



DEPARTMENT OF
ECOLOGY
State of Washington

Preliminary Regulatory Analyses

Including the:

Preliminary Cost-Benefit Analysis

Least-Burdensome Alternative Analysis

Administrative Procedure Act Determinations

Regulatory Fairness Act Compliance

Chapter 173-224 WAC

Water Quality Permit Fees

March 2019

Publication no. 19-10-017

Publication and Contact Information

This report is available on the Department of Ecology's website at <https://fortress.wa.gov/ecy/publications/SummaryPages/1910017.html>

For more information contact:

Water Quality Program
P.O. Box 47600
Olympia, WA 98504-7600
Phone: 360-407-6600

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

- Headquarters, Olympia 360-407-6000
- Northwest Regional Office, Bellevue 425-649-7000
- Southwest Regional Office, Olympia 360-407-6300
- Central Regional Office, Union Gap 509-575-2490
- Eastern Regional Office, Spokane 509-329-3400

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-

Chapter 173-224 WAC

Water Quality Permit Fees

by

Kasia Patora

with

Sam Wilson

for the

Water Quality Program
Washington State Department of Ecology
Olympia, Washington

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List of Acronyms

| | |
|--------|---|
| APA | Administrative Procedure Act |
| CBA | Cost Benefit Analysis |
| DES | Washington Department of Enterprise Services |
| EPA | United States Environmental Protection Agency |
| GHG | Greenhouse Gas |
| LBA | Least-Burdensome Analysis |
| LCB | Washington Liquor and Cannabis Board |
| MW | Megawatt |
| NAICS | North American Industrial Classification System |
| OBRC | Oregon Beverage Recycling Cooperative |
| PhAGRs | Phytoremediation Attached Growth Reactors |
| RCW | Revised Code of Washington |
| REMI | Regional Economic Models Incorporated |
| RFA | Regulatory Fairness Act |
| US DOE | United States Department of Energy |
| VOC | Volatile organic compounds |
| WWTP | Wastewater treatment plant |

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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 proposed amendments to the Water Quality Permit Fees rule (chapter 173-224 WAC; the “rule”). This includes the:

- Preliminary 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. Ecology encourages feedback (including specific data) that may improve the accuracy of this analysis.

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.

About this rulemaking

This rulemaking proposes to:

- Increase permit fees for Fiscal Years 2020 and 2021 to collect the revenue needed to recover the costs of administering the wastewater and stormwater programs for the 2021-23 Biennium and move closer to payment equity across fee categories.
- Add incentives for permittees that pursue market research and development that reduce environmental impacts.

The proposed rule amendments make the following changes:

- **Updating permit fees:** Increasing permit fees to recover program costs and to improve equity across fee categories, including adding fees for the Winery General Permit.
- **Market research and development:** Adding an up to three-year, 75-percent discount for fees for facilities involved in market research for products or processes that reduce or eliminate pollutants or pollutant-generating activity.
- **Annual production certification:** Requiring winery permit holders to submit information certifying annual production or unit processes.

Costs compared to the baseline

- **Updating permit fees:** Total 20-year present value costs across all likely permittees range between \$199 million (if all wineries use the general permit) and \$202 million (if wineries maintain existing individual permits).
- **Market research and development:** To the extent permittees are able to take advantage of this discount, they would incur some time cost associated with requesting the discount. This request activity would cost \$50.
- **Annual production certification:** Wineries annually certifying production would incur an equivalent 20-year present value cost of \$159 thousand.

Benefits compared to the baseline

- **Updating permit fees:**
 - Without fee increases, Ecology would likely need to reduce staff or program services, which would result in more time needed to process applications, revisions, and renewals. This would increase the likelihood of a facility being out of compliance with other rules, resulting in potential penalties and increased risk to human health and the environment.
 - Additionally, Ecology is required by law to maintain funding through the fee program (RCW 90.48.465). Since fees are based on likely costs of administering permits, based on budget forecasts, the value of these services is the equivalent of their costs, estimated in Chapter 3 to be between \$199 million and \$202 million in 20-year present values.
- **Market research and development:** Updating permit fees includes potential three-year, 75-percent fee reductions for facilities who engage in market research and development to investigate and demonstrate the viability of products and/or processes that reduce or eliminate pollutants or pollutant-generating activities. These products or processes could result in reduced environmental impact from production inputs, the production process, or product use.
- **Annual production certification:** Knowing certified annual production values from wineries would help ensure wineries are charged the correct fees for their wastewater discharge. This means wineries would neither overpay nor underpay, as their level of wastewater discharge is closely tied to their output.

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

Least-burdensome alternative

The primary goal and objective of the authorizing statute is to collect enough fees in total to fully fund the water quality permitting programs.

In addition, the statute directs that:

- “All fees charged shall be based on factors relating to the complexity of permit issuance and compliance and may be based on pollutant loading and toxicity and be designed to encourage recycling and the reduction of the quantity of pollutants.”
- “Fees shall be established in amounts to fully recover and not to exceed expenses incurred by the department in processing permit applications and modifications, monitoring and evaluating compliance with permits, conducting inspections, securing laboratory analysis of samples taken during inspections, reviewing plans and documents directly related to operations of permittees, overseeing performance of delegated pretreatment programs, and supporting the overhead expenses that are directly related to these activities.”
- “In establishing fees, the department shall consider the economic impact of fees on small dischargers and the economic impact of fees on public entities required to obtain permits for stormwater runoff and shall provide appropriate adjustments.”

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

Regulatory Fairness Act compliance

Due to the uncertain relationship between business size and facility size (in terms of wastewater quantity), we cannot conclude that the proposed amendments do not have disproportionate impact on small businesses. We therefore conclude that the proposed rule amendments may have disproportionate impacts on small businesses, and therefore Ecology must include elements in the proposed rule amendments to mitigate this disproportion, as far as is legal and feasible.

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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 proposed amendments to the Water Quality Permit Fees rule (chapter 173-224 WAC; the “rule”). This includes the:

- Preliminary 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. Ecology encourages feedback (including specific data) that may improve the accuracy of this analysis.

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.

1.1.1 Introduction

This rulemaking proposes to:

- Increase permit fees for Fiscal Years 2020 and 2021 to collect the revenue needed to recover the costs of administering the wastewater and stormwater programs for the 2021-23 Biennium and move closer to payment equity across fee categories.
- Add incentives for permittees that pursue market research and development that reduce environmental impacts.

1.2 Summary of the proposed rule amendments

The proposed rule amendments make the following changes:

- Updating permit fees: Increasing permit fees to recover program costs and to improve equity across fee categories, including adding fees for the Winery General Permit.
- Market research and development: Adding an up to three-year, 75-percent discount for fees for facilities involved in market research for products or processes that reduce or eliminate pollutants or pollutant-generating activity.
- Annual production certification: Requiring winery permit holders to submit information certifying annual production or unit processes.

1.3 Reasons for the proposed rule amendments

1.3.1 Updating permit fees

The authorizing statute for this rule (RCW 90.48.465) requires Ecology to set water quality permit fees to reflect various costs of administering the permit programs. In addition to raising fees to meet this directive, Ecology is continuing to adjust fees to reflect the actual costs of administration.

1.3.2 Market research and development

Innovative products and processes hold promise for reducing or eliminating pollutants, as well as reducing the administrative costs of associated permits. Because it may not be clear, how viable new products and processes are on the market, Ecology is proposing to incentivize market research and development of new products or processes.

1.3.3 Annual production certification

To appropriately set fees for wineries – particularly as the winery general permit will go into effect July 1, 2019 – Ecology intends to collect certified production data from wineries.

1.4 Document organization

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

- Baseline and the proposed rule amendments (Chapter 2): Description and comparison of the baseline (what would occur in the absence of the proposed rule amendments) and the proposed changes to rule requirements.
- Likely costs of the proposed rule amendments (Chapter 3): Analysis of the types and sizes of costs we expect impacted entities to incur as a result of the proposed rule amendments.
- Likely benefits of the proposed rule amendments (Chapter 4): Analysis of the types and size of benefits we expect to result from the proposed 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 proposed 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).

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Chapter 2: Baseline and the Proposed Rule Amendments

2.1 Introduction

We analyzed the impacts of the proposed 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 proposed 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 proposed rule amendments.

For this proposed rulemaking, the baseline includes:

- The existing rule: Water Quality Permit Fees rule, chapter 173-224 WAC.
- The authorizing statute: Water Pollution Control law, chapter 90.48 RCW; specifically RCW 90.48.465 Water Discharge Fees.
- Requirements set by other agencies, including the Washington State Liquor and Cannabis Board (LCB).

2.3 Proposed rule amendments

The proposed rule amendments make the following changes:

- Updating permit fees: Increasing permit fees to recover program costs and to improve equity across fee categories, including adding fees for the Winery General Permit.
- Market research and development: Adding an up to three-year, 75-percent discount for fees for facilities involved in market research for products or processes that reduce or eliminate pollutants or pollutant-generating activity.
- Annual production certification: Requiring winery permit holders to submit information certifying annual production or unit processes.

2.3.1 Updating permit fees

Baseline

The existing rule sets fees for all water quality permits, except the Winery General Permit, which was issued in May 2018 after the last time this rule was amended (July 2017). Some fees are capped on a per-unit basis (per person or per dairy cow) by statute.

Proposed

The proposed rule amendments set new fees for discharger categories that have been underpaying compared to their administrative burden, increasing fees overall, but not

increasing fees uniformly, as compared to the baseline. The difference in fee increases is intended to reduce the degree to which there are facilities that over-pay (in excess of what is needed for permit administration) and facilities that underpay (below what is needed for permit administration). The proposed amendments also create a fee category for the Winery General Permit, which goes into effect July 1, 2019.

Facilities that would pay higher fees in 2020 and 2021 than they currently pay are in the following categories:

- Aluminum alloys
- Aluminum forming
- Aquaculture
- Aquatic pest control
- Boatyards
- Coal mining and separation
- Combined industrial waste treatment
- Concentrated animal feeding operations
- Facilities not otherwise classified
- Food processing
- Individual stormwater
- Industrial stormwater
- Iron and steel
- Metal finishing
- Municipal stormwater
- Municipalities
- Nonferrous metals forming
- Ore mining
- Private and state-owned domestic wastewater facilities
- Pulp, paper, and paperboard
- Sand and gravel
- Seafood processing
- Shipyards
- Solid waste sites
- Stormwater construction
- Vessel deconstruction
- Water plants
- Wineries

Some municipalities would pay lower fees (capped in the statute per unit of population). Many facilities would not pay different fees in 2020 and 2021 than they currently pay.

These include facilities in the following categories:

- Aluminum and magnesium reduction
- Aquaculture
- Combined food processing waste
- Combined industrial waste treatment
- Combined sewer overflow systems
- Dairies
- Facilities not otherwise classified
- Flavor extraction
- Food processing
- Fruit packing
- Fuel and chemical storage

- Hazardous waste cleanup sites
- Industrial stormwater
- Ink formulation and printing
- Inorganic chemicals manufacturing
- Municipal stormwater
- Municipalities
- Noncontact cooling water with and without additives
- Organic chemicals manufacturing
- Petroleum refining
- Photofinishers
- Power and/or steam plants
- Pulp, paper, and paperboard
- Radioactive effluents and discharges
- RCRA corrective action sites
- Sand and gravel
- Seafood processing
- Solid waste sites
- Stormwater construction
- Textile mills
- Timber products
- Vegetable/bulb washing facilities
- Vehicle maintenance and freight
- Water plants

Expected impact

Most fees are expected to increase, though by varying proportions. This is simultaneously a cost (to permittees) and a benefit (paying for the services of the water quality permit programs).

2.3.2 Market research and development

Baseline

The existing rule allows permit fee reductions for some small businesses, but does not include additional discounts based on activities at the facility.

Proposed

The proposed rule amendments include a new section allowing up to three years of 75-percent fee reductions for facilities engaged in activities to market test products or processes that could reduce or eliminate pollutants.

Expected impact

While innovation is inherently currently unknown, some existing facilities and potential new facilities would take advantage of this discount while they test market their innovative processes. This generates application costs for permittees, as well as benefits of reduced fees (a cost-savings) and potential benefits to the environment and human health.

2.3.3 Annual production certification

Baseline

There is no existing requirement for wineries to annually certify their production to Ecology. However, they do report production to the Washington State Liquor and Cannabis Board each year.

Proposed

Wineries must report and certify their annual production to Ecology.

Expected impact

Wineries would incur the costs of reporting, and Ecology would benefit from ensuring the correct fee is charged to each winery.

Chapter 3: Likely Costs of the Proposed Rule Amendments

3.1 Introduction

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

3.2 Cost analysis

The proposed rule amendments make the following changes:

- Updating permit fees: Increasing permit fees to recover program costs and to improve equity across fee categories, including adding fees for the Winery General Permit.
- Market research and development: Adding an up to three-year, 75-percent discount for fees for facilities involved in market research for products or processes that reduce or eliminate pollutants or pollutant-generating activity.
- Annual production certification: Requiring winery permit holders to submit information certifying annual production or unit processes.

3.2.1 Updating permit fees

Water quality permittees in multiple industries would incur a cost under the proposed rule amendments, in the form of higher fees. We compared the current fees paid by all 6,364 existing permittees, plus assumed \$0 current fees for the additional 158 wineries likely to be on the Winery General Permit, to the fees listed in the proposed amendments for Fiscal Years 2020 and 2021.

To estimate 20-year present value costs (inflation-adjusted and opportunity cost-adjusted flows of annual costs from 2019 through 2038), we also forecast fees based on assumed three-percent annual increases in program costs. We note that for fees capped in the authorizing statute, the growth would not be uniform with program-cost growth, but we could not comprehensively forecast future growth in municipal populations and dairy cattle. Based on past fee growth, however, our assumption of a uniform three percent likely overestimates fee growth for those categories.

Sixteen wineries currently hold individual permits, and have known permit fees.¹ We identified 158 additional wineries as potential Winery General Permit holders.² It is not clear whether any

¹ Ecology permit database (Permitting and Reporting Information System; PARIS). WA Department of Ecology, 2019.

² WA Liquor and Cannabis Board, 2015. Reported net winery production data for 2015. Wineries with positive production values for that year. Winery wastewater flow estimated using 6 gallons of estimated wastewater per gallon of production.

of the wineries currently operating under individual permits would be able to switch to using the general permit.

To reflect this uncertainty, we estimated the costs of increased fees under two assumptions:

1. All wineries would switch to the general permit.
2. Wineries currently operating under individual permits would continue to do so.

Initial fee changes at the permittee level (during the two years specified in the proposed amendments) range from a fee reduction of \$1 thousand to a fee increase of \$943 thousand per year, across both winery assumptions, in 2021.³

In 20-year present values, individual permittees would pay between \$0 and \$24 million more under the proposed amendments.⁴

Total 20-year present value costs across all likely permittees range between \$199 million (if all wineries use the general permit) and \$202 million (if wineries maintain existing individual permits).

3.2.2 Market research and development

We cannot know the extent to which innovative products or processes wastewater permittees will pursue. To the extent permittees are able to take advantage of this discount, they would incur some time cost associated with requesting the discount. If we assume an environmental engineer takes one hour to submit the request to Ecology (verification would be performed by an Ecology engineer based on existing facility information), this request activity would cost \$50.⁵

3.2.2 Annual production certification

Under the proposed amendments, wineries would annually certify their production to Ecology. They would incur the additional labor costs to fill out a form and submit it to Ecology. We assumed this would take one hour of time, using known production values. If an environmental engineer performed this certification, it would cost \$50.⁶ At the 174 identified wineries with existing individual permits or positive production values in available LCB data,⁷ this would be a total annual cost of \$8,700. The equivalent 20-year present value cost is \$159 thousand.

³ Note that the high-end increase is for a municipality, and based on population growth. The three highest fee increases are based on population growth at municipalities. The next highest fee increase is smaller, at \$170 thousand.

⁴ 1.03 percent discount rate based on average historic (1998 to present) real rate of return on US Treasury Department I bonds. US Treasury Department, 2018.

⁵ Median hourly wage of \$46.89 in 2015, US Bureau of Labor Statistics, 2015. Updated for inflation using Consumer Price Index for All Urban Consumers, US Bureau of Labor Statistics, 2019.

⁶ Ibid.

⁷ WA Liquor and Cannabis Board, 2015. Reported net winery production data for 2015.

Chapter 4: Likely Benefits of the Proposed Rule Amendments

4.1 Introduction

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

4.2 Benefit analysis

The proposed rule amendments make the following changes:

- Updating permit fees: Increasing permit fees to recover program costs and to improve equity across fee categories, including adding fees for the Winery General Permit.
- Market research and development: Adding an up to three-year, 75-percent discount for fees for facilities involved in market research for products or processes that reduce or eliminate pollutants or pollutant-generating activity.
- Annual production certification: Requiring winery permit holders to submit information certifying annual production or unit processes.

4.2.1 Updating permit fees

The proposed amendments increase total permit fees to maintain funding for the water quality permit programs.

Water quality permit fees as a whole pay for permit administration and assistance for individual permits in industries including (but not limited to):

- Aluminum & magnesium reduction, alloys, and forming
- Aquaculture
- Aquatic pest control
- Coal mining and preparation
- Combined food processing waste
- Combined industrial waste treatment
- Combined sewer overflow systems
- Concentrated animal feeding operation
- Dairies
- Flavor extraction
- Food processing
- Fuel and chemical storage
- Hazardous waste cleanup sites
- Ink formulation and printing
- Inorganic chemicals manufacturing
- Iron and steel
- Metal finishing
- Municipalities
- Noncontact cooling water
- Nonferrous metals forming
- Ore mining
- Organic chemicals manufacturing
- Petroleum refining
- Photofinishers

- Power and/or steam plants
- Private and state-owned domestic wastewater facilities
- Pulp, paper, and paper board
- Radioactive effluents and discharges
- Hazardous waste corrective action sites
- Sand and gravel
- Seafood processing
- Shipyards
- Solid waste sites
- Stormwater
- Textile mills
- Timber products
- Vegetable/bulb-washing facilities
- Vehicle maintenance and freight
- Water plants
- Wineries

As well as general permits for:

- Aquatic pesticides
- Boatyards
- Bridge and ferry terminal washing
- Concentrated animal feeding operations
- Construction Stormwater
- Environmental Protection Agency (EPA) vessels
- Fruit packing
- Sand and gravel
- Stormwater
- Upland fin fish
- Vessel deconstruction
- Water treatment plants
- Wineries

Permit administration can ensure facilities remain in compliance with water quality standards for surface waters such as:

- Rivers
- Lakes
- Marine waters
- Groundwater

Without fee increases, Ecology would likely need to reduce staff or program services, which would result in more time needed to process applications, revisions, and renewals. This would increase the likelihood of a facility being out of compliance with other rules, resulting in potential penalties and increased risk to human health and the environment.

Additionally, Ecology is required by law to maintain funding through the fee program (RCW 90.48.465). Since fees are based on likely costs of administering permits, based on budget forecasts, the value of these services is the equivalent of their costs, estimated in Chapter 3 to be between \$199 million and \$202 million in 20-year present values.

4.2.2 Market research and development

The proposed rule amendments include potential three-year, 75-percent fee reductions for facilities who engage in market research and development to investigate and demonstrate the viability of products and/or processes that reduce or eliminate pollutants or pollutant-generating activities. This policy is meant to reflect a more accurate cost recovery fee for these facilities and encourage pollution reduction technologies. The fee reduction is available to qualifying facilities for a maximum of three years.

There are currently two recently permitted facilities operating in Washington that would be eligible to receive the market research and development fee reduction, but other facilities and projects, including some currently operational in Washington, may also benefit from this reduction. The innovations of permittees receiving discounts do not necessarily have to focus on water quality; Ecology is taking holistic environmental impact reductions into scope for this incentive.

The purpose of this section is to start a discussion on potential ways wastewater permittees can create opportunities for environmental solutions. This discussion is not intended to endorse specific projects, programs, or ideas over others, but to highlight potential innovations that may be eligible for the fee reduction.

The three potential innovations discussed here are those that:

- Were once demonstrated with some success and may be more successful in the present market (biogas-powered hydrogen fuel cells).
- Are currently being demonstrated in neighboring states (refillable glass beverage containers).
- Are likely to be available in Washington in the near future (mass timber building materials).

4.2.2.1 Existing Innovations

Sustainable Fiber Technologies is one of two facilities that would benefit from the fee reduction. In 2015, their Columbia County production facility began producing pulp from wheat and alfalfa using the Phoenix Process.

According to the company, compared to traditional wood pulp mills, this process:

- Requires fewer chemical inputs.
- Discharges significantly less effluent.
- Reduces water intake by about 90 percent.

The facility alone has increased the number of jobs in Columbia County by five percent, adding over 100 positions between the plant and headquarters.^{8, 9} Additionally, it provides an additional source of revenue for wheat and alfalfa seed farmers and reduces the occurrence of agricultural burning.

⁸ Seattle Times, 2017.

⁹ Begley and Johnson, 2018.

Another facility potentially eligible for the fee reduction is testing phytoremediation capabilities in plants for toxin removal, degradation, or containment for hazardous waste disposal. Located in an industrial section of Tukwila, the Gaco Western warehousing and storage site is a part of Ecology's Voluntary Cleanup Program. The facility has demonstrated reduced volatile organic compounds (VOCs) content in on-site groundwater through treatment by Phytoremediation Attached Growth Reactors (PhAGRs), which removed the pollutants through biological processes. As an additional remediation and cost savings measure, the facility uses the PhAGRs effluent as landscape irrigation.

4.2.2.2 Potential Areas for Innovations

Biogas-powered hydrogen fuel cells

Methane, a potent greenhouse gas (GHG), is emitted during wastewater treatment processes. For over thirty years, municipal wastewater treatment plants (WWTPs) in Washington State have demonstrated the economic and environmental benefits of capturing and using methane biogas to run onsite machinery and generate heat and electricity. In King County, some biogas collected from WWTPs is purified and used as a transportation fuel or sold to the natural gas grid. While biogas capture and use reduces direct methane emissions, burning the fuel still releases CO₂ into the atmosphere. However, it is important to note methane is 30 times more potent as a heat trapping gas than carbon dioxide and carbon sequestration is a burgeoning industry.

One non-combustion method for converting captured biogas to energy is through a hydrogen fuel cell. Between 2004 and 2006, King County partnered with FuelCell, Inc., demonstrating a molten carbonate fuel cell that produced electricity using captured biogas as fuel. The one megawatt (MW) plant was the first of its kind in the nation. Originally, King County anticipated keeping the fuel cell operational after the initial two-year test phase, but decided to end the project given the high cost of anticipated repairs and upgrades to keep the infant technology operational.¹⁰ Today, several large facilities outside of Washington use biogas-fueled fuel cells to generate on-site electricity.¹¹

Since this time, hydrogen has drawn significant focus as a potential clean transportation fuel for both on-road vehicles (cars, busses, etc.) and non-road vehicles (forklifts, etc.).¹² Between 2014 and 2016, worldwide shipment of fuel cells in megawatts nearly tripled, driven in large part by light-duty vehicle sales in Korea and Japan.¹³ At an Orange County, California WWTP, purified biogas is converted to hydrogen and offered to the public as a transportation fuel. Although this facility only produces enough hydrogen to fill 50 cars each day, it demonstrates the potential for further development.¹⁴

While the market for hydrogen as a transportation fuel is limited, the United States Department of Energy (US DOE) expects hydrogen production to increase as its fueling infrastructure

¹⁰ King County, 2009.

¹¹ United States Department of Energy, 2017.

¹² United States Energy Information Administration, 2019.

¹³ United States Department of Energy, 2017.

¹⁴ Orange County, 2012.

grows.¹⁵ Some analysts predict the global hydrogen generation market to grow at a nearly eight percent compounded growth rate through 2023.¹⁶ Currently, the majority of hydrogen produced in the US comes from fossil fuels. In Washington, the majority of hydrogen is produced at a single petroleum refinery, where it is used for desulfuring oil.¹⁷

Ecology may consider projects that develop, deploy, and demonstrate hydrogen fuel cell technologies at municipal, agricultural, and industrial methane sources that are currently combusting captured biogas for the fee reduction. Many of Washington's largest sources of methane emissions also have wastewater discharge permits. These include municipal landfills and waste lagoons at cattle feedlots; although municipal WWTPs emit methane at a much lower rate than these facilities, three municipal WWTPs in Washington capture methane.¹⁸ Currently, nine of Washington's largest municipal landfills collect biogas.¹⁹

Facilities that used captured biogas to power a fuel cell, instead of combusting the gas, would:

- Affect onsite GHG reductions.
- Promote a technology that is significantly more efficient than current practice.²⁰
- Create a source of renewable hydrogen fuel.

Refillable glass beverage containers

There is no doubt that craft beverages play a significant role in Washington's economic and cultural identity. Washington's vibrant wine, beer, and cider producers are well-known around the world. About 77 percent of the United States' total hop production occurs in the Yakima Valley and the Seattle area is home to more breweries than anywhere else in the nation with 174 as of 2017.^{21, 22} Washington is home to over 940 wineries and the industry overall is estimated to have an economic impact of \$4.8 billion.²³

Beverage and container producers that deploy innovative methods to reduce the life-cycle environmental impacts of their products could potentially benefit from the fee reduction. Recent research found packaging production to be one the most significant environmental impacts of both beer and wine production.^{24, 25} An infinitely recyclable and often reusable material, glass containers make up about 1.5 percent of Washington's statewide solid waste stream.²⁶ According to the United States Environmental Protection Agency (EPA), glass produced from recycled material consumes about 30 percent less energy during its production life-cycle.²⁷ Although

¹⁵ United States Department of Energy, 2017.

¹⁶ Marketwatch.com, 2019.

¹⁷ Sjoding and Hamernyik, 2008.

¹⁸ King County's West Point and South Treatment plants, and Chambers Creek Regional WWTP.

¹⁹ In 1998, EPA & Ecology estimated six landfills were actively pursuing energy recovery with another 11 identified as good candidates for Landfill Gas-to-Energy (LFGTE) projects.

²⁰ United States Department of Energy, 2016.

²¹ Washington Beer Commission, 2019.

²² Rietmulder, 2017.

²³ Washington State Wine Commission, 2018.

²⁴ Heller, 2017.

²⁵ Ferrara and De Feo, 2018.

²⁶ Ecology, 2018.

²⁷ United States Environmental Protection Agency, 2016.

Ecology estimates 67 percent of glass containers used in the state are recycled, we assume there could be additional environmental benefits from reusing glass containers multiple times before they are recycled.^{28, 29}

While a common practice in other nations, the United States maintains very few functional refillable glass beverage container programs. Over the past several years, the Oregon Beverage Recycling Cooperative (OBRC), in partnership with several breweries, launched a voluntary refillable bottle system for microbreweries around the state. The standardized bottles used by the breweries are made from locally recycled glass and can be returned, cleaned, refilled, relabeled, and redistributed up to 40 times before being recycled.³⁰ OBRC plans to open a local bottle cleaning facility in 2020.³¹ Although a denser, stronger bottle may require additional energy and material input during production and transportation, recent studies suggest that refillable glass beverage bottles showed the lowest life-cycle environmental impacts when compared to other common packaging.³²

Mass timber building materials

Newly constructed industrial facilities, commercial offices, or residential buildings that demonstrate the viability of innovative green building materials could benefit from the fee reduction. Building materials not only influence energy efficiency during a building's use, but also have significant embodied environmental impacts themselves. Recently, both research and real world applications have highlighted modern timber construction materials as significantly environmentally preferable over steel and concrete.^{33, 34} One study estimated that mass timber construction materials have between 14 and 31 percent fewer embodied GHG emissions from fossil fuels than other materials.³⁵

In late 2018, Washington updated building codes related to timber-framed structures, becoming the first state in the nation to allow for structural use of mass timber in buildings up to 18 stories (Chapters 51-50 and 51-54A WAC). Despite the popularity of mass construction in the early 20th century and a booming resurgence in other countries, few modern examples exist in the United States today. Often cited as, "the greenest commercial building in the world," Seattle's Bullitt Center is a six story, 52,000 square foot mass timber office building built largely from wood manufactured in Vancouver, Washington.³⁶ Ecology is not aware of any upcoming construction projects permitted in the state that employ high-rise mass timber methods, but assumes that such a project could have significant environmental benefits over traditional construction methods and serve as an example for future projects.

The Washington Department of Enterprise Services (DES) recently completed construction on 20 kindergarten through third-grade classrooms using a mass timber product called cross-

²⁸ Cleary, 2013.

²⁹ Ecology, 2019.

³⁰ National Public Radio, 2018.

³¹ Chow, 2018.

³² Heller, 2017.

³³ Heeren et al, 2015.

³⁴ Khasreen, Banfill, and Menzies, 2009.

³⁵ Oliver et al, 2014.

³⁶ Van Daalen, Court, and Kahn 2012.

laminated timber.³⁷ Cross-laminated timber has a number of environmental benefits over other building materials as it reduces the quantity of solid waste generated from construction sites, requires significantly less energy to produce, is grown and produced in Washington State, and sequesters CO₂. An added benefit of cross-laminated timber is that it can be produced from low quality timber that was previously not economically viable, like slash, thinning material from fire resiliency projects, and dead or diseased trees.^{38, 39}

4.2.3 Annual production certification

Knowing certified annual production values from wineries would help ensure wineries are charged the correct fees for their wastewater discharge. This means wineries would neither overpay nor underpay, as their level of wastewater discharge is closely tied to their output. As observed from the Fresh Fruit Packing General Permit, having current data on production prevents higher fees being charged in years where there is little production (e.g., drought or fire), and therefore relatively little wastewater to manage as well as less revenue available for fee payment.

³⁷ DES, 2019.

³⁸ Ibid.

³⁹ Lewis, Shrestha, and Crews, 2014.

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Chapter 5: Cost-Benefit Comparison and Conclusions

5.1 Summary of the costs and benefits of the proposed rule amendments

Costs compared to the baseline

- **Updating permit fees:** Total 20-year present value costs across all likely permittees range between \$199 million (if all wineries use the general permit) and \$202 million (if wineries maintain existing individual permits).
- **Market research and development:** To the extent permittees are able to take advantage of this discount, they would incur some time cost associated with requesting the discount. This request activity would cost \$50.
- **Annual production certification:** Wineries annually certifying production would incur an equivalent 20-year present value cost of \$159 thousand.

Benefits compared to the baseline

- **Updating permit fees:**
 - Without fee increases, Ecology would likely need to reduce staff or program services, which would result in more time needed to process applications, revisions, and renewals. This would increase the likelihood of a facility being out of compliance with other rules, resulting in potential penalties and increased risk to human health and the environment.
 - Additionally, Ecology is required by law to maintain funding through the fee program (RCW 90.48.465). Since fees are based on likely costs of administering permits, based on budget forecasts, the value of these services is the equivalent of their costs, estimated in Chapter 3 to be between \$199 million and \$202 million in 20-year present values.
- **Market research and development:** Updating permit fees includes potential three-year, 75-percent fee reductions for facilities who engage in market research and development to investigate and demonstrate the viability of products and/or processes that reduce or eliminate pollutants or pollutant-generating activities. These products or processes could result in reduced environmental impact from production inputs, the production process, or product use.
- **Annual production certification:** Knowing certified annual production values from wineries would help ensure wineries are charged the correct fees for their wastewater discharge. This means wineries would neither overpay nor underpay, as their level of wastewater discharge is closely tied to their output.

5.2 Conclusion

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

Chapter 6: Least-Burdensome Alternative Analysis

6.1 Introduction

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

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

In other words, to be able to adopt the rule, 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 alternatives proposed rule content, and determined whether they met the goals and objectives of the authorizing statutes. Of those that would meet these goals and objectives, Ecology determined whether those chosen for the proposed rule were the least burdensome to those required to comply with them.

6.2 Goals and objectives of the authorizing statute: RCW 90.48.465

The primary goal and objective of the authorizing statute is to collect enough fees in total to fully fund the water quality permitting programs.

In addition, the statute directs that:

- “All fees charged shall be based on factors relating to the complexity of permit issuance and compliance and may be based on pollutant loading and toxicity and be designed to encourage recycling and the reduction of the quantity of pollutants.”
- “Fees shall be established in amounts to fully recover and not to exceed expenses incurred by the department in processing permit applications and modifications, monitoring and evaluating compliance with permits, conducting inspections, securing laboratory analysis of samples taken during inspections, reviewing plans and documents directly related to operations of permittees, overseeing performance of delegated pretreatment programs, and supporting the overhead expenses that are directly related to these activities.”
- “In establishing fees, the department shall consider the economic impact of fees on small dischargers and the economic impact of fees on public entities required to obtain permits for stormwater runoff and shall provide appropriate adjustments.”

6.3 Alternatives considered and why they were not included

6.3.1 Not increasing fees

Ecology could have chosen not to increase fees. While this would have reduced compliance burden on permittees, as compared to the proposed amendments, it would not meet the primary goal of the authorizing statute, to fund the program. It would not provide funds sufficient to recover the costs of activities listed in the statute.

6.3.2 Increasing fees in different proportions

Each revision of the water quality permit fees intends to bring about equity across fees relative to the cost of activities required to administer and support permits. This is consistent with the primary and the more specific goals and objectives of the authorizing statute. These goals, and particularly the consideration for small dischargers and public entities – the general economic impact and viability of fee payment – that makes this a gradual process. While increasing fees in different proportions than those proposed, or increasing some fees more than proposed and decreasing others, would reduce burden on some permittees, it would not be consistent with all of the goals and objectives in the authorizing statute.

6.4 Conclusion

After considering alternatives to the proposed rule’s contents, as well as the goals and objectives of the authorizing statute, Ecology determined that the proposed 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 proposed 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 proposed 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 proposed 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

Ecology calculated the estimated per-entity costs to comply with the proposed rule amendments, based on the costs estimated in Chapter 3. In this section, Ecology summarizes compliance cost per employee at affected businesses of different sizes.

To estimate the sizes of businesses incurring compliance costs under the proposed amendments, we assigned North American Industrial Classification System (NAICS) codes to each of the water quality permit fee categories. Some categories (e.g., those using industrial process water or discharging stormwater) included multiple NAICS codes, and for those we reflected the overall parent NAICS code for the category, and examined employment data for all sub-categories of NAICS code. We identified associate NAICS codes for all permittees, including facilities that would not pay higher fees in 2020 and 2021 than they currently pay.

The average affected small business likely to be covered by the proposed rule amendments employs between 3 and 14 people, depending on industry group.⁴⁰ The largest ten percent of affected businesses employ an average of between 65 and 2,235 people, depending on industry

⁴⁰ WA Employment Security Department, 2019. Note that employment data for the broad affected set of industries was available at the facility level. This means higher ownership by conglomerate corporations is not reflected.

group.⁴¹ Based on cost estimates from Chapter 3, we estimated the following compliance costs per employee.

Small businesses

- Fee increases: Increased compliance costs (for permittees with proposed higher fees; see section 2.3.1 for list) per employee at small businesses would range from \$95 to \$123 thousand.
- There would be no increase in compliance costs for small businesses in fee categories that would not have explicit higher fees under the proposed amendments (see section 2.3.1 for list of categories with no proposed change in 2020 and 2021 fees).

Largest ten percent of businesses

- Increased compliance costs per employee at the largest ten percent of businesses would range from \$5 to \$5 thousand.
- There would be no increase in compliance costs for the largest ten percent of businesses that would not have explicit higher fees under the proposed amendments (see section 2.3.1 for list of categories with no proposed change in 2020 and 2021 fees).

7.2.1 If wineries switch to the general permit

The estimated compliance cost impacts per employee discussed above are for the high-end estimates of costs, based on the assumption that wineries currently on individual permits do not switch to the general permit that will be available to them July 1, 2019. If they do switch to the general permit, these wineries would pay between \$500 and \$14 thousand less in annual fees. Because most wineries are small businesses (employing on average 8 employees), the largest ten percent of wineries employ (on average) 23 employees per facility.

Assuming that all wineries currently holding an individual permit switch to the general permit would:

- Reduce compliance costs at small (by employment) wineries by between \$60 and nearly \$2 thousand per employee, in 2020 and 2021.
- Reduce compliance costs at the largest ten percent (by employment) of wineries by between \$21 and \$600 per employee, in 2020 and 2021.

7.2.2 Employment data limitations

The ranges above are across all parties likely to incur compliance costs. Making the comparison within industries, we note that the average ratio of small business costs to costs at the largest businesses is 57 (ranging between 7 and 745). Available employment data, however, was not able to individually match employment to operation size and fee, and instead correlated size and fees by category. This means the data matching could not identify when small facilities (in terms of the quantity of wastewater) were operated by small businesses, and also paid lower fees than large businesses in the same category. Similarly, we could not individually identify across all covered parties when very large facilities were operated by large businesses, and also paid higher

⁴¹ Ibid.

fees than small businesses in the same category.

7.2.3 Conclusion

Due to the uncertain relationship between business size and facility size (in terms of wastewater quantity), **we cannot conclude that the proposed amendments do not have disproportionate impact on small businesses.** We therefore conclude that the proposed rule amendments may have disproportionate impacts on small businesses, and therefore Ecology must include elements in the proposed rule amendments to mitigate this disproportion, as far as is legal and feasible.

7.3 Loss of sales or revenue

Businesses that would incur costs could experience reduced sales or revenues if the fee changes would 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), as well as the specific attributes of the markets in which they sell goods, including the degree of influence of each firm on market prices, as well as the relative responsiveness of market demand to price changes.

Ecology used the REMI PI+ model for Washington State to estimate the impact of the proposed rule on directly affected markets, accounting for dynamic adjustments throughout the economy. The model accounts for: inter-industry impacts; price, wage, and population changes; and dynamic adjustment of all economic variables over time.

- Prices:
 - In modeled results, the overall price level for all goods, including housing, would be virtually unaffected.
 - Correspondingly, most commodity prices would also not change, as compared to the baseline forecast.
 - Food and beverage prices, however, were modeled as increasing by 1/100th of a percent, compared to the baseline forecast for the state economy. Alcoholic beverages in particular would see a 1/50th of a percent increase in prices.
- Output/sales:
 - Apparel, leather, and similar products manufacturing would experience a reduction in the value of their output, of up to 1/5th of a percent of the baseline forecast sales. This is because this market is relatively small in the state. The nominal value of this impact is about \$1 million by 2038.
 - Similarly, textile manufacturing would experience an up to 1/20th of a percent of the baseline sales forecast. The nominal value of this impact is about \$276 thousand by 2038.
 - Some manufacturing sectors would experience sales losses by 2038 of up to 1/100th of a percent of the baseline sales forecast.

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 proposed rule on small businesses:

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

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

Due to the narrow scope of this rulemaking, the options for reducing disproportionate impacts on small businesses were limited. However,

- The existing rule (as well as the amended rule) include opportunity for small businesses to demonstrate hardship and reduce their fees.
- In line with the goals and objectives of the authorizing statute (see Chapter 6), fees were set with operation size (complexity of permit management and support) in mind. To the extent that operation size correlates with the number of employees, this would work to reduce relative compliance burden on small businesses.
- While this rule does not contain many of the substantive regulatory requirements suggested for reduction in the RFA (compliance requirements for permits, inspection, timetables, fines for noncompliance), it does contain some reporting requirements. The proposed amendments add reporting of production at wineries. This requirement was, however, designed to impose minimal burden, relying on known information and simplified reporting through a form.

7.5 Small Business and Government Involvement

Ecology involved small businesses and local government in our development of the proposed rule amendments, using the methods below. About 80 percent of permittees are small businesses or local governments.

- Water Quality listserv, including business association, individual business, and local government representatives.
- Permittee list from fee invoicing software (5,848 permittees with contact information)
- Stakeholder meetings including municipality and county representatives.

7.6 NAICS Codes of Impacted Industries

The proposed rule is likely to impose compliance costs on the North American Industrial Classification System (NAICS) codes below. An “X” denotes multiple individual 4-digit NAICS sub-codes without a specific associated water quality permit category.

- 112X Animal production and aquaculture (various)
- 1151 Support activities for crop production
- 2121 Coal mining
- 2122 Metal ore mining
- 2123 Nonmetallic mineral mining and quarrying
- 2211 Electric power generation, transmission, and distribution
- 2213 Sewer systems
- 2213 Water, sewage, and other systems
- 23XX Construction
- 3114 Fruit and vegetable preserving and specialty food manufacturing
- 3117 Seafood product preparation and packaging
- 3119 Other food manufacturing
- 3121 Beverage manufacturing
- 3132 Fabric mills
- 3211 Sawmills and wood preservation
- 3221 Pulp, paper, and paperboard mills
- 3241 Petroleum and coal products manufacturing
- 3251 Basic chemical manufacturing
- 3259 Other chemical product and preparation manufacturing
- 31XX - 33XX Manufacturing (various)

- 3311 Iron and steel mills and ferroalloy manufacturing
- 3313 Aluminum product manufacturing
- 3314 Nonferrous metal (except aluminum) production and processing
- 3328 Coating, engraving, heat treating, and allied activities
- 3366 Ship and boat building
- 4841 General freight trucking
- 5622 Waste treatment and disposal
- 8129 Other personal services
- 921X Executive, legislative, and general government (various)

7.7 Impact on Jobs

Ecology used the REMI PI+ model for Washington State to estimate the impact of the proposed rule on jobs in the state, accounting for dynamic adjustments throughout the economy. The model accounts for: inter-industry impacts; price, wage, and population changes; and dynamic adjustment of all economic variables over time.

The proposed rule amendments would result in transfers of money within and between industries:

- Fees paid by permittees would transfer to state government.
- Winery wages paid for production certification would transfer to employee compensation.

Under the assumption that wineries with existing individual permits would continue to operate under those permits (the highest compliance cost assumption), the Washington State economy could experience a *net* gain of between 23 jobs (in 2020) and 49 jobs (in 2038) across all industries. In this model, jobs are one year of full time equivalent employment. Economic activity across sectors of the state economy results in spending on goods and services, including those provided by the state government. This is how a broad-based set of compliance costs (primarily fees) results in a benefit to the state economy, when considered together.

Seventeen of the jobs gained in 2020, and 71 of the jobs gained in 2038, would be in the public sector. In the model, public sector job growth is primarily a result of increased economic activity (flow of money across sectors) as fees are paid to the public sector, then spent on wages, overhead, supplies, rents, contractors, and other things government purchases. Wages are then spent, invested, or saved based on typical public spending patterns in Washington State. Suppliers of the goods and services purchased by employees or the public sector receive them as revenues, spending them on production, investment, and other outlays. As a result of this modeled growth in the state economy, the public sector also grows and employs more people. Consequently, because the model groups all public sector activity, we cannot further refine where in the public sector these job gains would occur. Based on model structure, they are likely to be across a broad set of types of government (federal, state, county, city), but to include

Ecology.

To further examine the distributional effects on jobs (how different industries' employment is affected), we looked at the model results for industry groups with large numbers of permittees that would pay higher fees under the proposed amendments.

For example:

- Up to three of the jobs gained would be in construction, largely due to overall increased economic activity in the state.
- Manufacturing, which pays a high proportion of affected fees, would instead see job losses of one job in 2020, up to 15 jobs in 2038.

These prospective changes in overall employment in the state are the sum of multiple small increases and decreases across all industries in the state.

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Appendix A

Administrative Procedure Act (RCW 34.05.328)

Determinations

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

See Chapter 6.

- B. RCW 34.05.328(1)(b) –**

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

See Chapters 1 and 2.

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

We considered only one alternative: not to do rulemaking. The consequence of not amending the rule would be that current fee revenue would not recover Ecology’s expenses for the 2021-23 Biennium for administering the wastewater and stormwater permit programs. This would result in limitations to the permit program, which would impact water quality statewide.

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

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

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

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

See Chapters 1 – 5.

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

Please see Chapter 6 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.**

This rulemaking supports Ecology’s emphasis on supporting successful water management by maintaining its permitting program. Wastewater and stormwater discharge permits set rigorous discharge limits, monitoring requirements, and management practices, usually specific to a

discharge, which is designed to ensure a facility can meet both federal and state treatment and water quality standards. The permit program manages about 6,000+/- point source permits. Water quality discharge permits provide Ecology with a full range of tools to address water quality needs (e.g., permitting, technical assistance, and compliance/inspections). Maintaining compliance with all other federal and state laws is a requirement specifically identified in all Ecology issued permit coverages.

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.

Permit holders consist of large and small industrial businesses, construction companies, school districts, federal agencies, state agencies, and city governments. The requirement to pay fees is the same for all permittees.

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.

The proposed rule does not differ from any federal regulation or statute applicable to the same activity or subject matter.

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

- (i) A state statute explicitly allows Ecology to differ from federal standards.
- (ii) Substantial evidence that the difference is necessary to achieve the general goals and specific objectives stated in Chapter 6.

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

Ecology notifies all permit holders about any proposed changes to the permit fee rule. We also notify all stakeholders, including federal, state, and local government offices, regarding all rule announcement, proposal, and adoption stages.