

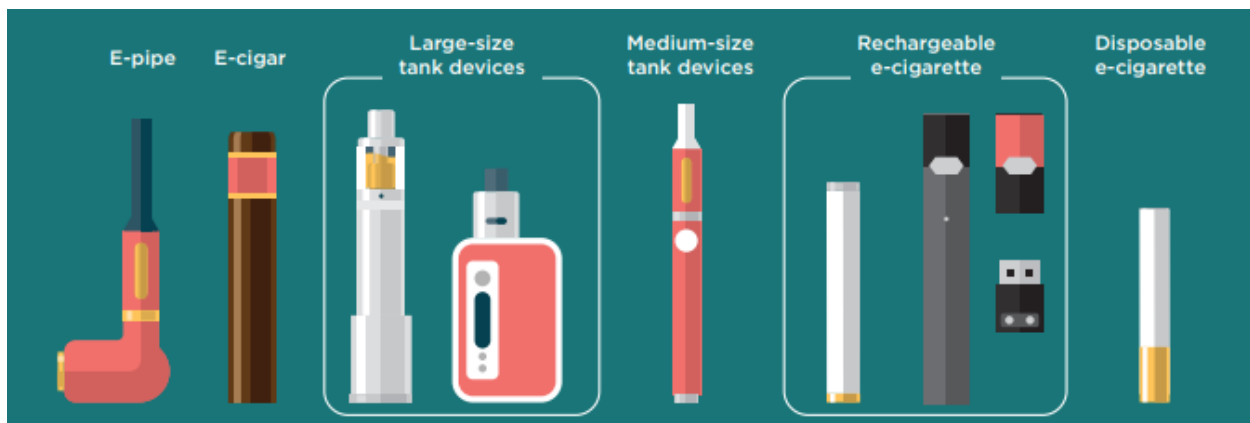
# Handling Waste from E-Cigarettes

## Scope and Focus of this Factsheet

The intent of this factsheet is to provide an overview of how to properly handle waste from electronic cigarettes (e-cigarettes or vapes) generated by consumers, distributors, and retailers. The options for handling waste from e-cigarettes may vary based on your location. Consumers, distributors, and retailers should check with their local waste hauler and local government for more specific options that are available in their respective communities.

## What are electronic cigarettes?

E-cigarettes are electronic devices that simulate tobacco or cannabis smoking. Devices are typically handheld, battery-powered, noncombustible products that vaporize a liquid solution (e-liquid) containing nicotine or cannabis extract. According to the [Centers for Disease Control and Prevention](#), 2.8% of American adults, or approximately 7 million people in the United States, use some type of e-cigarette regularly. There are multiple types of e-cigarettes, including disposable e-cigarettes, rechargeable e-cigarettes, medium- and large-size tank devices (collectively, tank devices), e-cigars, and e-pipes, with the most common being rechargeable e-cigarettes and tank devices. See below for an image from the [Centers for Disease Control and Prevention](#) showing the various types of e-cigarettes.



Disposable e-cigarettes are intended for single use, which means waste from these could potentially generate at a higher rate than waste from rechargeable e-cigarettes. As with other single use products, consumers should consider the waste generation impacts of using disposable e-cigarettes compared to reusable devices.

## What are electronic cigarettes?

In general, the components of e-cigarettes should be handled like any other item at the end of its useful life. Unique waste handling issues linked to e-cigarettes are tied to two internal components: batteries and e-liquids. E-cigarettes should not be placed in curbside bins for recycling because they often are not made of the type of plastic that can be recovered through curbside recycling, and may contain batteries. In Illinois, batteries are banned from curbside recycling bins because of the fire risk batteries pose when comingled with other items in collection vehicles and recycling facilities. Unused e-liquids and containers with e-liquid residue should be handled as either household hazardous waste, if generated by

individuals, or as special waste, if generated by businesses. These wastes may pose human health and environmental concerns because they may contain nicotine and other materials that could be hazardous. If littered or otherwise not properly handled, discarded e-liquid containers could impact soil or waterways and thereby expose Illinois residents to potentially hazardous materials.

### Rechargeable E-Cigarettes and Tank Devices

Many e-cigarettes contain rechargeable batteries, including lithium ion batteries. Improper handling of batteries like those found in e-cigarettes has been linked to fires in landfills and recycling facilities. If possible, batteries should be removed from e-cigarettes that have reached the end of their useful life and taken to a battery recycler. Information on available battery recycling outlets is available through [Call2Recycle's tool](#).

Empty or other unused e-liquid containers may contain residual nicotine, which can cause health problems, result in groundwater or surface water contamination, and make water less safe for drinking and agricultural usage. E-liquids should be taken to a [household hazardous waste collection event](#) or [medication collection site for proper disposal](#).

Some e-cigarettes can be recycled. However, before recycling, the e-cigarette must be properly cleaned to remove any residual nicotine that has condensed within the device. Information on cleaning e-cigarettes can be found [here](#). In most cases, once the e-cigarette has been cleaned it may be returned to the retailer for disposal. If the consumer is ever unsure, they should contact their retailer to clarify the options available for end-of-life handling processes.

### Distributors

A distributor is any entity that supplies e-cigarettes or e-cigarette products to stores and other businesses that sell to consumers. Distributors can consider partnering with other take-back programs, such as pharmaceutical take-back programs, to dispose of any nicotine containers or used e-cigarettes that are contaminated with residual nicotine.

- Items Returned from Consumers
  - Batteries: E-cigarette batteries may be collected and recycled through a legitimate battery recycler.
  - Empty e-liquid containers: Customers needing to dispose of used e-liquid containers can be directed to a household hazardous waste collection event or medication collection site.
  - E-cigarettes: If the battery and e-liquids in an e-cigarette are removed, and the inside has been cleaned to remove residual nicotine, the e-cigarette may be collected and recycled.
- Recycling Damaged Products
  - Damaged batteries: Damaged e-cigarette batteries may be collected and recycled at a legitimate battery recycler.
  - Damaged e-cigarettes: If the battery and e-liquids in an e-cigarette are removed, and the inside has been cleaned to remove residual nicotine, the e-cigarette may be collected and recycled.