimize the dripping of fluids and clutter in the yard.
- Maintain an organized inventory of materials used in the maintenance shop.
- Minimize the use of solvent-based cleaners for parts washing.
- Keep compressed gas tanks in good condition to prevent leaks or spills. Most tanks are made of steel so monitor them for rust as well.
- Do not pour liquids (including wash water) into floor drains, sinks, outdoor storm drain inlets or other storm drain or sewer connections.

## Vehicle crushing

- Double-check that fluids have been drained before crushing.
- Capture any crusher fluids. Collect this mixture of fluids in a spill-proof covered container. Keep the drain within the crusher clean so that the fluids do not collect and overflow from the crusher onto the ground.
- Install a bermed, impermeable concrete surface as a foundation under the crusher if possible.
- Develop a preventative maintenance program for regular inspections and maintenance of the crusher, facility equipment and vehicles.
- Clean and sweep the crushing area often to prevent accumulation of glass and other materials.

## Storage

- Provide impervious surfaces for outdoor vehicle storage.
- Park vehicles with a similar make and model together. Park vehicles with parts that have higher demand together in an easily accessible area.
- Store all engines and transmissions that have been removed from vehicles in covered areas not exposed to precipitation.
- Recycle lead battery cable ends and wheel balancing weights. Store lead parts in a covered container that is capable of handling the weight of lead.
- Store mercury switches in covered, leak-proof containers in a way that prevents the glass capsule from breaking.
- Do not stockpile old tires. Use indoor tire racks.
- Keep tanks and containers in good condition, free of any visible leaks, structural damage or deterioration. Secure and lock storage tanks.
- Use secondary containment for stored liquids such as oil, gas and antifreeze, as well as for lead acid batteries. Provide secondary containment for all drums, empty or used, and all above ground tanks.

- Secondary containment valves should be kept in the “off” position and locked at all times, except when collected water is removed.
- Repair malfunctioning equipment that is responsible for any leak or spill as soon as possible.
- Keep cleanup equipment on hand to clean up spills immediately.
- Do not use vehicle fluids, oil or fuels for dust or weed control.

Photo Credit Kaite Brady



Store vehicles in rows with plenty of aisle space so vehicles can be inspected regularly for leaks.

## Improper connections to storm sewer

- If it is unknown whether the sanitary water system and storm sewer system are connected, perform dye testing.
- Update facility schematics to accurately reflect all plumbing connections.
- Maintain and inspect the integrity of oil-water separator tanks; replace when necessary.

## Inspections

- Inspect all storage containers and storage areas to detect potential leaks.
- Inspect tanks and piping systems (pipes, pumps, flanges, couplings, hoses, and valves) for failures or leaks. Perform preventative maintenance as needed.
- Inspect vehicles regularly for signs of leakage.

## Employee training

- Train employees on proper collection, storage, reuse, recycling or disposal of batteries, oil, mineral spirits, antifreeze, mercury switches, refrigerants and solvents.
- Train employees in spill prevention, control, cleanup and materials management.
- Train employees on good housekeeping measures including all SWPPP components.

## Cold climate considerations

Minnesota experiences challenging climatic conditions that require thoughtful P2 design and operation. Cold weather, snow and ice result in extended storage of pollutants in the snowpack. The following P2 activities can help minimize the impact of cold climate on stormwater:

- Collect and remove debris from paved areas before snowfall to avoid collecting debris when plowing.
- Store materials away from areas where it could get mixed with snow and moved around when the area is plowed. Keep materials out of accumulated or dumped snow.
- Inspect containers and drums throughout the winter to be sure they withstand the cold.
- Sweep sand, salt, and spilled materials from paved surfaces throughout the winter and before snow melts.
- Cover salt storage areas to help minimize contact with stormwater.
- Use judicious amounts of de-icing and anti-skid chemicals and road salt.
- Keep plowed snow out of retention ponds. This ensures the treatment capacity of the pond is available during snowmelt or rain on frozen ground.

## Stormwater treatment best management practices

Stormwater treatment Best Management Practice(s) (BMPs) are engineered structures that treat stormwater runoff or reduce the stormwater runoff rate, volume and velocity. In combination with P2 practices, stormwater treatment BMPs such as retention ponds act as a second line of defense against polluting downstream waterbodies. Treatment BMPs should be used down-gradient of areas where P2 activities have been fully implemented. Specific guidance on stormwater treatment BMPs is in the *Minnesota Stormwater Manual* and the *BMP Guidebook*, which are linked in the Resources section at the end of this fact sheet.

Automotive salvage yards are prohibited from expanding or building new stormwater infiltration systems such as infiltration trenches, filter strips or rain gardens. However, they may continue to use infiltration systems that existed before April 2010. Retention ponds must be built with a liner that meets the requirements listed in the permit. See Part VII of the permit for details.

## Groundwater pollution potential

Auto salvage yards and similar facilities have the potential to contaminate groundwater with pollutants such as solvents, heavy metals, fuels, oils, grease and mercury in their stormwater runoff. Groundwater contamination is of greatest concern where there is a high water table and in karst regions. A water table that is close to the surface can allow pollutants to enter the groundwater system quickly. Karst is common in southeastern Minnesota and is largely shaped by the dissolving action of water on limestone. Over time, this creates features such as sinkholes, disappearing streams, complex underground drainage systems and caves. Water and pollutants can flow rapidly through these features to wells and streams.

In these areas it is critical to prevent infiltration of any contaminants by providing physical barriers around vehicle and parts storage areas. Examples of physical barriers include impervious surfaces with cover or perimeter berming and a wastewater collection system. Unpaved storage yards and processing areas are unacceptable in areas of high groundwater pollution potential. Stormwater treatment BMPs should be designed with sensitivity to local conditions.

## Resources

*BMP Guidebook* (fact sheet #wq-strm3-26) is available on the MPCA website at <http://www.pca.state.mn.us/index.php/view-document.html?qid=10557>.

EPA industrial stormwater fact sheet, *Sector M: Automobile Salvage Yards*, is available on the EPA website at [http://www.epa.gov/npdes/pubs/sector\\_m\\_autosalvage.pdf](http://www.epa.gov/npdes/pubs/sector_m_autosalvage.pdf).

EPA refrigerant webpage, *Just the Facts for MVACs: EPA Regulatory Requirements for Servicing of Motor Vehicle Air Conditioners*, available on the EPA website at <http://www.epa.gov/ozone/title6/609/justfax.html>.

Industrial stormwater webpages on the MPCA website at <http://www.pca.state.mn.us/industrialstormwater>.

Industrial stormwater permit (document #wq-strm3-67a) is available on the MPCA website at <http://www.pca.state.mn.us/index.php/view-document.html?qid=20797>.

*Low Impact Development for Businesses* webpage on the MPCA website at <http://www.pca.state.mn.us/veiz7d0>.

*Manufacturers: Reduce your exposure to stormwater regulations* (fact sheet #wq-strm3-15) is available on the MPCA website at <http://www.pca.state.mn.us/index.php/view-document.html?gid=7720>.

Minnesota Certified Automotive Recyclers (MN-CAR) *Guidance Manual* available on the Automotive Recyclers of Minnesota website at [http://www.autorecyclersmn.net/forms/mncar\\_manual.pdf](http://www.autorecyclersmn.net/forms/mncar_manual.pdf).

*Minnesota Stormwater Manual* is available on the MPCA website at <http://stormwater.pca.state.mn.us>.

*No Exposure: Qualifying for and keeping the exclusion* (fact sheet #wq-strm3-13) is available on the MPCA website at <http://www.pca.state.mn.us/publications/wq-strm3-13.pdf>.

## More information

For more information e-mail the MPCA's industrial stormwater program at [iswprogram.pca@state.mn.us](mailto:iswprogram.pca@state.mn.us) or call the stormwater hotline at 651-757-2119 or 800-657-3804 (non-metro only).