SENATE COMMITTEE ON ENVIRONMENTAL QUALITY
Senator Blakespear, Chair
2025 - 2026 Regular

Bill No:	AB 998		
Author:	Hadwick		
Version:	5/23/2025	**Hearing Date:**	7/16/2025
Urgency:	No	**Fiscal:**	Yes
Consultant:	Brynn Cook		

SUBJECT: Household hazardous waste: vape pens

DIGEST: This bill authorizes a school to transport and manage confiscated vape pens as household hazardous waste (HHW), and authorizes a HHW collection facility to disassemble HHW, including separating batteries, valves and electronic components.

ANALYSIS:

Existing federal law:

1) Establishes the Resource Conservation and Recovery Act (RCRA) to authorize the United States Environmental Protection Agency (US EPA) to manage hazardous and non-hazardous wastes throughout the wastes' life cycle. (42 United States Code (U.S.C.) § 6901 et seq.)

Existing state law

1) Establishes the Hazardous Waste Control Law (HWCL) to authorize the DTSC to regulate the management of hazardous wastes in California. (Health and Safety Code (HSC) § 25100 et seq.)

2) Defines "hazardous waste" as waste, that, because of its quantity, concentration, or physical, chemical, or infectious characteristics:
   a) Causes, or significantly contributes to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or,
   b) Poses a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bio accumulative properties, or persistence in the environment, when improperly treated, stored, transported, disposed of, or otherwise managed. (HSC § 25141(b))

3) Defines "household hazardous waste" as hazardous waste generated incidental to owning or maintaining a place of residence, but does not include waste

generated in the course of operating a business at a residence. (HSC § 25218.1(e))

4) Establishes that counties and cities will provide services for the collection of HHW and that the state will provide an expedited and streamlined regulatory structure to facilitate the collection of HHW. (HSC § 25218)

This bill:

1) Provides that a vape pen confiscated by a school as contraband shall be presumed to have been generated by a household and shall not lose its status as HHW when properly managed and disposed of at a household hazardous waste collection facility or through a household hazardous waste collection program.

2) Authorizes a school or its contractor, including a registered hazardous waste transporter transporting vape pens confiscated as contraband at a school facility, to transport vape pens to a HHW collection facility.

3) Authorizes, a HHW collection facility to conduct physical treatment activities involving the disassembly of HHW to separate batteries, valves, electronic components, and other parts containing liquids or gases, including, but not limited to, the disassembly of vape pens, in a manner that does not result in the unauthorized release of hazardous materials.

4) Prohibits a public agency, or its contractor, from including vape pens in a materials exchange program.

5) Defines "household hazardous waste" as hazardous waste generated incidental to owning or maintaining a place of residence.

6) Defines "school" as a public, private, or charter school serving K-12 or a local education agency as defined in Section 56026.3 of the Education Code.

7) Defines "vape pen" as an electronic device that is powered by one or more removable or embedded batteries and that delivers solely, or a combination of, nicotine, cannabis, or other vaporized liquids to the person inhaling from the device, including, but not limited to, an electronic cigarette, cigar, pipe, or hookah.

Background

1) *What is hazardous waste?* Hazardous waste is waste that could be dangerous to human health or the environment. Waste is deemed to be hazardous if it appears on a RCRA hazardous wastes list or exhibits one of the four characteristics of a hazardous waste: ignitability, corrosivity, reactivity, or toxicity. However, materials can be hazardous wastes even if they are not specifically listed or do not exhibit any characteristic of a hazardous waste. Hazardous wastes are prohibited from being disposed of in the trash, and must be properly transported and disposed of at permitted treatment, storage, and disposal facilities or at a recycling facility.

2) *Universal waste.* Universal waste comes primarily from consumer products containing mercury, lead, cadmium and other substances that are hazardous to human health and the environment. These items cannot be discarded in household trash nor disposed of in landfills. Examples of universal waste are batteries, fluorescent tubes, and many electronic devices. Under both state and federal law and regulation, universal wastes are authorized to be managed in a less stringent manner than hazardous waste.

   California's Universal Waste Rule allows individuals and businesses to transport, handle, and recycle certain common hazardous wastes, termed universal wastes, in a manner that differs from the requirements for most hazardous wastes. The more relaxed requirements for managing universal wastes were adopted to ensure that they are managed safely and are not disposed of in the trash. The universal waste requirements are also less complex and easier to comply with, thereby increasing compliance.

3) *Household Hazardous Waste collection.* Many common household products are also hazardous, and when these products are discarded, they become "HHW." Common HHW includes, but is not limited to, antifreeze, glue and adhesives, pesticides, used oil, batteries, electronic wastes, and household cleaners. In California, HHW is prohibited from being disposed of in the trash, down the drain, or by abandonment, and must be disposed of through a HHW Program. Most HHW programs are run by local government agencies such as a city or county.

4) *Environmental impacts of disposable vapes.* Disposable vapes are a 'double-whammy' in terms of environmental impact because they are used for a short time before becoming electronic waste and because they contain acutely toxic materials making them hazardous waste. Vapes, also known as e-cigarettes, are handheld battery powered electronic devices with heated metal coils that

vaporize a liquid containing nicotine or cannabis products, known as e-liquid. Vapes can be reusable, wherein new cartridges containing nicotine or cannabis and other flavorants can be replaced when they are empty, or they can be single use, wherein the cartridges are not refillable or replaceable, and the entire vape is thrown out as waste once the initial cartridge is empty. According to a 2023 report, "Vape waste: The environmental harms of disposable vapes," the United States Public Interest Research Group (USPIRG) Education Fund, sale of single use brands of vapes increased following the Food and Drug Administration's (FDA) crackdown on flavored nicotine e-liquid cartridges for reusable vapes in 2020. The FDA's decision prohibited the sale of flavored pre-filled nicotine vape cartridges exemplified by popular brand JUUL, but didn't mention disposable vapes. According to the USPIRG study:

"This sin of omission created a gray market and by March [2023] sales of disposable products increased to 11.9 million units a month and have overtaken cartridges market share at 53% of vape sales. At this rate, we throw out 4.5 disposable vapes per second."

A*cc*ording to CalEPA's website, 'Nicotine is toxic. Liquid nicotine in e-cigarettes can be easily absorbed by the skin, potentially causing nicotine poisoning with symptoms that include difficulty breathing, fainting, or seizures. Nicotine can also harm fish and other aquatic organisms.

Electronic waste produced from disposable vapes includes both the circuit boards and lithium ion batteries that power the device. These boards contain heavy metals and cannot be landfilled at the end of their (short) lives. Lithium batteries can catch fire, especially when damaged. When placed in household trash and recycling bins, lithium batteries often get damaged by trash compactors and can cause fires during transportation and at waste and recycling facilities."

Vape waste cannot be recycled with other plastics because the substance is defined by the U.S. EPA as an acute hazardous waste.

5) *Vapes in schools*. In 2024, e-cigarettes were the most commonly used tobacco product among middle and high school students in the United States[1]. According to the CDC, 1.63 million youths 18 and younger used vapes across the US (or 5.9%), This includes 410,000 (3.5%) middle school students and 1.21 million (7.8%) high school students. The frequency of use of vapes are

[1] Park-Lee E, Jamal A, Cowan H, et al. Notes from the field: e-cigarette and nicotine pouch use among middle and high school students—United States, 2024. *MMWR Morb Mortal Wkly Rep.* 2024;73(35):774-778.

very high for about a third of this population: 38.4% used an e-cigarette on at least 20 of the last 30 days, and 26.3% used an e-cigarette every day[2]. Since youths spend at a minimum 4 hours per day five days a week in school (and the majority spend far more time than the statutorily required minimum in California classrooms), vaping in schools is common. A study from 2020 by the NIH found that, in a state-wide survey of 7,938 staff from 255 middle and high schools, 31.9% of staff reported seeing students vaping at schools the last 30 days. 11.9% of teachers reported catching a student vaping during class[3].

6) *U.S. EPA guidance to managing vapes in schools.* The United States Environmental Protection Agency (US EPA) released guidance to schools and businesses on how to properly manage e-cigarettes (including vape pens). The guidance for properly storing the vape pens is simple:
   - Place each vape should in a sealed plastic bag to prevent the batteries from short-circuiting and catching fire.
   - Place each individual lithium battery in a separate clear, sealed plastic bag to prevent the batteries from short-circuiting and catching fire.
   - Place nicotine e-liquid vials, cartridges, and pods in a clear, sealed plastic bag.

   However, once the vapes have been prepped for removal, the next step for actually disposing of this hazardous waste is less clear. According to the guidance:

   > "The options that your school or business has for disposing of your hazardous waste depend on how much hazardous waste your school or business generates per calendar month. [U.S.] EPA established three RCRA hazardous waste generator categories - very small, small, and large quantity generators. You must count ALL the hazardous waste that your school or business generates on site in a calendar month – not just the e-cigarettes and e-liquids – in determining your RCRA generator category. Your disposal options will depend on: the RCRA generator category of your school or business, and whether your school or business is a healthcare facility (e.g., retail pharmacy or vape shop) or has an on-site healthcare facility (e.g., nurse's office or clinic)."

[2] Jamal A, Park-Lee, E, Birdsey J, et al. Tobacco product use among middle and high school students — National Youth Tobacco Survey, United States. *MMWR Morb Mortal Wkly Rep.* 2024;73(41):917–924.

[3] Cole AG, Lienemann BA, Sun J, Chang J, Zhu SH. California School Staff Reports of Seeing Students Vaping at School and Disciplinary Actions. J Sch Nurs. 2024 Dec;40(6):618-629. doi: 10.1177/10598405221127694. Epub 2022 Sep 27. PMID: 36168212; PMCID: PMC11558945.

Comments

1) *Purpose of Bill.* According to the author, "With the popularity of vaping on the rise, many students are bringing vapes to schools. These products are considered contraband by school officials and, often times, principals have drawers full of vapes that students bring from home. Schools encounter difficulty disposing of these vapes, stemming from uncertainty surrounding proper disposal. AB 998 allows schools to utilize existing Household Hazardous Waste Collection Facilities (HHWCF) to safely recycle vapes and takes the burden off of teachers and school administrators, so they can focus on educating our children. This bill also consolidates reporting requirements that CalRecycle and the CA Department of Toxic Substances Control have on the HHWCF, removing duplicative reporting measures and increasing government efficiency."

2) *Disposing of vapes: HHW at home, hazardous at school?* U.S. EPA guidance on vape disposal cautions vape owners not to throw vapes in trash, but instead treat them as HHW. That involves contacting the local HHW facility to dispose of the vapes with them.

   However, when vapes are located at schools, they are considered hazardous waste, and EPA guidance for disposing of vapes from schools applies. The vape pens are bagged separately and bundled in with the rest of the hazardous waste generated by the school; the amount of hazardous waste from a school determines if they are classified as Small Quantity Generators (VSQGs), Small Quantity Generators (SQGs), or Large Quantity Generators (LQGs).

   When vapes are treated as hazardous waste instead of HHW, the required handling, transportation, storage, and management of that vape pen is more intensive than if it were classified as HHW. AB 998 makes the argument that a vape pen confiscated at a school should be considered HHW when properly managed and disposed of at a HHW collection facility. This is the same waste designation that disposable vapes face if they are used in homes.

   However, schools are not classified as "households" under federal regulation (40 CFR 261.4 (b)(1)). Therefore, the authorization for schools to treat vape pens as HHW will likely conflict with federal regulations. California is not authorized to classify a material or product as less hazardous than the Federal government.

   To resolve this conflict with federal law, the author and committee may wish to strike the provisions of the bill that require vapes confiscated at schools to

be considered HHW, and instead require DTSC to develop a study to evaluate how to manage vape pens at schools that are consistent with federal law, and to specifically evaluate classifying confiscated vapes at schools as universal waste and develop recommendations for future legislation.

3) *Who picks up the tab for vape disposal?* The costs of properly managing disposable vapes, which are nearly-single use and become toxic and electronic hazardous waste, are significant. Not every HHW facility will accept vapes because they may not be able to or have capacity to manage these acutely toxic products.

   Even if vape pens were classified as HHW, it is unclear how schools would pay for their disposal. According to guidance on disposing of vape pens by the California Youth Advocacy network, Proposition 99 and 56 funds cannot be used to pay for disposal of vape waste[4]. In other words, cost of disposal, rather than waste classification, may be the limiting factor in ensuring that vape pens are probably disposed of.

   The author and committee may wish to specify that the study described in comment 2 also include a consideration of pathways for schools to pay for confiscated vape disposal.

4) ***Staff recommends the committee adopt the bolded amendments contained in comments 2 and 3 above.***

Related/Prior Legislation

AB 1894 (L. Rivas Chapter 390, Statutes of 2022) prohibits, commencing July 1, 2024, cannabis cartridges and integrated cannabis vaporizers packages from implying the product is disposable and adds advertisement and marketing requirements.

SOURCE: Author

SUPPORT:

Alameda County Office of Education
Alameda; County of

[4] *Providing Guidance on Safe Disposal of Vape Waste at K-12 Schools in California.* Developed by CYAN in partnership with the Orange County Department of Education's Tobacco-Use Prevention Education (TUPE) Capacity Building Project

Californians Against Waste
City of Thousand Oaks
Los Angeles County Sanitation Districts

OPPOSITION:

None received

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