

Nicotine Wastes: E-cigarettes and Vaping Devices Collected by Schools and Institutions

Guidance on Hazardous Waste Requirements



Introduction

Schools and other educational institutions are experiencing an increased use of e-cigarettes and vaping devices on premises. This waste stream includes:

- e-cigarette devices
- e-liquid containers
- cartridges or vials that contain liquid nicotine
- cannabinoid substances such as tetrahydrocannabinol (THC), cannabidiol (CBD), N,N-dimethyltryptamine (DMT) or other controlled substances.

Hazardous waste regulations are found in [chs. NR 660-679](#) of the Wisconsin Administrative Code

Of these substances, only nicotine is regulated as a hazardous waste and this document is specific to nicotine-containing devices (devices). Nicotine is a listed acute hazardous waste (waste code P075) and is extremely toxic through both dermal contact (skin) and inhalation. [s. NR 661.0033, Wis. Adm. Code]

In addition to nicotine, these devices typically contain lithium-ion batteries that are often integrated into the device and cannot be easily and/or safely removed. This complicates management and disposal options as lithium-ion batteries can cause explosions and fires in trashcans, garbage trucks, transfer stations or landfills if improperly managed. For this reason, lithium batteries are potentially a D003 (reactive) hazardous waste. [s. NR 661.23, Wis. Adm. Code]

Nicotine gum, lozenges and patches that are Federal Drug Administration (FDA)-approved, over-the-counter (OTC) nicotine replacement therapies are now exempted from regulation as a P075 hazardous waste. These materials can be disposed of as solid waste with regular trash disposal.

This document outlines the management and disposal options for schools and institutions that have collected nicotine devices on their premises.

Nicotine Devices and Components

Nicotine vaping devices, also known as e-cigarettes, vaporizers, vape pens or electronic nicotine delivery systems, are battery-operated devices that people use to inhale a vaporized liquid, which typically contains nicotine, flavorings and other chemicals.

They can resemble traditional tobacco cigarettes, cigars or pipes, or everyday items like pens or USB memory sticks. The batteries and e-liquid cartridges, tanks or vials come in a variety of colors, shapes and sizes. Regardless of their design and appearance, these devices generally operate in a similar manner and are made of similar components.

empty determination cannot be made, it is regulated as an acute P075 hazardous waste. [s. NR 666.507(1) and (4), Wis. Adm. Code]

- 3. Battery.** A lithium battery is used to power the heating element or atomizer, which creates the vapor, and may be a D003 hazardous waste when disposed of due to the lithium's reactivity. Therefore, as a best management practice, it is recommended that all lithium batteries be managed as a universal hazardous waste. See *How to Handle Universal Waste: Batteries* (WA-1809). [s. NR 673.02, Wis. Adm. Code]

How to Handle Devices

When a school or institution collects a nicotine device from an individual, they become responsible for proper hazardous waste management and disposal. Waste produced at dormitories is considered household waste as long as it is generated by the residents in the same manner as in a household and is not segregated and collected for management.

Making a proper waste determination can be difficult if you do not know what is in the device or if it has not been fully used. In addition, controlled substances may be present that have other regulatory requirements. [s. NR 662.011, Wis. Adm. Code]

Generating over 1 kg (2.2 lbs) of acute hazardous waste in any one calendar month puts the generator into the Large Quantity Generator (LQG) category which is subject to higher standards of regulation. [s. NR 660.10 (70m)(b), Wis. Adm. Code]

The following options are recommended when encountering these devices in the school environment:

- 1. Return the nicotine device to the parent or legal guardian of the student.** Returning a collected nicotine device allows the device to be managed as a household hazardous waste. Households may dispose of household hazardous waste as solid waste with regular trash disposal.
- 2. Hand over nicotine devices to School Resource Officers (SROs) or other law enforcement officers.** The school or institution could have their SRO manage the collected nicotine devices. The SRO can manage the collected nicotine devices under s. NR 666.506(1)(b), Wis. Adm. Code.
- 3. Operate a household hazardous waste pharmaceutical take-back program (i.e., Drop Box).** Nicotine devices collected by a school or institution can be conditionally exempted from many of the hazardous waste regulations when managed under s. NR 666.506(1)(b), Wis. Adm. Code.

Under s. NR 666.506(1)(b), Wis. Adm. Code, household hazardous waste pharmaceuticals (which include nicotine devices confiscated from students) may be conditionally exempt from the requirements of chs. NR 662 to 673, Wis. Adm. Code.

Management conditions

Nicotine devices collected or confiscated from students are exempt from full hazardous waste management regulations when the following hazardous waste pharmaceutical conditions are met:

- a. They are not flushed or placed into the sanitary sewer.
- b. They are combusted at one of the following types of permitted facilities:
 - Large or small municipal waste combustor.

- Hospital, medical and infectious waste incinerator.
 - Commercial and industrial solid waste incinerator.
 - Hazardous waste combustor.
- c. When they are also a controlled substance they are:
- managed in compliance with Drug Enforcement Administration regulations, and
 - destroyed by a DEA approved non-retrievable method.

For information on collecting e-cigarettes and vaping devices see *E-Cigarette and Vaping Devices: Collection, Management and Disposal* (WA-1898).

For information on hazardous waste generator requirements regarding management of hazardous waste see *Quick Reference Guide for Hazardous Waste Generators* (WA-1821).

DNR Contact information

For more information including [publications, inspection forms, and administrative codes and statutes](#), go to dnr.wi.gov and search “hazardous waste resources.” Use the *Additional Resources* menu to navigate to specific topics. For staff contact information, go to the [staff directory](#) and enter “hazardous waste requirements” in the subject field, and choose the appropriate county contact.

Mailing address: DNR Waste and Materials Management Program, PO Box 7921 Madison, WI 53707

Email: DNRWasteMaterials@Wisconsin.gov

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