



Final Regulatory Analyses:

Including the:

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

Chapter 173-187 WAC

Financial Responsibility

Prepared by

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For the

Spills Prevention, Preparedness, and Response Program

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Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region 360-407-6300	Northwest Region 206-594-0000	Central Region 509-575-2490	Eastern Region 509-329-3400
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Region	Counties served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	P.O. Box 47775 Olympia, WA 98504	360-407-6300
Northwest	Island, King, Kitsap, San Juan, Skagit, Snohomish, Whatcom	P.O. Box 330316 Shoreline, WA 98133	206-594-0000
Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
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Chapter 173-187 WAC, Financial Responsibility

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DEPARTMENT OF
ECOLOGY
State of Washington

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Abbreviations and Acronyms

APA	Administrative Procedure Act
bbl	Barrel(s) of oil, 42 U.S. gallons
CBA	Cost-Benefit Analysis
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COFR	Certificate of Financial Responsibility
E2SHB	Engrossed Second Substitute House Bill
FR	Financial Responsibility
LBA	Least-Burdensome Alternative Analysis
PV	Present Value
NRD	Natural Resource Damages
OPA 90	Oil Pollution Act (1990 Federal Law)
OSLTF	Oil Spill Liability Trust Fund
P&I	Protection and Indemnity
RCW	Revised Code of Washington
RFA	Regulatory Fairness Act
RP	Responsible Party
WAC	Washington Administrative Code

Executive Summary

Through Engrossed Second Substitute House Bill (E2SHB) 1691, codified in Chapter 88.40 RCW, the Legislature directed Ecology to adopt rules regarding financial responsibility (FR) requirements for oil handling facilities and vessels.

While Chapter 88.40 RCW sets the FR requirements for almost all vessels, it directs Ecology to set the FR requirements for facilities. In doing so, this rule requires oil handling facilities in Washington to demonstrate FR to pay for oil spill response costs and damages, like in other West Coast states.

Chapter 88.40 RCW allows for a variety of methods to demonstrate FR, including demonstrating insurance coverage for an oil spill event. The statute also allows for an entity to present a variety of evidence of sufficient financial resources to pay for the costs and damages that might result from an oil spill. This rule calls for the largest onshore facilities (Class 1) in Washington State to demonstrate \$300 million in FR and lesser amounts for smaller facilities.

Ecology has been advised that oil spill insurance offered in the market for onshore facilities has a practicable upper limit of \$200 million. This means the larger facilities will have to demonstrate FR through a combination of approved methods. The largest cost of this rule is the estimated annual aggregate range of \$49.9 million to \$101.5 million for the state's entities which own or operate Class 1 facilities (some entities have multiple facilities). The average annual cost per Class 1 entity is \$2.6 million per year in the low-cost scenario, and \$5.3 million in the high-cost scenario (Section 3.2.2). This cost is driven (50 to 80 percent) by the opportunity cost of holding enough equity to meet the self-insurance portion of the FR they need to demonstrate.

Many firms may carry enough equity and have strong enough finances to avoid paying the equivalent of an out-of-pocket cost. However, the holding of a specific amount of equity is a restriction due to the rule. For firms not needing to make financial adjustments immediately, the requirement may restrict how they spend, or borrow against, their equity in the future.

The rule brings several benefits to Washington including verified assurance that companies whose operations pose a risk of an oil spill to waters of the state have the financial strength to pay for the resulting cleanup and damages. We expect this to reduce the risk that governments will bear these costs. Furthermore, the COFR provides documentation of the individuals at the covered entities that are responsible for ensuring the funds are available in the event of a spill. This reduces the possibility of a company operating in Washington without the financial strength to pay for a large spill from their facility.

This rule meets the legislative intent of Chapter 88.40 RCW in setting FR requirements. The Legislature also called for self-insurance requirements at least as protective as other states which have them and with which Washington exports or imports petroleum products (RCW 88.40.030(2)).

Chapter 1: Background and Introduction

1.1 Introduction

This report presents the determinations made by the Washington State Department of Ecology as required under Chapters 34.05 RCW and 19.85 RCW, for the Financial Responsibility rule (Chapter 173-187 WAC). 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. Chapter 6 of this document describes that determination.

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

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 for small businesses to those of the largest businesses affected. Chapter 7 of this document documents that analysis, when applicable.

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

1.1.1 Background

Through Engrossed Second Substitute House Bill (E2SHB) 1691, codified in Chapter 88.40 RCW, the Legislature directed Ecology to adopt rules regarding financial responsibility (FR) requirements for oil handling facilities and vessels. This means entities, some of which control multiple facilities, must demonstrate they can pay certain levels of combined costs for cleanup and damages should they spill oil. The bill passed 88-15 in the House, and unanimously in the

Senate on the 3rd of March in 2022.² The bill added to, reenacted, and amended parts of Chapter 88.40 RCW, which was first established in 1991.³

The statute allows for a variety of methods to demonstrate FR for an oil spill event, including insurance coverage, surety bond, guarantee, letter of credit, and other methods. Additionally, the legislation allows an entity to present financial statements which prove sufficient internal financial resources to pay for the costs and damages that might result from an oil spill. This is referred to as self-insurance.

The main goal of the rule is to establish FR amounts for facilities and define the process to be used to verify or certify compliance with FR requirements for both vessels and facilities in Washington state. The FR amounts for covered vessels were largely prescribed in statute. The statute authorizes Ecology to establish a process for verification of Protection & Indemnity (P&I) club membership for vessels, and charges Ecology with establishing FR amounts for regulated facilities.

The statute required Ecology to develop a rule requiring facilities to demonstrate FR as necessary to compensate the state and affected federally recognized Indian Tribes, counties, and cities for damages that might result from a “reasonable worst-case spill”.⁴

The law also directed “consideration of the worst-case amount of oil that could be spilled, as calculated in the applicant's oil spill contingency plan approved under Chapter 90.56 RCW, the cost of cleaning up the spilled oil, the frequency of operations at the facility, the damages that could result from the spill, and the commercial availability and affordability of financial responsibility.”⁵

1.1.2 Federal context and the Oil Pollution Act

The Oil Pollution Act of 1990 (OPA 90) amended the Clean Water Act and addressed a wide range of problems associated with preventing, responding to, and paying for oil pollution incidents in navigable waters of the United States.⁶ It created a comprehensive prevention, response, liability, and compensation method to deal with vessel and/or facility caused oil pollution to U.S. navigable waters. OPA 90 greatly increased federal oversight of maritime oil transportation, while providing greater environmental safeguards by:

² [1691-S2.E HBR SA 22 \(wa.gov\)](https://app.leg.wa.gov/documents/billdocs/2021-22/Pdf/Bill%20Reports/House/1691-S2.E%20HBR%20SA%2022.pdf), <https://app.leg.wa.gov/documents/billdocs/2021-22/Pdf/Bill%20Reports/House/1691-S2.E%20HBR%20SA%2022.pdf>

³ “Effective Date”, [RCW 88.40.005: Intent. \(wa.gov\)](https://app.leg.wa.gov/RCW/default.aspx?cite=88.40.005), <https://app.leg.wa.gov/RCW/default.aspx?cite=88.40.005>

⁴ [Chapter 88.40 RCW: FINANCIAL RESPONSIBILITY](https://app.leg.wa.gov/RCW/default.aspx?cite=88.40&full=true#88.40.025), <https://app.leg.wa.gov/RCW/default.aspx?cite=88.40&full=true#88.40.025>

⁵ [Chapter 88.40 RCW: FINANCIAL RESPONSIBILITY](https://app.leg.wa.gov/RCW/default.aspx?cite=88.40&full=true#88.40.025), <https://app.leg.wa.gov/RCW/default.aspx?cite=88.40&full=true#88.40.025>

⁶ [US Oil Pollution Law](https://uscode.house.gov/view.xhtml?path=/prelim@title33/chapter40&edition=prelim), <https://uscode.house.gov/view.xhtml?path=/prelim@title33/chapter40&edition=prelim>

- Setting new requirements for vessel construction and crew licensing and staffing,
- Mandating contingency planning,
- Enhancing federal response capability,
- Broadening enforcement authority,
- Increasing penalties,
- Creating new research and development programs,
- Increasing liability limits, and
- Significantly broadening FR requirements.

Title I of OPA 90 established new and higher liability limits for oil spill damages, with commensurate changes to FR requirements. It substantially broadened the scope of damages, including natural resource damages (NRDs), for which polluters are liable. Responsible parties (RPs) for a spill are liable for all cleanup costs.⁷

OPA 90 also authorized the Oil Spill Liability Trust Fund (OSLTF, also referred to as “the fund”) up to \$1 billion per incident to pay for prompt oil removal and uncompensated damages. The fund’s balance is estimated to reach \$9.7 billion at the end of FY2024.⁸

The Delaware River Protection Act of 2006, title VI of the Coast Guard and Maritime Transportation Act of 2006, increased liability limits under OPA 90.⁹ With the latest adjustment for inflation, onshore facilities face liability for removal costs and damages up to \$725,710,800.¹⁰

1.1.3 Data on oil spills and their costs

This rulemaking occurs in the context of a marked reduction in the amount of oil spilled over the past two decades, both relative to the amount of oil handled and in absolute terms. In its report “Oil in the Sea IV: Inputs, Fates, and Effects (2022)” the National Academies of Sciences, Engineering, and Medicine, note: “[In North America]...over 20 years, the volume of spills decreased significantly for pipelines, tank vessels, non-tank vessels, and coastal refineries.”¹¹

For onshore facilities, data from a 2023 US Coast Guard report to Congress shows a sharp reduction in the number of spills into navigable waters from 2000 onward. Comparing the five

⁷ [Who Pays for Oil Spills?, NOAA, 2015](https://blog.response.restoration.noaa.gov/who-pays-oil-spills), <https://blog.response.restoration.noaa.gov/who-pays-oil-spills>

⁸ [Oil Spills: Background and Governance \(congress.gov\)](https://crsreports.congress.gov/product/pdf/RL/RL33705), <https://crsreports.congress.gov/product/pdf/RL/RL33705>

⁹ [Oil Pollution Act of 1990 \(uscg.mil\)](https://www.uscg.mil/Mariners/National-Pollution-Funds-Center/About_NPFC/OPA/), https://www.uscg.mil/Mariners/National-Pollution-Funds-Center/About_NPFC/OPA/

¹⁰ [OPA 90 Liability Adjustments](https://www.federalregister.gov/documents/2022/12/23/2022-27750/consumer-price-index-adjustments-of-oil-pollution-act-of-1990-limits-of-liability-vessels-deepwater), <https://www.federalregister.gov/documents/2022/12/23/2022-27750/consumer-price-index-adjustments-of-oil-pollution-act-of-1990-limits-of-liability-vessels-deepwater>

¹¹ [Oil in the Sea IV, 2022](https://nap.nationalacademies.org/read/26410/chapter/2#2), <https://nap.nationalacademies.org/read/26410/chapter/2#2>

years spanning when the incidents peaked, 1999-2003, to the five most recent years of data, 2018-2022, the number of incidents (spills) fell by 72 percent.¹² In absolute terms, the number of spills fell from nearly 1,500 to 417 within those respective five-year windows.

Continuing with onshore facilities, data from California spanning 21 years and 307 incidents indicate that over 95 percent of the spills were less than 200 barrels (bbl) in size.¹³ This data, covering 1998-2018, broken down by percentiles and spill size, is summarized in Table 1 below. The largest spill was 4,600 bbl.¹⁴

Table 1. Breakdown of California Onshore Facility Spill Data by Spill Size, 1998-2018

Percentile	Volume (bbl)
25th	1
50th	6
75th	30
95th	200

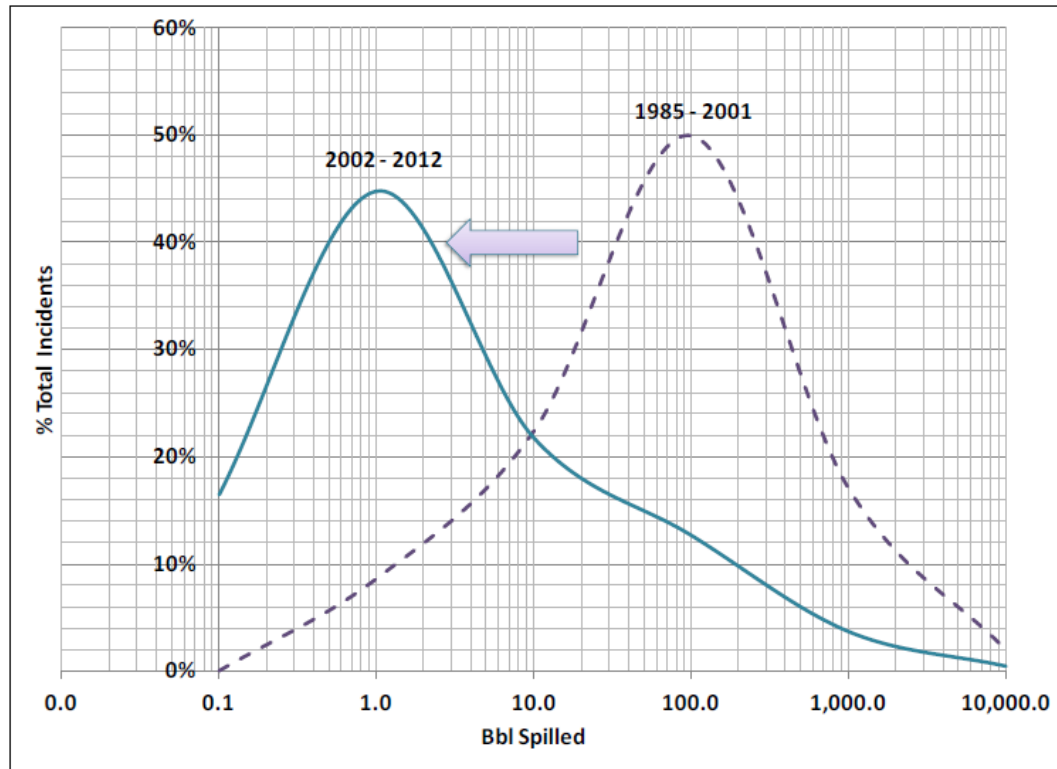
Regarding spills from pipelines, U.S. data shows a marked reduction in spill volumes per incident for the first part of this century relative to the 15 years prior to 2000. In the graph below, the purple arrow signifies the shift in the spill size distribution from pipelines between these time periods. The most frequent size of a spill fell from approximately 95 barrels in the 1985-2001 time-period, to just over 1 barrel in the years 2002-2012.

¹²Ecology calculations based on Figure 3 in [Coast Guard report to congress, Sept. 2023](https://www.uscg.mil/Portals/0/NPFC/docs/PDFs/Reports/2023_09_15_Oil%20Pollution%20Act%20Liability%20Liability%20in%202022.pdf?ver=o5HKU4o3hhe_nk_iltMFEQ%3d%3d), https://www.uscg.mil/Portals/0/NPFC/docs/PDFs/Reports/2023_09_15_Oil%20Pollution%20Act%20Liability%20Liability%20in%202022.pdf?ver=o5HKU4o3hhe_nk_iltMFEQ%3d%3d

¹³ California has 14 refineries, in aggregate capable of refining 1.7 million barrels per day. [California's Oil Refineries](https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/californias-oil-refineries), <https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/californias-oil-refineries>

¹⁴ California Oil Spill Response Cost Study, Catalyst Environmental Solutions, et.al., *November 2019*

Figure 1: Crude Pipeline Spill Volume Distribution by Time Periods



Spills from vessels in U.S. waters have seen a marked reduction as well, as presented in Table 2 below. Comparing the 2010s to the 1990s, the amount of oil spilled relative to the amount of oil transported fell by 97 percent.¹⁵

Table 2: Average Annual Tank Vessel Spillage in Relation to Oil Transported in U.S. Waters

Time Frame	Average Annual Spillage (Barrels)	Average Oil Transported/Year (Million Barrels)	Average Spillage per Million Barrels Oil Transported
Oil in the Sea III (1990-1999)	27,876	2,261	12.33
Oil in the Sea IV (2010-2019)	1,359	3,589	0.38

¹⁵ [Oil in Sea IV, National Academies.](https://nap.nationalacademies.org/catalog/26410/oil-in-the-sea-iv-inputs-fates-and-effects)

<https://nap.nationalacademies.org/catalog/26410/oil-in-the-sea-iv-inputs-fates-and-effects>. Table 3.12, page 87. Metric tons (MT) converted to barrels at a rate of 7.22 barrels/MT.

The Congressional Research Service’s 2023 report “Oil Spills: Background and Governance” reviews spills from all sources in the Coast Guard’s jurisdiction. That report shows the number of spill incidents declining from around 4,500 in 2002 to 2,000 in 2022.¹⁶ Data on total spill volume over the past 10 years indicates an average spill volume below 5 barrels per incident.

The comprehensive 2023 Coast Guard report to congress indicates that over the past 30 years, since the passage of OPA 90, there have been over 5,000 incidents (spills) from onshore facilities within its jurisdiction of navigable waters. Only one of those incidents cost more than \$50 million in clean up and damage costs in 2022 dollars.¹⁷ The upper limit of demonstrated FR required by this rule is \$300 million, which would cover over 99.9 percent of these nationwide onshore incidents in the past 30 years.

Extreme incidents have occurred, however. “In 2005, approximately 8 million gallons [190.5k bbl] of oil were released from Louisiana facilities damaged during Hurricane Katrina; in 2006, approximately 2 million gallons [47.6k bbl] spilled from a refinery in Louisiana.”¹⁸

Likewise, the Enbridge pipeline leak near Kalamazoo Michigan was estimated at around a million gallons and cost over \$1 billion for cleanup and damages.¹⁹

In December of 2023, near Conway Washington, the Olympic Pipeline spilled approximately 600 barrels of gasoline.²⁰ Clean-up and damage costs are not yet available for that incident.

1.2 Summary of the adopted rule

Chapter 173-187 WAC implements updates to Chapter 88.40 RCW Transport of Petroleum Products – Financial Responsibility, as required under Engrossed Second Substitute House Bill (E2SHB) 1691 and incorporates requirements of existing Chapter 317-50 WAC, which has been repealed.

The new rule:

- Defines the entities subject to financial responsibility requirements.
- Establishes required levels of financial responsibility for oil handling facilities and pipelines.

¹⁶ [Oil Spills: Background and Governance \(congress.gov\)](https://crsreports.congress.gov/product/pdf/RL/RL33705/37),
<https://crsreports.congress.gov/product/pdf/RL/RL33705/37>

¹⁷ [Coast Guard report to congress, Sept. 2023](https://www.uscg.mil/Portals/0/NPFC/docs/PDFs/Reports/2023_09_15_Oil%20Pollution%20Act%20Liability%20Limits%20in%202022.pdf?ver=o5HKU4o3hhe_nk_iltMFEQ%3d%3d),
https://www.uscg.mil/Portals/0/NPFC/docs/PDFs/Reports/2023_09_15_Oil%20Pollution%20Act%20Liability%20Limits%20in%202022.pdf?ver=o5HKU4o3hhe_nk_iltMFEQ%3d%3d

¹⁸ [Oil Spills: Background and Governance \(congress.gov\)](https://crsreports.congress.gov/product/pdf/RL/RL33705/37),
<https://crsreports.congress.gov/product/pdf/RL/RL33705/37>

¹⁹ [Kalamazoo River oil spill - Wikipedia](https://en.wikipedia.org/wiki/Kalamazoo_River_oil_spill), https://en.wikipedia.org/wiki/Kalamazoo_River_oil_spill

²⁰ [Olympic Pipeline Gas spill](https://ecology.wa.gov/spills-cleanup/spills/spill-preparedness-response/responding-to-spill-incident/spill-incident/olympic-pipeline-gasoline-spill-mt-vernon), <https://ecology.wa.gov/spills-cleanup/spills/spill-preparedness-response/responding-to-spill-incident/spill-incident/olympic-pipeline-gasoline-spill-mt-vernon>

- Specifies the procedures and timelines for obtaining or renewing a certificate of financial responsibility.
- Establishes requirements for acceptable evidence of financial responsibility, including self-insurance.
- Outlines the process for ensuring timely updates to changes in financial status.
- Defines the processes governing the suspension, revocation, and re-issuance of certificates of financial responsibility considering potential liabilities incurred by a covered entity after an oil spill or other incident.
- Incorporates and updates financial responsibility requirements currently included in Chapter 317-50 WAC – Financial Responsibility for Small Tank Barges and Oil Spill Response Barges, and repeals that chapter.

1.3 Reasons for the adopted rule

Without a COFR, there is no proof or assurance that regulated entities covered under this rule can pay for oil spill clean-up and damage costs as required under Washington state laws.

Responding to legislative direction, the rule enacts aspects of Chapter 88.40 RCW Transport of Petroleum Products – Financial Responsibility. The most recent amendments and additions to this Chapter, which prompted the adoption of this new rule, stem from 2022’s Engrossed Second Substitute House Bill (E2SHB) 1691.

The main goal of the new rule is to establish FR requirements and a process to ensure regulated entities meet them. The rule also establishes a process for requesting a Washington state Certificate of Financial Responsibility (COFR). The adopted rule ensures that vessel and facility owners and operators have specified levels of financial resources to pay for cleanup and damage costs arising from an oil spill. The COFR is documentation that provides that assurance to the State, local governments, recognized Tribes, and all Washingtonians.

1.4 Document organization

The chapters of this document are organized as follows:

- **Chapter 2 - Baseline and the adopted rule:** Description and comparison of the baseline (what would occur in the absence of the rule) and the rule requirements.
- **Chapter 3 - Likely costs of the adopted rule:** Analysis of the types and sizes of costs we expect impacted entities to incur as a result of the rule.
- **Chapter 4 - Likely benefits of the adopted rule:** Analysis of the types and sizes of benefits we expect to result from the rule.
- **Chapter 5 - Cost-benefit comparison and conclusions:** Discussion of the complete implications of the CBA.

- **Chapter 6 - Least-Burdensome Alternative Analysis:** Analysis of considered alternatives to the contents of the adopted rule.
- **Chapter 7 - Regulatory Fairness Act Compliance:** When applicable. Comparison of compliance costs for small and large businesses; mitigation; impact on jobs.
- **Appendix A - APA Determinations:** RCW 34.05.328 determinations not discussed in chapters 5 and 6.

Chapter 2: Baseline and the Adopted Rule

2.1 Introduction

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

2.2 Baseline

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

For this rulemaking, the baseline includes federal FR standards, and the state laws that authorize this rulemaking.

Under federal law (33 CFR Part 138):

- Standards setting the amount of financial liability for facilities and vessels and responsibility required for vessels as defined in OPA 90.
- The Delaware River Protection Act of 2006, which increased liability limits.
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), passed in 1980, which establishes separate, additional liability limits under its authority.

State law:

- The authorizing law that directs this rulemaking, Chapter 88.40 RCW.
- The existing rule pertaining to oil barges, Chapter 317-50 WAC.

2.3 The adopted rule

The adopted rule:

- Defines the entities subject to financial responsibility requirements.
- Establishes required levels of financial responsibility for oil handling facilities and pipelines.
- Specifies the procedures and timelines for obtaining or renewing a certificate of financial responsibility.
- Establishes requirements for acceptable evidence of financial responsibility, including self-insurance.
- Outlines the process for ensuring timely updates to changes in financial status.

- Defines the processes governing the suspension, revocation, and re-issuance of certificates of financial responsibility considering potential liabilities incurred by a covered entity after an oil spill or other incident.
- Incorporates and updates financial responsibility requirements currently included in Chapter 317-50 WAC – Financial Responsibility for Small Tank Barges and Oil Spill Response Barges, and repeals that chapter.

2.3.1 Define the entities subject to financial responsibility requirements

Baseline

Under Chapter 88.40 RCW, FR requirements apply to the owners and operators of onshore facilities, offshore facilities, and covered vessels with the following exceptions:

- (a) Railroad car, motor vehicle, or other rolling stock while transporting oil over the highways or rail lines of this state.
- (b) Retail motor vehicle motor fuel outlet.
- (c) Facility that is operated as part of an exempt agricultural activity as provided in RCW 82.04.330.
- (d) Underground storage tank regulated by the department or a local government under Chapter 70A.355 RCW.
- (e) Marine fuel outlet that does not dispense more than three thousand gallons of fuel to a ship that is not a covered vessel, in a single transaction.
- (f) Covered vessels owned or operated by the federal government or by a state or local government.
- (g) Onshore or offshore facilities owned or operated by the federal government or by the state or local government.

The statute also defines multiple terms, including but not limited to:

- (1) A "Barge" means a vessel that is not self-propelled.
- (2) A "Cargo vessel" means a self-propelled ship in commerce, other than a tank vessel, fishing vessel, or a passenger vessel, of 300 or more gross tons.
- (3) A "Covered vessel" means a tank vessel, cargo vessel, or passenger vessel.
- (4) A "Fishing vessel" means a self-propelled commercial vessel of 300 or more gross tons that is used for catching or processing fish.
- (5) A "Passenger vessel" means a ship of 300 or more gross tons with a fuel capacity of at least 6,000 gallons carrying passengers for compensation.
- (6) A "Tank vessel" means a ship that is constructed or adapted to carry, or that carries, oil in bulk as cargo or cargo residue, and that: (i) operates on the waters of the state; or (ii)

transfers oil in a port or place subject to the jurisdiction of this state. Articulated tug barges (ATBs), tank barges, and tank ships are considered tank vessels.

The adopted rule

FR requirements apply to the owners and operators of onshore facilities, offshore facilities, and covered vessels. This includes the following entities, which are defined in the rule:

- A “Class 1 facility” is defined as any structure, group of structures, equipment, pipeline, or device, other than a vessel, located on or near the navigable waters of the state that transfers oil in bulk to or from any vessel with an oil carrying capacity over two hundred fifty barrels or pipeline, that is used for producing, storing, handling, transferring, processing, or transporting oil in bulk. A Class 1 facility does not include any: railroad car, motor vehicle, or other rolling stock while transporting oil over the highways or rail lines of this state; retail motor vehicle motor fuel outlet; facility that is operated as part of an exempt agricultural activity as provided in RCW 82.04.330; underground storage tank regulated by ecology or a local government under chapter 70A.355 RCW; or marine fuel outlet that does not dispense more than 3,000 gallons of fuel to a ship that is not a covered vessel, in a single transaction.
- A “Class 2 facility” refers to mobile tank units; including any motor vehicle, portable device or other rolling stock, while not transporting oil over the highways or rail lines of the state, used to transfer oil to a nonrecreational vessel.
- A “Class 3 facility” refers to small marine terminals; including any structure that (i) transfers oil to a nonrecreational vessel with a capacity of 10,500 or more gallons of oil whether the vessel's oil capacity is used for fuel, lubrication oil, bilge waste, or slops or other waste oils; and (ii) does not transfer oil in bulk to or from a tank vessel or pipeline; and (iii) does not include any: boatyard, railroad car, motor vehicle, or other rolling stock while transporting oil over the highways or rail lines of this state; underground storage tank regulated by ecology or a local government under chapter 70A.355 RCW; or a motor vehicle motor fuel outlet; or a facility that is operated as part of an exempt agricultural activity as provided in RCW 82.04.330.

Chapter 88.40 RCW provides exclusions for railroads, motor vehicles, or other rolling stock while transporting oil over the highways or rail lines of the state and covered vessels and facilities owned or operated by the federal government or by a state or local government.

The rule, in WAC 173-187-020 adds the following exceptions to covered vessels:

- Tribal vessels.
- Vessels temporarily transiting waters of the state of Washington through international maritime routes that do not call on U.S. ports.

Expected impact

Defining Class 1, 2, and 3 facilities establishes the framework for FR requirements addressed in the next section.

Ecology is unaware of any Tribal vessels 300 gross tons or larger.

International vessels not calling on U.S. ports fall outside Washington State’s jurisdiction and are expected to spend little time in Washington waters. They are recognized under international law as conducting “innocent passage”. However, vessels engaging in “willful and serious pollution” would violate the standard of innocent passage.²¹

Ecology expects excluding Tribal vessels to have neither costs nor benefits.

2.3.2 Establish required levels of financial responsibility for oil handling facilities and pipelines

Baseline

RCW 88.40.025 specifies that “an onshore or offshore facility shall demonstrate financial responsibility in an amount determined by the department as necessary to compensate the state and affected federally recognized Indian Tribes, counties, and cities for damages that might occur during a reasonable worst-case spill of oil from that facility into the navigable waters of the state. The department shall adopt a rule that considers such matters as the worst-case amount of oil that could be spilled, as calculated in the applicant's oil spill contingency plan approved under Chapter 90.56 RCW, the cost of cleaning up the spilled oil, the frequency of operations at the facility, the damages that could result from the spill, and the commercial availability and affordability of financial responsibility.”

Under OPA 90, responsible parties (RP) must pay for all cleanup costs.²² However, that federal regulation also places a limit of liability at \$725,710,800 for onshore facilities.²³

The adopted rule

WAC 173-187-040 adopts the definition of a facility from RCW 88.40.011 and defines three classes of facilities described above to be as consistent as possible with Chapter 173-180 WAC, “Facility Oil Handling Standards”.²⁴ WAC 173-187-110 specifies the FR amounts for each facility class.

²¹ [UNITED NATIONS CONVENTION ON THE LAW OF THE SEA, https://www.un.org/Depts/los/convention_agreements/texts/unclos/part2.htm](https://www.un.org/Depts/los/convention_agreements/texts/unclos/part2.htm)

²² [Who Pays for Oil Spills? | NOAA's Office of Response & Restoration Blog, https://blog.response.restoration.noaa.gov/who-pays-oil-spills](https://blog.response.restoration.noaa.gov/who-pays-oil-spills)

²³ [Federal Register :: Consumer Price Index Adjustments of Oil Pollution Act of 1990 Limits of Liability-Vessels, Deepwater Ports and Onshore Facilities, https://www.federalregister.gov/documents/2022/12/23/2022-27750/consumer-price-index-adjustments-of-oil-pollution-act-of-1990-limits-of-liability-vessels-deepwater](https://www.federalregister.gov/documents/2022/12/23/2022-27750/consumer-price-index-adjustments-of-oil-pollution-act-of-1990-limits-of-liability-vessels-deepwater)

²⁴ [WAC 173-180-025; https://app.leg.wa.gov/WAC/default.aspx?cite=173-180-025](https://app.leg.wa.gov/WAC/default.aspx?cite=173-180-025)

Class 1 facilities will be required to establish FR of \$12,500 per barrel times the worst-case spill volume up to a maximum of \$300 million.

Class 2 facilities will be required to establish FR of \$12,500 per barrel times 30 percent of the entire contents of the container(s) in which oil is stored or transported, up to a maximum amount of \$5 million.

Class 3 facilities will be required to establish FR of \$12,500 per barrel times the volume of the largest facility tank, up to a maximum of \$5 million.

Expected impact

Regulated facilities will incur costs of either purchasing insurance or otherwise demonstrating FR. A major benefit is meeting the intent of the Legislature as reflected in Chapter 88.40 RCW. The public will also receive the benefit of knowing that oil handling facilities have demonstrated financial resources to pay for oil spill cleanup and damage costs.

2.3.3 Specify the procedures and timelines for obtaining or renewing a certificate of financial responsibility.

Baseline

Procedures and timelines for obtaining a Washington COFR do not currently exist.

Chapter 88.40 RCW specifies FR amounts for vessels over 300 gross tons and allows Ecology to set requirements for smaller vessels. It also directs Ecology to set FR requirements for facilities by rule.

Under existing state law, the only FR requirements for vessels are in Chapter 317-50 WAC, which applies to tank barges 300 gross tons or less or oil spill response barges. Their options for demonstrating current FR requirements include demonstrating protection and indemnity (P&I) club membership, possessing a Coast Guard issued certificate of financial responsibility (COFR), an insurance policy, or demonstration of ability to meet the required amount of FR to the Office of Marine Safety.

The adopted rule

Requirements under Chapter 317-50 WAC were incorporated into the new rule and that chapter has been repealed. Chapter 88.40 RCW covers vessels over 300 gross tons including tank barges and specifies FR requirements for them.

The owner or operator of a vessel or facility that is required to demonstrate FR under this chapter, or their authorized representative, must apply for a Washington COFR based on guidance located on Ecology's website. Alternatively, vessels may be verified as a member of a P&I club. Anyone who owns or operates more than one vessel or facility that is subject to FR requirements may obtain a single COFR that applies to multiple vessels or facilities based on the vessel or facility that represents the greatest financial risk for a spill.

The rule specifies a phase-in timeline for the owners or operators of existing facilities and vessels operating in Washington to submit an application for a COFR. The phase-in timeline is:

- Class 1 facilities: 9 months after the effective rule date.
- Class 2 and 3 facilities: 15 months after the effective rule date.
- Vessels: 21 months after the effective rule date or demonstrate P&I club membership.

The rule also specifies the timeline to submit an application for a COFR for the owners or operators of facilities and vessels that begin operating in Washington after the effective date of the rule. The required timelines by category are:

- Class 1, 2, and 3 facilities: 65 calendar days before beginning operations in the state.
- Vessels: at least 10 calendar days before entering the waters of the state, for any vessel that cannot demonstrate P&I club membership. The rule specifies conditions under which an expedited application review can take place in less than 10 calendar days.

The rule further specifies a timeline for COFR renewal. Washington COFRs expire two years after the issuance date. The owner or operator of regulated facilities or vessels, or their authorized representative, must submit an application to renew their COFR between 30 and 90 calendar days before the expiration date.

Expected impact

The benefit of a web-based application process is simplicity and a streamlined COFR application process. A vessel's P&I club membership can be verified without any required action on the part of the vessel owner or operator, agent, or multi-vessel contingency plan holder. The benefit of allowing the owner or operator of multiple vessels or facilities to obtain one COFR that covers multiple vessels or facilities is reduced cost of compliance.

The benefit of the phase-in timeline for obtaining a COFR after the effective date of the rule include allowing businesses time to determine and implement the method(s) of proving FR that provide the most benefit for their company, the best coverage with the least cost. The benefit of having the COFR expire after two years is reduced administrative effort than having the COFR expire after one year. The administrative costs and benefits of documenting FR will be considered in section 2.3.4.

2.3.4 Establish requirements for acceptable evidence of financial responsibility, including self-insurance

Baseline

Under RCW 88.40.030, acceptable methods to demonstrate FR, include:

- (a) Evidence of insurance;
- (b) Surety bonds;

- (c) Guaranty;
- (d) Letter of credit;
- (e) Certificates of deposit;
- (f) Protection and indemnity club membership;
- (g) A certificate providing evidence of compliance with the requirements of another state's FR requirements or federal FR requirements if the state or federal government requires a level of FR the same as or greater than that required under this chapter; or
- (h) Other evidence of financial responsibility deemed acceptable by the department.

In addition to the options above, the owner or operator of a vessel or facility may demonstrate financial responsibility through qualification as a self-insurer. Self-insurance requires that the applicant demonstrate the security of their financial position. This demonstration may include assets, cash flow, equity, liabilities, and bond ratings. The self-insurance requirements must be no less protective than in other jurisdictions with similar programs with which Washington imports from, or exports to, significant volumes of oil.

The adopted rule

WAC 173-187-220 describes the FR methods specified in RCW 88.40.030, including providing details about evidence required to demonstrate FR for each method and further definitions of the methods that may be used. It also identifies ecology published documents that may be submitted along with an entity's application that provides detailed information about the method of proving FR.

For self-insurance, WAC 173-187-220(6)(g)(ii) lists the required documentation that an owner or operator of a facility must provide when using the self-insurance option. If entities choose this option, audited annual financial statements and quarterly financial statements, as typically filed with the Securities and Exchange Commission, must be submitted to Ecology.

Expected impact

There will be administrative costs associated with compiling and submitting this documentation. The benefit will be assurance to the public and Ecology that FR requirements have been adequately established and documented.

2.3.5 Outline the process for ensuring timely updates to changes in financial status.

Baseline

Chapter 88.40 RCW does not list changes in financial status that must be reported to Ecology.

The adopted rule

WAC 173-187-300 defines significant changes relevant to a vessel or facility's COFR that require notification to Ecology within seven (7) calendar days. These changes include but are not limited to:

- A change in ownership or operational control.
- That a method of demonstrating FR will be terminated or any coverage thereunder will cease.
- Any FR coverage amount that will be changed or adjusted.

If there is a change in applicant name, vessel or facility name, if the Washington COFR expires, or there is any change in the FR coverage amount, a new Washington COFR will be necessary.

The holder of a Washington COFR must notify Ecology within 10 calendar days if it experiences a spill in Washington or in another jurisdiction for which it may be liable, and which may incur damages that exceed 15 percent of the financial resources reflected by the Washington COFR.

Ecology may request the owner or operator of a vessel that has been verified to be a member of an international P&I club to provide evidence that it is able to maintain required levels of FR required under Chapter 173-187 WAC if it has an oil spill.

Expected impact

Small administrative costs are likely to result from this aspect of the rule. Assessing in a timely manner that owners or operators of vessels or facilities can still meet their financial obligations benefits the public and Ecology. Were an entity to undergo organizational changes, or face liability for a spill, its ability to demonstrate ongoing FR may be affected. This may place its status outside of the specifications of this new rule, which carries out the legislative intent of Chapter 88.40 RCW.

2.3.6 Define the processes governing the suspension, revocation, and re-issuance of certificates of financial responsibility considering potential liabilities incurred by a covered entity after an oil spill or other incident

Baseline

RCW 88.40.040(3) states that the holder of a Washington COFR under this chapter must notify Ecology of an oil spill or discharge in state waters consistent with Chapters 90.48 and 90.56 RCW.

It also states: "The holder of a certificate of financial responsibility for more than one covered vessel or facility must notify [Ecology] if it experiences a spill or spill from a vessel or facility in another jurisdiction for which it may be liable, and which may incur damages that exceed 15 percent of the financial resources reflected by the certificate."

If a Washington COFR holder incurs an oil spill or discharge or other potential liability in another jurisdiction, Ecology may reevaluate the validity of the COFR. Ecology must reevaluate the validity of a COFR if the damages exceed 25 percent of the resources specified in the COFR. Ecology may suspend or revoke a COFR if Ecology determines that, because of a spill, discharge, or other action or potential liability, the holder of the COFR is likely to no longer have the financial resources to still meet its Washington COFR requirements.

The adopted rule

In the event of a spill in Washington or in another jurisdiction for which a Washington COFR holder may be liable and which may incur damages that exceed 15 percent of the financial resources reflected by the Washington COFR, Ecology must be notified with 10 calendar days. All other requirements under this section can be found in the statute, RCW 88.40.040.

Expected impact

Ecology considers 10 calendar days a reasonable timeframe. It should allow staff to perform this requirement within their regular schedules. We expect it to produce no significant additional costs.

Notification of a spill within Washington or another jurisdiction within 10 calendar days provides Ecology with enough time to monitor the incident and assess whether the liabilities incurred threaten the entity's COFR qualifications.

2.3.7 Incorporate and update financial responsibility requirements currently included in Chapter 317-50 WAC – Financial Responsibility for Small Tank Barges and Oil Spill Response Barges, and repeal that chapter.

Baseline

Under the authorizing statute, RCW 88.40.020, the FR for tank vessels greater than 300 gross tons is \$1 billion. The statute does not specify the FR for tank vessels of 300 gross tons or less but does allow rulemaking to establish a standard that is less than \$1 billion. Chapter 317-50 WAC currently requires demonstrated FR for tank barges of 300 gross tons or less. For barges certified to carry persistent oil, it requires \$2 million, or \$3 thousand per barrel of the barge's total capacity (or allowed capacity if assigned a load line under 46 CFR Parts 42 or 44), whichever is greater. For barges certified to carry nonpersistent oil, it requires \$2 million, or \$1.5 thousand per barrel of the barge's total capacity (or allowed capacity if assigned a load line under 46 CFR Parts 42 or 44), whichever is greater. Oil spill response barges are exempt from this requirement.

Tank vessels designated as oil spill response vessels are also exempt from this requirement.

The adopted rule

WAC 173-187-100 mandates demonstrated FR for tank vessels, including tank barges, of 300 gross tons or less of \$5 million or \$3,000 per barrel of the barge's total capacity, whichever is greater, regardless of whether it carries mostly persistent or non-persistent oil. Oil spill response barges are exempt from this requirement.

This is the only vessel FR requirement in Chapter 173-187 WAC that is not defined by Chapter 88.40 RCW.

Expected impact

Only one vessel is known to fall into this category. It is a member of a P&I club and is covered for oil pollution risks up to the required amounts, and therefore is not required to demonstrate financial responsibility pursuant to RCW 88.40.020(2)(c).^{25,26} We do not expect this element of the rule to result in costs or benefits, as compared to the baseline.

²⁵ [RCW 88.40.020: FR for Vessels, https://app.leg.wa.gov/RCW/default.aspx?cite=88.40.020](https://app.leg.wa.gov/RCW/default.aspx?cite=88.40.020)

²⁶ Personal communication from ECY's SPPR program.

Chapter 3: Likely Costs of the Adopted Rule

3.1 Introduction

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

Ecology estimates costs and benefits of rulemakings in 20-year present values. A present value converts streams of future costs and benefits into a current total value that reflects both inflation and the opportunity cost of having funds later instead of now. Future values are discounted using a real (inflation-adjusted) discount rate of 0.9 percent.²⁷ This value stems from historic interest rates on inflation-adjusted U.S. government I-Bonds and the U.S. Bureau of Labor Statistics offices' estimate of the Consumer Price Index (CPI).²⁸

In some sections below, the “discount factor” will be used. It is the ratio of the discounted sum over 20 years, using the real discount rate (0.9 percent in this instance), to the undiscounted sum. For example, if the annual cost were \$1 for years 0-20, the discount factor at the 0.9 percent real discount rate would be 19.23 divided by 21 equals 0.916.

3.2 Cost analysis

The adopted rule:

- Defines the entities subject to financial responsibility requirements.
- Establishes required levels of financial responsibility for oil handling facilities and pipelines.
- Specifies the procedures and timelines for obtaining or renewing a certificate of financial responsibility.
- Establishes requirements for acceptable evidence of financial responsibility, including self-insurance.
- Outlines the process for ensuring timely updates to changes in financial status.
- Defines the processes governing the suspension, revocation, and re-issuance of certificates of financial responsibility considering potential liabilities incurred by a covered entity after an oil spill or other incident.

²⁷ [I bonds interest rates — TreasuryDirect, https://treasurydirect.gov/savings-bonds/i-bonds/i-bonds-interest-rates/#:~:text=The%20composite%20rate%20for%20I,through%20April%202023%20is%206.89%25](https://treasurydirect.gov/savings-bonds/i-bonds/i-bonds-interest-rates/#:~:text=The%20composite%20rate%20for%20I,through%20April%202023%20is%206.89%25)

²⁸ [CPI Home : U.S. Bureau of Labor Statistics \(bls.gov\), https://www.bls.gov/cpi/](https://www.bls.gov/cpi/)

- Incorporates and updates financial responsibility requirements currently included in Chapter 317-50 WAC – Financial Responsibility for Small Tank Barges and Oil Spill Response Barges, and repeals that chapter.

3.2.1 Define the entities subject to financial responsibility requirements

We do not expect this part of the rule to result in costs as compared to the baseline. See Chapter 2 for discussion.

3.2.2 Establish required levels of financial responsibility for oil handling facilities and pipelines

We expect entities to incur costs in either purchasing insurance or otherwise establishing FR. Insurance offers the benefit of shifting risk onto another party, and of pooling the risk of various firms. Though one facility may suffer a spill, it is less likely many will during a given time.

Before presenting the cost estimates of this aspect of the rule, a discussion of the methodology involved is in order.

The rule requires self-insuring entities to demonstrate \$20 million plus twice the amount of self-insurance needed in equity. This financial restriction results in opportunity costs due to the rule. This concept addresses theoretical costs for firms choosing to self-insure, as it may restrict business decisions the firm may otherwise make. As discussed below, we estimate the larger oil handling facilities will need to demonstrate FR outside of the regular insurance market. For the biggest firms, self-insurance may be a relatively easy option.

Larger firms may have adequate financial resources to avoid paying the equivalent of an out-of-pocket cost when self-insuring. However, even for firms that don't need to make financial adjustments immediately, the requirement could restrict how they spend, or borrow against their equity in the future.

Since the adopted requirements are new, and firms previously had the option of not meeting them, we estimate an essentially theoretical cost even if no action is needed by the firm. Since there is a phase-in provision for the rule, costs are assumed to start 1 year after the rule's implementation.

Some examples illustrate the range of situations firms might face.

BP owns the Cherry Point Refinery in Anacortes, WA. It reported equity of \$83 billion at the end of 2022.²⁹ Its other financial metrics indicate it could meet the self-insurance requirements of the new rule with its financial statements as they existed at the end of 2022. From 2019 to

²⁹ [BP Financial Data](https://www.google.com/finance/quote/BP:NYSE), <https://www.google.com/finance/quote/BP:NYSE>

2020, when COVID hit, BP saw its equity drop by \$15 billion, but that did not alter its finances to where it wouldn't have been able to meet the rule's self-insurance requirements.

Par Pacific owns the US Oil refinery in Tacoma, WA. By contrast, it saw its equity fall from \$650 million in 2019 to \$240 million in 2020.³⁰ If it had chosen to self-insure its entire FR requirement under the adopted rule in 2019, it would have needed another method in 2020 to stay in compliance.

Rates for oil spill insurance, and prices for insurance type products (surety bonds, guarantees) to demonstrate FR do not appear on public exchanges. For this reason, cost estimates will rely on general economic principles and information gathered from people who work in the insurance field.

Offered insurance for oil spills has a practicable upper limit of \$200 million dollars in currently available commercial markets.³¹ Ecology has been informed that environmental surety bonds are largely unobtainable in excess of \$30 million, and that their rates range from 1 to 10 percent of the amount bonded.^{32,33}

Insurance at the \$200 million dollar level has an estimated premium of 1 percent per annum. At lower levels of \$2 million to \$5 million, the estimated rate is 0.9 percent of the amount insured. It is likewise based on information from industry contacts.

Estimating the opportunity cost of self-insurance

It's common practice to consider the return on 10-year U.S. treasury bonds as the measure of the rate of risk-free return on money. The U.S. Government, with its ability to tax revenue and issue currency is considered a safe debtor. As of November 2023, that rate of return hovered near 4.5 percent.³⁴

BBB rated corporate bonds carry some risk but are still considered "investment grade" and they have a higher yield.³⁵ For the month of November 2023 their average yield was 6.19 percent.³⁶

Corporate profit in all non-financial industries as percent of GDP as of second quarter of 2023 was 9.6 percent.^{37,38}

Using quarterly data covering the past 20 years, the difference between the average yield on BBB rated corporate debt and the general rate of corporate profit averaged 2.26 percent. This

³⁰[Par Pacific Financial data](https://www.google.com/finance/quote/PARR:NYSE), <https://www.google.com/finance/quote/PARR:NYSE>

³¹ "Practicable" is defined as capable of being put into practice. It is used to reflect that though some minor caveats exist, oil spill insurance markets for facilities don't offer coverage above this level.

³² WA State Office of Insurance Commissioner. 11/21/23

³³ Personal communication, Brown & Riding, 11/17/23

³⁴ [10 Year Treasuries data](https://fred.stlouisfed.org/series/DGS10/), <https://fred.stlouisfed.org/series/DGS10/>

³⁵ [Bond Ratings - Fidelity](https://www.fidelity.com/learning-center/investment-products/fixed-income-bonds/bond-ratings), <https://www.fidelity.com/learning-center/investment-products/fixed-income-bonds/bond-ratings>

³⁶ [BBB bond data](https://fred.stlouisfed.org/series/BAMLC0A4CBBBEY/), <https://fred.stlouisfed.org/series/BAMLC0A4CBBBEY/>

³⁷ [GDP data](https://fred.stlouisfed.org/series/GDP), <https://fred.stlouisfed.org/series/GDP>

³⁸ [Corporate Profits data](https://fred.stlouisfed.org/series/CPATAX), <https://fred.stlouisfed.org/series/CPATAX>

rate varies over time, so a range around this average is considered: 1 to 3.5 percent.³⁹ This range will be treated as the opportunity cost of keeping sufficient equity available to pay for potential oil spills. For firms needing to demonstrate FR above the level made available by insurance or insurance type products, the restriction of holding reserves in relatively secure but also in a relatively high paying investment grade asset, compared to the profit that might be otherwise earned, will be treated as the cost of that requirement.⁴⁰

Based on the above, the following tiered cost estimates of demonstrating FR for Class 1 facilities will be used:

- \$0 - \$200 million: 1 percent of the FR amount.
- \$200 million - \$ 300 million: A range, from 1 percent (low cost) to 3.5 percent (high cost) of the amount of equity required.

Ecology estimates there are eight (8) Class 1 entities that will be required to demonstrate the \$300 million level of maximum FR. Eleven entities will face lower requirements. Seven Class 1 entities have California COFRs and will be able to use that demonstration of FR for part or all of Ecology's requirements under the new rule. We estimate the annual cost for entities required to demonstrate \$300 million in FR to be \$4.2 million per year in the low-cost scenario, and \$9.7 million in the high-cost scenario. Companies having to demonstrate the availability of \$220 million of resources outside of the formal insurance market is the largest cost driver for these entities, comprising nearly half of the total cost in the low-cost scenario, and nearly 80 percent of the total cost in the high-cost scenario.

- In aggregate, summing over all Class 1 entities, the combined annual cost totals \$49.9 million dollars in the low-cost scenario, and \$101.5 million in the high-cost scenario.
- Using a real discount rate of 0.9 percent over the next 20 years, the present value (PV) for this aspect of the rule totals \$0.91 billion in the low-cost scenario, and \$1.85 billion in the high-cost scenario.

Class 2 facilities' (tanker trucks) FR requirements fall within the regular insurance markets. Ecology estimates their coverage can be purchased, with provisions and deductibles for 0.9 percent of the covered amount. There are 19 such facilities. Two entities have California COFRs that will meet the new rule's requirements, and they will incur no additional costs. The 17 remaining entities will pay an average premium of \$4,605 per year, ranging from \$2,400 to \$8,000. The range results from the size of a worst-case oil spill at the facilities, and the FR amount of \$12,500 per barrel. This totals \$87,509 per year, with a PV over 20 years of \$1.47 million.

³⁹ The range is +/- one standard deviation from the average.

⁴⁰ A more industry specific metric was considered, but the volatility in energy markets over the course of the COVID pandemic and Russia's invasion of Ukraine led us to choose a more stable, broader metric. In the Spring of 2020, the price of a barrel of West Texas Intermediate crude turned negative for a short time. In the late Spring of 2022, it was over \$100 per barrel.

Class 3 facilities' (marine terminals) FR requirements are also covered by the regular insurance markets. As discussed above, Ecology estimates their coverage can be purchased, with provisions and deductibles for 0.9 percent of the covered amount. There are five (5) such facilities, which will pay an average premium of \$18,374 per year. The resulting PV over 20 years using a real discount rate of 0.9 percent is \$1.77 million. These facilities vary widely in size, and the annual premiums we estimate to range from under \$1,870 per year to \$45,000 per year. This calculation uses the adopted rule's \$12,500 of coverage needed per barrel of oil. The premiums are estimated based upon the size of potential worst-case spills at the facilities, and the amount of FR required, \$208 thousand dollars at the low end, and \$5 million at the high end. Two facilities will be able to be covered by COFRs for other facilities owned by the same entity.

These low, and high, cost estimates are summarized in the tables 3 and 4 below, respectively.

Table 3. Summary of Low-Cost Estimates to Entities.

Class Level	Average annual cost per entity	Summed Annual Cost for Entities in Class	Present Value (PV) over 20 years
Class 1 Entities	\$2.6 million	\$49.9 million	\$0.91 billion
Class 2 Facilities	\$4.0 thousand	\$76.6 thousand	\$1.39 million
Class 3 Entities	\$18.4 thousand	\$91.8 thousand	\$1.67 million

Table 4. Summary of High-Cost Estimate to Entities.

Class Level	Average annual cost per entity	Summed Annual Cost for Entities in Class	Present Value (PV) over 20 years
Class 1 Entities	\$5.3 million	\$101.5 million	\$1.85 billion
Class 2 Entities	\$4.0 thousand	\$76.6 thousand	\$1.39 million
Class 3 Entities	\$18.4 thousand	\$91.8 thousand	\$1.67 million

3.2.3 Specify the procedures and timelines for obtaining or renewing a certificate of financial responsibility

We estimate no significant costs from the timeline requirements. The administrative costs of documenting FR will be considered in the section 3.2.4.

3.2.4 Establish requirements for acceptable evidence of financial responsibility, including self-insurance

We expect this part of the adopted rule to result in administrative costs associated with compiling and submitting required documentation.

Certificates are issued for two years. Those choosing self-insurance must send updated financials to Ecology on a quarterly basis.

Ecology estimates for entities, acquiring, compiling, and submitting the evidence of FR to take 16 hours for the initial application. Self-insuring entities may need two additional hours per quarter to submit required financial documents to Ecology. Annual submission of insurance or another method of demonstration by facilities may take two hours per year. Assuming an average of 5 hours per year ongoing, we calculate the following cost across 47 estimated entities covered by the rule.

The estimated cost assumes an executive secretary will be performing this work at a pay rate of \$35.74 per hour. For 16 hours at \$35.74 the amount per entity totals \$571.84 initially. On an ongoing basis, five hours per year at \$35.74 equals \$178.70 per year.⁴¹

Across 47 entities, Class 1, 2, 3 combined, the initial cost totals \$26,876.48, followed by \$8,398.90 in subsequent years.

The 20-year PV is then $\$26,876.38 + (20 \times 0.911 \text{ (discount factor years 1-20)} \times \$8,398.90) = \$179,904.34$

3.2.5 Outline the process for ensuring timely updates to changes in financial status

From section 2.3.5 above: “Small administrative costs are likely to result from this aspect of the rule.”

Ecology estimates the updates in changes in financial status, or responding to its requests for vessels to verify they are maintaining FR to take roughly two hours annually. Ecology anticipates this work will be done by an executive secretary at a pay rate of \$35.74 per hour.⁴²

At \$35.74 per hour over roughly 4,200 vessels and facilities, assuming 10 percent of them incur changes each year that require Ecology to be notified, the estimated annual cost totals \$30,022 per year. The PV through 20 years is then $21 \times 0.916 \times \$30,022/\text{year} = \$577,503$.

⁴¹ [WA wage estimates \(BLS\)](https://www.bls.gov/oes/current/oes_wa.htm#43-0000), https://www.bls.gov/oes/current/oes_wa.htm#43-0000

⁴² [WA wage estimates \(BLS\)](https://www.bls.gov/oes/current/oes_wa.htm#43-0000), https://www.bls.gov/oes/current/oes_wa.htm#43-0000

3.2.6 Define the processes governing the suspension, revocation, and re-issuance of certificates of financial responsibility considering potential liabilities incurred by a covered entity after an oil spill or other incident

From section 2.3.6 above: Ecology expects no significant additional costs from this aspect of the rule.

Almost all the requirements in the adopted rule come from statute. The 10 calendar day time-frame for notification comes from the rule. We consider 10 calendar days a reasonable amount of time for reporting, allowing personnel to perform the task within their normal schedules.

3.2.7 Incorporate and update financial responsibility requirements currently included in Chapter WAC 317-50 – Financial Responsibility for Small Tank Barges and Oil Spill Response Barges, and repeal that chapter

From section 2.3.7 above: “Only one vessel is known to fall into this category. It is a member of a P&I club and is covered for oil pollution risks up to the required amounts, and therefore, is not required to demonstrate financial responsibility pursuant to RCW 88.40.020(2)(c)”.⁴³ Ecology estimates there is no significant cost from this aspect of the rule.

3.3 Summary of Costs

Table 5: Cost summary of adopted rule

Requirement Type	Low-cost annual estimate	High-cost annual estimate	20-year PV range
FR requirements	\$49.9 million	\$101.5 million	\$0.91-\$1.85 billion
Documentation requirements	\$26.9 thousand (1 st year), \$8.4 thousand after.	\$26.9 thousand (1 st year), \$8.4 thousand after.	\$179.9 thousand
Status change requirements	\$30 thousand	\$30 thousand	\$578 thousand
Total cost	\$49.9 million	\$101.5 million	\$0.91 – \$1.85 billion

⁴³ [WA.gov Financial Responsibility for Vessels](https://app.leg.wa.gov/RCW/default.aspx?cite=88.40.020), <https://app.leg.wa.gov/RCW/default.aspx?cite=88.40.020>

Chapter 4: Likely Benefits of the Adopted Rule

4.1 Introduction

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

4.2 Benefits analysis

The adopted rule:

- Defines the entities subject to financial responsibility requirements.
- Establishes required levels of financial responsibility for oil handling facilities and pipelines.
- Specifies the procedures and timelines for obtaining or renewing a certificate of financial responsibility.
- Establishes requirements for acceptable evidence of financial responsibility, including self-insurance.
- Outlines the process for ensuring timely updates to changes in financial status.
- Defines the processes governing the suspension, revocation, and re-issuance of certificates of financial responsibility considering potential liabilities incurred by a covered entity after an oil spill or other incident.
- Incorporates and updates financial responsibility requirements currently included in Chapter 317-50 WAC – Financial Responsibility for Small Tank Barges and Oil Spill Response Barges, and repeals that chapter.

4.2.1 Define the entities subject to financial responsibility requirements

The facilities defined in section 2.3.1 above represent the entities that are recognized as the largest potential sources of oil spills into waters of the state. Defining Class 1, 2, and 3 facilities establishes the framework for implementing FR requirements consistent with categorization of facilities in other regulations. The benefits of these requirements are addressed in the next section.

Tribal vessels and vessels not calling on U.S. ports but temporarily using international routes through Washington waters are not covered by this rule. Ecology is unaware of any Tribal vessels that are 300 gross tons or larger that will be exempt from this rule. International vessels not calling on U.S. ports fall outside Washington State's jurisdiction and are expected to spend little time in Washington waters. They are recognized under international law as conducting

“innocent passage”. The benefit of administrative consistency and simplicity results from this aspect of the rule.

4.2.2 Establish required levels of financial responsibility for oil handling facilities and pipelines

The Legislature, in Chapter 88.40 RCW, directed Ecology to adopt this rule to ensure vessels and oil handling facilities have appropriate financial resources to pay for oil spills that could result from their operations. Most of these entities have state-required and state-approved oil spill contingency plans that specify actions that will be taken in the event of a spill and there is no limit of liability for costs associated with an oil spill in Washington. However, there is currently no mechanism to ensure they have the finances to pay for the actions described in their plans, or for any other associated costs and damages from oil spills.

The statute specifically addresses financial responsibility for reasonable worst-case spills. As noted in section 1.1.3, while infrequent, extreme oil spill events can and do occur. While significant improvements have been made over time to regulatory requirements and compliance activities related to spill prevention and preparedness, in a state such as Washington, where a significant oil industry presence exists, the question is not whether a spill will occur, but when will it occur. Furthermore, when a spill does occur, how much it will cost to cleanup, how much damage will be incurred, and how much will it cost to repair the damage, must be considered.

Potential spill damages

Costs that could be borne by Washingtonians, if they are not covered by the party responsible for the spill, include the costs associated with cleaning up the spilled oil. Other costs that impact Washingtonians, but may not be realized as out-of-pocket costs include:

- loss of fish or shellfish populations
- loss of use of recreational natural resources
- damages to real and personal property
- loss of shipping related commerce.

Overburdened and underserved populations such as subsistence fishers and those with higher rates of fish consumption (Tribal, Asian, and Pacific Islander populations) suffer disproportionate damage in the loss of fish or shellfish populations, as they use fishing and shell fishing as a source of nutrition and as part of cultural food practices. Tribes also suffer disproportionate damages from impacts to fisheries, shellfisheries, waters, and shorelines that are part of maintaining their traditional lifeways, generating economic revenues, and maintaining cultural values. If the RP is not able to pay for the damages noted above, then the Tribes, underserved populations, and other Washingtonians have to absorb the losses.

Department of Ecology’s 2004 Socioeconomic Cost Modeling for Washington State Oil Spill Scenarios report explains,

“An oil spill can have serious socioeconomic impacts on the affected region, local communities, residents, the state, and the federal government. These impacts include damages to real and personal property, loss of use of natural resources (parks and recreation areas), and loss of income and expenses (fishing, tourism, recreation, shipping, and other commerce). As a major shipping port and tourist and recreation area, Puget Sound and the Columbia River are particularly vulnerable to socioeconomic impacts from oil spills. Reduction in tourism, commercial fishing, and blocking the shipping port could have widespread impacts. There can also be serious impacts on the Tribal Nations, particularly with respect to subsistence fishing.”

A valuation of these impacts was calculated and is posted on Ecology’s website. The summary states: “A significant oil spill could cost the state an average of \$10.8 billion (based on 2006 estimates) and adversely affect 165,000 jobs. It would disrupt maritime shipping, port activities, recreation, and tourism, and cause significant harm to fish, shellfish, and wildlife resources.”⁴⁴ Crucially, however, the study assumed a 250,000-barrel spill in open water with significant impacts to port operations, marinas, commercial shell fishing, commercial fishing, parks, recreation, and tourism. Impacts to commercial fishing comprised the majority of the costs but were based on the industry’s seasons from 20 years ago. The model also assumed cleanup efforts to be of limited to negligible effectiveness.

The 1999 Olympic pipeline explosion in Bellingham, Washington, is an example of the vast damages that have been caused by a spill in Washington. The pipeline ruptured and spilled gasoline into a creek for over an hour and a half. Damage to the park where the explosion occurred is visible to this day. Property damage costs at the time were estimated at over \$45 million. The city’s water treatment plant was heavily damaged, and the water supply was compromised. Eight people were injured and required medical attention. Three youths were killed. Authorities noted that the destruction and death toll were much lower than would be expected from such a large explosion because the ignition occurred before the gasoline travelled into heavily populated portions of the city, including I-5 at rush hour.⁴⁵ All told, Olympic, Equilon, and their various corporate owners and partners faced settlements totaling more than \$187 million.⁴⁶ If a spill of this magnitude occurred today, in today’s dollars it could cost over \$404 million.

Paying for spill costs and damages

⁴⁴ [Oil spill prevention - Washington State Department of Ecology, https://ecology.wa.gov/spills-cleanup/spills/oil-spill-prevention](https://ecology.wa.gov/spills-cleanup/spills/oil-spill-prevention)

⁴⁵ [NTSB - Pipeline Accident Report, https://www.nts.gov/investigations/AccidentReports/Reports/PAR0202.pdf](https://www.nts.gov/investigations/AccidentReports/Reports/PAR0202.pdf)

⁴⁶ [“Pipeline Fireball” Bellingham, WA: 1999 | The Pop History Dig, https://pophistorydig.com/topics/pipeline-fireball-bellingham-wa-1999/](https://pophistorydig.com/topics/pipeline-fireball-bellingham-wa-1999/)

Ecology's experience is that paying for oil spill clean-up costs and damages is challenging. Settlements are often made for lesser amounts than the real costs of the spill. Having an established COFR program means a responsible party contact is established at regulated entities. The rule states the COFR application must be "signed by the owner, operator, or authorized representative of the owner or operator, whose title must be indicated on the attestation."⁴⁷

The rule mirrors California's regulations to a large extent and adopts the same FR requirement for the largest oil handling facilities (\$300 million). Several of the Washington state regulated facilities also operate in California and are complying with the California rule. The benefit of this parity of west coast states is that it increases rule clarity and consistency, which increases simplicity and minimizes management of multiple similar yet disparate requirements for the regulated community.

Washington's expectation on oil spill response is that rapid, aggressive clean-up efforts will be initiated by the RP. It is imperative that the RP has the financial resources to pay for the clean-up. The state and federal government have response accounts, oil spill response account and Oil Spill Liability Trust Fund, respectively, that may be used to pay for clean-up of oil spills when the RP is unidentified or unable to pay for spill clean-up. These accounts are not intended to be used to cover financial obligations when the responsible party is identified.

Not all spills to the waters of the state meet the requirements to receive federal response account funding. When the federal account is not available, only state funding is available to pay for clean-up. However, if the state government must fund the response and clean-up, the balance of that fund becomes depleted quickly. If this occurs, this fund is not available to spent on other responses where the RP is unidentified or unable to pay for the clean-up.

The majority of the entities impacted by this rule have state-required and state-approved oil spill contingency plans that specify what they must do in the event of a spill and are based on a worst-case spill volume. The adopted rule fills a regulatory gap that establishes a mechanism to ensure they have the finances to pay for the actions described in their plans, or for the other associated costs and damages from oil spills.

Funding and timeliness

In addition to reducing the likelihood of the public and impacted parties bearing the costs of a spill, having financial resources readily available at the time of a spill could reduce timelines and improve the efficiency of actions taken during spill response. This happens via clear financing, staff designations and rapid funding. Ecology has observed this during spill responses in which the RP had funds immediately available and was proactive in required response activities. Relying on additional processes and authorizations to access other funding sources was unnecessary. This will vary by the nature and context of any given spill. It could include, for

⁴⁷ Adopted WAC 173-187-220

example, more-rapid deployment of specialized contractors (e.g., to excavate contaminated media and flora), reducing the time spilled oil stays in place, migrates, and damages the environment.

In the event of a worst-case spill

The discussion above applies to all sizes of spill, as relates to response, who bears the damages, and efficiency, but the adopted rule has additional benefits in the event of an exceptionally large spill. In the event of a very large spill, there is additional risk of a RP not having sufficient funds to cover response costs and damages, as these may be very large. This could limit or delay coverage of extended cleanup and remediation needs, or of addressing ongoing damages to the environment, property, and economic activities. We note that there is potential for these costs to exceed the new COFR requirements and considered higher requirements during this rulemaking (see Chapter 6 for discussion of alternative financial responsibility requirements).

Summary and additional expected benefits from COFR:

- Based on Ecology’s experience implementing spill response we anticipate that having immediate access to demonstrated funds will facilitate response, efficiencies, and accountability. Therefore, Ecology expects the following benefits may also be a result of having FR requirements in place: State, federal and local government, Tribes, and Washingtonians will have assurance that vessels that transport oil on the navigable waters of the state can pay for oil spill clean-up and damage costs if a spill occurs.
- State, federal, and local government, Tribes, and Washingtonians will have assurance that oil handling facilities that transfer, process, or transport oil on or near the navigable waters of the state are able to pay for oil spill clean-up and damage costs if a spill occurs.
- Washington State required oil spill contingency plans that bind these companies to direct specific, rapid, and well-coordinated response actions will have the financial backing to be fully implemented without delay. This includes being able to execute response contracts with its contracted responders immediately. It is expected that having a COFR in place will make this more likely.
- A rapid, aggressive clean-up effort will reduce the impacts of the spill and minimize damages to the natural, cultural, and economic resources. The RP having demonstrated levels of FR in place is expected to better enable such efforts. Decisions made during spill response will be made more quickly and without delay because the RP will have the funds already identified and available and be able to access them more quickly.
- State response funds will not be used to fund oil spill clean-up costs that result from responsible parties that are required by state law to have the financial means to clean-up spills they are responsible for. The state response account fund should be reserved for responding to oil and hazardous substance spills where a RP is not able to be identified or an entity is unable to pay.

- The federal Oil Spill Liability Trust Fund will not be used for spills where the RP is required to have the financial means to pay for clean-up costs and damages. This will help preserve the national fund to address spills where the RP is not identified, or an entity is unable to pay.
- Significant time and costs associated with recovering state and federal funds used for clean-up and damages will be avoided.
- Legal actions that result in added layers of cost will be minimized. With clear FR requirements in place, we expect a reduced likelihood of protracted legal battles over liability. The RP's ability to pay for the costs of clean up and damages will be pre-established. FR requirements will streamline the process of addressing spills and compensating affected parties.
- Entities that have incurred damages because of a spill will have a more direct pathway to the RP with claims, which we expect will be processed more quickly.
- Maintaining parity with the highest requirements amongst west coast states provides the greatest protection as well as increased regulatory clarity and consistency, which increases simplicity and minimizes confusion for the regulated community.

4.2.3 Specify the procedures and timelines for obtaining or renewing a certificate of financial responsibility

This new rule establishes a web-based application process that owners and operators of facilities and vessels must use to submit their COFR requests. This process offers simplicity, making it easier to submit a complete application, and streamlines the COFR application process. The system will include tools that will prompt requesters for required information and accepts FR document attachments supporting the streamlined process.

The benefit is in service of the broader goal requiring that FR has been adequately established. Should an oil spill occur, the cost of spill clean-up and damages will be less likely to be borne by State, federal, and local government, Tribes, and all Washingtonians. As noted in section 3.2.2, costs to facilities are assumed to begin one year after the rule's implementation.

- As described in section 2.3.3, the rule includes an initial phase-in compliance period as follows: Class 1 facilities will have 9 months from rule effective date to obtain a COFR.
- Class 2 and 3 facilities will have 15 months from rule effective date to obtain a COFR.
- Vessels that elect to apply for a COFR will have 21 months from rule effective date to do so.

This provides time for industry to understand the rule and ask Ecology clarifying questions or for support in order to meet the requirements. The costs calculated in section 3.2.2 attribute no costs to facilities for the first year as a result of the phase-in provisions. Vessel requirements are set by statute.

It also allows Ecology time to develop and implement the processes required for application review and issuance of the COFR.

Another attribute of the phase-in timeline is that it provides regulated entities time to determine and implement the method(s) of proving FR that makes the most sense for their business. This may include shopping for insurance coverage at an optimal rate or accessing additional financial resources and/or advice.

The new rule sets the effective period of a COFR at two years, allowing for a less frequent application cycle.

The rule allows the owner or operator of more than one vessel or facility subject to FR requirements to obtain a single Washington COFR that applies to all of the owner's or operator's vessels and facilities. The benefit of allowing the owner or operator of multiple vessels or facilities to obtain one COFR is reduced cost of compliance (they only need to prove FR once), reduced duplicative effort of requesting a COFRs for each vessel or facility, and increased administrative simplification related to tracking multiple COFRs with multiple effective periods for multiple vessels or facilities. These compliance savings were incorporated in the cost calculations of Section 3.2.2.

The rule also establishes a process for verification of a vessel's P&I club membership, which provides proof of its FR to required levels, without requiring action on the part of the vessel community. The benefit of this is that it provides assurance of FR to the state and Washingtonians. At the same time, it minimizes duplicative effort for the vessel community and avoids impacting commerce by requiring submittal of a COFR request within a prescribed timeline.

4.2.4 Establish requirements for acceptable evidence of financial responsibility, including self-insurance

The major benefit of the adopted rule is that it meets the legislative intent of Chapter 88.40 RCW. FR requirements for vessels have been in statute since the early 1990's. However, most of these requirements had not been implemented and FR requirements for facilities had not been established. By adopting requirements for acceptable evidence of FR, Ecology can successfully implement the intent of statute and statutory requirements. Establishing these requirements provides clarity to the regulated community on how to successfully meet regulatory requirements.

The Legislature called for self-insurance requirements at least as protective as other jurisdictions which have them and with which Washington exports or imports petroleum products. Specifically, RCW 88.40.030(2) reads: "In adopting rules pertaining to self-insurance requirements, the department must establish standards that are no less protective than the qualification standards for self-insurance established in other jurisdictions with similar programs as of January 1, 2022, and from which Washington imports significant volumes of oil

or petroleum products or to which Washington exports significant volumes of oil or petroleum products.”

The Washington State Department of Commerce’s 2013, “Petroleum Supply and Use in Washington State” reports that Washington exports gasoline to California.⁴⁸ Ecology’s data on vessel traffic suggests a range of 5 to 10 tank vessels move oil between Washington and California each year.⁴⁹

Additionally, Washington residents, the State, local governments, and Tribes will have the assurance that handlers of oil have demonstrated a specified level of FR by providing acceptable evidence to Ecology, facilitating the benefits discussed in Section 4.2.2. Ecology will review and approve documentation submitted by regulated entities to ensure these requirements are being met.

4.2.5 Outline the process for ensuring timely updates to changes in financial status

From section 2.3.5 above, the benefit is “assessing in a timely manner that owners or operators of vessels or facilities can still meet their financial obligations.” This is a benefit to the public and to Ecology because if a regulated entity under the rule were to undergo organizational changes, or face liability for a spill, its ability to demonstrate ongoing FR may be affected. Ecology and the public need assurance that a regulated entity can meet the rule’s requirements to successfully meet the legislative intent of Chapter 88.40 RCW.

See section 4.2.2 for detailed discussion of how these costs are borne in the absence of sufficient FR.

4.2.6 Define the processes governing the suspension, revocation, and re-issuance of certificates of financial responsibility considering potential liabilities incurred by a covered entity after an oil spill or other incident

The notification requirement of within 10 calendar days is set by the adopted rule, all other requirements in this section of the rule come from statute. The 10 calendar day requirement of notification gives Ecology timely notice of an oil spill incident, either within Washington or another jurisdiction.

This is important because if an entity faces liabilities for a spill, it may impact their ability to meet their ongoing requirements of FR. Ecology and the public benefit from this aspect of the

⁴⁸ [Petroleum Supply and Use in Washington State, https://www.commerce.wa.gov/wp-content/uploads/2016/04/Energy-Petroleum-Whitepaper-7-15-2013.pdf](https://www.commerce.wa.gov/wp-content/uploads/2016/04/Energy-Petroleum-Whitepaper-7-15-2013.pdf)

⁴⁹ Internal Ecology communication, Spills Program, 12/19/23, 1/5/2024

rule as it creates a mechanism to avoid periods of time where an entity is not meeting the FR requirements while operating in Washington.

See section 4.2.2 for detailed discussion of how these costs are borne in the absence of sufficient FR.

4.2.7 Incorporate and update financial responsibility requirements currently included in Chapter 317-50 WAC – Financial Responsibility for Small Tank Barges and Oil Spill Response Barges, and repeal that chapter

The existing rule (Chapter 317-50 WAC), which applies only to small tank barges, will be incorporated into the adopted rule. It is only known to affect one vessel. That vessel is a member of a P&I club and is covered for oil pollution risks up to the required amounts, and therefore, is not required to demonstrate financial responsibility pursuant to (RCW 88.40.020(2)(c)).⁵⁰

The benefit is that moving this chapter of the existing WAC into the rule consolidates regulations pertaining to vessels in one place. It creates additional regulatory clarity by combining financial responsibility requirements for one category of tank barges with requirements for other tank vessels.

⁵⁰ [RCW 88.40.020, WA.gov](https://app.leg.wa.gov/RCW/default.aspx?cite=88.40.020), <https://app.leg.wa.gov/RCW/default.aspx?cite=88.40.020>

Chapter 5: Cost-Benefit Comparison and Conclusions

5.1 Summary of costs and benefits of the adopted rule

5.1.1 Costs

The estimated cost of the adopted rule is driven by FR requirements for the largest oil handling entities. For the biggest facilities and their owning entities, the opportunity cost of holding financial reserves in addition to insurance comprises a major component of their costs. We estimate the FR requirement costs to range from \$49.9-101.5 million annually, with a PV over 20 years of \$0.91-1.85 billion.

The costs of the other aspects of the rule, concerning documentation, notification and updating of status for vessels and facilities are much lower. The cost summary from Chapter 3 is presented here with all quantities expressed in millions of dollars.

Table 6. Rule cost summary

Adopted Requirements	Low-cost annual estimate	High-cost annual estimate	20-year PV range
FR requirements	\$49.9 million	\$101.5 million	\$910-\$1,850 million
Documentation requirements	\$0.027 million (1 st year), \$0.008 million after.	\$0.027 million (1 st year), \$0.008 million after.	\$0.18 million
Status change requirements	\$0.030 million	\$0.030 million	\$0.578 million
Total cost	\$49.9 million	\$101.5 million	\$911 million – \$1,851 million

5.1.2 Benefits

The adopted rule meets the legislative intent of recently amended Chapter 88.40 RCW. The law specifies FR levels for most vessels and calls for levels for oil handling facilities to be set by rule. The rule contains implementing procedures for both vessels and facilities to document their FR.

Also, as required by law, the rule sets self-insurance requirements as protective as other states with whom we export or import petroleum products. The State, local governments, Tribes, and general public benefit from knowing that oil handling facilities have met a specified level of FR to make possible paying for likely clean-up and damage costs resulting from an oil spill.

Specifically, the State, local governments, Tribes, and general public will know that entities that might spill oil have demonstrated resources, making it unnecessary to access public resources

in event of a spill. Parties damaged by a spill will likewise know that resources have been set aside ahead of time as available compensation.

A list of expected benefits from Chapter 4 is presented below.

Summary of expected benefits from COFR:

- Based on Ecology’s experience implementing spill response we anticipate that having immediate access to demonstrated funds will facilitate response, efficiencies, and accountability. Therefore, Ecology expects the following benefits may also be a result of having FR requirements in place: State, federal and local government, Tribes, and Washingtonians will have assurance that vessels that transport oil on the navigable waters of the state can pay for oil spill clean-up and damage costs if a spill occurs.
- State, federal, and local government, Tribes and Washingtonians will have assurance that oil handling facilities that transfer, process, or transport oil on or near the navigable waters of the state are able to pay for oil spill clean-up and damage costs if a spill occurs.
- Washington State required oil spill contingency plans that bind these companies to direct specific, rapid, and well-coordinated response actions will have the financial backing to be fully implemented without delay. This includes being able to execute response contracts with a firm’s contracted responders immediately. It is expected that having a COFR in place will make this more likely.
- A rapid, aggressive clean-up effort reduces the impacts of the spill and minimizes damages to the natural, cultural, and economic resources. The RP having demonstrated levels of FR in place is expected to better enable such efforts. Decisions made during spill response will be more quickly made and without delay because the RP will have the funds already identified and available and be able to access them more quickly.
- State response funds are less likely to be used to fund oil spill clean-up costs that result from RPs that are required by state law to have the financial means to clean-up spills they are responsible for. The state response account fund will be reserved for responding to oil and hazardous substance spills where a RP is not able to be identified or an entity is unable to pay.
- The federal Oil Spill Liability Trust Fund will not be used for spills where the RP is required to have the financial means to pay for clean-up costs and damages. This will help preserve the national fund to address spills where the RP is not identified, or an entity is unable to pay.
- Significant time and costs associated with recovering state and federal funds used for clean-up and damages will be avoided.
- Legal actions that result in added layers of cost will be reduced. With clear FR requirements in place, we expect a reduced likelihood of protracted legal battles over liability. The RP’s ability to pay for the costs of clean up and damages will be pre-

established. FR requirements streamline the process of addressing spills and compensating affected parties.

- Entities that have incurred damages because of a spill will have a more direct pathway to the RP with claims, which we expect will be processed more quickly.
- Maintaining parity between west coast states, while establishing the highest FR requirements on the west coast, provides increased regulatory clarity and consistency, increases simplicity and minimizes confusion for the regulated community, while providing the greatest protection for state, federal, and local government, Tribes, and Washingtonians.

5.2 Conclusion

We conclude, based on a reasonable understanding of the quantitative and qualitative costs and benefits likely to arise from the adopted rule, as compared to the baseline, that the benefits of the adopted rule 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, we must determine that the requirements of the rule are the least burdensome set of requirements that achieve the goals and objectives of the authorizing statute(s).

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

6.2 Goals and objectives of the authorizing statute

The authorizing statute for this rule is Chapter 88.40 RCW, Transport of petroleum products – FR. Its goals and objectives are:

- To define and prescribe FR requirements for vessels that transport petroleum products as cargo or as fuel across the waters of the state of Washington.

- To define and prescribe FR requirements for facilities that store, handle, or transfer oil or hazardous substances in bulk on or near the navigable waters.

The statute specifies that, “An onshore or offshore facility shall demonstrate financial responsibility in an amount determined by the department as necessary to compensate the state and affected federally recognized Indian Tribes, counties, and cities for damages that might occur during a reasonable worst-case spill of oil from that facility into the navigable waters of the state” and requires Ecology to adopt a rule that considers worst-case oil spill scenarios, the cost of cleaning up spilled oil, the frequency of operations at facilities, damages that could result from spills, and the commercial availability and affordability of FR.

6.3 Alternatives considered and why they were excluded

We considered the following alternative rule requirements and did not include them in the new rule. This list includes alternatives that were suggested by the public during development of the rule, with the intent of mitigating negative impacts, including environmental harms, on vulnerable populations and overburdened communities, and equitably distributing benefits. Each section below explains why we did not include these alternatives.

- Requiring higher FR for facilities.
- Requiring lower FR for facilities.
- Requiring a higher credit rating when insurance is used to prove FR.
- Requiring the State of Washington to be listed as additional insured or certificate holder on an insurance policy.
- Requiring vessel owners/operators or their agent to verify P&I club membership and require verification at least 10 calendar days before entering state waters.
- Not adding a maximum FR amount for Class 2 and 3 facilities.
- Not allowing an option for facilities to request an alternative FR calculation.
- Requiring Class 2 facilities to prove FR for the entire contents of their oil storage or transportation container.
- Allowing a federal COFR to meet Washington COFR requirements.
- Setting COFR expiration at one year.
- Not requiring insurance to be regulated by Washington State or surplus line insurance.
- Requiring the use of specific forms in demonstrating FR.

6.3.1 Requiring higher financial responsibility for facilities.

We considered increasing the level of FR for Class 1 facilities to \$27,200 per barrel, up to a maximum of \$600 million. The \$12,500 per barrel and \$300 million in California’s requirements

are based on 1990's dollar values. According to the consumer price index, prices since 1990 have more than doubled, so we considered adjusting the per barrel rate and maximum to account for inflation. We also believed a higher amount would provide better assurance that the costs and damages associated with a worst-case spill to Washington's unique waters and resources could be covered by the company. This higher level could have provided a higher level of protection for the state but failed to meet the specific objective of considering commercial affordability and availability of FR in the marketplace.

Furthermore, as detailed in Section 1.1.3 above, there has been notable improvement in oil spill prevention, preparedness, and response in recent years.⁵¹

By requiring a greater FR, this rule would have been more burdensome for facilities. We expect that many facilities will choose to meet the FR requirements through insurance. We learned that insurance for pollution control and damages in today's commercial insurance market has a practicable upper limit of \$200 million. Industry may use multiple methods to prove FR and we expect facilities will supplement the available insurance with other financial means, such as self-insurance, to meet a \$300 million maximum requirement. We estimate the cost of this approach to be greater than purchasing insurance and the cost increases as the FR requirement grows above \$200 million. (See section 3.2.2.)

6.3.2 Requiring lower financial responsibility for facilities.

Requiring a lower level of FR does not meet the intent of the authorizing statute – to provide the highest level of FR while maintaining consistency with other western states. The requirement for Class 1 facilities to demonstrate FR of \$12,500 per barrel up to a \$300 million maximum is consistent with California rules which are the highest on the west coast. Several facilities that operate in Washington also have operations in California and currently comply with California's regulations. Enacting the highest level of FR while also maintaining consistency along the west coast maximizes Washington's protection and reduces barriers to compliance.

6.3.3 Requiring a higher credit rating when insurance is used to prove financial responsibility.

We considered requiring an AM Best credit rating of A- for insurance companies that are used when insurance is purchased to prove FR instead of a B+. This alternative would have been more burdensome to parties that use insurance to comply with the rule because the insurance industry is experiencing a very tight market currently due to numerous claims related to wildfires and other losses. This tight market is resulting in reduced AM Best ratings for some insurance companies, especially those who serve high risk markets, and it may be difficult for

⁵¹ [Oil in the Sea IV, 2022](https://nap.nationalacademies.org/read/26410//2#2). <https://nap.nationalacademies.org/read/26410//2#2>

the regulated community to purchase coverage from an insurance company with an A- AM Best rating. An insurance company with a B+ rating by AM Best is still considered to have a good chance of meeting their financial obligations and is not considered vulnerable to changes in economic conditions and therefore still meets the objectives of the statute.

6.3.4 Requiring the State of Washington to be listed as additional insured or certificate holder on an insurance policy.

We considered requiring the State of Washington to be listed as additional insured or certificate holder on insurance policies used to prove FR. This alternative would be more burdensome on covered parties. Insurance companies are likely to charge an additional premium to add an additional insured to the policy. It is also possible that insurance companies will not allow additional insureds or certificate holders, which would result in fewer insurance options for the regulated industry. Additionally, requiring the State to be listed as additional insured or certificate holder may not be effective in guaranteeing that the State would receive a payout in the event of an oil spill, so it is questionable that there would be any benefit to this requirement. Our insurance industry advisors communicated that the most effective way to ensure the state is paid for a loss is to require an insurance company representative to sign a certificate of insurance agreement.

6.3.5 Requiring vessel owners/operators or their agent to verify P&I club membership and require verification at least 10 calendar days before entering state waters.

We considered requiring vessel owners/operators or their agents to provide proof of their P&I club membership. This alternative would have been more burdensome to the vessel community because either the multi-plan contingency plan holders would need to add this task as a new responsibility, which may have conflicting legal and administrative responsibilities, or the vessel owners/operators would need to be notified of this requirement and submit the required application and proof of P&I Club membership. Communicating this requirement could be very difficult to achieve within the allowed timeframe. The statute says that vessels that have P&I coverage do not need to prove FR and also says that Ecology may request proof of P&I club membership. Ecology has developed a process it can use to identify arriving vessels and verify P&I club membership through online tools that are currently available.

6.3.6 Not adding a maximum financial responsibility amount for Class 2 and 3 facilities.

We considered not establishing a maximum FR amount for Class 2 and 3 facilities, however, establishing a maximum FR amount ensures that their FR requirement is in alignment with the level of risk of an oil spill from these smaller volume facilities. It also ensures consistency with the FR requirement for barges, fishing vessels, and other regulated entities with lower potential

oil spill volumes. Most of the Class 2 and 3 facilities are small businesses. This alternative would have been very burdensome for these facilities, and failed to meet the goals and objectives of the statute because it would not have considered the affordability of FR for smaller volume facilities.

6.3.7 Not allowing an option for facilities to request an alternative financial responsibility calculation.

We considered not allowing an option for facilities to request an alternative FR calculation. This rule establishes requirements on a very diverse population of entities, with unique facility characteristics. Allowing a facility to request alternative FR calculation enables them to describe the facility's prevention and preparedness features, as well as improvements they have invested in to reduce the likelihood of spill.

Facility operators may find their least burdensome compliance with the rule is to take steps to reduce their FR requirements. This could be through documenting their current oil spill response capabilities, or making investments that reduce their maximum oil spill scenario, including purchasing additional protective features. This alternative would remove this option, making the regulation more burdensome for these facilities.

6.3.8 Requiring Class 2 facilities to prove financial responsibility for the entire contents of their oil storage or transportation container.

This rule regulates Class 2 facilities when they are transferring oil products to or from a vessel, not while they are in transit. Tank truck containers are divided into three different storage compartments. There are shut-off valves between the different storage compartments that ensure that oil can only be dispensed, or released, from one compartment at a time. It would be burdensome for these facilities to prove FR for the entire contents of their container, considering that containment features of the container would most likely prevent more than a third of the container from spilling.

6.3.9 Allowing a federal certificate of financial responsibility to meet Washington certificate of financial responsibility requirements.

We considered allowing a federal COFR to meet Washington COFR requirements. This alternative would fail to meet the goals and objectives of the authorizing statute because the federal COFR for vessels has lower FR requirements than those set forth in RCW 88.40.020. The federal COFR isn't equal to or more restrictive than Washington's FR requirements and cannot be used as an equivalent to prove FR in Washington. For facilities, the federal requirements establish liability limits, which is a cap or maximum that a facility will need to pay for clean-up and damages associated with an oil spill. This is not the same type of requirement as a FR requirement, so facilities cannot use the federal requirement to prove FR in Washington.

6.3.10 Setting certificate of financial responsibility expiration at one year.

We considered setting COFRs to expire after one year to ensure there is no lapse in a regulated entity's demonstration of FR. Adopted rule language includes a requirement for regulated entities to provide updated information about their proof of FR if it changes (for example, renewed insurance policy) or is terminated. Since Ecology will be notified of a significant change, this alternative would have been overly burdensome and unneeded. Facility COFRs are effective for two years and vessels that are members of P&I clubs must be re-verified each year after February 20 (the end of the P&I coverage year) and before entering the waters of the state. These timelines meet statute requirements and are less burdensome to regulated industry.

6.3.11 Not requiring insurance to be regulated by Washington State or surplus line insurance.

We considered not requiring insurance that is obtained to prove FR to be regulated by the Washington State Insurance Commission or be procured through a licensed surplus line broker in accordance with Chapter 48.15 RCW. This alternative would have failed to meet the goals and objectives of the authorizing statute because insurance that is not regulated by the state or procured through a licensed surplus line broker in accordance with Chapter 48.15 RCW may be high risk insurance that cannot be relied upon to provide coverage in the event of an oil spill. This puts the state at risk of having to pay the costs to clean-up an oil spill and does not meet the FR goals of the statute.

6.3.12 Requiring the use of specific forms in demonstrating FR

We considered requiring regulated community use of specific forms or agreements created by Ecology to provide backup to their proof of FR. During the public comment period, we received a comment that suggested requiring the use of these forms may be burdensome to the regulated community. The commentor also noted that if specific forms are required to be used to comply with the rule, they should be available for review and subject to public comment before rule adoption. Ecology considered these comments and removed all requirements to use specific forms from the adopted rule.

Ecology will provide published forms that support the FR application process. These forms will simplify and streamline the application process and we encourage their use. They will be available, but no specific form will be required by rule.

6.4 Conclusion

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

Chapter 7: Regulatory Fairness Act Compliance

7.1 Introduction

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

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

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

7.2 Analysis of relative compliance cost burden

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

We estimate there are no Class 1 facilities with fewer than 50 employees. The average affected small business among Class 2 and 3 facilities likely to be covered by the rule employs 18 people. Based on cost estimates in Chapter 3, we estimated the following compliance costs per employee.

Table 7. Compliance costs per employee for Class 2 facilities

Type of cost (or total cost)	Small Businesses	Largest 10% of Businesses
Average employment	18	20,180
Average Annual Compliance Costs	\$4,000	\$4,000
Cost per employee	\$222	\$0.20

Table 8. Compliance costs per employee for Class 3 facilities

Type of cost (or total cost)	Small Businesses	Largest 10% of Businesses
Average employment	18	318
Average Annual Compliance Costs	\$18,400	\$18,400
Cost per employee	\$1022	\$58

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

7.3 Action taken to reduce small business impacts

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

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

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

- Are legal and feasible.
- Meet the goals and objectives of the authorizing statute.
- Are within the scope of this rulemaking.

As part of the rule, Ecology allows for modifications in regulatory requirements, simplifications in reporting, and a delayed compliance timetable to reduce costs to small businesses. Details of these mitigation methods are outlined in the following subsections. The scope of this rulemaking does not include inspection frequency nor a schedule of fines for non-compliance. These cost mitigation measures are therefore not available for this rule.

7.3.1 Modifying regulatory requirements.

There are several ways in which the rule reduces regulatory requirements for facilities or that allows facilities to take actions to reduce or modify their regulatory requirements while achieving the objectives of the underlying statute.

The rule adopts alternative FR levels for different classes of facilities. Class 2 and 3 facilities tend to be smaller in scale than Class 1 facilities. FR for Class 2 and 3 facilities is limited to \$5 million in contrast to the \$300 million maximum for Class 1 facilities.

Facility owners or operators may request alternative FR calculations. As discussed in the Least-Burdensome Alternative Analysis (see Chapter 6), this allows for flexibility in meeting the intent of the statute. Covered entities may choose to comply with the regulation by making investments to prevent or prepare for spills that reduce their worst-case spill volume. They can also provide information that allows additional factors to be accounted for in calculating an alternative FR. Allowing an alternative FR calculation may reduce their FR requirements.

The rule creates several avenues for the owners or operators of facilities to demonstrate FR. This added flexibility may reduce the burden of compliance for some facilities, particularly smaller facilities that may not be able to completely self-insure.

As discussed in the Least-Burdensome Alternative Analysis (see Chapter 6), Ecology considered the following alternative regulatory requirements, but they were not included in the rule due at least in part to the additional compliance burden they would have imposed.

- Requiring higher levels of FR.
- Requiring a higher credit rating for insurance companies.
- Requiring the state of Washington to be listed as additional insured or certificate holder.
- Requiring Class 2 facilities to prove FR for the entire contents of their oil storage or transportation container.

Additional reductions or modifications to the rule's regulatory requirements were considered, but these alternatives would have compromised the ability of the rule to meet the intent of the underlying statute.

7.3.2 Simplifying or reducing reporting requirements.

As discussed in the Least-Burdensome Alternative Analysis (see Chapter 6), Ecology considered the following alternative reporting requirements, but they were not included in the rule due at least in part to the additional compliance burden they would have imposed.

- Requiring vessel owners/operators or their agent to verify P&I club membership and require verification at least 10 calendar days before entering state waters. Instead, Ecology will verify P&I club membership through its own means, thereby reducing reporting requirements and associated costs for vessel owners and operators.

- Setting COFR expiration at 1 year.

7.3.3 Delaying compliance timetables

The rule institutes timelines for the phase-in of FR requirements. One of the purposes of this phase-in is to allow smaller entities additional time to apply for COFRs. Owners and operators of Class 1 facilities have 9 months from the effective rule date to submit a COFR application. Owners and operators of other facilities and vessels have 15 months and 21 months, respectively.

7.4 Small business and government involvement

Ecology involved small businesses and local governments in its development of the adopted rule using:

- Notice of rulemaking (“Proposal Statement of Inquiry”; form CR-101), emails, updates, and workshop invitations directly to likely impacted entities, as well as entities that are not impacted by the rule as outlined below.
 - 26 Class 1 facilities.
 - 26 Class 2 facilities.
 - 5 Class 3 facilities.
 - 43 vessel agents, facilitators, or fuel deliverers.
 - Contingency plan contact list, including representatives from the EPA, UTC Pipeline Safety Program, Oregon Department of Environmental Quality, railroads, US Coast Guard and Washington Department of Transportation.
 - 100 stakeholders and interested parties, including Tribes, trade associations, municipalities, other states, and non-governmental organizations representing environmental, safety, and health interests.
 - 69 ports.
- Notice of rulemaking directly to state, regional, and local emergency and air quality bodies:
 - 43 local emergency planning committees.
 - 17 state emergency response commissions.
 - 7 clean air agencies.
- Notice of rulemaking directly to 54 associations and organizations representing:
 - Environmental organizations.
 - Engineers.

- Businesses, including maritime and small businesses.
- Public health.
- Counties.
- Emergency response.
- Transportation.
- Recreation.

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

The adopted rule likely impacts the following industries, with associated NAICS codes. NAICS definitions and industry hierarchies are discussed at <https://www.census.gov/naics/>.

- 321113 Sawmills
- 324110 Petroleum Refineries
- 424710 Petroleum Bulk Stations and Terminals
- 424720 Petroleum and Petroleum Product Merchant Wholesalers (except bulk stations and terminals)
- 441222 Boat Dealers
- 457120 Other Gasoline Stations
- 483211 Inland Water Freight Transportation
- 486110 Pipeline Transportation of Crude Oil
- 486210 Pipeline Transportation of Natural Gas
- 486910 Pipeline Transportation of Refined Petroleum Products
- 493190 Other Warehousing and Storage
- 541611 Administrative Management and General Management Consulting Services
- 551112 Offices of Other Holding Companies
- 562900 Remediation and Other Waste Management Services
- 562910 Remediation Services

7.6 Loss of sales or revenue and impacts on jobs

Businesses that incur costs could experience reduced sales or revenues if the adopted rule significantly affects 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 affects marginal costs), as well as the specific attributes of the markets in which they sell goods. This includes the degree of influence each firm has on market prices, as well as the relative responsiveness of market demand to price changes. Finally, overall shifts in economic activity in the state, including competition within markets and attributes of the labor market simultaneously adjust in response to changes in compliance costs.

Similarly, employment within directly impacted industries, other industries in Washington, the labor market within and outside of the state, and in the state as a whole will also adjust in response to a change in costs.

We used the REMI E3+ model for Washington State to estimate the impact of the rule on directly affected markets, accounting for dynamic adjustments throughout the economy.⁵² The model accounts for variables including but not limited to inter-industry impacts; price, wage, interstate and international trade, and population or labor market changes; and dynamic adjustment of all economic variables over time.

Direct compliance costs were inputted in the following REMI categorized industries:

- Sawmills and wood preservation
- Petroleum and coal products manufacturing
- Wholesale trade
- Retail trade
- Water transportation
- Pipeline transportation
- Warehousing and storage
- Management of companies and enterprises
- Waste management and remediation services

⁵² Ecology rules frequently set compliance requirements resulting in production costs or other direct expenditures, however the primary costs we estimated for this rulemaking are opportunity costs. We reflected this in the REMI model by representing these as reductions in exogenous industry sales in order to capture the impacts of lost investment revenue without distorting relative production costs in the region.

The results of the REMI E3+ model shows that the rule will impact a variety of industries (see table 7, below), costing the Washington economy an estimated \$140 million to \$284 million in output at its peak (total amount of goods and services produced by Washington businesses) across all sectors. In the first quarter of 2023, Washington state’s annual GDP was estimated at \$761 billion. \$284 million is equivalent 0.04 percent of the state’s GDP.⁵³

Output losses are projected to be highest in the few years immediately following the rule implementation, with losses of \$123 million in the low-cost scenario and \$250 million in the high-cost scenario in the first year of the rule. These losses increase by 14 percent over the next two years, peaking in 2027 at \$140 million and \$284 million for the low- and high-cost scenarios, respectively. Output losses slowly decrease after 2027. By 2045, the output loss is projected to have declined under the low and high-cost scenarios to \$92 million and \$190 million, respectively. The petroleum and coal products manufacturing industry is impacted the most among all industries, accounting for nearly one quarter of the total output loss, followed by wholesale trade, construction, water transportation, and real estate.

Table 9. Modeled economic impacts to output (millions of \$)

Industry	2027 (low)	2027 (high)	2045 (low)	2045 (high)
Whole state	-140	-284	-92	-190
Petroleum and coal products manufacturing	-32	-66	-23	-46
Wholesale trade	-16	-33	-12	-25
Construction	-19	-38	-3	-7
Water transportation	-7	-14	-5	-10
Real estate	-8	-16	-4	-9

The rule will result in transfers of money within and between industries, as compared to the baseline. The modeled impacts on employment are the result of these transfers and the way in which REMI projects these transfers to be utilized within the broader economy as well as changes to prices and other economic variables across all industries in the state. REMI results project an immediate state-wide loss of 459 full-time equivalent positions (FTEs) under the low-cost scenario, and a loss of 934 FTEs under the high-cost scenario, in the year 2025. This loss increases over the next two years, peaking in 2027 with a loss of 550 and 1120 FTEs, under the low-cost and high-cost scenarios, respectively (see table 8, below). The statewide loss in FTEs is lessened after 2027 so that in 2045 the statewide projected loss is reduced to 273 FTEs in the low-cost scenario, and 565 FTEs in the high-cost scenario in 2045. Under the high-cost scenario,

⁵³ [GDP by State | U.S. Bureau of Economic Analysis \(BEA\)](#)

this is a projected state-wide job loss of roughly 0.03 percent of state-wide FTEs at the peak loss in 2027.⁵⁴

The construction sector is projected to be the most heavily impacted industry, accounting for about 23 percent of the FTE loss from this rule statewide in 2027. It is not unusual for the construction industry to have high projected impacts from a rule as the construction industry is often quite sensitive to any changes in the market in REMI models. Industries that are most impacted are listed in table 8 below. Because petroleum and coal products manufacturing is less labor intensive than most other industries, it is not among the most heavily impacted in terms of changes in FTE but is included here because many of the businesses to which this rule applies directly belong to this industry.

Table 10. Impacts on jobs

Industry	2027 Jobs Impact (low)	2027 Jobs Impact (high)	2045 Jobs Impact (low)	2045 Jobs Impact (high)
Whole state	-550	-1120	-273	-565
Construction	-127	-259	-19	-39
State and local government	-48	-108	-32	-66
Wholesale trade	-44	-89	-20	-42
Warehousing and storage	-40	-82	-25	-51
Retail trade	-27	-56	-12	-25
Petroleum and coal products manufacturing	-4	-8	-2	-4

⁵⁴ Assuming state-wide employment of 3.4 million as estimated in May 2022. [See this link for the most recent U.S. Bureau of Labor Statistics report for WA.](#)

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Appendix A

Administrative Procedure Act (RCW 34.05.328)

Determinations

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.

RCW 34.05.328(1)(b) –

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

See chapters 1 and 2.

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

A new rule is required to address legislative direction that came out of the 2022 session. The adopted rule implements Engrossed Second Substitute House Bill 1691, passed in 2022 and codified in Chapter 88.40 RCW. The adopted rule also incorporates relevant requirements of previously existing Chapter 317-50 WAC, which has been repealed. The adopted rule ensures that owners and operators of vessels and facilities have adequate financial resources to pay cleanup and damage costs arising from an oil spill.

Chapter 88.40 RCW requires certain vessels and facilities transporting, storing, handling, or transferring oil in Washington to demonstrate a defined level of FR for the costs of a spill, and directs Ecology to adopt rules to implement this chapter. Ecology received funding through the Legislature to support this rulemaking and align the new rule with the updated state law.

Failure to conduct rulemaking will undermine the legislative direction in Chapter 88.40 RCW.

Additionally, without rulemaking to implement this chapter, Ecology would not be able to determine the levels necessary to compensate the state and affected counties and cities for damages that might occur during a spill of oil from that facility into the navigable waters of the state. Ecology would also be unable to establish a COFR program to ensure compliance with the requirements of Chapter 88.40 RCW for both facilities and vessels.

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

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.

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.

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.

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.

The adopted rule does not conflict with or violate the requirements of another federal or state law. Ecology has authority under Chapter 88.40 RCW to adopt rules establishing financial responsibility requirements. The adopted rule is complementary with current state and federal laws and rules.

Vessel Financial Responsibility

RCW 88.40.020 explicitly defines the levels of FR for vessels that transport petroleum products as cargo or as fuel across the waters of the state of Washington, depending on the type, size, and function of the vessel. The adopted rule reiterates the FR amounts that are included in the statute, RCW 88.40.020 (2)(b), and allows Ecology to establish lesser standards of FR for tank vessels less than 300 gross tons, as long as this amount is not less than the amount required under federal law.

RCW 88.40.020 states that an owner or operator of a vessel who is a member of an international P&I mutual organization and is covered for oil pollution risks up to the amounts required under this section is not required to demonstrate FR. Ecology will use available tools to verify a vessel's P&I membership.

Facility Financial Responsibility

In alignment with RCW 88.40.025, the adopted rule establishes FR amounts for onshore and offshore (Class 1, 2, and 3) facilities that are necessary to compensate the state and affected federally recognized Indian Tribes, counties, and cities for damages that might occur during a reasonable worst-case spill of oil from the facility to the waters of the state. Establishing these FR amounts does not conflict with federal regulation, as 33 C.F.R. Part 138.230(d) establishes limits of liability and does not establish FR amounts.

Compliance Timelines

The adopted rule establishes timeframes for vessels and facilities to obtain a COFR in alignment with RCW 88.40.020 and 88.40.025. There is a phase-in schedule that details the timelines for currently regulated facilities and vessels to obtain their first COFR. Thereafter, the adopted rule

requires that facilities and vessels request a renewal of their COFR at least 30 days before their existing COFR expires. After the initial phase-in period, any vessel that does not have a valid COFR must request a certificate at least 10 calendar days before entering the waters of the state and any facility that will begin operations in the state must request a COFR at least 65 calendar days before beginning operations. The adopted rule does not conflict with federal requirements as federal timeline requirements do not apply to facilities. In regards to vessels, 33 C.F.R. Part 138.90 requires vessels to submit an application for a COFR 21 calendar days prior to the date the certificate is needed, which is a more stringent requirement than the adopted rule establishes.

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.

In alignment with state law, the adopted rule imposes more stringent requirements on private entities than on public entities. In accordance with RCW 88.40.020(6), the adopted rule does not apply to vessels owned or operated by the federal government or by a state or local government. Additionally, in accordance with RCW 88.40.025, the adopted rule does not apply to facilities owned or operated by the federal government or by a state or local government.

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, the rule does differ from federal regulation.

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.

Vessel requirements

RCW 88.40.020 explicitly directs Ecology to differ from federal standards in regards to the amount of FR required for vessels by setting more stringent requirements in state law than exist in federal law. Federal standards are defined in OPA 90 and the CERCLA. In OPA 90, (33 USC 40 CFR Part 2716) the FR amounts for vessels are defined. These values differ from those mandated by RCW 88.40.020.

Facility requirements

Rather than establishing FR requirements for facilities, the federal government has established the concept of limit of liability. A limit of liability places a cap on the amount of damages and cleanup costs an oil polluter must pay. This means that, federally, facilities do not have any requirement under OPA 90 that a RP maintain FR up to the limit of liability for onshore facilities.

If costs exceed the limit of liability, the federal government must pay for the costs above the established limit of liability.

33 CFR Part 138 Subpart B, specifically 38 CFR Part 138.200 (Scope), and 33 CFR Part 138.230 (Limits of Liability) set forth the limits of liability under Title I of the OPA 90, as amended (33 USC 2701, et seq.), for vessels, deepwater ports, and onshore facilities, as adjusted under OPA 90 (33 USC 2704(d)). This subpart also sets forth the method and procedure the Coast Guard uses to periodically adjust the OPA 90 limits of liability by regulation under OPA 90 (33 USC 2704(d)(4)), to reflect significant increases in the Consumer Price Index (CPI), and to update the limits of liability when they are amended by statute.⁵⁵ In addition, this subpart (33 CFR Part 138) cross-references the U.S. Department of the Interior regulation setting forth the OPA 90 limit of liability applicable to offshore facilities, as adjusted under OPA 90 (33 USC 2704(d)(4)) to reflect significant increases in the CPI.

Washington's adopted rule establishes FR requirements for onshore and offshore facilities as opposed to a limit on liability. Proving FR requires regulated facilities to prove they have the financial means to pay for the costs of an oil spill on hand, either through insurance, surety, guarantee, certificate of deposit, or other acceptable financial instrument and/or self-insurance. Self-insurance requires the facility to show it has sufficient financial resources, in terms of assets and equity, to pay the costs of an oil spill.

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.

Federal and state agencies that regulate Class 1, 2, and 3 facilities, or vessels covered by the adopted rule include the United States Coast Guard, United States Environmental Protection Agency, California Department of Fish and Wildlife Office of Spill Prevention and Response, and Alaska Department of Environmental Conservation Spill Prevention and Response.

Ecology notified and solicited input from these and other federal and state agencies, Tribes, and other stakeholders throughout this rulemaking process.

Ecology met with Tribal representatives in a meeting to discuss their specific concerns. Also, Ecology exchanged emails, phone calls, and met with California Department of Fish and Wildlife Office of Spill Prevention and Response and Alaska Department of Environmental Conservation Spill Prevention and Response employees to coordinate rule development.

Representatives from the British Columbia Ministry of Environment engaged Ecology early in the rule development phase and asked to be invited to all workshops and to review preliminary

⁵⁵ [OPA 90 Price Adjustments](https://www.federalregister.gov/documents/2022/12/23/2022-27750/consumer-price-index-adjustments-of-oil-pollution-act-of-1990-limits-of-liability-vessels-deepwater), <https://www.federalregister.gov/documents/2022/12/23/2022-27750/consumer-price-index-adjustments-of-oil-pollution-act-of-1990-limits-of-liability-vessels-deepwater>

rule language as they are considering writing a rule to establish a COFR program in British Columbia. They attended all workshops.