



DEPARTMENT OF  
**ECOLOGY**  
State of Washington

# Chapter 173-408 WAC Landfill Methane Emissions

March 30, 2023

# Meet the Panel

Nick Bourgault – Community Outreach and Engagement Specialist

Joshua Grice – Climate Rule Unit Supervisor

Bill Flagg – Rulemaking Lead

Catherine Lucke – Technical Lead

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Bill Harris – Solid Waste Engineer (Southwest Regional Office)

Lynnette Haller – Air Quality Engineer (Central Regional Office)

Andy Kruse – Air Quality Engineer (Eastern Regional Office)

# Agenda

- 1 Welcome and Zoom functionality
- 2 Background and applicability
- 3 Rulemaking overview
- 4 Q and A
- 5 10-minute break
- 6 Definitions and input
- 7 Submitting written comments
- 8 Next steps

MSW: Municipal Solid Waste

WIP: Waste in Place

HIC: Heat Input Capacity

GCCS: Gas Collection and Control System

Btu/Hr: British Thermal Units per Hour

PPMV: Parts per Million by Volume

GHGs: Greenhouse Gases

CO<sub>2</sub>: Carbon Dioxide

# Acronyms

## Washington Administrative Code (WAC)

Rules detailing how a  
state agency will  
implement a law

## Revised Code of Washington (RCW)

Laws enacted in  
Washington

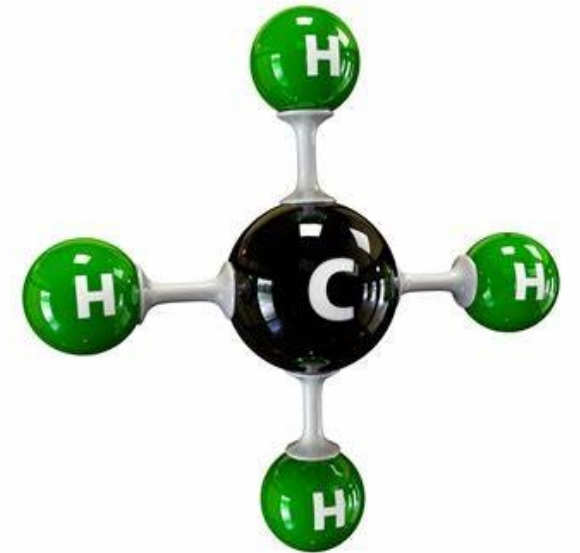
## Rulemaking

Process for development  
and adoption of a rule

# Common Terms

# Methane

- Organic material (e.g., food waste) in landfills releases gas as it decomposes. This gas is mostly methane and CO<sub>2</sub>, two GHGs that contribute to climate change once they escape the landfill and enter the atmosphere.
- Washington's GHG inventory reported ~1.5 million tons of CO<sub>2</sub> equivalent emissions from landfills, about 2% of the state's total GHG emissions in 2018.
- Methane is a potent GHG that has ~84 times the global warming potential of CO<sub>2</sub> over a 20-year period.



Methane (CH<sub>4</sub>)

# Purpose

- To reduce emissions of methane, a potent greenhouse gas, from Washington landfills
- Washington will join California and Oregon in implementing more protective standards for decreasing emissions.
- This will help Washington achieve its commitment to reduce greenhouse gas emissions to 95 percent below 1990 levels by 2050.

# Chapter 70A.540 RCW

Who: MSW landfills that received solid waste after January 1, 1992

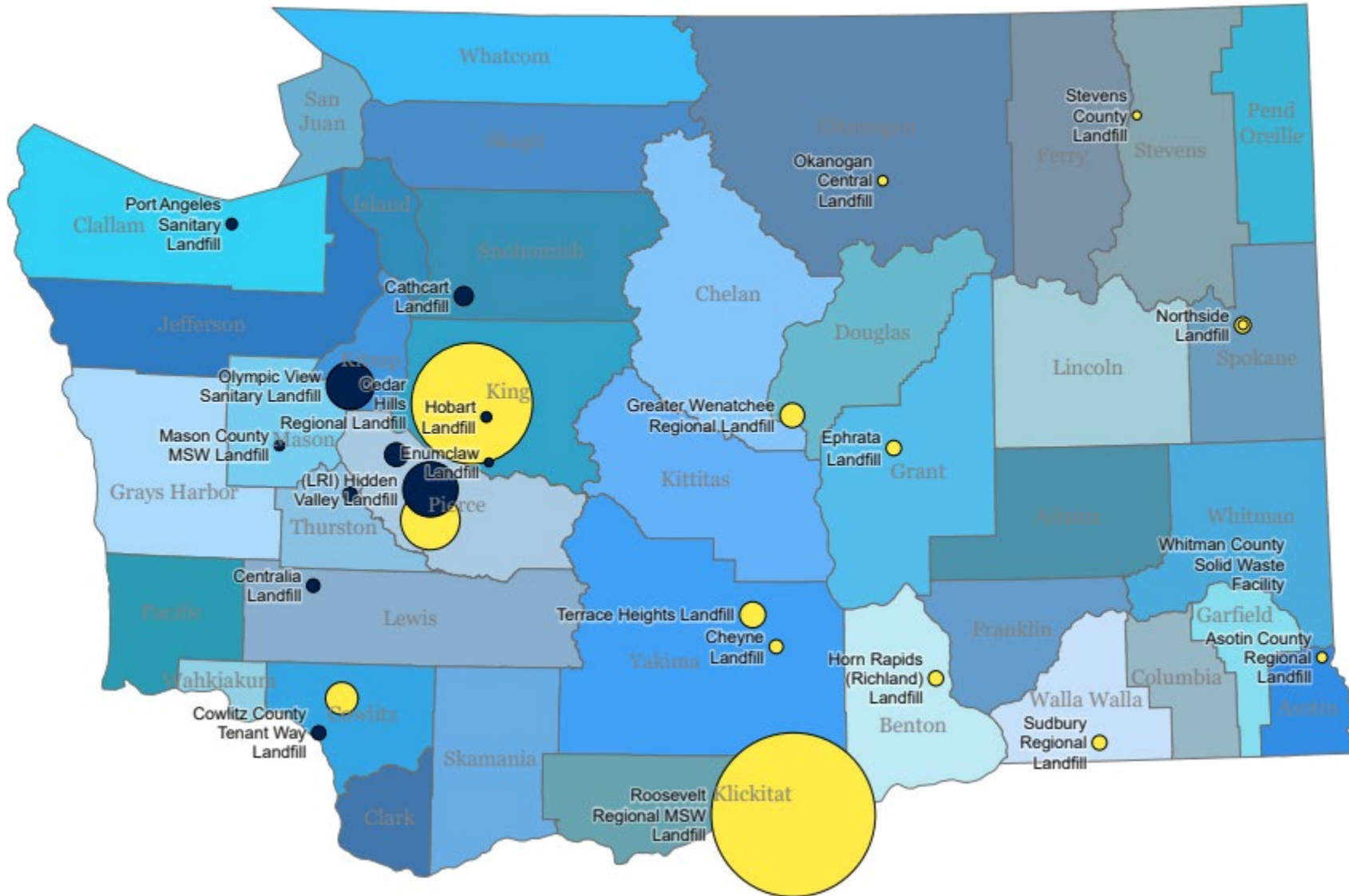
What:



- Reporting requirements
- Monitoring requirements
- Technology installation and performance requirements
- Penalties for violation of law and implemented rules
- Other possible requirements

When: Implementation of rule projected to start January 1, 2025



# MSW Landfills



-  Active landfill
-  Closed landfill

# List of Landfills on the Map

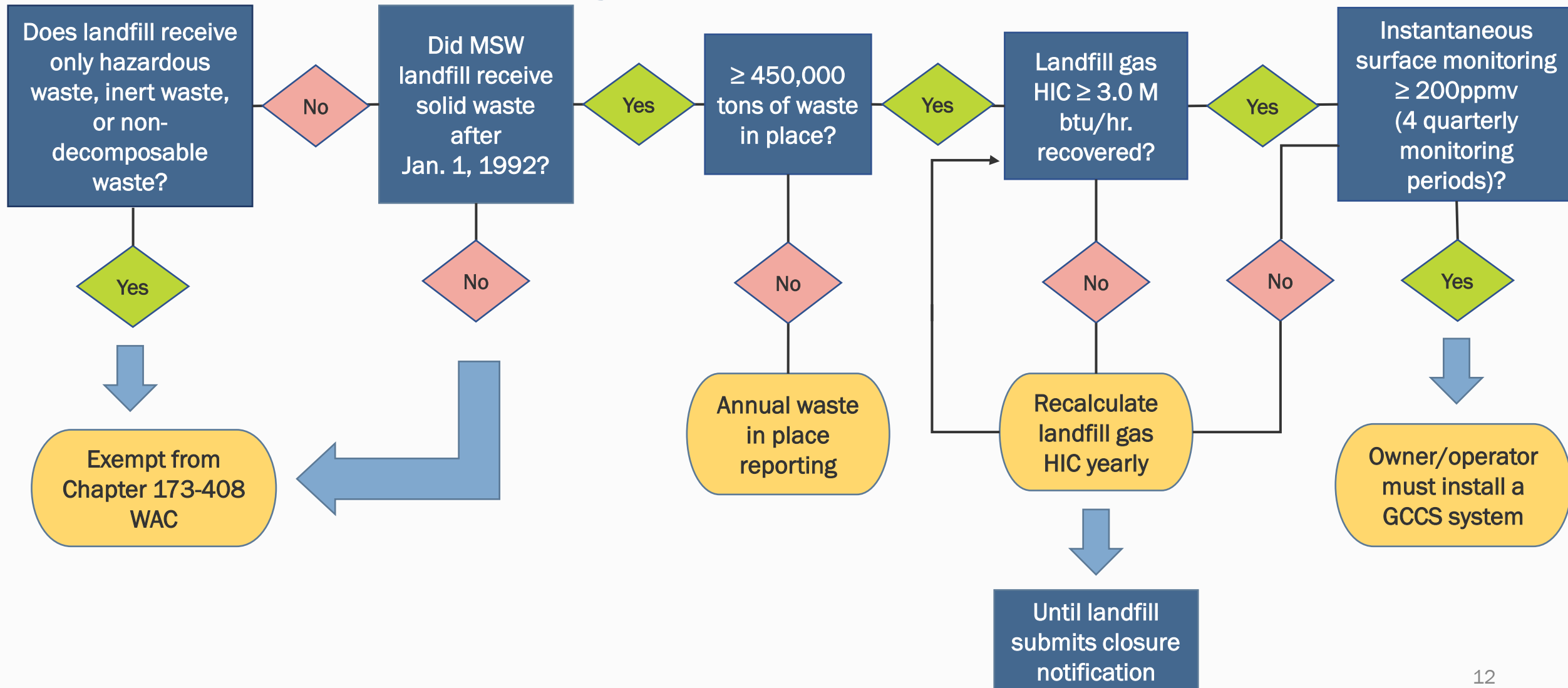
- Asotin County Regional
- Cathcart
- Cedar Hills
- Centralia
- Cheyne
- Cowlitz County HQ
- Cowlitz County Tenant Way
- Enumclaw
- Ephrata
- Greater Wenatchee Regional
- Hobart
- Horn Rapids (Richland)
- LRI (304th Street)
- LRI (Hidden Valley)
- Mason County
- Northside
- Okanogan Central
- Olympic View Sanitary
- Port Angeles Sanitary
- Roosevelt Regional
- Stevens County
- Sudbury
- Tacoma City Municipal
- Terrace Heights
- Thurston County
- Whitman County

# Active and Closed MSW Landfills

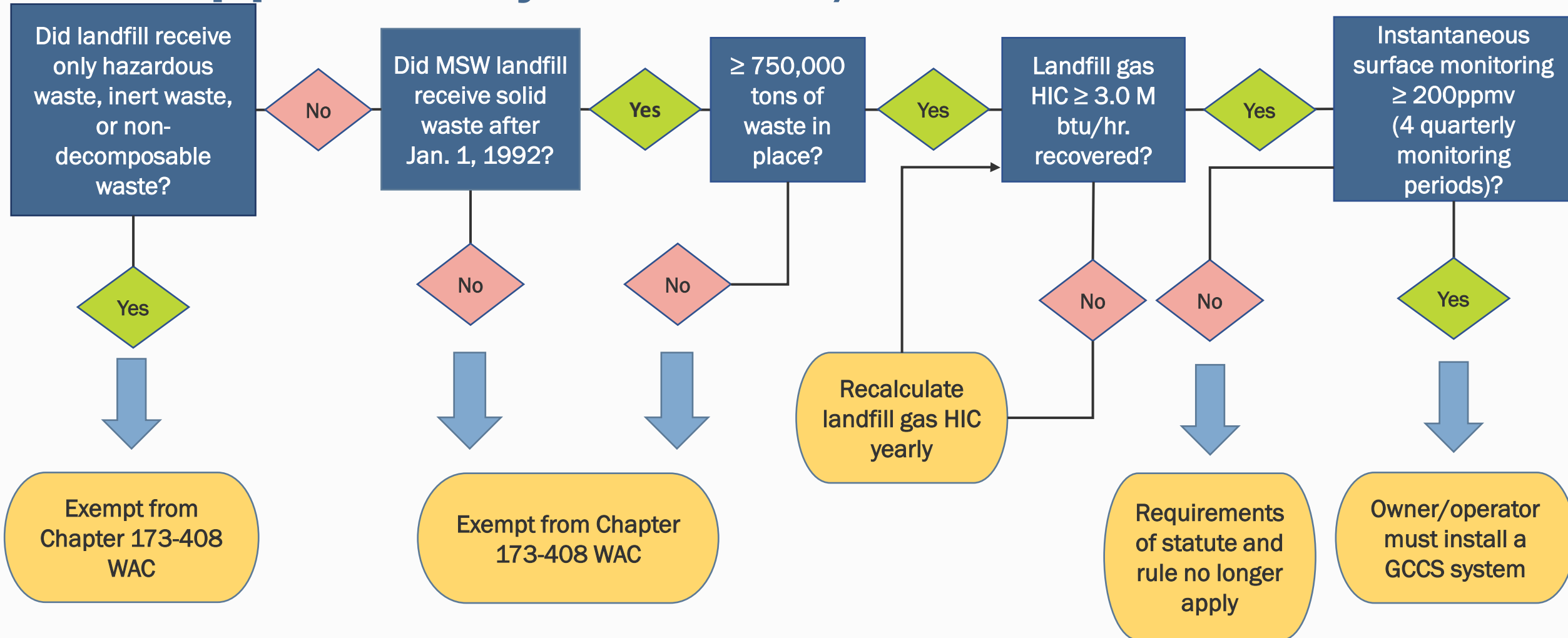
## RCW 70A.540.010

- The law defines an “active municipal solid waste landfill” as a landfill that has accepted or is accepting solid waste for disposal and has not been “closed” as described below.
- A “closed municipal solid waste landfill” means a municipal solid waste landfill that is no longer accepting solid waste for disposal and has been closed in accordance with the requirements set forth in WAC 173-351-500 (Municipal Solid Waste Landfills – Closure and Post Closure Care) as it existed on January 10, 2022.

# Applicability – Open/Active Landfills



# Applicability – Closed/Inactive Landfills

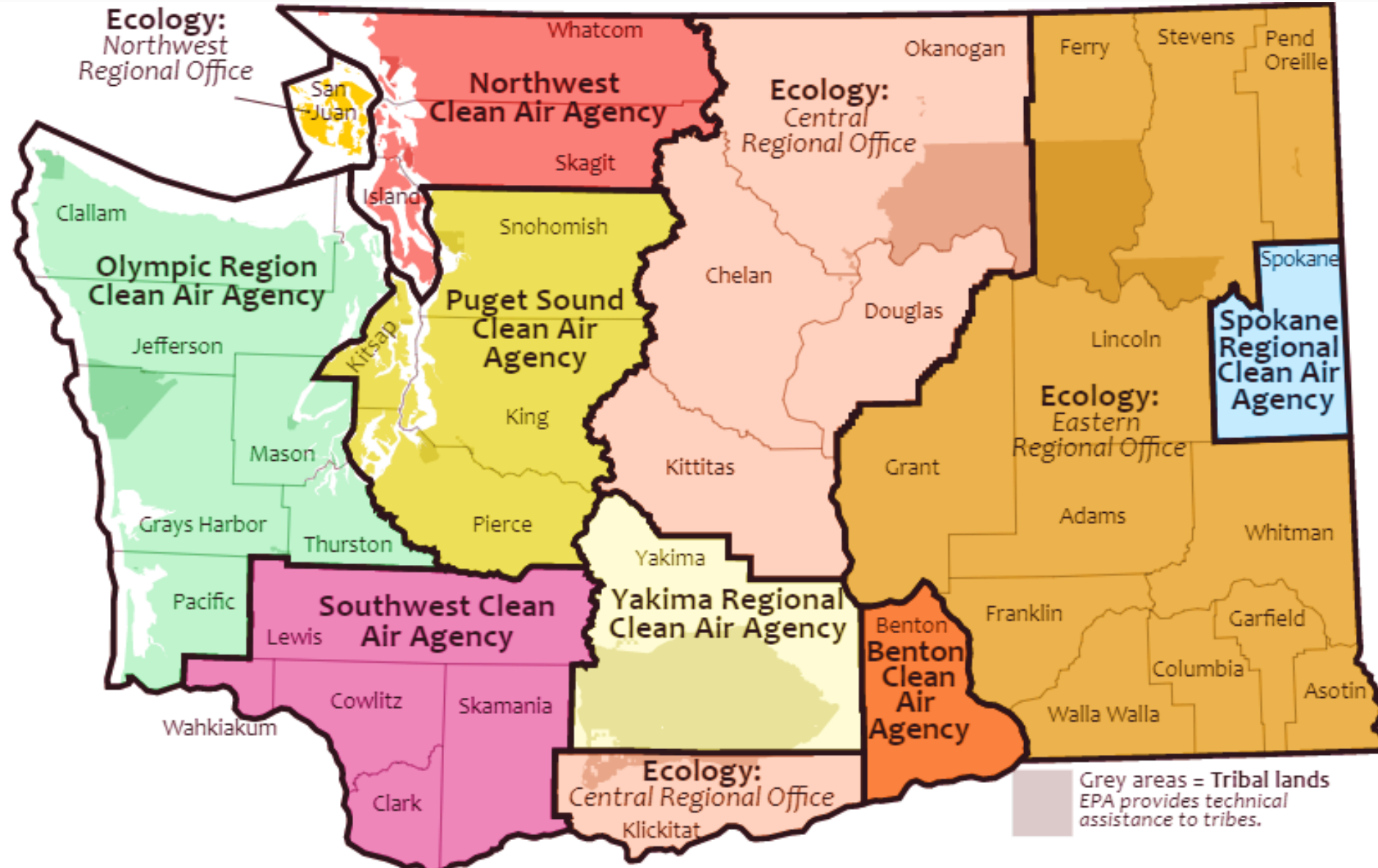


# Determining Applicability

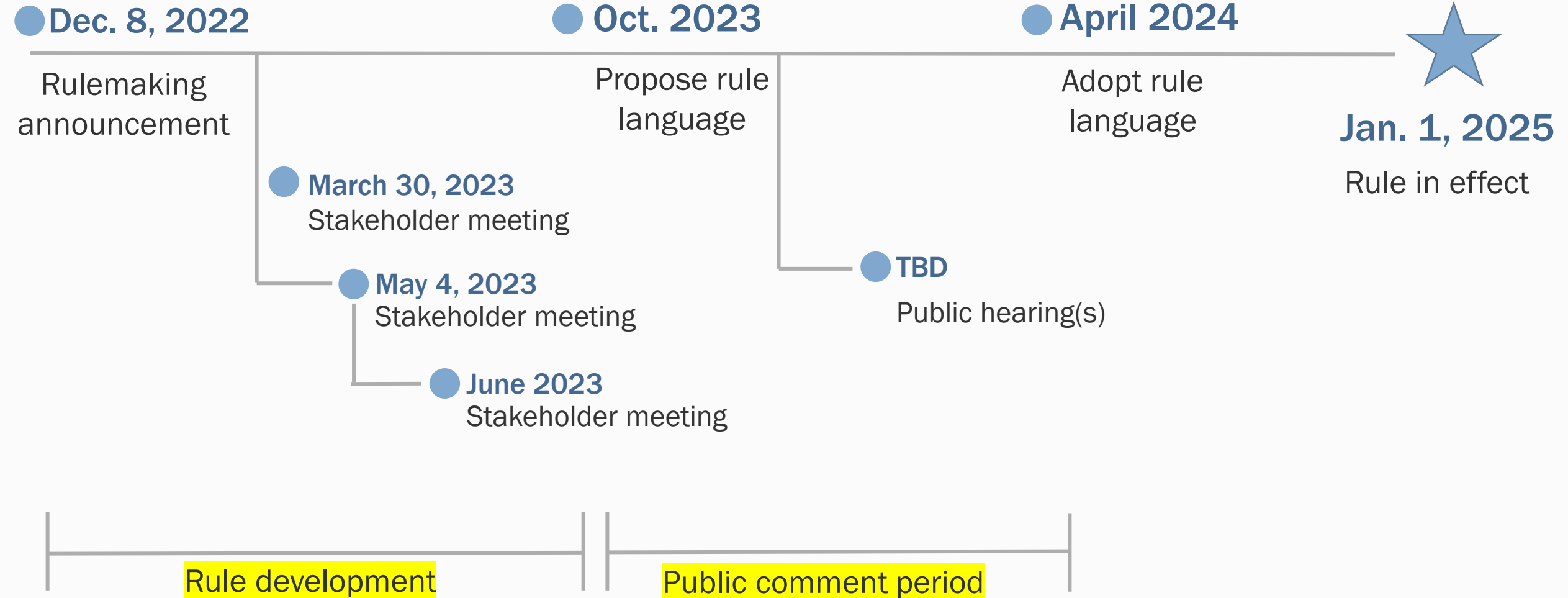
## RCW 70A.540.110

- The department or local authority may request that any owner or operator of a municipal solid waste landfill demonstrate that a landfill does not meet the applicability criteria specified in RCW 70A.540.020.
- Such a demonstration must be submitted to the department or local authority within 90 days of a written request received from the department or local authority.

# Local Clean Air Agencies



# 173-408 Rulemaking Timeline



**Note: Dates are subject to change**





# Questions





**10-minute break**



# Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- Establishes requirements concerning closed and abandoned hazardous waste sites.
- Authorizes short-term and long-term environmental remedial actions.
- National list includes some landfills in Washington.

# CERCLA Draft Definitions

- “CERCLA regulated landfill” means the portion of a municipal solid waste landfill that has been designated as on-site for purposes of a CERCLA response action(s).
- “CERCLA response action” means a removal or remedial action conducted pursuant to 42 USC Sections 9604, 9606, 9620, 9621, or 9622.
- “On-site” has the same meaning as set forth in 40 CFR 300.400(e)(1).

# Draft CERCLA Exemption Process

## Documentation

- CERCLA documentation, map, and additional information as needed to establish that landfill meets criteria for exemption

## Criteria

- CERCLA response actions must be active.
- The owner must demonstrate that complying with the rule would compromise the CERCLA action.
- CERCLA response requires installation or modification of a GCCS that captures methane.

# Inert and Non-Decomposable Waste

"Inert waste or non-decomposable waste(s)" has the same meaning as "inert waste" in WAC 173-350-100.

Inert waste(s) means waste that is allowed to be received at an inert waste landfill as described in WAC 173-350-410.

## **According to Washington regulation:**

"These standards apply to landfills that receive only the following types of solid waste if the waste has not been tainted, through exposure from chemical, physical, biological, or radiological substances, such that it presents a threat to human health or the environment greater than that inherent to the material."

## **Examples:**

Cured concrete  
Asphaltic materials  
Brick and masonry  
Ceramic materials  
Glass  
Stainless steel and aluminum

# Comments on determining applicability to this rule

# Submit Comments Online

- The informal public comment period for Chapter 173-408 WAC is open March 30, 2023 – June 30, 2023.
- Ecology will not respond to comments received during the informal comment period.
- Ecology will respond to comments received during the formal public comment period.



# Next Steps

## **Stakeholder meeting: May 4, 2023**

- Definitions
- Reporting and recordkeeping requirements
- Input on draft rule language

## **Stakeholder meeting: June 2023 (date/time TBD)**

- Input on draft rule language
- Monitoring methods
- GCCS requirements

## **Stakeholder meeting: (TBD, if needed)**

- Input on draft rule language
- GCCS requirements

# Ecology Contacts

## Rulemaking

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## Meetings and Communications

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**Thank you**

## **Rulemaking**

<https://ecology.wa.gov/Regulations-Permits/Laws-rules-rulemaking/Rulemaking/WAC-173-408>

## **Statute**

<https://app.leg.wa.gov/RCW/default.aspx?cite=70A.540&full=true>

## **Informal comments**

<https://aq.ecology.commentinput.com/?id=CsSje>

**More  
Information**