

Water Quality Contents

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General Requirements

Agencies and businesses work together to protect water quality

In Washington State, Ecology, EPA, and local governments work together to protect water quality. Central to our water quality regulations is the requirement to use all known, available, and reasonable technologies, along with best management practices (BMPs), to prevent release of pollutants into waters of the state. The objective of this policy is to help meet state Water Quality Standards and protect the beneficial uses of state waters. This section offers tools to help understand the requirements, and apply BMPs to meet the requirements to protect water quality.



The tools offered include BMPs from Ecology's stormwater management manuals for eastern and western Washington. BMPs are activities, practices, and procedures that help treat, prevent, or reduce the discharge of pollutants to surface and ground waters, and storm sewers. BMPs target control of pollution from municipal and industrial sources. Washington's source control and runoff treatment BMPs may be found by accessing Ecology's stormwater manuals at www.ecy.wa.gov/programs/wq/stormwater/tech.html. There are also BMPs for underground injection-control (UIC) wells and discharges to the sanitary sewer. These are discussed below, with links as appropriate.

Local jurisdictions also have water quality requirements and BMPs that may apply to your business too. There may be local codes for water quality, stormwater, utility, building, sanitation, land use, environment, and health and safety. (See *Appendix A* on page 77 for local contact information.)

Included in this section are discussions on water quality topics of special importance to the auto body industry—specifically, drains and vehicle washing. Drains are given special consideration because facilities need to determine where drains go in order to know what water quality rules and BMPs apply to them.

Vehicle washing is given special consideration because wash water is one of the most significant contributors of water pollution from the auto body industry. Once water is used to wash vehicles and clean shops, it becomes contaminated and is harmful to aquatic life and water quality.

See the *Glossary* on page 70 for definitions of *industrial wastewater*, *stormwater*, *industrial stormwater*, *surface water*, *ground water*, and *sanitary sewer*.

Drains

Know where all drains go

To know if you comply with federal, state, and local water quality laws, you must know where all indoor and outdoor drains discharge. Check with your local sewer district, building department (records), or check with a plumber or an environmental consultant to determine where shop wastewater goes. (See *Appendix A* on page 77, for local agency and vendor contact information.)

There are only two legal options for the discharge of industrial wastewater, including vehicle wash water:

1. To the sanitary sewer, under the guidance of the local sewer authority or Ecology; or
2. To a storage tank that is pumped out regularly for off-site treatment.



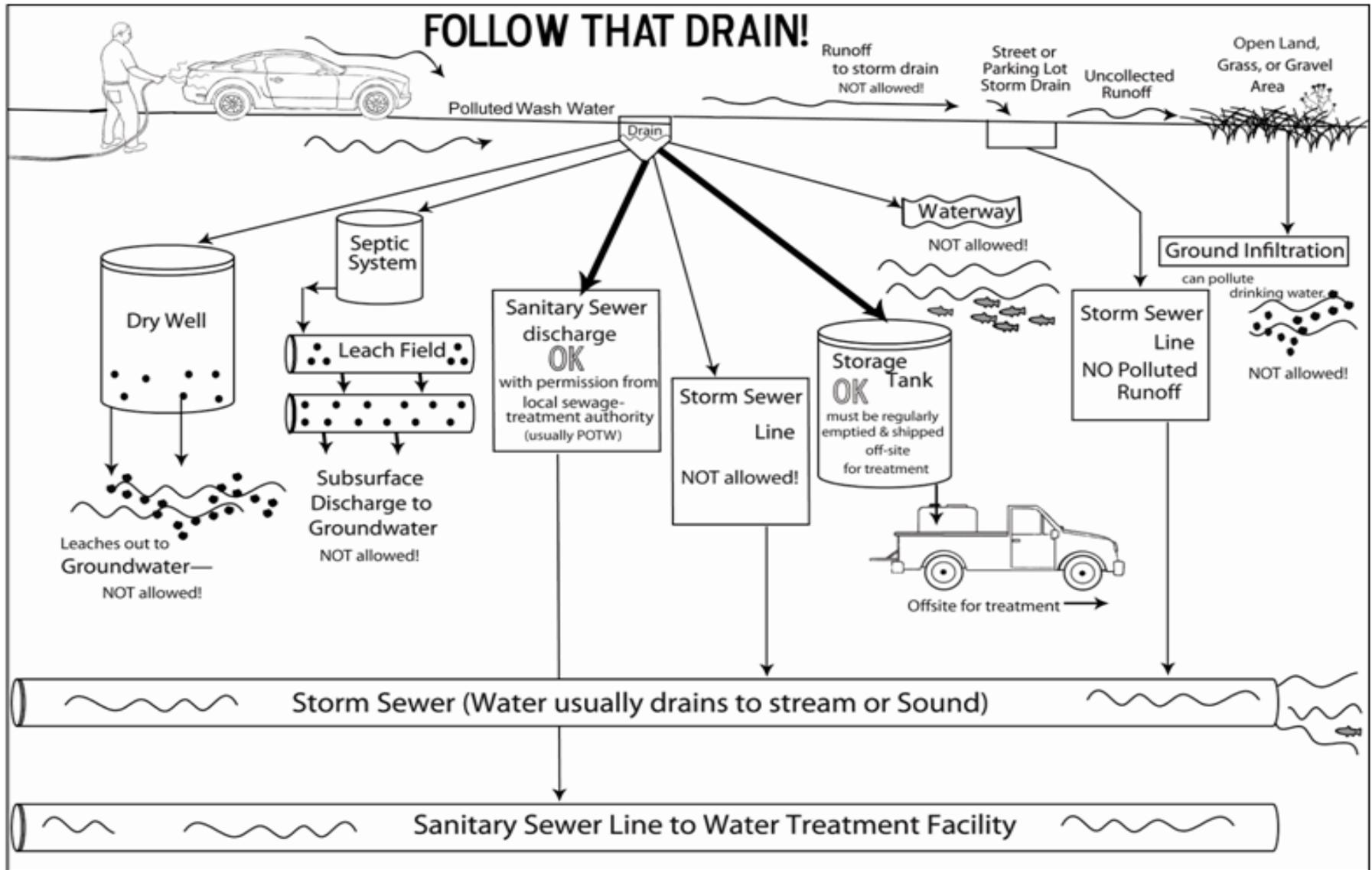


Figure 1: Use this figure to identify where drains may discharge. Note if a discharge is not allowed and correct the problem.

General BMPs for floor drains

- Identify where all floor drains discharge.
- Use drip pans or similar devices to collect vehicle fluids before they reach the floor drain system.
- Install berms or other forms of secondary containment around areas where chemical products (like paints, thinners, strippers, cleaners, and automotive fluids) are stored to prevent leaks from entering floor drains.
- Do not put fluids like oil, solvents, paints, or chemicals into a floor drain.
- Install screens in working drains to prevent solids from entering the floor drain system.
- Develop and implement a maintenance schedule for inspecting and cleaning the floor drain system.
- Prepare and train for emergencies. Have a plan in place to quickly cleanup a spill before it escapes.
- Use dry cleaning methods such as sweeping instead of water cleanup.
- Do not hose down your work area. This practice generates large quantities of contaminated wash water.
- Cap, plug, or seal floor drains that are not serving a useful and lawful purpose.
- Consider sealing your shop floor with epoxy or other suitable sealant.



Where Can Drains Lead?

If drains discharge industrial wastewater or vehicle wash water to the storm system or surface water:

Only stormwater should go to the storm drain! Discharge of industrial wastewater to surface water, ground water, or the storm system is illegal in Washington State. **If drains discharge industrial process wastewater or vehicle wash water to surface or ground water or the storm system (storm drains or street), the shop must immediately stop the discharge.**

If indoor floor drains are plumbed incorrectly and lead to the storm system, it will be necessary to redirect these drains to the sanitary sewer, or a storage tank for collection and proper disposal to the sanitary sewer. Get permission from the local sewer authority or follow state guidance if Ecology is your pretreatment control authority. (See *If drains go to sanitary sewer*, page 60.)

If a drain discharging industrial wastewater or vehicle wash water is not being redirected away from a connection to surface or ground water, or to the storm system, or is not being collected for disposal to the sanitary sewer, it results in an illicit connection and it will be necessary to seal the drain. A sealed floor drain means that no water can enter the drain and leave the premises. Proper sealing may include sealing the hole with a commercially available drain seal, cap, plug, epoxy, or Portland cement. Drains that are not serving a useful and lawful purpose should be sealed.

Outdoor storm drains also need to be protected. Catch basins are part of the stormwater drainage system and allow sediment to settle out of stormwater. Oil/grit and oil/water separators are designed to remove hydrocarbons and sediment from parking-lot runoff before going to an infiltration device or storm drain. For a discussion on these and other types of protective and treatment devices, see *Drainage system- catch basins and treatment devices* on page 67.

If storm drains discharge *significant* amounts of industrial stormwater to the storm system or surface water:

Auto body shops that discharge significant amounts of industrial stormwater to surface water or a stormwater conveyance system may be required to obtain an NPDES Industrial Stormwater Permit. Auto body shops are not included on the list of industrial facilities generally required to obtain coverage under an



Industrial Stormwater Permit. However, a shop will be required to apply for permit coverage if its storage areas or parking lots discharge significant amounts of industrial stormwater to the storm system or surface waters during storm events.

BMPs to prevent this type of pollution include installing berms and redirecting polluted stormwater away from storm drains, and collecting contaminated stormwater for disposal to sanitary sewer. Ecology's guidance on *Stormwater Discharges Associated with Industrial Activity* may be found at www.ecy.wa.gov/biblio/9938.html.

To see if your shop is required to obtain an NPDES Industrial Stormwater permit, please go to www.ecy.wa.gov/programs/wq/stormwater/industrial/index.html.

If drains go to the sanitary sewer:

Discharging to the sanitary sewer is the preferred option for disposing of industrial wastewater and vehicle wash water. All sanitary water, industrial wastewater, and vehicle wash water from the shop should go to the sanitary sewer. Contact the local sewer authority to ensure that existing connections are approved and that industrial wastewater is treatable at their facility. Connections to sanitary sewer may require a permit or written authorization, and may require pretreatment. In many cases, the local sewer authority or Ecology will require an oil/water separator (sometimes called a gas trap or grease trap) on the drain to remove oily waste from wastewater before it enters the sewer.

If it is too costly to redirect industrial waste runoff to the sanitary sewer, or if vehicle washing is minimal, a storage tank may be a good solution. Pump out the tank regularly to a sanitary sewer connection (with permission), or to a tanker vehicle for proper sanitary disposal. (See *Appendix A* on page 77, for local sewer district contact information.)

It is also important to determine if oil or solvents are being discharged to floor drains that go to the sanitary sewer. Oil and solvents are regulated dangerous wastes and must be removed and properly disposed. If the floor drain system is connected to the city sewer system, federal and state laws prohibit the discharge of oil or flammable solvents. (See the discussion on oil/water separators under *Drainage system- catch basins and treatment devices* on page 67.)

As with illicit connections to storm drains, if oil and solvent contaminants cannot be kept out of the floor drains, then they must be sealed. A sealed floor drain means that no water can enter the drain and leave the premises. Proper sealing may include sealing the hole with a commercially available drain seal, cap, plug, epoxy, or Portland cement. Drains that are not serving a useful and lawful purpose should be sealed.

If you do not have a municipal sewer authority:

The largest municipalities encompass roughly 75 percent of all sewered areas in Washington State, but there is still an approximate 25 percent chance your shop is not one of these delegated areas. In that case, Ecology is the “Pretreatment Control Authority” responsible for making decisions about whether your discharge requires a permit, and if so, what conditions you will need to meet.

Where Ecology is the pretreatment control authority, adhering to these BMPs may exempt you from the requirement to obtain a State Waste Discharge Permit for discharge to the municipal sanitary sewer:

- Conduct all repair and vehicle washing inside, or on covered and bermed wash pads. Overhead cover must be designed to allow a minimal amount of rain drift (which may require side panels).
- Route all wastewater from vehicle washing through a grit chamber to remove solids.

- Route wastewater from vehicle washing and repair activities through an effective* oil/water separator.
- Use only soaps compatible with your oil/water separator and minimize their use.
- Keep chemicals, solvents, oils, tank heels, dust, and shavings out of the sanitary sewer.
- Use a service that is permitted to launder shop towels to clean your soiled shop towels and clothes.
- Ensure all sources of storm water are separated from flows that go to the sanitary sewer.
- Make a schematic that shows where all buried pipes on the entire site are (inside and outside).
- Minimize discharges to the sewer by routinely using dry absorbents for spills.
- Seal floor drains to prevent inadvertent slug discharges of oil or other substances incompatible with the sewer system (tight-sealing plugs may be used if wet cleanup is not often necessary).
- Contact your sewer provider, let them know you are following these BMPs, and get a name and phone number to call in the event of a spill. (See *Appendix A* on page 77, for contact information.) If they use a survey form, complete and sign it for the municipality.
- Inspect your operations and treatment systems weekly to confirm the above BMPs are followed and keep records of your inspection and maintenance efforts for a minimum of three years.
- (Optional) Install and use a recycling-type vehicle wash system.

**An effective oil/water separator must be properly sized and maintained. Ecology has a process for reviewing your design to ensure that it will work properly. This process involves developing an engineering report, plans and specifications, and an Operations and Maintenance manual. When this is done, you should have a good assurance that your oil/water separator will effectively remove enough oil to discharge the effluent safely to the sanitary sewer even in areas where the sewer system has a low limit for total petroleum hydrocarbons (TPH). (See Appendix A on page 77, for local sewer authority contact information.)*

If drains go to a septic system:

Industrial wastewater or vehicle wash water must not go to a septic system. Septic systems are specifically designed to handle sanitary wastes from sinks, showers, and toilets, but they cannot treat dangerous substances. In addition, detergents used in vehicle washing can destroy septic systems.

Floor drains should never be routed to the septic system and process chemicals should never be flushed down sinks or toilets. Get permission from the local sewer authority to route water to the sanitary sewer. If it is not possible to route to the sanitary sewer, send water to a storage tank for off-site treatment and disposal. (See *Appendix A* on page 77, for local sewer authority contact information.)

If drains go to a dry well, injection well, or underground injection-control well:

If vehicle wash water or other industrial wastewater contaminated with process chemicals, oil, or solvents is currently going to any type of dry well, it must be redirected to the sanitary sewer. Floor drains should never be routed to a UIC well. Stormwater that has become contaminated is also not allowed to drain to a drywell.

Owners or operators of underground injection control (UIC) wells, dry wells, infiltration trenches with perforated pipe, and certain drain fields already in use or being built need to register with Ecology. Visit the UIC Web page for registration information at www.ecy.wa.gov/programs/wq/grndwtr/uic/index.html. UIC wells only have to be registered once. (See *Appendix A* on page 77, for Ecology contact information.)

Ecology's *Guidance for UIC Wells that Manage Stormwater*, publication 05-10-067, can be found at www.ecy.wa.gov/pubs/0510067.pdf. The guidance provides design and treatment BMPs for drywells used along roads and parking areas, and roof runoff.

If drains discharge to the ground:

The only way to discharge any industrial wastewater to the ground legally is to obtain a State Waste Discharge permit from Ecology. This is a difficult and expensive permitting process. Any discharge to the ground will likely require oil removal and pre-treatment to comply with Ecology's Ground Water Quality Standards. **This is not a preferred option because of the large volume of wash water most auto body shops produce.** For more information please refer to Ecology's guidance at www.ecy.wa.gov/pubs/9602.pdf.

If drains discharge to a (closed) storage tank:

If it is too costly to redirect polluted runoff to the sanitary sewer, a storage tank may be a solution. The tank will have to be regularly pumped out and water sent to a sanitary sewer connection (with permission), or transported off-site for appropriate treatment and disposal.

Vehicle Washing Can Pollute

Water used to wash vehicles and clean the shop can be contaminated with toxic soaps, detergents, heavy metals, oil, and grease. Wash water must be controlled to avoid polluting.

Use wash areas and wash pads

Wash vehicles in a paved and covered wash area. Reusing the water in a closed-loop water recycling system is preferred. If you are discharging wash water to a shop floor drain, check with your local jurisdiction to see if you comply with local regulations. Most municipalities no longer permit floor drains in the automotive industry.

If a closed-loop system isn't feasible, or if floor drains are used in wash bays, route the water for pre-treatment to a grit chamber, then to an oil/water separator, and then discharge to a sanitary sewer (with permission), or dead-end sump. The wash water may also be routed by a berm and collected with a wet vacuum or pump for proper disposal. *See the note under *Soaps and Detergents* on impacts to oil-water separators from detergents in wash water, and the use of 'quick release' alternatives on page 64.



All vehicle wash water and industrial wastewater needs to be directed to a sanitary sewer or dead-end sump, or collected for proper disposal. It should not be directed to a storm drain!

Designated wash areas must be well marked with signs indicating where and how washing must be done. Ideally, this area will be inside a building or under cover to keep out uncontaminated stormwater. If not, you will need permission from your local sewer authority to discharge contaminated stormwater and you may have to pay more for sewer service due to the higher flows.

Cover vehicle wash areas

In the past, stormwater sources were hooked up to the sanitary sewer. Now, most sewer districts are getting too much stormwater making it difficult to treat sewage properly when it rains. This pollutes our rivers and streams. Accordingly, Washington prohibits discharge of stormwater, and other direct inflow sources, to a sanitary sewer unless there are no feasible alternatives. Covering wash areas is typically feasible.

Many cities base hookup fees on flow. A 20' by 40' pad during a 3-inch rainstorm generates as much wastewater as six houses in a day. If the hookup fee for a house is \$10,000, the charge to serve this size pad may be six times this amount if the pad is not covered!

The wash area should be dedicated to vehicle washing or at least must be kept clean. Oil changes and other engine maintenance must not be conducted in the designated washing area.

Vehicle washing outside

If washing must occur outside, the washing pad must:

- Be paved with Portland cement.
- Be covered and bermed to prevent co-mingling with stormwater.
- Be sloped for wash-water collection.
- Be equipped with oil/water and grit separators to capture oil, grease, and particulates.
- Have a valve to close when washing is not occurring, to prevent stormwater from entering the system, unless stormwater cannot enter in any quantity because of the berm and cover.
- Wash water must be recycled, sent to sanitary sewer or a dead-end sump, or collected for proper disposal.

Closed-loop water recycling systems

A closed-loop system uses recycled water and has zero discharge. However, closed-loop water recycling systems may use chemicals to help remove solids from the waste. Systems that use chemicals generate chemical sludge that must be handled safely and disposed of in a manner that will not pollute waters of the state.

In addition, the closed-loop recycling systems may have a reservoir to store the recycled water for reuse. It may be necessary to discard the reservoir water periodically as oil, grease, and other pollutants accumulate. The contaminated reservoir water should be discharged to a municipal sewage system, only after prior authorization from the local sewer authority, or Ecology as the pretreatment control authority. For more information on wash water disposal options, see *If drains go to the sanitary sewer* on page 60 and *Vehicle washing can pollute* on page 62.

Soaps and detergents

All soaps can be harmful to aquatic organisms, including those labeled as "biodegradable," "non-toxic," or "environmentally friendly." Use the mildest detergent that is effective. Read the Material Safety Data Sheet (MSDS) for each cleaner.*

Yes!

- biodegradable
- water-based
- pH 6.0 to 10.5 (at the point of use)

Avoid:

- nonylphenols
- nonylphenol ethoxylates
- petroleum-based
- aromatic hydrocarbons
- halogenated compounds
- phenolics
- phosphates

It is important to note:

The emulsifying agents from detergents in wash water will ruin the effectiveness of an oil/water separator. Many companies now make "quick release" or "separator-friendly" detergents. Check with your vendor and local sewer district for their recommendation.

Indoor and Outdoor BMPs

Good housekeeping prevents pollution at its source. The following indoor and outdoor BMPs will help you meet water quality requirements and prevent water pollution.

Leaking vehicles

- Do not perform vehicle maintenance outside.
- Drain leaking vehicles immediately, or use drip pans.
- Spot-clean drips and spills.
- Dispose of spill cleanup materials quickly and appropriately, so they don't contaminate stormwater later.
- Conduct all maintenance and repair of vehicles and equipment inside a building or other covered, impervious containment area. If outside, this area should be covered, bermed, and sloped to collect runoff of contaminated stormwater, and prevent the co-mingling of uncontaminated stormwater with contaminants.

Waste storage

Leaks and spills during waste handling and storage are a significant source of industrial stormwater pollution. There are specific rules for dangerous waste storage in the *Dangerous Waste* section.

- Place tight-fitting lids on all containers.
- Cover dumpsters, or keep them under a cover such as a lean-to, to prevent the entry of stormwater. Keep dumpster lids closed.
- Replace or repair leaking dumpsters. Install waterproof dumpster liners.
- Place drip pans beneath all container taps and at all potential drip and spill locations.
- Enclose and/or cover all pollutant sources. Examples would include enclosing sources within a building or other enclosure, covering storage and working areas with a roof, and covering with a temporary tarp.
- Use secondary containment. Build or buy a containment system, such as a system of dikes, berms, or commercial spill-containment pallets that can hold leaks and spills. A secondary containment system must be able to hold ten percent of the total volume of all containers with liquid waste, or the volume of the largest container, whichever is greater. Waste stored inside a building may use the building itself as the secondary containment. If this option is chosen, prevent any spills from entering drains or escaping the building.

Stockpiles and metal

Contact of outside bulk materials with stormwater can cause toxic leachate, as well as loss of stored materials.

- Cover materials stored outside to prevent run-on and discharge of leachate and suspended solids.
- Provide impervious secondary containment with berms, dikes, and other forms of secondary containment.

Materials that would need to be covered or have secondary containment include:

- Acids
- Antifreeze
- Automotive parts
- Batteries
- Caustic bases
- Landscaping materials
- Metals
- Paints/coatings
- Pesticides/herbicides/fertilizers
- Petroleum/oils (e.g., hydraulic, cutting, motor oil)
- Plastics
- Recycling
- Solid waste
- Solvents
- Tires

Sanding dust

- Do not conduct spraying, blasting, or sanding activities where wind may blow paint into water.
- Sweep or vacuum dust right away.
- Keep doors and windows closed to prevent sanding dust from escaping outside.
- Be careful not to track the dust outside on your shoes or vehicles.
- Use a vacuum sander.

Parking lots

Public and commercial parking lots are sources of toxic hydrocarbons and other organic compounds, oil and grease, metals (zinc, copper, etc.), and sediment deposited by vehicles.

- Provide appropriate BMPs for stormwater runoff from parking lots (see note below).
- Sweep (rather than hose) paved areas regularly to remove accumulated pollutants and prevent contamination of stormwater.
- Properly maintain catch basins and treatment devices.

Note: Consider routing runoff through an oil/grit separator then through an oil/water separator, which can more efficiently remove hydrocarbons and sediment from parking-lot runoff before going to an infiltration device or storm drain network. Filter fabric can help capture sediment so catch basins are not overwhelmed.

If discharging to a UIC well, Ecology publication, *Guidance for UIC Wells that Manage Stormwater* explains when solids removal and oil control treatment BMPs are required. This guidance may be found at www.ecy.wa.gov/pubs/050067.pdf.

The building

- Stormwater runoff from roofs and sides of buildings can pollute. Galvanized steel used in roofing and other applications leaches zinc into stormwater. Paint or seal galvanized steel to prevent this. Peeling and chipping paint can also pollute stormwater.
- If a roof/building pollution source is identified, implement appropriate control measures such as air-pollution control equipment, changing building materials, or changing processes or operations. If replacing the pollution source is not possible, capturing the runoff and directing it to the sanitary sewer is an alternative option.

The drainage system—catch basins and treatment devices

- Oil and grease, hydrocarbons, debris, heavy metals, sediments, and contaminated water can be found in catch basins, oil and water separators, settling basins, etc.
- Maintain and clean out debris, sediments, and oil from stormwater collection, conveyance, and treatment systems for proper operation.
- Inspect and clean catch basins, treatment devices, and conveyance systems, as needed, and determine whether improvements are necessary.
- Promptly repair any deterioration that threatens the structural integrity of the catch basin or treatment system. This may include replacement of clean-out grates, catch-basin lids, and rock in emergency spillways.

Catch basins

Catch basins are part of the stormwater drainage system. They allow sediment to settle out of stormwater. Catch basins are not an approved treatment BMP, but they do collect small amounts of sediment and debris. They are most often located below the grating in storm drains. Those located on private property are the responsibility of the landowner.

Routine maintenance is required to keep catch basins functioning properly. If the catch basin becomes full, debris may accumulate in the outlet and drains will flood. If catch basins are not cleaned frequently, contaminants may reach concentrations where the sludge is considered dangerous waste.

Dangerous waste sludge requires disposal, which can be expensive. Locate any catch basins, and be sure to maintain them. **Keep a maintenance log for all maintenance performed on catch basins and water treatment devices.**

Catch-basin maintenance

- *Cleaning catch basins at least twice a year, in the spring and late fall.* They should also be cleaned as required after spills. Oil and grease, hydrocarbons, debris, heavy metals, sediments and contaminated water are found in catch basins and other water treatment devices, such as oil and water separators and settling basins.
- *Monitoring sediment levels in the catch basin, they should be cleaned out before deposits fill 60 percent of the area below the outlet pipe.* When catch basins are about 60 percent full of sediment, they stop removing sediments. In no case, should there be less than six inches of clearance from the debris surface to the invert of the lowest pipe. If they fill up, the outlet pipe will become plugged and water will not drain.
- *Posting warning signs: “Dump No Waste—Drains to Stream” (or other water body), or stencil yellow fish beside stormwater drains.* Check local requirements.
- *Using filter fabric to protect catch basins from dust, grit, and other pollutants.* Filter fabric may also be useful in a parking or storage lot to capture small bits of debris and paint chips shed from wrecked vehicles. The fabric needs to be changed regularly to remain effective.



Water Treatment Devices

Permitting authorities, including Ecology and the local sewer district, may require pre-treatment of wastewater. Runoff from parking lots is of particular concern, and treatments such as oil/grit separators, oil/water separators, and catch basin filters are recommended.

Treatment devices common to auto body shops generally separate or absorb oil and include:

- Oil-water separators
- Oil-grit separators
- Oil-absorbent materials
- Filtration systems

If there are no routine flows from the area, another option to catch small spills is a spill control (SC) unit. However, it is not capable of separating oil from water. It must be pumped out to an approved oil/water separator, or hauled off-site by a licensed waste hauler if there is a spill.

For additional guidance on water treatment devices, refer to Ecology's stormwater management manuals for eastern and western Washington, specifically the volumes on *Runoff Treatment BMPs*. The manuals are available online at www.ecy.wa.gov/programs/wq/stormwater/tech.html.

Oil/water separators

An oil-water separator removes solids and oil from your wastewater and collects them for proper disposal. The rest of the wastewater is discharged to the sewer. It is important to maintain an oil/water separator so that it functions properly. Check weekly to see if the sludge in the bottom or the floating oily waste needs to be removed and disposed. These wastes may need to be managed either as a dangerous waste or as an oily waste, depending on the content.

There are different types of oil-water separators. These are recommended:

- American Petroleum Institute (API) unit.
- Coalescing Plate (CP) separator unit.
- Skimmer type units (which pull an absorbent loop through a vault and squeeze the oil into an oil-holding vessel).

Oil/water separators need to be inspected weekly. Treatment devices need regular maintenance to remain effective. Be especially diligent before and after big storms, and at the beginning and end of the runoff season.

Note: Detergents in vehicle wash water can make an oil/water separator ineffective.

Oil/water separators cannot capture the oil mixed with soap and the soap may actually free up oil previously captured. Many companies now make "quick release" or "separator-friendly" detergents. Check with your vendor and local sewer district for their recommendation.

Oil/grit separators

Oil/grit separators are designed to remove hydrocarbons and sediment from parking lot runoff before going to an infiltration device or storm drain network. The oil/grit separator is essentially three concrete chambers modified to separate grit, oil, and sediment before it passes to a storm drain. Oil/grit separators are most effective when used in combination with an oil/water separator.

Oil/absorbent materials

Oil absorbents are designed to absorb hydrocarbons, but not water. The absorbents come in many shapes and configurations to meet different needs. These can be included in your spill cleanup kit in granular form or as a long flexible tube, called a boom, to stop the flow of material across the ground.

A drain receiving oil-contaminated water can be protected by either placing absorbents in the basin or a boom surrounding the basin. Using filter fabric can also help prevent sediment and particles from clogging up treatment devices.



Filtration systems

Filtration systems can separate oil and solids from water. They are useful for reuse of vehicle wash water in a closed-loop (or zero discharge) system, and for pretreatment of water before discharge to sanitary sewer. These systems require scheduled maintenance. Check the owner's manual.

Glossary — Definitions Used in this Section

Industrial wastewater

The water or liquid that carries waste **from industrial or commercial processes**. Industrial wastewater includes vehicle wash water. Auto body shops may not discharge industrial wastewater to surface water, ground water, or storm drains. Industrial wastewater must be discharged to the sanitary sewer.

Stormwater

Runoff during and following precipitation and snowmelt events. Stormwater that co-mingles with process water becomes industrial wastewater and must be discharged to the sanitary sewer.

Industrial stormwater

Runoff **from storage areas** associated with manufacturing, processing, or raw materials at industrial plants. For many industries, facilities that discharge industrial stormwater to surface water or a stormwater conveyance are required to apply for coverage under the National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for Stormwater Discharges Associated with Industrial Activities (Industrial Stormwater Permit). ***Auto body shops are generally not required to have coverage under an NPDES Industrial Stormwater permit, unless they are significant contributors of industrial stormwater.***

Surface water

An open body of water, such as water collecting on the ground or in a conveyance system, stream, river, lake, sea or ocean.

Ground water

The supply of fresh water found beneath the surface of the land or surface water body, usually in aquifers, which supply wells and springs.

Sanitary sewer

The sewer that carries residential and industrial wastewater to a treatment plant for treatment; as distinct from the storm sewer that carries stormwater. Connections to the sanitary sewer may require a permit or written authorization from the local sewer district. Local sewer authorities may specify limits and treatments before they grant permission. (See *Appendix A* on page 77, for a list of local sewer districts and their contact information.)

Management's Role in Preventing Pollution

- Have a spill cleanup plan. (See the *Management and Records* section for more information on spill plans.)
- Report all significant spills of oil or dangerous substances.
- Train employees on what to do in the event of a spill.
- Train employees how to operate and maintain any treatment devices (such as oil/water separators).
- Make a schedule for the maintenance and inspection of treatment devices.
- Retain maintenance records and inspection reports of treatment devices for three years.

Top Pollution Prevention Tips to Protect Water Quality

Below are the top two prevention tips for ways to better reduce or eliminate water pollution from your processes. If the EnviroStars program is available in your jurisdiction and you would like to participate, the ideas below may be helpful to use for your improvement goals. (See *EnviroStars* below for more information.)

❑ **Install a closed-loop water recycling system for vehicle washing.**

- A closed-loop system uses recycled water and has zero discharge. For shops that do a lot of vehicle washing, this would be the most successful way to prevent the generation of water pollution by your business.

❑ **Survey and map your drains**

- Prepare a map of each area as it is to be surveyed. Show the known location of storm drains, sanitary sewers, and permitted and un-permitted discharges. Aerial photos may be useful. Check records, such as piping schematics to identify known side sewer connections, and show these on the map. Consider using smoke, dye or chemical analysis tests to detect connections between two conveyance systems (e.g., industrial process water and stormwater).
- Conduct a field survey of buildings, particularly older buildings, and other industrial areas to locate all storm drains. Note where these join the public storm drain(s).
- During non-stormwater conditions, inspect each storm drain for non-stormwater discharges. Record the locations of all non-stormwater discharges and eliminate or treat them. Include all permitted discharges.
- Compare the observed locations of connections with the information on the map and revise the map accordingly. Note connections that are inconsistent with the field survey and correct all illicit connections.
- Provide this map to your sewer provider and include it with any permit application.