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DEPARTMENT OF ECOLOGY
State of Washington

Washington State Landfill Methane Emissions Reduction Grant Program

DRAFT Grant Guidelines

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Background

Methane is a potent greenhouse gas with more than 80 times the warming power of carbon dioxide over the first 20 years after it reaches the atmosphere. This gas is produced in landfills by decomposing organic material, such as food scraps, cardboard, and yard trimmings. If there are no systems in place to capture these methane emissions, the gas escapes into the atmosphere, accelerating the warming that leads to climate change. In Washington, landfills are a significant source of methane emissions. Ecology's most recent GHG inventory from 2019 reported methane emissions from landfills composed approximately 2% of the state's total GHG emissions that year.

In 2022, the Washington Legislature passed the Landfills-Methane Emissions law [1] and as required by the law, the Air Quality Program adopted a new rule, Chapter 173-408 WAC[2] – Landfill Methane Emissions. This rulemaking establishes new requirements for active and closed municipal solid waste landfills (MSW) to reduce emissions of methane.

The State Legislature appropriated $15M from Climate Commitment Act[3] funds to help owners and operators of MSW landfills comply with the new requirements. In 2024, the capital budget was amended and requires approximately $5 million to help fund Cowlitz PUD in building a methane treatment and processing facility, co-located at the Cowlitz County landfill. The remaining funds are being disbursed through the Landfill Methane Emissions Reduction Grant[4] program.

[1] Codified into law as Chapter 70A.540 RCW: Landfills – Methane Emissions

[2] https://ecology.wa.gov/Regulations-Permits/Laws-rules-rulemaking/Rulemaking/WAC-173-408

[3] The Landfill Methane Emissions Reduction Grant is supported with funding from Washington's Climate Commitment Act. The CCA supports Washington's climate action efforts by putting cap-and-invest dollars to work reducing climate pollution, creating jobs, and improving public health. Information about the CCA is available at www.climate.wa.gov

[4] https://ecology.wa.gov/LFmethane

Eligibility

Eligible applicants

- Municipal solid waste landfill owners and operators subject to applicability of Chapter 70A.540 RCW and required to meet the compliance obligations outlined in Chapter 173-408 WAC. Applicability of compliance obligations will be determined through initial waste in place reporting as required under Chapter 173-408-170.
- Tribal Governments that own and operate a municipal solid waste landfill[5]

Eligible projects

Eligible projects must address compliance with methane emission requirements established in Chapter 70A.540 RCW and Ecology's implanting rules outlined in Chapter 173-408 WAC.

Eligible Costs

All costs must be necessary for, and directly connected to meeting the compliance obligations outlined in Chapter 173-408 WAC. Any costs incurred prior to the start date of a signed grant agreement will be ineligible. Installation of landfill gas collection and control components purchased and installed before the grant start date is ineligible.

Examples of eligible reimbursable costs include:

- Engineering and project design: preparation and site surveys; permits and fees
- Purchase and installation or repairs of landfill gas collection and control components
- Purchase of equipment to conduct emissions monitoring
- Engineers contracted to perform monitoring and/or reporting

Examples of ineligible, non-reimbursable costs include:

- Construction or general maintenance of buildings
- Administrative costs
- Operating costs

[5] Landfills located on Tribal lands are exempt from this law and rule, but tribes may opt to meet the requirements of the law and apply for funds to assist the purchase of landfill gas collection and control components.

Project funding levels

Project funding levels have not been determined. Project funding levels may be informed by input from stakeholders on estimated project costs.

Landfills are unique and complex systems, each with an individual set of needs, and therefore costs, to meet the compliance requirements under the new law (Chapter 70A.540 RCW) and implanting rule (Chapter 173-408 WAC). We seek input to understand if estimated project costs align with needs.

Estimated costs (detailed information is welcome):

- Design plan preparation:
  - $11,000 - $15,000
- Surface monitoring design plan:
  - $5,000
- New enclosed flare:
  - $245,000 - $395,000
- New monitoring system for flare:
  - $80,000+
- Gas collection and control components:
  - Costs vary greatly depending on need. Seeking input on expected costs for different system components.
- Monitoring equipment:
  - Costs vary greatly depending on need and available technology. Seeking input on expected costs for monitoring needs.
- Any additional project costs that may be associated with compliance not already listed.

Scoring Criteria

An Ecology evaluation committee will use the competitive scoring criteria below to score and rank applications meeting the screening criteria of eligible applicants.

Ecology will evaluate applications based on the following scoring criteria:

1. **Environmental Health Disparities (30% of total score): 50 points**

   Projects will be awarded the following points based on the location of the landfill using the Washington Tracking Network's "Environmental Health Disparities" Index (Information by Location | Washington Tracking Network (WTN)[6] and the Climate & Economic Justice Tool[7].

Sub criteria	Point value
Environmental health disparities score of 9 or 10 ***Or*** identified as disadvantaged on the Climate & Economic Justice Screening Tool ***Or*** is on Tribal Lands	50
EHD score 8	25
EHD score 7	15
EHD score 1-6	0

2. **Landfill status (30% of total score): 50 points**

   Project points will be awarded based on the operational status of the landfill site where the project will occur.

Sub criteria	Point value
Publicly or tribally owned and operated, closed landfill	50
Privately owned and operated, closed landfill	40
Closed landfill with access to existing or supplemental revenue stream to assist with financial obligations.	30
Open landfill	20

[6] https://doh.wa.gov/data-and-statistical-reports/washington-tracking-network-wtn/information-location
[7] https://screeningtool.geoplatform.gov/en/about#3/33.47/-97.5

3. **Landfill gas collection and extraction (15% of total score):**
   Project points will be awarded based on the status of landfill gas collection and extraction system.

   Projects meeting the requirements of sub criteria A are not eligible for points in sub criteria B.

Sub criteria A	**Point value**
Landfill gas collection system lacks **all** landfill gas extraction components to meet required system performance standards**.** No wells or collectors in place - landfill gas is not controlled by a traditional gas collection system with horizontal and vertical wells.	25

   Projects that do not meet the requirements of sub criteria A (above) will be awarded points from sub criteria B (below), as applicable. Points for sub criteria B are cumulative, with 23 total points possible.

Sub criteria B	**Point value**
Landfill gas collection in place, but extraction components are not constructed of an approved material or is not of suitable dimensions as outlined in WAC 173-408-080(3) subsection (d).	5
Wells and horizontal collectors require servicing or retrofitting to allow gas entry and migration to meet the gas flow requirements.	3
Landfill gas collection in place, but location and/or condition of components do not meet the requirements outlined in WAC 173-408-080(3) subsection (e).	4
Landfill gas collection recovery rate is below 75% and new wells must be installed.	4
Landfill gas collection components in place, but header pipes and connector assembly are non-functioning or missing components required to meet performance standards.	3
Landfill gas collection system requires replacement or installation flow equipment components to meet required system performance standards.	4
Cumulative points possible for this section	**23**

4. **Landfill gas control (15% of total score)**
   Project points will be awarded based on the status of landfill gas control system.

Projects meeting the requirements of sub criteria A are not eligible for points in sub criteria B.

Sub criteria A	Point value
No Landfill gas control components installed.	25

Projects that do not meet the requirements of sub criteria A (above) will be awarded points from sub criteria B (below), as applicable. Points for sub criteria B are cumulative, with 23 total points possible.

Sub criteria B	Point value
Landfill gas is routed to flare, but flare is not the correct size to achieve required landfill gas destruction efficiency rate.	7
Flare requires the replacement or installation of operational components to achieve required destruction efficiency.	6
Open flare in place but does not meet requirements outlined in WAC 173-408-080(4) subsection (b).	7
Flare is not in compliance with source testing requirements as of June 9, 2022.	3
Cumulative points possible for this section	**23**

5. **Monitoring (10% of total score)**
   Project points will be awarded based on monitoring requirements. Points are cumulative, with 15 total points possible.

Sub criteria	Point value
Prior to the landfills methane emissions law (Chapter 70A.540 RCW), landfill was not required to conduct quarterly surface and component monitoring.	5

Prior to the landfills methane emissions law (Chapter 70A.540 RCW), landfill was not previously required to conduct monthly wellhead monitoring.	5
Current environmental factors prevent landfill from being able to conduct monitoring as required by Chapter 70A.540 RCW. (e.g. addition or replacement of cover materials).	5
Cumulative points possible for this section	**15**