DEPARTMENT OF ECOLOGY
State of Washington

Landfill Methane Emissions Chapter 173-408 WAC

Air Quality Program

June 21, 2023

Meet the Panel

Nick Bourgault – Community Outreach and Engagement Specialist

Bill Flagg – Rulemaking Lead

Catherine Lucke – Technical Lead

Philip Gent – Air Quality Engineer

Bill Harris – Solid Waste Engineer

Lynnette Haller – Air Quality Engineer

Topics of Discussion

1. Review of previous meetings
2. Reporting
3. Certification and notification
4. Monitoring
5. Gas collection and control
6. Test methods
7. Alternative compliance
8. Economic analysis
9. Feedback and next steps

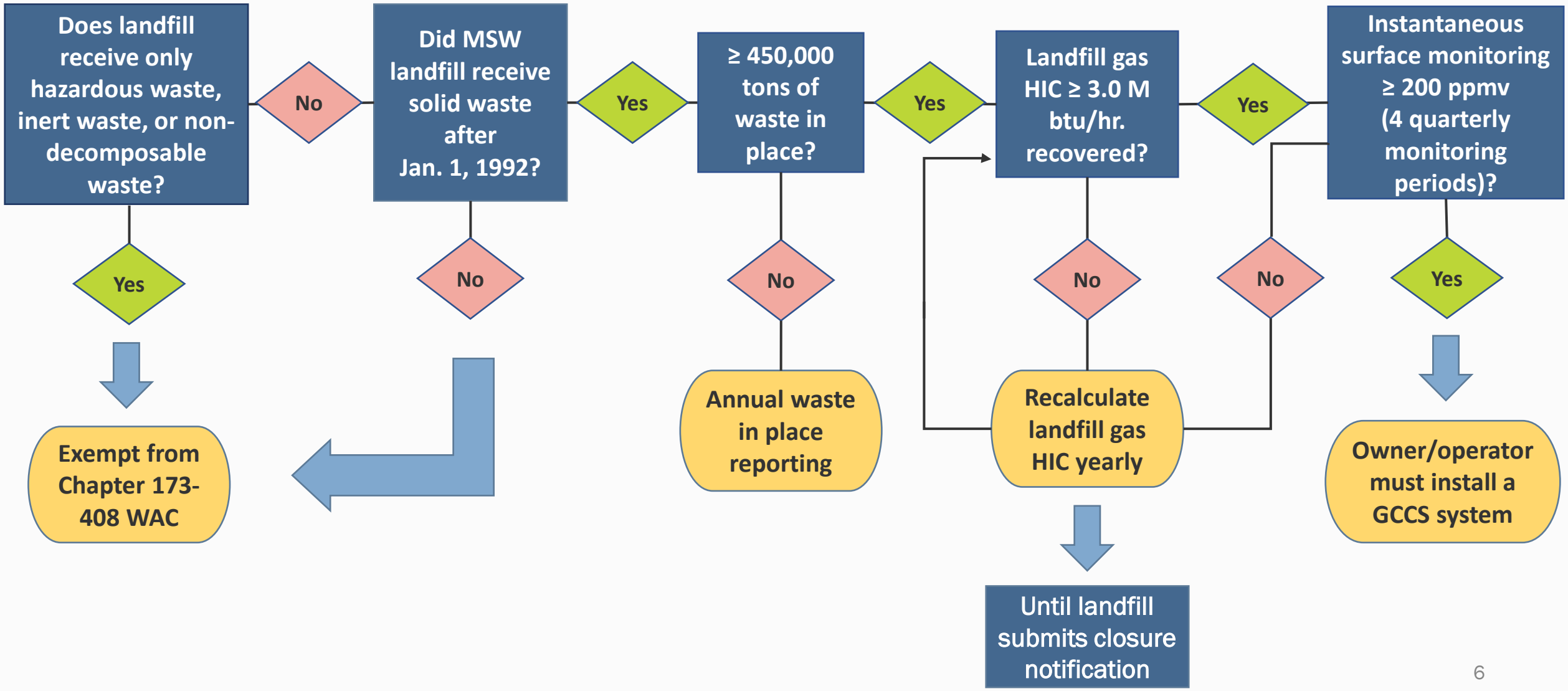
Purpose

- 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.

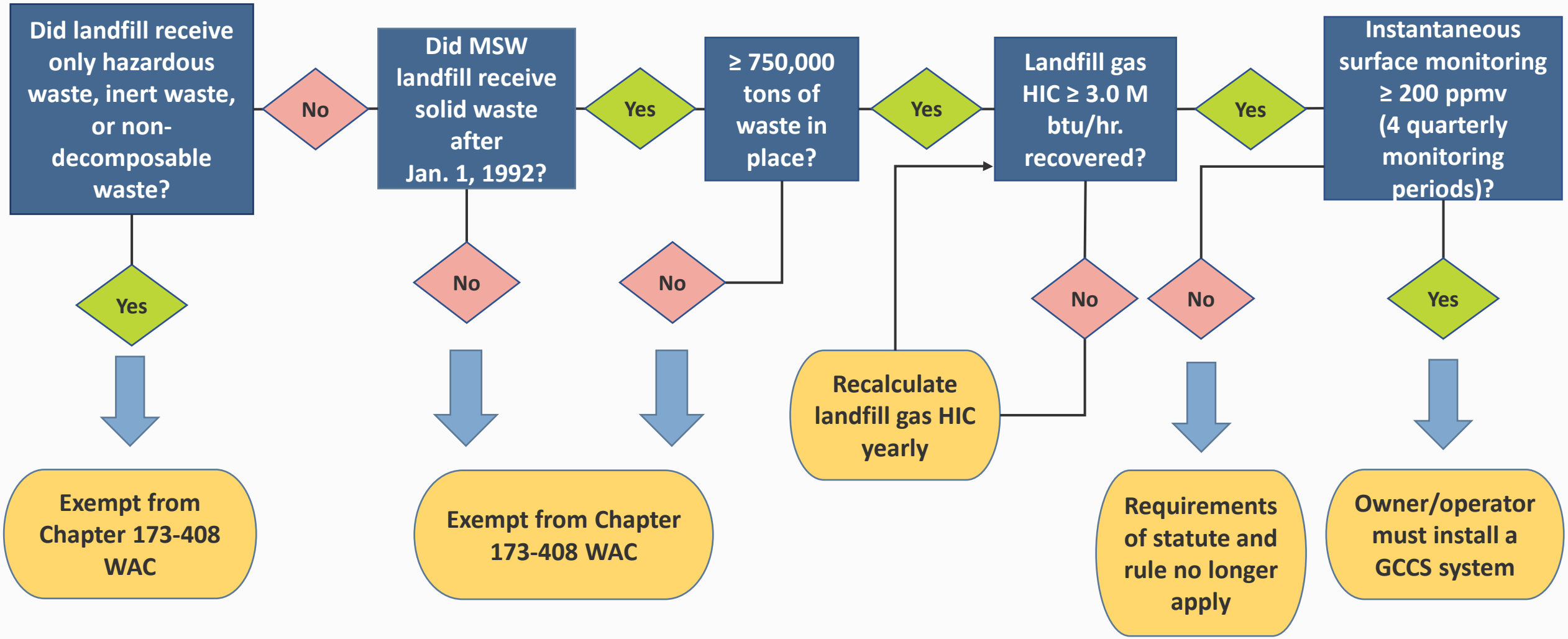
Review of March 30 and May 4 Meetings

- Rule applicability
- Recordkeeping requirements
- Reporting requirements

Applicability – Active MSW Landfills



Applicability – Closed MSW Landfills



Proposed Recordkeeping Requirements

DEPARTMENT OF ECOLOGY
State of Washington

Landfill Operations

- Waste in place
- Annual solid waste acceptance rate/current WIP
- Areas excluded from collection system
- Nature, location, amount, and date of deposition of non-degradable waste
- Landfill surface disturbance
- Records of disturbance activities, time/date, location, mitigation measures

Methane

- Methane exceedances
- Instantaneous surface readings of 200 ppmv or greater
- 500 ppmv instantaneous, 25 ppmv integrated, leak location, leak concentration, date/time, mitigation measures, re-monitoring (ppmv concentration), wind speed during sampling
- Monitoring
- Quarterly instantaneous surface monitoring records

GCCS

- Well heads
- Positive gauge pressure wellhead measurements and corrective actions
- Operating parameters
- Combustion temperatures, 50 degrees F or below stack test for 3+ hours
- Individual well shutdowns
- Control device
- Destruction efficiency, stack tests and source tests

Required Reports

Annual Report	Waste in Place Report Landfill Gas Heat Input Capacity Instantaneous Surface Monitoring GCCS Operations
Equipment Removal Report	Within 30 days of well capping or GCCS removal
Closure Notification Report	Within 30 days of ceasing to accept waste

Proposed Annual Reporting Requirements

- The reports must be prepared for the period of January 1 through December 31 of each year, and be submitted as part of an annual report on April 1 of the subsequent year. In each report, the following information must be included:
  - MSW landfill name, owner and operator, address, and Facility/Site ID (FS ID) number
  - Most recent topographic map, at a minimum, of the site showing the areas with final cover and a geomembrane, and the areas with final cover without a geomembrane with corresponding percentages over the landfill surface

Draft rule language for review and feedback

Initial Waste in Place Report

WAC 173-408-050(1) Waste in place reporting

Each owner or operator of a MSW landfill that received solid waste after January 1, 1992 must submit an initial waste in place report pursuant to **WAC 173-408-110(2)(a).**

WAC 173-408-110(2)(a)

Initial Waste in Place Report: Each owner or operator of a MSW landfill that meets the requirements of **WAC 173-408-050(1)** must submit an initial waste in place report. The report must be submitted within 90 days of the effective date of this chapter.

Initial Heat Input Capacity Report

WAC 173-408-060(1) Landfill gas heat input capacity (HIC)

Each owner or operator of an active MSW landfill having greater or equal than 450,000 tons of waste in place or a closed MSW landfill having greater than or equal to 750,000 tons of waste in place must submit an initial landfill gas HIC report to the local authority pursuant to **WAC 173-408-110(2)(b).**

WAC 173-408-110(2)(b)

Initial Landfill Gas Heat Input Capacity Report: Any owner or operator of a MSW landfill subject to the requirements of **WAC 173-408-060(1)** must calculate the landfill gas HIC, using the procedures specified in **WAC 173-408-090(2),** and submit the calculation to the local authority. The calculation must be submitted within 90 days of the effective date of this chapter.

Certification

WAC 173-408-045

Any application form, report, compliance certification, or other information submitted pursuant to this chapter shall contain the following written certifications made and signed by the person making the submission:

- "I certify under penalty of perjury under the laws of the state of Washington that I am duly authorized to make this submission on behalf of the party that is required to provide the information contained therein pursuant to Chapter 173-408 WAC."

- "I certify under penalty of perjury under the laws of the state of Washington that, based on information and belief formed after reasonable inquiry, all statements and information contained in the submitted document are true, accurate, and complete."

Notifications

WAC 173-408-046

Any communications required by this chapter must be in a format acceptable to the local authority.

Monitoring Requirements

- To determine applicability to rule: **RCW 70A.540.030**
  - 4 consecutive quarterly monitoring periods - 200 ppmv methane threshold (instantaneous)

- MSW landfills with a GCCS: **RCW 70A.540.050**
  - 500 ppmv instantaneous surface monitoring
  - Average concentration of 25 ppmv integrated surface monitoring

Proposed Monitoring Requirements

WAC 173-408-070

- The owner or operator of a MSW landfill with a gas collection and control system (GCCS) **must conduct quarterly instantaneous or integrated surface monitoring of the landfill surface.**
- A surface monitoring design plan must be developed that includes a topographical map, at a minimum, with the monitoring traverse, exempt areas, and the rationale for any site-specific deviations, and must be available upon request from the local authority.
- The owner or operator of a MSW landfill must notify the local authority **within 72 hours of any exceedance and resulting corrective actions taken.** The owner or operator of a MSW landfill may request alternative compliance measures to this section.

Exceedances and Re-Monitoring

Owner or operator must record the date, location, and **value of each exceedance**, along with re-test dates and results. The location of each exceedance must be clearly marked and identified on a topographic map, at a minimum, of the MSW landfill, drawn to scale with the location of both the grids and the gas collection system clearly identified.

Within 10 calendar days of a measured exceedance, corrective action must be taken by the owner or operator such as, but not limited to, cover maintenance or repair, or well vacuum adjustments and the grid must be re-monitored.

- If the re-monitoring of the grid shows a second exceedance, additional corrective action must be taken, and **the location must be re-monitored again no later than 10 calendar days** after the second exceedance.
- If the re-monitoring shows a third exceedance, the owner or operator must install a new or replacement well, or an alternative active methane control approved by the local authority, as determined to achieve compliance no later than **120 calendar days after detecting the third exceedance**.

Exceedances: Closed Landfills/Inactive Areas

Any closed MSW landfill, or closed or inactive areas on an active MSW landfill, that has no monitored exceedances of the limits (**500/25 ppmv**) after 4 consecutive quarterly monitoring periods may monitor annually.

- Any exceedances of these limits detected during the annual monitoring **that cannot be remediated within 10 calendar days** will result in a return to quarterly monitoring of the landfill.
- Any exceedances of these limits detected during any compliance inspections will result in a return to quarterly monitoring of the landfill.

An owner or operator of a closed MSW landfill or closed or inactive areas on an active MSW landfill, that can demonstrate that in the three years before the effective date of this chapter that there were no measured exceedances by annual or quarterly monitoring may monitor annually. Any exceedances detected during the annual monitoring **that cannot be remediated within 10 calendar days** will result in a return to quarterly monitoring of the landfill.

GCCS Equipment Monitoring

The owner or operator of a MSW landfill with a GCCS must monitor the gas control system according to the following procedures:

Components containing landfill gas:

- **Must be monitored quarterly for leaks**
- **Component leaks must be tagged and repaired within 10 calendar days.**
- Component leak testing may be conducted prior to scheduled maintenance for:
  - Facilities that combust landfill gas for energy production, or treat it for other beneficial uses

Enclosed flares:

- Temperature monitoring device with continuous recorder (accuracy ± 1 %) in Celsius or Fahrenheit
- At least one gas flow rate measuring device, must record flow at least every 15 minutes

Device other than enclosed flare:

- Provide information describing operation of device, monitoring procedures (monitoring plan)
- Local authority may request specify additional monitoring procedures

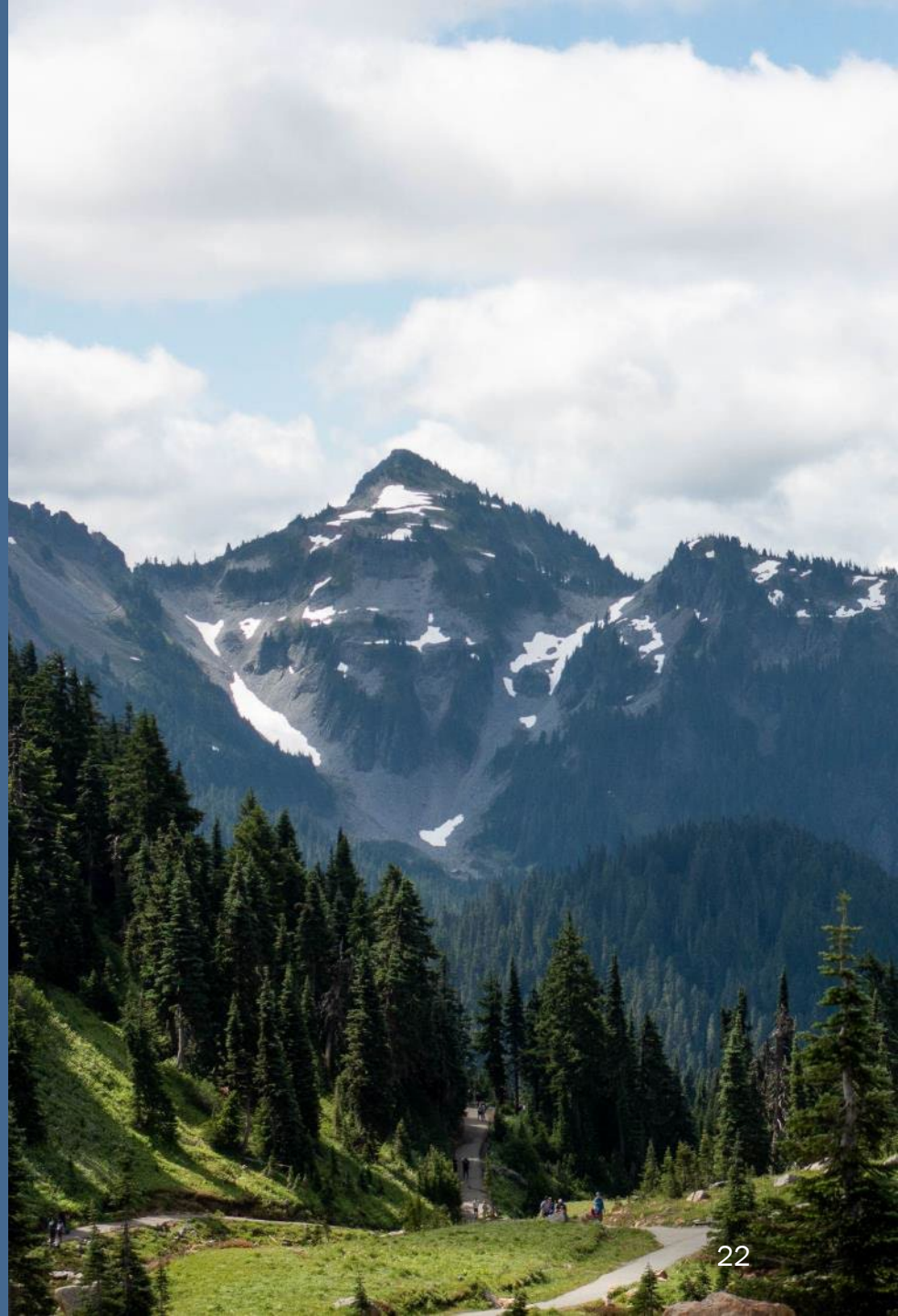
Wellhead Monitoring

The owner or operator of a MSW landfill with a GCCS must monitor each individual wellhead monthly to determine the gauge pressure. If there is any positive pressure reading other than as provided in **WAC 173-408-080(6),** the owner or operator must take the following actions:

- **Initiate corrective action within 5 calendar days of the positive pressure measurement.**
- **If the problem cannot be corrected within 15 days** of the date the positive pressure was first measured, the owner or operator must initiate further action, including, but not limited to, any necessary expansion of the gas collection system, to mitigate any positive pressure readings.
- Corrective actions, including any expansion of the GCCS, must be completed and **any new wells must be operating within 120 days** of the date the positive pressure was first measured.

Questions and comments

- Monitoring frequency
- Exceedance notifications
- GCCS monitoring
- Wellhead monitoring



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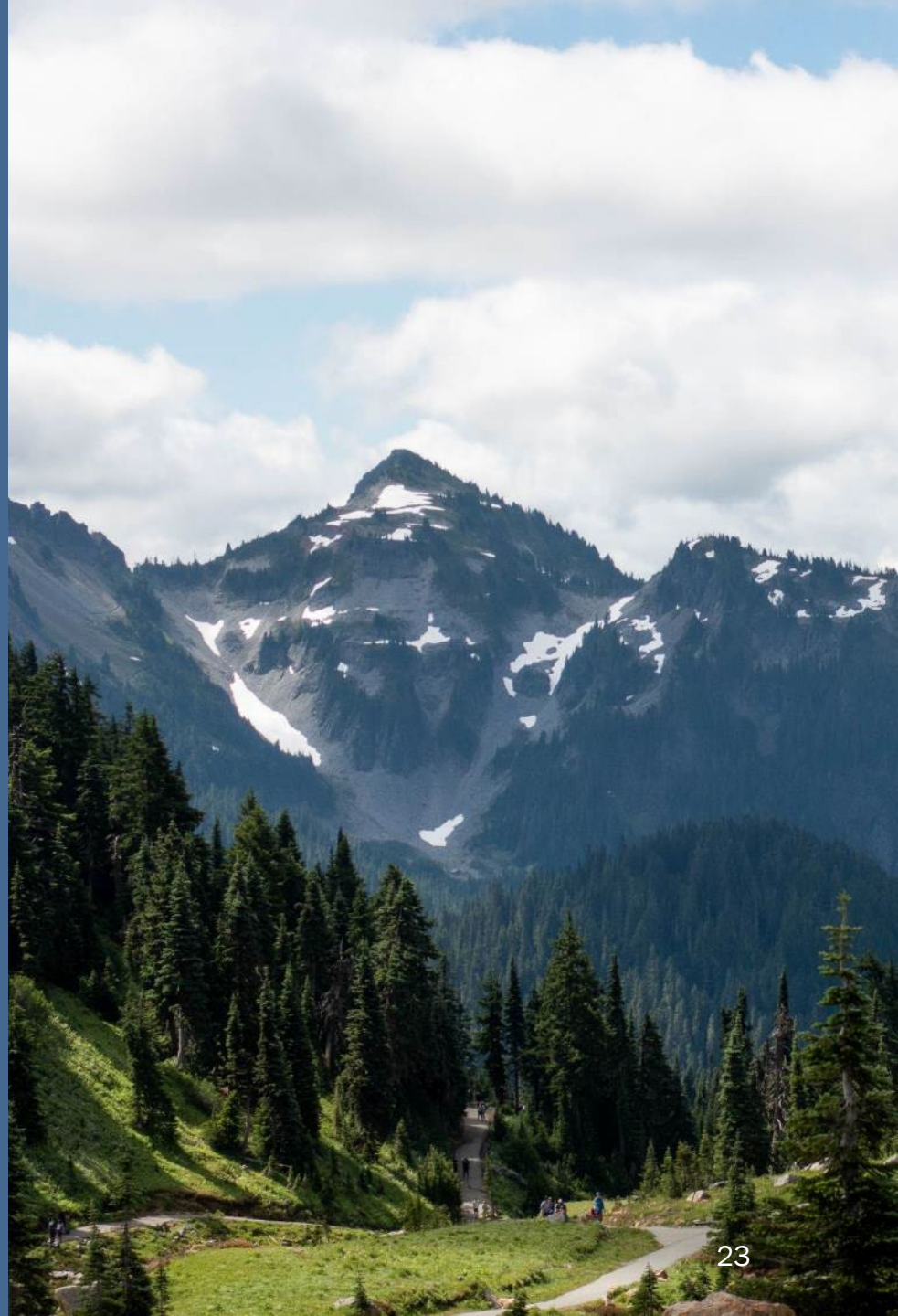


GCCS: Requirements of the Law

WAC 173-408-080

General requirements*:* Any owner or operator of a MSW landfill that exceeds an HIC threshold of greater than or equal to 3,000,000 Btu/hr, unless the owner or operator demonstrates that there is no measured concentration of methane 200 parts per million by volume or greater of methane using the instantaneous monitoring methods specified in **WAC 173-408-090(3)(b),** must install a GCCS.

If a MSW landfill partners with a third party to operate all or a portion of the GCCS or energy recovery device, the obligation to comply with the requirements of this chapter are the responsibility of the owner or operator of the relevant portion of the GCCS or energy recovery device.

Design Plan General Requirements

Design plan and installation: If a GCCS which meets the requirements of either **WAC 173-408-080(3), WAC 173-408-080(4), or WAC 173-408-080(5)** has not been installed, the owner or operator of a **MSW landfill must submit a Design Plan to the local authority within one year** after the effective date of this subchapter, or **within one year of detecting any leak on the landfill surface exceeding a methane concentration of 200 ppmv.**

The local authority must review and either approve or disapprove the Design Plan within 120 days. The local authority may request that the owner or operator submit additional information as part of the review of the Design Plan.

Design Plan Requirements

- Prepared and certified by a professional engineer
- Provide for the control of the collected gas via an open flare, enclosed flare, or gas control device other than a flare
- Include a description of mitigation measures to prevent the release of methane during installation or preparation of wells, piping, or other equipment, during repairs or the temporary shutdown of gas collection system components, or when solid waste is excavated and moved
- For active MSW landfills, plan must identify areas of the landfill that are closed or inactive.
- The owner or operator must develop acceptable pressure limits for the wellheads and include them in the Design Plan/
- Show GCCS will handle the expected gas generation flow rate from the entire area of the MSW landfill to comply with **500/25 ppmv limits** and **component leak standard of 500 ppmv.**
- Any areas that contain only inert waste or non-decomposable waste(s) may be excluded from gas collection, provided: submits documentation containing the nature, date of deposition, location and amount of inert waste or non-decomposable waste(s) deposited in the area

Design Plan Requirements

- **Any owner or operator of an active MSW landfill must install and operate a gas collection and control system within 18 months after approval of the Design Plan by the local authority.**
- **Any owner or operator of a closed MSW landfill must install and operate a gas collection and control system within 30 months after approval of the Design Plan by the local authority.**
- If an owner or operator is modifying an existing gas collection and control system to meet the requirements of this subchapter, the existing Design Plan must be amended to include any necessary updates or addenda, and must be certified by a professional engineer.
- An amended design plan must be submitted to the local authority within 90 days of any event that requires a change to the Design Plan.
- The gas collection system must be operated, maintained, and expanded in accordance with the procedures and schedules in the approved Design Plan.
- Must include any proposed alternatives to the requirements, test methods, procedures, compliance measures, monitoring, and recordkeeping or reporting requirements

Operational Requirements

WAC 173-408-080(3): The owner or operator must satisfy the following requirements when operating a GCCS:

- Route the collected gas to a gas control device or devices, and operate the GCCS continuously except as provided in **WAC 173-408-080(7), WAC 173-408-080(8), and WAC 173-408-080(9).**
- Operate the GCCS so that there is no landfill gas leak that exceeds, 500 ppmv, measured as methane, at any component under positive pressure.
- The gas collection system must be designed and operated to draw all the gas toward the gas control device or devices.

Requirements: Enclosed Flares

WAC 173-408-080(4)(a)

- **Achieves a methane destruction efficiency of at least 99% by weight**
- Is equipped with automatic dampers, an automatic shutdown device, a flame arrester, and continuous recording temperature sensors
- During restart or startup, there must be sufficient flow of propane or commercial natural gas to the burners to prevent unburned collected methane from being emitted to the atmosphere.
- The gas control device must be operated within the parameter ranges established during the initial or most recent source test.

Requirements: Open Flares

WAC 173- 408-080(4)(b)

- **The open flare must meet the requirements of 40 C.F.R. Sec. 60.18 (as last amended 73 Fed. Reg.78209, December 22, 2008);**
- **An open flare installed and operating prior to December 31, 2022 may operate until January 1, 2032**, unless the owner or operator demonstrates to the satisfaction of the department or local authority that the landfill gas heat input capacity is less than 3,000,000 British thermal units per hour and is insufficient to support the continuous operation of an enclosed flare or other gas control device; and
- The owner or operator may temporarily operate an open flare during the repair or maintenance of the gas control system, or while awaiting the installation of an enclosed flare, or to address offsite gas migration issues. **Any owner or operator seeking to temporarily operate an open flare must submit a written request to the local authority.**

Requirements: Other Control Devices

If a GCCS routes the collected gas to an energy recovery device or devices:

- **Must achieve a methane destruction efficiency of at least 97 percent by weight,**
- Exception: Lean-burn internal combustion engines that were installed and operating prior to January 1, 2022, methane concentration < than 3,000 ppmv, dry basis corrected to 15% oxygen; and
- If a boiler or a process heater is used as the gas control device, the landfill gas stream must be introduced into the flame zone, except that where the landfill gas is not the primary fuel for the boiler or process heater, introduction of the landfill gas stream into the flame zone is not required.
- The gas control device must be operated within the parameter ranges established during the initial or most recent source test.

If a GCCS routes the collected gas to a treatment system for processing and sale:

- **Must ensure the system achieves a methane leak rate of 3% or less by weight.**
- Venting of processed landfill gas to the ambient air is not allowed.
- If the processed landfill gas cannot be routed for subsequent sale or use, then it must be flared.

Source Test Requirements

- **An initial source test must be conducted within 180 days of initial start-up of the GCCS.**
- If a gas control device is currently in compliance with source testing requirements as of June 9, 2022, **the owner or operator must conduct the source test no less frequently than once every 5 years.**
- If a gas control device is currently not in compliance with source testing requirements as of June 9, 2022, or if a subsequent source test shows the gas control device is out of compliance, **the owner or operator must conduct the source test no less frequently than once per year until two subsequent consecutive tests both show compliance.**
  - Upon two subsequent consecutive compliant tests, the owner or operator may return to conducting the source test no less frequently than once every 5 years.

Wellhead Gauge and Well Raising

WAC 173-408-080(6): Each wellhead must be operated under a vacuum (negative pressure), except as provided in WAC **173-408-080(7), WAC 173-408-080(8)** and **WAC 173-408-080(9),** or under any of the following conditions:

- Use of a geomembrane or synthetic cover; or
- A decommissioned well

WAC 173-408-080(7): The requirements of sections **WAC 173-408-080(3)(a), WAC 173-408-080(3)(b), and WAC 173-408-080(6),** do not apply to individual wells involved in well raising, provided the following conditions are met:

- New fill is being added or compacted in the immediate vicinity around the well.
- Once installed, a gas collection well extension is sealed or capped until the raised well is reconnected to a vacuum source.

Repairs and Temporary Shutdown of GCCS

WAC 173-408-080(8)

The requirements of sections WAC 173-408-080(3)(a), WAC 173-408-080(3)(b), and WAC 173-408-080(6) do not apply to individual landfill gas collection system components that must be temporarily shut down to repair or modify components of the gas collection system, to connect new landfill gas collection system components to the existing system, to extinguish landfill fires, or if the MSW landfill engages in construction, active mining, or law enforcement activities, provided the following requirement is met;

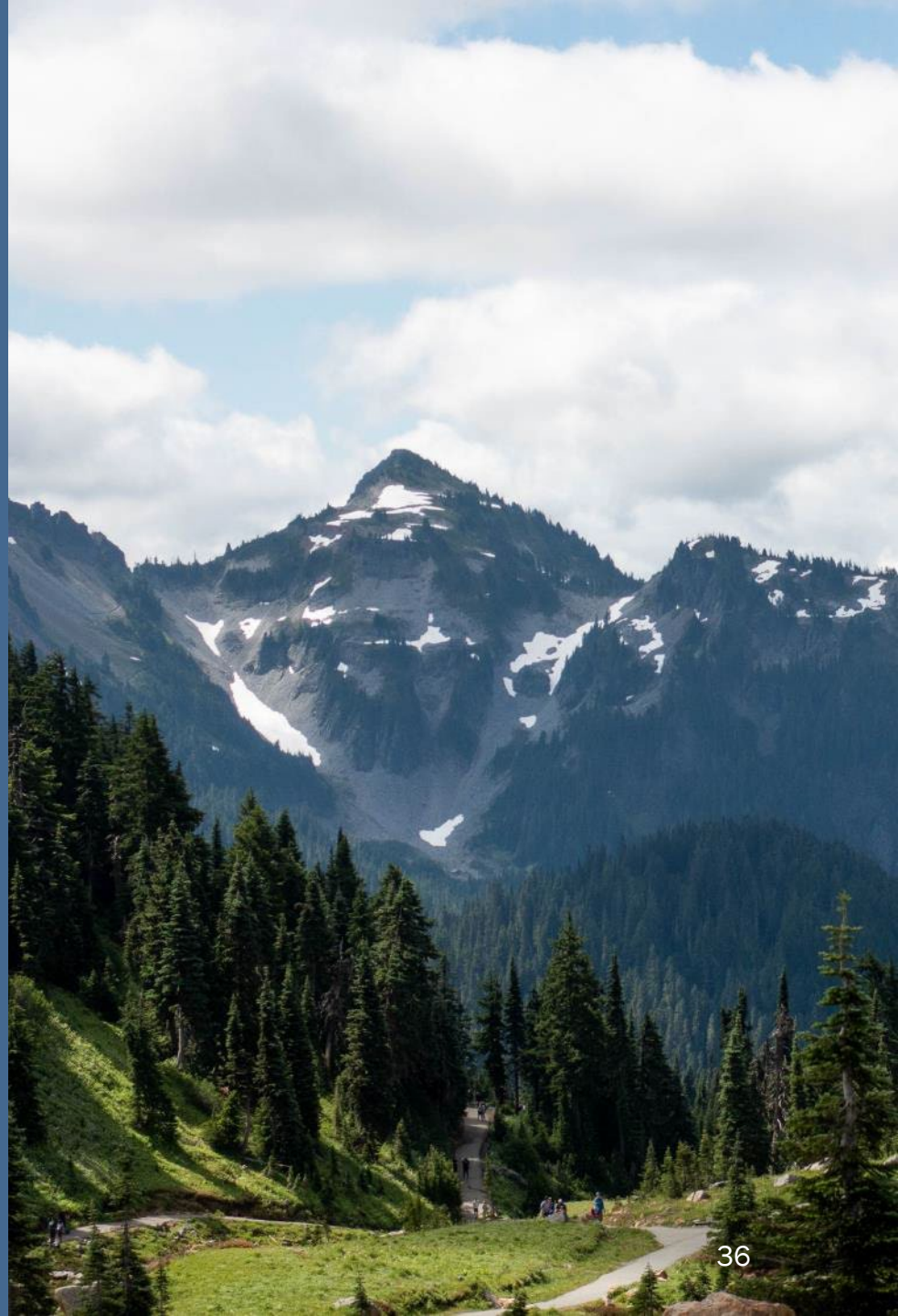
- Methane emissions are minimized/mitigated during shutdown as described in Design Plan.

Permanent Shutdown/Removal of GCCS

- **GCCS was in operation for at least 15 years,** unless owner or operator can demonstrate to the local authority that due to declining methane rates the MSW landfill will be unable to operate the GCCS for a 15-year period.
- Surface methane concentration measurements do not exceed 500/25 ppmv.
- The owner or operator submits an Equipment Removal Report to the local authority.
- The owner or operator of the landfill that has capped or removed a GCCS **must conduct surface emissions monitoring over the portion of the landfill with the capped or removed GCCS for at least 8 consecutive calendar quarters** after the GCCS is capped or removed. Surface monitoring must comply with the following requirements:
  - The walking grid in **WAC 173-408-090(3)(a)(ii)** may be increased to 100-foot spacing so long as the walking grid is offset by 25 feet each quarter so that **by the end of one year of monitoring, the entire surface area has been monitored every 25 feet;**
  - If there is any measured concentration of methane from the surface of the closed landfill that exceeds 500/25 ppmv, the owner or operator must restart the operation of the GCCS.

Questions and comments

- Design plan
- Flares
- Source tests
- Wellheads
- Shutdown/removal of GCCS



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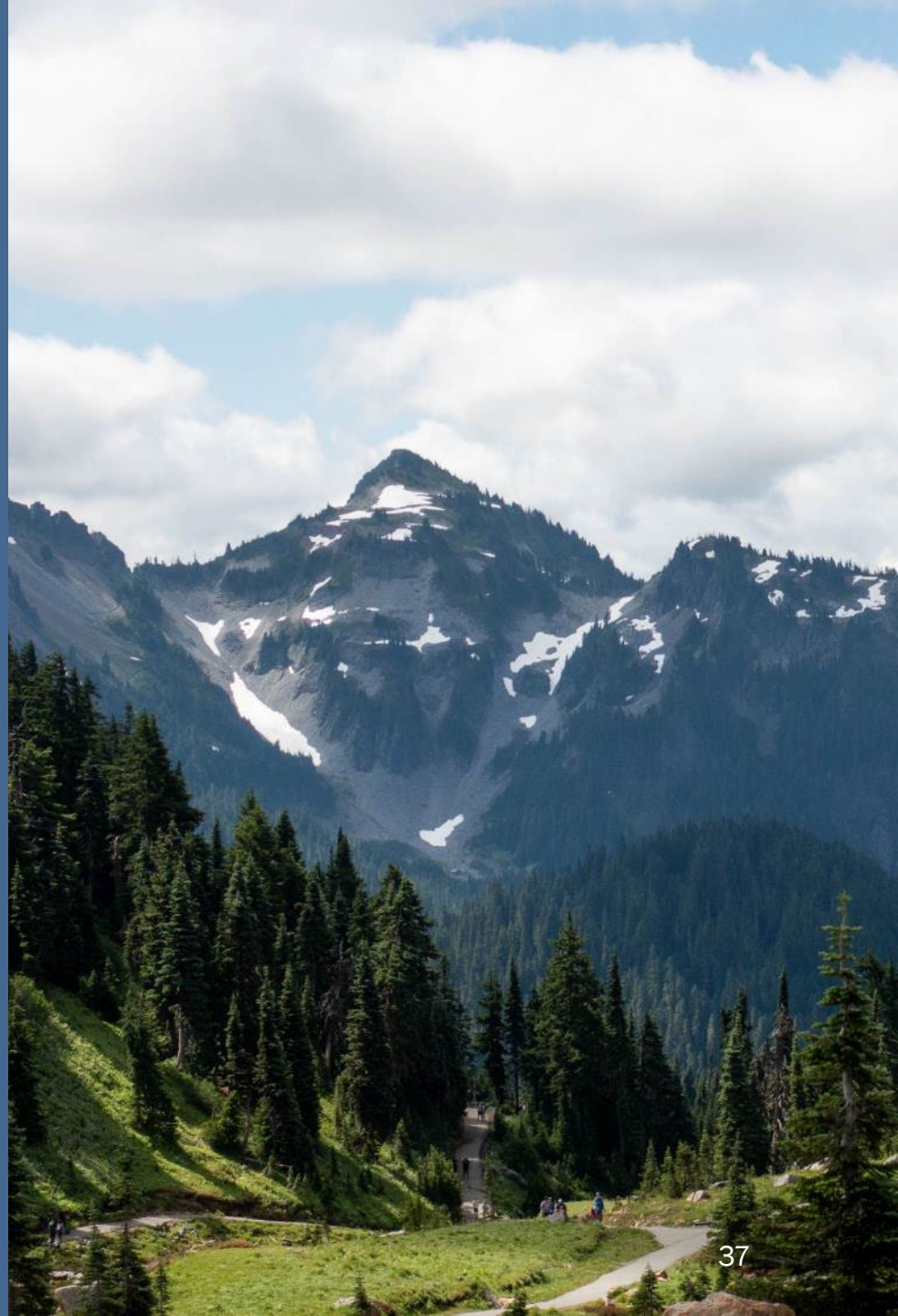


Test Methods and Procedures

WAC 173-408-090(1)

Hydrocarbon Detector Specifications: Any instrument used for the measurement of methane must be a Hydrocarbon detector or other equivalent instrument approved by the local authority that meets the calibration, specifications, and performance criteria of either:

- EPA reference Method 21, Determination of Volatile Organic Compound Leaks, 40 CFR Part 60, Appendix A (as last amended 65 Fed.Reg. 61744 (October 17, 2000)), which is incorporated by reference herein, except for the following:
  - Methane replaces all references to volatile organic compounds (VOC)
  - The calibration gas shall be methane
- Other approved EPA test methods with concurrent local authority approval

Determination of Landfill HIC

WAC 173-408-090(2)(a)

MSW Landfills without Carbon Adsorption or Passive Venting Systems: The HIC must be calculated using the procedure as specified in Appendix I.

Additional information may be requested as necessary to verify the heat input capacity from the MSW landfill. Site-specific data may be substituted when available.

Determination of Landfill HIC

WAC 173-408-090(2)(b)

MSW Landfills with Carbon Adsorption Systems: The landfill gas HIC must be determined by measuring the actual total landfill gas flow rate, in standard cubic feet per minute (scfm), using a flow meter or other flow measuring device such as a standard pitot tube and methane concentration (percent by volume) using a hydrocarbon detector meeting the requirements of **WAC 173-408-090(1).**

The total landfill gas flow rate must be multiplied by the methane concentration and then multiplied by the gross heating value (GHV) of methane of 1,012 Btu/scfm to determine the landfill gas heat input capacity.

Determination of Landfill HIC

WAC 173-408-090(2)(c)

MSW Landfills with Passive Venting Systems: The landfill gas HIC must be determined pursuant to both of the following and is the higher of those determined values:

- **WAC 173-408-090(2)(a);** and
- The owner or operator must measure actual landfill gas flow rates (scfm) by using a flow measuring device such as a standard pitot tube and methane concentration (percent by volume) using a hydrocarbon detector meeting the requirements of **WAC 173-408-090(1)** from each venting pipe that is within the waste mass.
- Each gas flow rate must then be multiplied by its corresponding methane concentration to obtain the individual methane flow rate. The individual methane flow rates must be added together and then multiplied by the GHV of methane of 1,012 Btu/scfm to determine the landfill gas heat input capacity.

Surface Emissions Monitoring

WAC 173-408-090(3)(a)

Monitoring Area: The entire landfill surface must be divided into individually identified 50,000 square foot grids. The grids must be used for both instantaneous and integrated surface emissions monitoring.

- Testing must be performed by holding the hydrocarbon detector's probe within 3 inches of the landfill surface while traversing the grid.
- The walking pattern must be no more than 25-foot spacing intervals and must traverse each monitoring grid.
  - If the owner or operator has no exceedances of 500/25 ppmv after any four consecutive quarterly monitoring periods, the walking pattern spacing may be increased to 100-foot intervals.
  - Must return to 25-foot spacing intervals upon any exceedances of 500/25 ppmv that cannot be remediated within 10 calendar days.

Surface Emissions Monitoring

WAC 173-408-090(3)(a)

If an owner or operator can demonstrate that in the past three years before the effective date of this chapter that there were no measured exceedances of 500 ppmv by annual or quarterly instantaneous surface emissions monitoring, the owner or operator may increase the walking pattern spacing to 100-foot intervals.

- Must return to 25-foot spacing intervals upon any exceedances of 500/25 ppmv that cannot be remediated within 10 calendar days.
- Demonstration must prove that instrument used for methane detection meets **WAC 173-408-090(1)** requirements.

Instantaneous Surface Monitoring

WAC 173-408-090(3)(b)
The owner or operator must record any instantaneous surface readings of methane 200 ppmv or greater, other than non-repeatable, momentary readings.

- Surface areas of the MSW landfill that exceed a methane concentration limit of 500 ppmv must be marked and remediated pursuant to **WAC 173-408-070(1)(a).**
- The landfill surface areas with cover penetrations, distressed vegetation, cracks, or seeps must also be inspected visually and with a hydrocarbon detector that meets the requirements of **WAC 173-408-090(1).**
- The wind speed must be recorded during the sampling period.

Integrated Surface Monitoring

WAC 173-408-090(3)(c)

- Integrated surface readings must be recorded and then averaged for each grid.
- Individual monitoring grids that exceed an average methane concentration of 25 ppmv must be identified and remediated pursuant to **WAC 173-408-070(1)(b).**
- The wind speed must be recorded during the sampling period.

GCCS Leak Procedures and Gas Generation Flow Rate

WAC 173-408-090(4)

The owner or operator of a MSW landfill must measure leaks using a hydrocarbon detector meeting the requirements of **WAC 173-408-090(1).**

WAC 173-408-090(5)

The expected gas generation flow rate must be determined as prescribed by the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, Chapter 3, which is incorporated by reference herein, using a recovery rate of 75 percent.

Control Device Destruction Efficiency

WAC 173-408-090(6)

Enclosed Combustors: One of the following test methods must be used to determine the efficiency of the control device in reducing methane by at least 99 percent, or in reducing the outlet methane concentration for lean burn engines to less than 3,000 ppmv, dry basis, corrected to 15 percent oxygen:

- EPA Reference Method 18
- EPA Reference Method 25
- EPA Reference Method 25A
- EPA Reference Method 25C

The following equation must be used to calculate destruction efficiency:

$$Destruction\ Efficiency\ = \left[1 - \left(\frac{Mass\ of\ Methane - Outlet}{Mass\ of\ Methane - Inlet}\right)\right] x\ 100\%$$

Open Flares: Open flares must meet the requirements of 40 CFR § 60.18 (as last amended 73 Fed.Reg. 78209 (December 22, 2008).

Gauge Pressure and Alternative Test Methods

WAC 173-408-090(7)

Determination of Gauge Pressure: Gauge pressure must be determined using a hand held manometer, magnehelic gauge, or other pressure measuring device approved by the local authority. The device must be calibrated and operated in accordance with the manufacturer's specifications.

WAC 173-408-090(8)

Alternative Test Methods: Alternative test methods may be used if they are approved in writing by the local authority pursuant to **WAC 173-408-120.**

Alternative Compliance Measures

DEPARTMENT OF ECOLOGY State of Washington

WAC 173-408-120

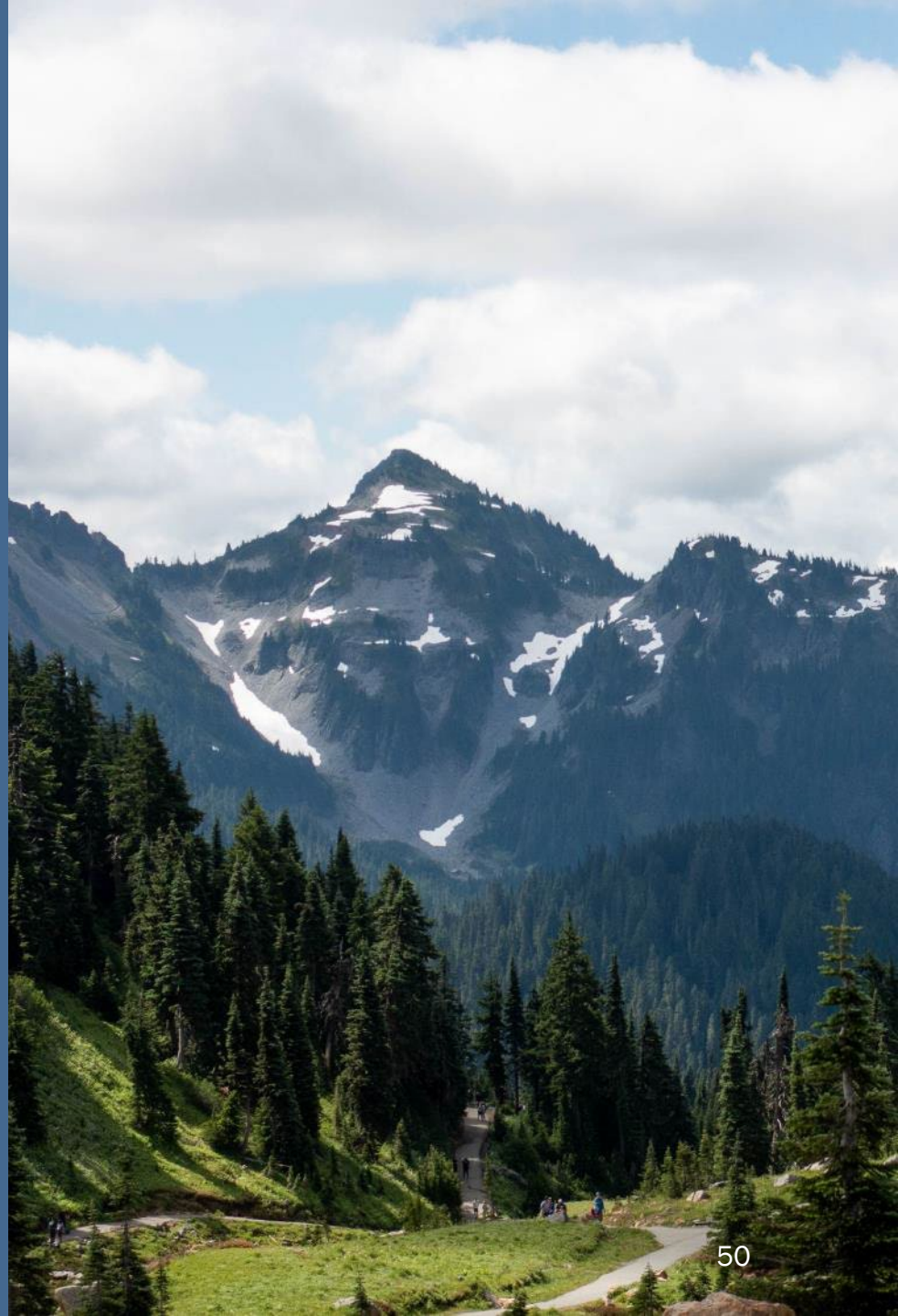
The owner or operator of a MSW landfill may request alternatives to the compliance measures, monitoring requirements, and test methods and procedures set forth in **WAC 173-408-070, WAC 173-408-080, and WAC 173-408-090.** Any alternatives requested by the owner or operator must be submitted in writing to the local authority.

The local authority must review the requested alternatives, and either approve or disapprove the alternatives within 120 days. The department may request that additional information be submitted as part of the review of the requested alternatives.

The department must deny a request for alternative compliance measures if the request does not provide levels of enforceability or methane emissions control that are equivalent to those set forth in this chapter.

Questions and comments

- Heat input capacity
- Surface emissions monitoring
- Gas flow rate
- Destruction efficiency
- Gauge pressure



Administrative Procedure Act and Regulatory Fairness Act

- The likely **benefits of the rule must exceed the likely costs.** This includes quantified and qualitative impacts.
- The rule **requirements must be the least burdensome** (to parties required to comply) that achieve the goals and objectives of the authorizing statute.
- Ecology must take all legal and feasible steps to **reduce disproportionate costs on small businesses.**

Questions for Economic Analysis

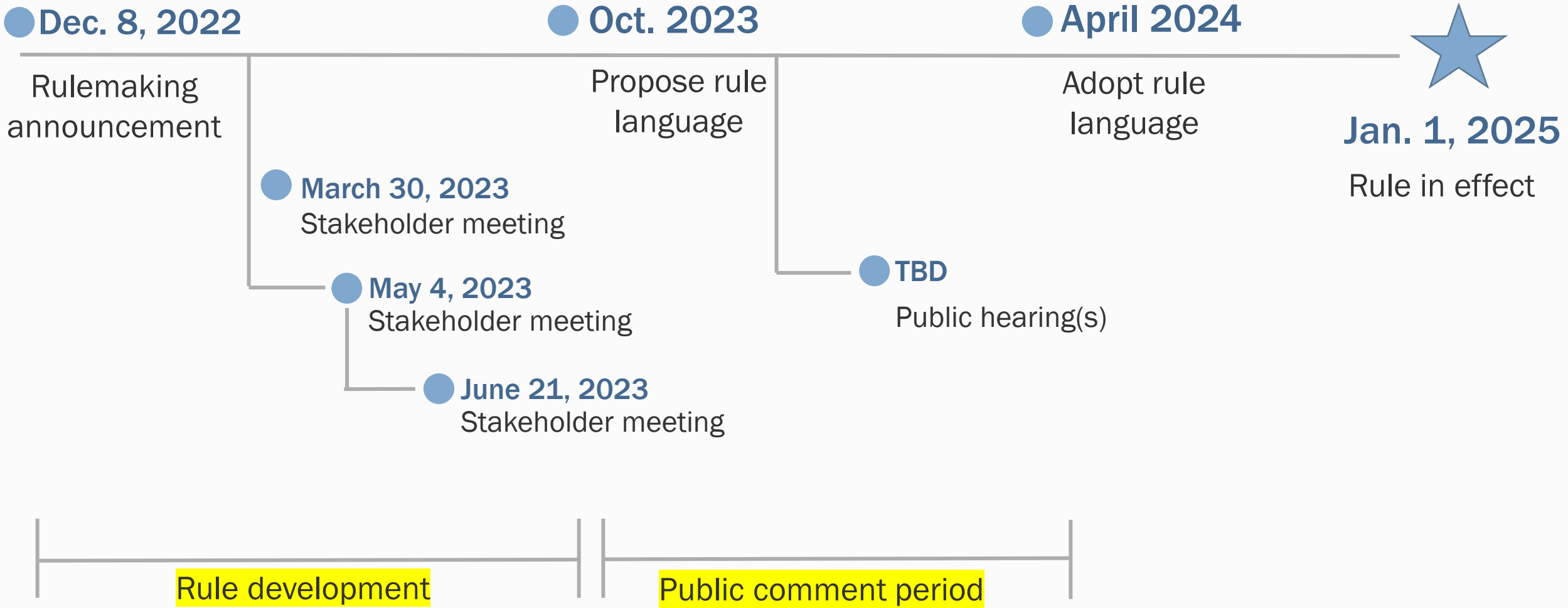
How would the rule change affect you?

- How would it impact your capital, labor, or administrative expenses?
- How would it impact your revenue stream?
- How would it provide specific benefits?

Are you a small business or a local government?

- How would it affect your ability to comply with the rule?

WAC 173-408 Rulemaking Timeline



Note: Dates are subject to change

Next Steps

1. Comment period extended through July 21, 2023
2. Economics Survey: July 10, 2023 – August 2023
3. Economic Analyses: August 2023 – October 2023
4. Propose rule: October 2023

Ecology Contacts

Rulemaking

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Meetings and Communications

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More Information

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

Economic analyses
https://ecology.wa.gov/Footer/rulemaking/Economics-analyses

Questions

Thank you