



Hazardous Wastes in Schools

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Resource Conservation and Recovery Act (RCRA) Subtitle C

- Signed into law in October of 1976.
- Enacted amidst wave of environmental legislation during the 1970s.
- Aimed to reduce waste generation as a means “to protect human health and the environment.”



What Is a Hazardous Waste?

‘Listed’ and ‘Characteristic’ Hazardous Wastes

Title 40 CFR Part 261.3 (adopted by reference in the Administrative Rules of South Dakota (ARSD) Chapter 74:28) defines a **listed** hazardous waste as the following:

- **F-listed** hazardous wastes are used products from non-specific industrial processes.
- **K-listed** hazardous wastes are used products from specific industrial processes.
- **P-listed** wastes are unused commercial chemical products, manufacturing chemical intermediates, off-specification products, or container residues that are destined for disposal.
- **U-listed** wastes are unused commercial chemical products, manufacturing chemical intermediates or off-specification commercial chemical products. These are considered toxic hazardous wastes.

What Is a Hazardous Waste?

*Note: Characteristic hazardous wastes are prefaced by the letter "D".

40 CFR Part 261.3 defines a **Characteristic*** hazardous waste as one that exhibits one or more of the following chemical properties or **characteristics**:

- **Ignitability** (closed cup flash point below 140°F)

D001



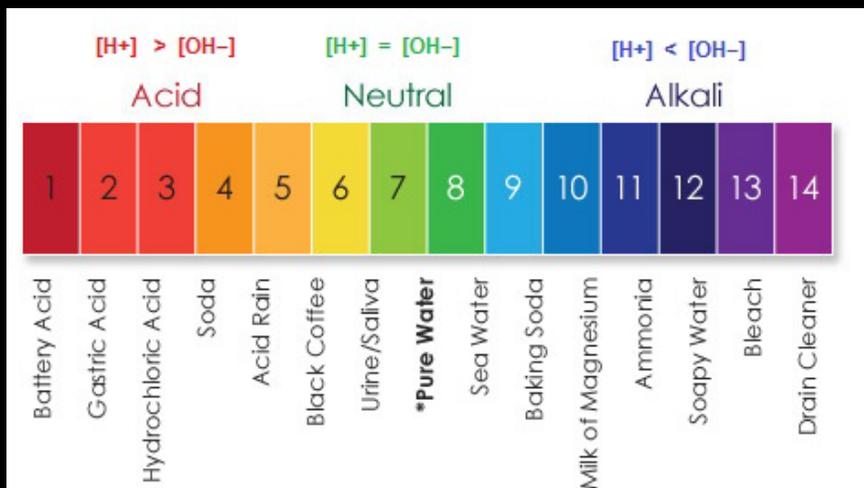
- **Reactivity** (normally unstable or reacts violently with water)

D003



- **Corrosivity** ($\text{pH} \leq 2$ or $\text{pH} \geq 12.5$)

D002



- **Toxicity** (TCLP analysis above regulatory limit for some specific metals, chlorinated solvents, and volatile organic compounds)

Ex. Lead
D009



There Are Two Main Types of Hazardous Waste

Acute Hazardous Waste

- P-listed hazardous wastes (all)
- K-listed (small #)
- F-listed (small #)



Non-Acute/Toxic Hazardous Waste

- U-listed hazardous waste
- K-listed hazardous waste
- F- listed hazardous waste
- “D” code characteristic wastes that exceed one or more Toxicity Characteristic Leaching Procedure (TCLP) standards

Who Can Generate Hazardous Waste?

- **Residence (household hazardous waste)** – not regulated under the state’s hazardous waste regulations
- **Non-residence (business, school, etc.)** – regulated under the state’s hazardous waste regulations
- *****Note:** Pharmaceutical waste generated at a school is not household hazardous waste because to be household hazardous waste, (1) the waste must be generated by individuals on the premise of a temporary or permanent residence and (2) the waste stream must be composed primarily of materials found in wastes generated by consumers in their homes



Types of Hazardous Waste Encountered in Schools

- Science laboratory chemicals/equipment
- Auto shop/vocational classrooms materials
- School maintenance activities
 - Standard mercury-containing lamps
- Pharmaceuticals



Science Lab Chemicals/Equipment



- Prepare an inventory with chemical name, amount of chemical present, condition of container, and any additional insight surrounding the chemical.
- Waste Management Program (WMP) staff can review inventory, help identify potential hazardous wastes, and offer suggestions for next steps.
 - WMP can provide hazardous waste generator identification number for school.
 - WMP can provide list of hazardous waste management contractors.
- Financial assistance (cost-share) for chemical removal and disposal may be available; to inquire about funding, please contact Drew Huisken (Drew.Huisken@state.sd.us; phone 605-773-4216) .

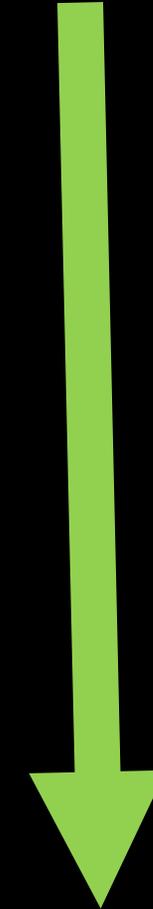
Possible Hazardous Waste Pharmaceuticals

- E-cigarettes (e.g., e-juice bottles, Juuls) and other nicotine-containing vaping related substances
- Prescription medications (Epinephrine, Nitroglycerin, Warfarin, Mercury-containing Rx's)
- Drug delivery devices (e.g., syringes, insulin injector pens, metered aerosol dose inhalers)
- Drug Enforcement Administration controlled substances (e.g., Cocaine, Fentanyl, Methamphetamine, OxyContin)
- Dietary supplements (i.e., containing arsenic, cadmium)



Hazardous Waste Generator Categories

- Very Small Quantity Generator (VSQG)
 - Generates ≤ 220 lbs. of non-acute hazardous waste AND ≤ 2.2 lbs. of acute hazardous waste in a calendar month.
- Small Quantity Generator (SQG)
 - Generates between 220 lbs. and 2,200 lbs. of non-acute hazardous waste in a calendar month AND ≤ 2.2 lbs. of acute hazardous waste in a calendar month.
- Large Quantity Generator (LQG)
 - Generates ≥ 2200 lbs. of non-acute hazardous waste AND/OR > 2.2 lbs. of acute hazardous waste in a calendar month.



Regulations/compliance requirements increase

Hazardous Waste Generator Categories

Amount of waste generated per calendar month
(separate calculations):

- School nurse's office/healthcare site.
- All other school-related HWs.

What should I do with the hazardous wastes if my school, totaling all wastes, is a Very Small Quantity Generator (VSQG)?

- Almost all schools would likely fall into this category!
- School may opt to follow Pharmaceutical Waste Rule.
- South Dakota VSQGs can consolidate their hazardous waste at an off-site Large Quantity Generator (LQG) only if:
 - The LQG is under control of the same person as the VSQG (i.e., a centralized school district location).
 - Certain labeling requirements and accumulation limits are met (see 40 CFR Part 262.14).

What should I do with hazardous wastes if my school is a Small Quantity Generator (SQG) or Large Quantity Generator (LQG)?

Non-Pharmaceutical Hazardous Waste:

- If your school generates more than 220 lbs. of non-acute or more than 2.2 lbs. of acute waste/calendar month, your school may be subject to the SQG or LQG requirements (*note episodic generator provisions that provide an exception*).

Pharmaceutical Hazardous Waste:

- If your school generates more than 220 pounds of non-acute or more than 2.2 lbs. of acute waste/calendar month, you must comply with the pharmaceutical waste requirements under 40 CFR Part 266 Subpart P.

Is a clinic at a school required to operate as a healthcare facility under part 266 Subpart P?

- A school's nurse's office is considered a healthcare facility under state and federal regulations.
- If VSQG → Option to either operate as a healthcare facility under 40 CFR Part 266 Subpart P OR can comply with VSQG regulations located 40 CFR section 262.14.
- If SQG or LQG → Must operate under 40 CFR Part 266 Subpart P.



Subpart P Highlights

- A recent set of federal standards that serve to address pharmaceutical waste generation, accumulation, and management.
- It also includes an amendment to the P075 acute listing for nicotine.
- The final rule was published on February 22, 2019 in the *Federal Register* and recently became law in the State of South Dakota.



Subpart P Highlights

- Prohibits disposal of hazardous waste pharmaceuticals down the drain, regardless of generator status.
- Eliminates dual regulation of hazardous waste pharmaceuticals that are also controlled substances under the Drug Enforcement Administration (DEA).
- Continues the household hazardous waste exemption for pharmaceuticals collected during “take-back” programs/events, while also ensuring proper disposal practices.
- Excludes certain U.S. Food and Drug Administration approved over-the-counter nicotine replacement therapies from regulation as hazardous waste, specifically nicotine patches, gums, and lozenges.

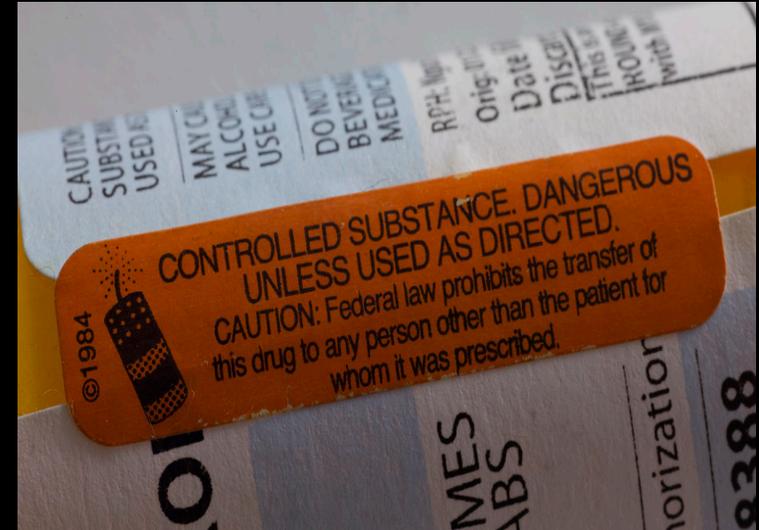
Prohibition on the Disposal of Hazardous Waste Pharmaceuticals Down the Drain

- 40 CFR Part 266.505 now prohibits all healthcare facilities from discharging any hazardous waste pharmaceuticals to a sewer system that passes through a Publicly Owned Treatment Works (i.e., a municipal wastewater treatment plant).
- Intention is to lower pharmaceutical levels that are processed by Publicly Owned Treatment Works to lessen potential impact on aquatic life and water resources.
- EPA strongly discourages sewerage of any pharmaceutical in any setting.



What should I do if I encounter a DEA controlled substance on the premise of my school?

- Contact a member of your local law enforcement.
 - Possibly acceptable at a local take-back event.
- DEA states that flushing does not comply with the “non-retrievable” standard for controlled substances.



Exclusion of Certain FDA-Approved Over-the-Counter Nicotine Replacement Therapies from Regulation as Hazardous Waste

- An amendment was passed coinciding with Subpart P management standards that exempts nicotine patches, gums, and lozenges that are FDA-approved over-the-counter nicotine replacement therapies from being managed as P075 hazardous waste.
- The State of South Dakota has this amendment in effect.
- These exempted wastes can be thrown in the municipal solid waste trash.



What are some of the storage/accumulation requirements for schools that accumulate non-creditable hazardous waste pharmaceuticals?

- Healthcare facilities (i.e., schools) have a one-year accumulation time limit. There are three approaches to demonstrate the length of time that non-creditable hazardous waste pharmaceuticals are accumulated on site:
 - Mark the container label with the date that accumulation first began.
 - Maintain an inventory system that identifies dates when the hazardous waste pharmaceuticals were first accumulated.
 - Identify in the accumulation area the earliest date that a hazardous waste pharmaceutical became a hazardous waste.
- Healthcare facilities must label the containers transported off-site with the words “hazardous waste pharmaceuticals.”

Questions?

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Additional Resources

- [Frequent Questions about the Management Standards for Hazardous Waste Pharmaceuticals and Amendment to the P075 Listing for Nicotine Final Rule](#)
- [Disposal of Post-Consumer E-cigarettes](#) (see pp. 15-40)
- [Supplemental Pharmaceutical Waste Documents on DANR's website.](#)

Thanks to Rob Monson and the School Administrators of South Dakota for hosting this webinar!