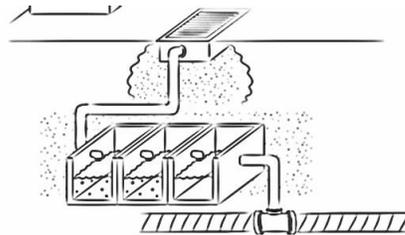




The Oil-Water Separator



1. What does the oil-water separator do?

An oil-water separator:

- slows the water flow
- separates oil, dirt and solids from water that goes down the indoor drain.
- solids sink to the bottom, oil collects on the surface.
- prevents oils and solids from entering the third chamber but allows water to pass through.

2. Which type of automotive shop has an oil-water separator, a wet shop or a dry shop?

A wet shop

3. Where does the wastewater leaving the oil-water separator go?

If connected to the sanitary sewer, it flows to the ocean (for more details see the FAQ's)

NOTE: If connected to a septic system: it filters through the ground into groundwater. The watershed drains the surface and groundwater to a common waterway, such as a creek, stream, lake or ocean.

4. Can an oil-water separator remove all the chemicals from wastewater?

No

5. What is connected to an oil-water separator?

- a. Toilet b. Sink c. Floor drain d. Outdoor drain

6. Where do the drains outside the shop flow?

Storm drains lead to creeks, streams and the ocean.



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Dry Shops

1. What must an owner do to make their automotive business a dry shop?

An owner must:

- *hire a plumber to identify which indoor shop drains are connected to the sanitary sewer and “cap them off” (i.e. disconnect them from the sanitary sewer and put a cover over the drain grate).*
- *hire a liquid waste management company to handle any liquid wastes (this includes emptying the oil-water separator) and taking the waste away for treatment.*

2. Should water from washing floors go down a storm drain? Why or why not?

No, it must either go through an oil-water separator or be collected in a holding tank and taken away by a liquid waste management company to be treated.

3. What advantage do you think there is to converting an automotive shop into a dry shop?

Less contaminants go down the drain into the sanitary sewer (ocean) or septic system (groundwater, creeks and the ocean).

4. Do you think it is important as an employee, to know if you are working in a dry or wet shop? Why or why not?

Yes, because it will change your actions at work, e.g.

- *in a dry shop, there is no oil-water separator; floor washwater must be stored for pick up by a liquid management waste company.*
- *in a wet shop, you may be expected to know where the oil-water separator is located, how to assess if it is working and/or needs maintenance and how to clean it following a spill.*

Hazardous Waste

5. What is a spill containment area and what does it prevent?

- *It is the area where hazardous waste products are stored.*
- *It prevents accidental leaks and spills of hazardous wastes from going down a drain or spreading inside or outside the shop.*
- *Spills and leaks are contained for safe disposal and/or recovery.*

6. Why must the spill containment area not be connected to a drain?

- *safety (e.g. hazardous wastes can damage the sanitary sewer, corroding pipes).*
- *environmental reasons (e.g. prevent pollution)*
- *it is the law (CRD Sewer Use Bylaw)*

7. What should be done with dirty shop rags and work clothes?

- *Disposable oily rags should be stored and picked up by a hazardous waste management company.*
- *Reusable oily cloth rags and work wear should be cleaned at an industrial laundry that has the equipment to separate oil from washwater.*

8. What happens to absorbent materials used to clean up spills?

- *It is stored and picked up with other hazardous waste for safe disposal.*





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Scavenger Hunt

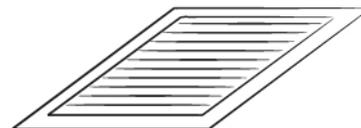
Can you find...	How are you reducing the environmental impact with these shop components?
<p><i>Answers will vary. Fill in the table and answers to questions below for your shop.</i></p>	<p><i>Overarching answer: Hazardous waste is dangerous to people, pets and the environment. If hazardous wastes are put in the garbage or poured into the sanitary sewer, septic system or storm drain, they create environmental and public health hazards. If disposed of incorrectly, toxic materials can harm aquatic life, destroy sensitive ecosystems and pollute recreational sites and water supplies. They may be unsafe for sewage or garbage workers and can damage equipment and the structural integrity of the system (e.g. pipe corrosion).</i></p>
<p>where to put dirty overalls:</p>	<ul style="list-style-type: none"> • <i>Overalls are washed in a facility where the oil is removed from the wash water for recycling or proper disposal.</i> • <i>Laundry facilities without this equipment could contaminate groundwater (septic) or the marine environment (sanitary sewer).</i>
<p>where to put oily rags:</p>	<p><i>Oily rags will be:</i></p> <ul style="list-style-type: none"> • <i>washed in a facility where the oil is removed from the wash water protecting groundwater and the marine environment.</i> • <i>picked up with used absorbent materials for proper disposal offsite, diverting potentially toxic items from Hartland landfill.</i>
<p>where to put used oil and oil filters:</p>	<ul style="list-style-type: none"> • <i>Used oil and oil filters (banned from the landfill) will be recycled.</i> • <i>Proper disposal diverts these potentially toxic items from Hartland landfill and our waterways.</i> • <i>Recycling oil reduces the need for crude oil and uses less energy to refine.</i> • <i>Recycling oil filters reduces the need for raw materials (oil and metal).</i>
<p>where to put empty oil containers:</p>	<ul style="list-style-type: none"> • <i>Motor oil containers (banned from the landfill) will be recycled.</i> • <i>Recycling oil and plastic reduces the need for raw materials and uses less energy than refining crude oil.</i> • <i>Proper disposal diverts these potentially toxic items from Hartland landfill and our waterways.</i>



Can you find...	How are you reducing the environmental impact with these shop components?
where to put used batteries:	<ul style="list-style-type: none"> • Batteries (banned from the landfill) will be recycled. • Reduces the need for raw materials to make new products. • Diverts potentially toxic items from Hartland landfill and our waterways.
where to put materials used to clean up a spill:	<ul style="list-style-type: none"> • Used absorbent materials (banned from the landfill) are picked up for proper disposal diverting potentially toxic items from Hartland landfill. • No used materials are swept into storm drains, protecting our waterways from pollutants.
a spill containment area:	<ul style="list-style-type: none"> • Prevents hazardous materials (e.g. batteries, solvents, antifreeze, oil, brake fluid, transmission fluid and fuel storage tanks) from escaping into the environment via storm drains, septic systems or sanitary sewers. • The spill containment area is pumped out and the liquid picked up for proper disposal preventing pollutants from escaping into the environment.
a hose with a backflow preventer:	<ul style="list-style-type: none"> • Prevents dirty water from being sucked back through the hose into the public drinking water system.
a floor drain:	<ul style="list-style-type: none"> • In a wet shop, the floor drain is connected to an oil-water separator. • In a dry shop, it is disconnected and all wastewater is picked up by a liquid waste management company. • Both protect our groundwater (septic) and marine environment (sanitary sewer).
a storm drain:	<ul style="list-style-type: none"> • It is used to prevent flooding (of storm water into the shop) and is not used for waste disposal. • It protects our waterways, shorelines and the ocean.
the spill response kit	<ul style="list-style-type: none"> • Appropriate spill equipment is ready for use to prevent hazardous material from escaping into the environment via storm drains, septic systems or sanitary sewers.
the spill response plan:	<ul style="list-style-type: none"> • Employees are trained to deal with spills and have appropriate spill equipment ready for use.

1. Our shop helps to protect the _____ watershed and/or the marine environment near the _____ sanitary sewer outfall.

2. What else is our shop doing to protect the environment?





Pollution Prevention: Automotive Repair Video (Part 1-5)

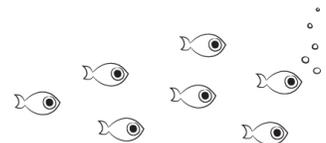


Capture It

- Draw (or take a picture of the shop) and label where each of the following are located:
 - spill response plan
 - dirty shop overalls
 - used solvents
 - storm drain
 - backflow preventer
 - garbage bins
 - spill response kit
 - used oil filters
 - indoor drains
 - spill containment area
 - used oil
 - handwash sink
 - oily rag container
 - used antifreeze
 - used batteries

Answers will vary. Fill in the chart and answers below for your shop.

- Our shop helps to protect the _____ watershed and/or the marine environment near the _____ sanitary sewer outfall.
- What else is our shop doing to protect the environment?





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Spill Response Scenario



Answers will vary. Fill in the answers below for your shop.

1. Following the spill response plan, can you safely clean up the spill?
 - a) What worked?
 - b) What didn't work?
2. Are there any changes you would make to improve the spill response plan?
3. Are there materials that could be added to the spill response kit to make the clean-up easier and more effective?
4. How else could we be prompted about the right way to handle automotive waste?