



DEPARTMENT OF
ECOLOGY
State of Washington

Final Regulatory Analyses

Including the:

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

Chapter 173-303 WAC

Dangerous Waste Regulations

Revised June 2021
Publication 19-04-007

Publication and Contact Information

This report is available on the Department of Ecology's website at <https://apps.ecology.wa.gov/publications/SummaryPages/1904007.html>

For more information contact:

Hazardous Waste and Toxics Reduction Program
P.O. Box 47600
Olympia, WA 98504-7600
Phone: 360-407-6700

Washington State Department of Ecology - www.ecology.wa.gov

- Headquarters, Olympia: 360-407-6000
- Northwest Regional Office, Shoreline: 206-594-0000
- Southwest Regional Office, Olympia: 360-407-6300
- Central Regional Office, Union Gap: 509-575-2490
- Eastern Regional Office, Spokane: 509-329-3400

ADA Accessibility

The Department of Ecology is committed to providing people with disabilities access to information and services by meeting or exceeding the requirements of the Americans with Disabilities Act (ADA), Section 504 and 508 of the Rehabilitation Act, and Washington State Policy #188.

To request an ADA accommodation, contact Ecology by phone at 360-407-6700 or email at hwtrpubs@ecy.wa.gov. For Washington Relay Service or TTY call 711 or 877-833-6341. Visit ecology.wa.gov/accessibility for more information.

Final Regulatory Analyses

Including:

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

Chapter 173-303 WAC Dangerous Waste Regulations

By

Kasia Patora

with

Sam Wilson

for the

Hazardous Waste and Toxics Reduction Program
Washington State Department of Ecology
Olympia, Washington

This page intentionally left blank.

Table of Contents

Table of Contents	i
Executive Summary	v
Chapter 1: Background and Introduction	1
1.1 Introduction.....	1
1.1.1 Motivation for rulemaking.....	1
1.2 Summary of the rule amendments	2
1.3 Reasons for the rule amendments	3
1.3.1 Amendments based on federal rules	3
1.3.1.1 Hazardous Waste Generator Improvements Rule.....	3
1.3.1.2 Hazardous Waste Export-Import Revisions.....	3
1.3.1.3 Hazardous Waste Management System – E-Manifest system.....	3
1.3.1.4 Revisions to the Definition of Solid Waste.....	4
1.3.1.5 Conditional exclusions from Solid Waste and Hazardous Waste for solvent contaminated wipes.....	4
1.3.2 State-initiated rule amendments.....	4
1.3.2.1 Secondary containment.....	4
1.3.2.2 Used oil facility reporting	4
1.3.2.3 Container labeling.....	5
1.3.2.4 Tank system labeling	5
1.3.2.5 Reduce duplicative regulation of waste	5
1.3.2.6 Clarifications and revisions with no material impact on requirements.....	5
1.4 Document organization.....	6
Chapter 2: Baseline and the Rule Amendments	7
2.1 Introduction.....	7
2.2 Baseline.....	7
2.2.1 Federal laws and rules.....	7
2.2.2 State laws and rules.....	8
2.3 Rule amendments.....	8
2.3.1 Amendments based on federal rules	9
2.3.1.1 Hazardous Waste Generator Improvements Rule (GIR)	9
2.3.1.2 Hazardous Waste Export-Import Revisions.....	11
2.3.1.3 Hazardous Waste Management System – e-Manifest System.....	11
2.3.1.4 Revisions to the Definition of Solid Waste.....	12
2.3.1.5 Conditional exclusions from Solid Waste and Hazardous Waste for solvent contaminated wipes.....	13
2.3.2 State-initiated rule amendments.....	14
2.3.2.1 Secondary containment.....	14
2.3.2.2 Used oil facility reporting	14
2.3.2.3 Container labeling.....	14

2.3.2.4 Tank system labeling	15
2.3.2.5 Reduce duplicative regulation of waste	15
2.3.2.6 Clarifications and revisions with no material impact on requirements.....	16
Chapter 3: Likely Costs of the Rule Amendments	19
3.1 Introduction.....	19
3.2 Cost analysis	19
3.2.1 Amendments based on federal rules	19
3.2.1.1 Hazardous Waste Generator Improvements Rule (GIR)	19
3.2.1.2 Hazardous Waste Export-Import Revisions.....	20
3.2.1.3 Hazardous Waste Management System; e-manifest system.....	20
3.2.1.4 Revisions to the Definition of Solid Waste.....	20
3.2.1.5 Conditional exclusions from Solid Waste and Hazardous Waste for solvent contaminated wipes.....	20
3.2.2 State-initiated rule amendments.....	20
3.2.2.1 Secondary containment.....	20
3.2.2.2 Used oil facility reporting	20
3.2.2.3 Container labeling.....	20
3.2.2.4 Tank system signage and labeling	21
3.2.2.5 Reduce duplicative regulation of waste	21
3.2.2.6 Clarifications and revisions with no material impact on requirements.....	21
Chapter 4: Likely Benefits of the Rule Amendments	23
4.1 Introduction.....	23
4.2 Benefit analysis.....	23
4.2.1 Amendments based on federal rule revisions	23
4.2.1.1 Hazardous Waste Generator Improvements Rule.....	23
4.2.1.2 Hazardous Waste Export-Import Revisions.....	24
4.2.1.3 Hazardous Waste Management System.....	24
4.2.1.4 Revisions to the Definition of Solid Waste.....	24
4.2.1.5 Conditional exclusions from Solid Waste and Hazardous Waste for solvent contaminated wipes.....	24
4.2.2 State-initiated rule amendments.....	25
4.2.2.1 Secondary containment.....	25
4.2.2.2 Used oil facility reporting	25
4.2.2.3 Container labeling.....	25
4.2.2.4 Tank system signage and labeling	25
4.2.2.5 Reduce duplicative regulation of waste	26
4.2.2.6 Clarifications and revisions with no material impact on requirements.....	26
Chapter 5: Cost-Benefit Comparison and Conclusions	27
5.1 Summary of the costs and benefits of the rule amendments.....	27
Costs.....	27
Labeling	27
Secondary containment (unlikely to cause cost increases).....	27
TSD and generator container labeling	28

Tank system signs	28
Benefits	28
Labeling	28
Emergency response waiver	29
Drip pad accumulation	29
Solvent-contaminated wipe recycling	29
Secondary containment	30
TSD container labeling	30
Tank system labeling and signs	30
Overlapping regulations	30
Clarifications and revisions with no material impact on requirements	30
5.2 Conclusion	30
Chapter 6: Least-Burdensome Alternative Analysis	31
6.1 Introduction	31
6.2 Goals and objectives of the authorizing statute: Chapter 70.105 RCW	32
6.3 Alternatives considered and why they were not included	32
6.3.1 Removing episodic waste reporting for small quantity generators	32
6.3.2 Less prescriptive labeling requirements	32
6.3.3 No signage for underground tanks	33
6.3.4 No immediate designation of unknown wastes	33
6.3.5 Revised definition of authorized representative	33
6.3.6 Removing requirement for complete inspection of containers	33
6.3.7 Less-stringent EPA rules	34
6.3.8 Including land-based units in definition of contained	34
6.3.9 Allowing local fire authorities to waive ignitable waste setbacks	34
6.3.10 EPA terminology for generator categories	35
6.3.11 Excluding solvent-contaminated wipes disposed of at solid waste landfills and combustors	35
6.3.12 Including all sizes of container in labeling requirement	35
6.3.13 EPA pharmaceutical rule	36
6.4 Conclusion	36
Chapter 7: Regulatory Fairness Act Compliance	37
7.1 Introduction	37
7.2 Quantification of Cost Ratios	37
7.3 Loss of sales or revenue	38
7.4 Action Taken to Reduce Small Business Impacts	38
7.5 Small Business and Government Involvement	39
7.6 NAICS Codes of Impacted Industries	40
7.7 Impact on Jobs	42
References	43

Appendix A Administrative Procedure Act (RCW 34.05.328) 44

Executive Summary

This report presents the determinations made by the Washington State Department of Ecology (Ecology) as required under chapters 34.05 RCW and 19.85 RCW, for the adopted amendments to the Dangerous Waste Regulations rule (chapter 173-303 WAC; the “rule”). This includes the:

- Final Cost-Benefit Analysis (CBA)
- Least-Burdensome Alternative Analysis (LBA)
- Administrative Procedure Act Determinations
- Regulatory Fairness Act Compliance

The Washington Administrative Procedure Act (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 (RCW 34.05.328(1)(d)). 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 provides the documentation for these determinations.

All determinations are based on the best available information at the time of publication.

The Washington Regulatory Fairness Act (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 to small businesses to the largest businesses affected. Chapter 7 documents that analysis, when applicable.

Ecology is required to adopt certain federal hazardous waste rules to maintain its authorization by the Environmental Protection Agency (EPA) and remain consistent with EPA regulations. Ecology is authorized to carry out the state hazardous waste program in place of the federal hazardous waste program. Ecology must adopt the following rules to maintain this authorization:

- Definition of Solid Waste – Revisions to Solid Waste Variances, prohibition on sham recycling and the Definition of Legitimacy.
- Revisions to the Export Provisions of the Cathode Ray Tube (CRT) Rule.
- Parts of the Hazardous Waste Generator Improvements Rule.
- Hazardous Waste Export-Import Revisions.
- Hazardous Waste Electronic Manifest Rule.

Ecology is adopting optional federal rules within this rulemaking in order to provide regulatory relief or make the regulations easier to comply with:

- Parts of the generator improvement rule.
- The solvent-contaminated wipes rule.

The state regulations must be as least as protective as EPA rules, but can be more stringent or broader in scope; in addition, under RCW 70.105.007 Ecology regulates state-only dangerous wastes not included in federal regulation.

The adopted amendments make the following changes:

- Amendments based on federal rules:
 - Hazardous Waste Generator Improvements Rule.
 - Hazardous Waste Export-Import Revisions.
 - Revisions to the Export Provisions of the Cathode Ray Tube (CRT) Rule.
 - Hazardous Waste Electronic Manifest System.
 - Revisions to the Definition of Solid Waste.
 - Conditional exclusions from Solid Waste and Hazardous Waste for solvent contaminated wipes.
- State-initiated rule amendments:
 - Secondary containment.
 - Used oil facility reporting.
 - Tank and container labeling.
 - Reduce duplicative regulation of waste.
 - Clarifications and revisions with no material impact on requirements.

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

The regulatory baseline for this analysis is the existing state rule: Dangerous Waste Regulations chapter 173-303 WAC as amended December 2014. This chapter consists of both federal provisions and state-only requirements. Ecology analyzed the elements of the rule amendments that are different than the existing state rule. However, we are not analyzing amendments that incorporate the Resource Conservation and Recovery Act (RCRA) without state modification.

Costs

Comparing the baseline and the rule amendments, the following costs are likely to result.

Costs to generators

The rule amendments to labeling requirements are likely to result in one-time additional labeling costs for some facilities with inadequate labels on containers larger than one gallon or four liters. These labels may be replacements for existing labels, or additional labels augmenting existing labeling. It is not clear how prevalent inadequate labels that

will need to be replaced are, the number of those labels at facilities, and the degree of updating or replacement needed to bring labels into compliance.

We are therefore including this cost qualitatively, with illustrative cost information. Ecology inspectors have observed labels that do not adequately communicate the hazards associated with dangerous wastes, and are not readable at a safe distance. The flexibility provided for under the rule amendments, and examples of waste characteristics included to facilitate understanding, however, are likely to allow facilities to expend minimal costs to update labels. For illustrative purposes, hazard labels can cost less than one dollar each, with prices depending on label size and quantity purchased.¹

During the public comment period, we received information from some large facilities, including labs, that under the proposed rule they would need to replace possibly thousands of labels (including numerous small containers). One commenter estimated 10,000 small containers from a lab. At a cost of one dollar each for purchased replacement labels (or a lower bulk printing cost), this could cost a facility in excess of \$10 thousand for a few large laboratory generators.² This cost is likely to be significantly smaller under the adopted exclusion for small containers, and those small containers are packaged into larger containers labeled for shipping and disposal under the baseline, but which may themselves need replacement or augmenting labels.

The rule amendments to requirements for signage of underground storage tanks and labeling of aboveground storage tanks are likely to result in one-time additional signage or labeling costs for some generator facilities with inadequate or missing signs at underground tanks and tank systems, and benefits of staff, public, and environmental safety in being able to recognize the hazards posed by wastes. It is not clear how prevalent inadequate or missing signs on underground tank systems are, the number of facilities with underground tanks systems missing signage, and the degree of updating or replacement needed to bring any existing signs into compliance. We are therefore including this cost qualitatively.

Treatment, storage, and disposal costs

The rule amendments to label requirements are likely to result in one-time additional labeling costs for some facilities. It is not clear how prevalent inadequate labels that will need to be replaced are, the number of generator and treatment, storage, and disposal (TSD) containers bearing those labels, and the degree of updating or replacement needed to bring labels into compliance. We are therefore including this cost qualitatively.

There are 13 treatment, storage, disposal, and recycling (TSDR) facilities operating in the state, along with hundreds of generators. Ecology inspectors have observed labels that do not adequately communicate the hazards associated with dangerous wastes at a safe distance. The flexibility provided for under the rule amendments, and examples of waste

¹ ULINE (2018). Product catalog. <http://www.uline.com>

² One large lab indicated they would need to replace over 600 thousand labels. This would lead to potential costs of \$600 thousand at one facility.

characteristics included to facilitate understanding, however, are likely to allow facilities to expend minimal costs to update labels.

The rule amendments to requirements for signage of underground storage tanks and labeling of aboveground storage tanks are likely to result in one-time additional signage or labeling costs for some treatment, storage, or disposal facilities with inadequate or missing signs at underground tanks and tank systems, and benefits of staff, public, and environmental safety in being able to recognize the hazards posed by wastes as well as the locations of covered hazards (i.e., underground dangerous waste storage tanks). It is not clear how prevalent inadequate or missing signs on underground tank systems are, the number of facilities with underground tanks systems missing signage, and the degree of updating or replacement needed to bring any existing signs into compliance. We are therefore including this cost qualitatively.

Secondary containment costs

The rule amendments are likely to result in costs to any facilities that have not upgraded facilities and moved their secondary containment since before 1986. The number of facilities that have not upgraded their secondary containment is likely to be minimal. In the 32 years since that 1986 secondary containment regulation, facilities have likely updated and moved their central containment areas, triggering secondary containment requirements under the baseline.

Benefits

Comparing the baseline and the rule amendments, the following benefits are likely to result.

Labeling

The rule amendments to signage requirements are likely to result in benefits of staff, public, and environmental safety in being able to recognize the hazards posed by wastes. It is not clear how prevalent inadequate signs that will need to be replaced are, the number of those signs at facilities, and the degree of updating or replacement needed to bring signs into compliance. We are therefore including this benefit qualitatively.

Ecology inspectors have observed signs that do not adequately communicate the hazards associated with dangerous wastes at a safe distance. Better knowledge of waste hazards will allow staff and the public to appropriately handle wastes, avoid contact, and deal with exposure to toxic, reactive, or corrosive wastes.

Emergency response waiver

MQGs and LQGs with 24-hour internal emergency response capabilities can take advantage of a waiver from the requirement to provide local emergency response authorities with contingency plan documents. Generators will need to receive the waiver from the authority with jurisdiction over the fire code or other emergency response agencies, provided that the waiver is documented in the generator's operating record. This waiver will allow generators to avoid staff time costs in providing this information to local agencies.

Drip pad accumulation

Allowance of drip pad accumulation will benefit wood treatment dangerous waste generators by allowing an additional accumulation option in addition to containers, tanks, and containment buildings. They will also benefit from the flexibility of being able to remove waste from a drip pad and move it to another accumulation unit for the remainder of their accumulation time limit.

Solvent-contaminated wipe recycling

Under the rule amendments, solvent-contaminated wipes that are laundered are not annually reported and do not count toward generator status determination, which could result in lessened requirements if they affect generator status. It is unclear to what degree solvent-contaminated wipes currently designated as dangerous waste will make a difference in determining generator status. Under existing rule, appropriately recycled wipes contribute to a generator's total pounds of dangerous waste. Under the rule amendments, a reduction in their disposal could result in a cost-savings, and will result in encouragement of recycling of solvent-contaminated wipes (laundering and reuse) rather than them being used only once and sent to a landfill or incinerator.

Secondary containment (unlikely)

The rule amendments could result in benefits of secondary containment including protection of staff and public health, and environmental health, in the event a spill took place. But this is only the case if there are facilities that will be impacted by the rule amendments. The number of facilities operating since before 1986 without updates to central accumulation areas (that will trigger secondary containment requirements) is likely to be minimal in the over three decades since the year of this baseline exemption.

TSD container labeling

The rule amendments to labeling requirements are likely to result in benefits of staff, public, and environmental safety in being able to recognize the hazards posed by wastes in TSD containers. It is not clear how prevalent inadequate labels that will need to be replaced are, the number of those labels at facilities, and the degree of updating or replacement needed to bring labels into compliance. We are therefore including this benefit qualitatively. Ecology inspectors have observed labels that do not adequately communicate the hazards associated with dangerous wastes at a safe distance. Better knowledge of waste hazards will allow staff and the public to appropriately handle wastes, avoid contact, and deal with exposure.

Tank system labeling and signs

The rule amendments to signage requirements for underground tanks and labeling for aboveground tanks are likely to result in benefits of staff, public, and environmental safety in being able to recognize the hazards posed by wastes. It is not clear how prevalent inadequate labels and signs that will need to be replaced are, the number of those labels or signs at facilities, and the degree of updating or replacement needed to bring labels and signs into compliance. We are therefore including this benefit

qualitatively. Ecology inspectors have observed signs that do not adequately communicate the hazards associated with dangerous wastes at a safe distance. Better knowledge of waste hazards will allow staff and the public to appropriately handle wastes, avoid contact, and deal with exposure.

Overlapping regulations

The rule amendments are likely to result in a reduction in double regulation of PCB wastes that are also regulated under 40 CFR part 761. This will reduce confusion and potential duplicative compliance behaviors.

Clarifications and revisions with no material impact on requirements

These rule amendments are not likely to result in benefits beyond improved clarity facilitating compliance, as compared to the baseline.

Ecology concludes, based on reasonable understanding of the quantified and qualitative costs and benefits likely to arise from the rule amendments, that the benefits of the rule amendments are greater than the costs.

Least-Burdensome Alternative

After considering alternatives to the amended rule's contents, as well as the goals and objectives of the authorizing statute, Ecology determined that the amended rule represents the least-burdensome alternative of possible rule contents meeting these goals and objectives.

Small Business Impacts

We could not quantify the likely costs of the rule amendments, due to uncertainty about:

- The number of generator and TSD containers, and aboveground tanks, with currently inadequate labels.
- The number of underground tanks and tank systems with currently inadequate or missing signage.

Small facilities, however, are likely to have fewer containers and tanks than large facilities. To the extent that small facilities are likely to be owned and operated by small businesses, compliance costs are likely to be smaller at small businesses. It is unclear, however, whether the ratio of inadequate labels, or inadequate or missing signs, at small businesses compared to the largest ten percent of businesses is the same as the ratio of employees between small and large businesses. This is further confounded by the inability to quantify whether small or large businesses are more likely to have inadequate signs, or whether the likelihood is the same.

We therefore conclude that it is not clear that the rule amendments have a disproportionate impact on small businesses. However, because we cannot establish quantitatively that the rule amendments do not place disproportionate compliance cost burden on small businesses, Ecology included cost-reducing elements in the amended rule.

Chapter 1: Background and Introduction

1.1 Introduction

This report presents the determinations made by the Washington State Department of Ecology (Ecology) as required under chapters 34.05 RCW and 19.85 RCW, for the adopted amendments to the Dangerous Waste Regulations rule (chapter 173-303 WAC; the “rule”). This includes the:

- Final Cost-Benefit Analysis (CBA)
- Least-Burdensome Alternative Analysis (LBA)
- Administrative Procedure Act Determinations
- Regulatory Fairness Act Compliance

The Washington Administrative Procedure Act (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 (RCW 34.05.328(1)(d)). 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 provides the documentation for these determinations.

All determinations are based on the best available information at the time of publication.

The Washington Regulatory Fairness Act (RFA; Chapter 19.85 RCW) requires Ecology to evaluate the relative impact of rules that impose costs on businesses in an industry. It compares the relative compliance costs to small businesses to the largest businesses affected. Chapter 7 documents that analysis, when applicable.

1.1.1 Motivation for rulemaking

Ecology is required to adopt certain federal hazardous waste rules to maintain its authorization by the Environmental Protection Agency (EPA) and remain consistent with EPA regulations. Ecology is authorized to carry out the state hazardous waste program in place of the federal hazardous waste program. Ecology must adopt the following rules to maintain this authorization:

- Definition of Solid Waste – Revisions to Solid Waste Variances, tracking of speculatively accumulated dangerous wastes, prohibition on sham recycling and the definition of legitimacy.
- Revisions to the Export Provisions of the Cathode Ray Tube (CRT) Rule.
- Parts of the Hazardous Waste Generator Improvements Rule.
- Hazardous Waste Export-Import Revisions.
- Hazardous Waste Electronic Manifest Rule.

Ecology is adopting optional federal rules within this rulemaking in order to provide regulatory relief or make the regulations easier to comply with:

- Parts of the generator improvement rule.
- The solvent-contaminated wipes rule.

The state regulations must be as least as protective as EPA rules, but can be more stringent or broader in scope; in addition, under RCW 70.105.007 Ecology regulates state-only dangerous wastes not included in federal regulation.

1.2 Summary of the rule amendments

The rule amendments make the following changes:

- Amendments based on federal rules:
 - Hazardous Waste Generator Improvements Rule.
 - Hazardous Waste Export-Import Revisions.
 - Revisions to the Export Provisions of the Cathode Ray Tube (CRT) Rule.
 - Hazardous Waste Electronic Manifest System.
 - Revisions to the Definition of Solid Waste.
 - Conditional exclusions from Solid Waste and Hazardous Waste for solvent contaminated wipes.
- State-initiated rule amendments:
 - Secondary containment.
 - Used oil facility reporting.
 - Container labeling at generator sites and at permitted treatment, storage, and disposal facilities.
 - Tank system labeling at generator sites and at permitted treatment, storage, and disposal facilities.
 - Reduce duplicative regulation of PCB waste.
 - Clarifications and revisions with no material impact on requirements.

1.3 Reasons for the rule amendments

1.3.1 Amendments based on federal rules

Ecology is adopting the following federal regulations into the state rule for similar reasons as presented by EPA below. Also, ecology wants to maintain consistency with the federal program.

1.3.1.1 Hazardous Waste Generator Improvements Rule

With the Hazardous Waste Generator Improvements Rule (Final Rule November 28, 2016 – Vol. 81 FR 85732), EPA revised the Resource Conservation and Recovery Act's (RCRA). The EPA had several objectives to these revisions. They include:

- Reorganizing the hazardous waste generator regulations to make them more user-friendly and thus improve their usability by the regulated community.
- Providing a better understanding of how the RCRA hazardous waste generator regulatory program works.
- Addressing gaps in the existing regulations to strengthen environmental protection.
- Providing greater flexibility for hazardous waste generators to manage their hazardous waste in a cost-effective and protective manner.
- Making technical corrections and conforming changes to address inadvertent errors and remove obsolete references to programs that no longer exist.

1.3.1.2 Hazardous Waste Export-Import Revisions

The EPA amended existing regulations regarding the export and import of hazardous wastes from and into the United States (Final rule November 28, 2016 - Vol. 81 FR 85696). EPA made these changes to:

- Provide greater protection to human health and the environment by making existing export and import related requirements more consistent with the current import-export requirements for shipments between members of the Organization for Economic Cooperation and Development (OECD).
- Enable electronic submittal to EPA of all export and import-related documents (e.g., export notices, export annual reports).
- Enable electronic validation of consent in the Automated Export System (AES) for export shipments subject to RCRA export consent requirements prior to exit. The AES resides in the U.S. Customs and Border Protection's Automated Commercial Environment (ACE).

1.3.1.3 Hazardous Waste Management System – E-Manifest system

The EPA established new requirements (Final rule February 7, 2014 – Vol. 79 FR 7518) that authorize the use of electronic manifests (or e-Manifests) as a means to track off-site shipments of hazardous waste from a generator's site to the site of the receipt and disposition of the hazardous waste. This final rule also implements certain provisions of the Hazardous Waste Electronic Manifest Establishment Act (Public Law 112-195), which directs EPA to establish a

national e-Manifest system, and to impose reasonable user service fees as a means to fund the development and operation of the e-Manifest system.

1.3.1.4 Revisions to the Definition of Solid Waste

The EPA published a rule (Final Rule January 13, 2015 – Vol. 80 FR 1694) that revises several recycling-related provisions associated with the definition of solid waste. This is used to determine hazardous waste regulation applicability under Subtitle C of RCRA. The purpose of these revisions is to encourage reclamation in a way that does not result in increased risk to human health and the environment from discarded hazardous secondary material.

1.3.1.5 Conditional exclusions from Solid Waste and Hazardous Waste for solvent contaminated wipes

The EPA published a rule (Final Rule July 31, 2013 – Vol. 78 FR 46448) that modifies its hazardous waste management regulations for solvent-contaminated wipes under RCRA. Specifically, this rule revises the definition of solid waste to conditionally exclude solvent-contaminated wipes that are cleaned and reused and revises the definition of hazardous waste to conditionally exclude solvent-contaminated wipes that are disposed. The purpose of this final rule is to provide a consistent regulatory framework that is appropriate to the level of risk posed by solvent-contaminated wipes in a way that maintains protection of human health and the environment, while reducing overall compliance costs for industry.

1.3.2 State-initiated rule amendments

1.3.2.1 Secondary containment

The existing rule requires medium quantity generators (MQGs) and large quantity generators (LQGs) to have secondary containment in dangerous waste accumulation areas, unless the facility was built before 1986. In the 32 years since 1986, Ecology expects that most if not all facilities will have upgraded their facilities and moved their accumulation areas, and are complying with the secondary containment requirement. The rule amendment requires all facilities to have secondary containment in central accumulation areas. This change is motivated by a need to apply a uniform requirement to central accumulation areas. This will establish uniform environmental and human health protection requirements at all facilities, including those that built accumulation areas before 1986 and have not since upgraded them.

1.3.2.2 Used oil facility reporting

Nearly all covered facilities are required to report waste data annually, but for used oil transporters, processors, and burners, the reporting frequency requirement is required by reference to federal rules requiring reporting every other year. While existing regulations require generators to follow Ecology reporting instructions, which tell used oil facilities to report annually, and most do so, the rules are not clear that they need to report annually. The rule will explicitly require annual reporting for used oil transporters, processors, and burners. This rule amendment is motivated by Ecology's need to know each year's waste data, and a need for uniform requirements across facilities.

1.3.2.3 Container labeling

Ecology is adopting labeling content and legibility requirements for containers. This rule amendment is motivated by the need to ensure labels are legible and hazard indication labels can be understood. These labeling requirements will provide uniform information that is legible and understandable to workers and the public regarding hazards posed by container contents.

1.3.2.4 Tank system labeling

Ecology is adopting labeling content and legibility requirements for tank systems, including underground tank systems. This rule amendment is motivated by EPA Generator Improvement Rule hazard label rules, to ensure labels are legible and can be understood. These labeling requirements will provide uniform information that is legible and understandable to workers and the public regarding hazards posed by tank contents. This rule amendment is additionally motivated by a need for inspectors to be able to identify underground tank locations, content hazards, and to ensure that underground tanks are not forgotten or abandoned.

1.3.2.5 Reduce duplicative regulation of waste

Ecology is adopting to align our exclusion with the RCRA PCB exclusion in 40 CFR part 261.8, by narrowing it to only include PCB dielectric fluid and electric equipment containing such fluid, as regulated under 40 CFR part 761. We are adding an exemption for state-only PCB wastes that are also regulated under 40 CFR part 761. This rule amendment is intended to align state and federal requirements, and reduce duplicative regulation of these PCB wastes.

1.3.2.6 Clarifications and revisions with no material impact on requirements

Ecology is adopting a number of amendments intended to clarify rule requirements and facilitate understanding of the rule, its coverage, and compliance options. These changes also include increased allowance for electronic signatures, consistent with state law. None of these changes are expected to impact rule requirements, or to generate costs or benefits beyond improved clarity.

1.4 Document organization

The remainder of this document is organized into the following chapters:

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

Chapter 2: Baseline and the Rule Amendments

2.1 Introduction

We analyzed the impacts of the rule amendments relative to the baseline of 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 the amended rule were not adopted. It is discussed in Section 2.2, below.

2.2 Baseline

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

The regulatory baseline for this analysis is the existing state rule: Dangerous Waste Regulations chapter 173-303 WAC. This chapter consists of both federal provisions and state-only requirements as amended December 2014. Ecology analyzed the elements of the rule amendments that are different than the existing state rule. However, we are not analyzing amendments that incorporate RCRA without state modification.

2.2.1 Federal laws and rules

The Resource Conservation and Recovery Act (RCRA) is the federal law that regulates hazardous waste at the federal level. RCRA gives EPA the authority to regulate hazardous waste from the "cradle-to-grave," which includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of nonhazardous solid wastes. In 1984, Congress adopted amendments to RCRA that focused on waste minimization, phasing out land disposal of hazardous waste, and corrective action procedures for releases of hazardous waste. The 1986 amendments to RCRA enabled EPA to address environmental problems that will result from underground tanks storing petroleum and other hazardous substances.

The primary set of federal rules related to management of hazardous waste is found in Title 40 of the Code of Federal Regulations, Part 260 through Part 279. EPA has authorized Washington and other states to operate their state hazardous waste programs in lieu of the federal RCRA program. As a condition of authorization, the EPA requires states to incorporate certain mandatory provisions of the federal rules and laws in the state dangerous waste rules. In some situations, states must adopt certain of these mandatory provisions of the federal rule, without modification. In other cases, the state might make changes to the federal rule, as long as the state rule is consistent with and as least as stringent as the federal rule.

2.2.2 State laws and rules

The authorizing statute for chapter 173-303 WAC, is chapter 70.105 RCW, Hazardous Waste Management. Chapter 70.105 RCW provides a comprehensive framework for the planning, regulation, control, and management of dangerous waste which helps prevent land, air, and water pollution while conserving natural, economic, and energy resources of the state.

The statute provides for the prevention of problems related to improper management of dangerous wastes. Note, the federal rule uses the term hazardous waste and the state uses the term dangerous waste. Another purpose of the statute is to ensure that dangerous waste management facilities are operated safely, and sited to minimize harm to people and the environment.

Another major goal of chapter 70.105 RCW is to promote waste reduction and to encourage other improvements by generators in waste management practices. To accomplish these goals, the statute gives the Department of Ecology the authority to enact and enforce regulations relating to management of dangerous wastes and releases of hazardous substances. Ecology implements federal and state laws through chapter 173-303 WAC, Dangerous Waste Regulations, which is the baseline for this analysis.

Chapter 173-303 WAC includes the provisions of the federal rules required by RCRA for authorized states, certain federal provisions adopted by Ecology at its discretion, and provisions initiated by Ecology under state authority. Specifically, chapter 173-303 WAC includes provisions related to:

- Designation of dangerous waste.
- Generator management of dangerous waste.
- Reporting of dangerous waste.
- Transport of dangerous waste.
- Treatment, storage, disposal, and recycling of dangerous waste.
- Standards for closure and post-closure of facilities that handle dangerous waste.
- Financial assurance requirements.

2.3 Rule amendments

The rule amendments make the following changes:

- Amendments based on federal rules:
 - Hazardous Waste Generator Improvements Rule.
 - Hazardous Waste Export-Import Revisions.
 - Revisions to the Export Provisions of the Cathode Ray Tube (CRT) Rule.
 - Hazardous Waste Electronic Manifest System.
 - Revisions to the Definition of Solid Waste.

- Conditional exclusions from Solid Waste and Hazardous Waste for solvent contaminated wipes.
- State-initiated rule amendments:
 - Secondary containment.
 - Used oil facility reporting.
 - Container labeling at generator sites and at permitted treatment, storage, and disposal facilities
 - Tank system labeling at generator sites and at permitted treatment, storage, and disposal facilities
 - Reduce duplicative regulation of PCB waste.
 - Clarifications and revisions with no material impact on requirements.

2.3.1 Amendments based on federal rules

2.3.1.1 Hazardous Waste Generator Improvements Rule (GIR)

Baseline

The baseline for these rule amendments is the existing state rules and existing RCRA.

Optional portions of the RCRA GIR where the state amended rule is different:

- Including examples of acceptable labeling systems for hazard labels on containers, tanks, and containment buildings.
- Allowing local fire authorities to waive the 50-foot property line setback requirement for LQGs containers holding ignitable and reactive wastes.
- Allowing MQGs and LQGs to accumulate wastes on drip pads for 90 days, then an additional 180 or 90 days accumulation at a central accumulation area, respectively.
- Including “regular maintenance” as a way episodic wastes are generated.
- Requiring any generator who is an LQG for at least one month out of the year to submit a biennial report for entire year.

Adopted

The rule amendments conform to the RCRA GIR except where they are more stringent and/or already exist in the baseline state rule, as described below.

- WA has required hazard labels for many years. The rule amendments do not include examples of labeling systems. Instead, they give examples of dangerous waste characteristics and criteria. Hazardous/dangerous waste labels and hazard labels on containers larger than one gallon or four liters must also be legible from 25 feet or lettering must be at least ½ inch in height.
- Fire code:
 - The rule amendments maintain the state baseline requirement of referencing International Fire Code (IFC) standards for separation distances for storage of

explosives. The baseline state rule currently subjects MQGs to the IFC standards for storage of ignitable and reactive wastes in containers.

- MQGs and LQGs with 24-hour internal response capabilities may seek a waiver from fire code authorities regarding arrangements with local fire authorities.
- The rule amendments allow MQG wood treatment facilities 180 days total accumulation time on drip pads and in central accumulation areas, and 90 days total accumulation time for LQGs. These total accumulation times are the same as in the baseline state rule. In addition the wood treatment facility must maintain records of the original start date waste begins to be accumulated on the drip pad.
- “Regular maintenance” is not included as an example of episodic waste generation. This is the same as in the baseline state rule.
- Explicit clarification that annual reporting is required for both MQGs and LQGs generating waste for at least one month of a year.

Expected impact

Comparing the baseline and the rule amendments, we expect the following impacts:

- The rule amendments to labeling requirements are likely to result in one-time additional labeling costs for some facilities with inadequate labels on containers larger than one gallon or four liters, and benefits of staff, public, and environmental safety in being able to recognize the hazards posed by wastes. These labels may be replacements for existing labels, or additional labels augmenting existing labeling.
- Fire code:
 - There is no change in fire code requirements from the baseline, and we do not expect costs or benefits to result.
 - New MQG and LQG facilities with their own 24-hour internal emergency response capabilities will benefit from the avoided cost of making arrangements with the local fire department and other emergency responders.
- The drip pad allowance for accumulating dangerous waste is a less stringent federal standard that provides MQGs with an additional accumulation alternative. Currently, MQGs can accumulate dangerous waste in containers, tanks, and containment buildings. Allowance of drip pad accumulation will provide the benefit of an additional accumulation option that is not offered under the baseline. Additionally, the less stringent accumulation time limit allows waste that is removed from a drip pad to be moved to another accumulation unit for the remainder of the MQG’s 180-day or LQG’s 90-day time limit.
- Recordkeeping of drip pad accumulation times is a federal requirement, and is therefore not expected to create costs or benefits as compared to the baseline.
- Episodic “Regular maintenance” waste is not part of the baseline rule, but not including it as an example of episodic waste generation in the rule amendments is not expected to result in costs or benefits as compared to the baseline.

- The rule amendment explicitly clarifying that SQGs that generate dangerous waste as MQGs for at least one month to report for the year is not a change from the baseline. Existing dangerous waste rules already require SQGs that generate higher levels of waste as MQGs to report annually via the following pathway:
 - WAC 173-303-060(5) directs generators with an EPA or state identification number to submit an annual report as required under WACs 173-303-070(8), 173-303-220, and 173-303-390.
 - WAC 173-303-070(8)(c) directs SQGs with an identification number to submit an annual report according to WAC 173-303-220.
 - WAC 173-303-220(1)(a) also says that generators with an identification number must submit an annual report, according to the dangerous waste annual report instructions (Ecology publication number 03-04-018).
 - Page 21 of the dangerous waste annual report instructions directs MQGs with an active identification number at any time during the reporting year to complete a generation and management form for each waste stream generated.

2.3.1.2 Hazardous Waste Export-Import Revisions

Baseline

The baseline for these rule amendments is RCRA and the existing state rule. EPA amended existing hazardous waste export and import regulations. The rule:

- Makes existing export and import related requirements more consistent with the current import-export requirements for shipments between members of the Organization for Economic Cooperation and Development (OECD).
- Enable electronic submittal to EPA of all export and import-related documents (e.g., export notices, export annual reports).
- Enable electronic validation of consent in the Automated Export System (AES) for export shipments subject to RCRA export consent requirements prior to exit. The AES resides in the U.S. Customs and Border Protection's Automated Commercial Environment (ACE).

Adopted

The rule amendments include the above RCRA amendments without change.

Expected impact

We do not expect any impacts in excess of the baseline as a result of these rule amendments.

2.3.1.3 Hazardous Waste Management System – e-Manifest System

Baseline

The baseline for these rule amendments is RCRA and the existing state rule. This rule:

- Establishes new requirements authorizing the use of electronic manifests (or e-Manifests) as a means to track off-site shipments of hazardous waste as well as state-only “hazardous wastes” from a generator's site to the site of the receipt and disposition of the hazardous waste.

- Implements certain provisions of the Hazardous Waste Electronic Manifest Establishment Act (Public Law 112-195), which directs EPA to establish an e-Manifest system and to impose reasonable user service fees as a means to fund the development and operation of the e-Manifest system.
- Clarifies explicitly that e-Manifest documents obtained from the Agency's national e-Manifest system and completed in accordance with the rule, are the legal equivalent of the paper manifest forms that are currently authorized for use in tracking hazardous waste shipments. Upon completion of the e-Manifest system, the electronic manifest documents authorized by this final regulation will be available to manifest users as an alternative to the paper manifest forms, to comply with federal and state requirements respecting the use of the hazardous waste manifest. Users who elect to opt out of the electronic submittal to the e-Manifest system may continue to use the paper manifest to track their shipments during transportation, which then will be submitted by the designated facility for inclusion in the e-Manifest system.
- Specify how issues of public access to manifest information will be addressed when manifest data are submitted and processed electronically.

Adopted

The rule amendments include the above RCRA amendments without change.

Expected impact

We do not expect any impacts in excess of the baseline as a result of these rule amendments.

2.3.1.4 Revisions to the Definition of Solid Waste

Baseline

The baseline for these rule amendments is RCRA and the existing state rule. EPA revised several recycling-related provisions associated with the definition of solid waste used to determine hazardous wastes under Subtitle C of RCRA. These revisions also include exemptions for:

- Solvent remanufacturing.
- Materials recycled under control of the generator.
- Materials transferred for recycling - known as the “transfer based exclusion”.
- Non-waste determination.

Adopted

The rule amendments include multiple recycling-related provisions in line with EPA’s revisions, but do not include the above exemptions. Definitions associated with exemptions not included in the rule amendments are therefore not needed, and so the rule amendments do not include definitions for:

- Intermediate facility
- Land based units
- Non-waste determination

- EPA’s amended definition of “reclaim”

Expected impact

While a few of the rule amendments are more stringent than RCRA, the federal exemptions we are not including are also not part of the baseline state rule. We therefore do not expect these rule amendments to result in impacts as compared to the baseline.

2.3.1.5 Conditional exclusions from Solid Waste and Hazardous Waste for solvent contaminated wipes

Baseline

The baseline for these rule amendments is the revised RCRA hazardous waste management regulations for solvent-contaminated wipes. The rule revises the definition of solid waste to conditionally exclude solvent-contaminated wipes that are cleaned and reused, and revises the definition of hazardous waste to conditionally exclude solvent-contaminated wipes that are disposed of. The exclusions include solvent-contaminated wipes that are reused or disposed of in:

- Solid waste landfills.
- Solid waste combustors.
- Dangerous waste landfills.
- Dangerous waste incinerators.

Adopted

The rule amendments are consistent with EPA’s rule revisions, except they do not include the conditional exemption for disposal at:

- Solid waste landfills.
- Solid waste combustors.

Expected impact

Under the rule amendments, solvent-contaminated wipes that are laundered do not count toward generator status determination resulting in lessened requirements if generator status is affected. This could result in a cost-savings, and will result in encouragement of recycling of solvent-contaminated wipes (laundering and reuse) rather than them being sent to a landfill or incinerator.

There may be an additional cost-savings associated with the conditional exemption for solvent-contaminated wipes sent to dangerous waste landfills or incinerators. This cost-savings will only exist if generators choose to take advantage of the conditional exemption. In addition, by definition, “solvent contaminated wipes” will include wipes that designate as state only dangerous wastes. This will provide additional cost saving for generators who choose to use the conditional exemption.

2.3.2 State-initiated rule amendments

2.3.2.1 Secondary containment

Baseline

Under the baseline state rule, MQG and LQG central accumulation areas built before 1986 do not need secondary containment, unless Ecology determines there is an environmental threat posed from lack of secondary containment.

Adopted

The rule amendments require that all central accumulation areas have secondary containment.

Expected impact

The rule amendments are likely to result in costs to any facilities that have not upgraded facilities and moved their central accumulation areas since before 1986. Benefits of secondary containment will include protection of staff and public health, and environmental health, in the event a spill took place. The number of these facilities needing to comply is likely to be minimal because most if not all will have upgraded in the over three decades since the year of this baseline exemption.

2.3.2.2 Used oil facility reporting

Baseline

The annual report instructions for used oil facilities require that they report annually. The baseline state rules do require them to report annually, but the used oil rules reference EPA used oil regulations, which say only report biennially.

Adopted

The rule amendments explicitly require annual reporting for used oil transporters, used oil processors, and used oil burners. Ecology adopted this amendment to correct an oversight from a previous rulemaking since Ecology has always required annual reporting (while EPA requires biennial reporting).

Expected impact

We do not expect this rule amendment to create costs as compared to the baseline, which already requires annual reporting. There is a likely benefit of reducing confusion regarding existing annual reporting requirement and the reference to EPA used oil regulations.

2.3.2.3 Container labeling

Baseline

The state rule requires dangerous waste labels and risk labels on dangerous waste containers.

Adopted

The rule amendments alter labeling requirements along with similar changes to RCRA, but set different labeling examples and requirements. The state-only components of the rule amendments give examples of hazard labels to include dangerous waste characteristics and

criteria hazards. Labels must also be legible from 25 feet or letters must be at least ½ inch in height if the container is larger than one gallon or four liters. RCRA includes as hazard label examples hazardous waste characteristics and labeling systems used by US Department of Transportation and other organizations. RCRA does not include the requirement that labels be legible and understandable.

Expected impact

The rule amendments to labeling requirements are likely to result in one-time additional labeling costs for some facilities with inadequate labels on containers larger than one gallon or four liters, and benefits of staff, public, and environmental safety in being able to recognize the hazards posed by wastes. These labels may be replacements for existing labels, or additional labels augmenting existing labeling.

2.3.2.4 Tank system labeling

Baseline

The baseline requirement under RCRA and the state rule is posting of a label identifying tank contents and major risks, legible at 50 feet.

Adopted

The rule amendments require dangerous waste labels and hazard label that adequately show the hazards for tank systems. Additionally signage is required for aboveground postings for underground tanks.

Expected impact

The rule amendments requiring signage of underground storage tanks and labels for all other dangerous waste tanks requirements are likely to result in one-time additional signage or label costs for some facilities with inadequate or missing signs or signage at aboveground and underground tanks and tank systems. Benefits include increased environmental safety for staff and the public in being able to recognize the hazards posed by wastes and the location of hazards when dangerous waste tanks are underground.

2.3.2.5 Reduce duplicative regulation of waste

Baseline

The baseline for these rule revisions is the existing state rule and federal RCRA. RCRA excludes PCB dielectric fluid and electric equipment containing such fluid, which are also regulated under 40 CFR part 761. The baseline state rule excludes more materials than EPA, including PCB materials regulated under 40 CFR part 761.60, meaning the exclusion could also exclude contaminated hydraulic equipment and several other items listed in 761.60, and be less stringent than RCRA.

Adopted

The rule amendments align our exclusion with RCRA by narrowing the exclusion to only include PCB dielectric fluid and electric equipment containing such fluid. The rule amendments add an exemption for state-only PCB wastes that are also regulated under 40 CFR part 761.

Expected impact

The rule amendments are likely to result in a reduction in double regulation of PCB wastes that are also regulated under 40 CFR part 761. This will reduce confusion and potential duplicative compliance requirements for two separate sets of regulations.

2.3.2.6 Clarifications and revisions with no material impact on requirements

Baseline

The baseline for clarifications and revisions with no material impact on requirements is the existing state rule.

Adopted

The rule amendments include a number of clarifications that do not change requirements as compared to the baseline, but are intended to eliminate obsolete language, clarify wording, update references, and make other revisions to facilitate understanding of, and compliance with, the rule. These amendments include:

- Placing terms defined in other sections of the rules within the 040 definitions with a reference to the section where they are defined.
- For the term accumulation, referring to the state definition of storage.
- For the term “authorized representative”, adding an example of “an employee of the company of equivalent responsibility”.
- Adding an electronic signature definition, referencing RCW 19.034.020.
- Correcting an internal reference for closure requirements from 645(1)(e) to 645(1)(f).
- Defining the place and date for determining the point of waste generation.
- Updating the definition of storage.
- Providing a definition for “weekly inspection” as follows: “Weekly inspections” means at least once during the period from Sunday to Saturday.
- Revising the 40 CFR incorporation-by-reference date.
- Clarifying that recycling facilities are required to have an EPA/state ID #.
- Deleting “cancelled” and replacing with “withdrawn” in the WAC 173-303-060 EPA/state ID number regulations.
- Adding a parenthetical statement giving an example of activities transporters are not allowed to perform.
- Clarifying that solid wastes discovered on a generator’s site must be promptly designated by that generator.
- Clarifying existing rules that wastes must be designated for both state toxic and persistent criteria.
- In section 060, adding references to WAC 173-303-120 Recycled wastes and 173-303 -515 Used Oil Standards.

- Clarifying that excluded wastes may continue to have some dangerous waste management requirements.
- Revising the EPA SW-846 Test Methods reference to include Update V to the Third Edition.
- Correcting reference titles.
- Revising language to read: “(5) Used oil that is recycled and is also a dangerous waste solely because it exhibits a dangerous waste characteristic or criteria is not subject to the requirements of this chapter except for applicable requirements of WAC 173-303-515 and the requirements of 40 C.F.R. Part 279, which is incorporated by reference at WAC 173-303-515.”
- Revising authority language to read: “The word "EPA" (in 40 C.F.R.) means "Ecology" at 40 C.F.R. 268.44(m) and at 268.45(a).”
- Amending the container condition examples by adding severe rusting, or flaking or scaling.
- Revising the aisle space separation rule and stipulate for inspection purposes that the view of the container be unobstructed.
- Changing “emergency circumstance” to “any emergency event”. Natural disaster is added to the list of events that contingency plans must address.
- Changing “In the event of an emergency” to “any emergency event identified in WAC 173-303-350”.
- Adding clarification to annual report requirements.
- Updating internal references and citations.
- Updating contact information for notification of discharges during transport.
- Revising language to read: “(d) The owner or operator must keep a written or electronic inspection log or summary, including at least the date and time of the inspection, the printed name and the handwritten or electronic signature of the inspector, a notation of the observations made, an account of spills or discharges in accordance with WAC 173-303-145, and the date and nature of any repairs or remedial actions taken.”
- Revising to “EPA/state ID#” for consistency with definition.
- Adding references to sections 9903 and 9904.
- Revising language to read: “The owner or operator of a destination facility (as defined in WAC 173-303-040) is subject to all applicable requirements of WAC 173-303-140 and 173-303-141, 173-303-280 through 173-303-525, 173-303-600 through 173-303-695, 173-303-800 through 173-303-840, and the notification requirement at WAC 173-303-060, or (b) The owner or operator of a destination facility that recycles a particular universal waste without storing that universal waste before it is recycled must comply with WAC 173-303-120 (4)(c).”
- Changing a reference from 173-303-620(8)(d) to 173-303-620(1)(d).

- Clarification of financial assurance responsibilities for operators of facilities that are not state or federally owned, but may be leased or otherwise under contract with the state or federal government.
- Updating references to the International Fire Code for storage of reactive wastes.
- Revising language for consistent naming of NFPA 30 “Flammable and combustible Liquids Code”.
- Revising language to read: “Data gathered from monitoring ~~any~~ and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and...”
- Changing internal reference from RCW 70.105D.020(7) to RCW 70.105D.020(13).
- Correcting entries for commercial chemical products listed in U019 and U020.

Expected impact

We do not expect any impacts in excess of the baseline as a result of these rule amendments.

Chapter 3: Likely Costs of the Rule Amendments

3.1 Introduction

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

3.2 Cost analysis

3.2.1 Amendments based on federal rules

3.2.1.1 Hazardous Waste Generator Improvements Rule (GIR)

Comparing the baseline and the rule amendments, the following costs are likely to result.

The rule amendments to labeling requirements are likely to result in one-time additional labeling costs for some facilities with inadequate labels on containers larger than one gallon or four liters. These labels may be replacements for existing labels, or additional labels augmenting existing labeling. It is not clear how prevalent inadequate labels that will need to be replaced are, the number of those labels at facilities, and the degree of updating or replacement needed to bring labels into compliance.

We are therefore including this cost qualitatively, with illustrative cost information. Ecology inspectors have observed labels that do not adequately communicate the hazards associated with dangerous wastes, and are not readable at a safe distance. The flexibility provided for under the rule amendments, and examples of waste characteristics included to facilitate understanding, however, are likely to allow facilities to expend minimal costs to update labels. For illustrative purposes, hazard labels can cost less than one dollar each, with prices depending on label size and quantity purchased.³

During the public comment period, we received information from some large facilities (including labs) that the proposed rule would require them to replace thousands of labels (including numerous small containers). One commenter estimated 10,000 small containers from a lab. At a cost of one dollar each for purchased replacement labels (or a lower bulk printing cost), this could cost a facility in excess of \$10 thousand for a few large laboratory generators.⁴ This cost is likely to be significantly smaller under the adopted exclusion for small containers, and those small containers are packaged into larger containers labeled for shipping and disposal under the baseline, but which may themselves need replacement or augmenting labels.

We do not expect costs associated with rule amendments regarding fire code requirements, drip pad accumulation, recordkeeping, episodic waste, or reporting, as compared to the baseline. See Chapter 2 for discussion.

³ ULINE (2018). Product catalog. <http://www.uline.com>

⁴ One large lab indicated they would need to replace over 600 thousand labels. This would lead to potential costs of \$600 thousand at one facility.

3.2.1.2 Hazardous Waste Export-Import Revisions

These rule amendments are not likely to result in costs as compared to the baseline. See Chapter 2 for discussion.

3.2.1.3 Hazardous Waste Management System; e-manifest system

These rule amendments are not likely to result in costs as compared to the baseline. See Chapter 2 for discussion.

3.2.1.4 Revisions to the Definition of Solid Waste

These rule amendments are not likely to result in costs as compared to the baseline. See Chapter 2 for discussion.

3.2.1.5 Conditional exclusions from Solid Waste and Hazardous Waste for solvent contaminated wipes

These rule amendments are not likely to result in costs as compared to the baseline. See Chapter 2 for discussion.

3.2.2 State-initiated rule amendments

3.2.2.1 Secondary containment

The rule amendments are likely to result in costs to any facilities that have not upgraded facilities and moved their secondary containment since before 1986. The number of facilities that have not upgraded their secondary containment is likely to be minimal. In the 32 years since that 1986 secondary containment regulation facilities have likely updated and moved their central containment areas, triggering secondary containment requirements under the baseline.

3.2.2.2 Used oil facility reporting

These rule amendments are not likely to result in costs as compared to the baseline. See Chapter 2 for discussion.

3.2.2.3 Container labeling

The rule amendments to label requirements are likely to result in one-time additional labeling costs for some facilities. It is not clear how prevalent inadequate labels signs that will need to be replaced are, the number of generator and treatment, storage, and disposal facility (TSD) containers bearing those labels, and the degree of updating or replacement needed to bring labels into compliance. We are therefore including this cost qualitatively.

There are 13 treatment, storage, disposal, and recycling (TSDR) facilities operating in the state, along with hundreds of MQG and LQG generators. Ecology inspectors have observed signs that do not adequately communicate the hazards associated with dangerous wastes at a safe distance. The flexibility provided for under the rule amendments, and examples of waste characteristics included to facilitate understanding, however, are likely to allow facilities to expend minimal costs to update labels. For illustrative purposes, hazard labels can cost less than one dollar each, with prices depending on label size and quantity purchased.⁵

⁵ ULINE (2018). Product catalog. <http://www.uline.com>

3.2.2.4 Tank system signage and labeling

The rule amendments for underground storage tank signage labeling of aboveground storage tanks are likely to result in one-time additional signage or labeling costs for some generator and treatment, storage, or disposal facilities with inadequate or missing signs at underground tanks and tank systems, and benefits of staff, public, and environmental safety in being able to recognize and locate the hazards posed by wastes. Because there is no baseline requirement for signage and labeling for underground dangerous waste tanks, it is not clear how prevalent inadequate or missing signs on underground tank systems are, or the degree of updating or replacement needed to bring tanks into compliance. We are therefore including this cost qualitatively.

Ecology inspectors have observed underground tank systems with no signage, and signs that do not adequately communicate the hazards associated with hazardous wastes at a safe distance. The flexibility provided for under the rule amendments, and examples of waste characteristics included to facilitate understanding, are likely to allow facilities to expend minimal costs to update signs. For illustrative purposes, hazard signs can cost less than one dollar each, with prices depending on label size and quantity purchased.⁶

3.2.2.5 Reduce duplicative regulation of waste

These rule amendments are not likely to result in costs as compared to the baseline.

3.2.2.6 Clarifications and revisions with no material impact on requirements

These rule amendments are not likely to result in costs as compared to the baseline.

⁶ ULINE (2018). Product catalog. <http://www.uline.com>

This page intentionally left blank.

Chapter 4: Likely Benefits of the Rule Amendments

4.1 Introduction

We estimated the likely benefits associated with the rule amendments, as compared to the baseline (both described in Chapter 2 of this document).

4.2 Benefit analysis

4.2.1 Amendments based on federal rule revisions

4.2.1.1 Hazardous Waste Generator Improvements Rule

Comparing the baseline and the rule amendments, we expect the following impacts:

- The rule amendments to labeling requirements are likely to result in benefits of staff, public, and environmental safety in being able to recognize the hazards posed by wastes. It is not clear how prevalent inadequate labels that will need to be replaced are, the number of those labels at facilities, and the degree of updating or replacement needed to bring labels into compliance. We are therefore including this benefit qualitatively.

Ecology inspectors have observed labels that do not adequately communicate the hazards associated with hazardous wastes at a safe distance. Better knowledge of waste hazards will allow staff and the public to appropriately handle wastes, avoid contact, and deal with exposure to toxic, reactive, ignitable, or corrosive wastes.

Environmental health and safety guidance indicates that there are typically three audiences for labelling: workers, consumers, and emergency responders.⁷ In daily functioning, workers and consumers directly interacting with a dangerous waste may be aware of its hazards. In mixed workplaces, however, workers and members of the public unaccustomed to handling the substance may need to know about a hazard and its nature before they even approach it. First responders (depending on the type and attributes of an emergency they are called to – spill, medical, fire, flood, law enforcement, collision) may also need to be aware of the existence of a hazard before approaching it, to minimize potential exposure before appropriately addressing the situation. This may be particularly important in larger-scale emergencies such as fires and flooding.

While we could not quantify the incidence or reduction in risk for such circumstances, we note that inpatient care in Washington for chronic breathing difficulty could cost between

⁷ See for example: MSDSONline (2019). GHS 101: Labels. <https://www.msdsonline.com/resources/ghs-answer-center/ghs-101-labels/>; Unidocs (2008). Marking Requirements and Guidelines for Hazardous Materials and Hazardous Wastes.

\$9 thousand and \$30 thousand per incident, excluding quality of life impacts.⁸ The average emergency room expenditure (regardless of type of illness or injury; national) in 2015 cost between \$300 and \$5 thousand.⁹ Avoiding additional illness or injury resulting from exposure to, or improper handling of, dangerous wastes could reduce or avoid these costs being incurred in the first place. In larger emergencies, this may also reduce some burden on emergency facilities.

- MQGs and LQGs with 24-hour internal emergency response capabilities can take advantage of a waiver from the requirement to provide local emergency response authorities with contingency plan documents. Generators will need to receive the waiver from the authority with jurisdiction over the fire code or other emergency response agencies, provided that the waiver is documented in the generator's operating record. This waiver will allow generators to avoid staff time costs in providing this information to local agencies.
- Allowance of drip pad accumulation will benefit wood treatment dangerous waste generators by allowing an additional accumulation option in addition to containers, tanks, and containment buildings. They will also benefit from the flexibility of being able to remove waste from a drip pad and move it to another accumulation unit for the remainder of their time limit.

4.2.1.2 Hazardous Waste Export-Import Revisions

These rule amendments are not likely to result in benefits as compared to the baseline. See Chapter 2 for discussion.

4.2.1.3 Hazardous Waste Management System

These rule amendments are not likely to result in benefits as compared to the baseline. See Chapter 2 for discussion.

4.2.1.4 Revisions to the Definition of Solid Waste

These rule amendments are not likely to result in benefits as compared to the baseline. See Chapter 2 for discussion.

4.2.1.5 Conditional exclusions from Solid Waste and Hazardous Waste for solvent contaminated wipes

Under the rule amendments, solvent-contaminated wipes that are laundered are not annually reported and do not count toward generator status determination, which could result in lessened requirements if they affect generator status.

⁸ Washington Health Alliance (2014). Hospital Sticker Shock: A report on hospital price variation in Washington state. <http://www.wahealthalliance.org>

⁹ US Department of Health and Human Services (2015). Medical Expenditure Panel Survey. Person-level emergency room expenditures, facility and doctor. https://meps.ahrq.gov/mepsweb/data_stats/MEPSnetHC/selvariable.action

It is unclear to what degree solvent-contaminated wipes currently designated as dangerous waste will make a difference in determining generator status. Under existing rule, appropriately recycled wipes contribute to a generator's total pounds of dangerous waste.

Under the rule, a reduction in their disposal could result in a cost-savings, and will result in encouragement of recycling of solvent-contaminated wipes (laundering and reuse) rather than them being sent to a landfill or incinerator.

4.2.2 State-initiated rule amendments

4.2.2.1 Secondary containment

The rule amendments could result in benefits of secondary containment including protection of staff, public, and environmental health, in the event a spill took place. But this is only the case if there are facilities that will be impacted by the rule amendments. The number of facilities operating since before 1986 without updates to central accumulation areas (that will trigger secondary containment requirements) is likely to be minimal in the over three decades since the year of this baseline exemption.

4.2.2.2 Used oil facility reporting

While most used oil transporters, used oil processors, and used oil burners currently report annually per reporting instructions under the baseline rule, there is potential confusion about reporting requirements because the baseline also references federal regulations requiring biennial reporting. Through explicit requirements for used oil facilities to report annually, the rule amendments will clarify the existing reporting requirement.

4.2.2.3 Container labeling

The rule amendments to labeling requirements are likely to result in benefits of staff, public, and environmental safety in being able to recognize the hazards posed by wastes in generator and TSD containers. It is not clear how prevalent inadequate labels that will need to be replaced are, the number of those labels at facilities, and the degree of updating or replacement needed to bring labels into compliance. We are therefore including this benefit qualitatively. Ecology inspectors have observed labels that do not adequately communicate the hazards associated with hazardous wastes at a safe distance. Better knowledge of waste hazards will allow staff and the public to appropriately handle wastes, avoid contact, and deal with exposure.

4.2.2.4 Tank system signage and labeling

The rule amendments to signage requirements for underground tanks labeling for aboveground tanks are likely to result in benefits of staff, public, and environmental safety in being able to recognize the location and hazards posed by wastes. It is not clear how prevalent inadequate labels and signs that will need to be replaced are, the number of those labels or signs at facilities, and the degree of updating or replacement needed to bring labels and signs into compliance. We are therefore including this benefit qualitatively. Ecology inspectors have observed signs that do not adequately communicate the hazards associated with dangerous wastes at a safe distance. Better knowledge of waste hazards will allow staff and the public to appropriately handle wastes, avoid contact, and deal with exposure.

4.2.2.5 Reduce duplicative regulation of waste

The rule amendments are likely to result in a reduction in double regulation of state-only PCB wastes that are also regulated under 40 CFR part 761. This will reduce confusion and potential duplicative compliance behaviors.

4.2.2.6 Clarifications and revisions with no material impact on requirements

These rule amendments are not likely to result in benefits beyond improved clarity facilitating compliance, as compared to the baseline. See Chapter 2 for discussion.

Chapter 5: Cost-Benefit Comparison and Conclusions

5.1 Summary of the costs and benefits of the rule amendments

Costs

Comparing the baseline and the rule amendments, the following costs are likely to result.

Labeling

The rule amendments to labeling requirements are likely to result in one-time additional labeling costs for some facilities with inadequate labels on containers larger than one gallon or four liters. These labels may be replacements for existing labels, or additional labels augmenting existing labeling. It is not clear how prevalent inadequate labels that will need to be replaced are, the number of those labels at facilities, and the degree of updating or replacement needed to bring labels into compliance.

We are therefore including this cost qualitatively, with illustrative cost information. Ecology inspectors have observed labels that do not adequately communicate the hazards associated with dangerous wastes, and are not readable at a safe distance. The flexibility provided for under the rule amendments, and examples of waste characteristics included to facilitate understanding, however, are likely to allow facilities to expend minimal costs to update labels. For illustrative purposes, hazard labels can cost less than one dollar each, with prices depending on label size and quantity purchased.¹⁰

During the public comment period, we received information from some large facilities, including labs, that under the proposed rule they would need to replace possibly thousands of labels (including numerous small containers). One commenter estimated 10,000 small containers from a lab. At a cost of one dollar each for purchased replacement labels (or a lower bulk printing cost), this could cost a facility in excess of \$10 thousand for a few large laboratory generators.¹¹ This cost is likely to be significantly smaller under the adopted exclusion for small containers, and those small containers are packaged into larger containers labeled for shipping and disposal under the baseline, but which may themselves need replacement or augmenting labels.

Secondary containment (unlikely to cause cost increases)

The rule amendments are likely to result in costs to any facilities that have not upgraded facilities and moved their secondary containment since before 1986. The number of facilities that have not upgraded their secondary containment is likely to be minimal. In the 32 years since that 1986

¹⁰ ULINE (2018). Product catalog. <http://www.uline.com>

¹¹ One large lab indicated they would need to replace over 600 thousand labels. This would lead to potential costs of \$600 thousand at one facility.

secondary containment regulation, facilities have likely updated and moved their central containment areas, triggering secondary containment requirements under the baseline.

TSD and generator container labeling

The rule amendments to label requirements are likely to result in one-time additional labeling costs for some facilities. It is not clear how prevalent inadequate labels that will need to be replaced are, the number of generator and treatment, storage, and disposal (TSD) containers bearing those labels, and the degree of updating or replacement needed to bring labels into compliance. We are therefore including this cost qualitatively.

There are 13 treatment, storage, disposal, and recycling (TSDR) facilities operating in the state, along with hundreds of generators. Ecology inspectors have observed labels that do not adequately communicate the hazards associated with dangerous wastes at a safe distance. The flexibility provided for under the rule amendments, and examples of waste characteristics included to facilitate understanding, however, are likely to allow facilities to expend minimal costs to update labels.

Tank system signs

The rule amendments to requirements for signage of underground storage tanks and labeling of aboveground storage tanks are likely to result in one-time additional signage or labeling costs for some generator and treatment, storage, or disposal facilities with inadequate or missing signs at underground tanks and tank systems, and benefits of staff, public, and environmental safety in being able to recognize and locate the hazards posed by wastes. Because there is no baseline requirement for signage and labeling for underground dangerous waste tanks, it is not clear how prevalent inadequate or missing signs on underground tank systems are, or the degree of updating or replacement needed to bring tanks into compliance. We are therefore including this cost qualitatively.

Benefits

Comparing the baseline and the rule amendments, the following benefits are likely to result.

Labeling

The rule amendments to signage requirements are likely to result in benefits of staff, public, and environmental safety in being able to recognize the hazards posed by wastes. It is not clear how prevalent inadequate signs that will need to be replaced are, the number of those signs at facilities, and the degree of updating or replacement needed to bring signs into compliance. We are therefore including this benefit qualitatively.

Ecology inspectors have observed signs that do not adequately communicate the hazards associated with dangerous wastes at a safe distance. Better knowledge of waste hazards will allow staff and the public to appropriately handle wastes, avoid contact, and deal with exposure to toxic, reactive, or corrosive wastes.

Environmental health and safety guidance indicates that there are typically three audiences for labelling: workers, consumers, and emergency responders.¹² In daily functioning, workers and consumers directly interacting with a dangerous waste may be aware of its hazards. In mixed workplaces, however, workers and members of the public unaccustomed to handling the substance may need to know about a hazard and its nature before they even approach it. First responders (depending on the type and attributes of an emergency they are called to – spill, medical, fire, flood, law enforcement, collision) may also need to be aware of the existence of a hazard before approaching it, to minimize potential exposure before appropriately addressing the situation. This may be particularly important in larger-scale emergencies such as fires and flooding.

While we could not quantify the incidence or reduction in risk for such circumstances, we note that inpatient care in Washington for chronic breathing difficulty could cost between \$9 thousand and \$30 thousand per incident, excluding quality of life impacts. The average emergency room expenditure (regardless of type of illness or injury; national) in 2015 cost between \$300 and \$5 thousand. Avoiding additional illness or injury resulting from exposure to, or improper handling of, hazardous wastes could reduce or avoid these costs being incurred in the first place. In larger emergencies, this may also reduce some burden on emergency facilities.

Emergency response waiver

MQGs and LQGs with 24-hour internal emergency response capabilities can take advantage of a waiver from the requirement to provide local emergency response authorities with contingency plan documents. Generators will need to receive the waiver from the authority with jurisdiction over the fire code or other emergency response agencies, provided that the waiver is documented in the generator's operating record. This waiver will allow generators to avoid staff time costs in providing this information to local agencies.

Drip pad accumulation

Allowance of drip pad accumulation will benefit wood treatment dangerous waste generators by allowing an additional accumulation option in addition to containers, tanks, and containment buildings. They will also benefit from the flexibility of being able to remove waste from a drip pad and move it to another accumulation unit for the remainder of their time limit.

Solvent-contaminated wipe recycling

Under the rule amendments, solvent-contaminated wipes that are laundered are not annually reported and do not count toward generator status determination, which could result in lessened requirements if they affect generator status. It is unclear to what degree solvent-contaminated wipes currently designated as dangerous waste will make a difference in determining generator status. Under existing rule, appropriately recycled wipes contribute to a generator's total pounds of dangerous waste. Under the amended rule, a reduction in their disposal could result in a cost-savings, and will result in encouragement of recycling of solvent-contaminated wipes (laundering and reuse) rather than them being sent to a landfill or incinerator.

¹² See for example: MSDSONline (2019). GHS 101: Labels. <https://www.msdsOnline.com/resources/ghs-answer-center/ghs-101-labels/>; Unidocs (2008). Marking Requirements and Guidelines for Hazardous Materials and Hazardous Wastes.

Secondary containment

The rule amendments could result in benefits of secondary containment including protection of staff and public health, and environmental health, in the event a spill took place. But this is only the case if there are facilities that will be impacted by the rule amendments. The number of facilities operating since before 1986 without updates to central accumulation areas (that will trigger secondary containment requirements) is likely to be minimal in the over three decades since the year of this baseline exemption.

TSD container labeling

The rule amendments to labeling requirements are likely to result in benefits of staff, public, and environmental safety in being able to recognize the hazards posed by wastes in TSD containers. It is not clear how prevalent inadequate labels that will need to be replaced are, the number of those labels at facilities, and the degree of updating or replacement needed to bring labels into compliance. We are therefore including this benefit qualitatively. Ecology inspectors have observed labels that do not adequately communicate the hazards associated with hazardous wastes at a safe distance. Better knowledge of waste hazards will allow staff and the public to appropriately handle wastes, avoid contact, and deal with exposure.

Tank system labeling and signs

The rule amendments to signage requirements for underground tanks and labeling for aboveground tanks are likely to result in benefits of staff, public, and environmental safety in being able to recognize the hazards posed by wastes. Because there is no baseline requirement for signage and labeling for underground dangerous waste tanks, it is not clear how prevalent inadequate or missing signs on underground tank systems are, or the degree of updating or replacement needed to bring tanks into compliance. We are therefore including this benefit qualitatively. Ecology inspectors have observed signs that do not adequately communicate the hazards associated with dangerous wastes at a safe distance. Better knowledge of waste hazards will allow staff and the public to appropriately handle wastes, avoid contact, and deal with exposure.

Overlapping regulations

The rule amendments are likely to result in a reduction in double regulation of PCB wastes that are also regulated under 40 CFR part 761. This will reduce confusion and potential duplicative compliance behaviors.

Clarifications and revisions with no material impact on requirements

These rule amendments are not likely to result in benefits beyond improved clarity facilitating compliance, as compared to the baseline.

5.2 Conclusion

Ecology concludes, based on reasonable understanding of the quantified and qualitative costs and benefits likely to arise from the rule amendments, that the benefits of the 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 “...determine, 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, Ecology is required to determine that the contents of the rule are the least burdensome set of requirements that achieve the goals and objectives of the authorizing statute(s).

Ecology assessed alternative amended rule content, and determined whether they met the goals and objectives of the authorizing statutes. Of those that meet these goals and objectives, Ecology determined whether those chosen for the amended rule were the least burdensome to those required to comply with them.

6.2 Goals and objectives of the authorizing statute: Chapter 70.105 RCW

The authorizing statute for chapter 173-303 WAC is chapter 70.105 RCW, Hazardous Waste Management Act. The goals and objectives of the authorizing statute are:

- Establish a comprehensive statewide framework for the planning, regulation, control, and management of hazardous waste which prevent land, air, and water pollution and conserve the natural, economic, and energy resources of the state.
- Give Ecology authority to enact and enforce regulations relating to the management of dangerous wastes and releases of dangerous substances.
- Provide for prevention of problems related to improper management of hazardous substances.
- Ensure that hazardous waste management facilities are operated safely, and sited to minimize harm to people and the environment.
- Promote waste reduction and to encourage other improvements by generators in waste management practices.

6.3 Alternatives considered and why they were not included

6.3.1 Removing episodic waste reporting for small quantity generators

Ecology considered removing the requirement for small quantity generators (SQG) and MQGs to annually report WAC 173-303-174 episodic generation waste and also subject those waste to pollution prevention planning and fees.

This alternative does not meet the goals of the authorizing statute. Washington State pollution prevention laws (P2) require businesses generating larger quantities of dangerous waste to become P2 planners and determine how they can reduce amounts of these wastes or switch to safer alternative feedstocks. Dangerous waste from episodic events should also be subject to P2 rules. Annual reporting and P2 planning ensures that Ecology staff know how much and what kind of waste a business is generating, and better able to assist the business in waste reduction or safer alternatives. This helps ensure ecology is aware of and able to assist those businesses generating large quantities of episodic waste to manage them appropriately.

6.3.2 Less prescriptive labeling requirements

Ecology considered allowing use of any hazard labeling systems as given as examples in RCRA. We also considered not setting a requirement for text size.

This alternative does not meet the goals of the authorizing statute. Ecology is not preventing use of other labeling systems, but doesn't want labels to be used which do not convey the hazard to workers and the public. The authorizing statute gives broad rulemaking ability, with the objective of preventing harm through informing anyone who might come into contact with dangerous waste about the threat it could pose. This includes ensuring that label text is large enough so people can read it at a distance.

6.3.3 No signage for underground tanks

Ecology considered not requiring hazard signage for underground tanks.

This alternative does not meet the goals and objectives of the authorizing statute. Dangerous waste tanks, no matter if aboveground or below, should have dangerous waste and hazard labels to ensure that people know they are there and what hazards are posed. The rule amendments will help prevent underground dangerous waste tanks at the Hanford Site (cleanup site at the former nuclear production facility) or other locations not to go unnoticed and or forgotten.

6.3.4 No immediate designation of unknown wastes

Ecology considered not including language requiring prompt designation of solid wastes discovered on a generators site.

This alternative does not meet the goals and objectives of the authorizing statute. This is not a new requirement under the rule amendments, but a clarification of existing EPA and state rules. Property owners are responsible for any solid waste found on their property, and can't deflect or delay the management of these wastes based on not having generated them.

6.3.5 Revised definition of authorized representative

Ecology considered revising the definition for authorized representative to include the RCRA example of "a person of equivalent responsibility".

This alternative does not meet the goals and objectives of the authorizing statute. RCRA gives "or person of equivalent responsibility" as an example of an authorized representative. This phrase has often has been used by waste consultants to enable them to complete customer paperwork that only the generator is legally able to complete. We are hoping to prevent deliberate misinterpretation by not including this example. We are including the example of "an employee of the company of equivalent responsibility". This example gives more flexibility in determining who is an authorized representative, without opening the door to allow non company personnel to act as an authorized representative.

6.3.6 Removing requirement for complete inspection of containers

Ecology considered removing language requiring complete inspection of containers.

This alternative does not meet the goals and objectives of the authorizing statute. We acknowledge that “complete” could be misinterpreted by inspectors, and we are changing the word “complete” to “unobstructed” rather than removing the wording entirely. This word will help clarify that any internal or HWTR inspectors will need to have a clear view of individual containers to assess condition and to see labels.

6.3.7 Less-stringent EPA rules

Ecology considered including optional less-stringent EPA requirements. EPA's 2015 Definition of Solid Waste rule provides:

- Exclusions for dangerous waste recycled either by generator controlled entities or at an off-site recycler.
- An exclusion for certain high volume spent industrial solvents remanufactured into new solvent.
- A process for non-waste determinations.

This alternative does not meet the goals and objectives of the authorizing statute. Most states have not yet adopted these less stringent recycling rules. Ecology’s reasoning for not adopting is that dangerous waste recycling has in past resulted in numerous superfund cleanup sites. If we excluded recycled hazardous secondary materials, we could end up with more contaminated sites threatening the environment. We are not intending to adopt the non-waste determinations because they are not needed in Washington State, given existing alternative mechanisms for delisting wastes. Finally, no entities expressed interest in the solvent remanufacturing exemption, and our research indicated that very few industries able to take advantage of this exclusion are located in Washington State.

6.3.8 Including land-based units in definition of contained

Ecology considered adopting "land-based units" (such as surface impoundments and waste piles) within the definition of "contained".

This alternative does not meet the goals and objectives of the authorizing statute. Ecology doesn't agree that land-based units are appropriate storage areas for recycled materials. Recycled materials pose same risk as other dangerous waste. Improper storage could cause impacts to groundwater and create environmental justice concerns.

6.3.9 Allowing local fire authorities to waive ignitable waste setbacks

Ecology considered incorporating EPA changes allowing generators to obtain a waiver from local fire code authorities for ignitable waste storage property line setback distances.

This alternative does not meet the goals and objectives of the authorizing statute. Existing dangerous waste rules differ from RCRA in that they reference International Fire Code

requirements for storage of ignitable and reactive wastes. RCRA only says ignitable and reactive wastes must be stored at least 50' from property line, unless a waiver from the local fire jurisdiction is obtained. Such a waiver would shift the burden to local fire departments for determining safe distances for storage of reactive dangerous waste, and Ecology believes this is best determined by consulting the International Fire Code.

6.3.10 EPA terminology for generator categories

Ecology considered using EPA terminology for generator categories.

This alternative does not meet the goals and objectives of the authorizing statute. RCRA generator category descriptions vary from Washington State category descriptions, as does the universe of wastes we regulate. By keeping Washington's distinct nomenclature, we will increase compliance and reduce financial burden because out-of-state generators and waste handlers will be cognizant of additional Washington state dangerous waste criteria. When out-of-state generators and waste handlers are aware Washington has different generator category names and state requirements, they will be more likely to properly manifest wastes being shipped into Washington state treatment, storage, and disposal facilities. This will reduce time and effort used to correct incorrect manifests.

6.3.11 Excluding solvent-contaminated wipes disposed of at solid waste landfills and combustors

Ecology considered excluding solvent-contaminated wipes disposed of at solid waste landfills and solid waste combustors from the rule. A few stakeholders would like us to allow disposal at municipal solid waste landfills.

This alternative does not meet the goals and objectives of the authorizing statute. Ecology chose not to adopt this part of the exemption because it discourages laundering and reuse of wipes, and encourages disposal. This goes against Washington State principles and regulations which support recycling. Also, there are inherent fire dangers to disposing of possible ignitable rags to a solid waste dumpster or in a garbage truck. The rule amendments do, however, include an exclusion for wipes sent to dangerous waste landfills and dangerous waste permitted incinerators, which are better suited to managing these types of wastes.

6.3.12 Including all sizes of container in labeling requirement

Ecology proposed rule language that included all sizes of containers in the amended labelling requirements. During the comment period, we learned this would be potentially difficult and burdensome for some generators – particularly labs and others with large numbers of small containers. Since these small containers include less dangerous waste than larger containers, and are typically placed into larger containers for transport and disposal, we determined that including an exception for containers less than one gallon or four liters in size (representing containers identified by commenters as difficult and burdensome to label in accordance with the

amended rule) would still meet the goals and objectives of the authorizing statute, while reducing burden on generators using small containers.

6.3.13 EPA pharmaceutical rule

Ecology considered including changes intended to conform to EPA's proposed pharmaceutical rule.

This alternative does not meet the goals and objectives of the authorizing statute at this time. EPA is currently in the process of adopting these rules, and it is more efficient to maintain current rule content and update our state rules in a separate rulemaking after EPA's rulemaking is complete.

6.4 Conclusion

After considering alternatives to the amended rule's contents, as well as the goals and objectives of the authorizing statute, Ecology determined that the amended rule represents the least-burdensome alternative of possible rule contents meeting these 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 rule amendments.

This chapter presents the:

- Results of the analysis of relative compliance cost burden.
- Consideration of lost sales or revenue.
- Cost-mitigating action taken by Ecology, if required.
- Small business and local government consultation.
- Industries likely impacted by the amended rule.
- Expected net impact on jobs statewide.

A small business is defined by the RFA as having 50 or fewer employees. Estimated costs are determined as compared to the existing regulatory environment—the regulations in the absence of the rule amendments. The RFA only applies to costs to “businesses in an industry” in Washington State. This means that impacts, for this document, are not evaluated for non-profit or government agencies.

The existing regulatory environment is called the “baseline” in this document. It includes only existing laws and rules at federal and state levels.

7.2 Quantification of Cost Ratios

We could not quantify the likely costs of the rule amendments, due to uncertainty about:

- The number of generator and TSD containers, and aboveground tanks, with currently inadequate labels.
- The number of underground tanks and tank systems with currently inadequate or missing signage.

Small facilities are likely to have fewer containers and tanks than large facilities. If small businesses were also likely to own/operate these small facilities, compliance costs are likely to be smaller at small businesses.

However, it is unclear, whether we can assume the ratio of inadequate labels, or inadequate or missing signs, at small businesses compared to the largest ten percent of businesses is the same as the ratio of employees between small and large businesses. This is further confounded by the inability to quantify whether small or large businesses are more likely to have inadequate signs,

or whether the likelihood is the same.

We therefore conclude that it is not clear that the rule amendments have a disproportionate impact on small businesses. However, because we cannot establish quantitatively that the rule amendments do not place disproportionate compliance cost burden on small businesses, Ecology included cost-reducing elements in the amended rule. See Section 7.4 for discussion.

7.3 Loss of sales or revenue

Businesses that will incur costs could experience reduced sales or revenues if compliance costs 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 significantly affect marginal costs).
- The specific attributes of the markets in which they sell goods, including the degree of influence of each firm on market prices.
- The relative responsiveness of market demand to price changes.

The rule amendments potentially affect a large breadth of businesses and industries. By instituting uniform requirements across industries, the rule amendments, if significantly costly compared to the size of the affected markets, could raise prices.

There is some potential for reduced compliance costs for users of solvent-contaminated wipes, however, which could result in impacts opposite those discussed above. Those businesses could experience a reduction in production costs, and a resulting increase in profits or pass-through of price reductions to their consumers.

7.4 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 amended 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.

Ecology considered all of the above options, and included the following legal and feasible elements in the rule amendments that reduce costs.

- **Solvent-contaminated wipes:** Adding conditional exemptions for solvent-contaminated wipes that could reduce compliance costs.
- **Labels and signs:**
 - Allowing flexibility in types of hazard labels.
 - Including examples of terms that can be used to describe waste hazards.
 - Setting requirements that could impose costs incrementally based on numbers of labels and signs, of which small businesses (as far as they are correlated with small operations) could have fewer.
 - Excluding containers under one gallon or four liters in size from the amended labelling requirements.

In addition, Ecology considered the alternative rule contents discussed in Chapter 6, and excluded those elements that would have imposed excess compliance burden on businesses.

7.5 Small Business and Government Involvement

Ecology involved small businesses and local government in its development of the rule amendments, using:

- 2016 Preproposal Statement of Inquiry (CR101) announcement emails to:
 - DW-Rules listserv: 1098 recipients.
 - TurboWaste generators list: 2124 recipients.
 - Pharmaceutical Stakeholders list: 42 recipients.
 - Environmental NGO's: five recipients, including the Puget Soundkeeper Alliance, Toxic-Free Future, Washington Environmental Council.
- 2017 CR101 announcement emails to:
 - DW-Rules listserv: 829 recipients.
 - TurboWaste generators list: 2223 recipients.
- Other listserv messages:
 - 2016 notice of informal 90 day comment period on draft rules.
 - Notice of 2016 interim pharmaceutical policy availability.
 - Notice of:
 - Interim Pharmaceutical policy webinar.

- Availability of webinar recording.
 - Notice of:
 - 2016 Dangerous Waste rulemaking informational webinar.
 - Availability of webinar recording.
 - Notice of withdrawal of 2016 CR101 and refile of new CR101.
 - Notice of 60 day informal comment period start for second round of draft rules – 2017.
 - Invitation and reminders of 2017 Dangerous Waste rulemaking webinar and 2 in-person public meetings.
 - Notice of availability of webinar recordings.
- Public meetings:
 - Webinar on Dangerous Waste draft rules - Nov. 2016: 168 attendees.
 - Webinar on updated Dangerous Waste draft rules -Nov. 2017.
 - In-person meeting at NWRO on updated Dangerous Waste draft rules - Nov. 2017.
 - In-person meeting at ERO on updated Dangerous Waste draft rules - Nov. 2017.
- ShopTalk article on Dangerous Waste rulemaking - Fall 2016.
- ShopTalk article on Dangerous Waste rulemaking - Spring 2017.

7.6 NAICS Codes of Impacted Industries

The amended rule is likely to impact a broad range of dangerous waste facilities. These facilities are primarily in the following North American Industrial Classification System (NAICS) codes:

113310	Logging
115114	Postharvest Crop Activities (except Cotton Ginning)
221111	Hydroelectric Power Generation
221310	Water Supply and Irrigation Systems
236220	Commercial and Institutional Building Construction
238110	Poured Concrete Foundation and Structure Contractors
311513	Cheese Manufacturing
311710	Seafood Product Preparation and Packaging
321113	Sawmills
325320	Pesticide and Other Agricultural Chemical Manufacturing
325510	Paint and Coating Manufacturing
327212	Other Pressed and Blown Glass and Glassware Manufacturing
331313	Alumina Refining and Primary Aluminum Production
331524	Aluminum Foundries (except Die-Casting)
332322	Sheet Metal Work Manufacturing
332710	Machine Shops

332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Service
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing
336211	Motor Vehicle Body Manufacturing
336390	Other Motor Vehicle Parts Manufacturing
336411	Aircraft Manufacturing
336612	Boat Building
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers
423930	Recyclable Material Merchant Wholesalers
424130	Industrial and Personal Service Paper Merchant Wholesalers
424690	Other Chemical and Allied Products Merchant Wholesalers
424910	Farm Supplies Merchant Wholesalers
424950	Paint, Varnish, and Supplies Merchant Wholesalers
441110	New Car Dealers
441222	Boat Dealers
442299	All Other Home Furnishings Stores
444110	Home Centers
444120	Paint and Wallpaper Stores
444190	Other Building Material Dealers
445110	Supermarkets and Other Grocery (except Convenience) Stores
446110	Pharmacies and Drug Stores
447190	Other Gasoline Stations
448310	Jewelry Stores
452210	Department Stores
452311	Warehouse Clubs and Supercenters
452319	All Other General Merchandise Stores
481112	Scheduled Freight Air Transportation
482111	Line-Haul Railroads
484121	General Freight Trucking, Long-Distance, Truckload
488390	Other Support Activities for Water Transportation
493110	General Warehousing and Storage
511210	Software Publishers
531120	Lessors of Nonresidential Buildings (except Miniwarehouses)
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing
541380	Testing Laboratories
551114	Corporate, Subsidiary, and Regional Managing Offices
562111	Solid Waste Collection
611110	Elementary and Secondary Schools
621210	Offices of Dentists
621493	Freestanding Ambulatory Surgical and Emergency Centers
621498	All Other Outpatient Care Centers
621511	Medical Laboratories
622110	General Medical and Surgical Hospitals
811111	General Automotive Repair
811112	Automotive Exhaust System Repair

811118	Other Automotive Mechanical and Electrical Repair and Maintenance
811121	Automotive Body, Paint, and Interior Repair and Maintenance
811219	Other Electronic and Precision Equipment Repair and Maintenance
811310	Commercial and Industrial Machinery and Equipment
921190	Other General Government Support
922140	Correctional Institutions
922160	Fire Protection
924120	Administration of Conservation Programs
926120	Regulation and Administration of Transportation Programs

7.7 Impact on Jobs

We could not quantify the likely costs of the rule amendments, due to uncertainty about:

- The number of generator and TSD containers, and aboveground tanks, with currently inadequate labels.
- The number of underground tanks and tank systems with currently inadequate or missing signage

In jobs-impact estimation, Ecology uses the Washington State Office of Financial Management's 2007 Washington Input-Output Model.¹³ The model accounts for inter-industry impacts and spending multipliers of earned income and changes in output, including expenditures by industries that must comply with rules, and the income of industries that receive those payments.

Of the potentially impacted industries listed in Section 7.6, the largest job loss per \$1 million of compliance costs is Ambulatory Health Care Services (NAICS 621; loss of 22 jobs per \$1 million in costs). If costs were exclusively incurred by Ambulatory Health Care Services (one of a wide breadth of potentially affected industries), and paid to replace labels and signs using services under Commercial Printing (except Screen and Books; NAICS 323111), each \$1 million of compliance costs will result in a net loss of 8 jobs statewide. Note that jobs impacts are primarily borne by the industry incurring costs, but net statewide jobs impacts are the sum of multiple smaller increases and decreases across all industries in the state.

In other words, to cause the loss of one job statewide, making the most conservative assumption that costs are borne by the potentially affected industry with the highest jobs impact per dollar of cost, the rule amendments would need to create a cost of nearly \$119 thousand. For example, if 10-inch squared hazard placards cost less than \$1 each,¹⁴ the rule amendments would result in the loss of one job if the amendments resulted in the purchase of over 119 thousand new placards. Label and sign prices would vary depending on the size of the label or sign, as well as the number purchased.

¹³ See the Washington State Office of Financial Management's site for more information on the Input-Output model. <http://www.ofm.wa.gov/economy/io/2007/default.asp>

¹⁴ ULINE (2018). Poly-coated tagboard or adhesive-backed vinyl 10 3/4-inch square hazard placards, Individual sign price in lots of 100.

References

MSDSonline (2019). GHS 101: Labels. <https://www.msdsonline.com/resources/ghs-answer-center/ghs-101-labels/>

ULINE (2018). Poly-coated tagboard or adhesive-backed vinyl 10 ¾-inch square hazard placards, Individual sign price in lots of 100.

ULINE (2018). Product catalog. <http://www.uline.com>

Unidocs (2008). Marking Requirements and Guidelines for Hazardous Materials and Hazardous Wastes.

US Department of Health and Human Services (2015). Medical Expenditure Panel Survey. Person-level emergency room expenditures, facility and doctor. https://meps.ahrq.gov/mepsweb/data_stats/MEPSnetHC/selvariable.action

Washington Health Alliance (2014). Hospital Sticker Shock: A report on hospital price variation in Washington state. <http://www.wahealthalliance.org>

WA Office of Financial Management (2007, 2012). Input-Output Model for Washington State. <http://www.ofm.wa.gov/economy/io/2007/default.asp>

Appendix A

Administrative Procedure Act (RCW 34.05.328)

- 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.**

Ecology is required to adopt many of the amendments to stay consistent with the federal hazardous waste regulations and to maintain Environmental Protection Agency (EPA) hazardous waste program funding and authorization. Ecology has the option to incorporate other federal rules that are less stringent and generally provide regulatory relief to generators. In some cases we are adopting these less stringent rules, in other cases we determined the less stringent options pose risks to human health and the environment and therefore does not meet the requirement of the state authorizing statute. Decisions about adopting or not adopting specific rules are based on reducing risks from waste mismanagement and making the rules easier to understand and comply with. In some cases we determined that adopting optional federal rules would be redundant to our existing regulations.

Please see the Least Burdensome Alternative Analysis, Chapter 6 of this document, for more 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 and record for rulemaking.

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.

Most of the amendments we are adopting are federal hazardous waste regulations which have been determined by EPA not to conflict with other federal regulations and laws. Other rules unique to Washington State have been reviewed by Ecology staff to ensure compliance with the rule requirements will not require someone to violate requirements of another federal or state law.

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.

No, it does not. The Dangerous Waste Regulations generally apply equally to private and public entities. None of the amendments will impact private entities more stringently 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.

Yes

If yes, the difference is justified because of the following:

- (i) A state statute explicitly allows Ecology to differ from federal standards. [If checked, provide the citation included quote of the language.]
- (ii) Substantial evidence that the difference is necessary to achieve the general goals and specific objectives stated in Chapter 6.

Washington's dangerous waste regulations, and some of these revisions, differ from federal hazardous waste regulations because of unique circumstances within the state. For example, we have extensive manufacturing adjacent to the Salish Sea, making it necessary to have different or more stringent standards. The Hazardous Waste Management Act gives Ecology broad rulemaking authority to ensure human health and the environment are protected, which can include adopting regulations that are more stringent or broader in scope than federal requirements.

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 kept EPA informed about our rulemaking efforts, and provided drafts and formal rule proposals for their review. We have communicated and coordinated with EPA throughout the process.

Ecology worked closely with other interested state and local government agencies and encouraged them to provide input in development of rule language and comments on draft and proposed rule language.

We made available to all stakeholders draft rule language and informational meeting opportunities. We also asked for informal comments and questions. Stakeholders were also asked to provide comments on the formal proposal and to attend the public hearing(s).