



2021

VIRTUAL **PUBLIC HEALTH LAW** **CONFERENCE**

**Building and Supporting
Healthy Communities
for All**

September 21-23

2021

**PUBLIC HEALTH LAW
CONFERENCE**

**Building and Supporting
Healthy Communities for All**

Sep. 21-23, 2021
PHLC2021.org
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UBIQUITOUS EXTERNALITIES: THE ENVIRONMENTAL INJUSTICE OF SINGLE-USE PLASTIC TOBACCO WASTE

PRESENTERS

- Kyra Hill, Staff Attorney, Public Health Law Center
- Terry Rousey, Youth Tobacco Policy Specialist, Colorado State Tobacco Education and Prevention Partnership
- Angela Haren, Senior Attorney, Chesapeake Legal Alliance



WHAT ARE WE TALKING ABOUT?

- Plastic waste
- Hazardous waste
- Environmental [in]justice



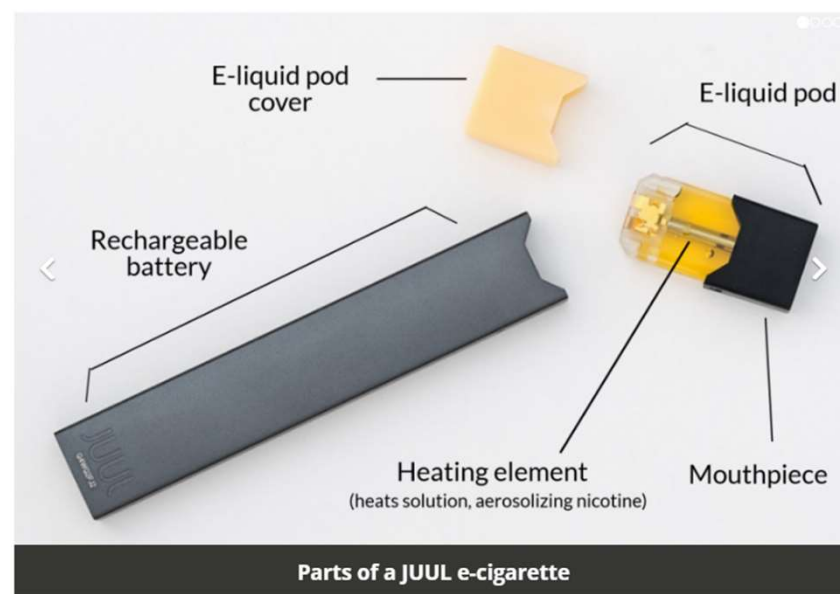
PLASTIC WASTE

- Cigarette filters
 - Made of plastic, degrades into microplastics
- E-cigarettes
 - Cartridges, plastic casing, etc.
- Tobacco product packaging
 - Cigar wrappers, cigar tips, pouches



HAZARDOUS WASTE E-CIGARETTES/VAPES

- Nicotine
 - Acute hazardous waste—extremely toxic to humans at low doses
- Batteries
 - Hazardous waste, fire and explosion risk
- Metals
 - Leaching of cobalt and other toxic metals



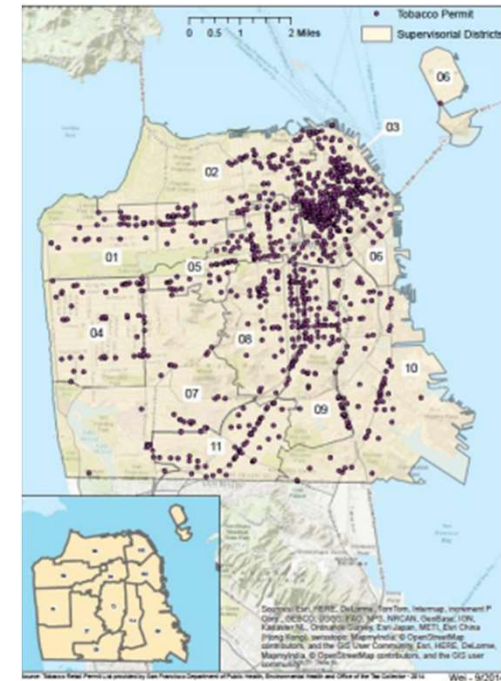
TOXIC/HAZARDOUS WASTE CIGARETTE BUTTS

- Nicotine
- Metals and heavy metals
- Volatile Organic Compounds (VOCs)
- Polycyclic aromatic hydrocarbons (PAHs)
- Thousands of additional chemicals



ENVIRONMENTAL INJUSTICE RETAILER DENSITY

- Waste and pollution from tobacco products collects around tobacco retailers
- Tobacco retail density is greatest in communities of color and low-income communities



ENVIRONMENTAL INJUSTICE

RESOURCE ALLOCATION

- Fewer government resources are expended to clean up waste in communities of color and low-income communities
- Landfills and incinerators disproportionately located in and near communities of color and low-income communities
- Greater exposure to sources of pollution of all types in communities of color and low-income communities



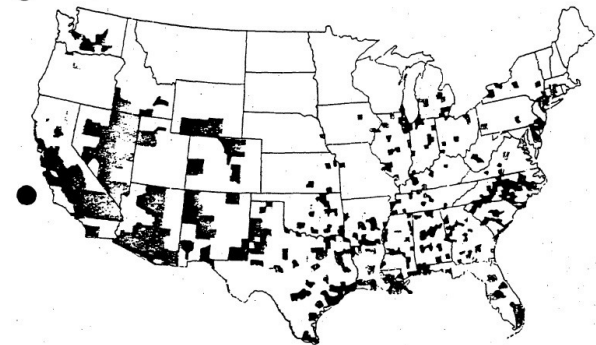
ENVIRONMENTAL JUSTICE

ENVIRONMENTAL RACISM

- Race is the characteristic with the strongest correlation to density and proximity to polluting industries and hazardous waste sites
- Environmental justice is “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”

TOXIC WASTES AND RACE In The United States

A National Report on the Racial and Socio-Economic
Characteristics of Communities
with Hazardous Waste Sites



COMMISSION FOR RACIAL JUSTICE
United Church of Christ
© 1987

ENVIRONMENTAL JUSTICE ENVIRONMENTAL RACISM

- Tobacco retail density is an environmental justice issue
- Tobacco product waste is an environmental justice issue



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www.publichealthlawcenter.org



[@phealthlawctr](https://twitter.com/phealthlawctr)



facebook.com/publichealthlawcenter

Tobacco Product Waste

Ubiquitous Externalities: The Environmental
Injustice of Single-Use Plastic Tobacco Waste



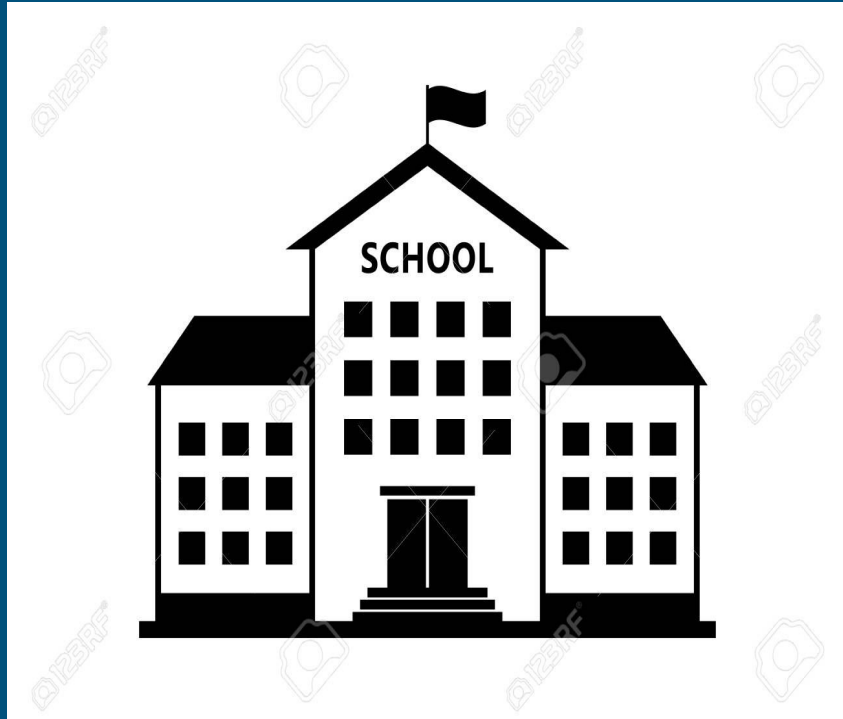
Overview

- Exploring solutions led to unexpected discovery
- Coordinated a state response
- Local efforts

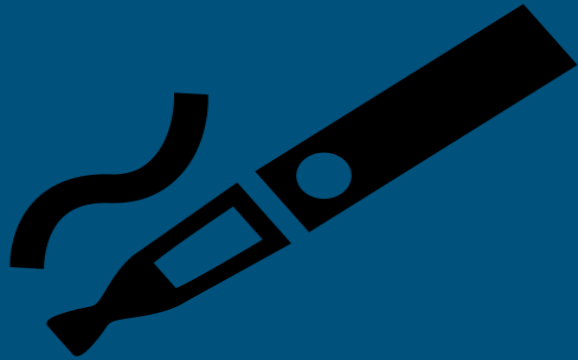
25.9%

Current High School vaping

Where did Colorado start



The problem



- **Nicotine/Salt**
- **Batteries**
- **Plastics**
- **Electronics**
- **Containers**

Guidance Documents

- **Business, Government and Schools**
- **Schools**
- **Business**

Business, Government, and Schools

Vaping Liquids, E-Cigarettes and Nicotine Waste Guidance



COLORADO
Department of Public
Health & Environment

Vaping Liquids, E-cigarettes and Nicotine Wastes

Guidance for businesses, government agencies and schools handling nicotine-containing wastes

Vaping liquid, the solution used in electronic cigarettes, is also known as E-liquid, E-juice, E-fluid, or liquid nicotine. Discarded vaping liquid may present a significant risk to human health and the environment if improperly disposed. Other nicotine-containing wastes, including electronic cigarettes themselves (E-cigarettes), nicotine gum and nicotine patches, also present health and safety risks.

Businesses, government agencies and schools handling any of these wastes must comply with the hazardous waste regulations administered by the State of Colorado Hazardous Materials and Waste Management Division (the "division").

Information regarding hazardous waste requirements in Colorado can be located on the division's website (see end of this guidance).

Nicotine-containing wastes regulated by the division

All waste discarded by a business, government agency or school that contains any concentration of nicotine, may be considered an acute hazardous waste in Colorado. Examples of these wastes include:

- Vaping liquid that contains nicotine.
- Shipping or storage containers or E-cigarette cartridges that held nicotine or nicotine-containing vaping liquid that have not been triple-rinsed, even if they look empty.
- Rinse water from rinsing nicotine and vaping liquid containers.
- Vaping liquid spill cleanup materials.
- E-cigarettes, whether used or not, unless the vaping liquid reservoirs have been removed.
- Unused nicotine gum.
- Unused nicotine patches.

There is no minimal amount or concentration of nicotine-containing material that is exempt from regulation.



School



Guidance for Schools on storing and disposing of nicotine waste

Draft Copy

Guidance for Colorado Schools about Storage and Disposal of Nicotine Waste

The use of electronic nicotine devices/vapes by youth is a serious health concern and a disruption to learning. Proper disposal of confiscated electronic nicotine devices/vapes can reduce the risk of nicotine exposure on school grounds.

Keep your school safe from hazardous Nicotine waste materials found in vape/electronic smoking devices and e-liquid by:

- Collecting Nicotine waste in containers made of, or lined with, materials which will not react with, and that will be compatible with, the hazardous waste collected.
- Labeling or marking containers with the words "Hazardous Waste".
- Storing containers in a safe place and in a manner that avoids leaks until they can be properly disposed of.
- Properly dispose of waste materials, keeping storage limits to less than 2.2 pounds of Nicotine waste.
- Sending containers to an off-site facility authorized by Colorado Department of Public Health and Environment to manage hazardous waste. For more information, contact the solid waste authority in your community listed below.

Never place nicotine-containing waste into the typical trash. These items are harmful to the environment when disposed incorrectly.

Waste containing any concentration of nicotine is considered acutely hazardous as it only takes a small amount of nicotine to be lethal for a human or small animal.

Examples of Nicotine Hazardous Waste that should be disposed of properly in the appropriate containers:

- Vaping liquid that contains nicotine.
- E-cigarettes (i.e. Puff Bar, Juul, Vuse or Mod type) whether used or not, unless the vaping liquid reservoirs have been removed.
- E-cigarette cartridges (i.e. Juul pod) that held nicotine-containing vaping liquid, even if they look empty.
- Vaping liquid spill and cleanup materials.

The Colorado Department of Education and Colorado Department of Public Health and Environment, [recommend schools](#) confiscate electronic nicotine products (i.e. Puff Bar Juul, Vuse, and Mod type) as one of the best practice strategies to address the [youth vaping epidemic](#) and to enforce the [Colorado Tobacco Free Schools Law](#).

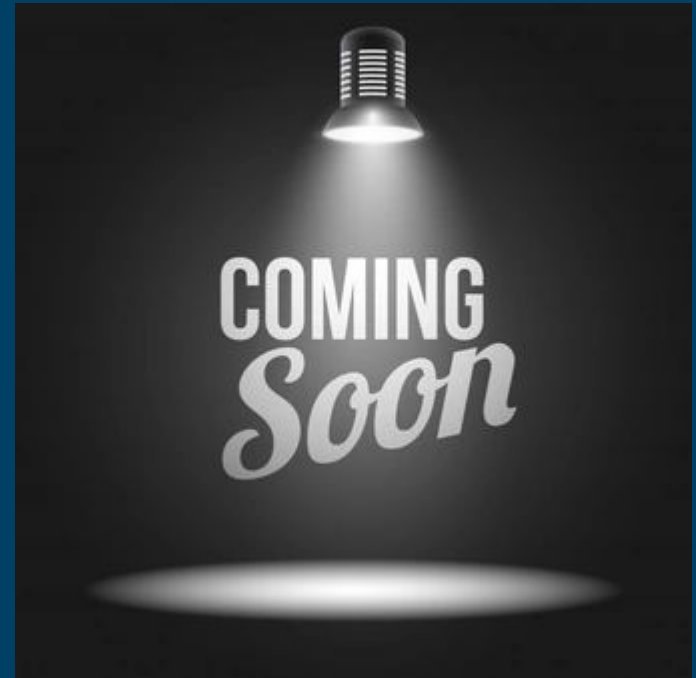
Consistent implementation of all recommended best practices er of the law and supports the tobacco free school laws across the s



COLORADO
Department of Public
Health & Environment

Business

Guidance for Vape Shops and
Tobacco Retailer/Manufacture



Tobacco Product Waste Tsunami

Environmental Justice

ENVIRONMENTAL CONSIDERATIONS FOR TOBACCO PRODUCT APPLICATIONS SUBMITTED TO CTP




*Presented by
Cristi Stark, M.S.
Associate Director for Science Policy
Office of Science, CTP, FDA*

August 2016

State Program Efforts



Waste Tracker 1.0

Organization	Date Range Collected	Collected from	What was collected	Device Type	Brand	Count	Name of Brand/Type not listed	Photograph of Items Collected
Boulder	2020	School	Cartridges	Disposable	Puff-Bar	9		

Local Efforts

Boulder/Jefferson County/Summit

"Hurts the Environment"

Boulder Instagram message

Vapes are trash.

Vapes are horrible for the environment.

Vapes typically contain lithium-ion batteries, heavy metals, and plastics. Like other electronic waste, they should be specially recycled to conserve resources and limit pollution. But they are often tossed or thrown in the garbage. A recent study found nearly 20% of litter at CA high schools came from e-cigarettes.

Disposable vapes like Puff Bar, MyA, Sky and Vaporesso are the biggest threat. They are used only once and then discarded with their batteries, plastic, and metal parts. From 2019 to 2020, disposable use went up 1,000% among high schoolers who vape.

Most vape companies do not provide adequate services or information on how to properly dispose of their products. Almost all contain liquid nicotine, which is recognized by the EPA as hazardous waste. With that and other harmful substances, e-cigarette litter poses a biohazard risk to the environment.

The #vapesaretrash campaign and youth challenge

See vape litter. Snap a photo. Share it to Instagram!

Parents Against Vaping e-cigarettes (P.A.V.) has created a user-generated content campaign via our youth initiative SAVE, urging young people to raise awareness about the environmental impact of e-cigarettes by documenting vape litter in their own communities. By following our official rules and posting on social media, youth enter to win a prize from sustainable company NABECO.

See more and join the challenge on Instagram at @Students_against_vaping!

VAPE.SARETRASH.ORG | PARENTSAGAINSTVAPING.ORG

VAPING IS HAZARDOUS FOR THE ENVIRONMENT

Did you know? Boulder County is going Zero Waste! Through reducing, reusing, recycling and composting we aim to divert 90% of waste away from landfill 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.

VAPE AWARE
You own your responsibility
Boco.org/VapeAware

EL VAPEO ES PELIGROSO PARA EL MEDIO AMBIENTE

¿Sabías? El Condado de Boulder busca eliminar todos sus desechos. Al reducir, reutilizar, reciclar y compostar, nuestros desechos en menos de 20 años, podremos desviar el 90% de nuestros desechos de los vertederos antes del año 2025. Pero el vapeo no ayudará que logremos esta meta.

- La nicotina en los cigarrillos electrónicos se considera un residuo peligroso y siempre hay que desecharlo apropiadamente.
- Cuando se desecha apropiadamente, el líquido de los cigarrillos electrónicos puede filtrarse al suelo, contaminando el medio ambiente con químicos peligrosos.
- Los cartuchos y las cápsulas no son reciclables y no se deben tirar en los basureros.
- Las baterías de los cigarrillos electrónicos pueden causar incendios.
- Los aerosoles de los cigarrillos electrónicos pueden afectar la calidad del aire.
- Los aerosoles pueden causar problemas de la salud respiratoria.
- La mejor manera de prevenir la contaminación del medio ambiente causada por el desperdicio del vapeo es dejar de usar los cigarrillos electrónicos por completo. Si tienes preguntas o quieres dejar de vapear, manda la palabra QUIT por mensaje de texto al 47848.

VAPE AWARE
Tú tienes tu propia responsabilidad
Boco.org/VapeAware

VAPING IS HAZARDOUS FOR THE ENVIRONMENT

- When not disposed of properly, e-liquid can leak into the ground causing hazardous chemicals to enter the environment.
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Jefferson County Schools Parent/Guardian Policy Violation Flyer

Notice of Student Tobacco Policy Violation Information for Parents/Guardians

This document includes information about your student's recent violation of the Tobacco Free Schools' Policy. Minor possession and use of any form of tobacco, including the use of electronic smoking devices (referred to here as vapes, vaping devices, e-cigarettes and JUULs) is prohibited by State law and Jefferson County Public Schools' policy (see http://bit.ly/TPS_code_of_conduct). Lakewood High School requires students who violate the policy to adhere to disciplinary procedures including, but not limited to, alternatives to suspension and/or in school suspension, with completion of the Second Chance online tobacco/nicotine intervention modules. If you have questions or wish to discuss the violation or disciplinary response, contact [FILL IN APPROPRIATE NURSE OR ADMIN CONTACT HERE].

All Tobacco/Nicotine Use is Hazardous

- Tobacco use is the single greatest cause of preventable death in Colorado. All forms of commercial tobacco/nicotine pose risks to health and can cause serious, debilitating chronic diseases.
 - Nicotine is toxic and addictive and can disrupt brain development in youth/young people, causing cognitive impairment, memory disruption, difficulty with impulse control and behavioral problems.
 - Nicotine may also prime the brain for addiction, putting young people at risk of other addictions.
- For more info: <https://www.drugabuse.gov/publications/drugfacts/cigarettes-other-tobacco-products>

E-cigarettes/Vapes/JUULs – Health and Safety Hazards

- Use of electronic smoking devices/vapes/JUULs can result in a number of serious health risks, including addiction and vaping-related lung disease. The aerosol from vaping devices is not harmless water vapor, but contains heavy metals, ultrafine particles that can be inhaled deeply into the lungs, volatile organic compounds, cancer-causing chemicals and other toxins. For more information: <https://e-cigarettes.surgeongeneral.gov/knownrisks.html>.
- E-cigarettes/vape devices, including JUULs as well as the nicotine liquid ("e-juice") they may contain, are considered **hazardous waste** and need to be stored and disposed of safely. The batteries and other components of the devices require special handling and have been known to explode, causing burns, fires and other risks to people, animals and property. Liquid nicotine is poisonous and has caused illness and death in pets and small children who have come into contact with it. For more information: <https://www.childrenssafetynetwork.org/infographics/e-cigarette-poisoning>.

What Parents/Guardians Can Do

- Discuss rules and expectations with/for your student regarding tobacco/nicotine, alcohol, other drugs and other challenging/risky behaviors. Be clear about the consequences and follow through with them when rules are broken. Visit www.speaknowcolorado.org for helpful information and resources.
- Encourage and model positive behaviors and choices. Ask for their ideas, and listen to them. Remind them that they're important to you and build trust through healthy communication. For guidance and resources visit www.twelvetalks.com
- Minimize exposure at home. Teens who are exposed to alcohol, marijuana, prescription medications and other drugs in the home are more likely to use these substances.
- Visit www.tobaccofreeco.org to learn about tobacco use/vaping and to get help with quitting tobacco/nicotine for the young person in your life, or even for yourself.
- Contact Colorado Crisis Services if you feel you or your young person is in need of more immediate counseling assistance at 1-844-493-8255.



Jefferson County Policy Matrix

Policy Making Body	Level/Type of Policy	Purpose/Priority	Limits, barriers and enablers
School District	Protocol/Policy	Directive to school staff regarding confiscation, handling, storage and transport of ESD waste	<p>Barriers: cost to dispose of as a hazardous waste at the school or district level</p> <p>Enablers: if there were funds derived from assessing a fee for retailers and manufacturers to defray the cost of safe disposal</p>
Board of Health	Resolution/Regulation	<p>ESD hazardous waste and safe handling, storage and disposal of ESD waste</p> <p>Establish processes and requirements for localities and/or ESD retailers/manufacturers to assure safe storage and disposal of products</p>	
Municipal/County Governments	Ordinance/Regulation/Code	Addresses the local problem of ESD hazardous waste as part of best practice/comprehensive approaches to tobacco/nicotine use;	

Take-back Events

AUGUST 24TH @ LAKE DILLON AMPHITHEATER

FREE CONCERT

FOR SUMMIT COUNTY
MIDDLE & HIGH SCHOOL YOUTH

August 24th
6:30-8:30pm

BEAU THOMAS
& Additional Guests

Lake Dillon Amphitheater

FREE EMPANADAS FOR ALL ATTENDEES

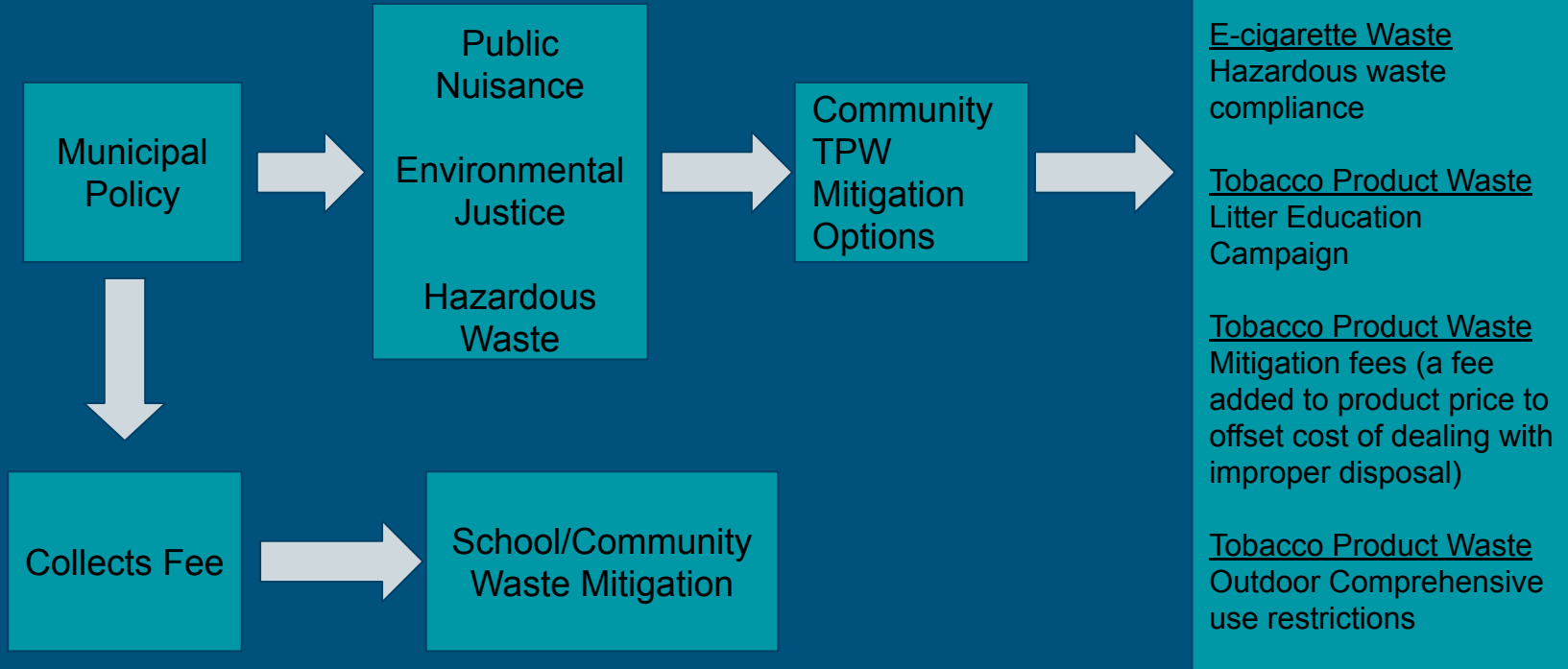
No pre-registration necessary, just show up!

A "vape take back" box will be present at this event, for any youth wishing to safely dispose of a vape. A \$25 gift card will be provided to anyone who provides a vape for disposal.

SPONSORED BY UPRISE, A LOCAL YOUTH COALITION



Policy Options



Questions

Terry Rousey, MPH
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C H E S A P E A K E
L E G A L A L L I A N C E

Legal Approaches to Ending Single-Use Plastic Pollution

Angela Haren, Senior Attorney

September 22, 2021

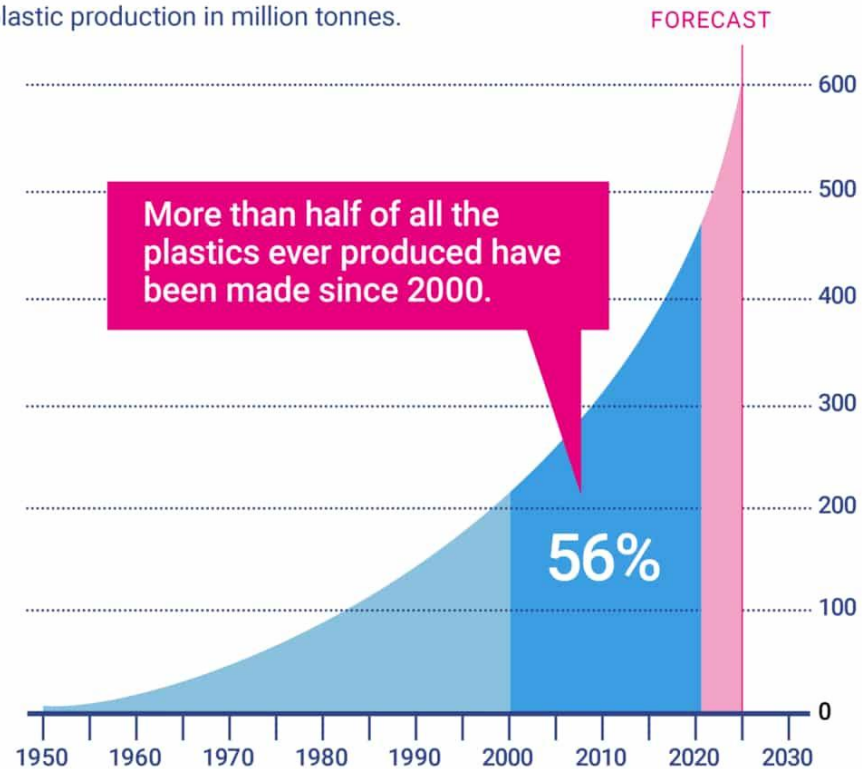
Public Health Law Conference

The Problem



PRODUCTION OF PLASTIC

Global annual plastic production in million tonnes.



SOURCE: PLASTIC ATLAS 2019 | © PLASTIC SOUP FOUNDATION



Impact on Human Health

- Microplastics
- Shown to bioaccumulate in fish tissue
- Process to make plastic causes pollution
- Trash incinerators/disposal
- Disproportionate impacts on low-income and people of color.



Photo Credit: Dave Harp, Bay Journal



The Mode of Conveyance



- Stormwater
- Intensity of storms increasing
- Recycling Fiction



Photo courtesy of South River Federation

End of Pipe Solutions

- Does nothing to reduce the amount of trash.
- Ignore the upstream issues and neighborhoods.
- Only benefit downstream.



Clean Ups

- Great Team Building and Education.
- Do nothing to reduce the amount of trash.
- Ignore the upstream issues and neighborhoods.
- Cigarettes Butts #1 Item Found.



2020 DATA AT A GLANCE

Topline Data

People	221,589
Pounds	5,229,065
Kilograms	2,371,864
Miles	49,635
Kilometers	79,880
Total Items	8,066,072

Tiny Trash

Items measuring less than 2.5cm

Foam Pieces	364,218
Glass Pieces	81,002
Plastic Pieces	1,685,206

Top Ten Items Recorded

1	Cigarette Butts	964,521	
2	Beverage Bottles (plastic)	627,014	
3	Food Wrappers (candy, chips, etc.)	573,534	
4	Other Trash* (Clean Swell)	519,438	
5	Bottle Caps (plastic)	409,855	
6	Grocery Bags (plastic)	272,399	
7	Straws, Stirrers	224,170	
8	Take Out/Away Containers (plastic)	222,289	
9	Beverage Cans	162,750	
10	Beverage Bottles (glass)	146,255	

*Other Trash refers to items that are collected by volunteers using the Clean Swell mobile app that do not fall in a specific category. These other items range in material type and size. Examples include indiscernible plastic pieces, clothing and metal pieces. Notably for 2020, it is likely that Personal Protective Equipment (PPE) items were logged in this category before a specific category was created for it on Clean Swell.

Legal Mechanisms

- Laws to restrict products
 - Plastic Bag Bans/Fees
 - EU Single Use Plastic Directive
 - Straws
 - EPS Foam Food Packaging Ban
- Local v. State Level
- Preemption
- Extended Producer Responsibility



Photos: Baltimore Beyond Plastics

Resources

<https://www.BeyondPlastics.org>

<https://www.StoryofStuff.org>

<https://www.epa.gov/trash-free-waters>

<https://www.unep.org/interactive/beat-plastic-pollution/>

<https://www.plasticbaglaws.org/>

Questions



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