



# VAPE MANAGEMENT AND DISPOSAL

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# WHAT ARE “VAPES”?

Terms used for vaping products:

- “Vapes” or “vape pens.”
- E-cigarettes or “e-cigs”.
- “E-hookahs”.
- Electronic Nicotine Delivery Systems or “ENDS”.
- Nicotine liquid or “E-juice”.

Types:

- Single-use (often sealed).
- Devices with refillable reservoirs or replaceable cartridges.

Does not include:

- Natural tobacco products, nicotine gum or patches.



# WHY ARE VAPES A CONCERN?

Hazards to children and adolescents:

- Accidental poisonings due to nicotine.
- Poisoning can occur via ingestion or skin contact with nicotine liquid.
- In 2022, poison control centers logged > 6,700 exposure incidents.
- Inappropriate use or misuse by adolescents.

Fire hazards:

- Contain lithium-ion batteries.
- Can catch fire if overcharged, discharged too quickly, or damaged.
  - Especially “DDR” batteries (defective, damaged, or recalled batteries).
  - Look out for swollen, corroded batteries and vapes with discolored cases.
- Batteries are prone to damage when disposed of in MSW.
- Fires have occurred in MSW collection and transportation vehicles.
- Fires can also occur at transfer stations, VRFs, and disposal facilities.





*Figure 10: Photo of the aftermath of an LIB fire in a garbage truck. An LIB fire in a garbage truck forced the driver to empty garbage onto the street to be extinguished, disrupting service for customers and creating a traffic hazard for community members and first responders. Photo courtesy of Bellevue Police Department.*

# HOW SHOULD INDIVIDUAL USERS MANAGE AND DISPOSE OF VAPES?

## [CT DPH Guidance](#)

## [EPA Guidance for Individuals](#)

### Key Points:

- Household hazardous waste.
- Don't throw in trash or down the drain.
- Don't put in recycling bin.
- If battery is removable, take it out and put it in a plastic baggie or tape the terminals.
  - Battery can be recycled (e.g., HHW or [Call2Recycle battery collections](#)).
- Dismantling of sealed, single-use vapes to removed batteries is not recommended.
- Put cartridges and vials of e-liquid into baggies and dispose at HHW collection.
- Wear rubber gloves when handling vape components.



# HOW SHOULD NON-RESIDENTIAL GENERATORS MANAGE VAPES?

[CT DPH Guidance](#)

[EPA Guidance for Schools and Small Businesses](#)

## Key Points:

- Nicotine is an acute toxic hazardous waste (P075).
  - Only takes 1 kg (2.2 lbs.) to make a generator a [Large Quantity Generator](#) of HW.
  - Tobacco products (cigars, cigarettes, smokeless tobacco) are not P075 HW.
  - 1 kg of nicotine = 2,000 Juul pods, 200 5-ml e-juice vials, or 76 Elfbars.
  - Only need to count the weight of the nicotine, not the whole device or container.
- Lithium batteries are ignitable and reactive hazardous waste (D001 / D003).
  - 100 kg = ~ 2,000 type 18650 batteries.
- Are not eligible for HHW exemption (not generated in a “residence”).
- Must be disposed of via a [licensed hauler](#) and disposed of at a [permitted TSDF](#).
- Alternative: [Small Business Collections](#) at a HHW collection events.



# SCHOOLS

Accumulate vapes confiscated from students.

Most Schools are already CESQG / VSQG generators.

May already generate waste that require special handling:

- **HW:** Science lab waste, vocational shop waste, paint and facility maintenance waste.
- Universal Waste: fluorescent lamps, batteries, used electronics, etc.
- Biomedical waste: nurses offices.
- Haulers of these may be licensed to take vapes.



# CHALLENGES

MTS GP allows collection of batteries but not vapes.

Most HHW collections don't currently accept them.

CT DCP drug collection boxes at police stations are intended only for prescription medications, not vapes.

National collections by US DEA will accept vaping devices and cartridges as long as batteries have been removed.

- Will not take whole vapes (sealed vapes or vapes with batteries in them).

Battery recyclers will not take whole vapes.

Knightshade will only take e-juice, not whole vape devices.

The only facilities that seem to want to take sealed vapes are HW incinerators.

- Few facilities nationally; capacity sometimes tight.
- Are located far from CT.
- Expensive.



# WHAT ABOUT THC VAPES?

THC is the main psychoactive ingredient in marijuana.

THC vapes are available in CT:

- Legal (e.g., through a licensed dispensary).
- Illegal (street drugs).



Vaping products that are derived from marijuana present unique challenges:

- Are regulated at the federal level by US DEA as Schedule I Controlled Substances (narcotics).
- Can include CBD products, if they are derived from cannabis (not if synthetic).
- DEA Rules state that the only persons that may legally be in possession of them is law enforcement.
- Non-hazardous THC vaping products may be disposed of at RRFs as “contraband” waste.
- Hazardous THC vaping products (e.g., with non-removable lithium batteries) must be shipped out of state to a HW incinerator facility.

Sealed THC vape products are both HW and a DEA Schedule I drug.

# JUNE 2023 ARSON FIRE AT A CLANDESTINE DRUG LAB

The drug lab was in a commercial building in an industrial/office park in Bloomfield.

Had various illegal drugs on-site, including 12 drums of single-use THC vape pens.

The drums of THC vape pens had to be shipped to a HW incinerator in Ohio.

- 541 miles away, 8.5 hours by truck).

Truck had to be accompanied by law enforcement and “witness destructed”.

Disposal cost the Bloomfield PD a lot of money.

- Hope to recoup some funds from resolution of criminal cases against the responsible parties.



# DRUG LAB CASE: LESSONS LEARNED

Wastes that consist of both a HW component and a Schedule I Controlled Substance are very hard (and expensive) to properly dispose of.

Let DEA take the lead on drug lab cases.

- They have special disposal contracts for controlled substances and personnel to transport the waste.
- DEA won't dispose of the waste unless they are the lead on the investigation.

Generators of cannabis-based products in states where they are legal could also find themselves with all of the same problems.

- Example: manufacturer of legal THC vape pens needs to dispose of off-spec vape pens.
- MA DEP has seen this problem.



# WHAT'S ON THE HORIZON?

Movement away from single-use sealed devices:

- Reusable devices.
- Devices with removable batteries.

EPR/Product Stewardship.

- The [Product Stewardship Institute](#) is looking into it.
- NY and VT are pursuing EPR for e-cigarettes.
- Other states are considering it.

Addition of nicotine vapes to HHW collections.

- Check with your HHW vendor to see if they will collect nicotine vapes.

Vape shops / dispensaries may start collecting them.

- There are waste permitting issues with this.

DEEP adoption of HW Generator Improvements and Pharms Rules.

DEA proposed rule to “reschedule” cannabis to Schedule III.





# Questions?

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# USED OIL BULLETIN – BURNING OF MTS USED OIL

A MTS manager called DEEP: Can he give away used oil to town residents to burn at home?

- Answer: According to [RCSA Section 22a-449\(c\)-119\(a\)\(2\)\(J\)](#), burning used oil in a residential boiler/furnace or even in a garage or outbuilding is prohibited in CT.
- Also prohibited is the sale or giving away used oil for burning in residential boilers/furnaces.

Why?

- Depending on the source, used oil can be contaminated with toxic metals, PCBs, or other contaminants.
- Residential generators would be tempted to burn other wastes, such as solvents with their used oil.
- DEEP concluded that the burning of used oil in residential boilers/furnaces in a population-dense state like CT (which already has serious air quality issues) would be a bad idea.

More information available:

- [CT DEEP web page on the Proper Management of Used Oil](#).
- [DEEP Used Oil Fact Sheet #9](#) – “Management of Household Do-It-Yourselfer Used Oil”.