



Preliminary Regulatory Analyses:

Including the:

- Preliminary Cost-Benefit Analysis
- Least-Burdensome Alternative Analysis
- Administrative Procedure Act Determinations
- Regulatory Fairness Act Compliance

Chapter 173-350 WAC, Solid Waste Handling Standards (Organics Management)

By

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For the

Solid Waste Program

Washington State Department of Ecology

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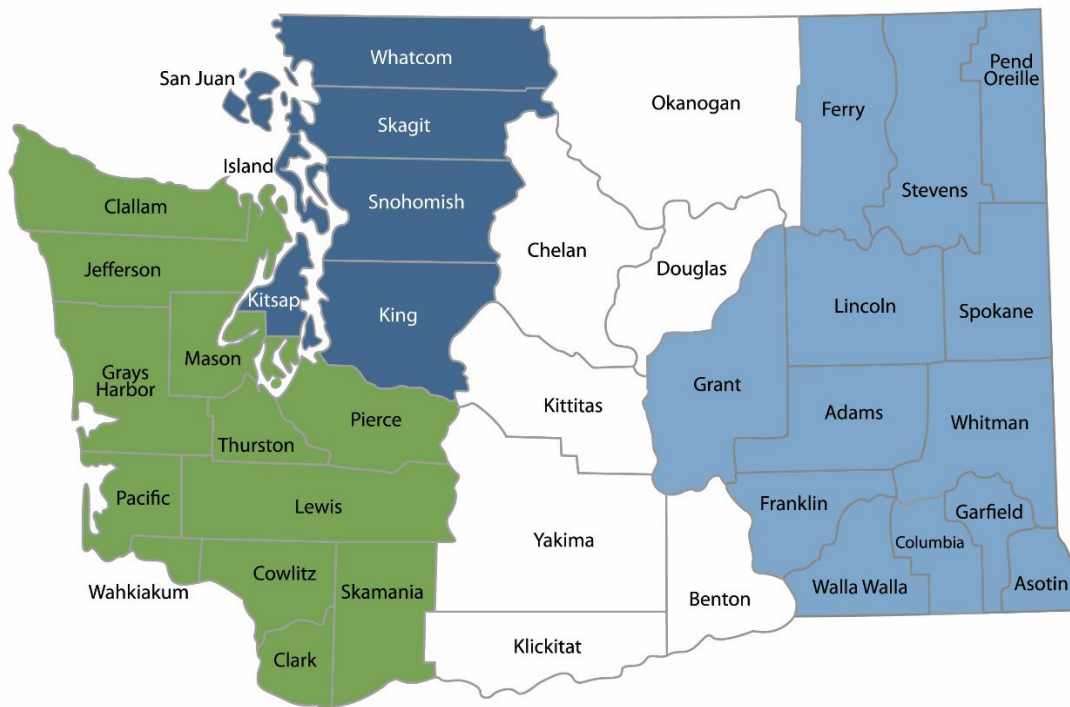
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Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region
360-407-6300

Northwest Region
206-594-0000

Central Region
509-575-2490

Eastern Region
509-329-3400

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Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	P.O. Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	P.O. Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
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*Chapter 173-350 WAC, Solid Waste Handling
Standards (Organics Management)*

Solid Waste Program
Washington State Department of Ecology

Olympia, WA

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DEPARTMENT OF
ECOLOGY
State of Washington

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Abbreviations and Acronyms

APA	Administrative Procedure Act
BOMA	Business Organics Management Area
CBA	Cost Benefit Analysis
EPA	United States Environmental Protection Agency
ORCA	Organics Recycling Collection Area
RCW	Revised Code of Washington
RFA	Regulatory Fairness Act
WAC	Washington Administrative Code

Executive Summary

This report presents determinations made by the Washington State Department of Ecology as required under chapters 34.05 RCW and 19.85 RCW, for the proposed amendments to the Solid Waste Handling Standards rule (chapter 173-350 WAC; the “rule”). This includes:

- Final Cost-Benefit Analysis
- Least-Burdensome Alternative Analysis
- Administrative Procedure Act Determinations
- Regulatory Fairness Act Compliance

The proposed rule amendment was prompted by statutory amendments to RCW 70A.205.540 that directed Ecology to amend solid waste handling permit requirements for organic materials management facilities to address contamination associated with incoming food waste feedstocks and finished products. Ecology proposes to address that statutory mandate through the proposed rule amendment. Ecology is proposing other amendments in addition to those with an explicit statutory mandate. Many of the chapters focused on requirements for organic materials management facilities have not been substantively updated since 2013.

The proposed rule amendments would:

- Clarify requirements for recyclable materials containers
- Clarify that an organics management facility does not own a load they rejected
- Create, revise, or clarify definitions
- Create organic materials pre-processing standards
- Limit feedstock physical contamination to 5% prior to organic materials management
- Revise organic solid waste permit exemptions
- Clarify exemptions at permitted facilities
- Standardize training requirements across all organic management facilities
- Revise language for documentation requiring a professional engineer
- Revise testing requirements for finished organic materials
- Reduce physical contaminant limits in finished organic materials
- Create permitting standards for other organic materials handling activities
- Update the rule’s organizational structure, wording, and references

We estimate costs for the proposed rule amendment. Each cost is in terms of the present value over a twenty-year time horizon.

Table 1. Summary of quantified costs

Chapter 3 Section and Description	Estimated Cost
3.2.4 Testing requirement for pre-processors	\$250,675 - \$501,350
3.2.6 Anaerobic digester notification requirement	\$102 - \$918
3.2.6 Dairy digester testing requirement	\$0 - \$88,530
3.2.10 Change in testing frequency for finished organic products	\$112,852 - \$225,604
Total 20-year cost	\$363,629 - \$816,402

In addition to the quantified costs, we described some costs that are not easily quantified, either because they depend on how local health jurisdictions handle permitting or because the cost is indirect. These include costs associated with the following expected impacts:

- Exempt facilities would need to resubmit notification to address new criteria
- Approximately eight pre-processing facilities would need to amend permits
- Amendments to exemptions that would increase regulatory requirements could discourage prospective growth or development of new organic materials management facilities

We estimate the quantified benefit of the proposed rule amendment as between \$607,186 and \$1,214,372 based on a reduction in training costs as described in section 4.2.7.

In addition to the quantified benefits, we described numerous benefits that are not easily quantified. Many of these are benefits without a readily discernible value or that are sufficiently prospective or indirect that they are not amenable to quantification.

General benefits across several parts of the proposed rule amendment include:

- Increase clarity of the rule and rule requirements for individuals, businesses, and government agencies.
- Notification, testing, operation, and reporting requirements to protect the environment, consumers, and public health.

Benefits to organic materials management facilities from particular amendments include:

- Reduction in market uncertainty, through:
 - Clarifying that a facility does not own a load they rejected
 - Establishing a 5% physical contaminant limit by volume for any material that has already been pre-processed
 - Limiting incoming feedstocks to 5% physical contamination by volume at organic materials management facilities
- Reduction in regulatory uncertainty, including the regulatory status of:
 - Organic materials pre-processing facilities
 - Other organic materials management facilities
- New or expanded permit exemptions for:
 - On-farm meat processing waste
 - On-farm composting of land-clearing and yard debris
- Increase consumer confidence and demand for finished organic products through:
 - Additional testing requirements

- Reduction in allowable physical contaminants –while the magnitude of the benefit is uncertain, we estimate a plausible 1% increase in the value of finished organic products to have a benefit of at least \$7 million

We conclude, based on a reasonable understanding of the quantified and qualitative costs and benefits likely to arise from the proposed rule amendments, as compared to the baseline, that the benefits of the proposed rule amendments are greater than the costs.

We assessed alternative proposed rule content and determined whether they met the goals and objectives of the authorizing statute(s). We considered the following alternative rule requirements and did not include them in the proposed rule amendments as they would either not meet the goals and objectives of the authorizing statute or not be the least burdensome alternative.

- Set incoming physical contamination standard based on weight
- Set a lower incoming physical contamination limit
- Set incoming physical contamination limit for pre-processors
- Requirement to recover inorganic recyclable materials
- No incoming contamination limit for organic materials management facilities
- Raise the limit for exemptions
- Align training requirements with existing composter training requirements
- Add a recovery rate to organic materials pre-processors
- Align sampling requirements
- Exclude primate waste as an eligible feedstock for zoo composting

We used the REMI E3+ model for Washington State to estimate the impact of the quantified estimates of costs and benefits presented in chapter 3 and 4 of this document, respectively, on directly affected markets, accounting for dynamic adjustments throughout the economy. The model accounts for economic linkages to simulate how the direct impacts of the rule might affect the larger Washington economy. We run two model simulations: a low net benefit scenario that uses the maximum cost estimate and the minimum benefit estimate, as well as a high net benefit scenario that uses the minimum cost estimate and the maximum benefit estimate.

Expected impacts of the quantified aspects of the proposed rule amendment on the Washington economy are summarized by the expected impacts to overall full-time equivalent employment and the value of the total economic output of the state economy. In the near-term, the impact on total economic output for the state across the two simulations was between a seven thousand dollar decrease and a 42 thousand dollar increase each year. The longer-term equilibrium after twenty years estimates an annual total impact on the Washington economy between a 24 thousand dollar decrease and a 74 thousand dollar increase. Neither simulation predicted an impact on jobs over the course of a twenty-year time horizon.

Table 2. Summary of job and economic impacts

Industry	Initial Jobs Impact	Jobs Impact in 20 years	Initial output impact	Output impact in 20 years
Whole state	0	0	-7 - +42	-24 - +74
Waste management and remediation services	0	0	-1 - +8	-7 - +17

Simulations in the REMI model only account for the benefits and costs quantified in the analysis. It does not include benefits that we did not quantify, such as improvements to the environment or public health or an increase in demand for finished organic products. It also does not include indirect impacts that we were not able to quantify. Many of the expected impacts of the proposed rule amendment are highly indirect, and they depend on how the organic management industry evolves in response to the proposed rule amendment alongside changes in organics recycling due to organics management laws. Many of the precise impacts will be a function of how individual businesses decide to operate to meet the requirements of both rule and statute in a way that is not realistically quantifiable.

Chapter 1: Background and Introduction

1.1 Introduction

This report presents the determinations made by the Washington State Department of Ecology as required under chapters 34.05 RCW and 19.85 RCW, for the proposed Solid Waste Handling Standards rule (chapter 173-350 WAC; the “rule”) amendments. This includes the:

- Preliminary Cost-Benefit Analysis
- Least-Burdensome Alternative Analysis
- Administrative Procedure Act (APA) Determinations
- Regulatory Fairness Act (RFA) Compliance

The Washington APA (RCW 34.05.328(1)(d)) requires Ecology to evaluate significant legislative rules to “determine that the probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the law being implemented.” Chapters 1 - 5 of this document describe that determination.

The APA also requires Ecology to “determine, after considering alternative versions of the rule...that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives” of the governing and authorizing statutes. Chapter 6 of this document describes that determination.

The APA also requires Ecology to make several other determinations (RCW 34.05.328(1)(a) - (c) and (f) - (h)) about the rule, including authorization, need, context, and coordination. Appendix A of this document describes these determinations.

The Washington RFA (chapter 19.85 RCW) requires Ecology to evaluate the relative impact of proposed rules that impose costs on businesses in an industry. It compares the relative compliance costs for small businesses to those of the largest businesses affected. Chapter 7 of this document describes that analysis, when applicable.

All determinations are based on the best available information at the time of publication. We encourage feedback (including specific data) that may improve the accuracy of this analysis.

1.1.1 Background

As of 2024, more than 1.5 million tons of organic material is collected per year in the state of Washington for recovery.² The overwhelming majority of this material is processed at compost facilities. Despite this volume of material handled by organic materials management facilities, roughly 2.1 million tons of organic waste in the state was disposed in landfills, including over

² Waste Generation and Recovery Data available for 2024, accessed through <https://ecology.wa.gov/research-data/data-resources/solid-waste-recycling-data>

587 thousand tons of vegetative food waste.³ Organic material entering a landfill is a source of methane emissions, a potent greenhouse gas contributing to climate change and its consequent economic impacts. The EPA estimates that the 587 thousand tons of food waste entering the landfill would contribute about 384 thousand tons of greenhouse gas emissions,⁴ costing an estimated \$125 million,⁵ compared to composting the same material.

In an effort to decrease the amount of landfilled organic material, the Washington legislature passed a series of Organics Management Laws between 2020 and 2023, intending to expand organics management to additional households and businesses throughout the state. The goals include a 75 percent reduction in the amount of organic waste going to the landfill by 2030 compared to 2015 levels.

With the opportunities that come from expanded organics management, there are also challenges that this rule is meant to address. Among these challenges is the volume of physical contaminants in organic material collected for management. A physical contaminant is any unwanted material that is not recyclable or does not readily decompose as part of the organic materials management process, and can include things like plastics, glass, metal, and treated wood.

Physical contaminants can be a serious issue for organic materials management facilities. One report estimates that over 20% of facility costs are related to decontaminating incoming material.⁶ Some facilities report spending more than \$45 on decontamination for each ton of material they receive.⁷ Other states, such as California and Massachusetts, that have required large numbers of new customers to separate their organic material from their landfill waste have seen an increase in contamination coming into organic materials management facilities. Organic materials management facilities can reject loads or limit feedstocks due to too much contamination,⁸ which could limit progress towards Washington's goal of limiting organic material going to landfill. In recognition of contamination as a potentially serious issue, the Washington Legislature directed Ecology to address contamination associated with incoming food waste and finished organic products.

1.2 Reasons for the proposed rule amendments

The proposed rule amendment was prompted by statutory amendments to RCW 70A.205.540 that directed Ecology to amend solid waste handling permit requirements for organic materials management facilities to address contamination associated with incoming food waste

³ Estimates using data from 2020-2021, as calculated in Cascadia (2021)

⁴ Expressed in carbon-equivalent emissions as calculated in EPA Waste Reduction Model version 16

⁵ EPA (2023) cost estimate for 348,309 metric tons of carbon dioxide equivalent emissions at a 1.5% near term discount rate is between \$115 million and \$138 million.

⁶ Barry, et al. (2024)

⁷ *Ibid.*

⁸ High profile examples include Rexius in Oregon (Rosengren, 2019) and A1 composting in Colorado (Pyzyk, 2022), both of which stopped accepting compostable packaging after regularly rejecting loads due to contamination.

feedstocks and finished products. Ecology proposes to address that statutory mandate through the proposed rule amendment.

Ecology is proposing other amendments in addition to those with an explicit statutory mandate. Many of the sections focused on requirements for organic materials management facilities have not been substantively updated since 2013. Changes in prevailing technologies and practices since then have created opportunities for Ecology to amend the rule to better meet the environmental, safety, and economic goals of chapter 70A.205 RCW. Ecology has also identified several areas where the rule could be improved based on feedback from owners and operators of regulated facilities, local governments, regulatory agencies, and the public. We go through each proposed rule amendment in turn below.

1.2.1 Clarify requirements for recyclable materials containers

Chapter 70A.205 RCW specifies requirements for containers collecting recyclable materials. The proposed rule amendments are meant to incorporate statutory language and provide standards to help meet the statutory intent.

1.2.2 Clarify that an organics management facility does not own a load they reject

The proposed rule amendments are meant to help resolve any uncertainty about who owns loads that have been rejected by organics management facilities.

1.2.3 Create, revise, or clarify definitions

There has been a need to create new definitions as a result of statutory changes, and to support regulatory amendments. Ecology has identified the need to modify other definitions to improve clarity for owners and operators of organics waste management facilities, their clients, regulatory agencies, and the public.

1.2.4 Create organic materials pre-processing standards

Amendments to chapter 70A.205 RCW are expected to expand residential and commercial organics materials management. Ecology expects an increase in volume from these feedstocks will also increase contamination rates compared to current levels based on similar laws in Washington and across the country. The proposed rule amendment is intended to recognize that organic materials pre-processing is a necessary step in the organics management process for some feedstocks. Organic materials pre-processing has existed in Washington for years, either at an organics management facility or at a material recovery facility, and will likely grow if feedstock contamination increases together with expansions to residential and commercial organic materials management. By creating a distinct permit section that sets requirements for these activities, Ecology intends to achieve contamination reduction standards for incoming

feedstocks prior to processing at an organic materials management facility and to reduce start-up costs by increasing regulatory certainty for these operations.

1.2.5 Limit feedstock physical contamination to 5% prior to organic materials management

Amendments to RCW 70A.205.540 in 2024 direct Ecology to address contamination in incoming organic feedstocks at organic materials management facilities. This limit is meant to protect organics management facilities from the expense of feedstocks that are too contaminated to effectively transform into finished products without initial pre-processing. Together with the pre-processor standards, the proposed rule amendment is meant to reduce the cost of removing contamination at organic materials management facilities, to reduce the number of loads rejected due to contamination, and help maintain the high quality of finished products.

1.2.6 Revise organic solid waste permit exemptions

Based on input from working groups and stakeholders, Ecology recognized that they could make several changes to organic materials management facility permit exemptions to reduce compliance burden and promote economic opportunity for facilities, to reduce environmental and public health risks, and to improve rule clarity.

1.2.7 Clarify exemptions at permitted facilities

Based on feedback from local governments and other stakeholders, Ecology recognized that it was unclear whether, or under what conditions, sites with solid waste permits could also qualify for exemptions from requirements in other sections if the site included activities that were covered under multiple sections. The proposed amendment adds language to each of the rule sections to clarify permitting requirements and exemptions.

1.2.8 Standardize training requirements across all organic management facilities

Based on feedback from stakeholders, Ecology recognized that the training requirements for compost facilities were not aligned with training requirements for other organics management facilities. The proposed amendments standardize these training requirements across organic facility types. It is intended to reduce compliance costs without compromising environmental and public health.

1.2.9 Revise language for documentation requiring a professional engineer

The proposed rule amendment is intended to reduce costs by making it clear that a professional engineer is only required to draft certain parts of a facility's necessary documentation.

1.2.10 Revise testing requirements for finished organic materials

The proposed rule amendments revise the existing testing frequency and reporting requirements for finished organic products to make test reporting more consistent, to demonstrate the consistent quality of organic products, and to be more protective of human and environmental health.

1.2.11 Reduce physical contaminant limits in finished organic products

Amendments to RCW 70A.205.540 in 2024 directed Ecology to address physical contamination in finished organic products. The proposed rule amendments are meant to address the statute and to respond to consumer demand for less contaminated finished products. It is meant to benefit both consumers and producers of finished organic materials by maintaining consumer confidence in product quality despite anticipated increases in finished product volume. The proposal rule amendments are also more protective of the environment and public health.

1.2.12 Create permitting standards for other organic materials handling activities

Technological and industrial changes in organic waste handling, particularly in large-scale vermiculture, has increased the expected demand for permit standards specific to facilities that employ vermiculture, black soldier fly production, and similar operations. The proposed amendment creates standards for these operations.

1.2.13 Update organizational structure, wording, and references

Ecology identified an opportunity to standardize language across different solid waste handling standards. Ecology is proposing consistent organization and wording to all sections that outline requirements for organic materials management facilities. Additional changes are meant to improve organization and update statutory references where those have changed since the last rule amendment.

1.3 Summary of the proposed rule amendments

The proposed rule amendments would:

- Clarify requirements for recyclable materials containers
- Clarify that an organics management facility does not own a load they rejected
- Create, revise, or clarify definitions
- Create organic materials pre-processing standards
- Limit feedstock physical contamination to 5% prior to organic materials management

- Revise organic solid waste permit exemptions
- Clarify exemptions at permitted facilities
- Standardize training requirements across all organic management facilities
- Revise language for documentation requiring a professional engineer
- Revise testing requirements for finished organic materials
- Reduce physical contaminant limits in finished organic materials
- Create permitting standards for other organic materials handling activities
- Update the rule's organizational structure, wording, and references

1.4 Document organization

The chapters of this document are organized as follows:

- **Chapter 2 - Baseline and the proposed rule amendments:** Description and comparison of the baseline (what would occur in the absence of the proposed rule amendments) and the proposed rule requirements.
- **Chapter 3 - Likely costs of the proposed rule amendments:** Analysis of the types and sizes of costs we expect impacted entities to incur as a result of the proposed rule amendments.
- **Chapter 4 - Likely benefits of the proposed rule amendments:** Analysis of the types and sizes of benefits we expect to result from the proposed rule amendments.
- **Chapter 5 - Cost-benefit comparison and conclusions:** Discussion of the complete implications of the cost-benefit analysis.
- **Chapter 6 - Least-Burdensome Alternative Analysis:** Analysis of considered alternatives to the contents of the proposed rule amendments.
- **Chapter 7 - Regulatory Fairness Act Compliance:** When applicable. Comparison of compliance costs for small and large businesses; mitigation; impact on jobs.
- **Appendix A - APA Determinations:** RCW 34.05.328 determinations not discussed in chapters 5 and 6.

Chapter 2: Baseline and Proposed Rule Amendments

2.1 Introduction

We analyzed the impacts of the proposed rule amendments relative to the existing rule, within the context of all existing requirements (federal and state laws and rules). This context for comparison is called the baseline and reflects the most likely regulatory circumstances that entities would face if Ecology does not adopt the proposed rule.

2.2 Baseline

The baseline for our analyses generally consists of existing laws and rules. This is what allows us to make a consistent comparison between the state of the world with and without the proposed rule amendments.

For this rulemaking, the baseline includes:

- Existing chapter 173-350 WAC, Solid Waste Handling Standards rule
- Chapter 70A.205 RCW, Solid Waste Management – Reduction and Recycling

2.2.1 Recent amendments to chapter 70A.205 RCW – Organics Management

The baseline includes anticipated changes to the volume and characteristics of organic material that will be managed by Washington organics management facilities due to statutory requirements.

A new section added by the Washington legislature to chapter 70A.205 RCW in 2022 established the goal of reducing landfill disposal of organic materials by 75 percent by 2030 relative to 2015 levels. To that end, additional amendments to chapter 70A.205 RCW in 2022, 2024, and 2025 require expanded commercial and residential organics management services.

Beginning on July 1, 2023, and every year thereafter, RCW 70A.205.545 requires Ecology to identify Business Organics Management Areas (BOMAs), where businesses must arrange organics management services to reduce organic waste going to landfills. BOMAs are any part of the state where businesses have access to year-round organics materials collection, and those materials are delivered to an organics management facility with capacity to accept increased volumes of organic materials.⁹

As of January 1, 2026, RCW 70A.205.545 requires any business operating within a BOMA that generates at least 96 gallons of organic material waste per week to arrange for organic materials management services specifically for organic waste. The 96-gallon threshold is a

⁹ Ecology (2026)

reduction from 2025 when the limit was four cubic yards (808 gallons), which, in turn, is a reduction from 2024 when the limit was eight cubic yards.

Beginning April 1, 2027, RCW 70A.205.540 will require cities and counties within an Organics Recycling Collection Area (ORCA) to ensure access to year-round organic solid waste collection services to businesses that generate more than 0.25 cubic yards per week of organic materials and to all single-family residences. ORCAs are generally areas with at least 25,000 residents and that disposed of at least 5,000 tons of solid waste in the most recent year, though other exceptions apply as well. Beginning April 1, 2030, food waste must be included as part of organic solid waste collection, and all unwanted organic materials must be collected through organic waste collection services.

A 2025 analysis projected that these statutory amendments would lead to an increase in the amount of material handled by compost facilities; from about one million tons in 2023 to more than three million tons in 2035.¹⁰ While the analysis focused particularly on the compost industry, other forms of organic materials recycling are active in Washington, and Ecology expects those services to be used more as well. We adopted the compost market study numbers in this analysis, but these projected recovery tonnages are applicable to any type of organics management method. Ecology anticipates needing a variety of management methods to most effectively manage this growth in organics recovery. The scale and pace of growth is expected to challenge the processing capacity of Washington's existing organics management facilities.

The feedstocks Ecology anticipates will expand the most are also among the more contaminated; particularly, food waste and mixed food/yard waste from households and businesses in places where organics waste collection is newly required. Ecology's 2022-2023 organics characterization study found that 2.2% of hauler-collected residential organic material by weight was physical contamination. In a similar waste characterization study for 2022, King County identified 7% of residential organic waste, and 10% of non-residential organic waste, by weight as contaminants.¹¹ Most residents of King County have had access to organics collections for years,¹² making it a plausible model for how much contamination there may be in areas of the state where organics collection will become required over the next several years.

The baseline for analyzing the impacts of the proposed rule is not static. We assume that there will likely be an increase in organic waste managed by Washington facilities and that waste will likely become more contaminated with material that cannot be processed by organic management facilities.

¹⁰ Greene Economics (2025)

¹¹ Cascadia Consulting Group (2024)

¹² Seattle, King County's largest city, has required organics collection for all residents since 2011 and prohibited food waste in garbage since 2015. While Seattle organic material management is not included in the King County report, they are a leader in the region and other local governments often enact similar standards.

2.3 Proposed rule amendments

The proposed rule amendments would:

- Clarify requirements for recyclable materials containers
- Clarify that an organics management facility does not own a load they rejected
- Create, revise, or clarify definitions
- Create organic materials pre-processing standards
- Limit feedstock physical contamination to 5% prior to organic materials management
- Revise organic solid waste permit exemptions
- Clarify exemptions at permitted facilities
- Standardize training requirements across all organic management facilities
- Revise language for documentation requiring a professional engineer
- Revise testing requirements for finished organic materials
- Reduce physical contaminant limits in finished organic materials
- Create permitting standards for other organic materials handling activities
- Update the rule's organizational structure, wording, and references

2.3.1 Clarify requirements for recyclable materials containers

Baseline

RCW 70A.205.010 states as one of the purposes of the chapter:

“To provide for the adoption and enforcement of basic minimum performance standards for solid waste handling, including that all sites where recyclable materials are generated and transported from shall provide a separate container for solid waste.”

RCW 70A.205.750 outlines requirements for collection bins. One of these requirements is:

“By January 1, 2028, each container for curbside, commercial, or public place waste collection must bear a clear and conspicuous label on each container and lid, using background colors or a font that matches the coloring arrangement for containers and lids specified in subsection (2) of this section, specifying the categories of materials that are allowed to be placed in the container”

Proposed

The proposed amendment to WAC 173-350-025 specifies responsibilities of the “owner, operator, and occupant of any premises, business establishment, or industry responsible for the management of solid waste generated or accumulated on the property.” Among these responsibilities:

“Ensuring that where there is a container to collect recyclable materials, there is a separate container for waste to be disposed;

Ensuring recyclable materials containers clearly identify acceptable materials”

The proposed amendment specifies requirements for the containers, including requirements for durability and human and environmental health and safety in accordance with existing rule and statute.

The amendments also include labeling and other requirements. Any reusable or detachable container with a volume of at least one cubic yard to collect recyclable materials at sites of solid waste generation must:

“Identify recyclable materials accepted by providing a clear and conspicuous label on the container, providing clear and conspicuous signage, or other effective means; and

If at a temporary project site, inform persons responsible that a second container for waste to be disposed must also be placed. The container for waste to be disposed at a temporary job site must be located in close proximity to the container for recyclable materials and must be of adequate size to collect the volume of waste destined for disposal.”

Expected impact

The purpose of the proposed rule amendment is to incorporate the statutory requirements into rule and clarify them to meet the statutory intent. Statute intends to create a solid waste handling system that supports the separation of recyclable materials from solid waste, including disposing of them in separate containers and clearly labeling those containers. The proposed rule amendment supports those statutory requirements.

Because these requirements are intended to implement the statutory requirements, we do not expect any costs associated with them. There may be some benefit associated with adding more precision to meet the requirements outlined in statute. It could make it easier for local health jurisdictions to enforce, and it may help reduce for regulated entities who would otherwise be uncertain in how to meet the statutory requirements.

2.3.2 Clarify that an organics management facility does not own a load they reject

Baseline

WAC 173-350-220(6) requires that compost facilities reject feedstocks if they are contaminated with greater than five percent physical contaminants by volume unless they have a plan to clean up the contaminated load.

WAC 173-350-220(6) and 173-350-250(6) require each composting and anaerobic digester facility, respectively, to have a plan to accept only wastes identified in the plan of operations and approved as part of the permitting process or conditions of exemption. WAC 173-350-250(6) specifically requires anaerobic digester facilities to ensure that dangerous waste and any other unacceptable waste is not accepted. Unacceptable waste includes waste that is

prohibited by the conditions of the permit, as well as local, state, and federal regulatory restrictions. Waste that is not accepted by a facility is not owned by that facility at the point of receipt, though that is not explicit in the existing rule.

Proposed

The proposed rule amendment would add the following language to the “Collection and Transportation standards” concerning legal responsibility, which under the proposed amendment would be located in WAC 173-350-025(4)(e):

Any person collecting or transporting solid waste is responsible for legal management of the waste by ensuring delivery only to solid waste handling facilities that have approval by oversight agencies to manage the waste types delivered and such persons must adhere to any waste acceptance restrictions. A solid waste handling facility may reject a load and takes no ownership of a rejected load if it finds within the load waste that is prohibited under regulation, permit conditions, or facility acceptance policies.

Expected impact

Facilities have the right to reject a load if it does not meet the requirements of acceptable waste under the existing rule. The proposed amendment clarifies this by making it explicit that organics management facilities do not own a load they have rejected.

We expect the proposed amendment will reduce any ambiguity regarding who is responsible for rejected loads, which would increase efficiency in handling rejected loads. By decreasing uncertainty in ownership of a rejected load, it may result in changes to who pays for its appropriate disposal, but this would be a transfer of costs between different parties rather than an increase in costs.

We do not expect any costs from this proposed amendment. There may be some benefit in reducing uncertainty, and in marginally reducing contracting costs between facilities and haulers or municipalities who otherwise may have been unclear whether organics management facilities owned rejected loads.

2.3.3 Create, revise, or clarify definitions

Baseline

The baseline is existing definitions in chapter 173-350 WAC and chapter 70A.205 RCW.

Proposed

The proposed rule amendment would modify the existing definitions:

- Agricultural waste
- Anaerobic digester
- Bulking agent
- Crop residues
- Food processing waste

- Liquid waste
- Manufactured organics
- Manure and bedding
- On-farm
- Organic materials
- Other conversion technologies
- Physical contaminants
- Pile
- Pre-consumer vegetative waste
- Processing capacity
- Recyclable materials
- Soil amendment
- Tip floor
- Yard debris

The proposed amendment would add new terms not previously defined in the rule:

- Clean wood waste (changed from “wood waste” in the existing rule)
- Emergency animal mortalities
- Engineered features
- Farm
- Food waste
- Land clearing debris
- Low-grade wood waste (changed from “wood derived fuel” in the existing rule)
- Meat processing waste
- Mulch
- Organic materials management
- Organic materials pre-processing
- Preconsumer vegetative food waste (changed from “preconsumer vegetative waste” in the existing rule)
- Routine livestock mortalities
- Vermiculture (changed from “vermicomposting” in the existing rule)
- Worm castings

The proposed amendment would remove definitions that appear in the existing rule:

- On-farm vegetative waste
- Preconsumer vegetative waste (changed to “preconsumer vegetative food waste”)
- Post-consumer food waste
- Preconsumer animal-based waste
- Wood derived fuel (changed to “low-grade wood waste”)
- Wood waste (changed to “clean wood waste”)

Expected impact

There is no expected impact from the new, revised, or clarified definitions, in and of themselves. All changes in definitions consist of one or more of the following:

- Clarifications of existing definitions with no material change. For example, adding precision to the definition of “crop residue” and clarity to the definition of “food processing waste.”
- Definitions added or adapted from statute, and therefore part of the baseline for the analysis. This includes the definitions of “food waste,” “organic materials,” “soil amendment,” and “yard debris.”
- Revisions to more precisely match existing operations under the rule. For example, the definition of “bulking agent” was revised to include feedstock used to “provide carbon to achieve a targeted carbon to nitrogen ratio.”
- Definitions that were renamed for clarity or removed because they are not used in the rule.
- Definitions that support substantive amendments in other parts of the rule, which will be incorporated into the analysis of the section specific to those amendments, such as the definitions of “organic materials pre-processing”, “engineered features,” and “emergency animal mortalities.”

2.3.4 Create organic materials pre-processing standards

Baseline

While there are many organic materials pre-processing operations ongoing in Washington, the existing rule does not include standards specific to organic materials pre-processing. Many organic materials management facilities, such as compost facilities and anaerobic digester facilities, pre-process their incoming feedstocks to remove physical contaminants prior to organic materials management. These operations are common and are permitted in the baseline as part of each facility’s solid waste permit under the existing rule.

In addition to numerous other organic materials pre-processing operations, two depackaging operations have been permitted subject to the recycling and material recovery facility standards detailed in WAC 173-350-210.

Summarizing the standards under the existing WAC 173-350-210:

- Design requirements, including
 - Controlling public access and preventing illegal dumping of waste
 - Provide effective vector and litter control
 - Pollution prevention measures, including using construction materials to prevent soil and groundwater contamination, a covered tipping floor, leachate management, stormwater runoff collection, and measures to protect air quality.
- Documentation requirements: Submit facility drawings and construction documents to the local health jurisdiction. Engineered features to meet design requirements must be prepared by a professional engineer.
- Develop, keep, and follow an operation plan, which must include descriptions of:
 - Wastes and feedstocks to be handled and procedures for ensuring only those wastes will be accepted
 - How materials will be handled on-site, including recycling and recovery and maximum site capacity
 - How the facility will be operated to:
 - Meet vector control and pollution measures
 - Provide adequate signage and an on-site attendant during operating hours
 - Summon emergency services in the event of an emergency
 - Remove or manage leachate from containment structures
 - Remove waste materials from the tipping floor at approved intervals
 - Ensure waste that attracts birds does not pose an aircraft safety hazard
 - How facility staff will be adequately trained
 - An inspection and maintenance plan
 - Operating records will be maintained
 - Safety and emergency plans
- Submit annual reports to Ecology and the jurisdictional health department
- Closure plans, including how remaining waste will be removed

Proposed

The proposed rule amendment creates WAC 173-350-215 and lists organic materials pre-processing facility requirements in that section. Organic material pre-processing is defined as the processing of source separated solid waste to remove physical contaminants and packaging prior to organic materials management.

Pre-processing operations for feedstocks with less than five percent physical contaminants by volume is exempt from all requirements under this section. This will allow organics management facilities that receive feedstocks with less than five percent contamination to undertake additional pre-processing without meeting the requirements of WAC 173-350-215.

The proposed permit requirements for pre-processing facilities in WAC 173-350-215 are the same as the existing requirements for recycling and material recovery facilities in WAC 173-350-210 except for the following:

- Additional design requirements
 - Calculate maximum site capacity and maximum feedstock processing capacity, though the former is an existing requirement under the operating plan requirements in the baseline WAC 173-350-210. This is an existing requirement for compost facilities and anaerobic digester facilities.
 - An uncovered tipping floor may be approved for certain pre-processing facilities co-located with composting or other organic materials handling facilities.
- Additional operation plan requirements, describing
 - Types of waste to be handled at the facility, which must be limited to source-separated solid waste in preparation for the materials to be processed at an organic materials management facility.
 - How materials will be handled to meet a five percent by volume physical contamination limit for organic materials to be accepted at organic materials handling facilities
 - Sample collection after physical contaminants have been removed, and a requirement to test every 3 months or every 5,000 cubic yards for solids and every 1 million gallons for liquids, whichever is more frequent
 - How materials that do not meet a five percent by volume physical contaminant standard will be managed
 - How the pre-processing operation will be kept distinct for facilities co-located with an organics materials management facility

Expected impact

The proposed rule amendment creates a section with distinct requirements for pre-processing facilities. Under WAC 173-350-030(2), existing facilities that pre-process waste with more than 5% physical contamination by volume would be required to meet the proposed operating and

monitoring standards within 18 months of the effective date of the rule amendment, and would have an additional six months to meet performance and design requirements.

Existing facilities that will be required to meet these standards already have solid waste permits. In the baseline, depending on the facility, they must meet the requirements for the applicable organic materials management facility or the requirements in WAC 173-350-210. The proposed WAC 173-350-215 shares the requirements of WAC 173-350-210 and adds standards specific to organic materials pre-processing.

The requirement to calculate maximum feedstock processing capacity and the requirement to accept only source-separated solid waste are not in the baseline WAC 173-350-210 but are included in the baseline standards for organic materials management facilities in WAC 173-350-220 and 173-350-250. While these requirements would be new to facilities subject to WAC 173-350-210, we do not believe they would represent any additional cost.

Some of the proposed operating plan requirements in the proposed WAC 173-350-215 that differ from the baseline WAC 173-350-210 are meant to support the requirement to limit feedstock physical contaminants to five percent prior to sending pre-processed material to organic materials management. We discuss this proposed rule amendment in section 2.3.5 below.

The only proposed amendment we expect to create ongoing costs is the requirement to begin collecting and sample pre-processed material for physical contaminants within 18 months of the effective date of the rule. Facilities would be required to sample their pre-processed material every three months, or every 5,000 cubic yards (or 1 million gallons for liquids), to ensure it meets the five percent physical contaminant by volume limit. While it creates laboratory costs for pre-processing facilities, it also helps ensure consistency in pre-processed organic material, reducing uncertainty for organic materials management facilities that would receive the pre-processed material and require a low concentration of physical contaminants in their feedstock.

There may be some additional costs for existing facilities to amend their permits to include pre-processing activities and demonstrate that they meet the pre-processing facility standards, but we believe these will be one-time administrative costs. However, we do not expect that existing permitted facilities will have a substantial impact on their operations from the rule. While any organic materials management facility that accepts feedstock with greater than five percent physical contaminants by volume would be subject to the requirements proposed in WAC 173-350-215, pre-processing could be done under their existing solid waste permit and we expect facilities already meet the requirements to reduce physical contaminants to five percent by volume or less. Compost facilities that accept feedstocks with contaminants greater than five percent by volume are already required to develop a plan to reduce physical contaminants to an acceptable level prior to composting. Due to the requirements of the technology, anaerobic digester facilities also reduce the concentration of physical contaminants to below five percent by volume despite no explicit requirement in the baseline rule.

The proposed WAC 173-350-215 standards create a permit exemption for pre-processing at organic materials management facilities, such as regularly occurs now under the current rule,

for incoming feedstocks below five percent contamination. We expect that many organic materials management facilities engage in some degree of feedstock pre-processing and will qualify for this exemption.

Looking at potential impacts outside of existing permitted facilities, there may be some indirect impacts from the proposed amendment. It could be perceived to add certainty and stability to the regulatory status of pre-processing in Washington state. This could change investors' perceptions of risk and may attract more investment in Washington's pre-processing sector. However, it is important to note that a local government could pass a local ordinance that limits the flow of certain types of materials into pre-processing operations within those local jurisdictions, which could mitigate any impact of the rule in reducing regulatory uncertainty.

One potential benefit of creating pre-processor standards could be the ability to more easily modify pre-processor requirements in the future. While pre-processing is a well-established practice in Washington, technology is evolving rapidly as new organics policies become active. The operating claims of pre-processing technologies have not always been evaluated, and the environmental and public health risks of these technologies are not fully understood. Having a permit in place specific to pre-processors may make it easier for Ecology to track and address environmental and health challenges within this sector through existing or amended regulations.

2.3.5 Limit feedstock physical contamination to 5% prior to organic materials management

Baseline

Chapter 70A.205.540 RCW was amended in 2024, directing Ecology to address contamination in incoming food waste feedstocks.

"The department must adopt new rules or amend existing rules adopted under this chapter establishing permit requirements for organic materials management facilities requiring a solid waste handling permit addressing contamination associated with incoming food waste feedstocks and finished products, for environmental benefit."

The current version of chapter 173-350 WAC defines "**physical contaminants** as they relate to incoming feedstocks and compost quality means inorganic and organic constituents that are not readily decomposed during the composting process including, but not limited to, plastics, glass, textiles, rubber, leather, metal, ceramics, polystyrene, and wood pieces containing paint, laminates, bonding agents or chemical preservatives such as creosote, pentachlorophenol, or copper-chrome-arsenate."

Physical contaminant concentration in incoming compost feedstocks is currently limited to five percent by volume, or the composter must have a plan to reduce contaminants to an acceptable level prior to processing. Specifically, WAC 173-350-220(6) requires:

[A] description of how wastes and organic materials including incoming feedstocks, composting, curing, and composted materials are to be handled on-site during the facility's active life, including...

Procedures and criteria for ensuring that only the feedstocks described will be accepted. This includes a plan for rejecting feedstocks contaminated with greater than five percent physical contaminants by volume, or a plan to accept and separate contaminated loads from noncontaminated loads, and reduce physical contaminants to an acceptable level prior to composting.”

The baseline includes existing operations and practices. We do not expect compost facilities to successfully process feedstock with more than five percent contamination without first pre-processing to reduce the concentration of physical contaminants. A nationwide survey of composters found that 77% only accept feedstocks with five percent contamination or less,¹³ and it is common for composters to reject loads if the contamination by volume approaches five percent.¹⁴

Proposed

The proposed rule amendment modifies the definition of “physical contaminant” to include any feedstock constituents that are “either not accepted by the receiving facility, not recyclable in the system, or not readily decomposed during the organic materials management process.”

Under the proposed amendments, compost, other organic materials management, and anaerobic digester facilities must limit physical contaminants in incoming feedstocks to no more than five percent by volume in accordance with the proposed amendments to WACs 173-350-220, -225, and -250, respectively.

The proposed WAC 173-350-215 creates pre-processing standards to remove physical contaminants to meet the five percent by volume standard before it is sent to an organic materials management facility. Organic materials pre-processing facilities must describe how physical contaminants will be removed to meet the five percent by volume physical contaminant limit and must demonstrate they meet this limit by periodically sampling and testing the pre-processed material. Organic materials pre-processing can be co-located with compost, other organic materials management, and anaerobic digester facilities but the operations must be kept distinct.

There is no proposed limit on incoming feedstock contamination for organic materials pre-processing facilities. Given that the purpose of the pre-processing activity is to reduce the physical contaminants to the five percent by volume standard required in the proposed rule, a limit would be counter to the facility’s purpose.

Expected impact

We do not anticipate any impact on existing facility operations due to the proposed five percent contamination limit.

The baseline already limits compost facilities to accept feedstock that is five percent contamination by volume or lower unless they have a plan to decontaminate it prior to composting. We expect that compost facilities that accept feedstocks with greater than five

¹³ Goldstein, et al. (2023)

¹⁴ Barry, et al. (2024)

percent contamination under the baseline already engage in sufficient pre-processing to meet the proposed rule amendment. More generally, we do not expect compost facilities to successfully process feedstock with more than five percent contamination without first pre-processing to reduce the concentration of physical contaminants.

The proposed amendment requires incoming feedstocks received by other organic materials management facilities, such as vermiculture or black soldier fly facilities, and anaerobic digesters to also meet the five percent contamination threshold. However, we do not expect these types of facilities are able to accept feedstocks with contamination that exceeds five percent physical contaminants in the baseline rule without pre-processing. In that case, the proposed rule amendment would not have an impact on existing operation.

The proposed rule amendment could cause some organic materials management facilities to apply for permit modifications to include pre-processing as described in 2.3.4. Specifically, this would impact any organic materials management facility that currently accepts feedstocks with incoming contamination greater than five percent. There may be costs associated with amending their existing permit and meeting the pre-processed material testing requirement we outline in Section 2.3.4. However we expect the similarity between pre-processing requirements and the requirements for organic materials management facilities in the proposed rule amendment will not result in any other significant costs to amend the permit. A facility could also obtain a separate permit, though we believe that would be unlikely. Solid waste rules allow multiple handling standards at the same site under a single solid waste permit, and we expect any organic materials management facility that requires a permit that includes pre-processing will modify an existing permit.

While we expect the rule amendment may result in permit amendment costs for some facilities, we expect the proposed amendments will give Ecology greater ability to monitor and regulate pre-processing activities to protect human and environmental health. This may decrease market costs associated with limiting physical contaminants in the organic material supply chain, particularly as the volume and concentration of physical contaminants in organic feedstocks are expected to increase over the next several years.

It is possible that organic materials management facilities may change their operations, including their pre-processing operations in upcoming years due to baseline changes rather than changes in the proposed rule. As we outlined in section 2.2.1, Ecology projects the amount of material coming into organics management facilities will increase significantly over the next several years. Commercial food waste and residential mixed food and yard waste are among the categories organic waste that are expected to expand the most. However, these categories can also be the most contaminated. Potential increases in contamination could cause greater investment in pre-processing, either collocated with the organics processing facility or at distinct pre-processing sites.

2.3.6 Revise organic solid waste permit exemptions

Baseline

WAC 173-350-030(3) requires any facilities operating under an exemption to meet the revised conditions of the exemption within 12 months of the effective date of a rule amendment. Tables 220-A, 225-A, 250-A, and 320-A of the existing rule detail permit exemptions for composting facilities, other organics management facilities, anaerobic digesters, and piles for storage or treatment respectively.

Of relevance to the proposed emergency animal mortality permit exemption, WAC 16-25-040 states:

If the state veterinarian determines there is an animal health emergency, the state veterinarian has the authority to specify the method of disposal and place additional requirements for the disposal of carcasses of livestock animals that die of disease or are euthanized to prevent the spread of disease.

We summarize any other specific relevant baseline within the context of the proposed change below.

Proposed

The proposed rule amendment would include additional or modified permit exemptions for composting facilities, other organics management facilities, anaerobic digesters, and piles for storage or treatment.

Compost permit exemption amendments (Table 220-A)

- Insert a new exemption 3. Up to 250 cubic yards of on-farm waste at one time (not to exceed 1,000 cubic yards per year), including meat, food processing, and agricultural waste would be exempt. Additional bulking agent may be imported from off-farm.
 - If the facility distributes material off-site, they would be subject to additional requirements: notification, pathogen management and test parameter limits, compost analysis, and annual reporting.
 - This exemption would be able to co-locate with the exemption for unlimited agricultural waste, allowing on-farm food processing waste composting to occur at the same farm as crop residue and manure composting.
- Proposed changes to exemption 5 (exemption 4 in the baseline) would add land clearing debris to the material covered under the exemption, and extend the maximum allowed volume on-site at any one time from 1,000 cubic yards to 2,500 cubic yards. All facilities would have to notify Ecology even if they do not distribute material off-site.
- New proposed exemption 7. Emergency animal mortality composting under a method approved by the Washington State Department of Agriculture and the state veterinarian would be exempt except for the requirement to immediately notify Ecology upon beginning composting.
 - If material is distributed off-site the exemption also requires pathogen management, compost analysis, and annual reporting. This is also required in the baseline.

- Material that does not meet compost quality standards may be distributed under judgement of the Washington State Department of Agriculture and the State Veterinarian, and it cannot be called compost.
- New proposed exemption 8 would create a separate exemption for an unlimited volume of manure and bedding from zoos. In the current rule, this is part of exemption 5 that includes agricultural waste. There is a notification requirement, and if the facility distributes material off-site, they would be subject to additional requirements: pathogen management and test parameter limits, compost analysis, and annual reporting.

Other organics management facility exemption amendments (Table 225-A)

- Proposed changes to exemption 1 would reduce the maximum amount covered under this exemption from 5,000 gallons on-site at any one time to 1,000 gallons on-site at any one time.
- Proposed changes to exemption 2 would add black soldier fly and other similar raising of beneficial organisms as exempt activities, reduce the on-site volume limit for organic materials from 1,000 cubic yards to 250 cubic yards at any one time, and add a requirement to test distributed material every 5,000 cubic yards.
- Proposed changes to exemption 3 would increase the minimum volume covered under this exemption from 25 cubic yards on-site at any one time to 250 cubic yards.
 - If the facility distributes material off-site, they would be subject to a requirement to test the material every 5,000 cubic yards for physical contaminants.
- New proposed exemption 4. An unlimited volume of on-farm vermiculture of agricultural waste would be exempt.
 - If the facility distributes material off-site, they would be subject to a notification and reporting requirement.
- Proposed changes to exemption 5 (exemption 4 in the baseline) would reduce the minimum volume covered under this exemption from 5,000 gallons to 1,000 gallons and test distribute material every 5,000 gallons or annually, whichever is more frequent to demonstrate concentration of physical contaminants meets the standards in Table 220-B.
- New proposed exemption 6. Mulch from clean wood waste or fuel from clean or low-grade wood waste would be exempt for volumes between 25 and 2,000 cubic yards of material on-site at any one time. Facilities under this exemption would be required to notify Ecology and submit annual reports.
- New proposed exemption 7. Land application of processed emergency animal mortality under a method approved by the Washington State Department of Agriculture and the state veterinarian. Material that does not meet compost quality standards may be land

applied at agronomic rates when overseen by the Washington State Department of Agriculture.

Anaerobic digester permit exemption amendments (Table 250-A)

- Proposed changes to exemption 1 would reduce the maximum amount covered under this exemption from 5,000 gallons on-site at any one time to 1,000 gallons on-site at any one time.
- Proposed changes to exemption 2 would reduce the volume range covered under this exemption from between 5,000 and 50,000 gallons on-site at any one time to between 1,000 and 5,000 gallons on-site at any one time.
 - If distributed off-site, the proposed amendment would require facilities to test for physical contaminants every 5,000 cubic yards (or 1 million gallons) or annually, whichever is more frequent.
- Proposed changes to exemption 3 would require anaerobic digesters covered under this exemption to provide nutrient and metals analysis quarterly (or more often if feedstocks change significantly) to any partner dairies land applying under a nutrient management plan.

Piles used for treatment and storage exemption amendments (Table 320-A)

- New proposed exemption 3. Facilities storing up to 30 cubic yards of yard and/or land-clearing debris at a drop-off station prior to transfer to an organics management facility would now be exempt from the requirements in WAC 173-350-320. They would be required to notify Ecology 30 days prior to operation, completely remove materials routinely according to the timeline specified, maintain records, and submit annual reports. In the baseline, these facilities either triggered a permit for piles, or operate under a recycling and material recovery facility exemption, which requires them to remove the material every three days and to keep the pile under a roof or cover, restricting the practical size of the temporary pile.

Amendments across all permit exemptions

- Any exemption that requires an annual report must include specific information in the report. While this specifies the information in the annual report more precisely, this information is already included in annual reports in the baseline. The specific information in annual reports in the proposed rule is:
 - Name and address of the operation
 - Calendar year covered by the report
 - Annual quantities and types of waste received, materials recovered, and waste disposed
 - Destination and use of materials
 - Any additional information required by Ecology

Proposed changes also include additional conditions that are standardized primarily to match previous revisions to other exempt activities in the rule that did not address organic management facilities, as well as limiting physical contamination to five percent in feedstocks incoming to organic materials management facilities.

Other proposed amendments to testing requirements in permit exemptions are covered as part of section 2.3.9 specifically covering testing requirements.

Expected impact

Compost permit exemption amendments (Table 220-A)

- Farms with up to 250 cubic yards of on-farm waste, including meat, food processing, and agricultural waste at any one time would no longer be required to notify Ecology unless they distributed material off-farm. This operation could be on the same farm as unlimited agricultural waste and still qualify for the exemption as long as it is kept separate. Ecology is not aware of any existing farms this would impact, but it could reduce costs of new or expanded compost operations.
- Farms composting between 1,000 and 2,500 cubic yards of agricultural waste would no longer require composting to be included in their farm nutrient management plan. Ecology is not aware of any existing farms this would impact, but it could reduce costs of new or expanded compost operations.
- Farms composting between 1,000 and 2,500 cubic yards of combined agricultural waste, yard debris, and land-clearing debris (with no more than 50% yard and/or land-clearing debris) would now be exempt from all permit requirements other than notification. If the facility distributed material off-site, they would be subject to pathogen management and test parameter limits, compost analysis, and annual reporting requirements, which they would also be subject to in the baseline. Ecology is not aware of any existing farms this would impact, but it could reduce costs of new or expanded compost operations.
- Emergency animal mortality composting under a method approved by the Washington State Department of Agriculture and the state veterinarian would no longer be required to notify Ecology 30 days prior to beginning operation. In practice, Ecology waives this requirement in the interest of public and environmental health and in accordance with the state veterinarian's authority over emergency animal mortalities in WAC 16-25-040. We expect this to increase clarity in meeting rule requirements and help to harmonize WAC 173-350-220 with WAC 16-25-040.

Other organics management facility exemption amendments (Table 225-A)

- Facilities that have between 1,000 and 5,000 gallons of material on-site at any one time would no longer qualify for Exemption 1 and could become subject to additional requirements depending on the waste they process and their specific method of processing. If they do not qualify for another exemption, these facilities would be required to notify Ecology 30 days prior to operation. While this is a new requirement,

we do not expect it to contribute to significant costs other than a small amount of employee time associated with notifying Ecology.

- If they distribute material off-site, they would also be subject to testing and reporting requirements. The material would have to meet test parameter limits, undergo further processing, or be subject to specific use limits. Ecology is not aware of any facilities that would be impacted by this requirement, though it could increase costs for facilities that would like to distribute material. While these new requirements would create costs, there is a commensurate benefit to environmental and public health by ensuring that distributed material meets Washington standards.
- Black soldier fly production and similar raising of beneficial organisms with between 25 and 250 cubic yards of material on-site at any one time would be exempt and no longer be subject to standards established by local health jurisdictions under WAC 173-350-490. Ecology is not aware of any existing operations this would impact. However, we expect that adding regulatory certainty and removing a requirement for local health jurisdictions to develop standards would reduce costs of new or expanded operations that would be covered by this exemption.
- Vermiculture operations of on-farm agricultural waste of more than 1,000 cubic yards of material on-site at any one time would no longer be permitted under standards established by local health jurisdictions under WAC 173-350-490. Instead, they would be required to notify Ecology 30 days before beginning operations and submit annual reports. Ecology is not aware of any existing operations this would impact. However, we expect that adding regulatory certainty and removing a requirement for local health jurisdictions to develop standards would reduce costs of new or expanded operations that would be covered by this exemption.
- Facilities manufacturing mulch from clean wood waste or fuel from clean or low-grade wood waste with between 25 and 2,000 cubic yards on-site would be required to notify Ecology 30 days before beginning operation and submit annual reports. However, these facilities may also qualify for other exemptions with similar requirements, as described in the Recycling and Material Recovery Facility exemptions in Table 210-A or in the Piles exemptions described in Table 320-A. We do not expect this proposed exemption to have any additional costs or benefits other than maintaining exemptions in all appropriate sections of WAC 173-350.
- Land application of processed emergency animal mortalities at agronomic rates with the approval of WSDA and the state veterinarian would be exempt. However, as in the proposed compost exemption for processed emergency animal mortalities listed above, Ecology currently waives existing requirements in the interest of public and environmental health and in accordance with the state veterinarian's authority over emergency animal mortalities in WAC 16-25-040. We do not expect the proposed

exemption to have any costs. There may be some benefit in increasing clarity of the rule's requirements and consistency among exemptions.

Anaerobic digester permit exemption amendments (Table 250-A)

- Anaerobic digesters with between 1,000 and 5,000 gallons on-site at any one time would now be required to notify Ecology 30 days prior to operation. While this is a new requirement, we do not expect it to contribute to significant costs other than a small amount of employee time associated with notifying Ecology.
 - If they distribute digestate off-site, they would now also be subject to testing and reporting requirements. The digestate would have to meet test parameter limits, undergo further processing, or be subject to specific use limits. Ecology is not aware of any facilities that would be impacted by this aspect of the requirement, though it could increase costs for facilities that would like to distribute material. While these new requirements would create costs, there is a commensurate benefit to environmental and public health by ensuring that distributed material meet Washington standards.
- Anaerobic digesters with between 5,000 and 50,000 gallons on-site at any one time with feedstocks less than 50 percent animal manure (and/or more than 30 percent food processing waste) would be now subject to the full permit requirements for anaerobic digesters detailed in WAC 173-350-250. In the baseline, these facilities are required to notify Ecology but have no other requirements. If they distribute material off-site in the baseline, they must meet additional testing and reporting, and the material must meet test parameter limits, undergo further processing, or be subject to specific use limits. Ecology is not aware of any facilities currently operating that would be impacted by this requirement, though it could increase costs for new operations or expansions of existing operations that would have been exempt under the baseline rule. The proposed amendment would include new requirements for these facilities, including documentation of how they would meet standards to prevent soil and groundwater contamination and manage leachate. While these requirements may create costs, there is a commensurate benefit to ensuring that operations are protective of the environment and public health.
- Anaerobic digesters with between 5,000 and 50,000 gallons on-site at any one time that include at least 50 percent animal manure and no more than 30 percent food processing waste would be subject to certain operating requirements as detailed in the proposed Table 250-A Exemption 3. Ecology is not aware of any facilities that would be impacted by this requirement, though it could increase costs for new operations or expansions of existing operations that would have been exempt under the baseline rule. The proposed amendment would include new requirements for these facilities, including meeting construction industry standards and Natural Resources Conservation Service's Conservation Practice Standard. While these requirements may create costs, there is a commensurate benefit to ensuring that the operation is protective of the environment and public health.

- Anaerobic digesters processing only manure, agricultural waste, and up to 30% food processing waste would be required to periodically test and report nutrient concentrations to the partner dairies and WSDA beginning within 12 months of the effective date of the rule amendment. Dairies were already expected to apply digestate at agronomic rates as part of the existing requirements in WAC 173-350-230, which would have required at least some testing similar to the proposed change to the permit exemption. This may increase testing costs for some anaerobic digesters that partner with dairies, but it helps to ensure that land application standards are met to protect the environment and public health.

Piles used for treatment and storage exemption amendments (Table 320-A)

- Facilities storing up to 30 cubic yards of yard and/or land-clearing debris at a drop-off station prior to transfer to an organics management facility would no longer need to meet the Piles standards or to store material under a roof or cover within a material recovery facility exemption. We expect this could decrease costs for these facilities.

Amendments across all permit exemptions

- The proposed amendment would codify the contents of an annual report, but the expected content of the annual report would not change. We expect this to increase transparency, without any costs.
- Other changes across permit exemptions support existing changes elsewhere and are discussed in those sections, or improve organization of the rule without any substantive costs.

2.3.7 Clarify exemptions at permitted facilities

Baseline

Compost facility permit exemptions from WAC 173-350-220(2):

In accordance with RCW 70.95.305, conditionally exempt facilities composting materials and volumes in Table 220-A must meet the conditions listed in Table 220-A, and (a) through (e) of this subsection to be conditionally exempt from solid waste handling permitting. Feedstocks not listed in Table 220-A must be approved by the department and jurisdictional health department. For the purposes of this subsection, "material on-site at any one time" includes feedstocks, active composting, curing piles, and composted materials. An owner or operator that does not comply with the terms and conditions of Table 220-A and (a) of this subsection is required to obtain a permit from the jurisdictional health department and must comply with all other applicable requirements of this chapter. Violations of the terms and conditions of Table 220-A and (a) of this subsection may be subject to the enforcement provisions of RCW 70.95.315.

Similar language is included in WAC 173-350-225(1), 173-350-250(2), and 173-350-320(2), though the details of the language are particular to the exemptions in other organic material handling facilities, anaerobic digesters, and storage and treatment of piles, respectively.

Proposed

The proposed rule amendment includes language in each section that is meant to clarify permit and exemption requirements for local health jurisdictions and for the owners and operators of facilities. If a site requires a solid waste permit according to one section of WAC 173-350 but qualifies for an exemption under another section or sections of WAC 173-350, then:

- It would require a permit and would not be permit exempt.
- All activities could be covered under the same permit, and the activity would only need to meet the applicable conditional exemption standard.
- The plan of operation for that site must detail how they meet permit exemptions for any applicable sections.

The proposed rule amendment amends WAC 173-350-220(2) to read:

(a) Except for facilities specified in (b) of this subsection, according to RCW 70A.205.265, facilities managed in compliance with standards for exemption under this subsection are exempt from the permit requirements of this chapter. If an owner or operator does not comply with the standards for exemption under this subsection, the facility may be subject to permit requirements under this chapter, the department's enforcement provisions for exempt facilities in RCW 70A.205.280, and other enforcement provisions in chapter 70A.205 RCW.

(b) Facilities that operate within and as an integral part of facility requiring a solid waste handling permit under this chapter must be covered under that permit and are not permit-exempt but may operate in compliance with the standards for exemption under this subsection. For such facilities, the owner or operator must provide the jurisdictional health department information in the facility's plan of operation to show how they will meet the standards of this subsection. If an owner or operator does not comply with this subsection, the facility may be subject to permit requirements under this chapter, the jurisdictional health department's enforcement provisions for facilities subject to permit, and other enforcement provisions in chapter 70A.205 RCW.

The proposed amendment would also replace the earlier baseline language in WAC 173-350-225(1), 173-350-250(2), and 173-350-320(2) with language that is very similar to the proposed language in WAC 173-350-220(2).

In addition, the other proposed changes to WAC 173-350-225 would cause the baseline WAC 173-350-225(1) to be renumbered as WAC 173-350-225(2) in the proposed rule.

Expected impact

We expect the rule amendment to clarify which facilities need permits and what the regulatory requirements for those facilities are. It is possible that ambiguity in the current rule language created confusion regarding which facilities and activities were exempt and which required a permit. We expect the proposed amendment to help resolve this ambiguity.

2.3.8 Standardize training requirements across all organic management facilities

Baseline

Compost facility training requirements in WAC 173-350-220(6):

Ensure the facility operates under the supervision and control of a properly trained individual(s) during all hours of operation:

Facility supervisors responsible for daily operation must receive training, or be able to document prior training, in the basics of composting within the first year of supervising the facility. Training must consist of classroom and hands-on course work and conclude with a certificate of completion that must be kept on-site at all times. Appropriate compost training can be obtained through organizations such as the Washington organic recycling council, the Solid Waste Association of North America, the U.S. Composting Council, or other training as approved by the jurisdictional health department; and

Ensure facility employees are trained in appropriate facility operations, maintenance procedures, and safety and emergency procedures according to individual job duties and according to an approved plan of operation. A trained supervisor may provide appropriate training to employees responsible for daily operations.

Anaerobic digester training requirements in WAC 173-350-250(6):

Ensure the facility operates under the supervision and control of a properly trained individual during hours of operation when facility staffing is required;

Ensure facility employees are trained in appropriate facility operations, maintenance procedures, and safety and emergency procedures according to individual job duties and according to an approved plan of operation; and

Other organics management facilities do not currently have specific training requirements. While there are no organics management facilities currently permitted by local health jurisdictions under WAC 173-350-490, we expect that local health jurisdictions would likely have included training requirements comparable to either WAC 173-350-220(6) or 173-350-250(6).

Proposed

WAC 173-350-220(6), WAC 173-350-225(6), and WAC 173-350-250(6), would require compost, other organics management, and anaerobic digester facilities to keep and follow a plan of operation that must be available in a language that employees can read.

Each plan of operation includes requirements for ensuring the appropriate training.

Proposed compost facility standards in WAC 173-350-220(6) includes:

Ensure the facility operates under the supervision and control of properly trained operators during all hours of operation.

Facility employees must receive training in appropriate facility operations, maintenance procedures, and safety and emergency procedures according to individual job duties. Operator training to include required reading of the approved plan of operation for employees with responsibilities for compliance with this section. A trained supervisor may provide appropriate training to employees responsible for daily operations.

Proposed other organics management facility standards in WAC 173-350-225(6) includes:

A description of how facility staff will be appropriately trained in facility operations, maintenance procedures, and safety and emergency procedures according to individual job duties. Operator training to include required reading of the approved plan of operation for employees with responsibilities for compliance with this section.

Proposed anaerobic digester standards in WAC 173-350-250(6) includes:

Ensure the facility operates under the supervision and control of a properly trained individual during hours of operation when facility staffing is required.

Ensure facility employees are trained in appropriate facility operations, maintenance procedures, and safety and emergency procedures according to individual job duties; Operator training to include required reading of the approved plan of operation for employees with responsibilities for compliance with this section.

Expected impact

We expect this proposed amendment to reduce inconsistencies in training requirements in the baseline among different types of organic management facilities. The proposed amendment standardizes the language for all facilities so that it is similar to the anaerobic digester training requirements in the existing rule.

The proposed change may reduce the costs for compost facilities in complying with the training requirement. We do not expect the proposed change to compromise environmental or public health. The language still requires facility employees to be adequately trained but no longer specifies a particular training requirement for compost facility supervisors.

The proposed requirement to make the plan of operation available in a language that employees can read is not in the baseline. However, the baseline requires that all employees are trained on the contents of the plan of operation, including facility operations, maintenance procedures, and safety and emergency procedures. Because adequate training would already require the bulk of the plan of operation to be translated into languages spoken by employees, we do not expect this additional requirement to add significant costs.

2.3.9 Revise language for documentation requiring a professional engineer

Baseline

The design submission requirements for compost facilities and anaerobic digester facilities in WAC sections 173-350-220 and 173-350-250, respectively, require the owner or operator of a

facility to prepare and provide to the jurisdictional health department engineering documents prepared by a professional engineer registered in the state of Washington that include:

- An engineering report that presents the design basis and calculations for the engineered features of the facility, which must demonstrate it will meet the performance standards of the chapter
- Scale drawings of the facility
- Design specifications for the engineered features of the facility
- A construction quality assurance plan that describes monitoring, testing, and documentation procedures that will be performed during construction of the facility to ensure the facility is constructed in accordance with the approved design

“Engineered features” is not defined in the baseline rule. The current rule language could be construed to include features that should not require preparation by a professional engineer.

Proposed

The proposed rule amendment defines “engineered features”:

“Engineered features are constructed elements associated with meeting applicable standards under this chapter. Engineered features may include but are not limited to tip floors and impervious surfaces for storage and handling of solid waste; liner systems including underlying ground preparation; leachate collection, conveyance and storage systems; leak detection systems; stormwater management features including run-on prevention and runoff conveyance and storage; structures to meet indoor storage standards; shelter structures for tip floors and impervious surfaces; air pollution control systems; explosive gas control systems; landfill gas control systems; aeration systems; and landfill closure systems.”

The proposed amendment specifies that only engineered features proposed to meet the standards in each respective section must be prepared by a professional engineer registered in the state of Washington.

Expected impact

We expect the proposed rule amendment to reduce confusion over what parts of documentation that owners and operators of organic materials management facilities are required to provide must be completed by a professional engineer. We expect the rule may reduce documentation costs for some facilities.

2.3.10 Revise testing requirements for finished organic materials

Baseline

The existing WAC 173-350 requires facilities to analyze their material to ensure it meets the limits for metals concentrations and other testing parameters listed in Table 220-B. The required testing frequency is every 5,000 cubic yards (or every 1 million gallons) of material produced or every 365 days, whichever is more frequent. A summary of the laboratory analysis

is required as part of the annual report from each composter and anaerobic digester to jurisdictional health departments and Ecology.

Test parameters are listed in Table 220-B and includes metals, physical contaminants, and pathogens (either fecal coliform or salmonella), among other parameters.

Facilities that require testing include:

- All composters with greater than 25 cubic yards of material on-site at any one time that distribute composted material off-site. (WAC 173-350-220)
- All anaerobic digesters with greater than 5,000 gallons or 25 cubic yards of material on-site at any one time that distribute material off-site. (WAC 173-350-250)
- Other organic materials facilities, apart from vermiculture handling certain materials, that manage more than 5,000 gallons or 25 cubic yards of material at any one time that distribute material off-site. (WAC 173-350-225)

Proposed

The proposed amendment would change requirements from the baseline, including requiring:

- Accreditation for any laboratory conducting conduct analyses
- Laboratory test results in annual reports from facilities to include the summary of laboratory results from the accredited laboratory. Under the baseline, a report may include a summary of laboratory results that does not come from the accredited laboratory.
- Permitted compost, other organics management, and anaerobic digester facilities to test at least once per quarter, instead of at least once per year as in the baseline
- Testing at least once per year or every 5,000 cubic yards, whichever is more frequent, for some exempt facilities that do not require testing in the baseline, including
 - Vermiculture facilities that have more than 250 cubic yards on-site at any one time.
 - Anaerobic digester facilities that have between 1,000 and 5,000 gallons on-site at any one time.
- Test for salmonella or fecal coliform as most appropriate with a default to test for fecal coliform unless otherwise approved. Permit exempt facilities subject to testing requirements must test for fecal coliform.

Facilities would need to satisfy these requirements within 18 months of the effective date of the adopted rule amendment according to WAC 173-350-030(2).

Expected impact

Lab accreditation requirement

The standard current practice is for laboratory analysis of finished organic material to be done in an accredited laboratory. We do not expect any impact from the rule other than potentially

reducing uncertainty among organic management facility owners and operators about what constitutes an appropriate laboratory to meet the analysis standards in the rule.

Laboratory result reporting

Laboratory test results may currently be summarized by the facility when submitting annual reports. The proposed amendment makes it clear that the summary of results should come from the laboratory to ensure accuracy in the summarized report for the protection of environmental and human health. Facilities should already have these summaries, and we expect them to be able to comply with this requirement without any additional costs. There may be some benefit in reducing workload for facilities and in ensuring compliance with test parameter limits.

Testing frequency

Many permitted compost, other organics management, and anaerobic digester facilities test more frequently than once per quarter due to the requirement to test every 5,000 cubic yards of solid (or 1 million gallons of liquid) material produced. The only permitted facilities impacted would be those that produce less than 5,000 cubic yards of solid (or less than 1 million gallons of liquid) material per quarter. Exempt facilities that would now be required to test at least annually would also be impacted.

We expect facilities that would be required to conduct additional testing under the proposed rule amendment within 18 months of the effective date of the rule amendment would incur some cost associated with the additional testing. We also expect there to be some benefit – both to human health and to the marketability of organic products - in ensuring that finished organic products in Washington consistently meet the requirements outlined in Table 220-B as seasonal feedstocks and weather can impact composting biology, resulting in seasonal variations that will be better tracked through quarterly testing.

Testing for fecal coliform or salmonella

We do not expect any costs associated with these requirements. We expect this proposed amendment to reduce the ambiguity in the rule and help ensure human and environmental health by using the most appropriate test parameter.

2.3.11 Reduce physical contaminant limits in finished organic products

Baseline

The existing chapter 173-350 WAC includes contamination limits in Table 220-B. Of relevance for the proposed rule amendment, the limit for physical contaminants is 1 percent by weight, not to exceed 0.25 percent film plastic by weight.

This limit applies to all compost from facilities that:

- Have at least 25 cubic yards of solid (or 5,000 gallons of semi-solid or liquid material) organic material on-site at any one time

- Distribute finished product off-site

Facilities that produce digestate or products of other conversion technologies and that meet these two conditions may also choose to meet the test parameter limits in Table 220-B. If those limits are not met, there are other options for using the organic product for those facilities.

RCW 70A.205.540 was amended in 2024, directing Ecology to address contamination in finished organics products.

“The department must adopt new rules or amend existing rules adopted under this chapter establishing permit requirements for organic materials management facilities requiring a solid waste handling permit addressing contamination associated with incoming food waste feedstocks and finished products, for environmental benefit.”

Proposed

The proposed amendment to chapter 173-350 WAC defines a new physical contaminant limit in Table 220-B of 0.5 percent, not to exceed 0.1 percent film plastic, by weight.

The proposed rule amends the definition of “physical contaminant” to include any “inorganic or organic constituents that are either not accepted by the receiving facility, not recyclable in the system, or not readily decomposed during the composting organic materials management.”

Expected impact

All organic materials management facilities currently reporting physical contaminant concentrations in their finished organic products, such as compost or digestate, would meet the limits in the proposed rule amendment. While all facilities currently meet the proposed amendment, we anticipate growth in the total volume of organic materials recovered and an increase in physical contamination in feedstocks in the next several years due to the implementation of the organics management laws in chapter 70A.205 RCW. To the extent that physical contaminants in finished products may exceed the proposed limits in the baseline, we expect the proposed amendment would reduce physical contaminants in these products and the associated risks to the environment and public health. Limiting the amount of contamination consumers experience in purchased compost would also increase consumer confidence and demand, increasing the overall market value of compost and other finished organic products. Moreover, Ecology is required by statute to address physical contaminants in organic products. Reducing the physical contaminant limit in organic products meets this statutory obligation.

Regardless of whether physical contaminants in finished organic products would increase in the baseline, we expect the proposed amendment would help foster consumer confidence that the finished products maintain the same level of quality despite changes to underlying feedstocks. Consumers may make decisions about whether and when to use finished organic products based on the existing regulations around contaminants given that those are generally more readily accessible than underlying laboratory analyses. On that basis, it may increase consumer confidence and demand if the state were to adopt physical contaminant limits that align with consumer expectations. EPA documentation suggests a physical contaminant limit of 0.5% or less for most compost applications, which is in line with the limit in the proposed

amendment.¹⁵ Washington Department of Transportation likewise accepts only compost that meets the proposed limit of 0.5% physical contaminants or less. California has already limited physical contaminants in compost to 0.5% as of 2018. The proposed amendment would align Washington contamination limits with these expectations.

2.3.12 Create permitting standards for other organic materials handling activities

Baseline

Other organic materials handling activities in the baseline may include vermiculture or other conversion technologies that are not covered in the sections 220 or 250 of chapter 173-350 WAC, which provide permitting standards for composters and anaerobic digesters, respectively. Permit exemptions for other organic materials handling activities appear in Table 225-A within the existing WAC 173-350-225. However, there are currently no specific permit standards for other organic materials handling activities in the baseline rule.

Other organic materials handling activities not covered under a permit exemption would be subject to permitting under WAC 173-350-490. This section covers any solid waste handling not specifically identified elsewhere in the rule, and it requires the owner and operator of the facility to obtain a permit from the local health jurisdiction.

All solid waste handling facilities are required to comply with WAC 173-350-040, including: “Design, construct, operate, close and provide post-closure care as applicable, at any solid waste facility in a manner that does not pose a threat to human health or the environment.” Other permit requirements under WAC 173-350-490 are at the discretion of the local health jurisdiction within their local solid waste management plans and any applicable local, state, and federal laws and regulations. In most cases, the local authorities use the permit requirements that they deem appropriate for the activity from other sections of chapter 173-350 WAC, though they are not required to do so.

Proposed

The proposed rule amendment to WAC 173-350-225 would create standards for other organic materials handling activities that are not exempt or not covered by permits for composting facilities subject to WAC 173-350-220, anaerobic digesters subject to WAC 173-350-330, or solid waste that is beneficially used and approved through WAC 173-350-200 or WAC 173-350-230.

Proposed permit requirements generally align with permit requirements for other organic materials management facilities.

The proposed permit requirements for other organic materials handling facilities include:

- Design requirements, including

¹⁵ EPA (2025)

- Controlling public access and preventing illegal dumping of waste
- Provide effective vector control
- Calculations for maximum site capacity and maximum feedstock processing capacity
- Pollution prevention measures, including using construction materials to prevent soil and groundwater contamination, a covered tipping floor, leachate management, stormwater runoff collection, and measures to protect air quality.
- Documentation requirements: Submit facility drawings and construction documents to the local health jurisdiction.
- Develop, keep, and follow an operation plan
 - Description of wastes and feedstocks to be handled and procedures for ensuring only those wastes will be accepted, including a limit on incoming contamination
 - Description of how materials will be handled on-site
 - Description of the end use of processed materials, as well as sampling and testing. One option for use includes meeting testing requirements and finished product contamination limits.
 - Calculation of monthly processing capacity
 - Description of how vector control and pollution measures will be met
 - Description of how facility staff will be adequately trained
 - An inspection plan
 - A plan to maintain operating records
 - Safety and emergency plans
 - Odor management plans
- Closure plans, including how remaining waste will be removed
- Requirement to submit annual reports to Ecology and the jurisdictional health department

The proposed rule amendment to WAC 173-350-225 includes new permit exemptions, but the impact of those amendments are discussed in section 2.3.6.

Expected impact

In the baseline, other organic materials handling facilities would be subject to permitting by local health jurisdictions under WAC 173-350-490. While there are no organic materials management facilities currently permitted under WAC 173-350-490, it would have the potential to offer some flexibility for local health jurisdictions but would also create a burden on local health jurisdictions to appropriate regulatory standards for each facility. It is our expectation

that local health jurisdictions would largely have based any permits granted under WAC 173-350-490 on existing language that appears in other sections in chapter 173-350 WAC.

By creating permit standards for other organic materials handling facilities, the proposed amendment would reduce the cost for local health jurisdictions. The proposed rule amendment uses standardized requirements common to the permitted composter and anaerobic digester requirements. The standards in the proposed rule amendment largely align with the standards that we expect local health jurisdictions would have created under WAC 173-350-490. In that case, any costs associated with the proposed rule amendment would be minor. The proposed rule amendment would reduce the costs for local health jurisdictions that would no longer be responsible for creating standards for facilities that may be using new or more complicated technology.

2.3.13 Update organizational structure, wording, and references

Baseline

The baseline is the existing language and structure of Chapter 173-350 WAC as well as the Revised Code of Washington.

Proposed

The proposed rule amendment restructures the rule to allow each organic materials facility section to have a common structure. Each section would include the requirements for the corresponding facility activity with as much common language as possible, making it easier to read and understand within each section.

The proposed rule rescinds WAC 173-350-300 and moves the on-site storage, collection, and transportation requirements to WAC 173-350-025, instead.

The proposed amendment also makes minor updates to wording and updates references to statute where those have changed.

Expected impact

We do not expect any material impact from the proposed rule amendments beyond adding clarity so that facility operators, local health jurisdiction, and the public will have an easier time locating and understanding rule requirements. It is possible this may improve understanding and compliance with the rule.

Chapter 3: Likely Costs of the Proposed Rule Amendments

3.1 Introduction

We analyzed the likely costs associated with the proposed rule amendments, as compared to the baseline. The proposed rule amendments and the baseline are discussed in detail in Chapter 2 of this document.

3.2 Cost analysis

The proposed rule amendments would:

- Clarify requirements for recyclable materials containers
- Clarify that an organics management facility does not own a load they rejected
- Create, revise, or clarify definitions
- Create organic materials pre-processing standards
- Limit feedstock physical contamination to 5% prior to organic materials management
- Revise organic solid waste permit exemptions
- Clarify exemptions at permitted facilities
- Standardize training requirements across all organic management facilities
- Revise language for documentation requiring a professional engineer
- Revise testing requirements for finished organic products
- Reduce physical contaminant limits in finished organics products
- Create permitting standards for other organic materials handling activities
- Update organizational structure, wording, and references

3.2.1 Clarify requirements for recyclable materials containers

The proposed rule amendment would define responsibilities for providing separate containers for waste and recyclable materials and specify standards for those containers. The proposed amendment incorporates statutory language and clarifies them in rule to meet the statute's intent. It does not impose any costs outside of what would be required to meet the requirements in statute.

Because these requirements are included in the statutory baseline, there is no cost associated with the proposed rule amendment.

3.2.2 Clarify that an organics management facility does not own a load they reject

This proposed rule amendment directly states that an organics management facility does not own a load that they reject. We do not believe this amendment represents a change to the existing ownership of a rejected load. It clarifies the baseline by stating this explicitly. While this clarified understanding of the rule may change who bears the cost in practice, we do not believe it represents a new cost.

3.2.3 Create, revise, or clarify definitions

The proposed rule amendment includes definitions that differ from the baseline. In and of themselves, we do not expect this change to create any new costs. Any costs from changes in definitions are discussed in the sections focused on impacts to the rule that the definition supports.

3.2.4 Create organic materials pre-processing standards

While there are many organic materials pre-processing operations ongoing in Washington, the existing rule does not include standards specific to organic materials pre-processing. The proposed rule amendment creates a section with distinct requirements for organic materials pre-processing facilities. Previously, any standards related to organic materials pre-processing would have been incorporated into existing solid waste permit requirements for organic materials management facilities or recycling and material recovery facilities.

The organic materials pre-processing standards specified in the proposed rule are consistent with standards that exist in the baseline rule and under which organic materials pre-processing activity has been permitted in the baseline. There are several proposed requirements that would be new for some facilities, including requirements to describe how feedstocks will be reduced to five percent physical contaminants by volume, to regularly test the pre-processed material for physical contaminants, to describe how pre-processed material will be handled if it does not meet the physical contaminant limit, and to describe how pre-processing activity will be kept distinct for organic materials pre-processing co-located with organic materials management activities.

We expect the only costs arising from the new requirements for facilities already meeting the recycling and material recovery facility standards will be the cost to regularly test pre-processed material every 5,000 cubic yards starting within 18 months of the effective date of the rule amendment.

Some organic materials management facilities engage in significant pre-processing. Ecology estimates that six compost facilities currently post-consumer food waste, which we expect will require significant pre-processing in the future. If they accept feedstock with more than 5% physical contamination and elect to continue to do so, they may be required to meet the pre-processing standards defined by the proposed rule amendment. In that case, there may be some costs associated with demonstrating that they meet the proposed design and operating

standards for organic materials pre-processors. While many facilities have already supplied this information in their existing plans, it is possible that some have not. We do not expect this to increase their operating costs, but there may be one-time administrative costs associated with meeting these requirements.

In addition, there may be some administrative costs assessed by local health jurisdictions for any facility modifying an existing permit.

We focus on quantifying the costs associated with testing, which we expect would be the most significant cost for organic material pre-processing facilities from the proposed rule amendment. We estimate sampling and testing pre-processed material to cost roughly \$80 per test based on published fees. For context, a published report estimates the cost of pre-processing food waste may be over \$14 per cubic yard.¹⁶ Testing costs of \$80 per 5,000 cubic yards of material would add roughly 0.1% to the cost of pre-processing beginning within 18 months of the effective date of the rule amendment. The ultimate total cost depends on the volume of organic material managed over time and what proportion of that material will first go through pre-processing.

For an estimate of potential volume of pre-processed material, we assume that commercial food waste is the feedstock that is most likely to require pre-processing. We rely on projections from the published compost market study¹⁷ to assume that the total projected commercial organic material to be recovered is roughly 1.77 million tons in 2025, increasing to 2.22 million tons in 2035. Food accounts for 33.8% of that total material in 2025, rising to 35.1% in 2035. We expect roughly 5% of that waste is pre-consumer food processing waste that would have little if any physical contamination and would not require pre-processing. The resulting material that could require pre-processing is around 568,000 tons in 2025, increasing to 740,000 tons in 2035. We convert from tons to cubic yards using Ecology's estimates for food waste, 800 pounds per cubic yard.¹⁸ Given current and prospective levels of physical contaminants in these feedstocks, it is possible that as much as 100% of this material must be pre-processed. However, we also consider that growing familiarity with organics management combined with education and outreach efforts could reduce physical contamination considerably. To provide a reasonable range of potential costs, we assume that as little as 50% of this material may be pre-processed. If the pre-processed waste is tested every 5,000 cubic yards, this would require roughly 185 to 369 tests per year in 2035.

We estimate the present value cost of testing under these assumptions would be between \$251 thousand and \$501 thousand across all facilities engaged in organics material pre-processing.¹⁹ We expect this cost would be incurred directly by any facility permitted under the proposed pre-processing standards, which could include larger organic materials management facilities that undertake extensive pre-processing. While larger facilities tend to engage in more

¹⁶ Assuming 0.4 tons per cubic yard for food waste; Barry, et al. (2024)

¹⁷ Greene Economics (2025)

¹⁸ Ecology (2019)

¹⁹ Assuming testing begins 18 months after the effective date of the rule and continues over the 20-year time horizon of the rule, discounting future costs at a real rate of 0.41%.

pre-processing, any costs may also be passed on to smaller facilities that do not do their own pre-processing if they contract to receive material from a pre-processing facility.

3.2.5 Limit feedstock contamination to 5% prior to organic materials management

The proposed rule amendment would limit the amount of physical contaminants in incoming feedstocks to no more than five percent for compost, other organic materials management, and anaerobic digester facilities.

We expect that organic materials management facilities that accept feedstocks with greater than five percent contamination under the baseline already engage in sufficient organic materials pre-processing to meet the proposed rule amendment.

Some facilities that accept feedstocks with contamination greater than five percent may choose to modify their permit to include pre-processing due to the proposed rule amendment. The costs of meeting the pre-processing standards are discussed in 3.2.4.

3.2.6 Revise organic solid waste permit exemptions

The proposed rule amendment would create new requirements for some permit exemptions, which could result in costs for facilities that qualify for those exemptions. Facilities operating under an exemption where the criteria for exemption would be changed under the proposed rule amendment may have to resubmit a notification of exemption to address the new criteria.

Among facilities with additional requirements under the proposed rule amendment, we estimate there are approximately:

- Between two and six anaerobic digesters with between 1,000 and 5,000 gallons of material on-site at any one time. These facilities would now be required to notify Ecology. We assume this would cost each facility roughly one to three hours of labor at a rate of \$51 per hour.²⁰
- Five anaerobic digester facilities processing only manure, agricultural waste, and up to 30% food processing waste. These facilities would now be required to periodically test and report nutrient concentrations of their digestate to the partner dairies and WSDA beginning within the next 12 months. However, dairies were already expected to apply digestate at agronomic rates as part of the existing requirements in WAC 173-350-230, which would have required at least some testing and reporting as outlined in the proposed change to the permit exemption. We expect that the proposed amendment could cause facilities to conduct as few as zero tests per year (if facilities are already testing at least quarterly to ensure digestate is applied at agronomic rates under the baseline) or up to four tests per year. We assume tests cost \$300 each, which would cost up to \$1200 per facility per year as a result of the proposed rule amendment. The

²⁰ This is based on the BLS (2025) mean wage for plant and system operators plus additional 30% overhead.

present value of the testing cost discounted at 0.41% over a twenty-year time horizon is up to \$88,530.

Outside of the impact to existing facilities as they currently operate, proposed changes in exemptions that increase the regulatory requirements may carry additional costs. These could include higher regulatory costs that discourage the development of new organic materials management facilities or discourage existing facilities from growing. These costs must be weighed against the benefits associated with protecting environmental and public health through the regulatory requirements.

3.2.7 Clarify exemptions at permitted facilities

The proposed rule amendment clarifies permit and exemption requirements. It is a clarification of the existing rule and we do not expect it to have any costs.

3.2.8 Standardize training requirements across all organic management facilities

The proposed rule amendment removes a specific training certificate requirement for supervisors of compost facilities that is currently present in the baseline rule. The proposed rule amendment maintains the baseline requirement that all facility employees receive adequate training for the safe operation of the facility according to their permit, but it does not require supervisors to have or maintain a training certificate. We do not expect this proposed amendment to have any costs.

The proposed amendment still has a requirement to “ensure facility employees are trained in the operations, maintenance procedures, and safety and emergency procedures according to individual job duties and according to an approved plan of operation.” We expect the proposed requirement will not cause an increase in risk of costs to environmental or public health.

3.2.9 Revise language for documentation requiring a professional engineer

The proposed rule amendment defines “engineered features” as “constructed elements associated with meeting applicable standards under this chapter...” This term was previously undefined and created ambiguity for owners and operators of organic materials management facilities determining what documentation needed to be prepared by a professional engineer. The proposed rule amendment clarifies this requirement. We do not expect any costs from the proposed rule amendment. Instead, it may reduce costs for any facility that previously used a professional engineer to prepare documentation that included construction features that are not required by the rule.

3.2.10 Revise testing requirements for finished organic products

Lab accreditation requirement

The standard current practice is for laboratory analysis of finished organic material to be done in an accredited laboratory. Because this requirement does not change baseline actions, we do not expect it to have any cost.

Laboratory result reporting

Laboratory test results may currently be summarized by the organic materials management facility when submitting annual reports. The proposed amendment makes it clear that the summary of results should come from the laboratory to ensure accuracy in the summarized report for the protection of environmental and public health. Given that the facility should already have reports from the laboratory as part of the baseline requirements, we do not expect any costs associated with this proposed rule amendment.

Testing frequency

Many permitted compost, other organics management, and anaerobic digester facilities test more frequently than once per quarter due to the requirement to test every 5,000 cubic yards of solid (or 1 million gallons of liquid) material produced. The only permitted facilities impacted would be those that produce less than 5,000 cubic yards of solid (or less than 1 million gallons of liquid) material per quarter. Exempt facilities that would now be required to test at least annually would also be impacted.

To calculate the prospective costs of additional test requirements, we assumed that any facility that produced more than 5,000 cubic yards of compost and less than 20,000 cubic yards in that year would need additional tests beginning 18 months after the effective date of the rule amendment. We assumed the change in number of tests is equal to: $(20,000 - \text{Amount Produced}) \div 3$. Any permitted facility that produced less than 5,000 cubic yards of compost would require three additional tests, while facilities that produced greater than 20,000 would not require any additional tests. There are currently no anaerobic digesters that Ecology is aware of who would be impacted by this rule.

To determine the amount of compost produced at each facility over the twenty-year time horizon of the analysis, and therefore determine how much additional testing may be required over that period, we started with Ecology records for each facility's compost totals in 2023. We assumed that the amount of compost produced at each facility in each future year would change by the same rate that the total amount of compost produced in Washington changed. We adopted the total growth in compost projected by the compost market study and applied that growth factor to each facility for each year in the twenty-year time horizon of the analysis. In this way, the amount of compost is allowed to change over time for each facility.

Because the amount of compost is projected to increase over time, this growth assumption means that more testing would have been required in the baseline as more composters would produce more than 5,000 cubic yards per year and therefore be required to test more frequently than the minimum annual test in the baseline. The proposed rule amendment would increase the testing frequency for composters producing smaller amounts of compost, so the more compost that is produced in the baseline the fewer additional tests would be caused by the proposed rule amendment.

Based on these assumptions, there are approximately 16 compost facilities that would be required to perform additional testing under the proposed rule amendment, requiring a combined 31 additional tests per year. The number of anticipated additional tests combined across all facilities declines to about 25 additional tests per year by 2035. Assuming a cost of \$350 per test, the total present value of the cost, discounted at a 0.41% real rate over a twenty-year time horizon, is \$169,007.

While our growth assumption allows compost amounts to change over time, it may over- or under-estimate costs. How industry structure will evolve in the future is another source of uncertainty. The rule impact is mainly among smaller facilities. If there are fewer smaller operations than expected in the future, then our assumptions may over-estimate costs. This could occur if smaller facilities consolidated, or if growth in compost production occurred disproportionately among smaller facilities. On the other hand, if there is a growth in the number of small composters and anaerobic digesters, then more facilities may need to test more frequently than we assumed leading to higher costs than anticipated.

To account for this uncertainty, we calculate a low-cost and a high-cost scenario. In the low-cost scenario, projected growth in finished compost produced from 2023 onwards is not entirely proportional across all compost facilities. Instead, half of the growth is split evenly among all composters while half is allocated proportionally. In this way, low volume composters grow more quickly and would have to test their finished product more frequently under the baseline rule. In the high-cost scenario, we assume that any change in finished compost is handled by new facilities, so that existing facilities do not expand at all as we predict they would due to the organics management laws described in section 2.2.1. These scenarios produce a range of projected costs, discounted at a 0.41% real rate over a twenty-year time horizon, of \$112,852 - \$225,604.

Testing for fecal coliform or salmonella

We do not expect any costs associated with these requirements. The test must already be conducted in the baseline, but the proposed amendment specifies which test is most appropriate. We do not expect a cost difference between these two tests.

3.2.11 Reduce physical contaminant limits in finished organics products

The proposed amendment to table 220-B defines a new physical contaminant limit of 0.5 percent, not to exceed 0.1 percent film plastic, by weight. This is a reduction from 1 percent limit on physical contaminants, not to exceed 0.25 percent film plastic, by weight. This standard is already being met by all organic materials management facilities currently reporting physical contaminant concentrations.

Incoming feedstocks may become more contaminated over the next several years as described in section 2.2.1. However, we expect the organic materials pre-processing facility requirements described in section 2.3.4 and the limit on physical contaminants in incoming feedstocks as described in section 2.3.5 will limit these costs. We expect organic materials management

facilities will be able to continue to meet the proposed physical contaminant limits without substantially changing their current practices and without incurring any additional costs.

3.2.12 Create permitting standards for other organic materials handling activities

The proposed rule amendment creates permitting standards for other organic materials handling facilities. In the baseline, these facilities would have been subject to permitting by local health jurisdictions under WAC 173-350-490. Ecology is not aware of any existing facility permitted under WAC 173-350-490 that would be required to meet the proposed facility standards. Even if there were, we do not expect the permit requirements to be substantially different than what local health jurisdictions would have required. We expect no costs associated with the proposed rule amendment.

3.2.13 Update organizational structure, wording, and references

The proposed rule amendments update various parts of the rule language and structure without any material changes. We do not expect any costs associated with the proposed rule amendment.

Chapter 4: Likely Benefits of the Proposed Rule Amendments

4.1 Introduction

We analyzed the likely benefits associated with the proposed rule amendments, as compared to the baseline. The proposed rule amendments and the baseline are discussed in detail in Chapter 2 of this document.

4.2 Benefits analysis

The proposed rule amendments would:

- Clarify requirements for recyclable materials containers
- Clarify that an organics management facility does not own a load they reject
- Create, revise, or clarify definitions
- Create organic materials pre-processing standards
- Limit feedstock physical contamination to 5% prior to organic materials management
- Revise organic solid waste permit exemptions
- Clarify exemptions at permitted facilities
- Standardize training requirements across all organic management facilities
- Revise language for documentation requiring a professional engineer
- Revise testing requirements for finished organic products
- Reduce physical contaminant limits in finished organics products
- Create permitting standards for other organic materials handling activities
- Update organizational structure, wording, and references

4.2.1 Clarify requirements for recyclable materials containers

The proposed rule amendment would define responsibilities for providing separate containers for waste and recyclable materials and specify standards for those containers. The proposed amendment incorporates statutory language and clarifies the statute in rule to meet the statute's intended purpose of having a separate container for solid waste wherever recyclable materials are generated and transported.

The proposed rule amendment clarifies expectations around providing separate bins for solid waste and recyclable materials. We expect this to reduce the amount of waste that ends up in recycling containers and provides a clearer means to enforce this requirement than the language in statute. By preventing solid waste from being mislabeled and mishandled as

recycling, we expect this will reduce costs of appropriately disposing of this waste and potentially increase tip fee revenue for local governments handling municipal solid waste.

4.2.2 Clarify that an organics management facility does not own a load they reject

This proposed rule amendment directly states that an organics management facility does not own a load that they reject. We do not believe this amendment represents a change to the existing ownership of a rejected load. It clarifies the baseline by stating this explicitly. While there is no substantive change from the baseline, there may be some benefit in reducing uncertainty, and in marginally reducing contracting costs between facilities and haulers or municipalities who otherwise may have been unclear whether organics management facilities owned rejected loads.

4.2.3 Create, revise, or clarify definitions

The proposed rule amendment includes definitions that differ from the baseline. In many cases, the definitions were clarified, changed to match statute, or revised to be more precise. In those cases, we expect a minor benefit in making the definitions clearer and more consistent for owners and operators of regulated facilities, local governments, and the public.

Any additional benefits from changes in definitions are discussed in the sections focused on impacts to the rule that the definition supports.

4.2.4 Create organic materials pre-processing standards

While there are many organic materials pre-processing operations ongoing in Washington, the existing rule does not include standards specific to organic materials pre-processing. The proposed rule amendment creates a section with distinct requirements for pre-processing facilities, creating new and distinct standards compared to the baseline. Previously, any standards related to organic materials pre-processing would have been incorporated into existing solid waste permit requirements for organic materials management facilities or recycling and material recovery facilities.

The proposed rule requirement requires facilities to sample and test pre-processed material to make sure it meets the five percent contamination limit.

We expect this to help ensure consistency in pre-processed organic material, reducing uncertainty for organic materials management facilities that received the pre-processed organic material and that require a limited concentration of physical contaminants in their feedstock.

While we cannot accurately quantify the benefit of increasing certainty in the organic material supply chain, we expect this value to increase as both the volume and the concentration of physical contaminants of material moving through the supply chain is expected to increase as we detail in section 2.2.1.

Longer-term secondary benefits may include greater perceived regulatory certainty and greater regulatory flexibility in addressing changes in the organic materials pre-processing sector, although we are unable to quantify either of these benefits:

- The rule amendment could be perceived to add certainty and stability to the regulatory status of pre-processing in Washington state. This could change investors' perceptions of risk and may attract more investment in Washington's organic materials pre-processing sector.
- A distinct organic materials pre-processor permit may make it easier for Ecology to track and address environmental and health challenges within this sector through existing or amended regulations in the future.

Looking at potential impacts outside of existing permitted facilities, there may be some indirect impacts from the proposed amendment. It could be perceived to add certainty and stability to the regulatory status of organic materials pre-processing in Washington state. This could change investors' perceptions of risk and may attract more investment in Washington's pre-processing sector. However, it is important to note that local government could create ordinances that limit certain types of materials that can go to pre-processors in those local jurisdictions, which could mitigate any impact of the rule in reducing regulatory uncertainty.

One potential benefit of creating organic materials pre-processor standards could be the ability to more easily modify organic materials pre-processor requirements in the future. While organic materials pre-processing is a well-established practice in Washington, technology is evolving rapidly as new organics policies become active. The operating claims of organic materials pre-processing technologies have not always been evaluated, and the environmental and public health risks of these technologies are not always fully understood. Having standards in place specific to organic materials pre-processors may make it easier for Ecology to track and address environmental and health challenges within this sector through existing or amended regulations.

4.2.5 Limit feedstock physical contamination to 5% prior to organic materials management

The proposed rule amendment would limit the amount of physical contaminants in incoming feedstocks to no more than five percent for compost, other organic materials management, and anaerobic digester facilities.

The proposed amendment requires organic materials pre-processing for physical contamination that exceeds what processing facilities can reasonably expect to handle without pre-processing. We expect this requirement to help insulate organic materials management facilities from potential changes to the volume of physical contaminants in the feedstocks they receive. We expect this to help Ecology monitor and regulate organic materials pre-processing activities to reduce risks to human and environmental health from excessive physical contaminants. It may also reduce operating costs associated with contamination reduction and contracting costs with organic materials pre-processors or haulers by setting clear limits on acceptable physical contamination.

4.2.6 Revise organic solid waste permit exemptions

The proposed rule amendment would create new opportunities for permit exemptions, which could result in benefits for facilities that qualify for those exemptions.

Among existing facilities who would be qualified for exemptions or reductions in requirements under the proposed rule amendment, we estimate there are approximately:

- Five facilities currently store up to 30 cubic yards of yard and/or land-clearing debris at drop-off stations prior to transfer to an organic materials management facility. These facilities would be exempt from Piles permit requirements in WAC 173-350-320. Currently, these facilities use a recycling and material recovery facility exemption that requires material to be stored within a structure. The proposed exemption would allow them to manage more material while in compliance with exemption requirements at a lower cost as a structure would not be required.
- Four to five emergency animal mortality events per year would now be exempt from permit requirements for composting and land application. Ecology waives notification requirements in the interest of public and environmental health and in accordance with the state veterinarian's authority over emergency animal mortalities in WAC 16-25-040. The proposed amendment makes this practice consistent with the language in WAC 16-25-040. While we do not expect significant cost savings from the proposed amendment it could reduce confusion about applicable Ecology regulations and reduce potential delays for anyone managing emergency animal mortalities.

Beyond the expected benefit of increasing the availability of permit exemptions to existing facilities, the exemptions would increase the scope of exemptions, which could reduce costs for future operations. Expanding permit exemptions may reduce the costs for new operations to develop or existing operations to expand. The Department of Agriculture estimates roughly 3,000 farms in Washington may be eligible for the proposed meat processing compost exemption based on current on-farm slaughter and poultry processing licenses. While some of these facilities may currently compost meat processing under an existing exemption for small compost facilities, the proposed exemption could create opportunities for expansion or for new larger on-farm compost operations.

The proposed permit exemption changes also add requirements for some facilities. These are largely requirements to notify Ecology for organic materials management facilities with relatively small amounts of material on-site at any one time. A notification requirement is expected to be a small cost that would allow Ecology to monitor the number of facilities currently in operation and adjust regulations accordingly. We expect a notification requirement could potentially protect environmental and public health and reduce overall long-term regulatory costs.

Other proposed changes include requirements for some exempt facilities that distribute material off-site. These requirements are designed to protect the environment and public health by demonstrating the quality of the organic product being distributed and used. Given the projected increase in organic material feedstocks that facilities will manage and the likely

increase in physical contaminants of those feedstocks outlined in section 2.2.1, Ecology believes it is prudent to limit exemptions to testing requirements for organic products that are distributed off-site, which we believe will reduce the risk of highly contaminated product being used, be more protective of environmental and public health, and help ensure consumer confidence in the products.

Some proposed exemption changes create additional operating requirements for some anaerobic digesters with at least 5,000 gallons of material on-site at any one time. These requirements would help ensure the safe operation of digesters and reduce the risk of air contaminants, surface and groundwater contamination, migration of agricultural pests, and prevent the attraction of vectors.

4.2.7 Clarify exemptions at permitted facilities

We expect the rule amendment to clarify which facilities need permits and what the regulatory requirements for those facilities are. It is possible that ambiguity in the current rule language created confusion regarding which facilities and activities were exempt and which required a permit. We expect the proposed amendment to have a benefit to the extent that it resolves this ambiguity for local health jurisdictions and owners and operators of organic materials management facilities.

4.2.8 Standardize training requirements across all organic management facilities

The baseline rule requires compost facility supervisors to be trained and certified under one of three options, unless another certification is approved by the jurisdictional health department:

- Washington Organic Recycling Council
- Solid Waste Association of North America
- U.S. Composting Council

The proposed rule amendment requires all facility employees to receive adequate training for the safe operation of the facility according to their permit, but it does not require supervisors to have or maintain a specific certification. We assume supervisors are trained and that any cost to adequately train a compost supervisor would be comparable to the costs of the training associated with the certification programs listed explicitly in the baseline rule.

We assume the benefit compost facilities would receive from the proposed rule amendment would be to avoid the cost of getting and maintaining the certification. We take the Solid Waste Association of North America certification costs as the conservative option and calculate the benefit of avoiding these costs.

In addition to the training costs, which we assume would be comparable to the training costs compost facilities will continue to incur under the proposed rule, certification requirements and costs are:

- A certification test (\$400), which is valid for three years
- Three hours of supervisor labor to complete the certification test

Recertification must be done every three years and requires thirty hours of professional development to qualify for recertification. While some professional development may not have an out-of-pocket cost, many are fee-based. A thirty-hour course costs approximately \$850, and we assume that is the out-of-pocket cost every three years. Every three years after an initial certification, recertification requirements and costs are:

- A recertification fee (\$250)
- Thirty hours of qualified ongoing professional development (\$850)
- Thirty hours of supervisor labor to complete professional development requirements

We value supervisor labor at \$49.87 per hour. This is based on the Bureau of Labor Statistics estimate of the mean wage for “First-Line Supervisors of Production and Operating Workers” in May 2024 after accounting for an additional 30% overhead.²¹

Over a twenty-year time horizon with a 0.41% real discount rate, the value of avoiding the certification requirement for a new certification is approximately \$16,966, while the value of avoiding ongoing certification costs for a supervisor who already has a certification is approximately \$16,333.

We assume that each composting facility has either one or two supervisors. There are approximately 35 permitted compost facilities in Washington. To be as conservative as possible, we assume:

- Each permitted compost facility already has the appropriate number of certified supervisors.
- The number of compost supervisor positions would remain static at current levels, with no new supervisor positions expected to be added.
- Three to six new supervisors per year due to normal staff turnover.

Under these assumptions, the present-value benefit of avoiding certification expenses for compost facilities in the proposed rule is between \$607,186 and \$1,214,372.

More realistically, the amount of organic material managed by compost facilities is expected to grow dramatically in the next several years. This will likely increase the number of supervisors compost facilities require, which would increase the likely benefit of the proposed rule amendment to compost facilities that would avoid additional certification expenses compared to the baseline.

²¹ BLS (2025)

4.2.9 Revise language for documentation requiring a professional engineer

The proposed rule amendment defines “engineered features” as “constructed elements associated with meeting applicable standards under this chapter...” term was previously undefined and created ambiguity for owners and operators of organic materials management facilities determining what documentation needed to be prepared by a professional engineer. The proposed rule amendment clarifies this requirement. The proposed amendment may reduce costs for any facility that previously used a professional engineer to prepare documentation that included construction features that are not required by the rule.

While we expect the benefits of the rule amendment to be positive, we do not know the extent to which permitted facilities use a professional engineer outside of the proposed requirements, so we do not quantify these benefits.

4.2.10 Revise testing requirements for finished organic products

Lab accreditation requirement

The standard current practice is for laboratory analysis of finished organic material to be done in an accredited laboratory, which would be required under the proposed rule amendment. There may be some benefit in reducing uncertainty among facilities in the future regarding what constitutes a laboratory analysis to meet the standards in the rule.

Laboratory result reporting

Laboratory test results may currently be summarized by the facility when submitting annual reports. The proposed amendment makes it clear that the summary of results should come from the laboratory to ensure accuracy in the summarized report for the protection of environmental and human health. There may be some benefit in reducing workload for facilities and in ensuring compliance with test parameter limits.

Testing frequency

We expect an increase in test frequency will help ensure consistency in finished organic products among low-volume producers, and demonstrate that consistency for consumers of these products. It may reduce risks to environmental and public health through regularly testing for harmful metals, bacteria, and physical contaminants. We expect this requirement may also increase demand for these products, benefiting organic materials management facilities.

Testing for fecal coliform or salmonella

The proposed amendment specifies which test, fecal coliform or salmonella, is most appropriate. Testing for the less likely bacterial contaminant may increase the risk of human illness. We expect this proposed amendment to reduce the ambiguity in the rule and help ensure human and environmental health by using the most appropriate test parameter.

4.2.11 Reduce physical contaminant limits in finished organics products

All organic materials management facilities currently reporting physical contaminant concentrations in finished compost would meet the limits in the proposed rule amendment. However, we anticipate changes in volume and contamination levels in the next several years due to new requirements of the organics management laws. To the extent that physical contaminants in finished products may exceed the proposed limits in the baseline, we expect the proposed amendment would reduce physical contaminants in these products and the associated risks to the environment and public health. Limiting the amount of contamination consumers experience in purchased compost would also increase consumer confidence and demand, increasing the overall market value of compost and other finished organic products. Moreover, Ecology is required by statute to address physical contaminants in organic products. Reducing the physical contaminant limit in organic products meets this statutory obligation.

Regardless of whether physical contaminants in finished organic products would increase in the baseline, we expect the proposed amendment would help foster consumer confidence that the finished products maintain the same level of quality despite changes to underlying feedstocks. Consumers may make decisions about whether and when to use finished organic products based on the existing regulations around contaminants given that those are generally more readily accessible than underlying laboratory analyses. On that basis, it may increase consumer confidence and demand if the state were to adopt physical contaminant limits that align with consumer expectations. EPA documentation suggests a physical contaminant limit of 0.5% or less for most compost applications, which is in line with the limit in the proposed amendment.²² Washington Department of Transportation likewise accepts only compost that meets the proposed limit of 0.5% physical contaminants or less. California has already limited physical contaminants in compost to 0.5% as of 2018. The proposed amendment would align Washington contamination limits with these expectations.

We are not aware of any estimates of how compost market demand responds to changes in the concentration of physical contaminants, or to changes in quality more generally. However, an estimated 1.25 million tons of compost was produced in Washington in 2023, and this volume is expected to increase to nearly 2 million tons in 2035. Assuming a market value of roughly \$20-\$60 per ton that stays roughly unchanged over time, an increase in price of just one percent due to higher compost quality under the proposed rule amendment would create a benefit of between \$6.9 million and \$20.6 million.

4.2.12 Create permitting standards for other organic materials handling activities

The proposed rule amendment creates permitting standards for other organic materials handling facilities. In the baseline, these facilities would have been subject to permitting by

²² EPA (2025)

local health jurisdictions under WAC 173-350-490. Ecology is not aware of any existing facility permitted under WAC 173-350-490 that would be required to meet the proposed facility standards.

Creating permitting standards for these activities may reduce costs, or the risk of costs, for new facilities or for facilities expanding beyond the limits of their permit exemptions. The absence of facility standards in WAC 173-350-225 in the baseline means there would be regulatory uncertainty for any other organic materials handling facilities that did not qualify for a permit exemption. Without standards outlined in rule, the facilities would need to get a permit through their local health jurisdiction. While it is likely that the local health jurisdiction would draw permit requirements from other sections of WAC 173-350 that regulate similar facilities, this is not guaranteed. Uncertainty in potential permit requirements could dissuade investment in these activities. Developing standards for these in WAC 173-350-225 may also reduce the burden on local health jurisdictions to develop requirements in the future.

4.2.13 Update organizational structure, wording, and references

The proposed rule amendments update various parts of the rule language and structure without any material changes. There may be some benefit in making the rule easier to understand or comply with for facility operators, local health jurisdictions, and the public.

Chapter 5: Cost-Benefit Comparison and Conclusions

5.1 Summary of costs and benefits of the proposed rule amendments

5.1.1 Estimated costs from Chapter 3

Quantified costs

As described in chapter 3, we estimate the following costs for the proposed rule amendment. Each cost is in terms of the present value over a twenty-year time horizon.

Table 3. Summary of quantified costs

Chapter 3 Section and Description	Estimated Cost
3.2.4 Testing requirement for pre-processors	\$250,675 - \$501,350
3.2.6 Anaerobic digester notification requirement	\$102 - \$918
3.2.6 Dairy digester testing requirement	\$0 - \$88,530
3.2.10 Change in testing frequency for finished organic products	\$112,852 - \$225,604
Total 20-year cost	\$363,629 - \$816,402

Qualitative costs

In addition to the quantified costs, we described some costs that are not easily quantified. They depend on current facility operation and the way in which local health jurisdictions would handle permitting under the proposed rule amendment. Specifically, we identified expected impacts that could create costs for existing facilities:

- Resubmit notification for exempt facilities to address new criteria
- Cost of amending permits for roughly eight pre-processing facilities

In addition, some of the proposed exemption amendments may increase regulatory requirements, which could discourage the prospective development of new organic materials management facilities or discourage existing facilities from growing.

5.1.2 Estimated benefits from Chapter 4

Quantified benefits

As described in chapter 4, we estimate the quantified benefit of the proposed rule amendment as between \$607,186 and \$1,214,372 based on a reduction in training costs as described in section 4.2.7.

Qualitative benefits

In addition to the quantified benefits, we described numerous benefits that are not easily quantified. Many of these are benefits without a readily discernible value or that are sufficiently prospective or indirect that they are not amenable to quantification.

General benefits across several parts of the proposed rule amendment include:

- Increase clarity of the rule and rule requirements for individuals, businesses, and government agencies.
- Notification, testing, operation, and reporting requirements to protect the environment, consumers, and public health.

Benefits to organic materials management facilities from particular amendments include:

- Reduction in market uncertainty, through:
 - Clarifying that a facility does not own a load they rejected
 - Establishing a 5% physical contaminant limit by volume for any material that has already been pre-processed
 - Limiting incoming feedstocks to 5% physical contamination by volume at organic materials management facilities
- Reduction in regulatory uncertainty, including the regulatory status of:
 - Organic materials pre-processing facilities
 - Other organic materials management facilities
- New or expanded permit exemptions for:
 - On-farm meat processing waste
 - On-farm composting of land-clearing and yard debris
- Increase consumer confidence and demand for finished organic products through:
 - Additional testing requirements
 - Reduction in allowable physical contaminants –while the magnitude of the benefit is uncertain, we estimate a plausible 1% increase in the value of finished organic products to have a benefit of at least \$7 million

5.2 Conclusion

We conclude, based on a reasonable understanding of the quantified and qualitative costs and benefits likely to arise from the proposed rule amendments, as compared to the baseline, that the benefits of the proposed rule amendments are greater than the costs.

Chapter 6: Least-Burdensome Alternative Analysis

6.1 Introduction

RCW 34.05.328(1)(e) requires Ecology to “...[d]etermine, after considering alternative versions of the rule and the analysis required under (b), (c), and (d) of this subsection, that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives stated under (a) of this subsection.” The referenced subsections are:

- (a) Clearly state in detail the general goals and specific objectives of the statute that the rule implements;
- (b) Determine that the rule is needed to achieve the general goals and specific objectives stated under (a) of this subsection, and analyze alternatives to rule making and the consequences of not adopting the rule;
- (c) Provide notification in the notice of proposed rulemaking under RCW 34.05.320 that a preliminary cost-benefit analysis is available. The preliminary cost-benefit analysis must fulfill the requirements of the cost-benefit analysis under (d) of this subsection. If the agency files a supplemental notice under RCW 34.05.340, the supplemental notice must include notification that a revised preliminary cost-benefit analysis is available. A final cost-benefit analysis must be available when the rule is adopted under RCW 34.05.360;
- (d) Determine that the probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the statute being implemented.

In other words, to be able to adopt the rule, we must determine that the requirements of the rule are the least burdensome set of requirements that achieve the goals and objectives of the authorizing statute(s).

We assessed alternative proposed rule content, and determined whether they met the goals and objectives of the authorizing statute(s). Of those that would meet the goals and objectives, we determined whether those chosen for inclusion in the proposed rule amendments were the least burdensome to those required to comply with them.

6.2 Goals and objectives of the authorizing statute

The authorizing statute for this rule is RCW 70A.205.540, Source separated organic solid waste collection services – Fees – Exceptions - Rulemaking. The goals and objectives of this statute are to establish permit requirements for organic materials management facilities to address contamination associated with incoming food waste feedstocks and finished products for environmental benefit.

6.3 Alternatives considered and why they were excluded

We considered the following alternative rule requirements and did not include them in the proposed rule amendments. Each section below explains why we did not include these alternatives.

- Set incoming physical contamination standard based on weight
- Set a lower incoming physical contamination limit
- Set incoming physical contamination limit for pre-processors
- Requirement to recover inorganic recyclable materials
- No incoming contamination limit for organic materials management facilities
- Raise the limit for exemptions
- Align training requirements with existing composter training requirements
- Add a recovery rate to organic materials pre-processors
- Align sampling requirements
- Exclude primate waste as an eligible feedstock for zoo composting

6.3.1 Set incoming physical contamination standard based on weight

We considered setting an incoming physical contamination standard based on weight. However, because organic material weight varies greatly by type of feedstock and climate (moisture), a weight comparing organic materials to relatively light-weight physical contaminants would lead to inconsistent measurements. Moreover, best practices indicate this should be measured on a dry-weight basis in a laboratory, which is impractical for organics management material facilities deciding to accept or reject an incoming load in real time. This alternative would be more burdensome for covered parties to comply with.

6.3.2 Set a lower incoming physical contamination limit

We considered setting a lower incoming physical contamination limit between 2% and 4% by volume. However, based on public comments we decided that a 5% by volume incoming physical contamination limit would be less burdensome to covered parties.

6.3.3 Set incoming physical contamination limit for pre-processors

We considered setting a physical contamination limit on feedstocks received by organic materials pre-processing. Since these facilities' primary function is to remove contamination to meet contamination limits prior to processing at recyclers, it does not meet goals to limit how much contamination an organic materials pre-processor may receive and remove. To help address stakeholder feedback, we did specify that such facilities cannot accept municipal solid waste.

6.3.4 Requirement to recover inorganic recyclable materials

We considered requiring organic materials pre-processors to recover inorganic recyclable materials. Recovering such materials is not required by statute nor would such a standard apply to any other solid waste facility type. This alternative would be more burdensome for covered parties to comply with. Ecology did add a section in the operating plan at such facilities to include a description of any plan to recover inorganic recyclables.

6.3.5 No incoming contamination limit for organic materials management facilities

We considered having no incoming contamination limit for organics management facilities, however, this would not meet the statutory mandate of requiring further reduction of incoming feedstock contamination.

6.3.6 Raise the limit for exemptions

We considered an upper limit of 500 cubic yards for smaller exemptions accepting any feedstock types. However, there have been issues with compliance at the current 250 cubic yard exemption limit that has associated risks to human health and the environment. Ecology determined that larger volumes warrant increased oversight. This alternative would not have met the goal and objective of establishing appropriate permit requirements for environmental benefit.

6.3.7 Align training requirements with existing composter training requirements

We considered requiring training across all organic management facilities to align with existing composter training requirement. However, not all organics management facilities have access to the same type of training that is reasonably priced and accessible geographically to Washington stakeholders. Therefore, we created a broader training requirement without any specifics outlined for any organic management facility. This alternative would have been more burdensome for covered parties.

6.3.8 Add a recovery rate to organic materials pre-processors

We considered adding a recovery rate to organic materials pre-processors. However, we lack data available nationally to set an informed organic materials pre-processing recovery rate. Additionally, measuring recovery is imperfect given the water weight of incoming feedstocks, which easily evaporates and/or is separated from organic material. This alternative may have resulted in a standard that was not equitable and more burdensome for organic materials pre-processors.

6.3.9 Align sampling requirements

We considered aligning sampling requirements between all organics management processing facilities. However, making the sampling standard the exact same between all organics management processing facilities created unreasonable sampling expectations for anaerobic digestors and other organic materials handling facilities such as vermiculture. Standards were updated to be equitable amongst organics management processing facilities but custom to what was within reason for the type of processor. This alternative would have been more burdensome to covered parties.

6.3.10 Exclude primate waste as an eligible feedstock for zoo composting

We considered excluding primate waste as an eligible feedstock for zoo composting based on concerns of zoonotic disease management from the Washington State Department of Health. However, after extensive communication with many stakeholders, the state veterinarian from the Washington State Department of Agriculture was able to speak as an expert on zoonotic disease that there was no good justification to prevent zoos from composting primate waste with other animal manure under an exemption. Keeping primate waste composting as an option for zoos allows them to avoid permitting costs. Excluding primate waste as an eligible feedstock would have been more burdensome for covered parties.

6.4 Conclusion

After considering alternatives, within the context of the goals and objectives of the authorizing statute, we determined that the proposed rule represents the least-burdensome alternative of possible rule requirements meeting the goals and objectives.

Chapter 7: Regulatory Fairness Act Compliance

7.1 Introduction

The Regulatory Fairness Act (RFA; RCW 19.85.070) requires Ecology to perform a set of analyses and make certain determinations regarding the proposed rule amendments. This chapter presents the:

- Analysis of relative compliance cost burden.
- Consideration of lost sales or revenue.
- Cost-mitigating elements of the rule, if required.
- Small business and local government consultation.
- Industries likely impacted by the proposed rule.
- Expected impact on jobs.

A small business is defined by the RFA as having 50 or fewer employees, at the highest ownership and operator level. Estimated compliance costs are determined as compared to the baseline (the regulatory environment in the absence of the proposed rule amendments, limited to existing federal and state requirements). Analyses under the RFA only apply to costs to “businesses in an industry” in Washington State. This means the impacts, for this part of our analyses, are not evaluated for government agencies.

7.2 Analysis of relative compliance cost burden

We calculated the estimated per-business costs to comply with the proposed rule amendments, based on the costs estimated in Chapter 3 of this document. In this section, we estimate compliance costs per employee.

Costs quantified in chapter 3 generally pertain to testing requirements for permitted organic materials management facilities. We estimate that all but one of these facilities qualify as small businesses under the definition in the RFA of 50 or fewer employees.

We were unable to assign the quantified costs associated with proposed testing requirements for pre-processed organic material from feedstocks with greater than 5% physical contaminants by volume. No permit yet exists, and Ecology does not have any data to suggest which, if any, businesses would add pre-processing to a new or existing permit in response to the proposed rule amendment.

The average affected small business likely to incur direct costs from the proposed rule amendment employs about 13 people. The largest ten percent of affected businesses employ an average of 39 people. Based on cost estimates in Chapter 3, we estimated the annual compliance costs per employee.

Table 4. Costs by business size

Averages	Small businesses	Largest 10% of businesses
Num. employees	12.9	38.6
Annual cost per employee	\$66	\$0

We conclude that the proposed rule amendments are likely to have disproportionate impacts on small businesses, and therefore Ecology must include elements in the proposed rule amendments to mitigate this disproportion, as far as is legal and feasible.

7.3 Action taken to reduce small business impacts

The RFA (19.85.030(2) RCW) states that:

“Based upon the extent of disproportionate impact on small business identified in the statement prepared under RCW 19.85.040, the agency shall, where legal and feasible in meeting the stated objectives of the statutes upon which the rule is based, reduce the costs imposed by the rule on small businesses. The agency must consider, without limitation, each of the following methods of reducing the impact of the proposed rule on small businesses:

- a) Reducing, modifying, or eliminating substantive regulatory requirements;
- b) Simplifying, reducing, or eliminating recordkeeping and reporting requirements;
- c) Reducing the frequency of inspections;
- d) Delaying compliance timetables;
- e) Reducing or modifying fine schedules for noncompliance; or
- f) Any other mitigation techniques including those suggested by small businesses or small business advocates.

If a proposed rule affects only small businesses, the proposing agency must consider all mitigation options defined in this chapter.”

We considered all of the above options, and the goals and objectives of the authorizing statutes (see Chapter 6). We limited compliance cost-reduction methods to those that:

- Are legal and feasible.
- Meet the goals and objectives of the authorizing statute.

The baseline rule does not include inspection frequency or fine schedules, so these are not feasible to amend within the proposed rule amendment.

Organic materials management facilities are overwhelmingly small businesses as defined by the RFA. Any mitigation actions to reduce the costs on small business are designed to either reduce compliance costs for all regulated business, or to reduce regulatory costs to the extent possible for businesses engaged in activities where less stringent requirements would not compromise the goals and objectives of the authorizing statute.

We included the following elements in the proposed rule amendments to reduce costs to small businesses:

- Maintaining a delayed compliance timetable. The existing baseline rule includes a delayed compliance timetable for all new rule requirements, allowing small businesses to adjust to rule changes. The proposed rule maintains that delayed compliance timetable.
- Substantive regulatory requirements are reduced, modified, or eliminated by:
 - Proposing new or expanded permit exemptions that reduce regulatory requirements for some organics management facilities.
 - Standardizing training requirements across all organic management facilities, which reduces regulatory requirements for compost facilities.
- Reporting requirements are simplified or reduced by:
 - Proposing new or expanded permit exemptions that reduce reporting and recordkeeping requirements for some organics management facilities.
 - Revising language for which documentation requires a professional engineer, which we expect to simplify reporting requirements for some facilities.

7.4 Small business and government involvement

We involved small businesses and local governments in the development of the proposed rule amendments, using:

- Email announcement of the proposed rule to over 46 local governments and one small business
- Contacted compost facilities in the Central region about the rulemaking and comment period
- Three public meetings to present the rule, which were attended by 37 local governments

7.5 North American Industry Classification System (NAICS) codes of impacted industries

The proposed rule amendments likely impact the following industries, with associated NAICS codes. [NAICS definitions and industry hierarchies](https://www.census.gov/naics/) are discussed at <https://www.census.gov/naics/>.

- 111 Crop Production
- 112 Animal Production and Aquaculture
- 311 Food Manufacturing

- 321 Wood Product Manufacturing
- 322 Paper Manufacturing
- 32531 Fertilizer and Compost Manufacturing
- 444180 Other Building Material Dealers
- 444240 Nursery, Garden Center, and Farm Supply Retailers
- 561730 Landscaping Services
- 5621 Waste Collection
- 5622 Waste Treatment and Disposal
- 611310 Colleges, Universities, and Professional Schools
- 712130 Zoos and Botanical Gardens

7.6 Loss of sales or revenue and impacts on jobs

Businesses that would incur costs could experience changes to sales or revenues if the proposed rule amendments significantly affect the prices of the goods they sell. The degree to which this could happen is strongly related to each business's production and pricing model (whether additional lump-sum costs would significantly affect marginal costs), as well as the specific attributes of the markets in which they sell goods, including the degree of influence each firm has on market prices, as well as the relative responsiveness of market demand to price changes. Finally, overall shifts in economic activity in the state, including competition within markets and attributes of the labor market simultaneously adjust in response to changes in compliance costs. Similarly, employment within directly impacted industries, other industries in Washington, and the labor market within and outside of the state will also adjust in response to a change in costs.

We used the REMI E3+ model for Washington State to estimate the impact of the proposed rule amendments on directly affected markets, accounting for dynamic adjustments throughout the economy. The model accounts for variables including but not limited to: inter-industry impacts; price, wage, interstate and international trade, and population or labor market changes; and dynamic adjustment of all economic variables over time.

Within the REMI model, we input the quantitative estimates of costs and benefits presented in chapter 3 and 4 of this document, respectively. These include the net quantified costs and benefits associated with the proposed rule amendment: organic material pre-processing standards test requirement, revised permit exemptions for notification and dairy digester testing, and revised testing requirements for finished organic products.

We run two model simulations: a low net benefit scenario that uses the maximum cost estimate and the minimum benefit estimate, as well as a high net benefit scenario that uses the minimum cost estimate and the maximum benefit estimate.

The structure of the REMI model requires costs and benefits to be attributed to an industry as well as a category of economic impact. We assign the impact to the “Waste management and remediation services” industry in REMI, which includes organics management operations and we model the net cost of the proposed rule amendment as a change in production cost.

The table below presents the range of expected impacts based on the two model simulations. Expected impacts are in total jobs in the state, in terms of full-time equivalent employment, and a measure of the value of total economic output of the state economy. The near-term impact on total economic output for the state across the two simulations was between a seven thousand dollar decrease and a 42 thousand dollar increase per year. The longer-term equilibrium estimates an annual total impact on the Washington economy between a 24 thousand dollar decrease and a 74 thousand dollar increase. Waste management and remediation services is the industry directly impacted by the proposed rule amendments, and they are expected to experience roughly 20% of the projected gains or losses from the rule amendment. Neither simulation predicted an impact on jobs over the course of a twenty-year time horizon.

Table 5. Annual impacts on jobs and output (in \$ thousands)

Industry	Initial Jobs Impact	Jobs Impact in 20 years	Initial output impact	Output impact in 20 years
Whole state	0	0	-7 - +42	-24 - +74
Waste management and remediation services	0	0	-1 - +8	-7 - +17

Simulations in the REMI model only account for the benefits and costs quantified in the analysis. It does not include benefits that we did not quantify, such as improvements to the environment or public health or an increase in demand for finished organic products. It also does not include indirect impacts that we were not able to quantify. Many of the expected impacts of the proposed rule amendment are highly indirect, and they depend on how the organic management industry evolves in response to the proposed rule amendment alongside changes in organics recycling due to organics management laws. Many of the precise impacts will be a function of how individual businesses decide to operate to meet the requirements of both rule and statute in a way that is not realistically quantifiable.

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Appendix A Administrative Procedure Act (RCW 34.05.328) Determinations

A. RCW 34.05.328(1)(a) – Clearly state in detail the general goals and specific objectives of the statute that this rule implements.

See Chapter 6.

B. RCW 34.05.328(1)(b) –

1. Determine that the rule is needed to achieve the general goals and specific objectives of the statute.

See chapters 1 and 2.

2. Analyze alternatives to rulemaking and the consequences of not adopting this rule.

RCW 70A.205.540 requires Ecology to adopt rules establishing permit requirements for organic materials management facilities requiring a solid waste handling permit addressing contamination associated with incoming food waste feedstocks and finished products.

Beginning April 1, 2027, source separated organic solid waste collection service must be offered to all residents and businesses within specified areas, year-round. Beginning April 1, 2030, that service must be provided year-round on a non-elective basis and must include food waste collection. As a result of these two requirements, we expect to see significant increases to the amount of organic materials entering the waste stream. Projections from the 2025 Compost Market Study and information from other states with similar organic management laws forecast a surge in organics recovered. We could see a **four-fold increase** of organic materials recovered by 2035 compared to the state's 2023 recovery numbers.

Food waste feedstocks are generally more contaminated than other types of organic waste. Therefore, the addition of food waste collection services will require more stringent measures in place to adequately reduce contamination in the organics waste stream.

This rulemaking is needed to comply with the law and to ensure that contamination in organic materials is appropriately addressed. If this rule is not adopted, some organic material management facilities, especially many of the smaller facilities will be forced to reject loads with high contamination. This would result in increased organic material being sent to the landfill for disposal rather than being managed for beneficial uses. For loads that facilities do accept they will require significant investments to remove the higher physical contamination prior to processing. Many smaller facilities are unable to fund the investments that would be needed. With the drastic increase of organic materials we expect within the next decade, Washington will need to utilize all its organics management facilities, including small facilities, to manage organic materials entering the waste stream.

Please see the Least Burdensome Alternative Analysis, Chapter 6 of this document, for discussion of alternative rule content considered.

C. RCW 34.05.328(1)(c) - A preliminary cost-benefit analysis was made available.

When filing a rule proposal (CR-102) under RCW 34.05.320, Ecology provides notice that a preliminary cost-benefit analysis is available. At adoption (CR-103 filing) under RCW 34.05.360, Ecology provides notice of the availability of the final cost-benefit analysis.

D. RCW 34.05.328(1)(d) – Determine that probable benefits of this rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and the specific directives of the statute being implemented.

See Chapters 1 - 5.

E. RCW 34.05.328 (1)(e) - Determine, after considering alternative versions of the analysis required under RCW 34.05.328 (b), (c) and (d) that the rule being adopted is the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives stated in Chapter 6.

Please see Chapter 6.

F. RCW 34.05.328(1)(f) - Determine that the rule does not require those to whom it applies to take an action that violates requirements of another federal or state law.

This rule does not conflict with any federal or state law. Ecology regulates the activities of solid waste handling facilities, including those at organics management facilities, through the issuance and enforcement of solid waste handling permits.

G. RCW 34.05.328 (1)(g) - Determine that the rule does not impose more stringent performance requirements on private entities than on public entities unless required to do so by federal or state law.

One of the primary objectives of this rule is to level the playing field for all organic management facilities across the state, regardless of whether the facility is privately or publicly owned. This rule does not impose any more stringent performance requirements on private entities than public entities.

H. RCW 34.05.328 (1)(h) Determine if the rule differs from any federal regulation or statute applicable to the same activity or subject matter.

No, the rule does not differ from any federal regulations or statute

- If **yes**, the difference is justified because of the following:
 - ☐ (i) A state statute explicitly allows Ecology to differ from federal standards.
 - ☐ (ii) Substantial evidence that the difference is necessary to achieve the general goals and specific objectives stated in Chapter 6.

I. RCW 34.05.328 (1)(i) – Coordinate the rule, to the maximum extent practicable, with other federal, state, and local laws applicable to the same subject matter.

Ecology has been coordinating with the Washington State Department of Agriculture to ensure that the rule does not conflict with regulations for farming practices.