

Management of Hazardous, Dangerous, and Solid Waste

Identification of wastes that are regulated as hazardous, dangerous, or solid waste.

- Hazardous waste is a federal definition based on the Resource Conservation and Recovery Act (RCRA).
- Dangerous waste is a Washington state term and includes more wastes than the federal definition.
- Solid waste is defined in Washington state regulations as wastes that are also dangerous.

Solid waste doesn't necessarily mean it's solid. It could be liquid or gaseous. There are some exempt wastes but in general, if the material is going to be disposed, it may be a solid waste – you'll have to check.

Some exclusions: Domestic sewage and mixture of domestic sewage and other wastes that go through a POTW.

Legal responsibilities when these wastes are generated.

Designate the waste. There are three "categories" to consider. Listed, Characteristic, and Washington State Criteria wastes.

Listed Wastes (WAC 173-303-9903 to 9904)

- Chemicals and processes are listed (P, U, K, or F code)
- P and U codes are discarded products that contain only one active ingredient; not too common, come mostly from labs or medical facilities
- K codes are specific to certain industries (processes)
- F codes most common – include used solvents and specific industries

Characteristic Wastes (WAC 173-303-090) These are hazardous because of their properties. The materials may be toxic, reactive, or corrosive.

- Ignitable (flashpoint < 140°F)
- Corrosive (pH ≤ 2.0 (acid) or pH ≥ 12.5 (base) capable of corroding metal containers)
- Reactive (does it spontaneously combust?) Reactive wastes are unstable under normal conditions (like lithium sulfur batteries or explosives).
- Toxic (federal D list) Toxic wastes are defined through the laboratory test, Toxicity Characteristic Leaching Procedure (TCLP) test.

Washington state criteria wastes (WAC 173-303-090 and -100)

In general, Washington-specific regulated wastes are toxic and persistent in the environment. (example, flame retardant, or aggressive soap for cleaning). Waste codes start with "W".

Exempt or excluded wastes include used oil, car batteries, antifreeze, and others, however, management rules still apply.

- Obligations of a **Small Quantity Generator** - Depending on the quantity of regulated waste, an entity is classified as a Small Quantity, Medium Quantity, or Large Quantity generator. Regardless of status, the generator of the waste is obligated to
- Designate the waste (characterize it).
- Manage waste safely while onsite (there are limits on the quantities and length of time waste can be stored, and there are rules about how it is to be stored).
- Recycle or properly dispose of waste (paperwork must be kept).

What to do in case of an **emergency discharge**.

- Stop the spill.
- Warn others in the area immediately.
- Turn off ignition sources, including cigarettes.
- Contain the spill.
- Report the spill. There are no penalties for reporting a spill unnecessarily, but there may be significant penalties for not reporting one.
 - Call 1-800-OILS-911 in Washington (Washington Emergency Management Division, 24/7). During regular business hours, you can call the appropriate [Ecology regional office](#).
 - Call 1-800-424-8802 for National Response Center

Prevent spills and leaks

- Explore using less chemical – the less fluid you use the less likely you are to have a significant (high-volume) spill. Lean and 5S projects can support these efforts.
- Good housekeeping lets you move around in a storage area so chemicals can be accessed. It also allows you to notice if a leak has developed.
- Keep containers tightly closed – if a tightly closed container is knocked over, it won't spill.
- Use containers that are easy to pour – don't have containers that are too big to lift for pouring or that have spouts that drip. Funnels are available in all sizes to aid in pouring.
- Maintain and inspect equipment – look for damaged or rusted containers and leaks.
- Recapture spilled materials if possible with a dust pan and squeegee. Remember that any clean-up materials may need to be disposed as hazardous waste if the material being cleaned is hazardous.
- Store materials inside or under cover to prevent any spill or leak from being washed away into the stream by rainwater.
- Never use storm drains or gutters, ditches, or swales for waste disposal. This is essentially putting the chemical directly into the stream.