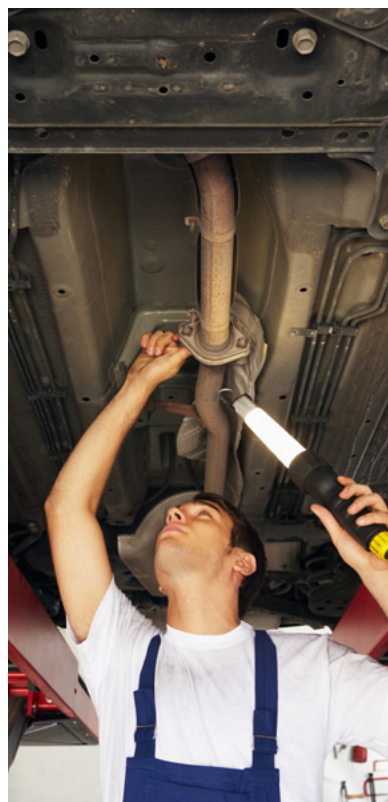


BEST MANAGEMENT PRACTICES FOR
AUTOMOTIVE
SERVICE FACILITIES
IN THE CITY OF TORONTO



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1.0 INTRODUCTION

This Best Management Practices (BMP) applies to Automotive Service Facilities, which includes Automotive Repair Operations, Autobody Repair Operations, Vehicle Wash Operations and Petroleum Facilities (Gas Stations).

This BMP is intended to assist owners and operators of Automotive Service Facilities to improve their environmental performance and minimize contaminants discharged to municipal sewers and any impact their operations have on the quantity and quality of wastewater. It is also intended to serve as a general guide to the sections of the Municipal Code Chapter 681, Sewers (the “Sewers Bylaw”) that specifically apply to Automotive Service Facilities and to show owners and operators can meet these requirements.

BMPs are based on the Pollution Prevention (P2) principle that emphasizes reducing or eliminating contaminants and toxic material at their source rather than removing them from a mixed waste stream. Preference should be given to practices highest in the following P2 hierarchy:

- Avoidance, elimination or substitution of polluting products or materials
- Reduction in the use of polluting products or materials
- Elimination and reduction of the generation of polluting by-products
- Re-use and recycling of polluting by-products
- Energy recovery from polluting by-products
- Treatment or containment of polluting residual by-products
- Remediation of contaminated sites.

The BMP will also help Automotive Service Facilities improve their operations and save money through applications of P2 principles. Operators are encouraged to influence their suppliers by requesting and purchasing less-toxic alternative cleaning products and buying from suppliers who accept materials and containers back for recycling.

The types of automotive repair operations covered by this BMP include but are not limited to: service stations with service bays, vehicle dealerships, mechanical and collision repair shops, towing services, vehicle recycling operations, radiator repair shops, quick lubes, trucking firms, vehicle and heavy equipment wash operations, petroleum facilities (gas stations) and detailing shops.

The types of industrial vehicle and equipment wash operations covered by this BMP include but are not limited to: car, truck or heavy equipment wash facilities or a combination of the foregoing. It also covers: vehicle exterior wash operations with tunnel washes, rollover washes and/or wand washes; detailing shop operations with engine washing; and any automotive service facility that operates a vehicle washing area such as an autobody repair facility that washes vehicles on site.

The types of petroleum facilities covered by this BMP include but are not limited to: retail fuel facilities (service stations and gas bars); commercial fuel facilities (cardlocks, keylocks and truck stops); bulk fuel plants and agencies; aviation fuel storage facilities; refined products terminals; and any automotive service facility that operates a gas pump such as an automotive repair facility with a gas pump on site.



Volumes and flow rates of wastewater and fuel generated by these different types of facilities will vary, as will the spill control and pollution prevention equipment that is in place. Depending on the type of facility an oil/water separator, henceforth referred to as an oil interceptor and/or a sediment interceptor, henceforth referred to as a sand and grit interceptor, may be required.

Owners/operators of Automotive Service Facilities who choose to follow the BMP are required to submit a one-time declaration form confirming compliance with the BMP. Should an owner/operator of an Automotive Service Facility not choose to follow or comply with the BMP, then they are required to submit a Pollution Prevention Plan every six (6) years with an update on the third year, as required by the Sewers Bylaw. In the event of change of ownership of the business, the new owner will be required to submit the one time declaration form to confirm compliance with the BMP document.

Nothing in this BMP exempts a person from complying with any applicable federal, provincial or municipal legislation or other requirements. In the event of any discrepancy between this BMP and any applicable federal, provincial or municipal legislation or regulations, the federal, provincial or municipal legislation or regulations, including the Sewers Bylaw, shall take precedence.

2.0 REGULATORY REQUIREMENTS

To protect persons, animals, aquatic life and the natural environment from adverse effects from discharges of wastewater to the municipal sewers, as well as sewage works and wastewater treatment processes; and to control biosolids quality, all levels of government (federal, provincial and municipal) have legislation and regulations that limit the quality and quantity of substances of concern discharged into municipal sewer systems.

The quality and quantity of substances discharged into municipal sanitary, storm and combined sewer systems by Automotive Service Facilities are regulated, at a municipal level, by the Sewers Bylaw.

Substances of concern from Automotive Service Facilities include but are not limited to: antifreeze, windshield washer, glycol, brake fluids, oil, grease, paints, total suspended solids (TSS), benzene, toluene, ethylbenzene, xylene (BTEX), polycyclic aromatic hydrocarbons (PAHs), nonylphenols, and nonylphenol ethoxylates.

It is important that owners and operators of Automotive Service Facilities do everything possible to reduce the quantity and types of substances discharged into sewers.

3.0 SUMMARY OF REGULATORY REQUIREMENTS

While the following is not intended to be a complete list of all applicable laws that may apply, it provides a very brief summary of notable applicable law affecting wastewater.



3.1 Federal Government

The federal *Fisheries Act* prohibits the deposit of a deleterious substance of any type in water frequented by fish or in any place where it eventually may enter water frequented by fish and places obligations on any person who owns or has the charge, management or control of a deleterious substance, or undertaking or activity that resulted in the deposit of a deleterious substance to take all reasonable measures consistent with public safety and with the conservation and protection of fish and fish habitat to prevent the occurrence or to counteract, mitigate or remedy any adverse effects that result from the occurrence or might reasonably be expected to result from it.

Improper connections or the discharge of contaminants to sanitary or storm sewers, or runoff that could introduce deleterious substances to local watercourses, may be a violation of the *Fisheries Act*.

3.2 Provincial Government

The *Environmental Protection Act* (EPA) prohibits the discharge of contaminants into the natural environment in an amount, concentration or level in excess of prescribed limits or that may cause or likely to cause an adverse effect to the natural environment. It also imposes duties to report and clean up contaminant or pollutant spills. Ontario Regulation 675/98 “Classification and Exemption of Spills and Reporting of Discharges” under the EPA, as amended, defines the duties and rights of parties subject to Part X of the EPA.

The *Building Code Act* and *Building Code* prescribe mandatory standards for building construction, including building, plumbing, drainage and private sewer systems and on-site sewage disposal systems.

Provincial waste regulations require specific waste disposal and record keeping requirements for certain types of wastes. In the context of this BMP, the regulations may apply to petroleum products recovered during spill recovery, oil interceptor and/or sand and grit interceptor maintenance; sludge removed from such interceptors and used sorbent materials. Please check with the Ontario Ministry of the Environment and Climate Change for requirements of permits or approvals needed prior to installing equipment such as oil interceptors and sand and grit interceptors that discharge to storm sewers or directly to the natural environment.

3.3 Municipal Government – Sewers Bylaw

The City of Toronto has the authority to regulate discharges to municipal sanitary, storm and combined sewers within its boundaries. The intent of the bylaw is to protect:

- persons, animals, aquatic life and the natural environment from adverse effects from discharges of wastewater to the municipal sewers;
- public health and safety;
- sewage works;
- wastewater treatment processes;
- biosolids quality; and, to
- promote responsible waste management practices.



3.4 Discharge Prohibition

An owner/operator of an Automotive Service Facility shall not discharge into a municipal sanitary, storm, or combined sewer any waste or matter that is in contravention of the Sewers Bylaw.

Without limiting the foregoing, Automotive Service Facilities shall not discharge into the sanitary sewer non-domestic waste that contains:

1. Acute hazardous waste chemicals.
2. Combustible liquids.
3. Fuel.
4. Hauled waste.
5. Ignitable waste.
6. Hazardous industrial waste.
7. Hazardous waste chemicals.
8. Severely toxic waste.
9. Private Water (water originating from a source other than the City water).
10. Waste water from engine cleaning.
11. Recreational vehicle waste.
12. Waste water from oily rags washing or cleaning.
13. Stormwater, as defined by the Sewers Bylaw. The wash area shall be designed to prevent storm water from outside the wash area and roof drain from flowing into the sewer connected to a municipal sanitary sewer.
14. Contaminated ground water, as defined in applicable provincial regulation. Discharge of treated groundwater into the sewer systems requires an agreement with the City.
15. Rinse water from vehicle parts that have been cleaned in solvent.
16. Water that accumulates in a fuel storage tank. This water shall not be pumped into either a municipal sanitary or storm water sewer or sewer connection.

The Sewers Bylaw also requires all businesses that use or produce subject pollutants, as identified in the Sewers Bylaw, to prepare a Pollution Prevention Plan. If Automotive Service Facilities adopt this BMP and follow the BMP requirements, a detailed Pollution Prevention Plan is not required. Automotive Service Facilities will instead have to submit a one-page declaration confirming compliance with this BMP.

3.5 Licensing

All Automotive Service Facilities operating in the City of Toronto must have a business licence issued by the City's Municipal Licensing and Standards Division.



4.0 EMPLOYEE EDUCATION

The owner/operator of an Automotive Service Facility shall ensure that employees are:

- Fully trained before beginning their first employment shift and whenever new equipment is installed or new procedures implemented (e.g. practice separation of duties, not working with flammables while welding is occurring in next service bay).
- Familiarized with the hazards associated with the material they are using and are aware of potential sources of contamination.
- Familiar with the location of, and purpose of Safety Data Sheets (SDS).
- Familiar with and understand the purpose of a spill response plan and are properly trained to carry it out.
- Familiar with the site's layout and catch basin locations.
- Employing good housekeeping practices and understand proper reporting procedures.
- Aware of the Best Available Technologies (BAT), as many companies now consider environmental issues when designing and manufacturing their products.
- Committed to pollution prevention practices.
- Aware that on site fluids and liquids have an impact to either the municipal sanitary and/or storm sewer system and may cause detrimental effect to the natural environment or neighbours through smells/fumes.
- Trained in waste handling and disposal (e.g. solvent recycling and reuse) and preventative maintenance program for all equipment.
- Annually conduct hazard communication training and waste management training.
- Provide incentives to reduce waste.
- Ask employees for pollution prevention suggestions.

5.0 MATERIALS STORAGE AND DISPOSAL

The owner/operator of an Automotive Service Facility shall:

- Ensure that all materials (e.g. solvents, paints, greases and fluids, detergents and other cleaning products)



are stored in the proper containers with the correct label in accordance with the appropriate Workplace Hazardous Material Information Sheet (WHMIS) procedures. An up-to-date SDS, available from the product's supplier, should be kept for each hazardous product.

- Ensure all used oils are stored in a tank specifically designed and used exclusively for that purpose and disposal of non-petroleum products into the used oil storage tank is not acceptable.
- If materials contain solvents, store materials in a double-bottomed drum to allow the solvent to drain so that it can be collected for reuse, recycling or disposal.
- Store materials and wastes indoors or under cover whenever possible to prevent moisture from seeping into the container. The storage areas should be locked and fenced, if vandalism is a problem and storage containers should be tightly and securely capped to avoid spills.
- Ensure that the following materials, if stored outdoors, use secondary spill containment;
 - Used acid-filled batteries.
 - Spent solvents, used antifreeze, used oils, used oil filters, used brake fluid, used transmission fluid and other hazardous waste materials.
 - Aboveground fuel storage tanks.
- Store flammable and combustible materials in fireproof cabinets.
- Ensure separate storage of incompatible chemicals to prevent cross contamination and chemical reactions.
- Process empty containers promptly as hazardous waste and work with suppliers to take back unused products.
- Purchase and use only what is needed, to reduce 'outdated materials' and minimize the number of products kept in stock and their disposal. Use older products first and closely monitor usage.
- Control access to solvents, paints, machinery lubrication oils, greases, fluids, detergent and other cleaning product stock. Some companies offer a computerized inventory control system to maintain proper quantities of stock. Such collected information will help with government reporting procedures.
- Periodically, complete a storage area inspection log sheet detailing the containers observed, their condition, spills or damage noticed and date of inspection – monthly inspections recommended.
- Always dispose of hazardous waste using a Ministry of the Environment and Climate Change (MOECC) approved waste carrier. Consider a MOECC approved waste carrier that spends time answering questions and concerns. Some waste carriers sell distilled/recycled solvents. Look at buying back these materials from the waste carrier.

Should bulk storage tanks be used, it should be a totally enclosed system with proper ventilation (flame arrestor/conservation vents), be filled from the top to prevent leakage/spills and the system regularly inspected.



6.0 NON-HAZARDOUS OFFICE WASTES

To help improve overall environmental performance, the owner/operator of an Automotive Service Facility shall:

- Choose products with the least packaging and the highest recyclable material content.
- Recycle regular office waste whenever possible.
- Recycle waste paper, aluminum cans, newspaper, glass, cardboard and plastic containers.

If occupying space in larger premises, check with the property manager to find out if any recycling programs are already established in the building.

7.0 SPILL REPORTING REQUIREMENT

The owner/operator of an Automotive Service Facility shall:

- Follow procedures in the facility's spill response plan (Section 8).
- Any spill must be reported immediately to the City via 311, Toronto's 24-hour hotline. A spill report shall be submitted to Toronto Water in accordance with the Sewers Bylaw within 5 days of the spill and sent to NOV@toronto.ca or by mail to:

Attention: Manager, Environmental Monitoring and Protection Unit
 Toronto Water
 30 Dee Avenue
 Toronto, ON M9N 1S9

- If applicable, contact the Ministry of the Environment and Climate Change (MOECC).
- Consider purchasing re-usable spill sorbents (absorbent material). Reusable pads are highly absorbent and can be used several times before disposal. The pads can be passed through a wringer to remove a large amount of the spilled product, allowing the pads to be reused and the spilled material to be recycled.
- Designate two containers: one for partially saturated rags to be re-used and one for saturated rags to be disposed. All rags, floor sweeps, absorbent pads and towels used to wipe, absorb or clean up spills must be covered with the substance before being disposed. Wring out saturated rags (recycling the collected material if possible) before disposal. Used rags may be considered a special waste, so do not throw them into the garbage. It is not recommended that used rags be laundered. However, if laundering is done, use a professional laundry facility that will handle the used rags in a safe and environmentally responsible manner.



8.0 SPILL RESPONSE PLAN

The owner/operator of an Automotive Service Facility shall ensure that:

- The facility has an up-to-date and tested spill response plan demonstrating it has provided suitable training on its Plan to its employees.
- The spill response plan is to be posted in a location known to and readily accessible by employees with a list of names and telephone numbers of those persons who need be contacted in the event of a spill.
- A sufficient amount of clean up equipment and supplies shall be kept in stock at all times, appropriate for the size and type of facility.
- All employees know the location of spill response material and equipment and are trained in its use.
- Authorities are notified immediately, if required and spills are cleaned up. (Be aware of, and prevent any fire or safety risks that may be caused by the spilled material.)
- Sorbents are used immediately to contain and absorb as much of the spilled product as possible, and to prevent spilled material from entering the stormwater collection system.
- Records are kept with the following detailed information:
 - date and time of spill
 - location where spill occurred
 - material spilled
 - volume and characteristics of material spilled
 - duration of spill
 - name and telephone number of person who reported the spill
 - authorities contacted and staff spoken to
 - steps taken in spill cleanup and recovery
 - preventative actions taken to eliminate the occurrence of a similar spill



In the event of a spill to the municipal sewage works, the person responsible or the person having the charge, management and control of the spill shall:

- Report to the City by calling 311.
- Do everything reasonably possible to: contain the spill (e.g. use sorbents to absorb and prevent spilled material from entering the sewer system); protect the health and safety of persons, animals and aquatic life, protect the natural environment; minimize damage to property; clean up the spill and contaminated residue and restore the affected area to its condition prior to the spill.
- Provide a detailed report on the spill to the City, within five days after the spill, containing the information required under Chapter 681.

If any spill of 2 litres or more gets into the oil interceptor and/or sand and grit interceptor, they must be immediately inspected and, if necessary, cleaned before resuming wastewater discharge from the operation.



The oil interceptor located at petroleum facilities (gas stations) will be able to retain a certain volume of hydrocarbon when there is little or no water flowing through the system. This capacity will be reduced when the flow of water is high, such as during a storm. Some interceptors have hydrocarbon retention capacities of thousands of litres. In the case of a large spill, when this retention capacity may be exceeded, the emergency shut-off valve on the discharge piping shall be closed to ensure that oil does not escape into the storm sewer.

9.0 RECORD KEEPING AND RETENTION

The owner/operator of an Automotive Service Facility shall keep and maintain accurate and up-to-date written records on site of:

- Employee training, including dates, name of employee and employee's acknowledgement.
- Mechanical drawings for the oil interceptor and/or sand and grit interceptor which must be available for inspection by the City within three (3) working days. These documents must be retained for the entire time that an oil interceptor and/or sand and grit interceptor is on site and in use, subject to the documentation requirements of the Sewers Bylaw.
- Oil interceptor and/or sand and grit interceptor inspections and maintenance for a period of seven (7) years from the date of inspection and/or maintenance. The record should include:
 - dates of inspection or maintenance
 - description of inspection or maintenance
 - measured depth of bottom sludge
 - measured depth of floating material
 - the type and quantity of material removed
 - date of material transferred to each company or facility
 - the Transportation of Dangerous Goods (TDG) manifest provided by the company cleaning the oil interceptor and/or sand and grit interceptor
- Waste disposal for a period of seven (7) years from the disposal date of any waste disposed offsite. The record should include:
 - name of disposal company
 - date of disposal
 - the type of wastes disposed
 - measured quantity of wastes disposed

A sample log sheet for sites with oil interceptor and/or sand and grit interceptor is included in the Appendix. Should effluent sampling be performed, analytical results are to be kept on site.

If an Automotive Service Facility changes its owner or operator, the departing owner or operator shall transfer to the incoming owner or operator, as the case may be, all records required to be maintained under this provision or Chapter 681 (e.g. inspections, maintenance, waste disposal etc.).



10.0 TREATMENT SYSTEMS

10.1 Oil Interceptor Standards

Any Automotive Service Facilities that perform automotive repair activities and discharge non-domestic wastewater into a sanitary sewer shall have oil interceptor(s) installed and all non-domestic wastewater from the operation shall flow into the interceptor(s). Non-domestic wastewater is from sources other than washrooms and kitchen facilities.

The oil interceptor should provide a minimum retention time of two (2) hours based on the maximum expected flow or be designed to ensure that effluent at the point of discharge does not contain oil and grease in a concentration exceeding 15 mg/L. Should the operation have an employee hand wash sink in the vehicle service area, it should be clearly designated as “for hand washing only”.

The oil interceptor shall be easily accessible. For ease of inspection, the oil interceptor should have sampling ports. The ports should be located either at the outlet of the oil interceptor or downstream of the interceptor, but upstream of any discharge of other wastes.

10.2 Oil Interceptor Inspection and Maintenance

The owner/operator of any Automotive Service Facility that performs automotive repair activities shall ensure that:

- The oil interceptor is inspected at least once every three (3) months by measuring the depth of the bottom sludge and of the floating oil and checking the last compartment to ensure water being directed to sewers does not contain solids, oils and greases (hydrocarbons).
- Bottom sludge does not exceed the lesser of 15 cm or 25 percent of the wetted height of the oil interceptor.
- Floating oil and grease does not exceed the lesser of 5 cm or 5 percent of the wetted height of the oil interceptor. As the design and capacity of oil interceptors may vary, the manufacturer's maximum recommended levels may be used as alternative maximum floating oil and grease levels. Due to the volatile nature of some oils, solvents and fuels, these materials should not be left to accumulate as they could cause health and safety concerns. (The efficiency of the interceptor decreases as the level of floating material increases).
- The oil interceptor is cleaned out within seven (7) days if during inspection the measured depth of floating oil or bottom sludge exceeds the criteria noted in either of the two points immediately above.
- The oil interceptor is cleaned out at least once every twelve (12) months regardless of the amount of floating oil or bottom sludge. This will ensure that the interceptor receives at least a minimum level of maintenance on a regular basis. *Clean out shall be done by a Ministry of the Environment and Climate Change (MOECC) approved waste carrier.*



- The oil interceptor is inspected immediately after clean out to ensure that it has been properly cleaned and that the water level has been restored.
- When the oil interceptor is cleaned, the oil, grease, solids, or a combination of the foregoing are **not** to be disposed of into the sewer connected to a sewage works or in any place where it may be introduced to a storm sewer or a watercourse. This waste is to be taken to a waste management facility approved by the MOECC.
- Compartment covers form a tight seal to ensure that all floor drainage is directed to the first compartment and water must be maintained at normal operating levels to retain the seal and prevent oil from leaving the first compartment.
- No changes are made to the piping or baffles in the oil interceptor except as approved by the manufacturer or a design engineer licensed to practice in Ontario.
- Hot water, detergents, solvents or any other chemical agents are not used to flush oil through the oil interceptor. (If the bay floor is to be washed, first wipe up all spills and do not use hot water or detergents as this causes oil and grease to emulsify and thereby not float to the surface for skimming off.)
- Servicing is completed promptly following any spill that results in a significant quantity of contaminants entering the oil interceptor.

10.3 Sand and Grit Interceptor Standards

Any Automotive Service Facility that operates a vehicle washing area shall have sand and grit interceptor(s) installed and all wash water from the washing area shall flow into the interceptor(s).

The sand and grit interceptor(s) shall be easily accessible. For ease of inspection, the sand and grit interceptor should have sampling ports. A port may consist of a simple tee or an opening for a pump sampling tube.

10.4 Sand and Grit Interceptor Inspection and Maintenance

The owner/operator of any Automotive Service Facility that operates a vehicle washing area shall ensure that:

- The sand and grit interceptor shall be inspected once per month by measuring the depth of the bottom sludge.
- The solids in the sand and grit interceptor shall not exceed 75 percent of the wetted height of the sand and grit interceptor. (As solids build up in the bottom of the interceptor, efficiency of the interceptor decreases and the chance of sludge passing through the interceptor increases.)
- The sand and grit interceptor shall be cleaned out within seven (7) days if during inspection the measured amounts exceed the criteria noted in either of the points immediately above.
- The sand and grit interceptor shall be cleaned at least once every six (6) months regardless of the amount of bottom sludge. This will ensure that the interceptor receives at least a minimum level of maintenance



on a regular basis. *Clean out shall be done by a Ministry of the Environment and Climate Change (MOECC) approved waste carrier.*

- When sand and grit interceptors are cleaned, the solids shall **not** be disposed of into any municipal sewer or sewer connection or in any location where it may be introduced to a municipal storm sewer or a watercourse. This waste is to be taken to a waste management facility approved by the MOECC.
- Servicing is completed promptly following any spill that results in a significant quantity of contaminants entering the sand and grit interceptor.

10.5 Combined Sand and Grit Interceptor and Oil Interceptor Standards

Some Automotive Service Facilities (e.g. vehicle wash operations) have one or more sand and grit interceptor with a rare few having an oil interceptor.

- If present, the sand and grit interceptor shall be located downstream of the oil interceptor.
- The design shall ensure that all non-domestic waste from the Automotive Service Facility be directed to one or more sand and grit interceptor and one or more oil interceptor before discharge to the sewer.

Refer to Sections 10.1 and 10.3 for standard details on oil interceptor(s) and sand and grit interceptor(s), respectively.

Three compartment sand and grit interceptor and oil interceptor shall be cleaned out at least annually regardless of the amount of oil or solids. This will ensure that the sand and grit interceptor and the oil interceptor receive at least a minimum level of maintenance on a regular basis.

Refer to Sections 10.2 and 10.4 for inspection and maintenance details on oil interceptor(s) and sand and grit interceptor(s), respectively.

10.6 Petroleum Facilities (any facility with a gas pump)

Facility Stormwater Systems – Operations and Maintenance

Various types of petroleum facilities (gas stations/gas bars) covered by this BMP have different systems on site for stormwater management. The following sections deal with operations and maintenance requirements at these sites.

Fuels are lighter than water and will float when not disturbed. At some petroleum facilities (gas stations), particularly those that transfer higher flow rates and volumes of fuels, this chemical property is used to contain spilled fuel in an oil interceptor and prevent it from contaminating the natural environment, streams, rivers and lakes.



10.6.1 Surface Drainage Maintenance – All Facilities

The owner/operator of a Petroleum Facility (gas stations/gas bars) shall ensure that contaminants are prevented from mixing with stormwater runoff by:

- Either wiping up spills with rags or cleaning up any spills with sorbents and never hosing down spills with water.
- Never pouring wastes into drains, onto the ground, or into an oil interceptor.
- Never cleaning paved areas with a hose and water and instead using a broom to sweep.
- Picking up any litter on the lot and disposing of it in the trash to prevent the litter getting into the stormwater drains and potentially clogging them.
- Performing daily inspections of the lot for evidence of spills that may have happened while the site was unattended or during periods of poor visibility. If evidence of a recent spill is discovered, inspect the surrounding stormwater collection system to determine if petroleum product has migrated into the catch basins or the oil interceptor (if installed).
- Report the spill to the proper authorities and clean up any spilled fuel. Refer to the facility's spill/emergency response plan for spill reporting contacts.

Most fuelling areas have a concrete surface that is impervious to hydrocarbons and allows most spills to be contained. Repair and replacement of cracked or otherwise damaged paved areas is recommended if the damage could lead to the product escaping to the natural environment.

10.6.2 Simple Stormwater Collection System – Service Station/Gas Bar

At many service stations/gas bars, stormwater simply runs off the lot into the municipal stormwater collection system on the adjacent street. At other sites, there is a collection system consisting of catch basins and manholes on the property which are then connected to the nearby municipal sewer system.

In addition to the lot maintenance described in Section 10.6.1, any catch basins and manholes on the property shall be inspected annually and accumulated sludge and debris removed if necessary. A clean out is typically done by a sewer maintenance company using a vacuum truck.

10.6.3 Collection System with Stormceptor® Unit – Service Station/Other Facility

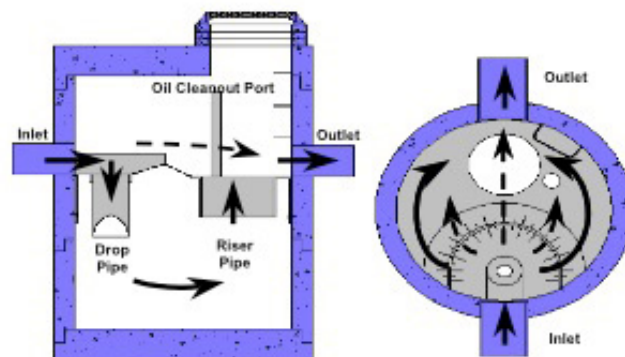
At some service stations/gas bars, as well as some cardlocks, keylocks and truck stops, there are Stormceptor® units in the system upstream of the discharge point to the municipal system. Be aware to check with provincial regulation regarding Stormceptor® units.

During low flow, the Stormceptor® separates solids and oil that are entrained with the water entering at the inlet. Water and oil are retained in the chamber. During higher flow, some of the flow bypasses the lower chamber directly to the outlet to the municipal sewer. A diagram of a typical Stormceptor® is shown on page 14.



The following shall be carried out in order for the system to perform as intended:

- Carry out lot maintenance activities as described in Section 10.6.1 and maintenance on stormwater collection system as described in Section 10.6.2.
- Oil that is collected in the Stormceptor® Unit shall be removed immediately after a spill.
- Every twelve (12) months inspect depth of sediment and thickness of oil. If any oil is discovered, it shall be removed immediately. Allowable sediment thickness depends on the size of the unit installed, 200 mm (8 inches) for the smaller units, and more for larger units.
- After three years, inspection frequency can be adjusted depending on the history of clean-outs that have been required. At a typical site, sediment removal is required once per year.



More information and allowable sediment thickness for the model at your site can be obtained from the owner's manual or company's website.

10.6.4 Oil Interceptor – Bulk Plant, Card/Keylock, Truck Stop, Aviation Facility or Terminal

Bulk plants, cardlocks, keylocks and truck stops typically have an oil interceptor that collects potentially contaminated runoff from pump islands in cardlocks, keylocks and truck stops and loading racks in bulk plants. Runoff from unloading facilities and dyked areas around above ground tanks is also collected in the oil interceptor. The interceptor is typically an above or below ground fibreglass or concrete tank equipped with baffles and arrangements of inlet and outlet piping designed to separate sediment and oil from water.

(Note: if the interceptor is a Stormceptor®, procedures described in Section 10.6.3 shall be followed.)

Liquid wastes shall never be poured into or disposed of in the interceptor, including any of the following: used oil, antifreeze, solvents, tank bottom water, truck wash water or other water containing detergents. These wastes shall either be treated onsite by an appropriate and legal method or removed by a Ministry of the Environment and Climate Change (MOECC) approved waste carrier.

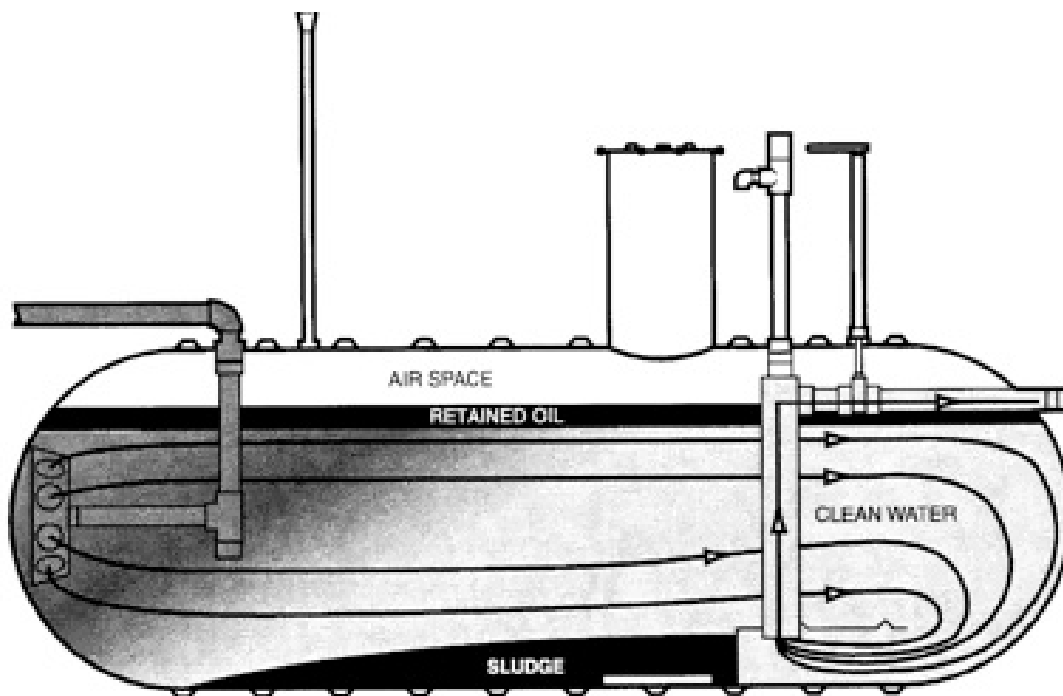
10.6.5 Oil Interceptor – Normal Operation

Most interceptors are equipped with a shut-off valve at the outlet which can be closed in the event of a spill to isolate the contents of the tank until a licensed carrier can attend the site to pump out the spilled material for disposal. Some installations also have a valve on the inlet piping that is used to isolate the vessel for safety in the event that it needs to be entered into for maintenance purposes.

Both valves should normally be left open. They should be labelled with “open” and “closed” positions, or otherwise readily identifiable to help prevent them from being left in the wrong position. Another option is to post a schematic nearby that details valve operation. A typical gravity oil interceptor is illustrated on page 15, showing the flow pattern through it.



At some sites, oil collecting in the interceptor is skimmed and routed to a separate tank for storage and subsequent disposal. At sites with aboveground tanks, water that collects within the dyked area around the tanks is often discharged to the oil interceptor after the rainfall event has passed. During a rainfall, and when the transfer of water is not taking place, the dyked area shall be isolated from the interceptor by keeping the shut-off valve closed.



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10.6.6 Oil Interceptor – Inspection

In addition to carrying out lot maintenance activities as described in Section 10.6.1 and maintenance on the stormwater collection system as described in Section 10.6.2, the following shall be carried out on a monthly basis in order for the system to perform as intended:

- Inspect oil interceptor contents.
- Measure and record sludge depth and oil layer thickness on log sheet. Use a calibrated gauge stick to determine water level when the interceptor is new and filled with water, but before sludge has accumulated in the system. To measure sludge and oil layer thickness during subsequent monitoring, proceed as follows:
 - Apply a coating of water detection paste extending to 30 cm (12 inches) below the expected top liquid level mark.
 - Insert the stick through the inspection port, keeping the stick vertical and slowly lower the stick into the interceptor. **Caution: Do not drop the stick into the interceptor to avoid misreading of sludge depth and/or causing damage to the bottom of the vessel.**
 - Continue to lower the stick until a slight resistance is encountered. This represents the top surface of the sludge layer. Note and record the reading at a convenient reference point (such



as the top of the inspection port).

- The difference in the liquid depth determined and that when the interceptor was new, is the sludge thickness.
- Withdraw the gauge stick and observe the water detection paste. The distance between the point where the paste has changed colour (the oil/water interface) and the total wetted liquid level is the thickness of the oil layer. If the paste has not changed colour, repeat the measurement using a new coating of water detection paste, but extend the paste to 60 cm (24 inches) below the expected top liquid level mark.
- The manufacturer of packaged units, or designer of the system, may specify maximum sludge depth for the interceptor. If this information has not been specified, then sludge depth shall not be greater than 15 cm (6 inches). Oil shall not be allowed to accumulate in the interceptor. Have the oil removed if the measured depth is 5 cm (2 inches)¹ or more. Scum and floating debris shall not be allowed to accumulate to a depth of more than 5 cm (2 inches).
- If oil or sludge thickness exceeds the specified maximums, the interceptor shall be cleaned out. If the entire interceptor contents are removed, it shall be refilled with clean water, unless the internal baffles are designed such that spilled oil is not allowed to bypass into the outlet when the interceptor is empty. See Section 10.6.7 which describes interceptor cleaning in more detail.
- For sites that have an oil collection tank that collects skimmed oil from the interceptor, the depth of oil in the collection tank shall be measured. The facility operator should determine, based on records, how quickly this tank fills up. Make arrangements to have the tank pumped out by a Ministry of the Environment and Climate Change (MOECC) approved waste carrier well before the tank is full, to prevent a malfunction of the system.

Twice per year (preferably in spring and fall) operate the shut-off valve on the oil interceptor outlet, and the one on the inlet, if there is one, to ensure they operate. Both inlet and outlet valves should normally be left open.

10.6.7 Oil Interceptor – Cleaning

The manufacturer of the interceptor or designer of the system usually defines maximum allowable sludge thickness. The interceptor needs to be cleaned out when the thickness of oil is 5 cm (2 inches)² or more and when the maximum allowable sludge thickness is reached to prevent deterioration in the performance of the interceptors. Record the date of interceptor cleaning and retain a copy of the waste manifest sheet. In most cases, only the oil layer will need to be removed, since the need for sludge removal is typically less frequent. Unless it is known or suspected that materials are soluble in water, such as solvents, antifreeze or detergents have contaminated the interceptor, it is not necessary to remove water from the interceptor during cleaning. Since cost normally depends on volume, removing only the oil layer will also save money.

¹As the design and capacity of oil interceptors may vary, the manufacturer's maximum recommended levels may be used as alternative maximum floating oil and grease levels.

²As the design and capacity of oil interceptor may vary, the manufacturer's maximum recommended levels may be used as alternative maximum floating oil and grease levels.



Manufacturers may have special procedures that need to be followed for cleaning or start-up - a copy of these should be kept on site. Coalescing interceptors or ones with other special internals have procedures for cleaning, including proper installation of the internals if they are to be removed for cleaning. Improper installation can result in the interceptor not being able to achieve the required separation.

Never enter the interceptor unless properly trained and equipped to do so. Most interceptors are confined spaces and require special procedures to be followed for entry, typically done by a trained contractor.

10.6.8 Oil Interceptor – Preparation for Winter Conditions

In facilities with shallow interceptor installations or those that experience long and severe winters, water in the interceptor could be subject to freezing. If pumps are part of the system, they could also be subject to freezing and damage. A frozen interceptor will not be able to function for its intended oil spill containment purpose. It would also thaw more slowly underground than snow at surface, resulting in a system that would not perform in the spring until the interceptor also thawed. Assuming that the design and installation of the system cannot be changed to avoid freezing, one of the following is necessary:

- Install a frost barrier to reduce frost penetration.
- Install a heating device in the interceptor activated by temperature and with a thermostatic overheat control. This equipment needs to be explosion proof and appropriate for this application.
- Drain the interceptor to within 9 inches of the bottom of the vessel and shut off the outlet valve. The empty vessel will then be available to contain any spill that might occur during winter months. Prior to arrival of spring, inspect the interceptor to check for the presence of oil. Clean it out, if oil is present. Refill with water and open the outlet valve so that it is ready to receive stormwater runoff.
- If the system has a pump that could be subject to freezing, it should be drained as well.

11.0 INDUSTRY-SPECIFIC BMPs

11.1 Automotive Repair and Autobody Repair Operations

In addition to the other requirements in this BMP for owners/operators of Automotive Service Facilities, Automotive Repair and/or Autobody Repair Facilities shall comply with the requirements of Sections 11.1.

11.1.1 Signage

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Post instructions on programs (e.g. Pollution Prevention) and practices (e.g. Spill Response) throughout the shop at relevant stations (e.g. post spray gun set-up, operating and cleaning instructions at spray booth).



- Post signs or otherwise mark drains, sinks and other connections warning employees not to pour wastes such as oils, solvents, antifreeze and other automotive fluids down drains.

11.1.2 Antifreeze

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Handle antifreeze containing ethylene glycol with care. Ethylene glycol is a water-soluble organic compound with a high biological oxygen demand (BOD) and is potentially toxic to aquatic life at relatively low concentrations. Consider substituting ethylene glycol with propylene glycol, a biodegradable product that readily degrades in activated waste treatment systems.
- Ensure that waste antifreeze is properly contained and labeled in case of a spill or leak.
- Not use antifreeze as a de-icing agent.
- If possible, use an antifreeze recycling unit that simultaneously filters the fluid, flushes the vehicle cooling systems and returns the antifreeze to the cooling system. This will reduce both the purchase and disposal costs of antifreeze.
- Never send any fluid into any sanitary or storm sewer or sewer connection.

11.1.3 Oil and Oil Filters

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Properly dispose of waste oil and oil filters containing greater than 3 percent oil by weight. (In some provinces, having more than 3 percent oil makes them special wastes.)
- Ensure that whoever picks up used oil and/or filter is a MOECC approved waste carrier. Automotive waste oils include crankcase oils, gear and metalworking oils, and transmission and hydraulic fluid. Brake fluid is not a petroleum product so it should not be put in a used oil container.
- Puncture oil filters and allow them to drain for 24 hours prior to recycling. To avoid injury, only use a puncture tool designed for this task. Store used filters in a separate and properly labeled container.
- Keep used oil in a separate, marked, watertight, rodent-proof container in a secure place prior to recycling. Make sure tanks or drums have proper containment in case of spill or leak - see Section 8. If the storage area is exposed to traffic, ensure it is protected from vehicle contact.
- Consider extending oil life by running it through an ultrafiltration process and avoid oils with chlorine or fluorine.
- Not use used oil in combustion systems unless specific approval by the MOECC is given under Section 9 of the *Environmental Protection Act* (EPA).
- Never send any fluid into any sanitary or storm sewer or sewer connection.



11.1.4 Gasoline

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Transfer gasoline into a safe storage containment unit that siphons, filters and dispenses gasoline and reuses gasoline when feasible/permitted.
- Not permit sanding and sparks to occur near gasoline storage area.
- Not permit drains to be located in gasoline storage area.
- Never send any fluid into any sanitary or storm sewer or sewer connection.

11.1.5 Spent Lead-Acid Batteries

- Recycle all lead-acid batteries. Until the batteries are collected by a MOECC approved waste carrier or taken to a MOECC approved waste management facility, store them upright in a covered place away from drains. Avoid storing in areas where freezing can occur. Check routinely for leaks and cracks. Acid resistant tubs can be used for storing batteries. Keep an acid spill response kit nearby and avoid long-term storage.

11.1.6 Brake Fluid and Carburettor Emulsifier

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Collect and store brake fluid in a separate, marked, closed container and dispose of it with assistance from a MOECC approved waste carrier.
- Never put brake fluid into your used oil container because brake fluid is not an oil based product and never mix it with waste oil as it is not a petroleum product.
- Consider using reformulated, cold dip and non-aerosol carburetor cleaning products.
- Collect excess carburetor cleaning fluids, separate particles and reuse when feasible.
- Never send any fluid into any sanitary or storm sewer or sewer connection.

Most vehicles now use fuel injection systems but there are still older vehicles on the road that have carburetors.

11.1.7 Parts Cleaning and Degreasing

If hazardous solvents are used in the parts washing system, the owner/operator should consider replacing the solvents and/or degreaser with a non-hazardous substitute. Spent solvents are one of the largest hazardous wastes, by volume, produced by the automotive industry. Spent solvents are hazardous to workers because they are toxic and emit harmful fumes.



The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Cover solvent cleaning tanks and close their drain plugs when not in use. Solvent losses due to inappropriate usage, equipment leaks, spills and evaporation can be up to 40 percent of total solvent usage.
- Replace solvent when the contamination level reaches 2 to 3 percent. Reduce the frequency of solvent disposal or replacement by increasing the amount of pre-cleaning. Pre-clean parts in a container with a squeegee, rag or wire brush before soaking them in a parts washer.
- Ensure that the solvent is not changed until it is necessary to do so. Consider having two tanks – one with old solvent to pre-soak and remove most of the dirt and grease and one with new solvent. This will extend the life of the solvent bath.
- Avoid chlorinated solvents and other solvents with a specific gravity greater than 1.0 (check the Safety Data Sheets (SDS) for details). Aqueous or alkaline cleaners may be substituted for solvent-based cleaners in some applications, particularly for non-aluminum parts.
- Use spray cleaners only when parts cannot be removed from a vehicle and the placement of a cleaning sink or a pan under the part to catch drips is not possible.
- Consider replacing the solvent sink with aqueous-based parts washing system. Two methods are immersion with agitation (ultrasonic or mechanical) and pressurized jet-spray washers using heat and a caustic detergent to physically and chemically remove organic and inorganic contaminants.
- Convert free-running rinses to still rinse to produce less wastewater, operate solvent sinks properly and allow more drainage time.
- Consider installing a drying rack and/or drip pan to collect solvents from washed parts.
- Promptly filter out solids out of solution.
- When soaking is required, use containers with air tight lids.
- Consider using an in-house solvent recycling system or distillation unit, which allows for reclamation of used solvents for continuous reuse within the facility and is the quickest way to clean up a hazardous waste storage area. This will reduce both the purchase and disposal costs of solvents. If solvent recycling system is not feasible, then purchase recycled solvent (e.g. from MOECC approved waste carrier).

11.1.8 Engine Cleaning / Shampooing

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Collect wastewater for reuse, recycling or for treatment and disposal as engine cleaning products can contain toxic solvents to remove oil and dirt.
- Not allow the wash area to drain to sanitary or storm sewers.
- Consider steam cleaning using small amounts of detergent as an alternative method for engine cleaning.



11.1.9 Radiator Repair and Fluid

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Place boil tanks for rinsing cleaned radiators in a secure area with spill containment.
- Use the solution in the boil tanks as long as possible. When it can no longer be used, dispose of it using a MOECC approved waste carrier.
- Consider collecting radiator flushing fluids and reuse.
- Never send any fluid into sanitary or storm sewer systems.

11.1.10 Used Tires and Other Solid Waste

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Store as few used tires on site as possible as they pose a fire hazard.
- Store materials such as scrap metal and old machine parts under a roof, if possible, to protect them from the elements and to prevent the potential for contaminated runoff.

11.1.11 Refrigerants

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Have only certified technicians recover refrigerants for proper disposal or recycling, as per automotive regulations (MOECC).
- Not vent or evaporate refrigerants.
- Recycle spent filters, condensers, evaporators and compressors for their metal content.
- Never send any fluid into any sanitary or storm sewer or sewer connection.

11.1.12 Transferring / Moving Chemicals

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Always use funnels during fluid transfer to prevent spills over pouring or sloshing.
- When moving solvent containers, make certain they are lidded to prevent evaporation or spills.
- Remove clutter from work aisles to reduce spills and trips when moving chemical filled containers.



- Practice proper WHMIS decanting/bonding procedures when decanting flammable liquids as the static charge created when moving flammable liquids must be dissipated to prevent fire or explosion.
- Never send any fluid into any sanitary or storm sewer or sewer connection.

11.1.13 Service Bays

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Never drain shop wastes into a stormwater drain, septic tank, onto the ground or into surface water.
- Place drip pans underneath vehicles and equipment when performing maintenance such as parts removal, unscrewing filters and unclipping hoses. Use separate drip pans for each fluid to avoid mixing. Do not leave drip pans or other open containers lying around.
- Place dirty parts in drip pans instead of on the floor.
- Never hose down spills with water and plug floor drains when cleaning.
- Not wash surfactants, which greatly reduce the surface tension of water, and surface cleaning agents into the interceptors.
- Have service bays drain into an oil interceptor as required by the *Ontario Building Code*, to prevent oily washes from being discharged into the sanitary sewer – refer to Section 10.0 ‘Treatment Systems’ for standards and maintenance of interceptors.
- Use solvents properly and not use them on the floor.

11.1.14 Vehicle Washing Area

If there are vehicle-washing activities in your facility, refer to Section 11.2 “Vehicle Wash Operations”.

Additionally, the owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Prior to working on a vehicle, remove all dirt from the surface by washing or sport cleaning. Prior to washing, check vehicles for fluid leaks.
- Always wash vehicles over a sand and grit interceptor as required by the *Ontario Building Code*, to prevent sediment material from being discharged into the sanitary sewer. If a large amount of water is being flushed, then drain it slowly through the interceptors - refer to Section 10.0 ‘Treatment Systems’ for standards and maintenance of interceptors.
- Avoid washing vehicles outside. If washing outside, wash water flow into outdoor catch basins (square grates on the ground) is not permitted as this leads to the storm sewer, which flows untreated directly into nearby lakes and streams. The discharge of wash water into a storm sewer is a contravention of the Sewers Bylaw.



- Use soap and water for first cleaning of undercoat instead of solvents. If solvent needed, do spot removal and do not use solvent for the whole wash.

11.1.15 Gas Pump(s)

If there are pump islands/gas pumps in your facility, refer to Section 11.3 “Petroleum Facilities”.

11.1.16 Water Pumped from Fuel Tanks

If water is pumped from fuel tanks, refer to Section 11.3.2 of “Petroleum Facilities”.

11.1.17 Paint Product and Mixing

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Use high solids/low-VOC or water-based paints and use coatings that do not have metal-based pigments (e.g. lead, chromium, cadmium). These paints produce a higher brilliance of colour shades, have faster wet-on-wet applications and minimize over-spray.
- Minimize or eliminate the use of hazardous paint-removing solvents, such as methyl ethyl ketone.
- Keep paint containers tightly closed when not in use.
- Consider using a computerized mixing scale to accurately weigh paint to reduce errors/waste. Using a computerized mixing scale allows smaller amounts of paint to be made (given the variety of colours and parts of a car that may need refinishing). Over-pour while formulating a colour can be re-calibrated for sheer accuracy and mistakes made in the formula can be corrected, hence no paint wasted.
- Schedule batch processing of lighter shades of paint before darker shades of paint so that equipment does not need to be cleaned between batches.
- Use extra mixed paint as undercoat for other jobs (or give it to the customer as touch-up paint).
- Never send any fluid into any sanitary or storm sewer or sewer connection.

11.1.18 Paint Equipment

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Drain paint containers completely to reduce ‘residual’ paint left in cans that can still be used. A draining jig (angled platform) can be used to obtain ounces of virgin paint.
- Reuse paint mixing cups and use metal mixing sticks. Clean mixing cups and mixing sticks before paint dries by wiping using a cloth/towel (paper towel for water based paints) and not by washing. Scrap excess paint from paint cups before rinsing with solvent.



- Consider using Teflon-lined paint cups to prevent paint from sticking or use paint guns with disposable pots liners.
- Add a small portion of thinner to empty containers to minimize residual material.

11.1.19 Spray Gun

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Use efficient spray equipment such as HVLP (High-Volume, Low-Pressure) guns, airless, air-assisted or any gun with a 65% spray efficiency to reduce coating usage. Follow manufacturer's instructions for these systems to avoid paint waste.
- Avoid open shop spraying.
- Clean spray guns using enclosed spray gun cleaners/washers or VOC recycling equipment and clean spray guns between coating applications (using solvents).
- Consider using a two-stage cleaning sequence by using spent/dirtier solvent for first pre-cleaning (e.g. flush spray guns with used solvent before cleaning with a new solvent).

11.1.20 Spray Gun Booth

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Use spray booths and keep booths and spray equipment clean and in proper maintenance.
- Conduct regular inspection and maintenance of air supply, exhaust performance and booth filters, adjusting and replacing when necessary.
- Maintain air supply and exhaust volume at optimum design parameters and maintain application equipment for minimum overspray.
- Plan cleaning schedules to minimize cleaning cycles.
- Consider coating walls with strippable compounds that can be removed by hot, high pressure water and scrap flat surfaces. If high pressure water is used, dispose of wash water properly by either collecting it and storing it in a drum for waste hauler pick-up or absorbing it with cloths/towels - refer to Section 7 regarding proper cleaning and disposal of cloths/towels.

11.1.21 Sanding

The owner/operator of an Automotive Repair and/or Autobody Repair Facility shall:

- Use rotary/orbital and straight-line/reciprocating sanders equipped with local exhaust ventilation.



- Collect sanding dust at the source using vacuum sanding filters. For large-scale operations, consider using a vacuum system and bag-house to remove sand and filter dust. For small-scale operations consider using a combination sander-vacuum or wet-vac in addition to filters on shop exhaust fans.
- Do not use water to wash dust, ensure dust is always vacuumed and make certain dust does not contaminate paint job.
- Separate and dispose of the sanding dust as hazardous waste if metals are present.

11.2 Vehicle Wash Operations (any facility with a vehicle washing area)

In addition to the other requirements in this BMP for owners/operators of Automotive Service Facilities, Vehicle Wash Facilities shall comply with the requirements of Sections 11.2.

11.2.1 Signage

The owner/operator of a Vehicle Washing Facility shall post signs that state:

- At wand washes, the wash area is for washing vehicle exteriors only and that other maintenance or cleaning activities such as oil changes and engine cleaning is prohibited. (Engine cleaning is prohibited in vehicle wash bay areas because solvents will remove oil and dirt from the engines that could enter the sewer).
- At wand washes, no outside cleaning agents are allowed (as they may cause unknown chemical reactions and interfere with the sand and grit interceptor.)
- If engines and engine parts are washed on the premises, the wastewater produced shall be collected in a separate holding tank and disposed of appropriately, as the water may be considered special waste. Such wastewater shall not be discharged to the oil interceptor or to storm drains.
- Never pour wastes into drains, into surface water, or onto the ground.
- Never hose down spills with water.

To ensure customers follow vehicle wash operation rules, post clearly worded signs in conspicuous locations.

11.2.2 Cleaning Products

The owner/operator of a Vehicle Washing Facility shall:

- Use only biodegradable, low-phosphate content, water-based cleaners. The cleaners must be free from nonylphenols and nonylphenol ethoxylates. Whenever possible, avoid the use of halogenated compounds, aromatic hydrocarbons, chlorinated hydrocarbons, petroleum-based cleaners or phenolics. (The presence of these substances can be checked in the SDS sheets for each cleaner.)
- Use pH 6.0 to 10.5 cleaners at the point of use (i.e. after dilution) to minimize dissolving metals (refer to SDS sheets).



11.2.3 Grading

The owner/operator of a Vehicle Washing Facility shall:

- At new operations, grade the site to prevent stormwater entering the sand and grit interceptor(s).

11.2.4 Gas Pump(s)

If there are pump islands/gas pumps in your facility, refer to Section 11.3 “Petroleum Facilities”.

11.3 Petroleum Facilities (any facility with a gas pump)

In addition to the other requirements in this BMP for owners/operators of Automotive Service Facilities, Petroleum Facilities shall comply with the requirements of Sections 11.3.

11.3.1 Vehicle Washing Area

If there are vehicle-washing activities in your facility, refer to Section 11.2 “Vehicle Wash Operations”.

11.3.2 Water Pumped from Fuel Tanks

The owner/operator of a Petroleum Facility shall:

- Dip all storage tanks for water on a daily basis and if water detected in any tank to a depth of 5 cm or more, consider contacting supplying company to report water content. The services of an approved petroleum equipment maintenance contractor should be engaged to pump out the water contaminant.
- Collected contaminated water is stored in tanks or drums and transported to a marketing terminal or refinery for treatment or to an MOECC approved waste management facility.
- Contaminated water must NOT be discharged into the oil interceptor, storm sewer or sanitary sewer unless it meets the ‘Concentration Limits of Sanitary and Combined Sewers Discharge’ set out in the Sewers Bylaw.



12.0 INSPECTIONS, MONITORING AND ENFORCEMENT

Toronto Water bylaw officers may carry out inspections, take photographs or videos, and examine records or other documents. The bylaw officer may take samples of effluent for analysis as specified under the Sewers Bylaw. Corrective measures will be ordered by the bylaw officer if it is determined that the BMP implementation procedures are not properly followed. Where corrective measures are not made to the satisfaction of Toronto Water bylaw officers, approval for the BMP can be removed.

Any offences under the Sewers Bylaw will be enforced as per the provisions in Section 681-13. Offences.

The BMP is *intended for guidance purposes only*. In the event of any discrepancy between this BMP and any applicable federal, provincial or municipal legislation or regulations, the federal, provincial or municipal legislation or regulations, including the Sewers Bylaw, shall take precedence.

13.0 MORE INFORMATION

For more information about the BMP, please contact:

Toronto Water
City of Toronto
Environmental Monitoring and Protection Unit
416-392-9940
p3help@toronto.ca

For any other questions on the Sewers Bylaw, call 311.

For reporting a **spill, illegal discharge, and non-drinking water quality complaints or concerns**, such as odours emanating from sewers or basement drains or discoloured discharge from storm outfalls, call City of Toronto's 24-hour reporting line at 311.



14.0 GLOSSARY OF TERMS

Bag-house: An air pollution control device that removes particulates out of air or gas released from commercial processes or combustion for electricity generation.

Carpet cleaner waste: A combination of water-carried liquid and solid wastes generated by carpet or furniture cleaning that is collected in a mobile holding tank or is discharged to a sewer, septic tank or holding tank.

Contaminant: A substance that is not naturally present in the environment or is present in elevated amounts, which, if in sufficient concentration, can adversely affect human health, flora, fauna and/or the natural environment.

Effluent: Liquid flowing out from a facility or household into a sewer system or water body.

Heavy metals: Metallic elements with high atomic weights, such as silver, iron, zinc, copper, lead, mercury, cadmium and arsenic. They are generally persistent in the environment, have the potential to accumulate in the food chain and sewage treatment plant sludge and can cause health effects in organisms.

Milligrams per litre (mg/L): The weight of a substance in milligrams in one litre of wastewater (may also be referred to as parts per million or ppm).

Oil and grease: An organic substance recoverable by procedures set out in *Standard Methods* or procedures and includes, but is not limited to, hydrocarbons, esters, fats, oils, waxes and high-molecular weight carboxylic acids.

Pollution prevention: The use of processes, practices, materials, products or energy that avoid or minimize the creation of contaminants and wastes, at the source.

Sanitary sewer: A sewer for the collection and transmission of domestic or industrial sewage or any combination thereof.

Sand and grit interceptor: A single-stage or multiple-stage interceptor or equivalent technology to remove a minimum of 99 percent of the grit and solids from wastewater prior to entry to an oil separation chamber of an oil interceptor or to the sanitary sewer.

Spill containment: Any impervious structure that surrounds a container or work area that is sufficient to hold the larger of 110 percent of the largest volume of free liquid in the container or work area or 25 percent of the total volume of free liquid in storage.

Spill response plan: A written plan developed by an owner or operator of an Automotive Service Facility to respond to any spills at the facility's site.



Standard Methods: A procedure or method set out in *Standard Methods for the Examination of Water and Wastewater* published jointly by the American Public Health Association, American Water Works Association and the Water Environmental Federation, latest edition.

Storm sewer: A sewer for the collection and transmission of uncontaminated water, storm water, drainage from land or from a watercourse or any combination thereof.

Trucked liquid waste: Any waste that is collected and transported, other than by discharge to a sewer, from the site where the waste originated.

Vehicle: A vehicle as defined under the *Highway Traffic Act, R.S.O. 1990 Chapter H. 8*, as may be amended from time to time.

Wastewater: Any liquid containing animal, vegetable, mineral or chemical matter in solution or in suspension but does not include storm water or uncontaminated water.

Wetted height: The depth from the static water line to the bottom of the grease interceptor.



15.0 REFERENCES AND LINKS

Canadian Fuels Association (CFA):

<http://canadianfuels.ca/>

ChemTRAC's Resources for Greening Auto Body, Collision Repair and Auto Refinishing Pollution Prevention Information:

http://www1.toronto.ca/city_of_toronto/toronto_public_health/healthy_public_policy/chemtrac/industries/files/pdf/autobody.pdf

Collision Industry Information Assistance (CIIA):

<http://www.ciia.com/>

CIIA's Autobody Profitability Workbook:

http://www.ciia.com/documents/FINALAUTOBODYPROFITABILITYDEC_22.pdf

Environmental Regulations & Best Management Practices: Automotive Repair Operations in the Capital Region:

<https://www.crd.bc.ca/docs/default-source/source-control-pdf/bmp-automotive-repair.pdf?sfvrsn=2>

Municipal Licensing & Standards (MLS):

www.toronto.ca/mlslicences

Ministry of the Environment and Climate Change (MOECC):

<http://www.ontario.ca/ministry-environment-and-climate-change>

MOECC's Best Management Practices Procedures for the Handling and Disposal of Selected Wastes from Retail Motor Vehicle Servicing Facilities:

<https://www.ontario.ca/document/best-management-practices-procedures-handling-and-disposal-selected-wastes-retail-motor-vehicle>

MOECC Regulation 347: General – Waste Management:

<http://www.ontario.ca/laws/regulation/900347>

Ontario Building Code (OBC):

<http://www.mah.gov.on.ca/Page7393.aspx>

Toronto Municipal Code Chapter 681 Sewers:

http://www.toronto.ca/legdocs/municode/1184_681.pdf



16.0 APPENDIX – SAMPLE LOG

RECORD OF INSPECTIONS

- **Oil Interceptor***
- **Sand and Grit Interceptor***

(check as applicable)

[illegible]

*Any waste removed from the site shall be managed in accordance with the requirement of the Ontario Waste Management Regulation 347 (formally known as: R.R.O 1990 Regulation 347 General - Waste Management) and info shall be documented and retained on site.



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