



Sector N: Scrap and waste recycling facilities

Industrial stormwater pollution prevention

Sector N includes facilities that sort and wholesale distribute scrap and waste materials, which are described by Standard Industrial Classification (SIC) code 5093. This includes automotive wreckers that dismantle automobiles for scrap. Salvage yards that dismantle automobiles for secondhand parts are in Sector M.

Activities at scrap and waste recycling facilities that can impact stormwater include material loading and unloading, material storage and processing, unrecyclable or hazardous wastes accidentally accepted with other wastes, equipment maintenance and storage, fueling stations and above ground storage tanks. Common pollutants are solvents, heavy metals, fuels, antifreeze, hydraulic fluids, oil and grease.

Pollution prevention practices

Minnesota's industrial stormwater permit requires a written Stormwater Pollution Prevention Plan. Use the Stormwater Pollution Prevention Plan (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.
- Provide secondary containment around storage tanks, such as berms, containment trenches, sumps, or other equivalent measures. Make sure secondary containment areas are properly sized and adequately sealed.
- Plug drains or use diversion devices to prevent spilled materials and liquids (including wash water) from entering floor drains, sewer connections or storm drains.

Define acceptable in-bound materials

- Create a written list of materials that will not be accepted at the facility and materials that will be accepted but require special handling procedures. Reject all unacceptable materials at the source.
- Train the drivers who pick up recyclable materials to inspect for items on the prohibited materials/special handling list and reject unacceptable materials.

- Train personnel who accept inbound recyclable materials to inspect for items on the prohibited materials/special handling list and reject unacceptable materials.
- Provide information and education (such as brochures) about acceptable and non-acceptable materials and about draining and properly reusing, recycling or disposing of residual fluids.
- Clearly mark public drop-off containers with which materials are accepted.

Waste processing

- Store equivalent of the average daily volume of recyclable materials indoors.
- Schedule routine preventive maintenance on processing equipment.
- Place scrap or waste products directly into covered transport containers rather than stockpiling until there is a full load.
- Remove obsolete equipment before it has a chance to leak or rust. Recycle unused equipment rather than stockpiling it.



**Store waste and/or recyclable materials in materially compatible containers.
Keep the area free and clear of debris, and keep lids closed.**

Liquid transfer areas and storage

- Use funnels when transferring liquids.
- Avoid accidentally mixing different types of wastes by using clearly labeled containers.
- Keep tanks and containers in good condition, free of any visible leaks, structural damage or deterioration. Store indoors wherever possible.
- Provide high-level alarms for storage tanks.
- Secure and lock outdoor storage tanks. Provide adequate security against vandalism and tampering.
- 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. Install manually-activated drainage valves instead of flapper-type drain valves.
- Establish spill prevention and response procedures. Locate spill cleanup materials near potential spill areas.
- Do not pour liquids (including wash water) into floor drains, sinks, outdoor storm drain inlets or other storm drain or sewer connections.

Vehicle crushing and shredding

- Remove and segregate mercury switches and mercury containing devices. Make sure not to puncture the mercury container during removal. Store mercury switches in covered, leak-proof containers in a way that prevents the glass capsule from breaking. 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 and recycle all lead parts such as lead battery cable ends and wheel balancing weights. Store lead parts in a covered container that is capable of handling the weight of lead.
- Remove airbags prior to crushing vehicles.
- 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.
- Do not vent refrigerants to the atmosphere. Follow U S Environmental Protection Agency (EPA) requirements for handling refrigerants.
- Provide containment bins for shredded material.
- Stabilize high traffic areas with concrete pads, gravel, or pavement around processing equipment where possible. Install a bermed, impermeable concrete surface as a foundation under the crusher if possible.
- Clean and sweep the crushing area often to prevent accumulation of glass and other materials.
- Conduct periodic maintenance and cleanout of all sumps, oil-water separators and media filters.



Photo Credit Brad Shorr

Conduct processing operations indoors. Wherever possible, store baled wastepaper indoors; if outdoors, provide cover to minimize contact with stormwater.

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 leaks.
- Inspect drums, 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 storage and inspection of items, processing steps, operation of equipment and transfer of liquids.
- 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.

Scrap and waste recycling facilities 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

Scrap and waste recycling facilities have the potential to contaminate groundwater with pollutants such as heavy metals, fuels, hydraulic fluids, 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?gid=10557>.

EPA industrial stormwater fact sheet, *Sector N: Scrap Recycling and Waste Recycling Facilities.*, is available on the EPA website at http://www.epa.gov/npdes/pubs/sector_n_scraprecycling.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?gid=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.

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 or call the stormwater hotline at 651-757-2119 or 800-657-3804 (non-metro only).