

TACKLING VAPE WASTE DISPOSAL



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AGENDA

A brief overview on vape product
waste management



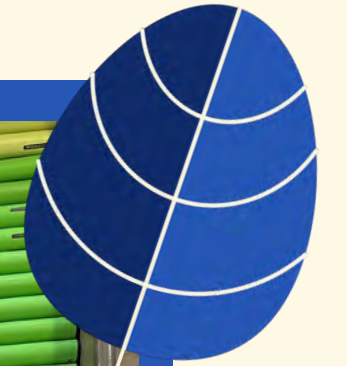
HOW WE STARTED



VAPE WASTE COLLECTION



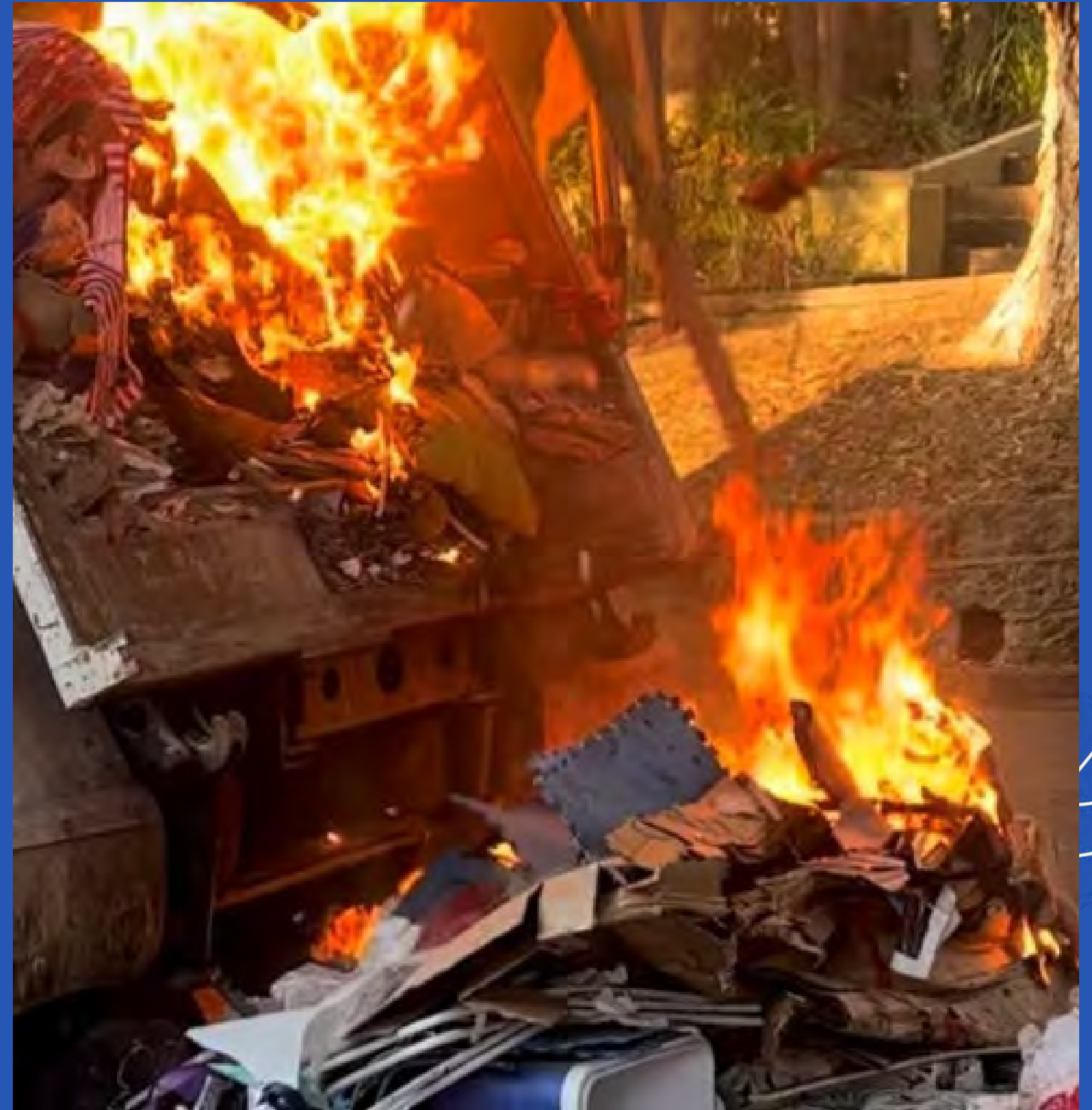
POLICY OPTIONS





WHAT IS THE PROBLEM

- No convenient disposal
- Most consumers toss vapes
- Battery and nicotine
- Fire hazards
- Expensive waste

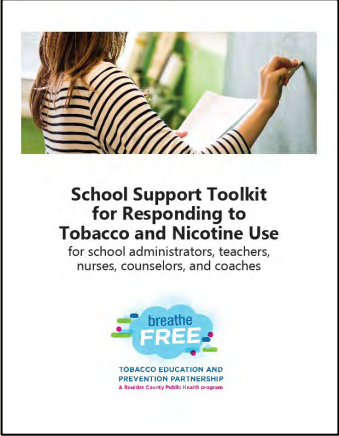


PARTNERSHIPS IN BOULDER COUNTY

What we've accomplished over the years

A horizontal timeline with a blue line and white circular markers. Above the line, the years 2017, 2019, 2020, 2021, and 2023 are displayed in large, bold, black font. Below the line, each year is associated with a partnership description in blue text. At the bottom of each year's column is a logo or image: Boulder County Public Health (2017), Boulder Valley School District (2019), a 'School Support Toolkit' document (2020), a pile of colorful vape devices (2021), and the Product Stewardship Institute (2023). The timeline is flanked by green dots at the top and bottom.

Year	Partnership	Accomplishment	Image/Logo
2017	Partner with Public Health	Create talking points for safe and proper disposal of vape devices for general public	Boulder County Public Health logo
2019	Partner with school district	Connect with local school districts to set up collection process for confiscated devices	Boulder Valley School District logo
2020	Guidelines	Establish guidelines and toolkit for schools around safe and proper disposal in alignment with tobacco-free school policy	School Support Toolkit for Responding to Tobacco and Nicotine Use
2021	Partner with vape shops	Partner with local vape shops to collect vape devices from local residents	Pile of colorful vape devices
2023	Partner on Innovative grant	Receive innovative grant funds to explore local policy options and design a vape waste disposal campaign	Product Stewardship Institute logo




MESSAGING FOR CONSUMERS


VAPE AWARE

VAPE DEVICES ARE HAZARDOUS WASTE


E-liquid can leak into the ground causing hazardous chemicals to enter the environment.



Cartridges and pods cannot be recycled and should not be disposed of in trash bins.



Vape batteries can start fires.




SIMPLE STEPS FOR SAFE STORAGE & HANDLING

- Keep devices and liquid out of harm's reach when not in use. Make sure tops are secure.
- Keep loose batteries in a case to prevent contact with metal objects.
- If devices are leaking place in a sealable plastic bag.
- Call the Rocky Mountain Poison and Drug Center at (800)-222-1222 if a child or pet swallows e-liquid or chews on a cartridge.
- To learn more about vape disposal, safe storage, or quitting tobacco, visit: boco.org/VapeAware


VAPE AWARE

PROPER DISPOSAL OF VAPE DEVICES


DISPOSABLE DEVICES




CARTRIDGES & PODS




BATTERIES (includes devices with internal batteries)



E-LIQUID




Vape devices and e-liquid are hazardous waste. Boulder County, City and County of Broomfield, and Town of Erie residents can dispose of them for FREE at the Boulder County Hazardous Materials Management Facility.



Hazardous Materials Management Facility
1901c 63rd Street • Boulder
Wednesday - Saturday 8:30 a.m. - 4 p.m.
720-564-2251

SCAN ME FOR APPOINTMENT



boco.org/VapeAware



Photo credit: Jacey Kraus

MANAGEMENT IN SCHOOLS



Photo credit: Jacey Kraus



Students are vaping in restrooms and flushing vapes down the toilet



Vapes collected under the principal's desk and in the school nurse's office



Collaborate with school district, Public Health, and HHW to collect vapes

COLLECTION IN SCHOOLS

Handling confiscated devices



Provide bins and PPE



No student access



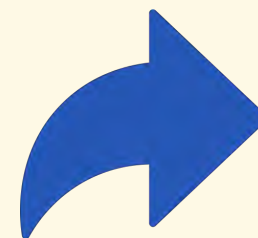
Call to schedule pick-up

WHAT'S IN THE BIN?

Acceptable Items: Vapes, pods, liquid, batteries



Vape collection in school



Inventory at HMMF

COLLECTION DIFFICULTIES



Collection & Confiscation



VSQG: Nicotine
2.2 lb. limit



Expensive disposal costs



COLLECTION DIFFICULTIES

We are only seeing a fraction of what is out there



FOUR 24'S

□ □ □ □

24 HOURS
4/24 - 4/25

24 DAYS
4/24 - 5/18

24 WEEKS
4/24 - 10/9

ALL OF 2024
4/24 - 1/1

ARANS COUNTY

The graphic features a blue background with the text 'FOUR 24'S' in a white box at the top. Below it are four white squares, each with a red arrow pointing to a corresponding 'FOUR 24'S' wristband. The wristbands are white, purple, red, and black. Below each wristband is its respective collection period. At the bottom center is the Arans County logo.



ONE HIGH SCHOOL ONE WEEK OF COLLECTION – 37 POUNDS – 312 DEVICES

TOOLKITS

For responding to tobacco and nicotine use for administrators, teachers, nurses, counselors, and coaches



Nicotine is an acute hazardous waste



Batteries can start fires

Electronic Smoking Device Disposal Guide
for Boulder County schools

Colorado law requires that all schools be tobacco and electronic vapor product-free. This guide will help school staff consistently dispose of these products properly and ensure that school campuses remain tobacco and vape-free.

E-Cigarette Waste is Hazardous for the Environment

Nicotine and other toxic substances in e-cigarettes, vape pens, and cartridges are considered hazardous waste, and should be disposed of properly at the Hazardous Materials Management Facility in Boulder. When not disposed of properly:

- E-liquid can leak into the ground causing hazardous chemicals to contaminate the environment
- Vape batteries can start landfill fires

Cartridges and pods can't be recycled and should not be disposed of in trash bins.

Safe Storage, Handling & Proper Disposal

Confiscate any vaping device and/or vape paraphernalia (e.g. e-liquid, cartridge) you see being used by a student. When handling vaping devices use gloves when possible to limit your exposure to harmful chemicals.

- Place devices, all components, and e-liquid in a designated bin and secure the lid.
- If a device, e-liquid bottle, or pod is leaking, place it in a sealable plastic bag (e.g. Ziploc) before placing it into the disposal bin. Be sure to wear gloves when handling a leaking device/liquid bottle.
- If a device is the first one in the bin, please add the date to the "accumulation start date" on the Hazardous Waste label.
- Securely store disposal bins in a locked administrative office that does not have student access.

When the waste reaches the line on the disposal bin (or at the end of the school year, whichever comes first, call Environmental Services or whoever might manage the hazardous waste at your location or site. Be sure to let staff and administration know about waste collection and these bins.

E-Cigarette Waste Disposal Kit Supplies

 Used Battery Container one per site 9.75" Lx7.75" Wx9.625" H PIG: DRM136; Grainger Item: 381PS1	 Nitrile or latex gloves keep a few pairs on site	 Vaping Guidelines Sticker 5"x5" Matte white Vinyl Sticker one per bin
 Hazardous Waste Label one per bin	 Clear sealable bags keep a few bags on site	 Vape Bin Fill Line Sticker 4"x2" Clear Stickers

To request supplies, contact the Tobacco Education and Prevention Partnership at 303.413.7581

Learn More
Nicotine Exposure or Poisoning: Call Poison Control at 1.800.222.1222
Hazardous Materials: Boulder County Hazardous Materials Management Facility at 720.564.2243
Disposal: Call Environmental Services at 720.561.5693
Tobacco or Vaping and Health: Call Boulder County Public Health at 303.413.7581

VAPE AWARE



School Support Toolkit
for Responding to
Tobacco and Nicotine Use
for school administrators, teachers,
nurses, counselors, and coaches



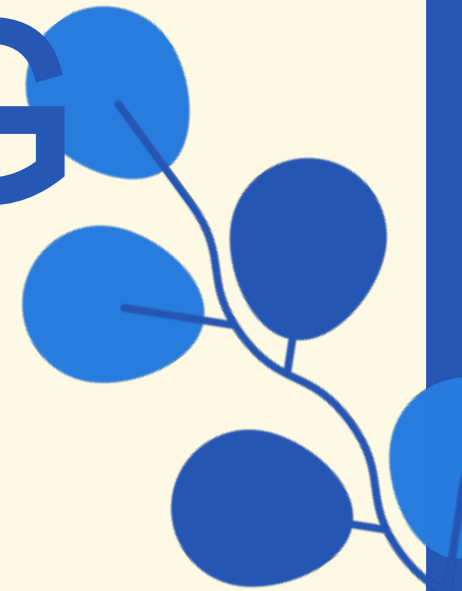
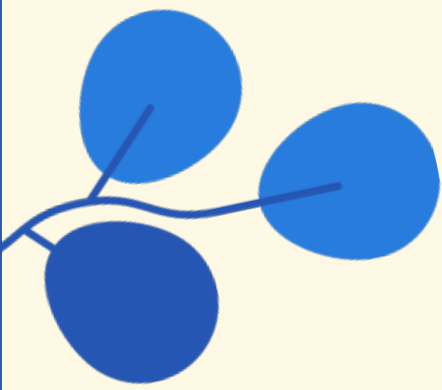
TOBACCO EDUCATION AND
PREVENTION PARTNERSHIP
A Boulder County Public Health program

VAPING IS HAZARDOUS FOR THE ENVIRONMENT

Did you know? Boulder County is going Zero Waste! Through reducing, reusing, recycling and composting we plan to divert 90% of waste away from landfills by 2025. *But vaping won't help us reach our goal.*

- Nicotine (among other toxic substances) in e-cigarettes, vape pens, and cartridges are considered hazardous waste, and should be disposed of properly at the Hazardous Materials Management Facility in Boulder.
- When not disposed of properly, e-liquid can leak into the ground causing hazardous chemicals to contaminate the environment.
- Cartridges and pods can't be recycled and should not be disposed of in trash bins.
- Vape batteries can start landfill fires.
- Aerosols from e-cigarettes can change indoor air quality and can cause respiratory health problems.
- The best way to avoid contaminating the environment with vape waste is to avoid using them altogether. If you have questions, or are wanting to quit, text QUIT to 47848.





COLLECTING FROM CONSUMERS



Voluntary consumer drop off at vape shops considered household hazardous waste (HHW)



No THC accepted

COLLECTION IN SHOPS

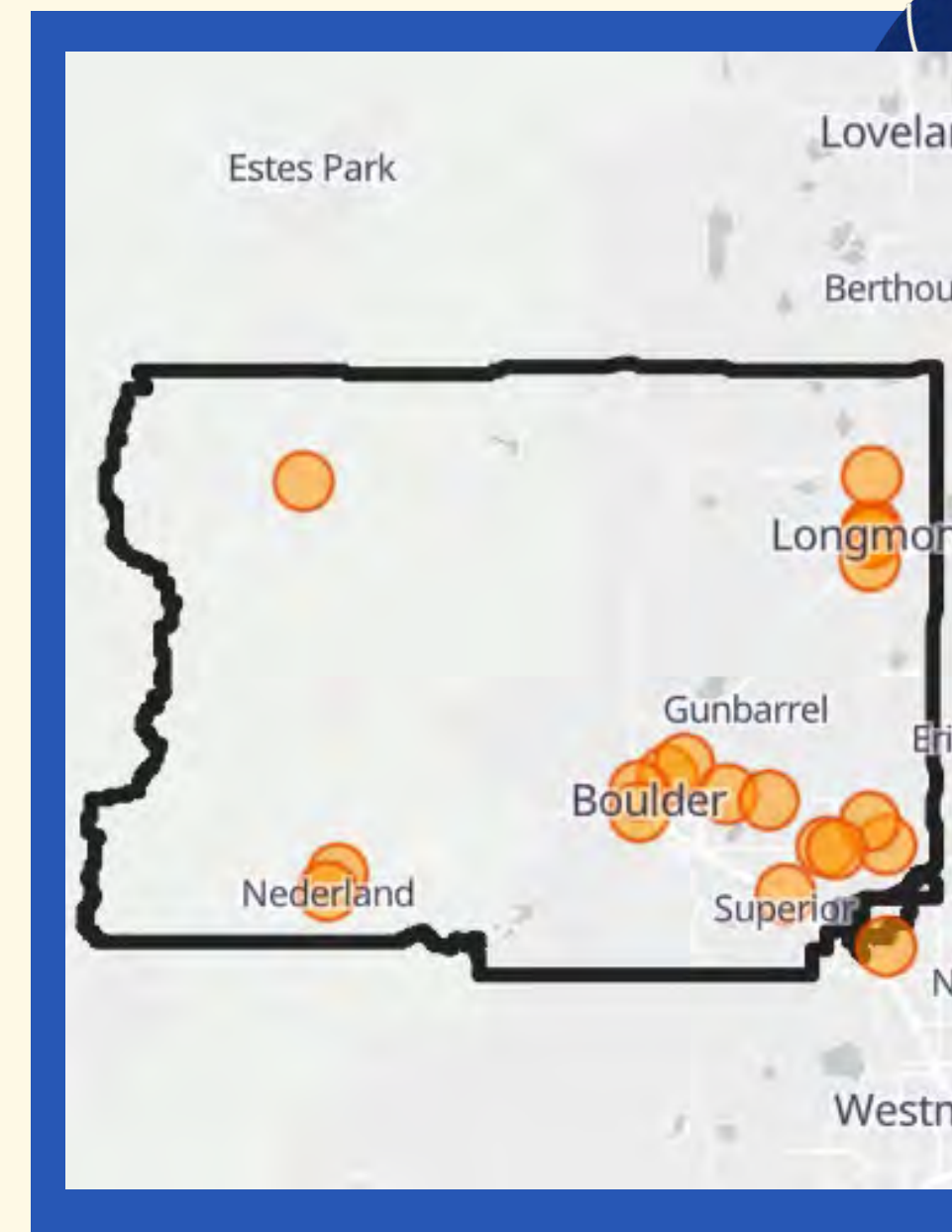
Voluntary collection of vape product waste



Provide bins and PPE



Flyer for free collection for consumers



20 convenient locations
boco.org/vapeaware

DROPOFF AT SHOPS

Voluntary collection of
HHW consumer vapes



Elite Vapes— 21 lbs.



Little Dog – 42 lbs.



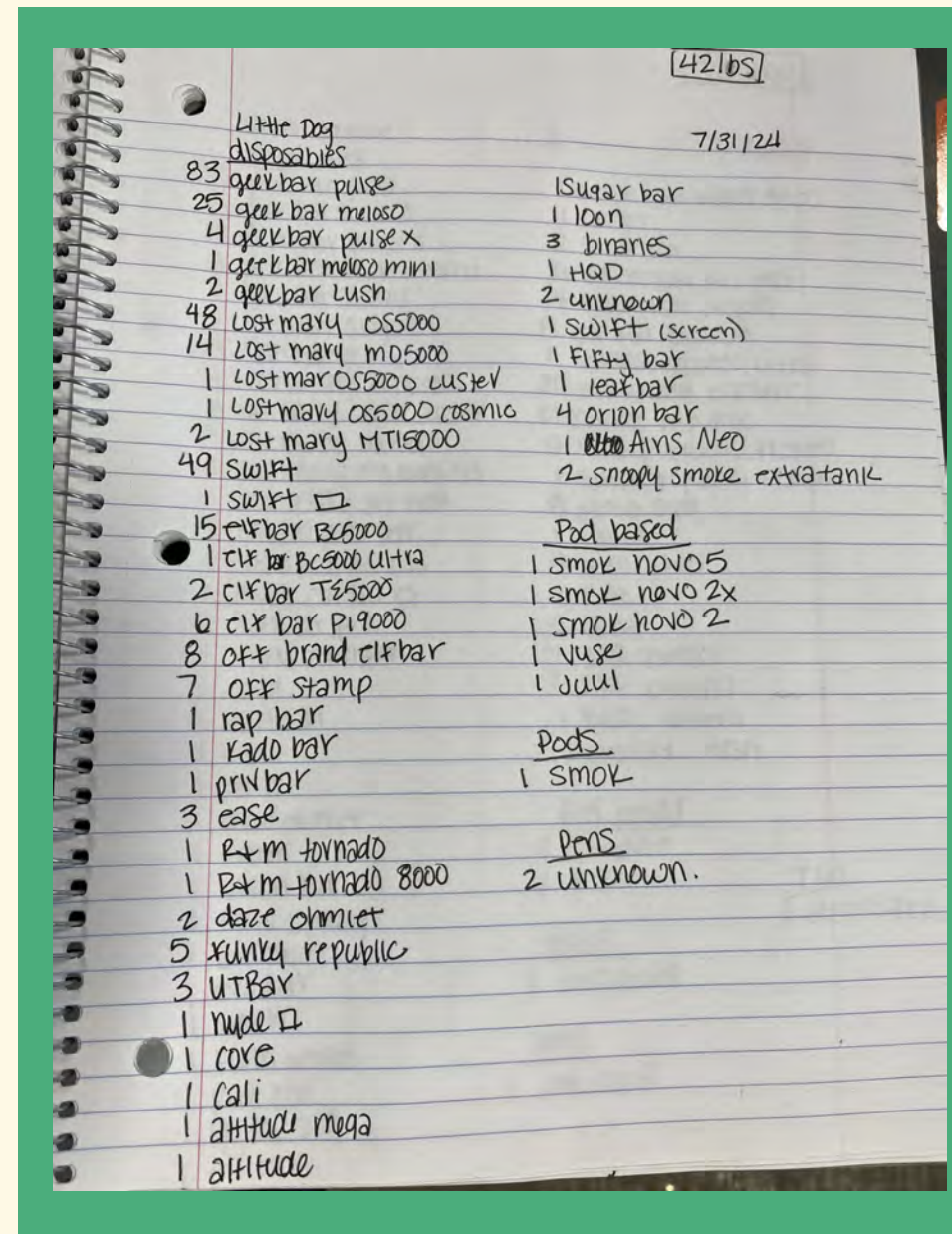
Up N Smoke— 73 lbs.



SORTING & INVENTORY



Organizing by vape type



Counting and more counting

Date	Geek Bar B5000	Geek Bar Lush (20000 Puffs)	Geek Bar Pulse (15000 Puffs)	Geek Bar Pulse X (15000 Puffs)	Geek Bar Meloso (9000 Puffs)
olorado 9/23/2025			4	2	
olorado 9/23/2025			9		
olorado 9/23/2025			4	3	
olorado 9/23/2025			7	2	
olorado 9/23/2025			5	1	
rado 9/23/2025			6	3	
rado 9/20/2025			5	2	
	5	35	5,393	3,211	96

Data tracking

INVENTORY

2023

- 7,706 devices
- 790 total pounds
- 26 pounds e-liquid
- 120 drop-offs
- 50 schools
- **~\$5,000**



2024

- 13,154 devices
- 1,749 total pounds
- 41 pounds e-liquid
- 187 drop-offs
- 76 schools
- **~\$10,000**

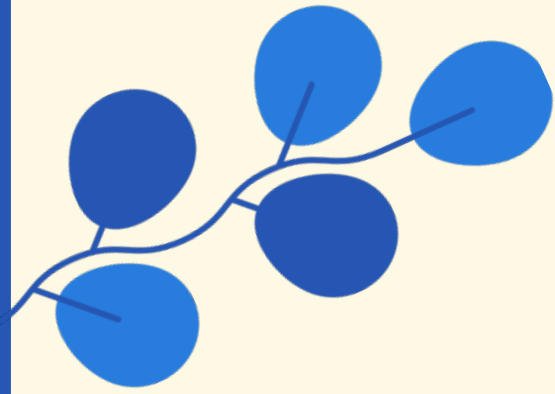


2025 (so far...)

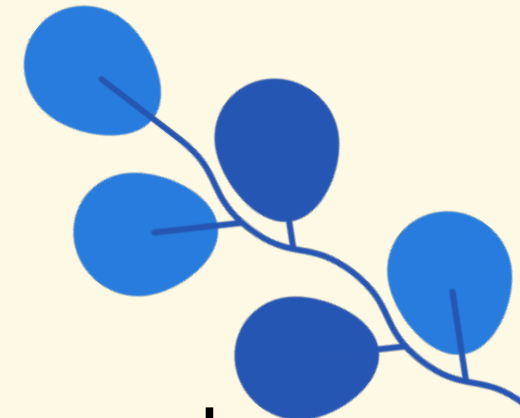
- 18,521 devices
- 2,835 total pounds
- 41 pounds e-liquid
- 388 drop-offs
- 106 schools
- **\$17,500+**



Since starting this program, Boulder County has collected over 39,381 vapes for disposal (as of Sept. 2025)



COST ESTIMATES



PSI estimates 141,792 vapes are generated annually in Boulder County and a cost of \$1.54 per vape to manage.

Percent of Devices Collected in Program	Vape Disposal (65% of Program Costs)	Outreach & Education (15% of Program Costs)	Collection Supplies & Services (20% of Costs)	Total Annual Program Costs
50%	\$70,896.00	\$16,306.08	\$21,977.76	\$109,179.80
75%	\$106,344.00	\$24,459.12	\$32,966.64	\$163,769.80
90%	\$127,612.80	\$29,350.94	\$39,559.97	\$196,523.70

WHAT MAKES GOOD VPW POLICY

- Cover all or most program costs (collection, supplies, outreach, disposal)
- Provide collection separate from the waste stream
- Provide convenient collection points
- Provide consistent and ongoing outreach





LESSONS LEARNED

- Industry constantly changing
- Communication is key
- Financial challenges

NEXT STEPS

- Assess community readiness for policy
- Retail license and EPR
- Community media campaign
- Increase convenient disposal options
- Develop sustainability plan



THANK YOU



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