Ohio Environmental Protection Agency | Department of Health

E-cigarette/Vape Disposal for Schools

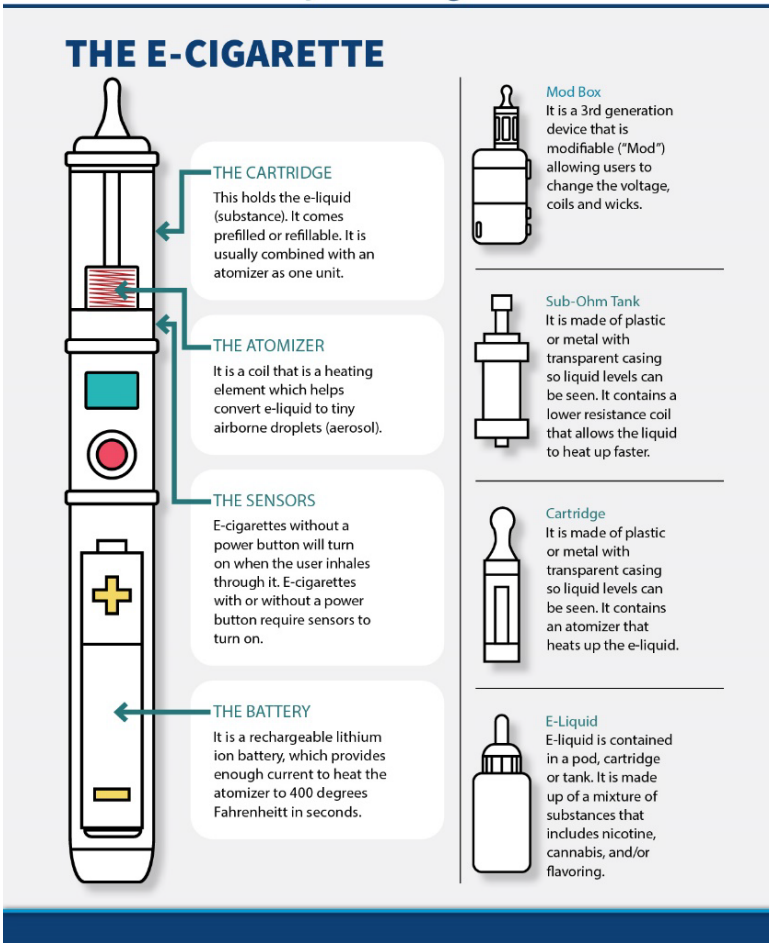
Schools in Ohio play a crucial role in preventing and reducing youth tobacco use, particularly regarding the growing concern of e-cigarette and vape waste. This waste includes discarded e-cigarettes, which can be hazardous waste. When students use vapes on campus, these devices are often confiscated. In response, the Ohio Department of Health (ODH) and Ohio Environmental Protection Agency (Ohio EPA) have created a resource to guide schools on the proper disposal of tobacco and nicotine products.

What is E-cigarette/Vape Waste?

- E-cigarettes or vaping devices require special disposal because they contain both nicotine and lithium batteries, making them **hazardous waste.**
- The liquid inside these devices usually contains nicotine mixed with flavors, propylene glycol, vegetable glycerin, and other ingredients that are heated to release an aerosol. Liquid nicotine can be absorbed through the skin and can be toxic. Children and adults handling e-cigarettes or vaping devices may be at risk of nicotine poisoning.
- E-cigarette liquid can contain much higher concentrations of nicotine than found in other tobacco products.

E-cigarette/vape waste, when improperly disposed of, can leak harmful toxins into the ground and air which can cause illness. The lithium batteries within e-cigarettes can cause fires when disposed of improperly.

Anatomy of an E-Cigarette



How can schools dispose of e-cigarette/vape waste?

Schools in Ohio must follow hazardous waste regulations when managing confiscated e-cigarettes or vaping devices. The disposal of these items should be included in the school's existing hazardous waste management protocols. Confiscated e-cigarettes and vape waste can be collected and stored alongside other hazardous waste, following the same container management guidelines, such as labeling, dating, and time accumulation requirements, based on the school's generator status.

How do I know my generator status?

A school may be classified as a very small quantity generator (VSQG), a small quantity generator (SQG), or a large quantity generator (LQG), depending on the total amount of hazardous waste collected in a calendar month. Schools should consider all hazardous waste accumulated, including e-cigarettes waste, when determining their generator status.

Very Small Quantity Generator (VSQG)*	Small Quantity Generator (SQG)*	Large Quantity Generator (LQG)*
≤ 1 kg acute hazardous waste (2.2 pounds) **and** ≤ 100 kg non-acute hazardous waste	≤ 1 kg acute hazardous waste (2.2 pounds) **and** > 100 kg (220 pounds) but < 1,000 kg (2,200 pounds) non-acute hazardous waste	> 1 kg acute hazardous waste (2.2 pounds) **and** > 1,000 kg (2,200 pounds) non-acute hazardous waste

* If the average vape device contains 2 ml of liquid when full, then schools could accumulate as many as 500 full vape devices before reaching the large quantity generator threshold.

Source: Generator Requirements Table, Hazardous Waste Generator Requirements, OEPA

What are the requirements for each generator status?

Very Small Quantity Generator:

- Ensure delivery of the hazardous waste to an offsite treatment or disposal facility permitted to manage hazardous waste.

Small Quantity Generator:

- Notify Ohio EPA of your hazardous waste activity and obtain an EPA identification number.
- Maintain an internal communication or alarm system, telephone or two-way radio, and fire, spill control and decontamination equipment.
- Train all employees involved in hazardous waste management on their duties and emergency response protocols.
- Store nicotine waste in labeled/marked storage containers that are in good condition (e.g., a five-gallon bucket with a lid marked with the words "hazardous waste" and "toxic").
- Store containers so that they do not rupture or leak and ensure that they remain closed except when adding or removing hazardous waste.
- Inspect hazardous waste containers weekly.

- Ship hazardous waste on a uniform hazardous waste manifest to an authorized facility (e.g., Resource Conservation and Recovery Act (RCRA) permitted hazardous waste treatment, storage, disposal facility (TSDF)) within 180 days of accumulation.

Beginning in 2021, a requirement went into effect for schools to notify Ohio EPA of their hazardous waste activity by September 1st of every year. (OAC rule 3745-52-18)

Large Quantity Generator:

- Notify Ohio EPA of your hazardous waste activity and obtain an EPA identification number.
- Maintain an internal communication or alarm system, telephone or two-way radio, and fire, spill control and decontamination equipment.
- Prepare and maintain a written hazardous waste contingency plan.
- Plan with local police, fire, hospitals, and other emergency response organizations and familiarize them with your facility.
- Train all employees involved in hazardous waste management on their duties and emergency response protocols.
- Store nicotine waste in labeled/marked storage containers that are in good condition (e.g., a five-gallon bucket with a lid marked with the words “hazardous waste” and “toxic”).
- Store containers so that they do not rupture or leak and ensure that they remain closed except when adding or removing hazardous waste.
- Inspect hazardous waste containers weekly.
- Ship hazardous waste on a uniform hazardous waste manifest to a Resource Conservation and Recovery Act (RCRA) permitted hazardous waste treatment, storage, disposal facility (TSDF) within 90 days of accumulation.
- In even-numbered years, submit a biennial report using RCRA Subtitle C forms for your hazardous waste activities the previous year by March 1.

Recommendations

Some schools segregate their confiscated items by type, for example weapons and drugs might be collected separately from the vapes. While not required, you may want to consider the use of personal protective equipment, such as proper gloves, eye protection, etc., when handling confiscated devices to protect yourself from the potent toxicity of the nicotine liquid that may be on the outside of the device as it can be absorbed through the skin. You may consider placing each device, pod, cartridge, or bottle in a sealable plastic bag (i.e., Ziploc) before being placed in the container. This will help prevent exposure in case of damage or leaking of either the nicotine liquid or the battery. Finally, while not required, consider placing storage containers in a cool environment away from the sun to avoid batteries overheating and exploding or catching on fire.

