

Basics of Managing Used Oil in Washington State

Hazardous Waste and Toxics Reduction Program

Washington State Department of Ecology Olympia, Washington

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Related Information

- Publication 25-04-005: <u>Used Oil Guide: Generators, Collection Centers, and Aggregation</u>
 Points¹
- Publication 25-04-006: <u>Used Oil Guide: Transporters, Transfer Facilities, Processors, Re</u>refiners, Used Oil Burners, and Fuel Marketers²
- Publication 05-04-006: <u>Closure Plan Template for Dangerous Waste Recyclers and Used</u>
 Oil Processors³
- Publication 05-04-016: Used Oil Guidance, Tank and Secondary Containment Guidelines⁴

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¹ https://apps.ecology.wa.gov/publications/SummaryPages/2504005.html

² https://apps.ecology.wa.gov/publications/SummaryPages/2504006.html

³ https://apps.ecology.wa.gov/publications/SummaryPages/0504006.html

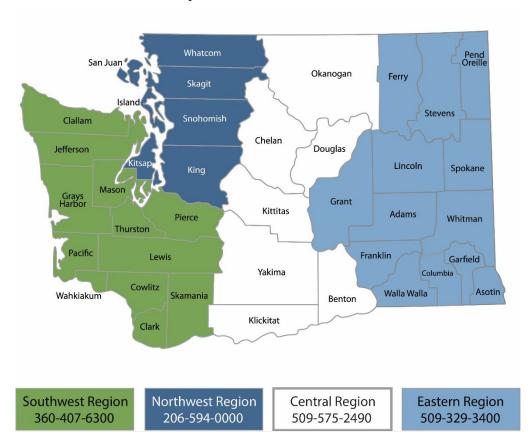
⁴ https://apps.ecology.wa.gov/publications/SummaryPages/0504016.html

⁵ https://ecology.wa.gov/contact

⁶ https://ecology.wa.gov/accessibility

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Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
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Introduction

This publication provides an overview of how to manage your used oil according to Washington State's Dangerous Waste Regulations. Please also refer to the following two guides specific to how you generate, manage, or transport used oil.

- Used Oil Guide: Generators, Collection Centers, and Aggregation Points⁷
- <u>Used Oil Guide: Transporters, Transfer Facilities, Processors, Re-refiners, Used Oil Burners, and Fuel Marketers</u>⁸

If you have any questions about managing used oil, please contact your <u>region's Ecology</u> <u>office</u>⁹ to speak with a dangerous waste specialist.

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⁷ https://apps.ecology.wa.gov/publications/SummaryPages/2504005.html

⁸ https://apps.ecology.wa.gov/publications/SummaryPages/2504006.html

⁹ https://ecology.wa.gov/contact

Used Oil Management Basics

Defining used oil

What is used oil?

Used oil is any oil refined from crude oil—or any synthetic oil—that's contaminated by physical or chemical impurities due to its use. 10

These materials may qualify as used oil when spent:

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Lubricating oil

 Transmission fluid

Hydraulic oil

- Transaxle fluid
- Gear oil

- Refrigerant oil
- Differential oil
- Motor oil
- Cutting oil

fluid

Power steering

Other oil materials may define as used oil if not contaminated with dangerous waste, such as:

- Used oil recovered from ship bilge water or wastewater from an oil/water separator.
- Used oil recovered from containers holding water and used oil.
- Metal cutting fluids without chlorinated compounds.
- Free-flowing oil recovered from oil filters, rags, and absorbents.
- Used oil residuals removed from a collection container and tank.
- Mixtures of used oil with small amounts of fuel products like kerosene, diesel. gasoline, or jet fuel that were drained from fuel filters.

See additional important definitions in **Appendix C. Definitions**.

What isn't used oil?

Materials that designate as dangerous wastes¹¹ aren't used oil, such as:

- Solvents like brake or carburetor cleaner, degreasers, and paints and stains (even if they're oil-based).
- Ethylene glycol-based fluids (for example, antifreeze).¹²
- Materials that designate as extremely hazardous waste (EHW).¹³

¹⁰ WAC 173-303-040 definitions

¹¹ https://ecology.wa.gov/designation

¹² See separate standards to manage spent antifreeze in WAC 173-303-522.

¹³ EHW refers to dangerous wastes designated as extremely hazardous in WAC 173-303-100.

- Polychlorinated biphenyl (PCB) oils and materials that designate as WPCB waste.¹⁴
- Metalworking fluids with chlorinated compounds when burned for energy recovery.
- Rags and absorbents that do not contain free flowing oil.
- Vegetable oils and animal fats.
- Fuels/refinery intermediates, gasoline, kerosene, heating oil, diesel, refinery by-products, or cutter stocks produced at an oil refinery.
- Unused oil product.¹⁶

Check the safety data sheets (SDSs) prior to disposal.

Learn about more materials that you may not manage as used oil in the <u>materials you may</u> not manage as used oil section.

Additional Washington State rules

Washington laws and regulations also prohibit the following:

- Used oil cannot be used as dust suppressant. 17
- Used oil mixed with any solid or dangerous wastes cannot be managed as used oil. It must be managed as solid waste, and possibly as dangerous waste. This includes spent solvents, gasoline, brake cleaner, or carburetor cleaner.
- Used oil cannot be mixed with small quantity generator waste.

On-specification and off-specification used oil

On-specification used oil meets the allowable level of constituents outlined in Table 1. On specification used oil can be burned in space heaters provided the burner follows the used oil generator provisions of WAC 173-303-515(6).

If the total halogen concentration in a container or tank of used oil exceeds 1,000 ppm, we presume the used oil was mixed with dangerous waste and is now all dangerous waste. However, you may rebut this presumption if your used oil has more than 1,000 ppm but less than 4,000 ppm of halogens by demonstrating no such mixing has occurred. In other words, Ecology's presumption is rebuttable if you have and can provide adequate generator knowledge or testing.

¹⁴ WPCB wastes are Washington state listed dangerous wastes that contain 2 ppm or more PCBs from listed sources.

¹⁵ Metalworking fluids containing chlorinated paraffins that are reclaimed or re-refined may be managed under the state's standards for management of used oil.

¹⁶ You may burn unused products for energy recovery if they'd classify as used oil when spent and if they're managed as used oil, so they don't become solid wastes subject to designation. These types of materials classify as unlisted commercial chemical products, not used oil.

¹⁷ RCW 70A.224.060 and WAC 173-303-515(5)(d).

Off-specification used oil exceeds the allowable level of constituents in Table 1. Off-spec used oil may only be burned for energy recovery in only the following devices:

- Industrial furnaces as defined and identified in WAC 173-303-040.
- Boilers as defined and identified in WAC 173-303-040 as follows:
 - Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;
 - Utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale; or
- Used oil-fired space heaters provided that the burner meets the provisions of WAC 173-303-515(10).
- Hazardous waste incinerators subject to regulation under WAC 173-303-670.

Off-spec used oil may also designate as a dangerous waste. Used oil is prohibited from being mixed with a dangerous waste. The resultant mixture is dangerous waste and must be managed as such. In general, if your used oil is just crankcase used oil and not mixed with anything, it will be on-specification. If you choose not to test for the on-specification status, or do not have knowledge¹⁸ of your used oil, you must manage it as off-specification used oil.

Table 1: Used oil specifications. 19

Constituent/property	Allowable on-specification level
Arsenic ²⁰	5 parts per million (ppm) maximum
Cadmium ²⁰	2 ppm maximum
Chromium ²⁰	10 ppm maximum
Lead ²⁰	100 ppm maximum
Flash point ²¹	100° Fahrenheit minimum
Total halogens ²² for rebuttable presumption ²³	1,000 ppm minimum ²⁴
Total halogens ²²	4,000 ppm maximum

¹⁸ **Knowledge** is knowing how the used oil was generated, where it came from, and what sources of contamination are possible. Knowledge also includes making decisions on new batches of used oil based on test results from previous batches.

¹⁹ Source: Table 1, WAC 173-303-515: https://app.leg.wa.gov/wac/default.aspx?cite=173-303-515.

²⁰ Use analytical test SW-846, methods 3040 or 3050.

²¹ Use analytical test SW-846, method 1010.

²² Use analytical test SW-846, method 8021.

²³ The rebuttable presumption procedure determines whether used oil is contaminated with halogenated solvents (F-listed hazardous wastes).

²⁴ We presume used oil containing more than 1,000 ppm total halogens is a dangerous waste under the rebuttable presumption. Such used oil is subject to 40 CFR Subpart H of Part 266 when burned for energy recovery unless you can successfully rebut the presumption of mixing.

How to test used oil

You may also need to test your oil to find additional properties that may make it illegal to burn as used oil. You can't burn used oil with any of these properties:

- **PCB oils** (PCB oils commonly come from transformers). These oils are state or federally regulated at greater than 2 ppm. Awareness of them is through knowledge.
- Chlorinated metalworking fluids. Awareness of them is through knowledge (check your SDSs).
- **Ethylene glycol-based fluids** (for example, antifreeze). Awareness of them is through knowledge.
- **Used oil mixed with dangerous waste.** Awareness of this is through knowledge or testing. It can be useful to have test results obtained from the rebuttable presumption.
- If it designates as EHW. By definition, if it designates as EHW then it cannot be managed as used oil. You can determine its designation by testing according to the Chemical Testing Methods for Designating Dangerous Wastes.²⁵

Testing options

Although the definitive analytical test to run for analysis of halogens is SW-846, methods 8021, you may use a chlorinated compound detection test kit (Chlor-D-Tect). We don't allow a handheld halogen detection instrument (sniffer) to test used oil as it's not approved by EPA and its results are often incomplete and unreliable—it was designed to detect leaks in refrigeration equipment, not detect halogens.

Alternatives to testing

If you know the source of your used oil's halogens—such as salty bilge water or a formulation of oil containing chlorinated paraffins—you may use that knowledge instead of testing. If you use knowledge to show your used oil meets the specification, you must keep supporting documentation at your site.

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²⁵ https://apps.ecology.wa.gov/publications/SummaryPages/97407.html

Flowchart: Used Oil Management Standards

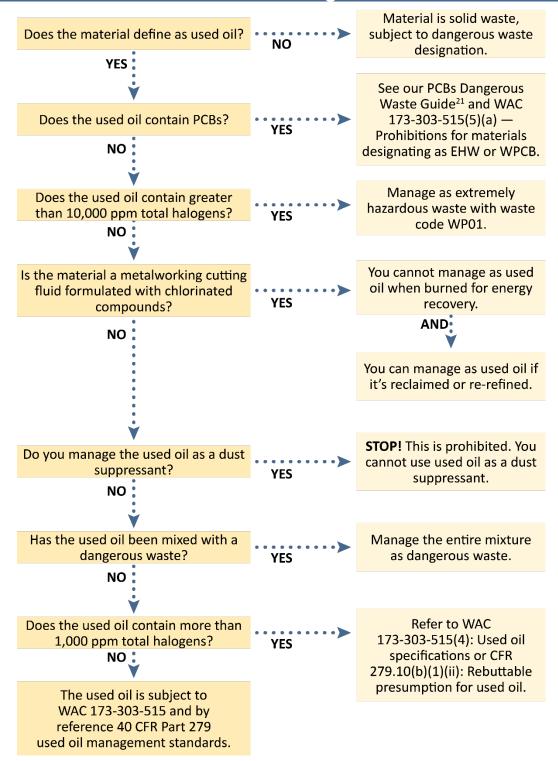


Figure 1: How to manage used oil. Read the plain text version in Appendix B.

²⁶ PCBs Dangerous Waste Guide: https://apps.ecology.wa.gov/publications/SummaryPages/2104034.html

Requirements for Used Oil Generators Self-Transporting Used Oil

Do you self-transport used oil off site?

YES

- You may self-transport less than or equal to 55 gallons of used oil that's:
 - Generated at your site.
 - Generated at your site to an aggregation point owned and/or operated by the same generator.
 - Collected from a household.
- You must self-transport used oil in a vehicle owned by the generator or generator's employee.
- You must self-transport used oil to a collection center that's registered, licensed, permitted, or recognized by a state, county, or municipal government to manage used oil.
- You may self-transport used oil generated at your site in quantities greater than 55 gallons to a used oil collection site, provided the owner/operator of the collection site records the name, address, telephone number, date of delivery, and quantity of used oil delivered to the collection site.
- You may self-transport used oil that's generated at your site to an approved used oil collection site or aggregation point without an EPA transporter ID number.

NO

- Transporter making all other shipments must have an EPA ID transporter number.
- Manifests aren't required for transport of used oil.
- Uniform hazardous waste manifests are required when used oil is a dangerous waste destined for disposal.

Note: See WAC 173-303-515(6), -515(7) and by reference 40 CFR Part 279.24, 279.30, 279.31, 279.32

Used Oil Generator Storage Regulatory Requirements

Do you store used oil in containers or above ground tanks?

YES

Containers must be closed except when adding or removing used oil.

Containers or aboveground tanks must:

- Be in good condition:
 - No rusting, severe corrosion, or deterioration.
 - o Free of leaks
- Be labeled or marked with the words "Used Oil."
- Respond to releases to environment:
 - Stop the release.
 - Contain the released used oil.
 - Clean up and manage the released used oil and other contaminated materials.
 - Repair or replace any leaking containers or tanks before returning to service.
 - Notify Ecology: ecology.wa.gov/report-a-spill.

We may require secondary containment for containers or aboveground tanks that hold used oil.

NO

If you store used oil in underground storage tanks:

- Underground tanks are subject to 40 CFR Part 280.
- You must mark fill pipes to underground tanks with the words "Used Oil."

Note: See reference to WAC 173-303-515(6) and by reference 40 CFR Part 279.22.

General used oil management requirements

If you don't manage your used oil according to the Dangerous Waste Regulations, you may be legally accountable for any problems your material causes, including liability for site cleanup actions in the future.

You must follow these requirements when managing used oil. Please also see the requirements included in the following sections that apply to your site.

- Store used oil in a leak-proof, closed container. Keep containers closed, except when adding or removing used oil.
- Store used oil in tanks and containers that are in good condition to store used oil. There must not be any rust, structural defects, or deterioration.
- Store used oil in secondary containment that's impervious to used oil.
 - Store containers and tanks of used oil in secondary containment if you're a transporter, transfer facility, processor, re-refiner, or burner.
 - Other types of handlers may be required to use secondary containment if on-site storage conditions pose a threat to human health and the environment.
- Label or mark containers, aboveground tanks, and fill pipes with the words "Used Oil."
- Be prepared to stop, contain, and clean up any releases of used oil. Be aware you may need to immediately report a release, ²⁷ too.
- Before the used oil leaves your site, know all of the following:
 - Its on-specification or off-specification status.
 - Whether it's prohibited from burning as used oil.
 - How it will be recycled.
- Don't mix used oil with other materials.

We also recommend these best management practices:

- Train employees to manage used oil properly and keep wastes separate.
- Drain and collect all oil on a covered and curbed, impermeable surface area away from drains.
- Use labels, markings, and signs to identify used oil and separate from other wastes at your business.
- Don't open, handle, manage, or store containers and tanks in a manner that may cause them to tip, leak, or rupture.
- Physically inspect all used oil storage containers and tanks on a regular basis.
- Keep all containers stored inside or under cover.

Requirements for a used oil space heater

Your used oil space heater must be designed for a maximum capacity of 0.5 million British thermal units (BTUs) per hour and you must vent the combustion gases to the outside.

You can only burn used oil from the following sources in your used oil space heater.

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²⁷ http://ecology.wa.gov/report-a-spill

- Used oil from household used oil generators.
- Used oil from your other businesses that generate used oil. In this case, your on-site space heater is an aggregation point.
- On-specification used oil from a marketer with shipment records.²⁸

While you may mix different used oils, be aware that burning mixed used oils with significantly different viscosities can clog your heater's feed lines.

Burning used oil-contaminated and derived materials

You may burn materials contaminated with used oil for energy recovery if you manage it under the used oil regulations. Examples of this include:

- Absorbent pads contaminated with used oil.
- Oil filters containing used oil.

We don't encourage you to mix gasoline or other fuels with used oil and recommend you keep fuels drained from filters in separate containers. However, federal used oil management standards allow you to mix fuel products with used oil and manage the mixture as used oil.²⁹

Learn about more materials that may qualify as used oil in the <u>materials you may manage as</u> used oil section.

Transporting used oil

As a generator, you can send your used oil to any of the following:

- A used oil collection center.
- A facility with a boiler, industrial furnace, or space heater that accepts on-specification used oil.
- A facility that's notified Ecology as a used oil processor.
- A facility that's notified Ecology as an off-specification used oil burner.
- Another site you own that may have a space heater if that site complies with the
 aggregation point requirements. See <u>Used Oil Guide: Generators, Collection Centers,
 and Aggregation Points</u>³⁰ for more information.

If you're a generator that transports more than 55 gallons of used oil, you must deliver the shipment to an approved used oil collection center. The center must collect and retain the following information:

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²⁸ You must test the used oil to show its on-specification before delivery or you could be regulated as a used oil marketer or processor. You can't assume it's on-specification before or as it's being delivered. Those who supply on-specification used oil must have analytical test results or knowledge proving the used oil meets specifications. ²⁹ See 40 CFR Part 279.10(d).

³⁰ https://apps.ecology.wa.gov/publications/SummaryPages/2504005.html

- Your name.
- Your address.
- Your phone number.
- The date and amount of delivery.

You can search for oil collection centers and used oil transporters on our <u>find a hazardous</u> waste service provider webpage.³¹

Recycling and disposal

Recycling

Ecology presumes that used oil will be recycled and encourages recycling by regulating it less stringently than dangerous waste. We strongly encourage you to recycle used oil. This process includes re-refining used oil back into a useable oil product. If you recycle your used oil, it's not subject to most of the dangerous waste regulations.

To ensure used oil is well suited for re-refining, we recommend you keep fuels drained from filters in separate containers. Even small amounts of chlorinated solvents or aerosol products (for example, brake or carburetor cleaner) can turn an entire container of used oil into dangerous waste that can't be recycled.

You must follow these guidelines to recycle your used oil:

- Keep used oil in a separate container marked or labeled "Used Oil" or "Used Oil Only."
- Keep containers closed at all times, except when adding or removing used oil.
- Don't mix used oil or used oil from DIY generators with any other waste if you plan to burn it in your shop for heating.

You should also place the container in a secure area away from floor or storm drains.

Disposal

Don't dispose of used oil on the ground, in the garbage, or down a drain. You may not dispose of containers holding free liquids to a landfill.³² Abandoning containers holding used oil is considered disposal.

Disposed used oil liquids are considered solid waste and subject to a dangerous waste determination.

³¹ https://ecology.wa.gov/DWContractors

³² According to the Solid Waste Regulations and most local agencies.

Materials You May Manage as Used Oil

Materials managed as used oil

Table 2 details materials that are considered used oil according to the Dangerous Waste Regulations. You may handle them under the standards for used oil management.³³

Table 2: Materials you may manage as used oil.

Material	Comments
Motor oil.	Example: Crankcase oil.
Synthetic oils and lubricants.	These oils function similarly to petroleum lubricants and oils as well as synthetic non-chlorinated cutting fluids.
Gear oil.	Examples: Gearbox oil and transfer case oils.
Lube oil.	Examples: Chain oil and gear oil.
Power steering fluid.	We recommend you manage this material separately as some types contain chlorinated compounds. ³⁴
Used oil generated from abnormal manufacturing operations, resulting in substantial leaks, spills, or other releases. ³⁵	Example: Sudden release of used oil from equipment failure, but not mixed with dangerous waste or hazardous substances.
Used oil stored in a petroleum refinery tank prior to insertion into crude oil refinery distillation or catalytic processing units.	
Transmission fluids.	Example: Automatic transmission fluid.
Brake fluid.	We recommend you manage this material separately as some types contain chlorinated compounds. ³⁴
Oil drained from filters.	Examples: Crankcase, transmission, and power steering filters. 36
Compressor oil.	Example: Air compressor motor pump oil.

³³ WAC 173-303-515

³⁴ These used oils are subject to the rebuttable presumption if they have more than 1,000 ppm chlorine after mixing with used oil. If testing determines the chlorinated compounds in this waste stream are solely from used power steering fluids, it's enough evidence to rebut the presumption of mixing with listed solvents.

³⁵ If free-flowing used oil from a spill is ponded and pooled, you may remove it with a vacuum system and manage absorbents as used oil.

³⁶ We recommend you hot drain filters for 24 hours before you dispose of the filter carcass as scrap metal. You can manage undrained filters under federal used oil management standards. See our publication: A Guide for Auto Body Shops: https://apps.ecology.wa.gov/publications/SummaryPages/2104010.html.

Material	Comments
Petroleum-based grease.	Examples: Ball bearing grease and gear grease.
Petroleum-based heat transfer oils.	Examples: Mineral oil and transformer oils with low PCB content. ³⁷
Refrigerant oils.	Example: Only refrigerant oil with less than 10,000 ppm chlorofluorocarbons (CFCs), hydro-chlorofluorocarbons (HCFCs), or other halogens. Oils with more than 10,000 ppm CFCs, HCFCs, or other halogens are EHW. ³⁸
Metalworking oils with chlorinated compounds.	These are only managed as used oil if reclaimed or re-refined. They aren't managed as used oil if burned as fuel for energy recovery or incineration.
Oil containing up to 2 ppm of PCBs.	Example: Some transformer oils. ³⁹

Additional materials you may manage as used oil

You may also manage the materials in Table 3 according to the standards for used oil management. 40

Table 3: Materials containing or contaminated with used oil, and used oil recovered from other materials.

Material	Comments
Oily waters.	Examples: Water with recoverable amounts of used oil such as boat bilge waters, floor washing, or containers holding used oil and rainwater ⁴¹ if not mixed with dangerous waste.

³⁷ Heat transfer oils come from various sources, often electrical equipment (transformers, capacitors, switches, and bushings). Older PCB-containing electrical equipment was mostly taken out of service or replaced with non-PCB oil. However, they may still contain low concentrations of PCBs from residuals.

³⁸ Refrigerant oils may become contaminated with chemical compounds used in refrigerant gases when seals leak or pumps fail. CFCs and HCFCs in concentrations above 4,000 ppm may be managed as off-specification used oil under Part 279 and are not subject to the rebuttable presumption. Under the dangerous waste regulations, CFCs and HCFCs are halogenated organic compounds that are classified as EHW in concentrations over 10,000 ppm.

³⁹ Used oil with fewer than 2 ppm PCB can be managed as on-specification used oil. TSCA rules regulate oils containing more than 2 ppm PCB and requires you determine the source of PCBs in contaminated oil. Used oil with quantifiable levels of PCBs can only be burned in qualified incinerators per 40 CFR 761.3

⁴⁰ WAC 173-303-515

⁴¹ See de minimis section below.

Material	Comments
Used oil liquids and used oil residues recovered from oil/water separators. ⁴²	These oils must be designated if mixed with a dangerous waste.
Used oil liquids, residues, and sludges recovered from wastewater treatment unit to meet wastewater discharge permit condition.	The emulsified oil and water mixture removed from your wastewater treatment unit can be managed as used oil if it's not mixed with dangerous waste.
Used oil recovered from wastewater in a used oil processor unit.	You may add chemical flocculants to a mixture of used oil and water in a used oil processor unit to recover used oil.
Oil filters that have not been drained.	Gravity drain the filter for 24 hours or crush it to remove and recover free flowing used oil.
Residues from storing or processing used oil.	Example: Tank bottoms when mixed with used oil to be burned as fuel. ⁴³
Free flowing used oil recovered from absorbents and rags.	May be managed as used oil if not contaminated with dangerous waste. ⁴⁴
Fuels mixed with used oil.	This applies to small amounts of fuel like kerosene, diesel, gasoline, or jet fuel from fuel filters. ⁴⁵
Soils contaminated with used oil.	You may manage as used oil if the soil has recoverable amounts of oil. ⁴⁶
Used oil discarded to an on-site wastewater treatment unit due to abnormal manufacturing operations, resulting in substantial leaks, spills, or other releases within a building.	Example: used hydraulic oil released from an assembly line system and sent into an on-site wastewater treatment unit by floor drains and sump pumps.

⁴² Whether the material can be managed as used oil depends on the type of business that uses the separator and what materials the separator receives.

⁴³ Note: you may not manage tank bottoms and residues from virgin fuel oil product storage tanks and petroleum distillates as used oil.

⁴⁴ Free flowing oil recovered from rags or absorbents may be managed under the state's standards for management of used oil. The residuals are solid waste subject to designation. We recommend you triple bag residuals and dispose of it as solid waste, with approval from your local solid waste operator.

⁴⁵ We don't encourage you to mix gasoline or other fuels with used oil and recommend you keep fuels drained from filters in separate containers. However, federal used oil management standards allow you to mix fuel products with used oil and manage the mixture as used oil. See 40 CFR Part 279.10(d).

⁴⁶ Petroleum-contaminated soils managed by treatment, remediation, or disposal are subject to the Model Toxics Control Act, including applicable and relevant requirements of the Dangerous Waste Regulations.

Materials You May Not Manage as Used Oil

The materials in Table 4 aren't defined as used oil under state and federal used oil management standards. You may not manage them as used oil.

Table 4: Materials you may not manage as used oil.

Material	Comments
Antifreeze	You must recycle separately from used oil. ⁴⁷
Solvents and thinners.	Examples: Low or high flash parts-washing solvent, paint thinners, diesel, kerosene, paint gun wash, and brake cleaners. ⁴⁸
Fuels and refinery intermediates.	Examples: Gasoline, jet fuel, kerosene, heating oil, diesel, refinery byproducts, intermediates, and cutter stocks. Manage these separately.
Rags, absorbents, or debris.	These are solid wastes you must designate after you remove the free-flowing used oil.
Undrained used oil filters.	Example: Used oil filters that haven't been drained.
Petroleum-contaminated soils and absorbents with no free-flowing oil.	These are solid waste you must designate.
Chlorinated metalworking fluids and cutting oils burned for energy recovery.	You may not manage as used oil when burned for energy recovery.
Refrigerant oil with high CFCs or HCFCs.	Segregate and store refrigerant oil with more than 10,000 ppm CFCs or HCFCs separately from used oils. You may recycle, reclaim, or manage as an EHW.
Oily water that has a sheen or minor amount of oil.	Water contaminated by de minimis (very small) leaks, drips, or drops of used oil from pumps, machinery, pipes, and other similar equipment during normal operations conveyed to a wastewater treatment unit is subject to permitted discharge regulations. ⁴⁹

⁴⁷ See separate standards for managing spent antifreeze in WAC 173-303-522.

⁴⁸ You may not manage mixtures of used oil and spent solvents as used oil. Parts-washing solvents contaminated with used oil—even if formulated as a product with a flash point greater than 140° Fahrenheit—are a solid waste that must be designated when spent. Spent solvent mixtures may contain other constituents that would cause them to designate as a dangerous waste. If necessary, we may apply the "non-free flowing" element of 40 CFR 279.10(c).

⁴⁹ See either section 402 or section 307(b) of Clean Water Act or Washington state water quality regulations.

Material	Comments
Any waste material identified as dangerous waste.	Listed, characteristic, or criteria dangerous wastes—such as organic and inorganic solvents as well as caustic or acid dip tank solutions.
Oil with high levels of PCBs.	Oil with 2–49 ppm PCBs may only be burned as fuel in certain high efficiency boilers or furnaces. ⁵⁰ Oil with 50 ppm PCBs or more is regulated under TSCA.
Material skimmed from parts washers: solvent tanks, cabinet styles, or another type.	Solid waste is subject to dangerous waste determination. ⁵¹
Vegetable oils and animal fats.	Manage these oils separately as solid waste.
Bilge water in boat.	Once on shore, a mixture with de minimis amounts of used oil and bilge water is managed as either used oil or solid waste subject to designation.
Used oil introduced into a crude oil pipeline.	Example: On-specification used oil generated at an oil and gas exploration and production well that's mixed with crude oil in a production separator, stock tank, or other tank-based unit.
Used oil introduced into a petroleum refining facility.	Example: Mixture of crude oil and less than 1% on-specification used oil stored in a slop tank before insertion into crude oil refinery distillation or catalytic processing units.
Refined petroleum product and associated tank bottoms and residues.	Examples: Refined petroleum products and associated tank bottom and residues stored in containers and tanks.

⁵⁰ You may manage used oil with up to 49 ppm PCBs as off-specification used oil under federal used oil management standards, but may only be burned in devices that comply with 40 CFR Part 279. PCBs must not be from TSCA-regulated sources or the whole volume of used oil is TSCA regulated. Note there are notification, certification, reporting, and recordkeeping requirements for generators, marketers, and burners of used oil containing 2-49 ppm PCB. See 40 CFR 761.20(e).

⁵¹ The oily material on the item isn't free flowing used oil so it's not subject to 40 CFR 279 or WAC 173-303-515.

Appendix A. History of the Used Oil Regulations

Federal versus state regulations

Ecology's standards for management of used oil have fallen under WAC 173-303-515 since 1984. We adopted most of EPA's federal used oil management standards⁵² into our regulations in 2000. Because the federal standards are incorporated into state rules, they may be enforced as state regulations.

Significant differences between state and federal standards include:

- We don't allow any generator to mix dangerous waste with used oil—including very small quantity generators.
- We don't allow any generator to mix characteristic (ignitable) waste with used oil, even if the resulting mixture doesn't exhibit ignitability.
- We don't allow any generator to manage metalworking fluids formulated with chlorinated compounds as used oil that's burned for energy recovery.
- We have more stringent performance standards for generators accumulating used oil in containers or tanks.
- We allow generators to self-transport more than 55 gallons of used oil to a used oil collection center if certain conditions are met.
- We have recordkeeping requirements for used oil collection centers.
- We can require assessment, repairs, and additional reports from those operating used oil transfer, storage, processing, and re-refining facilities.
- We require used oil processors and re-refiners to meet closure standards and financial assurance requirements.

Presumption of recycling

EPA's decision to establish separate standards for managing used oil was based on a **presumption of recycling** EPA proposed in the 1980s. This established a presumption that all used oils, once collected, would be recycled, and also decided to not designate recycled used oil as a listed waste. EPA issued specific management standards for used oil generators, collection centers, aggregation points, transporters, processors, re-refiners, burners, and marketers. Used oil management standards are less stringent than dangerous waste standards.

The presumption of recycling is the foundation for many federal and state used oil standards, including:

- Used oil specification standards.
- Rebuttable presumption criteria that used oil is mixed with a listed halogenated waste.

⁵² Found in 40 Code of Regulations (CFR) Part 279.

- Manage certain materials containing or contaminated with used oil as used oil.
- Mixing characteristic hazardous wastes with used oil is allowed under federal regulations, but isn't allowed in Washington.
- Standards for testing, documentation, record keeping, and containment.

Used Oil Management Standards Policy

Historically, we interpreted the used oil management standards to allow waste generated from processes that remove residual oil from mechanical parts to be managed as used oil.

In consultation with EPA, we revised our policy to agree with the federal interpretation:

Wastes generated from processes that remove residual oil (high flash solvent part washers, caustic dip tanks, etc.) or are contaminated with residual oil (cleaning rags, etc.) may no longer be managed as used oil. The wastes are solid wastes subject to the designation process to determine if the wastes should be managed as dangerous wastes.

Justification

We received questions about our interpretation of the used oil management standards regarding the applicability statements found in the rule. Specifically, these questions concerned our interpretation of the applicability statement that addressed a material containing or otherwise contaminated with used oil.⁵³

Our original interpretation had been wastes that contain or were otherwise contaminated with used oil and were burned for energy recovery, were subject to the used oil management standards.

After re-examining and discussing this position with EPA Region 10 staff, we revised our original interpretation. Wastes generated from high flash solvent parts washers or caustic dip tanks that become contaminated with an oily residue while cleaning engine parts cannot be managed as used oil because residual oil on an engine part that's later removed by a solvent isn't used oil.⁵⁴

A solvent with a high flash point, which is then used to clean an engine part that was properly drained of free-flowing oil, is cleaning a residue from the part. Wastes generated from that process are not eligible to be managed as used oil.

Another example is rags used to clean engine parts. In both cases, the oily film on the engine part is not used oil for the purposes of the used oil management standards.

These waste streams cannot be managed under the used oil management standards, even if burned for energy recovery.

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⁵³ 40 CFR Part 279.10 (c)

⁵⁴ See the used oil definition in Part 279.10(c) (1). The applicability statement reads, "Materials containing or otherwise contaminated with used oil from which the used oil has been properly drained or removed to the extent possible such that no visible sign of free-flowing oil remain in or on the material are not used oil and thus are not subject to the UOMS."

Appendix B. Flowchart Text

Used oil management standards

Does the material define as used oil?

- No: Material is solid waste, subject to dangerous waste designation.
- Yes: Continue to next question.

Does the used oil contain PCBs?

- Yes: See our <u>PCBs Dangerous Waste Guide</u>⁵⁵ and WAC 173-303-515(5)(a) Prohibitions for materials designating as EHW or WPCB.
- No: Continue to next question.

Does the used oil contain greater than 10,000 ppm total halogens?

- Yes: Manage as extremely hazardous waste with waste code WP01.
- No: Continue to next question.

Is the material a metalworking cutting fluid formulated with chlorinated compounds?

- Yes:
 - You cannot manage as used oil when burned for energy recovery.
 - You can manage as used oil if it's reclaimed or re-refined.
- No: Continue to next question.

Do you manage the used oil as a dust suppressant?

- Yes: **Stop!** This is prohibited. You cannot use used oil as a dust suppressant.
- No: Continue to next question.

Has the used oil been mixed with a dangerous waste?

- Yes: Manage the entire mixture as dangerous waste.
- No: Continue to next question.

Does the used oil contain more than 1,000 ppm total halogens?

- Yes: Refer to WAC 173-303-515(4): Used oil specifications or CFR 279.10(b)(1)(ii): Rebuttable presumption for used oil.
- No: The used oil is subject to WAC 173-303-515 and by reference 40 CFR Part 279 used oil management standards.

⁵⁵ https://apps.ecology.wa.gov/publications/SummaryPages/2104034.html

Appendix C. Definitions

Aggregation point

A site or facility that collects used oil from other sites or facilities that are all under the same ownership.

- An aggregation point cannot accept more than 55 gallons of used oil per shipment.
- An aggregation point may accept used oil from a household do-it-yourselfer.

Collection center

A site or facility that local government registered or permitted to accept and collect used oil from used oil generators in shipments greater than 55 gallons.

Dangerous waste

Waste that's potentially harmful to our health and environment. You can determine if a waste is dangerous through <u>designation</u>. ⁵⁶

Do-it-yourself (DIY) generator

An individual who generates used oil at home through maintenance of their personal vehicles.

Generator or used oil generator

Either of the following:

- A person whose act or process produces used oil.
- A person whose action first causes the used oil to be regulated as used oil.

Knowledge

Sufficient information about a waste to reliably substitute for direct testing of the waste. To be sufficient and reliable, the knowledge must provide information necessary to manage the waste in accordance with the requirements WAC 173-303-040.

Off-specification used oil

Used oil that exceeds any of the following specification levels:

Arsenic: 5 ppm.

• Cadmium: 2 ppm.

Chromium: 10 ppm.

Lead: 100 ppm.

• A minimum flash point of 100° F. ⁵⁷

⁵⁶ https://ecology.wa.gov/Designation

⁵⁷ We don't recommend generators add fuels—like gasoline or kerosene—to their used oil.

• Contains more than 4,000 ppm total halogens after passing the rebuttable presumption (see definition below).

On-specification used oil

Used oil that contains less than any of the following specification levels:

• Arsenic: 5 ppm.

• Cadmium: 2 ppm.

Chromium: 10 ppm.

• Lead: 100 ppm.

A minimum flash point of 100° F.⁵⁷

Total halogens: 1,000 ppm.

PCB oil

Used oil that is PCB-contaminated and is regulated waste under TSCA. Contact your <u>region's</u> <u>Ecology office</u>⁵⁸ for additional guidance.

Processing

Includes blending activities, settling, filtration, distillation, chemical or physical separation, and re-refining.

Processor

Conducts processing activities to produce a specification fuel, distillate fuel, lube oil feedstock, and other non-fuel oil-derived products.⁵⁹

Rebuttable presumption

It is presumed that used oil that contains more than 1,000 ppm total halogens is mixed with dangerous waste and must be managed as a dangerous waste. This means you can't manage it as used oil. You may rebut the presumption that used oil was mixed with halogenated dangerous waste by sample and analysis.

For example, if analysis shows that no single halogenated compound (for example, F001 and F002 listed solvent constituent) is over 100 ppm the presumption that the used oil was mixed with a halogenated solvent is rebutted and the material can be managed as used oil. If analysis shows that one of the F001 and F002 listed solvents is greater than 100 ppm then it designates as F001 or F002 dangerous waste.

See more details of rebuttable presumption for used oil in 40 CFR 279.10(b)(ii).60

⁵⁸ https://ecology.wa.gov/contact

⁵⁹ See Federal Register Vol. 57, No. 176, 9/10/1992, page 441593

⁶⁰ https://www.ecfr.gov/current/title-40/chapter-I/subchapter-I/part-279/subpart-B/section-279.10

Re-refiner

A facility that processes used oil to produce specification fuel, reconstituted lubricating oils, distillate fuel, lube oil feedstock, and other non-fuel oil-derived products.⁶¹

Testing

Method to determine if the used oil is on-specification, contains a listed hazardous waste, or is prohibited from being managed as used oil. Testing methods are available in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA Publication, SW-846.

Transfer facility

A site or facility where used oil is temporarily held during the normal course of transportation for more than 24 hours and less than 36 days. Examples include loading docks, parking areas, buildings, storage tanks, and storage areas.

Transporter

Someone who is any of the following:

- A person who collects and transports used oil from generators.
- A generator who transports their used oil somewhere other than a collection center or aggregation point.
- Generators transporting their own used oil to collection centers and aggregation points are not used oil transporters.
- An owner or operator of a used oil transfer facility.

Used oil

Used oil is any oil refined from crude oil—or any synthetic oil—that's contaminated by physical or chemical impurities due to its use.

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⁶¹ See Federal Register Vol. 57, No. 176, 9/10/1992, page 441593

Appendix D. Acronyms and Abbreviations

BTUs

British thermal units

CFCs

Chlorofluorocarbons

CFR

Code of federal regulations

Chlor-D-Tect

A chlorinated chemical compound detection test kit

DIY

Do it yourself

EHW

Extremely hazardous waste

EPA

U.S. Environmental Protection Agency

HCFCs

Hydro-chlorofluorocarbons

PCB

Polychlorinated biphenyl

PPM

Parts per million

SDS

Safety data sheet

TSCA

Toxics Substance Control Act

UOMS

Used oil management standards

WPCB

Washington state PCB waste. This waste contains 2 ppm or more PCBs from listed sources.