



## Fish and Wildlife Commission Presentation Summary Sheet

---

**Meeting date:**

10/28/2022

**Agenda item:**

7. Shoreline Armoring Rule Making (SSB 5273) Briefing

**Presenter(s):**

Margen Carlson, Habitat Program Director

Matt Curtis, Protection Division Manager

Theresa Nation, Environmental Planner

---

**Background summary:**

Habitat Program staff will brief the Commission on proposed amendments to Chapter 220-660 WAC – Hydraulic Code Rules, in preparation for a public hearing on the proposed changes. The rule amendments are necessary to implement Substitute Senate Bill 5273 (SSB 5273)<sup>1</sup> - a bill passed by the legislature during the 2021 legislative session.

Materials:

Because the Hydraulic Code Rules are significant legislative rules, you are receiving a large volume of materials in your notebook. These include:

- Table 1: Shoreline Stabilization Proposed Rule Changes by Section and Subsection
- CR-102 (WSR 22-19-081) filed Sept. 20, 2022 and published in Washington State Register 22-19 on Oct. 5, 2022, containing an abbreviated Small Business Economic Impact Statement
- Rule Changes to WAC 220-660-370 (Bank protection in saltwater areas)
- Draft Regulatory Analysis document, including least-burdensome alternative analysis
- Small Business Economic Impact Statement (full version)
- Cost-Benefit Analysis

SSB 5273 amended Chapter 77.55 RCW (Construction Projects in State Waters). This statute is also referred to as the Hydraulic Code. It spells out the authority and responsibilities of the Department of Fish and Wildlife (the department) related to the protection of fish life during construction projects that will affect state waters. The bill is codified in RCW [77.55.231](#) and applies to the issuance of Hydraulic Project Approval (HPA) permits.

---

<sup>1</sup> Laws of 2021, Chapter 279; Codified in RCWs 77.55.231

SSB 5273 requires that anyone desiring to replace residential marine shoreline stabilization or armoring must use the least impacting technically feasible bank protection alternative for the protection of fish life. The requirement must be met by preparing a site assessment and alternatives analysis report before proposing a hard armoring technique.

Objectives:

In order to implement SSB 5273, the department’s objectives in this rule making include the following:

- Specify that replacement of residential marine shoreline stabilization must utilize the least impacting technically feasible alternative for the protection of fish life;
- Incorporate the most-to-least-preferred alternatives list from SSB 5273;
- Specify that a site assessment and alternatives analysis report prepared by a qualified professional is required as part of an application for a Hydraulic Project Approval (HPA) permit for this type of project;
- Identify mandatory report elements; and
- Establish procedures for certain emergency and expedited shoreline stabilization permits.

Rule Proposal:

Rule amendments are proposed for WAC 220-660-370 (Bank protection in saltwater areas). The following table compares components of the existing rule and SSB 5273, and summarizes changes being proposed:

Existing rule: WAC 220-660-370	New legislation: SSB 5273	Proposed change to rule: WAC 220-660-370
Standards for new and waterward replacement or rehabilitation of marine shoreline armoring	Standards for replacement residential marine bank protection and armoring	Add replacement residential marine shoreline stabilization standards into the rule.
Must use least impacting technically feasible alternative	Must use least impacting technically feasible alternative	The existing language in rule is applied to the replacement or rehabilitation of residential marine shoreline stabilization.
Includes most-to-least preferred alternatives list	Includes most-to-least preferred alternatives list	The alternatives list in SSB 5273 is slightly different and is added into the rule. The existing list also remains.
Requires a site assessment, alternatives analysis and design rationale report prepared by a qualified professional	Requires a site assessment and alternatives analysis report when proposing hard armoring	The existing language in rule is applied to the replacement or rehabilitation of residential marine shoreline stabilization.
Mandatory report components identified	No mandatory report components identified	Mandatory report requirements already in rule are applied to the replacement or rehabilitation of residential marine bank protection.

WDFW may provide a report exemption based on scale and nature of the project	WDFW may provide a report exemption based on scale and nature of the project	Agency retains discretion to provide report exemptions. New language specifies the exemption of beach restoration and passive shoreline techniques from the report requirement.
"Feasible" is not defined	"Feasible" means available and capable of being done after taking into consideration cost, existing technology, and logistics, in light of overall project purposes	The definition from SSB 5273 is applied to all of section -370. No practical changes anticipated for how permits are issued.
Emergency and expedited permits are not addressed	Emergency and expedited permits are not addressed	New language on how emergency and expedited shoreline stabilization permit applications will be processed.

Table 1, following this briefing sheet, details the specific changes to Chapter 220-660 WAC.

---

**Staff recommendation:**

N/A. This is a briefing only.

---

**Policy issue(s) and expected outcome:**

WDFW proposes changes to WAC 220-660 to align it with changes to RCW implemented via SSB 5273. Some of the changes come directly from statute. These include utilizing the least impacting technically feasible alternative, requiring a site assessment and alternatives analysis report, and listing alternatives from most to least preferred. Other changes, such as describing how emergency and expedited marine shoreline stabilization HPA applications are processed, are not directly spelled out in statute but are necessary to administer the rules in accordance with the statute or existing rule. The current requirement in rule that the site assessment and alternatives analysis report be prepared *by a qualified professional* is expanded to include residential shoreline stabilization replacement and rehabilitation. While not specified in statute, that change aligns the requirements for residential shoreline stabilization replacement or rehabilitation projects with the requirements for new and waterward replacement or rehabilitation of shoreline stabilization. It also increases the likelihood that submitted reports are complete, accurate, and when prepared by a third party, have an element of impartiality.

Both SSB 5273 and WAC 220-660-370 currently allow the department to issue report exemptions based on the scale and nature of a particular project. The rule proposal also exempts HPA applications for the removal of stabilization and restoration of the beach, or that utilize passive techniques such as vegetation planting. These projects employ the most highly preferred, least impacting alternatives. This new language provides clarity about application requirements for those projects.

The expected outcome is that the Hydraulic Code Rules will align with statute.

---

**Fiscal impacts of agency implementation:**

SSB 5273 went into effect on July 25, 2021. WDFW has been implementing the new law since then. Costs can largely be attributed to the changes in statute. The rule proposal primarily incorporates those new statutory requirements. The costs would still be incurred even if the proposed rule amendments are not adopted. Costs relate to staff time to review site assessment and alternatives analysis reports, and to evaluate whether a shoreline stabilization proposal meets the standard of least impacting technically feasible alternative for the protection of fish life. Staff time is also necessary to continue conducting outreach and for training regional staff on the new statute and rule.

---

**Public involvement process used and what you learned:**

The department has conducted outreach to stakeholders throughout the rule-making process, starting with emails to the Tribes, key stakeholders including shoreline consultants and contractors, and other state and federal natural resource agencies to inform them about the rulemaking. The Notice of Proposed Rule Making was filed on May 18, 2022 and published in Washington State Register 22-11-094 on June 1, 2022. The department held a live webinar and discussion for tribal partners on Aug, 12, 2022, and an informational webinar for the public on Sept. 11, 2022. The informational webinar was recorded and posted on the project website and the agency YouTube channel and was livestreamed by TVW. WDFW invited a subset of stakeholders to conduct early review of the rule proposal in August. A complete list of outreach activities can be found in section 6 of the draft Regulatory Analysis document.

The public comment period runs through Oct. 31, 2022 and we are assessing comments as they come in. Based on the early review results and on comments received to date, there appears to be general support for the rule. No outright objections have been raised, although suggestions for modifications have been made. The most common theme for those suggestions is related to climate change, and ranges from adding introductory language to adding new mandatory report elements. Other themes include:

- Strong support for the language on processing expedited and emergency permit applications;
  - Concerns about site-specific situations; and
  - Wordsmithing or other ways to make the rule stronger or clearer.
- 

**Action requested and/or proposed next steps:**

This meeting includes a public hearing, providing the Commission an opportunity to hear perspectives on the rule change proposal.

---

**Draft motion language:**

N/A

---

**Post decision communications plan:**

N/A

---

**Table 1 SSB 5273 Rule Change Proposals presented by subsection number**

<b>WAC 220-660-370 Bank protection in saltwater areas (renamed “Shoreline stabilization in saltwater areas”)</b>		
<b>Change #</b>	<b>WAC Subsection</b>	<b>Description</b>
Change 1	220-660-370	Rename section title from “Bank protection in saltwater areas” to “Shoreline stabilization in saltwater areas”
Change 2	220-660-370	Various changes to terminology throughout the section for improved accuracy or clarity. Particularly: “shoreline stabilization” has replaced “bank protection” and other inconsistently used terms; “passive techniques” has replaced “natural techniques” for accuracy.
Change 3	220-660-370(1)	Replace “structures” with “buildings, roads and improvements” for clarity.
Change 4	220-660-370(1)	Remove inaccurate term “retaining walls” and replace with “related structures”.
Change 5	220-660-370(3)	Renamed subsection “Alternative selection”.
Change 6	220-660-370(3)(a)	Moved language up from WAC 220-660-370(3)(b).
Change 7	220-660-370(3)(a)	Add “To ensure the protection of fish life” as specified in SSB 5273.
Change 8	220-660-370(3)(a)	Insert the definition of “feasible” directly from SSB 5372.
Change 9	220-660-370(3)(b)	Specified the project types this subsection applies to.
Change 10	220-660-370(3)(b)(i)	Added “and restore the beach” for consistency with SSB 5273.
Change 11	220-660-370(3)(b)(iv)	Replaced “structures” with “buildings and improvements” for clarity.
Change 12	220-660-370(3)(c)	This subsection is introduced from SSB 5273 with no substantive changes.
Change 13	220-660-370(3)(d)	This subsection is restructured to apply report requirements to residential replacement projects.
Change 14	220-660-370(3)(e)	Adapted from the former (3)(d) subsection. No substantive changes.
Change 15	220-660-370(3)(f)	Adapted from the former (3)(d) subsection and SSB 5273. Retains exemptions “based on the scale and nature of the project”.
Change 16	220-660-370(3)(f)(i)	Provides a specific report exemption for removal of shoreline stabilization and restoration of the beach.
Change 17	220-660-370(3)(f)(ii)	Provides a specific report exemption for employing passive shoreline stabilization techniques.
Change 18	220-660-370(3)(g)	New procedures for emergency and expedited shoreline stabilization HPA applications.
Change 19	220-660-370(4)	Renamed subsection “Shoreline stabilization design”.
Change 20	220-660-370(4)(a)	Rephrased for clarity.
Change 21	220-660-370(5)	Renamed subsection “Shoreline stabilization location”.
Change 22	220-660-370(6)	Renamed subsection “Shoreline stabilization construction”.



# PROPOSED RULE MAKING

## CR-102 (July 2022) (Implements RCW 34.05.320) Do NOT use for expedited rule making

CODE REVISER USE ONLY

OFFICE OF THE CODE REVISER  
STATE OF WASHINGTON  
FILED

DATE: September 20, 2022

TIME: 12:34 PM

WSR 22-19-081

**Agency:** Washington Department of Fish and Wildlife

**Original Notice**

**Supplemental Notice to WSR** \_\_\_\_\_

**Continuance of WSR** \_\_\_\_\_

**Preproposal Statement of Inquiry was filed as WSR 22-11-094 ; or**

**Expedited Rule Making--Proposed notice was filed as WSR \_\_\_\_\_; or**

**Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1); or**

**Proposal is exempt under RCW \_\_\_\_\_.**

**Title of rule and other identifying information:** (describe subject) 2022 HPA marine shoreline stabilization rule amendment. The rule will amend WAC 220-660-370.

**Hearing location(s):**

Date:	Time:	Location: (be specific)	Comment:
Oct. 28-29, 2022	8:00am	In-person at Spokane Community College in Colville (985 S. Elm St. Colville, WA 99114) and webinar/teleconference	Visit our website at <a href="https://wdfw.wa.gov/about/commission/meetings">https://wdfw.wa.gov/about/commission/meetings</a> or contact the commission office at (360) 902-2267 (email <a href="mailto:commission@dfw.wa.gov">commission@dfw.wa.gov</a> ) for instructions on how to join the meeting.

**Date of intended adoption:** On or after Nov. 18, 2022 (Note: This is **NOT** the **effective** date)

**Submit written comments to:**

Name: Theresa Nation

Address: P.O. Box 43200 Olympia, WA 98504-3200

Email: [ShorelineStabilizationRule@PublicInput.com](mailto:ShorelineStabilizationRule@PublicInput.com)

Fax: (360) 902-2946 Attn: Theresa Nation

Other: Submit comments online at <https://publicinput.com/ShorelineStabilizationRule> or by phone at 855-925-2802 Project code 2265

By (date) Oct. 31, 2022

**Assistance for persons with disabilities:**

Contact WDFW ADA Coordinator

Phone: (360) 902-2349

Fax: (360) 902-2946 Attn: Theresa Nation

TTY: (360) 902-2207

Email: [ADAProgram@dfw.wa.gov](mailto:ADAProgram@dfw.wa.gov)

Other:

By (date) Oct. 31, 2022

**Purpose of the proposal and its anticipated effects, including any changes in existing rules:** The Washington Department of Fish and Wildlife (WDFW) proposes to amend WAC 220-660-370 Bank Protection. The agency's purpose for this rule amendment is to implement Substitute Senate Bill 5273 (SSB 5273), passed by the legislature in 2021. Rule changes will:

- Specify that replacement of residential marine shoreline stabilization must utilize the least impacting technically feasible alternative for the protection of fish life;
- Identify alternatives from most to least preferred;
- Specify that a site assessment and alternatives analysis report prepared by a qualified professional is required as part of an application for a Hydraulic Project Approval (HPA) permit for this type of project;
- Identify mandatory report elements; and
- Establish procedures for emergency and expedited shoreline stabilization permits.

Hydraulic Code Rules in chapter 220-660 WAC, implementing Chapter 77.55 RCW, are significant legislative rules under RCW 34.05.328.

**Reasons supporting proposal:** WDFW is proposing rule amendments implementing SSB 5273 (Laws of 2021, Ch. 279). SSB 5273 added new requirements for Hydraulic Project Approval (HPA) permitting. Many of the proposed changes directly incorporate language or requirements from SSB 5273. The new requirements are similar to those already in WAC 220-660-370 that apply to new shoreline stabilization and waterward replacement or rehabilitation of existing shoreline stabilization. SSB 5273 specifically applies those requirements to replacement of residential shoreline stabilization. In addition, WDFW has

developed procedural language regarding how emergency and expedited projects are handled in order to achieve the least impacting technically feasible alternative, as already required in statute and in rule. This new language will help provide clarity for both HPA applicants and agency staff.

**Statutory authority for adoption:** RCW 77.04.012, 77.12.047, 77.55.021, 77.55.231, 34.05.328, and SSB 5273 (Laws of 2021, chapter 279).

**Statute being implemented:** Chapter 77.55 RCW Construction Projects in State Waters

**Is rule necessary because of a:**

- Federal Law?  Yes  No  
Federal Court Decision?  Yes  No  
State Court Decision?  Yes  No

If yes, CITATION:

**Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters:**

**Type of proponent:**  Private  Public  Governmental

**Name of proponent:** (person or organization) Washington Department of Fish and Wildlife, Habitat Program, Protection Division

**Name of agency personnel responsible for:**

	Name	Office Location	Phone
Drafting:	Theresa Nation	1111 Washington St. SE Olympia, WA 98501	(360) 902-2562
Implementation:	Theresa Nation	1111 Washington St. SE Olympia, WA 98501	(360) 902-2562
Enforcement:	Kelly Still	1111 Washington St. SE Olympia, WA 98501	(360) 902-2605

**Is a school district fiscal impact statement required under [RCW 28A.305.135](#)?**

Yes  No

If yes, insert statement here:

The public may obtain a copy of the school district fiscal impact statement by contacting:

Name:  
Address:  
Phone:  
Fax:  
TTY:  
Email:  
Other:

**Is a cost-benefit analysis required under [RCW 34.05.328](#)?**

Yes: A preliminary cost-benefit analysis may be obtained by contacting:

Name: Theresa Nation  
Address: 1111 Washington St. SE Olympia, WA 98501  
Phone: (360) 902-2562  
Fax: (360) 902-2946 Attn: Theresa Nation  
TTY:  
Email: HPARules@dfw.wa.gov  
Other: The preliminary cost benefit analysis can be found at  
<https://wdfw.wa.gov/about/regulations/development/shoreline-stabilization-hpa-rule>

No: Please explain:

**Regulatory Fairness Act and Small Business Economic Impact Statement**

Note: The [Governor's Office for Regulatory Innovation and Assistance \(ORIA\)](#) provides support in completing this part.

**(1) Identification of exemptions:**

This rule proposal, or portions of the proposal, **may be exempt** from requirements of the Regulatory Fairness Act (see [chapter 19.85 RCW](#)). For additional information on exemptions, consult the [exemption guide published by ORIA](#). Please check the box for any applicable exemption(s):

This rule proposal, or portions of the proposal, is exempt under [RCW 19.85.061](#) because this rule making is being adopted solely to conform and/or comply with federal statute or regulations. Please cite the specific federal statute or regulation this rule is being adopted to conform or comply with, and describe the consequences to the state if the rule is not adopted.

Citation and description:

This rule proposal, or portions of the proposal, is exempt because the agency has completed the pilot rule process defined by [RCW 34.05.313](#) before filing the notice of this proposed rule.

This rule proposal, or portions of the proposal, is exempt under the provisions of [RCW 15.65.570\(2\)](#) because it was adopted by a referendum.

This rule proposal, or portions of the proposal, is exempt under [RCW 19.85.025\(3\)](#). Check all that apply:

- |   |   |
|---|---|
| <input type="checkbox"/> <a href="#">RCW 34.05.310</a> (4)(b)<br>(Internal government operations)         | <input checked="" type="checkbox"/> <a href="#">RCW 34.05.310</a> (4)(e)<br>(Dictated by statute)   |
| <input type="checkbox"/> <a href="#">RCW 34.05.310</a> (4)(c)<br>(Incorporation by reference)             | <input type="checkbox"/> <a href="#">RCW 34.05.310</a> (4)(f)<br>(Set or adjust fees)   |
| <input checked="" type="checkbox"/> <a href="#">RCW 34.05.310</a> (4)(d)<br>(Correct or clarify language) | <input checked="" type="checkbox"/> <a href="#">RCW 34.05.310</a> (4)(g)<br>((i) Relating to agency hearings; or (ii) process requirements for applying to an agency for a license or permit) |

This rule proposal, or portions of the proposal, is exempt under [RCW 19.85.025\(4\)](#) (does not affect small businesses).

This rule proposal, or portions of the proposal, is exempt under RCW \_\_\_\_\_.

Explanation of how the above exemption(s) applies to the proposed rule: Some aspects of the rule proposal correct or clarify language without changing its effect are exempt. Other aspects are dictated by statute or relate to process requirements for applying for an HPA permit.

**(2) Scope of exemptions:** *Check one.*

The rule proposal is fully exempt (*skip section 3*). Exemptions identified above apply to all portions of the rule proposal.

The rule proposal is partially exempt (*complete section 3*). The exemptions identified above apply to portions of the rule proposal, but less than the entire rule proposal. Provide details here (consider using [this template from ORIA](#)): This rule proposal amends only one section of WAC. Aspects of the proposal that incorporate requirements dictated by RCW 77.55.231 are exempt under RCW 34.05.310(4)(e). Aspects that modify terms or wording for consistency without changing the effect of the rule are exempt under RCW 34.05.310(4)(d). Aspects that specify the process for applying for an emergency or expedited HPA are exempt under RCW 34.05.310(4)(g). The portion of the rule that is not exempt is the requirement that a qualified professional must prepare a site assessment, alternatives analysis and design rationale report when applying for an HPA permit for replacement or rehabilitation of residential marine shoreline stabilization.

The rule proposal is not exempt (*complete section 3*). No exemptions were identified above.

**(3) Small business economic impact statement:** *Complete this section if any portion is not exempt.*

If any portion of the proposed rule is **not exempt**, does it impose more-than-minor costs (as defined by RCW 19.85.020(2)) on businesses?

No Briefly summarize the agency's minor cost analysis and how the agency determined the proposed rule did not impose more-than-minor costs. \_\_\_\_\_

Yes Calculations show the rule proposal likely imposes more-than-minor cost to businesses and a small business economic impact statement is required. Insert the required small business economic impact statement here:

**CHAPTER 1 INTRODUCTION**

This report evaluates the potential costs to businesses of compliance with a Washington State Department of Fish and Wildlife (WDFW) proposed rule that updates Washington State's Hydraulic Code to clarify how residential shoreline property owners should comply with recent legislation regarding residential marine shoreline stabilization.<sup>1</sup> This Small Business Economic Impact Statement (SBEIS) was developed in accordance with the Regulatory Fairness Act (RFA), Revised Code of Washington (RCW) Section 19.85 to determine whether the proposed rule would result in more than minor and disproportionate cost impacts on small businesses. The primary sources of information for this analysis include the following:

- Information gathered through outreach to county and municipal planners, businesses providing the services required by the proposed rule, and residential property owners who have experience with marine shoreline stabilization replacement;
- County and municipal Shoreline Master Program (SMP) documents;

<sup>1</sup> This report uses the term "shoreline stabilization" to refer broadly to the various shoreline interventions that are used to prevent or reduce erosion of the shoreline and protect upland property and structures, including passive or nature-based techniques, soft shore techniques, and hard structures such as bulkheads.



- Tax parcel data identifying land use types along marine shorelines;
- Data identifying location of existing shoreline stabilization along the marine shoreline; and
- Historical Hydraulic Project Approval (HPA) permit data provided by WDFW.

### 1.1 BACKGROUND

Washington State's Hydraulic Code (WAC 220-660-370) outlines requirements for shoreline bank protection in saltwater (i.e., marine) waters of the state in order to protect fish life from the habitat alteration that can result from certain types of shoreline protection. The existing requirements specify that a person wishing to place *new* shoreline protection, or replace existing protection with *protection that extends waterward of the existing protection*, utilize the least impacting technically feasible protection technique, and include a site assessment, alternatives analysis, and design rationale completed by a qualified professional in their permit application. In 2021 the State Legislature passed Substitute Senate Bill 5273, which amends RCW 77.55.231 to extend these requirements to the *replacement* of existing shoreline stabilization on residential properties. WDFW is now updating WAC 220-660-370 to be consistent with RCW 77.55.231, and to provide additional clarification with respect to the requirements.

### 1.2 SCOPE OF PROPOSED RULE

The proposed rule affects activities occurring on residential properties along Washington's marine shorelines, including the shorelines of Puget Sound, the Strait of Juan de Fuca, the outer coast, and along coastal estuaries. It does not change existing requirements with respect to commercial or other types of properties, nor does it affect activities occurring on residential properties along non-marine shorelines (e.g., rivers, ponds, or inland lakes). The proposed rule specifically addresses the requirements related to the *replacement or rehabilitation* of existing shoreline stabilization, and does not change the requirements for installation of new structures, or replacement of existing structures where the replacement occurs waterward of the existing structure.

### 1.3 BASELINE FOR THE SBEIS

RCW 77.55.231 requires that residential property owners on all marine shorelines of Washington State that wish to replace existing shoreline stabilization use the least impacting technically feasible alternative and submit a site assessment and alternatives analysis as part of their permit application package. In certain jurisdictions, county and municipal Shoreline Master Programs (SMPs) already specify that a qualified professional must be used to develop those reports. Although the requirement to use a qualified professional is not specified for all jurisdictions, interviews with county and municipal planners conducted in July and August 2022 suggest that it would be impossible or very challenging for an individual without the relevant professional background to fulfill the necessary requirements.<sup>2</sup> Therefore, residential applicants looking to replace their shoreline stabilization in the counties where SMPs do not describe that a qualified professional must be hired for the analyses are still likely to hire qualified professionals for this purpose.

### 1.4 PROPOSED RULE REQUIREMENTS

The proposed rule would update WAC 220-660-370 to implement the RCW 77.55.231 requirement for HPA permit applicants for residential marine shoreline stabilization or armoring replacement or rehabilitation projects. Specifically, the proposed rule includes the following:

- Revises existing language in WAC 220-660-370 to require HPA applicants to use the least impacting technically feasible bank protection alternatives for *replacement or rehabilitation of residential* bank protection projects, and specifies preferences for available alternatives;<sup>3</sup>
- Specifies the reporting elements that must be included in an HPA application for residential replacement projects (outlined in Section 1.2.1 of this SBEIS);

<sup>2</sup> Personal and email communication with representatives of county and municipal planning departments conducted in July and August 2022.

<sup>3</sup> WAC 220-660-370(3)(b) provides common alternatives for (1) new bank protection and (2) replacement or rehabilitation of bank protection that extends waterward of an existing bank protection structure projects. The proposed rule would modify WAC 220-660-370 to include common alternatives for replacement or rehabilitation of residential bank protection projects, adapted from RCW Section 77.55.231.

- Requires that HPA permit applicants for replacement or rehabilitation of residential bank protection provide a site assessment, alternatives analysis and design rationale for the proposed method *that is prepared by a qualified professional*; and
- Specifies procedures for how expedited or emergency shoreline stabilization permit applications will be processed.

As previously described, RCW 77.55.231 constitutes a pre-existing requirement regarding replacement of residential shoreline stabilizations; that is, the requirements of RCW 77.55.231 are part of the baseline of this analysis. Thus, any costs resulting from the requirements specified in RCW 77.55.231, which include the requirement that any person wishing to replace residential marine shoreline stabilization “use the least impacting technically feasible bank protection alternative for the protection of fish life” and “must conduct a site assessment to consider the least impactful alternatives...and should propose a hard armor technique only after considering site characteristics such as the threat to major improvements, wave energy, and other factors in an analysis of alternatives”, are baseline costs of compliance with these pre-existing requirements. The procedural language on the processing of emergency and expedited permits is exempt from Regulatory Fairness Act analysis in RCW 34.05.210(4)(g). The focus of this analysis is on the incremental costs of the proposed rule that are above and beyond the baseline costs.

The proposed rule is focused specifically on replacement or rehabilitation projects for protecting residential shoreline properties. Accordingly, the rule making applies only to residential property shoreline owners with existing shoreline stabilization in place. The new requirement specified in the proposed rule is that, when existing stabilization requires replacement or rehabilitation, the permit applicants must hire a qualified professional to complete the site assessment and alternatives analysis. Importantly, the requirement to conduct a site assessment and alternatives analysis is a baseline requirement for these sites; however, RCW 77.55.231 does not specify the need to rely on a qualified professional for the analysis and reporting. Thus, the requirement in the proposed rule to employ a qualified professional may generate incremental compliance costs.

## CHAPTER 2 SMALL BUSINESS IMPACTS

### 2.1 POTENTIALLY AFFECTED SMALL BUSINESSES

Absent detailed data on businesses that own residential properties along marine shorelines of Washington, we rely upon the best available information regarding the potential extent of businesses affected by the rule. We begin by describing the extent of shoreline properties that may be affected by the proposed rule, and then describe the universe of businesses that could incur costs as a result of the rule.

Owners of marine shoreline property in Washington, whether individuals or businesses, are only affected by the proposed rule under the following circumstances:

- The property is identified as residential;
- The property already has existing shoreline stabilization in place; and
- Existing requirements with respect to the local jurisdictions’ SMPs do not already require the use of a qualified professional to develop the requisite site assessment and alternatives analysis.

Available data suggest 64.3 percent of Washington’s marine shoreline parcels (31,823 tax parcels) are affirmatively identified as residential tax parcels, most of which are single family residential.<sup>4,5</sup> Exhibit ES-1 identifies the tax parcels along the marine shoreline identified as residential. For residential property owners, costs are only incurred when and if there is shoreline stabilization on their property that needs to be repaired or replaced. Of the 31,823 residential tax parcels along the Washington’s marine shorelines, 8,260 (26 percent) are identified as being 100 percent modified by some type of anthropogenic intervention, while another 20,683 are identified as having some “non-zero” extent of modification.<sup>6</sup> Finally, even in cases where residential property has existing shoreline stabilization that may require replacement, a substantial portion of Washington’s marine shoreline is already subject to the requirements that are being clarified in the

<sup>4</sup> For this analysis, we identify the marine shoreline as including the extent of Washington’s marine shoreline where marine shoreline protection has been identified in existing data. This includes the coastlines of Puget Sound, the Strait of Juan de Fuca, the Pacific Coast, and major coastal estuaries.

<sup>5</sup> Private geospatial data identifying existing marine shoreline parcels provided via secure server to IEC by WDFW on May 23, 2022. Residential parcels are identified using the property type code included in the data. Of the parcels within the area of focus, 4 percent do not include a property type code, and may also be residential.

<sup>6</sup> Publicly accessible geospatial data from the Washington State Shorezone Inventory. Developed by the Nearshore Habitat Program between 1994 and 2000. Downloaded July 2022. Available at: <https://www.dnr.wa.gov/programs-and-services/aquatics/aquatic-science/nearshore-habitat-inventory>.

proposed rule (i.e., the requirement for use of a qualified professional to develop the site assessment and alternatives analysis). Specifically, five counties and 13 municipalities specifically require that a qualified professional be used to develop the requisite analyses. Residential property owners located in these jurisdictions are not expected to incur costs due to the rule.

While nine counties and 33 municipalities do not specify this requirement, interviews with county and municipal planners conducted in July and August 2022 suggest that it would be impossible or very challenging for an individual without the relevant professional background to fulfill the necessary requirements. Therefore, residential applicants looking to replace their shoreline stabilization in the counties where SMPs do not describe that a qualified professional must be hired for the analyses are still likely to hire qualified professionals for this purpose. Residential property owners (potentially including small businesses) within these jurisdictions needing to repair or rehabilitate shoreline stabilization are unlikely to, but could potentially, incur costs as a result of the rule.

Costs of residential shoreline stabilization projects are generally borne by the property owners, which are frequently residents (i.e., households) and not businesses. In some cases, however, businesses may own residential properties or otherwise bear costs for replacing or rehabilitating residential shoreline stabilizations. Specifically, businesses that may incur costs as a result of the proposed rule may include those within the following North American Industry Classification System (NAICS) codes defining economic sectors:

- 813990 - *Business, Professional, Labor, Political, and Similar Organizations/Other Similar Organizations* (except Business, Professional, Labor, and Political Organizations): Includes (but is not limited to) property owners associations, condominium and homeowners' associations, and tenants' associations.<sup>7</sup>
- 531110 – *Lessors of Residential Buildings and Dwellings*

Additionally, businesses that are run out of an individual's residence may be affected by the rule. There are a wide range of business types that may fit this description and data are not available identifying the numbers and types of businesses associated with residential shoreline properties.

Data limitations do not allow for a specific enumeration and identification of the potentially affected businesses. Specific limitations include:

- NAICS code 813990 (*Other Similar Organizations*) includes a substantially greater universe of businesses than the property owners' associations that are of interest to this analysis;
- Businesses in NAICS code 53110 (*Lessors of Residential Buildings and Dwellings*) do not comprehensively pay Business and Occupation (B&O) tax to the Department of Revenue, and thus are not comprehensively tracked by the agency;<sup>8</sup>
- It is not possible to isolate businesses that are located on marine shorelines (which are the only ones potentially affected by the rule), so any counts of these businesses would grossly overstate the number of potentially affected businesses; and finally
- Data are not available to identify businesses being operated out of residential homes.

As described previously, most residential property owners with existing shoreline stabilization are likely already using qualified professionals to develop site assessments and alternatives analyses and are unlikely to incur costs as a result of the proposed rule. Nonetheless, there is some potential that individual property owners outside of areas where qualified professionals are required may incur the costs of utilizing a professional as a result of the proposed rule, and these property owners may include businesses.

Data limitations preclude the specific identification of businesses that have the potential to incur costs as a result of the rule. Within the counties with marine shorelines, including those where use of a qualified professional for site assessment and alternatives analysis is explicitly already required, there are 12,279 businesses representing NAICS 813990 (organizations

---

<sup>7</sup> Homeowners' associations, tenants' associations, and property owners' associations would only be considered businesses to the extent they are incorporated. RCW 64.38.010 (Definitions) defines HOAs as a "corporation, *unincorporated association*, or other legal entity, each member of which is an owner of residential real property located within the association's jurisdiction, as described in the governing documents, and by virtue of membership or ownership of property is obligated to pay real property taxes, insurance premiums, maintenance costs, or for improvement of real property other than that which is owned by the member." The inclusion of "unincorporated association" within the definition suggests that not all HOAs are considered businesses in Washington.

<sup>8</sup> Specifically, businesses offering long-term rentals are exempted from paying B&O tax (Personal communication with the Department of Revenue on July 8, 2022.)

including homeowners' association) and 4,547 representing NAICS 531110 (lessors of residential properties).<sup>9</sup> Of this universe of businesses in counties with marine shorelines, over 99 percent of those businesses are small (i.e., employ fewer than 50 people). Importantly, these businesses may be located anywhere within the county, are not specifically located on the marine shoreline, and are not specifically located on residential property. Data on home-based businesses are not available. This analysis conservatively assumes that all home-based businesses employ fewer than 50 individuals and are small.

“Minor cost” is defined in RCW 19.85.020 as, “a cost per business that is less than 0.3 percent of annual revenue or income or one hundred dollars, whichever is greater, or one percent of annual payroll.” Data limitations prevent identification of the average annual revenues for the potentially affected businesses. As such, this analysis conservatively assumes a minor cost threshold of \$100, which is more likely to underestimate than overestimate the minor cost threshold for a given business.

**EXHIBIT 1. NUMBER OF BUSINESSES, AVERAGE ANNUAL REVENUES, AND MINOR COST THRESHOLD FOR RELEVANT INDUSTRIES - PUGET SOUND AND PACIFIC OCEAN-ADJACENT COUNTIES**

TYPE OF BUSINESS (NAICS CODE) <sup>1</sup>	NUMBER OF BUSINESSES ON RESIDENTIAL MARINE-FRONTING PROPERTY	NUMBER OF BUSINESSES IN MARINE-ADJACENT COUNTIES <sup>2</sup>	PERCENTAGE OF BUSINESSES CONSIDERED SMALL <sup>3</sup>	AVERAGE ANNUAL REVENUES (2021\$)	MINOR COST THRESHOLD
813990 - Other similar organizations, including homeowners' and property owners' associations <sup>4</sup>	Unknown	12,279	>99 percent	Unknown	\$100
531110 - Lessors of Residential Buildings and Dwellings	Unknown	4,547	>99 percent	Unknown	\$100
Home-based business	Unknown	Unknown	Assume 100 percent	Unknown	\$100
<p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>1. Type of business as identified by primary North American Industry Classification System (NAICS) code. Relevant business types identified through interviews with county and municipal planners conducted in July and August 2022.</li> <li>2. Represents the total number of businesses within each identified NAICS code within Washington counties with marine shorelines. Count is not limited to businesses actually located along marine shorelines, or to businesses located on residential tax parcels.</li> <li>3. Percent of businesses with &lt;50 employees based on employment data obtained from the D&amp;B Hoovers database for businesses within each NAICS code within Washington counties with marine shorelines. Count is not limited to businesses actually located along marine shorelines, or to businesses located on residential tax parcels.</li> <li>4. NAICS code includes a variety of other business/organization types that are not associated with residential property including athletic associations.</li> </ol> <p><b>Source:</b> Business records for businesses within each identified NAICS code within Washington counties with marine shorelines obtained from the D&amp;B Hoovers database on August 2, 2022, <a href="https://www.dnb.com/products/marketing-sales/dnb-hoovers.html">https://www.dnb.com/products/marketing-sales/dnb-hoovers.html</a>.</p>					

**2.2 COST OF COMPLIANCE**

Consistent with RCW 77.55.040, this analysis evaluates the relevance of the following potential categories of costs to comply with the proposed rule:

- **Reporting, recordkeeping, and other compliance requirements:** The proposed rule does not include any new reporting or recordkeeping requirements beyond what is already required by RCW 77.55.231. The sole compliance requirement that is incremental to existing regulation is the need for use of a qualified professional to conduct the site assessment and alternatives analysis.

<sup>9</sup> Business records for businesses within each identified NAICS code within Washington counties with marine shorelines obtained from the D&B Hoovers database on August 2, 2022, <https://www.dnb.com/products/marketing-sales/dnb-hoovers.html>.

- **Professional services that a small business is likely to need in order to comply with such requirements:** The rule requires residential shoreline property owners (which, in some cases, may be small businesses) to acquire professional services to support HPA applications for replacing shoreline stabilizations. The rule requires that applicants use of qualified professionals, which may be permitting facilitators, geotechnical engineers, coastal engineers, or shoreline stabilization design and construction firms, to provide site assessment and alternatives analysis support.
- **Costs required to comply with the proposed rule, including costs of equipment, supplies, labor, professional services, and increased administrative costs:** As previously described, the costs of professional services are relevant to the rule making and described in detail below.
- **Based on input received, determine whether compliance with the rule will cause businesses to lose sales or revenue:** The proposed rule making does not restrict the regulated business' economic activities or projects. Additionally, the costs of professional services, as described below, are relatively low and only incurred at a time when shoreline stabilizations need replacement. Thus, the rule making is not anticipated to affect sales or revenues of regulated businesses.

The proposed rule would only generate additional costs to residential shoreline property owners, including businesses, if, absent the rule, they would comply with existing requirements without the use of a qualified professional (e.g., by having a construction firm submit a report to document slope instability). Most residential property owners with existing shoreline stabilization are likely already using qualified professionals to develop site assessments and alternatives analyses and are unlikely to incur costs as a result of the proposed rule. To the extent that a residential shoreline property owner's use of a qualified professional results specifically from the proposed rule, this analysis identifies the costs associated with having a qualified professional complete this report.

The cost of employing a qualified professional to complete the site assessment and alternatives analysis ranges from \$3,000 to \$10,000.<sup>10</sup> This range of costs represents estimates from industry representative interviews and email communications. This range of costs is relevant to multiple project types (new armoring structure project, rehabilitation or replacement shoreline stabilization project), proposed armoring types (e.g., hard armoring, hybrid armoring, soft-shore armoring), number of considered alternatives, and residential property shoreline length. This is because the base level of geotechnical analysis and reporting is unchanged across these metrics. For the same reasons, costs are also similar whether a residential applicant is applying for a general HPA permit or an emergency or expedited permit.<sup>11</sup> The range of costs is also unlikely to differ between residential property owners who operate their property as a business and property owners who simply reside within their property.

### 2.3 ASSESSMENT OF MINOR COST

Given data limitations, the minor cost threshold for businesses potentially incurring costs due to the proposed rule (i.e., located on a residential, marine-facing parcel, having existing shoreline stabilization that requires replacement, and not already required to engage a qualified professional to develop a site assessment and alternatives analysis due to local ordinances) is assumed to be \$100. Because the minor cost threshold is the greater of \$100 or 0.3 percent of average annual revenues, this assumption is more likely to understate than overstate the minor cost threshold for these businesses.<sup>12</sup> As noted above, the cost of engaging a qualified professional to develop the requisite report could range on average from \$3,000 to \$10,000. As described previously, it is unlikely that businesses will experience new costs as a result of this rule. To the extent that a business will incur costs as a result of the proposed rule, those costs are likely to be more than minor.

<sup>10</sup> Before RCW 77.55.231 was codified, permit applicants for residential rehabilitation and replacement bank protection projects in select areas spent as low as \$1,000 to provide proof of slope instability to necessitate the proposed work. However, since RCW 77.55.231 changed the reporting requirements for these applicants, we assume that the costs to prepare these deliverables are on average no lower than \$3,000.

<sup>11</sup> Personal and email communication with representatives of firms providing shoreline stabilization-related services conducted in July 2022.

<sup>12</sup> For businesses whose true minor cost threshold is greater than \$100, this analysis would identify that the minor cost threshold has been exceeded at cost point that is lower than the true minor cost threshold. For businesses whose true minor costs are lower than \$100, \$100 is the appropriate minor cost threshold to use.

## 2.4 DISPROPORTIONATE ECONOMIC IMPACT ANALYSIS

When proposed rule changes cause more than minor costs to small businesses, the RFA (RCW 19.85.040) requires an analysis that compares the cost of compliance for small business with the cost of compliance for the ten percent of businesses that are the largest businesses required to comply with the proposed rules to determine whether the costs are considered disproportionate. As described in section 2.1, over 99 percent of the businesses operating within the counties with marine shorelines in the relevant NAICS code categories are small, and the analysis assumes that most home-based businesses are also small. As such, this analysis finds that to the extent that businesses will incur costs associated with the rule, the proposed rule is likely to disproportionately impact small businesses. Accordingly, this SBEIS identifies and documents cost mitigation strategies.<sup>13</sup>

## 2.5 COST MITIGATION STRATEGIES

RCW 19.85.030 requires that, when a rule is expected to disproportionately impact small businesses, the agency consider several methods for reducing the impact of the rule on small businesses. These methods may include decisions that were made in determining the provisions of the rule itself, or opportunities to reduce the costs of implementing the rule as written. WDFW has considered the following opportunities to limit the costs of the rule to businesses.

WDFW acknowledges that the pool of qualified professionals who possess the skills to prepare site assessment and alternatives analysis reports is limited. WDFW has partnered with Sea Grant and the Shore Friendly program to develop the *Alternatives to Bulkheads* training series. The series is geared toward shoreline planners, consultants, and marine contractors. It is WDFW's hope that training more practitioners will increase industry capacity and minimize costs by reducing the potential for project delays and/or increased costs that may result from high demand and low supply of qualified professionals. The first two units of the series were launched through the Coastal Training Program in the spring of 2022.

WDFW has chosen to apply new rule requirements only to residential shoreline stabilization replacement, mirroring the legislative changes in SSB 5273. However, the ecological impacts of replacing shoreline stabilization are accrued for all such projects, including commercial and industrial properties, and not just residential projects. Commercial and industrial shorelines are much more likely to have small business landowners than residential sites. By not expanding the rule to include commercial and industrial shorelines at this time, WDFW is taking the potential effects on small businesses into consideration.

RCW 19.85.030(2) specifies particular options that the agency must consider in mitigating rule costs. Exhibit 2 identifies each type of cost mitigation opportunity and how WDFW has considered them during this rule making process.

### EXHIBIT 2. WDFW ASSESSMENT OF COST MITIGATION OPPORTUNITIES OUTLINED IN RCW 19.85.030

RCW 19.85.030 (2) REQUIREMENTS	WDFW RESPONSE
a) Reducing, modifying, or eliminating substantive regulatory requirements	WDFW considered reducing, modifying, or eliminating substantive regulatory requirements in the proposal. The resulting requirements are limited to those necessary to align WAC 220-660 with SSB 1382 (Laws of 2021, chapter 279) and clarify the intent of the WAC.
b) Simplifying, reducing, or eliminating recordkeeping and reporting requirements	The proposed rule does not create any new recordkeeping or reporting requirements.
c) Reducing the frequency of inspections	The proposed rule does not generate any new inspection requirements.
d) Delaying compliance timetables	The new requirement of the proposed rule is intended to reduce regulatory uncertainty for the regulated community. Thus, delaying compliance timetables in this case may have the effect of increasing the time it takes for HPA approvals if applicants produce site assessments and reports that require

	additional work and iteration in order to comply with the existing requirements of RCW 77.55.231.
e) Reducing or modifying fine schedules for noncompliance	The proposed rule does not introduce fines for noncompliance.
f) Any other mitigation techniques, including those suggested by small businesses or small business advocates.	WDFW has been and will continue working with the regulated community to identify and implement actions to lessen impacts.

## 2.6 INVOLVEMENT OF SMALL BUSINESSES IN RULE-MAKING PROCESS

The proposed rule targets shoreline stabilization activities on residential properties and does not directly regulate a specific industry or group of businesses. While residential property owners may be businesses, this is generally not the case. In order to ensure due consideration of potential effects on small businesses, WDFW is taking a broad approach to outreach, communicating the objectives of the rulemaking and capturing input from diverse stakeholders. This provided opportunities for potentially affected small businesses to be involved in the rule making process. The outreach activities and events as of 9/1/2022 are summarized in Exhibit 3.

### EXHIBIT 3. WDFW OUTREACH ACTIVITIES FOR PROPOSED RULE

DATE	PERSON(S)	ACTIVITY
12/16/2021	Hydraulic Code Implementation Advisory Group (HCIAG)	Presentation and discussion on implementation of SSB 5273
1/27/2022	Consultant and contractor businesses; Sea Grant Shoreline and Coastal Planners listserve	Information regarding implementation of SSB 5273
3/10/2022	Sea Grant Shoreline Local Government Working Group	Presentation and discussion on SSB 5273 and rule making
5/12/2022	Sea Grant Shoreline Local Government Working Group	Further discussion on rule making to implement SSB 5273
5/24/2022	Tribes	Email notification of rule making initiation and overview
6/22/2022	Stakeholders and Agencies; Sea Grant Shoreline and Coastal Planners listserve	Email notification regarding publication of CR-101
8/3/2022	Tribes	Rule proposal distributed for review
8/4/2022	Fish and Wildlife Commission Habitat Committee	Introduction to rule making in response to SSB 5273
8/12/2022	Tribes	Webinar to review the rule proposal and take comments
8/18/2022	Selected stakeholders	Rule proposal distributed for preliminary review
<p><b>Note:</b> Information was not available to directly identify businesses operating on residential properties along marine shorelines that may be affected by the proposed rule. Instead, WDFW focused outreach on entities that communicate and provide assistance directly to residential shoreline property owners with respect to the Hydraulic Code, some of whom would presumably be the small businesses potentially affected by the proposed rule.</p>		

## 2.7 JOBS CREATED OR LOST

Through the requirement that residential property owners wishing to replace or rehabilitate existing marine shoreline stabilization utilize a qualified professional to develop a site assessment and alternatives analysis, the rule has the potential to

<sup>13</sup> The RFA provides several options for comparing costs, including: (a) Cost per employee; (b) Cost per hour of labor; (c) Cost per one hundred dollars of sales (RCW 19.85.040(1)). In the absence of sufficient data to calculate disproportionate impacts, an agency whose rule imposes more than minor costs must mitigate the costs to small businesses, where legal and feasible, as defined in this chapter (RCW 19.85.030(4)).

impose costs on small businesses operating on residential marine parcels. These costs would only be incremental costs of the proposed rule if the requirement to use a qualified professional to develop a site assessment and alternatives analysis is not already in place through the local government's SMP and would only be incurred in the event that existing shoreline stabilization requires replacement or rehabilitation. As repair and replacement for a given shoreline stabilization project occurs infrequently, these costs are generally anticipated to be incurred one time, or infrequently (rather than being ongoing costs). Although the costs are more than minor, they are relatively low and would occur only infrequently, and it is thus unlikely that the costs incurred would result job loss.

A requirement that a qualified professional be used to develop a site assessment and alternatives analysis may result in an increased demand for those services. Several individuals interviewed identified that there exists a relatively limited pool of qualified individuals to perform these services in the region. To the extent that increased demand for these services results in qualified professional firms hiring additional staff, that creation of jobs could be considered an indirect effect of the rule. However, whether this would occur, and the number of businesses or jobs affected, is uncertain.

## 2.8 SUMMARY CONCLUSIONS

This rule making applies specifically to residential shoreline property owners who need to replace existing shoreline stabilization. The rule making requires this population, which may include small businesses, to employ a qualified professional in developing site assessments and alternatives analyses. It is unlikely that this rule will generate costs and, if it does, the costs to small businesses are likely to be very limited for the following reasons:

- Residential shoreline property owners include but are not limited to businesses. However, it is likely that businesses that do own residential shoreline properties are small.
- Shoreline property owners are required to comply with existing requirements under RCW 77.55.231, including the need to develop a compliant site assessment and alternatives analysis. The new rule making does not generate requirements for new reports.
- Many existing SMPs for counties and municipalities require the use of a qualified professional to develop these reports. In these cases, the new rule making does not impose any new requirements.
- While some property owners may attempt to accomplish the analysis and reporting requirements without the use of a qualified professional, outreach and interviews conducted in the context of this SBEIS identify that most of the time, property owners recognize a need to rely upon the expertise of a qualified professional, even absent the requirement being written into regulation.
- The rule making may reduce the costs of HPA permits for the subset of residential property owner that would attempt to comply with reporting requirements without the use of a qualified profession absent this rule making. This is because not using a qualified professional may result in non-compliant reports and analyses that result in comments from DFW and require re-analysis and revision. Use of a qualified professional reduces the risk of submitting non-compliant reports the first time.

Available data do not allow for a specific identification of the number of small businesses operating on marine shoreline residential properties that may experience costs as a result of the rule, or the extent to which those businesses are small. Employment data for businesses potentially operating on residential parcels within the affected counties suggest 99 percent of these businesses are small. It is unlikely that residential property owners, including small businesses, will incur costs as a result of this rule. However, to the extent that businesses do incur these costs, the costs would be borne disproportionately by small businesses, and are likely to be more than minor.

The public may obtain a copy of the small business economic impact statement or the detailed cost calculations by contacting:

Name: Theresa Nation

Address: 1111 Washington St. SE Olympia, WA 98501

Phone: (360) 902-2562

Fax: (360) 902-2946 Attn: Theresa Nation

TTY:

Email: [HPArules@dfw.wa.gov](mailto:HPArules@dfw.wa.gov)

Other: Please refer to the full SBEIS document with appendices found at

<https://wdfw.wa.gov/about/regulations/development/shoreline-stabilization-hpa-rule>



**Date:** 9/20/2022

**Name:** Annie Szvetecz

**Title:** Agency Rules Coordinator

**Signature:**

A handwritten signature in black ink, appearing to read "Annie Szvetecz". The signature is written in a cursive style with a horizontal line at the end.

**WAC 220-660-370 ((Bank protection)) Shoreline stabilization in saltwater areas.** Appropriate methods to assess the need for marine ((bank protection)) shoreline stabilization and, if needed, to design marine ((bank protection)) shoreline stabilization are available in the department's *Marine Shoreline Design Guidelines*, as well as other published manuals and guidelines.

(1) **Description:** A broad spectrum of ((bank protection)) shoreline stabilization techniques can be applied to protect property. These range from ((natural)) passive techniques that require minimal or no engineering ((to)), engineered soft shore protection ((to)), and hard ((shore)) shoreline armor. ((Natural)) Passive techniques include planting native vegetation, improving drainage, and relocating ((structures. Natural)) buildings, roads, and improvements (e.g., wells, utilities, septic fields, and the like). Passive techniques typically preserve the natural condition of the shore and have few to no negative impacts on fish life. Soft shore techniques ((include)) such as log placement, beach nourishment, resloping the bank, and re-vegetation can provide erosion protection using strategically placed natural materials while allowing beach processes and fish habitat to remain intact. Conventional hard techniques include bulkheads, seawalls, revetments and ((retaining walls)) related structures, which are designed to preclude shoreline migration and bank erosion. Each type of approach has varying degrees of impact. In general, ((natural)) passive techniques result in the fewest impacts to fish life and hard ((armor)) techniques have the most impacts.

(2) **Fish life concerns:** Conventional hard techniques as well as some soft shore techniques can physically alter the beach and disrupt beach processes. This alteration can cause a loss of the beach spawning habitat for Pacific sand lance and surf smelt. These forage fish species are a primary food source for some adult salmon species. This alteration can also reduce beach complexity, the presence of marine riparian vegetation including overhanging vegetation alongshore that produces terrestrial insects that are eaten by juvenile salmon. To protect fish life, the department protects both beaches where saltwater habitats of special concern occur and the beach processes that form and maintain this habitat.

(3) ((Bank protection)) **Alternative selection:**

(a) To ensure the protection of fish life, a person must use the least impacting technically feasible shoreline stabilization alternative. For the purpose of this section, "feasible" means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. A person should propose a hard armor technique only after considering site characteristics such as the threat to major improvements, wave energy, and other factors in an alternatives analysis.

(b) Common alternatives for both new shoreline stabilization and the replacement or rehabilitation of shoreline stabilization that extends waterward of an existing shoreline stabilization structure are, from most preferred to least preferred:

- (i) Remove any existing shoreline stabilization structure and restore the beach;
- (ii) Control upland drainage;
- (iii) Protect, enhance, and replace native vegetation;

(iv) Relocate buildings and improvements;  
(v) Construct a soft structure;  
(vi) Construct upland retaining walls;  
(vii) Construct a hard structure landward of the ordinary high water line; and  
(viii) Construct a hard structure at the ordinary high water line.

(c) Common alternatives for replacement or rehabilitation of residential shoreline stabilization are, from most preferred to least preferred:

(i) Remove the existing shoreline stabilization structure and restore the beach;

(ii) Remove the existing shoreline stabilization structure and install native vegetation;

(iii) Remove the existing shoreline stabilization structure and control upland drainage;

(iv) Remove the existing shoreline stabilization structure and replace it with a soft structure constructed of natural materials, including bioengineering;

(v) Remove the existing hard structure and construct upland retaining walls;

(vi) Remove the existing hard structure and replace it landward with another hard structure, preferably at or above the ordinary high water line; or

(vii) Remove the existing hard structure and replace it in the same footprint with another hard structure.

(d) Except as provided in (f) of this subsection, HPA applications for the following types of projects must include a site assessment, alternatives analysis and design rationale for the proposed method(s) prepared by a qualified professional (Qualified Professional's Report):

(i) New shoreline stabilization;

(ii) Replacement or rehabilitation of shoreline stabilization that extends waterward of an existing shoreline stabilization structure; and

(iii) Replacement or rehabilitation of residential shoreline stabilization.

(e) The applicant must submit the Qualified Professional's Report to the department as part of a complete application for an HPA that includes:

(i) An assessment of the level of risk to existing buildings, roads, or services being threatened by the erosion;

(ii) Evidence of erosion and/or slope instability to warrant the stabilization work;

(iii) Alternatives considered and the technical rationale specific to the shoreline stabilization technique proposed;

(iv) An analysis of the benefits and impacts associated with the chosen protection method; and

(v) An explanation of the method chosen, design parameters, types of materials, quantities, staging, and site rehabilitation.

(f) The department may grant an exemption to the Qualified Professional's Report required under (d) and (e) of this subsection based on the scale and nature of the project for the following:

(i) Projects for the removal of an existing shoreline stabilization structure and restoration of the beach.

(ii) Projects employing passive techniques such as controlling upland drainage or planting native vegetation.

(iii) Other projects as assessed by the department.

(g) Emergency or expedited applications submitted under RCW 77.55.021 (12), (14), or (16) that do not include a site assessment and alternatives analysis report should identify the work necessary to address the immediate situation authorized under RCW 77.55.021. A site assessment and alternatives analysis report must be submitted within 90 days from the permit issuance unless the department issues an exemption. After consideration of the assessment and analysis report, if the department determines that shoreline stabilization work conducted under the emergency or expedited permit is not the least impactful technically feasible alternative, the applicant may be required to replace the structure with one that is the least impactful technically feasible alternative.

(4) Shoreline stabilization design:

(a) If the ordinary high water line (OHWL) has changed since an existing hard (~~bank protection~~) shoreline stabilization structure was built, and OHWL reestablishes landward of the structure, the department will consider this reestablished OHWL to be the existing OHWL for permitting purposes. If an HPA application is submitted for repairs within three years of the breach, the (~~bank protection structure may be repaired or replaced in the original footprint~~) prior OHWL may be considered for permitting purposes.

(b) (~~A person must use the least impacting technically feasible bank protection alternative. A person should propose a hard armor technique only after considering site characteristics such as the threat to major improvements, wave energy, and other factors in an alternatives analysis. The common alternatives below are in order from most preferred to least preferred:~~

- ~~(i) Remove the bank protection structure;~~
- ~~(ii) Control upland drainage;~~
- ~~(iii) Protect, enhance, and replace native vegetation;~~
- ~~(iv) Relocate improvements or structures;~~
- ~~(v) Construct a soft structure;~~
- ~~(vi) Construct upland retaining walls;~~
- ~~(vii) Construct hard structure landward of the OHWL; and~~
- ~~(viii) Construct hard structure at the OHWL.~~

~~(e)) The construction of all (~~bank protection~~) shoreline stabilization must not result in a permanent loss of surf smelt or Pacific sand lance spawning beds.~~

~~((d) An HPA application for new bank protection, or the replacement or rehabilitation of bank protection that extends waterward of an existing bank protection structure must include a site assessment, alternatives analysis and design rationale for the proposed method prepared by a qualified professional. The department may grant an exemption depending on the scale and nature of the project. The applicant must submit the qualified professional's report to the department as part of a complete application for an HPA that includes:~~

- ~~(i) An assessment of the level of risk to existing buildings, roads, or services being threatened by the erosion;~~
- ~~(ii) Evidence of erosion and/or slope instability to warrant the stabilization work;~~
- ~~(iii) Alternatives considered and the technical rationale specific to the bank protection technique proposed;~~
- ~~(iv) An analysis of the benefits and impacts associated with the chosen protection method; and~~
- ~~(v) An explanation of the method chosen, design parameters, types of materials, quantities, staging, and site rehabilitation.~~

~~(e-))~~ (c) The department may require the design of hard (~~bank protection~~) shoreline stabilization structures to incorporate beach nourishment, large woody material or native vegetation as mitigation.

~~((4) Bank protection)~~ **(5) Shoreline stabilization location:**

(a) Locate the waterward face of a new hard (~~bank protection~~) shoreline stabilization structure at or above the OHWL. Where this is not feasible because of geological, engineering, or safety concerns, the hard (~~bank protection~~) structure may extend waterward of the OHWL the least distance needed to excavate for footings or place base rock, but no greater than six feet. Soft shoreline methods that allow beach processes and habitat to remain intact may extend waterward of the OHWL.

(b) Do not locate the waterward face of a replacement or repaired hard (~~bank protection~~) shoreline stabilization further waterward than the structure it is replacing. Where removing the existing hard (~~bank protection~~) structure will result in environmental degradation such as releasing deleterious material or problems due to geological, engineering, or safety concerns, the department will authorize the replacement (~~bank protection~~) shoreline stabilization to extend waterward of, but directly abutting, the existing structure. In these instances, a person must use the least-impacting type of structure and construction method.

~~((5) Bank protection)~~ **(6) Shoreline stabilization construction:**

(a) The department requires that plans submitted as part of a complete application show the horizontal distances of the structure(s) from permanent local benchmark(s) (fixed objects). Each horizontal distance shown must include the length and compass bearing from the benchmark to the waterward face of the structure(s). The benchmark(s) must be located, marked, and protected to serve as a post-project reference for at least ~~(ten)~~ 10 years from the date the HPA application is submitted to the department.

(b) A person must not conduct project activities when tidal waters cover the work area including the work corridor, except the area occupied by a grounded barge.

(c) No stockpiling of excavated materials containing silt, clay, or fine-grained soil is approved waterward of the OHWL.

(d) The department may allow stockpiling of sand, gravel, and other coarse material waterward of the OHWL. Place this material within the designated work corridor. Remove all excavated or stockpiled material from the beach within ~~(seventy-two)~~ 72 hours of construction.

(e) Backfill all trenches, depressions, or holes created during construction that are waterward of the OHWL before they are filled by tidal waters.



Washington  
Department of  
**FISH and  
WILDLIFE**

---

## **Hydraulic Code Rules Chapter 220-660 WAC Incorporating Elements of SSB 5273 into HPA Rules**

WAC 220-660-370 Bank protection in saltwater areas [Renamed]

### **Regulatory Analysis**

Incorporating:

**Least Burdensome Alternatives Analysis**

**Administrative Procedure Act Determinations**

Washington Department of Fish and Wildlife  
Habitat Program  
Protection Division  
Olympia, Washington

DRAFT Oct. 21, 2022

---

***Mission***  
***of the***  
***Washington Department of Fish and Wildlife***

*To preserve, protect and perpetuate fish, wildlife, and ecosystems  
while providing sustainable fish and wildlife  
recreational and commercial opportunities.*

Persons with disabilities who need to receive this information in an alternative format or who need reasonable accommodations to participate in WDFW-sponsored public meetings or other activities may contact Civil Rights Compliance Coordinator by phone (360-902-2575) or cell (360) 870-6175, TTY (711), or by email at [Title6@dfw.wa.gov](mailto:Title6@dfw.wa.gov). For more information, see [http://wdfw.wa.gov/accessibility/reasonable\\_request.html](http://wdfw.wa.gov/accessibility/reasonable_request.html).

---

## SECTION 1: INTRODUCTION

The state Legislature gave the Washington Department of Fish and Wildlife (department) the responsibility to preserve, protect, and perpetuate all fish and shellfish resources of the state. To help achieve this mandate, the Legislature passed a state law in 1943 called “Protection of Fish Life.” Now titled “Construction Projects in State Waters” and codified as Chapter 77.55 Revised Code of Washington (RCW), the entire text of the statute can be found at:

<http://app.leg.wa.gov/RCW/default.aspx?cite=77.55> .

Under the authority of Chapter 77.55 RCW, the department issues a construction permit called a Hydraulic Project Approval (HPA). The sole purpose of the HPA is to protect fish life from construction and other work that uses, diverts, obstructs, or changes the natural flow or bed of state waters. HPAs are site-specific, meaning that provisions are tailored to the site conditions and fish species that might be affected by each project. The HPA contains provisions that a permittee must follow in order to mitigate<sup>1</sup> impacts to fish life caused by the project.

The department adopts rules to implement Chapter 77.55 RCW under Chapter 220-660 Washington Administrative Code (WAC) - *Hydraulic Code Rules*. This WAC Chapter establishes regulations for administration of the HPA program. The Hydraulic Code Rules set forth definitions, administrative procedures for obtaining an HPA, steps for HPA appeals and civil compliance, and criteria generally used by the department to review and condition hydraulic projects to protect fish life.

This report presents analyses and determinations pursuant to Chapter 34.05 RCW - Administrative Procedure Act (APA), and Chapter 19.85 RCW - Regulatory Fairness Act (RFA), for proposed amendments to Hydraulic Code Rules in Chapter 220-660 WAC. This document is organized as follows:

SECTION 1: Introduction

SECTION 2: Describe the proposed rule and its history

SECTION 3: Significant Legislative Rule Analysis Required

SECTION 4: Goals and Objectives of the Statute that the Rule Implements

SECTION 5: How the Rule Meets the Objectives of the Statute

SECTION 6: Involving stakeholders in rule development

SECTION 7: Least Burdensome Alternative

SECTION 8: Remaining APA Determinations

SECTION 9: Sources of Information Used

SECTION 10: For Further Information

---

<sup>1</sup> “Mitigation” is defined in WAC 220-660-030(100) to mean sequentially avoiding impacts, minimizing impacts, and compensating for remaining unavoidable impacts to fish life or habitat that supports fish life.



Documents relating to this rule-making activity are available on the department’s rule-making web page at <https://wdfw.wa.gov/about/regulations>.

---

## **SECTION 2: Describe the proposed rule and its history**

Rule amendments are proposed as necessary to implement Substitute Senate Bill 5273 (SSB 5273)<sup>2</sup> - a bill passed by the legislature during the 2021 legislative session. SSB 5273 is codified in RCW [77.55.231](#) and applies to the issuance of HPA permits.

SSB 5273 requires that anyone desiring to replace residential marine shoreline stabilization or armoring must use the least impacting technically feasible bank protection alternative for the protection of fish life. The requirement must be met by preparing a site assessment and alternatives analysis report (report) before proposing a hard armoring technique.

### **2.1 Specific Objectives for this Rule Making**

In order to implement SSB 5273, the department’s objectives in this rule making include the following:

- ✓ Specify that replacement of residential marine shoreline stabilization must utilize the least impacting technically feasible alternative for the protection of fish life;
- ✓ Incorporate the most-to-least-preferred alternatives list from SSB 5273;
- ✓ Specify that a site assessment and alternatives analysis report prepared by a qualified professional is required as part of an application for a Hydraulic Project Approval (HPA) permit for this type of project;
- ✓ Identify mandatory report elements; and
- ✓ Establish procedures for certain emergency and expedited shoreline stabilization permits.

### **2.2 Describe the proposed rule**

Table 1 presents the proposed SSB 5273 Rule Change Proposals (Proposals). The table lists changes in sequential order by change number and WAC subsection number.

**Table 1 SSB 5273 Rule Change Proposals presented by subsection number**

<b>WAC 220-660-370 Bank protection in saltwater areas (renamed “Shoreline stabilization in saltwater areas”)</b>		
<b>Change #</b>	<b>WAC Subsection</b>	<b>Description</b>
Change 1	220-660-370	Rename section title from “Bank protection in saltwater areas” to “Shoreline stabilization in saltwater areas”

---

<sup>2</sup> Laws of 2021, Chapter 279; Codified in RCWs 77.55.231

<b>Change #</b>	<b>WAC Subsection</b>	<b>Description</b>
Change 2	220-660-370	Various changes to terminology throughout the section for improved accuracy or clarity. Particularly: “shoreline stabilization” has replaced “bank protection” and other inconsistently used terms; “passive techniques” has replaced “natural techniques” for accuracy.
Change 3	220-660-370(1)	Replace “structures” with “buildings, roads and improvements” for clarity.
Change 4	220-660-370(1)	Remove inaccurate term “retaining walls” and replace with “related structures”.
Change 5	220-660-370(3)	Renamed subsection “Alternative selection”.
Change 6	220-660-370(3)(a)	Moved language up from WAC 220-660-370(3)(b).
Change 7	220-660-370(3)(a)	Add “To ensure the protection of fish life” as specified in SSB 5273.
Change 8	220-660-370(3)(a)	Insert the definition of “feasible” directly from SSB 5273.
Change 9	220-660-370(3)(b)	Specified the project types this subsection applies to.
Change 10	220-660-370(3)(b)(i)	Added “and restore the beach” for consistency with SSB 5273.
Change 11	220-660-370(3)(b)(iv)	Replaced “structures” with “buildings and improvements” for clarity.
Change 12	220-660-370(3)(c)	This subsection is introduced from SSB 5273 with no substantive changes.
Change 13	220-660-370(3)(d)	This subsection is restructured to apply report requirements to residential replacement projects.
Change 14	220-660-370(3)(e)	Adapted from the former (3)(d) subsection. No substantive changes.
Change 15	220-660-370(3)(f)	Adapted from the former (3)(d) subsection and SSB 5273. Retains exemptions “based on the scale and nature of the project”.
Change 16	220-660-370(3)(f)(i)	Provides a specific report exemption for removal of shoreline stabilization and restoration of the beach.
Change 17	220-660-370(3)(f)(ii)	Provides a specific report exemption for employing passive shoreline stabilization techniques.
Change 18	220-660-370(3)(g)	New procedures for emergency and expedited shoreline stabilization HPA applications.
Change 19	220-660-370(4)	Renamed subsection “Shoreline stabilization design”.
Change 20	220-660-370(4)(a)	Rephrased for clarity.
Change 21	220-660-370(5)	Renamed subsection “Shoreline stabilization location”.
Change 22	220-660-370(6)	Renamed subsection “Shoreline stabilization construction”.

### 2.3 History of this Rule Making Action

July 25, 2021	SSB 5273 went into effect
May 18, 2022	WDFW commenced rule making by filing a CR-101 Preproposal Statement of Inquiry with the Washington State Code Reviser
Sept. 20, 2022	WDFW filed CR-102 with the Washington State Code Reviser for rule making to incorporate SSB 5273
Oct. 5, 2022	Draft SEPA determination of nonsignificance (DNS) released and comment period began for SEPA #22044
Oct. 5, 2022	Rule making public comment period and SEPA comment period began. Rule making materials available online at <a href="https://wdfw.wa.gov/about/regulations/development/shoreline-stabilization-hpa-rule">https://wdfw.wa.gov/about/regulations/development/shoreline-stabilization-hpa-rule</a>
Oct. 28, 2022	The Washington Fish and Wildlife Commission conducted a public hearing on the rule proposals
Oct. 31, 2022	Rule making comment period and SEPA comment period ended
-----	SEPA finalized. Final SEPA documents are available at <a href="https://wdfw.wa.gov/licenses/environmental/sepa/closed-final">https://wdfw.wa.gov/licenses/environmental/sepa/closed-final</a>

For information relating to stakeholder outreach refer to Section 6, which provides a timeline of outreach milestones related to this rule making activity.

#### 2.3.1 History of regulating shoreline stabilization

Permitting for bank stabilization dates back to the creation of the hydraulic program. The modern version of the rules for shoreline stabilization permitting was established in 2014, when the department completed a major overhaul of the Hydraulic Code Rules. The rules had not previously seen major changes since 1994. This effort culminated in moving the entire body of the updated rules (Chapter 220-110 WAC) into the new Chapter 220-660 WAC. The 2014 overhaul included the creation of WAC 220-660-370 Bank Protection in Saltwater Areas. The purpose of the project was to:

- Incorporate up-to-date fish science and technology;
- Align the rules with statutory changes;
- Simplify permitting for certain types of projects;
- Update application and processing procedures; and
- Establish a baseline for adaptive management to protect fish life.

Since 2014, WAC 220-660-370 has been modified once. In 2020, amendments were adopted to implement elements of Second Substitute House Bill 1579 (2SHB 1579)<sup>2</sup> - a bill passed by the legislature during the 2019 legislative session. This bill implemented recommendations of the

Southern Resident Orca Task Force (task force) related to increasing chinook abundance. Specific changes to WAC 220-660-370 included:

- Striking language from rule that referenced the repealed marine single-family residence protective bulkheads or rockwalls statute (RCW 77.55.141); and
- Adding a requirement that saltwater bank protection location benchmarks be recorded on plans as part of a complete HPA application.

In addition, introductory and baseline language in WAC 220-660-370(1) and (2) was updated but did not result in any changes to permitting requirements.

---

### **SECTION 3: Significant Legislative Rule Analysis Required**

*RCW 34.05.328(5)(a) states, “Except as provided in (b) of this subsection, this section applies to: (i) ... the legislative rules of the department of fish and wildlife implementing chapter 77.55 RCW;...”*

Hydraulic code rules in chapter 220-660 WAC are significant legislative rules as specified in RCW 34.05.328(5)(a)(i). Analyses pursuant to RCW 34.05.328 are provided for this rule proposal.

---

### **SECTION 4: Goals and Objectives of the Statute that the Rule Implements**

*RCW 34.05.328 (1)(a) states, “Clearly state in detail the general goals and specific objectives of the statute that the rule implements;”*

#### **4.1 Chapter 77.55 RCW - the Hydraulic Code - Goals and Objectives**

The state Legislature gave WDFW the responsibility to preserve, protect, and perpetuate all fish and shellfish resources of the state, and to

*“...authorize the taking of wildlife, food fish, game fish, and shellfish only at times or places, or in manners or quantities, as in the judgment of the commission does not impair the supply of these resources.” RCW 77.04.012*

The Legislature also granted the Commission very broad authority to adopt rules to protect fish life for a wide variety of activities in Washington waters:

*The commission may adopt, amend, or repeal rules: specifying the times when the taking of wildlife, fish, or shellfish is lawful or unlawful; specifying the areas and waters in which the taking and possession of wildlife, fish, or shellfish is lawful or unlawful; specifying and defining the gear, appliances, or other equipment and methods that may be used to take wildlife, fish, or shellfish, and specifying the times, places, and manner in which the equipment may be used or possessed. RCW 77.12.047.*

To help achieve the agency’s mandate, the Legislature passed a state law in 1943 called *Protection of Fish Life*, now recorded as [Chapter 77.55 RCW](#) - Construction projects in state waters. The entire text of the statute can be found at: <http://app.leg.wa.gov/RCW/default.aspx?cite=77.55> .

[RCW 77.55.011](#)(11) defines a “hydraulic project” as

*“the construction or performance of work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or freshwater of the state.”*

[RCW 77.55.021](#)(1) states

*“...In the event that any person<sup>3</sup> or government agency desires to undertake a hydraulic project, the person or government agency shall, before commencing work thereon, secure the approval from the department in the form of a permit as to the adequacy of the means proposed for the protection of fish life.”*

The Legislature limited WDFW's regulatory authority: WDFW cannot unreasonably withhold or unreasonably condition the HPA [[RCW 77.55.021](#)(7)(a)], nor can WDFW impose conditions that optimize fish life:

*“Conditions imposed upon a permit must be reasonably related to the project. The permit conditions must ensure that the project provides proper protection for fish life, but the department may not impose conditions that attempt to optimize conditions for fish life that are out of proportion to the impact of the proposed project.”* [RCW 77.55.231](#)(1)

The Hydraulic Code is intended to ensure that hydraulic projects adequately protect fish life.

---

## **SECTION 5: How the Rule Meets the Objectives of the Statute**

***RCW 34.05.328 (1)(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;***

### **5.1 Why is the Proposed Rule Needed?**

**Rule amendments are proposed to implement SSB 5273.**

SSB 5273 amended Chapter 77.55 RCW. It requires that anyone desiring to replace residential marine shoreline stabilization or armoring must use the least impacting technically feasible bank protection alternative for the protection of fish life. The requirement must be met by conducting a site assessment and alternatives analysis report (report) before proposing a hard armoring technique.

WDFW proposes changes to WAC 220-660 to align it with changes to RCW implemented via SSB 5273. Some of the changes come directly from statute. These include utilizing the least impacting technically feasible alternative, requiring a report, and listing alternatives from most to least preferred. Other changes, such as describing how emergency and expedited marine shoreline stabilization HPA applications are processed, are not directly spelled out in statute but are necessary to administer the rules in accordance with the statute and existing rule. The current

---

<sup>3</sup> A “person” is defined in WAC 220-660-030(112) as meaning “an applicant, authorized agent, permittee, or contractor. The term person includes an individual, a public or private entity, or organization.” This term is used throughout this document to refer to individuals, organizations, and businesses.

requirement in rule that the site assessment and alternatives analysis report be prepared *by a qualified professional* is expanded to include residential shoreline stabilization replacement and rehabilitation. While not specified in statute, that change aligns the requirements for residential shoreline stabilization replacement or rehabilitation projects with the requirements for new and waterward replacement of shoreline stabilization. It also increases the likelihood that submitted reports are complete, technically accurate, and when prepared by a third party, have an element of impartiality.

Both SSB 5273 and WAC 220-660-370 currently allow the department to issue report exemptions based on the scale and nature of a particular project. The rule proposal also exempts HPA applications for the removal of stabilization and restoration of the beach, or that utilize passive techniques such as vegetation planting. These projects employ the most highly preferred, least impacting alternatives. This new language provides clarity about application requirements for those projects.

## **5.2 Alternatives to rule making?**

Following is a discussion of alternatives to rule making that we considered before filing a preproposal notice of inquiry.

### **5.2.1: Alternative 1: No action - do not adopt the new statutes into rule**

Under this alternative, WDFW does not have a nexus in rule for requiring the least impacting technically feasible alternative for residential marine shoreline stabilization replacement and rehabilitation. The rule would also be missing the preferred alternatives list for such projects, the report requirement, and any indication of what elements are required in the report.

- The existing rule requires all of the above components for new shoreline stabilization and the waterward replacement of shoreline stabilization, but is silent on residential marine shoreline stabilization replacement and rehabilitation.
- The existing rule does not contain any procedures for processing emergency and expedited shoreline stabilization HPA applications. These procedures provide direction for how to comply with statute during urgent situations.

Without the changes, the rules would be inconsistent with statute and potentially misleading. The “no action” alternative is not a viable alternative.

### **5.2.2: Alternative 2: Adopt the new statute into rule but do not address emergency and expedited application processing**

Upon implementing SSB 5273 in 2021, it quickly became clear to the department that emergency and expedited permit applications posed a challenge for meeting the “least impacting technically feasible alternative” requirement. These applications are unlikely to include a site assessment and alternatives analysis report and do not necessarily propose the least impacting technically feasible alternative. In other words, they do not comply with statute and/or rule. The rule proposal allows for timely actions as described in WAC 220-660-050 (Procedures) to address an urgent situation, such as storm damage to a bulkhead that results in risk to a house, while also establishing a

process for complying with WAC 220-660-370 and SSB 5273. This approach is similar to procedures for other project types already in Chapter 220-660 WAC. It also provides clarity for both the department and the regulated community. Without this addition, reaching compliance with statute and rule is difficult or impossible.

### 5.3 Consequences of not adopting the rule

Declining to adopt the proposed rules would be inconsistent with amendments to RCW 77.55 implemented via SSB 5273. Omitting a particular project type (residential marine shoreline stabilization projects) from rule when requirements for other project types are included, creates the impression that there are no specific requirements for it. Members of the regulated community would have to know to look for the residential marine shoreline stabilization requirements in Chapter 77.55 RCW. Additionally, the absence of procedures for emergency and expedited HPA applications creates a situation where neither the department nor HPA applicants have clear roles for achieving compliance with RCW 77.55.231 or WAC 220-660-370.

---

## SECTION 6 Involving stakeholders in rule development

Because SSB 5273 has been in effect for more than a year already, WDFW took advantage of opportunities to explain the new statute while communicating the objectives of rule making to those affected. We also worked to obtain information from affected persons about how the rules would impact them. Those events are summarized in Table 2.

WDFW also maintains a web page<sup>4</sup> with information on rule making and a way for people to track rule making progress. An email address<sup>5</sup> is available for people to submit preproposal comments and formal public comments.

**Table 2 Stakeholder contact events**

Date(s)	Person(s)	Activity
12/16/2021	Hydraulic Code Implementation Citizen Advisory Group	Presentation and discussion on implementation of SSB 5273
1/27/2022	Consultant and contractor businesses; Sea Grant Shoreline and Coastal Planners group	Information regarding implementation of SSB 5273
3/10/2022	Sea Grant Shoreline Local Government Working Group	Presentation and discussion on SSB 5273 and rule making

---

<sup>4</sup> <https://wdfw.wa.gov/about/regulations>

<sup>5</sup> [ShorelineStabilizationRule@PublicInput.com](mailto:ShorelineStabilizationRule@PublicInput.com)

<b>Date(s)</b>	<b>Person(s)</b>	<b>Activity</b>
5/12/2022	Sea Grant Shoreline Local Government Working Group	Further discussion on rule making to implement SSB 5273
5/24/2022	Tribal partners	Email notification of rulemaking initiation and overview
6/22/2022	Stakeholders and Agencies; Sea Grant Shoreline and Coastal Planners group	Email notification regarding publication of CR-101
8/3/2022	Tribal partners	Rule proposal distributed for review
8/4/2022	Fish and Wildlife Commission Habitat Committee	Introduction to rule making in response to SSB 5273
8/12/2022	Tribal partners	Webinar to review the rule proposal and take comments
8/17/2022	Hydraulic Code Implementation Citizen Advisory Group	Draft rule distributed for review
8/18/2022	Selected stakeholders and government agencies	Rule proposal distributed for preliminary review
9/1/2022	Hydraulic Code Implementation Citizen Advisory Group	Draft rule discussion and feedback
10/4/2022	Stakeholders and government agencies	Webinar and comment period announcement
10/5/2022	News outlets	News release announcing webinar and comment period
10/5/2022	SEPA stakeholders	Announcement of SEPA Determination of Nonsignificance and start of comment period
10/11/2022	Any interested party	Informational webinar
10/19/2022	Shore Friendly Program regional leads	Informational webinar
10/28/2022	Any interested party	The Washington Fish and Wildlife Commission hosted a public hearing



## 6.1 Gathering data to inform the Small Business Economic Impact Statement and Cost-Benefit Analysis

Data used in the Small Business Economic Impact Statement (SBEIS) and Cost-Benefit Analysis includes the results of surveys of local governments (cities and counties) as well as shoreline consultants and contractors. The department contracted with Industrial Economics, Inc (IEc) to develop those analyses. Please refer to those documents for more information about the surveys.

---

## SECTION 7: Least Burdensome Alternative

***RCW 34.05.328 (1)(e) Determine, after considering alternative versions of the rule and the analysis required under (b) [Section 4 of this document], (c) [Notification in CR-102], and (d) [Section 6 of this document] 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 [i.e. for the statute being implemented];***

### 7.1 Introduction

In order to propose and adopt significant legislative rules, WDFW must evaluate alternative versions of the rule. Once this analysis is complete WDFW must determine that the rule proposed for adoption is the least burdensome version of the rule that will achieve the goals and objectives of the authorizing statute(s) as discussed in section 4. Alternatives to rule making are addressed in section 5.2 and consequences of not adopting the proposal are included in section 5.3.

### 7.2 Alternatives considered

Two alternatives to rule making are presented and discussed in Section 5.2 and summarized on Table 3.

The term “*least burdensome alternative,*” when used within this table and subsequently, means “*least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives stated under Chapter 77.55 [RCW].*”

**Table 3 Least Burdensome analysis of alternative rule language**

<b>Alternative/ Comment</b>	<b>Proposed Rule Change</b>	<b>WDFW Response</b>	<b>Least Burdensome Alternative</b>
Alternative 1:	No action - do not adopt the new statutes into rule	<ul style="list-style-type: none"><li>• Fails to adopt language needed to comply with statute change.</li><li>• The rule would be left with requirements for some projects, but not others. This is a misleading situation.</li></ul>	Proposed rule

Alternative/ Comment	Proposed Rule Change	WDFW Response	Least Burdensome Alternative
Alternative 2:	Adopt the new statute into rule but do not address emergency and expedited application procedures	<ul style="list-style-type: none"> <li>• These procedures provide direction for how to comply with statute during urgent situations.</li> <li>• Proposal is consistent with established procedures for other project types such as water crossings.</li> </ul>	Proposed rule

### 7.3 Determination: Least Burdensome

After considering alternative versions of the rule in context with the goals and objectives of the authorizing statute, **WDFW determines that the proposed rule represents the least burdensome alternative for those required to comply with it that will achieve the general goals and specific objectives stated under chapter 77.55 RCW.**

---

## SECTION 8: Remaining APA Determinations

The remaining narrative in this document addresses determinations pursuant to RCW 34.05.328(1)(f) through (1)(i) relating to state and federal laws, equal requirements for public and private applicants, and coordination with state, federal, tribal, and local entities.

### 8.1 Violation of other state or federal laws

***RCW 34.05.328 states, “(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.”***

There are no provisions in the Hydraulic Code Rules requiring those to whom they apply to take an action that violates requirements of another federal or state law.

We make this determination because the HPA permit does not compel persons to take an action.

Consistent with other state authorities, the Hydraulic Code Rules regulate the time, place, and manner in which an action can occur to adequately protect fish life. The HPA also does not convey permission to use public or private property to conduct the project. Applicants must seek permission to use property from the landowner. Authorization by WDFW to conduct any hydraulic project does not exempt anyone from the requirements of other regulatory agencies or landowners. Every HPA issued in Washington carries the notice that the permit

*“...[the HPA permit] pertains only to requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW. Additional authorization from other public agencies may be necessary for this project. The person(s) to whom this Hydraulic Project Approval is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state and/or federal) that may be necessary for this project.”*

Hydraulic Code rules do not supersede existing federal and state requirements.

**WDFW has determined that the proposed rule does not require those to whom it applies to take an action that violates requirements of another federal or state law.**

## **8.2 Equal Requirements for Public and Private**

*RCW 34.05.328 (1)(g) states, “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.”*

The hydraulic code rules generally apply equally to all HPA applicants whether public or private. Requirements are the same for public and private entities. **WDFW has determined that the rule does not impose more stringent performance requirements on private entities than on public entities.**

## **8.3 Difference from other state and federal rules**

*RCW 34.05.328 (1)(h) states, “Determine if the rule differs from any federal regulation or statute applicable to the same activity or subject matter and, if so, determine that the difference is justified by the following:” [(i) explicit state statute..., (ii) substantial evidence that the difference is necessary...].*

### **8.3.1 Other federal, state, or local agencies with authority to regulate this subject**

WDFW has sole authority to implement the Hydraulic Code Rules (chapter 220-660 WAC) under chapter 77.55 RCW (Construction Projects in State Waters). Pursuant to 77.55.361, Department of Natural Resources has authority to carry out the requirements of the Hydraulic Code for forest practices hydraulic projects regulated under Chapter 76.09 RCW. WDFW and DNR have a process for concurrent review of such projects.

Local and state government regulations pertaining to land use and development, shoreline use, and clean water appear to have overlapping authorities, but have different fundamental purposes. Washington Department of Ecology regulates water diversions, discharges, and stormwater outfalls, features that could occur concurrently with a project that is regulated under the hydraulic code. Local governments have regulations for the location (such as under the Shoreline Management Act) and methods (building codes) for construction projects. These aspects of a construction project also can co-occur with hydraulic project requirements, but none of these other authorities either duplicates or supersedes the hydraulic code authority.

### **8.3.2 The rule differs from federal regulations or statutes applicable to the same activity**

The Hydraulic Code regulates hydraulic projects for the protection of fish life. Hydraulic projects are construction projects and other work that effects the natural flow or bed of state waters. Federal protections under the Rivers and Harbors Act, Clean Water Act (U.S. Army Corps of Engineers and Washington Department of Ecology), and Endangered Species Act (U.S. Fish and Wildlife Service and National Marine Fisheries Service) may regulate hydraulic projects, however the purposes for these federal acts are very different from the state Hydraulic Code and rules.

Indeed, local, state, and federal agencies may have jurisdiction over the same project. Table 4 provides an overview of the characteristics of some aquatic permits at the federal, state, and local levels. At each jurisdictional level, priorities and legal mandates determine the resources or interests that are protected and the extent of the protection that is applied. Mitigation requirements also vary according to the agencies' protection priorities and legal mandates. As a result, regulatory efforts may share intentions or could have entirely different animal or habitat protection objectives.

The federal Endangered Species Act (ESA) comes closest to regulating the same subject matter - the protection of fish life. But while the state hydraulic code regulates the way a project is constructed (so that the project is protective of fish life), the federal ESA regulates the "take" or kill of species listed as threatened or endangered under the Act. Federal ESA jurisdiction relates only to animals or plants listed as threatened or endangered under the Act. The state hydraulic code applies to all fish species.

The HPA fills a unique niche because it is the only permit issued solely to protect (all) fish life. The HPA may be the only permit required when all the criteria below apply:

- Hydraulic projects in streams too small to be considered a shoreline of the state (relevant to the state Shorelines Management Act) or navigable waters (relevant to Corps of Engineers permitting);
- Hydraulic projects not regulated under the Clean Water Act;
- Hydraulic projects not subject to state or federal landowner notification or permit requirements;
- Hydraulic projects exempt from state or national Environmental Policy Act review (refer to SEPA statute and rules for criteria for SEPA exemption); or
- Hydraulic projects exempt from local permits.

### **8.3.3 Determination: Difference is necessary**

Differences between state HPA authority (and the current rule proposal) and federal authorities are necessary because there are no federal laws or rule protecting all fish life from the effects of construction projects. **WDFW has determined that the rule differs from any federal regulation or statute applicable to the same activity or subject matter and that the difference is necessary to meet the objectives of the hydraulic code statute.**

## **8.4 Coordination with state, federal and local laws**

*RCW 34.05.328 (1)(i) states, "Coordinate the rule, to the maximum extent practicable, with other federal, state, and local laws applicable to the same activity or subject matter."*

### **8.4.1 Coordination with local governments**

Government-to-government coordination for this rule focused on counties and cities with marine shorelines. Marine shorelines are subject to regulation under local Shoreline Master Programs (SMPs) as required by the state Shoreline Management Act (SMA) in Chapter 90.58 RCW. The

department reached out prior to drafting the rule in order to understand permitting requirements under local SMPs. Specifically, we were interested in how their permit requirements compared to those in SSB 5273 regarding site assessments and alternatives analysis reports. Our goals were:

- Develop a better understanding of local shoreline permitting requirements;
- Understand what types of project information are most useful for local government permitting decisions;
- Ensure that project proponents are able to prepare a single project report that satisfies both state and local regulations; and
- Make sure that rule requirements for HPA permits do not conflict with local requirements.

Outreach began several months before rule development. WDFW utilized the Washington Sea Grant program to communicate with the largest relevant audience possible. Specifically, we interacted with their Shoreline and Coastal Planners group. Within that group, we conducted two discussions with the Sea Grant Shoreline Local Government Working Group. Comments and input from the group helped to inform rule development. In addition to the work through Sea Grant, we invited a number of local planners to provide feedback on the preliminary rule before finalizing it for publication in the State Register.

#### **8.4.2 Coordination with state and federal agencies**

The Washington Department of Ecology (Ecology) partners with local governments to administer the SMA. We engaged with Ecology directly to improve understanding of the SMA and its requirements. We also incorporated feedback from an early draft of the rule.

WDFW provided notification of this rule making effort to other state and federal agencies. However, we did not approach those agencies for assistance with developing the rule proposal. The main objective of the proposal is to align the Hydraulic Code Rules with changes to state laws which have already been enacted, that govern hydraulic permitting authority. We turned to internal expertise to achieve this objective, forming a WDFW Hydraulic Code Rulemaking Workgroup to provide input during rule development.

In the long term, ongoing coordination with federal, state, and local agencies occurs because, while the objectives of regulation are different, projects being reviewed under the HPA program are potentially reviewed by these other jurisdictions as well. WDFW coordinates mitigation requirements with federal agencies so that mitigation required for construction project impacts can satisfy mitigation required for impacts to other authorities; this coordination prevents imposing double the mitigation for the same project impact.

WDFW also solicits input from federal, state, and local agencies on ways to improve HPA program implementation, including both the regulation of projects and with the technical assistance that WDFW provides to other agencies and to project proponents.

**Table 4 Comparison of some common aquatic permits**

<b>Permit</b>	<b>Agency</b>	<b>Purpose</b>	<b>Trigger activity</b>	<b>Action</b>	<b>Limitations</b>
Hydraulic Project Approval	WDFW	Protect fish/shellfish and their habitats	Projects that use, divert, obstruct, or change the natural flow or bed of salt or fresh state waters.	Construction permit issued with conditions that mitigate impacts	May not optimize conditions for fish or unreasonably restrict a project.
ESA Incidental Take Permit	USFWS, NMFS	Ensure activities are not likely to jeopardize the continued existence of listed species, or destroy or adversely modify their critical habitat	Anyone whose otherwise-lawful activities will result in the “incidental take” of a listed species needs an incidental take permit.	Incidental take permit and terms and conditions	Applies only to ESA-listed species; “take” includes harm to designated critical habitat
Shoreline Substantial Development Permit	Local governments, Ecology	Encourages water-dependent uses, protects shoreline natural resources, and promotes public access.	Any project, permanent or temporary, which interferes with public use of shorelands. Projects in or within 200 feet of marine waters, streams, lakes, and associated wetlands and floodplains.	Development permit issued by local government	Conditional Use and Variance require review by Ecology.
NPDES construction stormwater or general permit	Ecology	Protects and maintains water quality and prevents or minimizes sediment, chemicals, and other pollutants from entering surface water and groundwater.	Construction activities that disturb 1 or more acres of land and have potential stormwater or storm drain discharge to surface water.	Construction permit or general permit with conditions to minimize discharge and/or report	Apply to projects disturbing 1 or more acres of land

Permit	Agency	Purpose	Trigger activity	Action	Limitations
Aquatic Use Authorization	DNR	Allows use of state- owned aquatic lands. Washington State Department of Natural Resources (DNR) determines if aquatic land is state- owned, if it is available for use, and if the use is appropriate.	Project located on, over, through, under, or otherwise impacts state- owned aquatic lands. Aquatic lands are defined as tidelands, shorelands, harbor areas, and the beds of navigable waters.	Use authorization permit or lease	Only for state-owned aquatic lands
Section 404 Permit (Regional, Nationwide, or Individual) for Discharge of Dredge or Fill Material	U.S. Army Corps of Engineers	Restores and maintains chemical, physical, and biological integrity of national waters. Authorized under Section 404 of the Clean Water Act.	Excavating, land clearing, or discharging dredged or fill material into wetlands or other U.S. waters.	Permit to discharge dredged or fill material	Concurrent consultation on 401 Certification, CZM, National Historic Preservation Act, Endangered Species Act, Tribal Trust Issues, and National Environmental Policy Act.

Source: Excerpted from Governor’s Office of Regulatory Innovation and Assistance detailed [comparison of aquatic permits](#) by local, state, and federal agencies.

### 8.4.3 Permittee Responsibilities

Permittees are notified in standard HPA permits that it is the permittee’s responsibility to meet legal requirements of other state, federal, and local agencies in order to conduct shoreline stabilization projects. Permits from and notifications to other regulatory agencies may be required and applicable landowners must be consulted before conducting any activity. These responsibilities are independent from permitting under the Hydraulic Code.

### 8.4.4 Determination: Coordinated with other federal, state, and local laws

**WDFW has demonstrated that the rule has been coordinated, to the maximum extent practicable, with other federal, state, and local laws applicable to the same activity or subject matter.**

---

## SECTION 9: Sources of Information Used

*RCW 34.05.271(1)(a) states, “Before taking a significant agency action, the department of fish and wildlife must identify the sources of information reviewed and relied upon by the agency in the course of preparing to take significant agency action. Peer-reviewed literature, if applicable, must be identified, as well as any scientific literature or other sources of information used. The department of fish and wildlife shall make available on the agency’s web site the index of records required under RCW [42.56.070](#) that are relied upon, or invoked, in support of a proposal for significant agency action.”*

Following are references for material reviewed and relied upon by WDFW in the course of preparing to take this rule making action (Table 5), which is a significant legislative rule pursuant to RCW 34.05.328(5)(a). Each reference is categorized for its level of peer review pursuant to RCW 34.05.271. A key to the review categories under RCW 34.05.271 is provided on Table 5A.

**Table 5 References for material reviewed in preparation for rule making**

Reference Citation	Category
Certificate of Enrollment, Substitute Senate Bill 5273. Chapter 279, Laws of 2021.	v
Washington Department of Fish and Wildlife. CR-102 form WSR 20-24-121 (for HPA Rulemaking Implementing WSHB 1261). 2021. 124 pp.	viii
Washington Department of Fish and Wildlife. CR-102 form WSR 20-06-053 (for HPA Rulemaking Implementing 2SHB 1579). 2020. 95 pp.	viii
Washington Department of Fish and Wildlife. CR-102 form WSR 19-24-081 (for HPA Rulemaking Implementing 2SHB 1579). 2019. 43 pp.	viii
Washington Department of Fish and Wildlife. 2021. Regulatory Analysis of Hydraulic Code Rules Chapter 220-660 WAC Incorporating Elements of ESHB 1261 Into HPA Rules. 36 pp.	viii
Washington Department of Fish and Wildlife. 2020. Regulatory Analysis for Hydraulic Code Rules Chapter 220-660 WAC Incorporating Elements of 2SHB 1579 Into HPA Rules. 63 pp.	viii



Reference Citation	Category
Washington Department of Fish and Wildlife. 2019. Small Business Economic Impact Statement for Hydraulic Code Rules Chapter 220-660 WAC 2019 HPA Suction Dredge Rule Making. 20 pp.	viii
Washington Department of Fish and Wildlife. 2021. Small Business Economic Impact Statement for Hydraulic Code Rules Chapter 220-660 WAC Incorporating Elements of ESHB 1261 Into HPA Rules. 19 pp.	viii
Washington Department of Fish and Wildlife. 2014. Hydraulic Code Rulemaking (Chapter 220.660 WAC)-Cost/Benefit Analysis & Small Business Economic Impact Statement. 15 pp.	viii
Washington Department of Fish and Wildlife. 2019. Suction Dredge Rulemaking 2019 SEPA Checklist, SEPA #19018. 18 pp.	viii
Washington Department of Fish and Wildlife. 2014. Hydraulic Code Rulemaking (Chapter 220.660 WAC) Concise Explanatory Statement. 116 pp.	viii

**Table 5A Key to RCW 34.05.271 Categories Relating to Level of Peer Review**

Category Code	RCW 34.05.271 Section 1(c)
i	Independent peer review: Review is overseen by an independent third party
ii	Internal peer review: Review by staff internal to the department of fish and wildlife;
iii	External peer review: Review by persons that are external to and selected by the department of fish and wildlife;
iv	Open review: Documented open public review process that is not limited to invited organizations or individuals;
v	Legal and policy document: Documents related to the legal framework for the significant agency action including but not limited to: (A) Federal and state statutes; (B) Court and hearings board decisions; (C) Federal and state administrative rules and regulations; and (D) Policy and regulatory documents adopted by local governments;
vi	Data from primary research, monitoring activities, or other sources, but that has not been incorporated as part of documents reviewed under the processes described in (c)(i), (ii), (iii), and (iv) of this subsection;
vii	Records of the best professional judgment of department of fish and wildlife employees or other individuals; or
viii	Other: Sources of information that do not fit into one of the categories identified in this subsection (1)(c).

---

**SECTION 10: For Further Information**

This report was prepared by:

Theresa Nation  
Protection Division Rule Coordinator  
Habitat Program  
360 688-4745 [theresa.nation@dfw.wa.gov](mailto:theresa.nation@dfw.wa.gov)

Matthew Curtis  
Protection Division Manager  
Habitat Program  
360 628-0962 [andy.carlson@dfw.wa.gov](mailto:andy.carlson@dfw.wa.gov)



Residential Marine Shoreline  
Stabilization Proposed Rule

Small Business Economic Impact  
Statement

Final Report | September 16, 2022

prepared for:

Washington State Department of Fish and Wildlife  
Natural Resources Building  
1111 Washington St. SE  
Olympia WA 98501

prepared by:

Industrial Economics, Incorporated  
2067 Massachusetts Avenue  
Cambridge, MA 02140  
617/354-0074

## TABLE OF CONTENTS

### LIST OF ACRONYMS AND ABBREVIATIONS

### EXECUTIVE SUMMARY

#### CHAPTER 1 | INTRODUCTION

- 1.1 Need for the Rule *1-1*
- 1.2 Requirements for Developing an SBEIS *1-2*
- 1.3 Summary of Proposed Rule *1-3*
  - 1.3.1 Existing Regulations and Policies *1-3*
  - 1.3.2 Use of Qualified Professional to Develop a Site Assessment and Alternatives Analysis *1-6*
  - 1.3.3 Proposed Rule Provisions *1-11*

#### CHAPTER 2 | SMALL BUSINESS IMPACTS

- 2.1 Potentially Affected Small Businesses *2-1*
  - 2.1.1 Extent of Affected Shoreline Property *2-2*
  - 2.1.2 Identification of Potentially Affected Businesses *2-5*
- 2.2 Cost of Compliance *2-7*
- 2.3 Assessment of Minor Cost *2-10*
- 2.4 Disproportionate Economic Impact Analysis *2-10*
- 2.5 Cost Mitigation Strategies *2-11*
- 2.6 Involvement of Small Businesses in Rule Proposal Process *2-12*
  - 2.6.1 Involvement in the Present Rule Proposal *2-12*
  - 2.6.2 Involvement in SBEIS Development *2-13*
- 2.7 Jobs Created or Lost *2-14*
- 2.8 Summary Conclusions *2-14*

### REFERENCES

**ATTACHMENT A: OUTREACH SUMMARY AND LIST OF INDIVIDUALS  
INTERVIEWED IN JULY AND AUGUST 2022**

**ATTACHMENT B: INTERVIEW GUIDE**

**ATTACHMENT C: DATA DICTIONARY**

## LIST OF ACRONYMS AND ABBREVIATIONS

APPS	Aquatic Protection Permitting System
B&O	Business and Occupation
HCIAG	Hydraulic Code Implementation Advisory Group
HPA	Hydraulic Project Approval
NAICS	North American Industry Classification System
ORIA	Washington State’s Office for Regulatory Innovation and Assistance
RCW	Revised Code of Washington
RFA	Regulatory Fairness Act
SBEIS	Small Business Economic Impact Statement
SMA	Shoreline Management Act
SMP	Shoreline Master Program
WAC	Washington Administrative Code
WDFW	Washington State Department of Fish and Wildlife

## EXECUTIVE SUMMARY

This report evaluates the potential costs to businesses of compliance with a Washington State Department of Fish and Wildlife (WDFW) proposed rule that updates Washington State’s Hydraulic Code to clarify how residential shoreline property owners should comply with recent legislation regarding residential marine shoreline stabilization.<sup>1</sup> This Small Business Economic Impact Statement (SBEIS) was developed in accordance with the Regulatory Fairness Act (RFA), Revised Code of Washington (RCW) Section 19.85 to determine whether the proposed rule would result in more than minor and disproportionate cost impact on small businesses. The primary sources of information for this analysis include the following:

- Information gathered through outreach to county and municipal planners, businesses providing the services required by the proposed rule, and residential property owners who have experience with marine shoreline stabilization replacement;
- County and municipal Shoreline Master Program (SMP) documents;
- Tax parcel data identifying land use types along marine shorelines;
- Data identifying location of existing shoreline stabilization along the marine shoreline; and
- Historical Hydraulic Project Approval (HPA) permit data provided by WDFW.

### BACKGROUND

Washington State’s Hydraulic Code (WAC 220-660-370) outlines requirements for shoreline bank protection in saltwater (i.e., marine) waters of the state in order to protect fish life from the habitat alteration that can result from certain types of shoreline protection. The existing requirements specify that a person wishing to place *new* shoreline protection, or replace existing protection with *protection that extends waterward of the existing protection*, utilize the least impacting technically feasible protection technique, and include a site assessment, alternatives analysis, and design rationale completed by a qualified professional in their permit application. In 2021 the State Legislature passed Substitute Senate Bill 5273, which amends RCW 77.55.231 to extend these requirements to the *replacement* of existing shoreline stabilization on

---

<sup>1</sup> This report uses the term “shoreline stabilization” to refer broadly to the various shoreline interventions that are used to prevent or reduce erosion of the shoreline and protect upland property and structures, including passive or nature-based techniques, soft shore techniques, and hard structures such as bulkheads.

residential properties. WDFW is now updating WAC 220-660-370 to be consistent with RCW 77.55.231, and to provide additional clarification with respect to the requirements.

#### SCOPE OF PROPOSED RULE

The proposed rule affects activities occurring on residential properties along Washington's marine shorelines, including the shorelines of Puget Sound, the Strait of Juan de Fuca, the outer coast, and along coastal estuaries. It does not change existing requirements with respect to commercial or other types of properties, nor does it affect activities occurring on residential properties along non-marine shorelines (e.g., rivers, ponds, or inland lakes). The proposed rule specifically addresses the requirements related to the *replacement or rehabilitation* of existing shoreline stabilization, and does not change the requirements for installation of new structures, or replacement of existing structures where the replacement occurs waterward of the existing structure.

#### BASELINE FOR THE SBEIS

RCW 77.55.231 requires that residential property owners on all marine shorelines of Washington State that wish to replace existing shoreline stabilization use the least impacting technically feasible alternative and submit a site assessment and alternatives analysis as part of their permit application package. In certain jurisdictions, county and municipal Shoreline Master Programs (SMPs) already specify that a qualified professional must be used to develop those reports. Although the requirement to use a qualified professional is not specified for all jurisdictions, interviews with county and municipal planners conducted in July and August 2022 suggest that it would be impossible or very challenging for an individual without the relevant professional background to fulfill the necessary requirements.<sup>2</sup> It is also WDFW's experience that permit applicants typically employ a qualified professional to develop necessary reports even absent a specific requirement to do so.<sup>3</sup> Therefore, residential applicants looking to replace their shoreline stabilization in the counties where SMPs do not describe that a qualified professional must be hired for the analyses are still likely to hire qualified professionals for this purpose.

#### PROPOSED RULE REQUIREMENTS

The proposed rule would update WAC 220-660-370 to implement the RCW 77.55.231 requirement for HPA permit applicants for residential marine shoreline stabilization or armoring replacement or rehabilitation projects. Specifically, the proposed rule includes the following:

- Revises existing language in WAC 220-660-370 to require HPA applicants to use the least impacting technically feasible bank protection alternatives for

---

<sup>2</sup> Personal and email communication with representatives of county and municipal planning departments conducted in July and August 2022.

<sup>3</sup> Email communication with WDFW staff on September 7, 2022.

*replacement or rehabilitation of residential bank protection projects, and specifies preferences for available alternatives;*<sup>4</sup>

- Specifies the reporting elements that must be included in an HPA application for residential replacement projects (outlined in Section 1.2.1 of this SBEIS); and
- Requires that HPA permit applicants for replacement or rehabilitation of residential bank protection provide a site assessment, alternatives analysis and design rationale for the proposed method *that is prepared by a qualified professional.*<sup>5</sup>

As previously described, RCW 77.55.231 constitutes a pre-existing requirement regarding replacement of residential shoreline stabilizations; that is, the requirements of RCW 77.55.231 are part of the baseline of this analysis. Thus, any costs resulting from the requirements specified in RCW 77.55.231, which include the requirement that any person wishing to replace residential marine shoreline stabilization “use the least impacting technically feasible bank protection alternative for the protection of fish life” and “must conduct a site assessment to consider the least impactful alternatives...and should propose a hard armor technique only after considering site characteristics such as the threat to major improvements, wave energy, and other factors in an analysis of alternatives”, are baseline costs of compliance with these pre-existing requirements. The focus of this analysis is on the incremental costs of the proposed rule that are above and beyond the baseline costs.

The proposed rule is focused specifically on replacement or rehabilitation projects for protecting residential shoreline properties. Accordingly, the rule proposal applies only to residential property shoreline owners with existing shoreline stabilization in place. The new requirement specified in the proposed rule is that, when existing stabilization requires replacement or rehabilitation, the permit applicants must hire a qualified professional to complete the site assessment and alternatives analysis. Importantly, the requirement to conduct a site assessment and alternatives analysis is a baseline requirement for these sites; however, RCW 77.55.231 does not specify the need to rely on a qualified professional for the analysis and reporting. Thus, the requirement in the proposed rule to employ a qualified professional may generate incremental compliance costs.

---

<sup>4</sup> WAC 220-660-370(3)(b) provides common alternatives for (1) new bank protection and (2) replacement or rehabilitation of bank protection that extends waterward of an existing bank protection structure projects. The proposed rule would modify WAC 220-660-370 to include common alternatives for replacement or rehabilitation of residential bank protection projects, adapted from RCW Section 77.55.231.

<sup>5</sup> Per WAC 220-660-030, a “qualified professional” is a scientist, engineer, or technologist specializing in a relevant applied science or technology. This person may be certified with an appropriate professional organization, or could be someone who, through demonstrated education, experience, accreditation, and knowledge relevant to the particular matter, may be reasonably relied on to provide advice within that person’s area of expertise.



## POTENTIALLY AFFECTED BUSINESSES

Absent detailed data on businesses that own residential properties along marine shorelines of Washington, we rely upon the best available information regarding the potential extent of businesses affected by the rule. We begin by describing the extent of shoreline properties that may be affected by the proposed rule, and then describe the universe of businesses that could incur costs as a result of the rule.

Owners of marine shoreline property in Washington, whether individuals or businesses, are only affected by the proposed rule under the following circumstances:

- The property is identified as residential;
- The property already has existing shoreline stabilization in place; and
- Existing requirements with respect to the local jurisdictions' SMPs do not already require the use of a qualified professional to develop the requisite site assessment and alternatives analysis.

Available data suggest 66 percent of Washington's marine shoreline parcels (63,733 tax parcels) are affirmatively identified as residential tax parcels, most of which are single family residential.<sup>6,7,8</sup> Exhibit ES-1 identifies the tax parcels along the marine shoreline identified as residential. For residential property owners, costs are only incurred when and if there is shoreline stabilization on their property that needs to be repaired or replaced. Of the 63,733 residential tax parcels along the Washington's marine shorelines, 38,872 (61 percent) may be modified by some type of anthropogenic intervention.<sup>9,10</sup>

Finally, even in cases where residential property has existing shoreline stabilization that may require replacement, a substantial portion of Washington's marine shoreline is already subject to the requirements that are being clarified in the proposed rule (i.e., the requirement for use of a qualified professional to develop the site assessment and alternatives analysis). Specifically, five counties and 13 municipalities specifically require that a qualified professional be used to develop the requisite analyses. Exhibit ES-

---

<sup>6</sup> For this analysis, we define the marine shoreline as the extent of Washington's shoreline identified by WDFW as including marine tax parcels. This covers the coastlines of Puget Sound, the Strait of Juan de Fuca, the Pacific Coast, and major coastal estuaries. The Marine Parcel dataset includes parcel polygon data with county, city (if available), land use (if available) and owner data as specified by the county assessor, limited to parcels WDFW has identified as being located on marine shorelines.

<sup>7</sup> Private geospatial data identifying existing marine shoreline parcels provided via secure server to IEC by WDFW on May 23, 2022. Residential parcels are identified using the property type code included in the data. Of the parcels within the area of focus, 4 percent do not include a property type code, and may also be residential.

<sup>8</sup> For this analysis, residential parcels are identified by land use zoning code. However, WDFW does not administer the Hydraulic Code based on these designations. Rather, permitting decisions are made based on actual land use, which may not always align with the parcel's assigned land use zoning code.

<sup>9</sup> Publicly accessible geospatial data from the Washington State Shorezone Inventory. Developed by the Nearshore Habitat Program between 1994 and 2000. Downloaded July 2022. Available at: <https://www.dnr.wa.gov/programs-and-services/aquatics/aquatic-science/nearshore-habitat-inventory>.

<sup>10</sup> Publicly accessible geospatial data from the Beach Strategies Geodatabase (2017), Coastal Geologic Services, Available at: <https://fortress.wa.gov/dfw/public/PublicDownload/Habitat/BeachStrategies>.

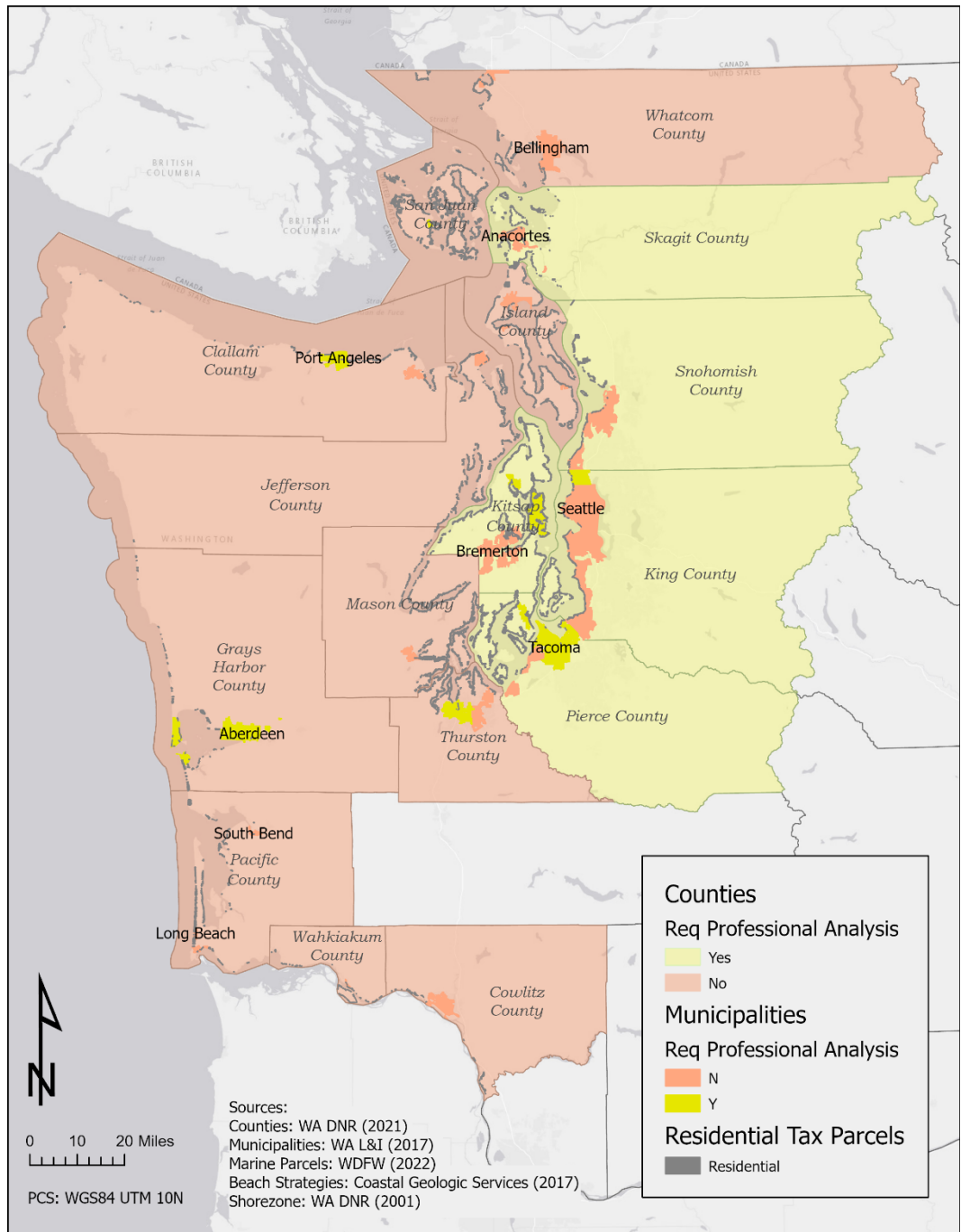
1 displays those counties and municipalities where the requirement to employ a qualified professional to complete the requisite reports is already in place. Residential property owners located in these jurisdictions are not expected to incur costs due to the rule.

While 11 counties and 30 municipalities do not specify this requirement, interviews with county and municipal planners conducted in July and August 2022 suggest that it would be impossible or very challenging for an individual without the relevant professional background to fulfill the necessary requirements. It is also WDFW's experience that property owners often employ a qualified professional to develop requisite reports even absent a requirement to do so.<sup>11</sup> Therefore, residential applicants looking to replace their shoreline stabilization in the counties where SMPs do not describe that a qualified professional must be hired for the analyses are still likely to hire qualified professionals for this purpose. Residential property owners (potentially including small businesses) within these jurisdictions needing to repair or rehabilitate shoreline stabilization are unlikely to, but could potentially, incur costs as a result of the rule.

---

<sup>11</sup> Email communication with WDFW on September 7, 2022.

**EXHIBIT ES-1. RESIDENTIAL MARINE SHORELINE TAX PARCELS AND EXISTING REQUIREMENTS FOR USE OF QUALIFIED PROFESSIONAL FOR SITE ASSESSMENT AND ALTERNATIVES ANALYSIS BASED ON COUNTY AND MUNICIPAL SMPS**



Costs of residential shoreline stabilization projects are generally borne by the property owners, which are frequently residents (i.e., households) and not businesses. In some cases, however, businesses may own residential properties or otherwise bear costs for replacing or rehabilitating residential shoreline stabilizations. Specifically, businesses that may incur costs as a result of the proposed rule may include those within the following North American Industry Classification System (NAICS) codes defining economic sectors:

- 813990 - *Business, Professional, Labor, Political, and Similar Organizations/Other Similar Organizations* (except Business, Professional, Labor, and Political Organizations): Includes (but is not limited to) property owners associations, condominium and homeowners' associations, and tenants' associations.<sup>12</sup>
- 531110 – *Lessors of Residential Buildings and Dwellings*

Additionally, businesses that are run out of an individual's residence may be affected by the rule. There are a wide range of business types that may fit this description and data are not available identifying the numbers and types of businesses associated with residential shoreline properties.

As described previously, most residential property owners with existing shoreline stabilization are likely already using qualified professionals to develop site assessments and alternatives analyses and are unlikely to incur costs as a result of the proposed rule. Nonetheless, there is some potential that individual property owners outside of areas where qualified professionals are required may incur the costs of utilizing a professional as a result of the proposed rule, and these property owners may include businesses.

Data limitations preclude the specific identification of businesses that have the potential to incur costs as a result of the rule. Within the counties with marine shorelines, including those where use of a qualified professional for site assessment and alternatives analysis is explicitly already required, there are 12,400 businesses representing NAICS 813990 (organizations including homeowners' association) and 4,589 representing NAICS 531110 (lessors of residential properties).<sup>13</sup> Of this universe of businesses in counties with marine shorelines, over 99 percent of those businesses are small (i.e., employ fewer than 50 people). Importantly, these businesses may be located anywhere within the county, are not specifically located on the marine shoreline, and are not specifically located on residential property. Data on home-based businesses are not available. This

---

<sup>12</sup> Homeowners' associations, tenants' associations, and property owners' associations would only be considered businesses to the extent they are incorporated. RCW 64.38.010 (Definitions) defines HOAs as a "corporation, *unincorporated association*, or other legal entity, each member of which is an owner of residential real property located within the association's jurisdiction, as described in the governing documents, and by virtue of membership or ownership of property is obligated to pay real property taxes, insurance premiums, maintenance costs, or for improvement of real property other than that which is owned by the member." The inclusion of "unincorporated association" within the definition suggests that not all HOAs are considered businesses in Washington.

<sup>13</sup> Business records for businesses within each identified NAICS code within Washington counties with marine shorelines obtained from the D&B Hoovers database on August 2, 2022, <https://www.dnb.com/products/marketing-sales/dnb-hoovers.html>.

analysis conservatively assumes that all home-based businesses employ fewer than 50 individuals and are small.

“Minor cost” is defined in RCW 19.85.020 as, “a cost per business that is less than 0.3 percent of annual revenue or income or one hundred dollars, whichever is greater, or one percent of annual payroll.” Data limitations prevent identification of the average annual revenues for the potentially affected businesses. As such, this analysis conservatively assumes a minor cost threshold of \$100, which is more likely to underestimate than overestimate the minor cost threshold for a given business.

#### COST OF COMPLIANCE

The proposed rule would only generate additional costs to residential shoreline property owners, including businesses, if, absent the rule, they would comply with existing requirements without the use of a qualified professional (e.g., by having a construction firm submit a report to document slope instability). Most residential property owners with existing shoreline stabilization are likely already using qualified professionals to develop site assessments and alternatives analyses and are unlikely to incur costs as a result of the proposed rule. To the extent that a residential shoreline property owner’s use of a qualified professional results specifically from the proposed rule, this analysis identifies the costs associated with having a qualified professional complete this report.

The cost of employing a qualified professional to complete the site assessment and alternatives analysis ranges from \$3,000 to \$10,000.<sup>14</sup> This range of costs represents estimates from industry representative interviews and email communications. This range of costs is relevant to multiple project types (new armoring structure project, rehabilitation or replacement shoreline stabilization project), proposed armoring types (e.g., hard armoring, hybrid armoring, soft-shore armoring), number of considered alternatives, and residential property shoreline length. This is because the base level of geotechnical analysis and reporting is unchanged across these metrics. For the same reasons, costs are also similar whether a residential applicant is applying for a general HPA permit or an emergency or expedited permit.<sup>15</sup> The range of costs is also unlikely to differ between residential property owners who operate their property as a business and property owners who simply reside within their property.

#### SUMMARY FINDINGS

Owners of marine shoreline property in Washington, whether individuals or businesses, are only affected by the proposed rule where the property is identified as residential, the property already has existing shoreline stabilization in place, and existing requirements

---

<sup>14</sup> Before RCW 77.55.231 was codified, permit applicants for residential rehabilitation and replacement bank protection projects in select areas spent as low as \$1,000 to provide proof of slope instability to necessitate the proposed work. However, since RCW 77.55.231 changed the reporting requirements for these applicants, we assume that the costs to prepare these deliverables are on average no lower than \$3,000.

<sup>15</sup> Personal and email communication with representatives of firms providing shoreline stabilization-related services conducted in July 2022.

with respect to the local jurisdictions' SMPs do not already require the use of a qualified professional to develop the requisite site assessment and alternatives analysis. Even where local SMPs do not explicitly clarify the need for a qualified professional to undertake the requisite analyses, most are still likely to hire qualified professionals for this purpose. As such, the proposed rule is unlikely to result in additional costs to residential property owners. In the likely limited instances where the rule may result in incremental costs to residential property owners, those costs may be borne by small businesses that are operating on residential properties. Available data do not allow for a specific identification of the number of small businesses operating on marine shoreline residential properties that may experience costs as a result of the rule, or the extent to which those businesses are small, though employment data for businesses potentially operating on residential parcels within the affected counties suggest 99 percent of these businesses are small. It is unlikely that residential property owners, including small businesses, will incur costs as a result of this rule. However, to the extent that businesses do incur these costs, the costs would be borne disproportionately by small businesses, and are likely to be more than minor.

## CHAPTER 1 | INTRODUCTION

This report evaluates the potential costs to businesses of compliance with a Washington State Department of Fish and Wildlife (WDFW) proposed rule that updates Washington State’s Hydraulic Code to clarify how residential shoreline property owners should comply with recent legislation regarding residential marine shoreline stabilization.<sup>16</sup> This Small Business Economic Impact Statement (SBEIS) was developed in accordance with the Regulatory Fairness Act (RFA), Revised Code of Washington (RCW) Section 19.85 to determine whether the proposed rule would result in more than minor and disproportionate cost impacts on small businesses. The primary sources of information for this analysis include the following:

- Information gathered through outreach to county and municipal planners, businesses providing the services required by the proposed rule, and residential property owners who have experience with marine shoreline stabilization replacement;
- County and municipal Shoreline Master Program (SMP) documents;
- Tax parcel data identifying land use types along marine shorelines;
- Data identifying location of existing shoreline stabilization along the marine shoreline; and
- Historic Hydraulic Project Approval (HPA) permit data provided by WDFW.

### 1.1 NEED FOR THE RULE

In 2021, the Washington State Legislature passed Substitute Senate Bill (SSB) 5273. This bill requires that anyone desiring to replace residential marine shoreline stabilization must use the least impacting, technically feasible bank protection alternative for the protection of fish life. This requirement is codified in RCW 77.55.231 and applies to the issuance of Hydraulic Project Approval (HPA) permits. The requirement must be met by conducting a site assessment and alternatives analysis report before proposing a hard armoring technique.

WDFW is developing the proposed rule to update the state’s Hydraulic Code rules (Chapter 220-660 Washington Administrative Code [WAC]) to be consistent with RCW

---

<sup>16</sup> This report uses the term “shoreline stabilization” to refer broadly to the various shoreline interventions that are used to prevent or reduce erosion of the shoreline and protect upland property and structures, including passive or nature-based techniques, soft shore techniques, and hard structures such as bulkheads.

77.55.231. To implement the new statute, WDFW's objectives for this rule proposal include:

1. Specify that replacement of residential marine shoreline stabilization must utilize the least impacting, technically feasible alternative for the protection of fish life;
2. Identify alternatives for shoreline stabilization from most to least preferred;
3. Specify that a site assessment and alternatives analysis report prepared by a qualified professional is required as part of an application for an HPA permit for this type of project;
4. Identify mandatory report elements; and
5. Elaborate on the report requirement for emergency and expedited permit applications.

Although not specified in SSB 5273, WDFW's proposed rule will clarify that the requisite site assessment and alternatives analysis report needs to be developed by a qualified professional. Reports must be prepared by a qualified professional to ensure that they are science-based, complete, and draw accurate conclusions. Qualified professionals are able to provide independent, expert analysis. Absent the proposed rule requirement to employ qualified professionals to develop the analyses and report, WDFW may need to reject poorly or incorrectly prepared reports, causing delays in the permitting process and potentially adding cost to the project. WDFW may also deny permits for proposals that are not the least impacting technically feasible option. Using a qualified professional provides HPA applicants with certainty that they have met regulatory requirements for analysis and reporting. A report prepared by a qualified professional will inform subsequent project design, increasing the likelihood that the final proposal is permissible. This requirement is consistent with existing rule in WAC 220-660-370 relative to *new* residential shoreline stabilization projects.

## 1.2 REQUIREMENTS FOR DEVELOPING AN SBEIS

19.85 RCW requires that the relevant agency prepare an SBEIS if the proposed rule “will impose more than minor costs on businesses in an industry.”<sup>17</sup> “Minor cost” is defined in RCW 19.85.020 as a cost per business that is less than 0.3 percent of annual revenue or income, or \$100, whichever is greater, or one percent of annual payroll.<sup>18</sup> The guidelines for preparing an SBEIS are included in RCW 19.85.040.<sup>19</sup> This analysis also utilizes the more specific guidance and resources provided by Washington State's Office for

---

<sup>17</sup> RCW 19.85.030 Agency Rules - Small Business economic impact statement reduction of costs imposed by rule. Accessed September 20, 2021 at: <https://app.leg.wa.gov/RCW/default.aspx?cite=19.85.030>.

<sup>18</sup> RCW 19.85.020 Definitions. Accessed September 20, 2021 at: <https://app.leg.wa.gov/rcw/default.aspx?cite=19.85.020>.

<sup>19</sup> RCW 19.85.040 Small business economic impact statement—Purpose—Contents. Accessed September 20, 2021 at: <https://app.leg.wa.gov/RCW/default.aspx?cite=19.85.040>.



Regulatory Innovation and Assistance (ORIA).<sup>20</sup> Per the SBEIS *Frequently Asked Questions* guidance, agencies are required to consider “costs imposed on businesses and costs associated with compliance with the proposed rules.”<sup>21</sup> Agencies are not required under 19.85 RCW to consider indirect costs not associated with compliance with the rule.

### 1.3 SUMMARY OF THE PROPOSED RULE

WDFW is proposing changes to WAC 220-660-370 regarding bank protection in saltwater areas. These changes address a 2021 requirement in RCW 77.55.231, which states that anyone desiring to replace residential marine shoreline stabilization must use the least impacting, technically feasible bank protection alternative for the protection of fish life, proven through the completion of a site assessment and alternatives analysis. The proposed rule will clarify the requirement that residential property owners applying for a Hydraulic Project Approval (HPA) permit complete a site assessment and alternatives analysis, and specify the need for a qualified professional to develop the analysis and reporting, for residential shoreline rehabilitation or replacement stabilization projects. This section summarizes the relevant existing regulations and practices for residential property owners submitting HPA permit applications for shoreline stabilization projects, identifies how they would change under the proposed rule, and describes how the change may result in costs to affected businesses.

#### 1.3.1 EXISTING REGULATIONS AND POLICIES

This section describes the existing state and local regulations and policies that guide the placement of shoreline stabilization on Washington’s marine shorelines, which forms the baseline for this analysis.

##### Hydraulic Code Rules

The current language of the WAC for bank protection in saltwater areas requires HPA permit applicants for either a *new* residential bank protection or the *replacement or rehabilitation of residential bank protection that extends waterward of an existing bank protection structure* (“waterward replacement”) to use the least impacting technically feasible bank protection alternative.<sup>22</sup> These requirements do not currently apply to replacement or rehabilitation of residential bank protection that *does not* extend waterward of an existing structure. The section stipulates that HPA applicants should propose a hard armoring technique only after considering relevant site characteristics and other factors in an alternatives analysis.

---

<sup>20</sup> ORIA. 2021. Regulatory Fairness Act Support. Accessed July 31, 2022 at: [https://www.oria.wa.gov/site/alias\\_\\_oria/934/regulatory-fairness-act-support.aspx](https://www.oria.wa.gov/site/alias__oria/934/regulatory-fairness-act-support.aspx).

<sup>21</sup> WA Attorney General Office. 2021. Small Business Economic Impact Statements - Frequently Asked Questions. Accessed July 31, 2022 at: [https://www.oria.wa.gov/Portals/\\_oria/VersionedDocuments/RFA/Regulatory\\_Fairness\\_Act/DRAFT\\_SBEIS\\_FAQ.pdf](https://www.oria.wa.gov/Portals/_oria/VersionedDocuments/RFA/Regulatory_Fairness_Act/DRAFT_SBEIS_FAQ.pdf).

<sup>22</sup> The WAC defines “feasible” as available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

In addition, HPA applicants for *new* or *waterward replacement* of existing bank protection structures are required to submit a site assessment and design rationale for the proposed method. These deliverables, in conjunction with the alternatives analysis, must be prepared by a qualified professional.<sup>23</sup> This “qualified professionals report” must be provided as part of the complete HPA application, which should include the following:

- An assessment of the level of risk to existing buildings, roads, or services being threatened by the erosion;
- Evidence of erosion and/or slope instability to warrant the stabilization work;
- Alternatives considered and the technical rationale specific to the bank protection technique proposed;
- An analysis of the benefits and impacts associated with the chosen protection method; and
- An explanation of the method chosen, design parameters, types of materials, quantities, staging, and site rehabilitation.

These requirements apply across all land use zones for the applicable project types (i.e., new shoreline bank protection or waterward replacements of existing protection). However, these WAC requirements *do not* apply to HPA permit applicants that wish to *replace* existing marine residential shoreline stabilization.

Property owners also have the option of applying for an emergency or expedited permit per requirements stipulated in RCW 77.55.021(12), RCW 77.55.021(14), and RCW 77.55.021(16). Per RCW 77.55.021(14), if WDFW determines that an imminent danger exists, they can issue an expedited written permit for work to remove any obstructions, repair existing structures, restore banks, or protect property. Per RCW 77.55.021(16), WDFW may also issue an expedited written permit in those instances where normal permit processing would result in significant hardship for the applicant or unacceptable damage to the environment. Expedited permit requests require a complete written application as required in RCW 77.55.021(2), which should include the following:

- General plans for the overall project;
- Complete plans and specifications of the proposed construction or work within the mean higher high water line in salt water or within the ordinary high water line in fresh water;
- Complete plans and specifications for the proper protection of fish life;
- Notice of compliance with any applicable requirements of the state environmental policy act, unless otherwise provided for in this chapter; and

---

<sup>23</sup> Per WAC 220-660-030, a “qualified professional” is a scientist, engineer, or technologist specializing in a relevant applied science or technology. This person may be certified with an appropriate professional organization, or could be someone who, through demonstrated education, experience, accreditation, and knowledge relevant to the particular matter, may be reasonably relied on to provide advice within that person’s area of expertise.

- In the event that any person or government agency desires to undertake mineral prospecting or mining using motorized or gravity siphon equipment or desires to discharge effluent from such an activity to waters of the state, the person or government agency must also provide proof of compliance with the requirements of the federal clean water act issued by the department of ecology.

WAC 220-660-030 requires a qualified professional's report for all new bank protection projects, whether the new shoreline stabilization project applicants are applying for a general HPA, expedited, or emergency permit, unless WDFW grants an exemption depending on the scale and nature of the project.

In 2021, Washington Legislature (via Substitute Senate Bill [SSB] 5273) passed a requirement (codified in RCW 77.55.231) that anyone desiring to *replace* residential marine shoreline stabilization must use the least impacting technically feasible bank protection alternative for the protection of fish life. Further, unless WDFW provides an exemption based on the scale and nature of the project, a property owner that desires to replace residential marine shoreline stabilization must complete a site assessment and alternatives assessment to consider the least impacting alternatives before proposing a hard armoring technique. The RCW does not specify that these analyses and report be completed by a "qualified professional."

#### Shoreline Management Act/Shoreline Master Program Requirements

The Shoreline Management Act (SMA) (Chapter 90.58 RCW) establishes partnerships between state and local governments for "managing, accessing, and protecting Washington's shorelines."<sup>24</sup> The SMA requires local governments within shoreline areas in the state of Washington to develop SMPs within their jurisdictions. The statewide rules that translate the broad policies of the SMA into guidance for the development of local SMPs are found in the state's Shoreline Master Program Guidelines (Chapter 173-26 WAC). To ensure that county and municipal governments are complying with changing state standards for SMPs during review periods, the Act requires that local governments amend their SMPs at least once every eight years. Local SMPs must at minimum address specific topics of statewide significance and may elect to go above and beyond statewide requirements to regulate the shoreline within their local jurisdiction.

With respect to shoreline modifications, including shoreline stabilization, for new structures, the SMP Guidelines require geotechnical reports that address the need for the modification, risk, and rate of erosion, and justification for hard armoring where it is being proposed. The SMP Guidelines do not specify that geotechnical reports must be developed by a qualified professional. The SMP Guidelines do not specify the need for a geotechnical report with respect to replacement stabilization. Of note, regardless of whether a local jurisdiction's SMP explicitly states the need for site assessment and

---

<sup>24</sup> Washington Department of Ecology. 2022. Shoreline Management Act (SMA). Viewed at <https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Shoreline-laws-rules-and-cases#:~:text=The%20state%20Shoreline%20Management%20Act,shoreline%20use%20in%20their%20jurisdictions>, July 29, 2022.

alternatives analysis, permittees in those jurisdictions are still subject to those requirements based on RCW 77.55.231.

### 1.3.2 USE OF QUALIFIED PROFESSIONAL TO DEVELOP SITE ASSESMENT AND ALTERNATIVES ANALYSIS

As outlined above, WAC 220-660-370 requires that for *new* shoreline stabilization, a qualified professional must address a suite of requirements including a risk assessment, evidence of erosion, alternatives for bank protection techniques, and the benefits and impacts of the selected technique. The WAC does not currently include the same requirements for residential property owners who wish to *replace or rehabilitate* existing shoreline stabilization. However, these requirements are already in place for residential shoreline stabilization replacements in some counties and municipalities through their local SMPs.

Exhibit 1-1 below describes each county's reporting requirements for replacing residential shoreline stabilization according to their respective SMPs. For each county, Exhibit 1-1 highlights whether requisite analyses are to be undertaken by a qualified professional according to the text of the local SMP.<sup>25</sup> While SMPs are separate from HPA requirements, some SMPs specify overlapping requirements regarding replacement of shoreline stabilizations, and therefore provide insight regarding the expected behaviors of permittees absent this rule proposal.

Interviews with shoreline planners from selected counties and the SMPs of each county informed this analysis. Several county and municipal shoreline planners stated in interviews that even if their SMPs did not explicitly clarify the need for a qualified professional to undertake the analyses, it would be impossible or very challenging for an individual without the relevant professional background to fulfill the necessary requirements. Therefore, residential applicants looking to replace their shoreline stabilization in the counties where SMPs do not describe that a qualified professional must be hired for the analyses are still likely to hire qualified professionals for this purpose.

Of the 16 counties with marine shorelines, five explicitly state the requirement for use of a qualified professional in developing site assessment and alternatives analysis reports. Four do not specify the need for a qualified professional to develop the requisite analyses, and although seven do not currently describe a requirement for geotechnical reports of any kind for applicants replacing residential shoreline stabilization, those residents are required to develop these reports by RCW 77.55.231 when applying for an HPA permit. In both cases, as described previously, it is likely that qualified professionals are being used to fulfill those requirements.

---

<sup>25</sup> Again, even where an SMP suggests that a site assessment and alternatives analysis is not required, individuals in those jurisdictions are in fact subject to those requirements based on RCW 77.55.231.

EXHIBIT 1-1. COUNTY SMP REQUIREMENTS FOR RESIDENTIAL REPLACEMENT SHORELINE  
STABILIZATION

COUNTY NAME	ANALYSES TO BE COMPLETED BY QUALIFIED PROFESSIONAL? <sup>1</sup>	SOURCE
Clallam	Need for a qualified professional not specified	Clallam County Shoreline Master Program
Cowlitz	No requirement for site assessment and alternatives analysis specified	Cowlitz County Shoreline Master Program
Grays Harbor	No requirement for site assessment and alternatives analysis specified	Interview with county shoreline planner; Grays Harbor County Shoreline Master Program
Island	Need for a qualified professional not specified	Interview with county shoreline planner; Island County Shoreline Master Program
Jefferson	No requirement for site assessment and alternatives analysis specified	Interview with county shoreline planner; Jefferson County Shoreline Master Program
King	Yes	Interview with county shoreline planner; King County Shoreline Master Program
Kitsap	Yes	Interview with county shoreline planner; Kitsap County Shoreline Master Program
Mason	No requirement for site assessment and alternatives analysis specified	Interview with county shoreline planner; Mason County Shoreline Master Program
Pacific	No requirement for site assessment and alternatives analysis specified	Pacific County Shoreline Master Program
Pierce	Yes	Interview with county shoreline planner; Pierce County Shoreline Master Program
San Juan	Need for a qualified professional not specified	San Juan County Shoreline Master Program
Skagit	Yes	Skagit County Shoreline Master Program
Snohomish	Yes	Interview with county shoreline planner; Snohomish County Shoreline Master Program
Thurston	No requirement for site assessment and alternatives analysis specified	Interview with county shoreline planner; Thurston County Shoreline Master Program
Wahkiakum	No requirement for site assessment and alternatives analysis specified	Wahkiakum County Shoreline Master Program

COUNTY NAME	ANALYSES TO BE COMPLETED BY QUALIFIED PROFESSIONAL? <sup>1</sup>	SOURCE
Whatcom	Need for a qualified professional not specified	Whatcom County Shoreline Master Program
<b>Notes:</b> 1. Where SMPs do not explicitly specify use of a certified professional, per IEC's interviews with selected counties it is unlikely that a residential property owner would be able to complete a compliant geotechnical report without the support of the appropriate qualified professional. Therefore, the instances where it is "not specified" whether a professional is required, applicants are likely to hire a qualified professional to fulfill the geotechnical analysis requirement. Sources: Shoreline Master Programs for each county. Interviews with Grays Harbor, Island, Jefferson, King, Kitsap, Mason, Pierce, Snohomish, and Thurston Counties conducted from July through August 2022.		

Exhibit 1-2 displays the same information as Exhibit 1-1 at the municipal level. This analysis includes all municipalities identified in the marine tax parcel data. Of the 43 municipalities that meet these criteria, 13 specifically state a requirement that a qualified professional develop the requisite reports for replacement residential shoreline stabilization structures. Two municipalities—Anacortes and Seattle—do not specify that a qualified professional must provide the reports, but as described above, it is likely residents are nonetheless hiring qualified professionals to fulfill these requirements. For the remainder, although the SMP does not specify the need for an alternatives analysis and site assessment, individuals in those jurisdictions must do so because of the requirements of RCW 77.55.231 and, for the same reason previously described, are most likely to be using qualified professionals to fulfill those requirements.

**EXHIBIT 1-2. MUNICIPAL REQUIREMENTS FOR RESIDENTIAL REPLACEMENT SHORELINE STABILIZATION OR ARMOROING**

MUNICIPALITY NAME <sup>1</sup>	ANALYSES TO BE COMPLETED BY QUALIFIED PROFESSIONAL? <sup>2</sup>	SOURCE
Aberdeen	Yes	Aberdeen Shoreline Master Program
Anacortes	Need for qualified professional not specified	Interview with municipal planner; Anacortes Shoreline Master Program
Bainbridge Island	Yes	Interview with municipal planner; Bainbridge Island Shoreline Master Program
Bellingham	No requirement for site assessment and alternatives analysis specified	Bellingham Shoreline Master Program
Blaine	No requirement for site assessment and alternatives analysis specified	Blaine Shoreline Master Program

MUNICIPALITY NAME <sup>1</sup>	ANALYSES TO BE COMPLETED BY QUALIFIED PROFESSIONAL? <sup>2</sup>	SOURCE
Bremerton	No requirement for site assessment and alternatives analysis specified	Bremerton Shoreline Master Program
Burien	No requirement for site assessment and alternatives analysis specified	Burien Shoreline Master Program
Cathlamet	No requirement for site assessment and alternatives analysis specified	Cathlamet Shoreline Master Program
Coupeville	No requirement for site assessment and alternatives analysis specified	Coupeville Shoreline Master Program
Des Moines	No requirement for site assessment and alternatives analysis specified	Des Moines Shoreline Master Program
DuPont	No requirement for site assessment and alternatives analysis specified	DuPont Shoreline Master Program
Edmonds	No requirement for site assessment and alternatives analysis specified	Edmonds Shoreline Master Program
Everett	No requirement for site assessment and alternatives analysis specified	Everett Shoreline Master Program
Federal Way	No requirement for site assessment and alternatives analysis specified	Federal Way Shoreline Master Program
Friday Harbor	Yes	Friday Harbor Shoreline Master Program
Gig Harbor <sup>3</sup>	Yes	Interview with municipal planner; Gig Harbor Shoreline Master Program
Hoquiam	Yes	Hoquiam Shoreline Master Program
Ilwaco	No requirement for site assessment and alternatives analysis specified	Ilwaco Shoreline Master Program
La Conner	No requirement for site assessment and alternatives analysis specified	La Conner Shoreline Master Program
Lacey	No requirement for site assessment and alternatives analysis specified	Lacey Shoreline Master Program
Langley	No requirement for site assessment and alternatives analysis specified	Langley Shoreline Master Program
Longview	No requirement for site assessment and alternatives analysis specified	Longview Shoreline Master Program
Long Beach	No requirement for site assessment and alternatives analysis specified	Long Beach Shoreline Master Program

MUNICIPALITY NAME <sup>1</sup>	ANALYSES TO BE COMPLETED BY QUALIFIED PROFESSIONAL? <sup>2</sup>	SOURCE
Mukilteo	No requirement for site assessment and alternatives analysis specified	Mukilteo Shoreline Master Program
Normandy Park	No requirement for site assessment and alternatives analysis specified	Normandy Park Shoreline Master Program
Oak Harbor	No requirement for site assessment and alternatives analysis specified	Oak Harbor Shoreline Master Program
Ocean Shores	Yes	Ocean Shores Shoreline Master Program
Olympia <sup>4</sup>	Yes	Interview with municipal planner; Olympia Shoreline Master Program
Port Angeles	Yes	Port Angeles Shoreline Master Program
Port Orchard	No requirement for site assessment and alternatives analysis specified	Port Orchard Shoreline Master Program
Port Townsend	No requirement for site assessment and alternatives analysis specified	Port Townsend Shoreline Master Program
Poulsbo	Yes	Poulsbo Shoreline Master Program
Ruston	Yes	Ruston Shoreline Master Program
Seattle	Need for qualified professional not specified	Seattle Shoreline Master Program
Sequim	No requirement for site assessment and alternatives analysis specified	Sequim Shoreline Master Program
Shelton	No requirement for site assessment and alternatives analysis specified	Shelton Shoreline Master Program
Shoreline	Yes	Shoreline Shoreline Master Program
South Bend	No requirement for site assessment and alternatives analysis specified	South Bend Shoreline Master Program
Steilacoom	No requirement for site assessment and alternatives analysis specified	Steilacoom Shoreline Master Program
Tacoma	Yes	Tacoma Shoreline Master Program
University Place	No requirement for site assessment and alternatives analysis specified	University Place Shoreline Master Program
Westport	Yes	Westport Shoreline Master Program
Woodway	No requirement for site assessment and alternatives analysis specified	Woodway Shoreline Master Program
<b>Notes:</b> 1. Municipalities with marine tax parcels within municipal boundaries. Marine tax parcels identified using private geospatial data identifying existing marine shoreline parcels provided via secure server to IEc by WDFW on May 23, 2022. Municipalities were specified by identifying marine tax parcels falling within municipal boundaries from publicly available geospatial data from the Washington Department of Natural Resources (WA DNR) (2021).		



MUNICIPALITY NAME <sup>1</sup>	ANALYSES TO BE COMPLETED BY QUALIFIED PROFESSIONAL? <sup>2</sup>	SOURCE
<p>2. Some SMPs do specify that a qualified professional is required for shoreline stabilization analyses and report but that these reporting requirements are not relevant for replacement structures. Of note, where SMPs do not explicitly specify use of a certified professional, per IEc's interviews with selected counties it is unlikely that a residential property owner would be able to complete a compliant geotechnical report without the support of the appropriate qualified professional. Therefore, the instances where it is "not specified" whether a professional is required, applicants are likely to hire a qualified professional to fulfill the geotechnical analysis requirement.</p> <p>3. Interviewee described that although the requirements are not specified in the SMP in detail, they are being implemented in practice.</p> <p>4. Municipal SMP requires that a qualified professional conduct most, but not all of those analyses.</p> <p>Sources: Shoreline Master Programs for each municipality. Interviews with representatives from Olympia, Gig Harbor, Bainbridge Island, and Anacortes conducted from in July 2022.</p>		

### 1.3.3 PROPOSED RULE PROVISIONS

The proposed rule would update WAC 220-660-370 to be consistent with the existing RCW 77.55.231 requirement for HPA permit applicants for residential marine shoreline stabilization replacement or rehabilitation projects. Specifically, the proposed rule prescribes the following:

- Revises existing language in WAC 220-660-370 to require HPA applicants to use the least impacting technically feasible bank protection alternatives for *replacement or rehabilitation of residential* bank protection projects, and specifies preferences for available alternatives;<sup>26</sup>
- Specifies the specific reporting elements that must be included in an HPA application for residential replacement projects (outlined in Section 1.2.1 of this report); and
- Requires that HPA permit applicants for replacement or rehabilitation of residential bank protection provide a site assessment, alternatives analysis and design rationale for the proposed method *that is prepared by a qualified professional*.

As described in Section 1.2.1, revisions made to RCW 77.55.231 as a result of SSB 5273 have already put into place the requirement to employ the least impacting technically feasible stabilization technique, and requirements for a site assessment and alternatives analysis with respect to replacement of residential shoreline stabilization. Costs incurred due to these requirements are thus not considered to be incremental to, or a result of, the proposed rule. Thus, the key rule change implemented by the proposed rule is that permit applicants of replacement or rehabilitation of residential bank protection projects must hire a qualified professional to complete the qualified professionals report. Applicants for these project types were not previously required to submit a qualified professionals

---

<sup>26</sup> WAC 220-660-370 provides common alternatives for (1) new bank protection and (2) replacement or rehabilitation of bank protection that extends waterward of an existing bank protection structure projects. The proposed rule would modify WAC 220-660-370 to provide common alternatives for replacement or rehabilitation of residential bank protection projects, adapted from RCW Section 77.55.231.

report, so any incurred costs to meet this updated requirement may be attributable to the proposed rule.

The proposed rule also outlines exemptions to the above requirements. WDFW may grant an exemption to the above described requirements under the following conditions:

- The department may grant an exemption depending on the scale and nature of the project; or
- Projects for the removal of an existing bank protection structure and restoration of the beach are exempted. These projects may include other passive techniques such as controlling upland drainage or planting native vegetation.

Finally, the proposed rule also clarifies the requirements for permit applicants seeking expedited or emergency permits, whether for new or replacement of existing shoreline stabilization), under RCW 77.55.021(12), RCW 77.55.021(14), or RCW 77.55.021(16). These applications should include all deliverables outlined in RCW 77.55.021(2), but a site assessment and alternatives analysis report are not required at the time of application. The proposed rule states that any HPA permit applicant who submits an emergency or expedited application must submit within 90 days from the permit issuance a site assessment and alternatives analysis report, unless WDFW issues an exemption. After review of these deliverables, the HPA permit applicant may be required to replace the structure with one that is truly the least impacting technically feasible alternative.

WAC 220-660-370 currently requires the submission of a site assessment and alternatives analysis report for all new shoreline modification, regardless of the type of application (standard, expedited, or emergency) unless the department provides an exemption depending on the scale and nature of the project. RCW 77.55.231 requires the same for replacement of existing shoreline stabilization. The proposed rule thus does not effectively change the existing requirement for *new* or *replacement* shoreline stabilization expedited or emergency applicants, other than specifying the timeframe within which the requisite report must be submitted.

## CHAPTER 2 | SMALL BUSINESS IMPACTS

This chapter evaluates the potential economic impacts of the proposed rule on small businesses in Washington State. As outlined in the RFA and in accordance with other guidance and best practices, this SBEIS addresses the following questions.<sup>27,28,29</sup>

- What are the industries and universe of businesses that may incur costs as a result of this rule?
- What are the likely costs of the rule to those businesses?
- Are the costs resulting from the rule anticipated to be more than minor?
- Will the rule disproportionately affect small businesses?
- What steps has the agency taken to reduce the costs of the rule on small businesses?
- How has the agency involved small businesses in the development of the rule?
- How many jobs may be created or lost as a result of compliance with the rule?

The sections that follow address each of these questions individually.

### 2.1 POTENTIALLY AFFECTED SMALL BUSINESSES

The rule has the potential to affect businesses that own residential property on marine shorelines of Washington State and that may need to replace or rehabilitate existing shoreline stabilization. The term “residential” with respect to the hydraulic code is not defined. For purposes of rule implementation, WDFW interprets the term with its common definition of describing a property on which individuals reside.<sup>30</sup> WDFW has specified that they will not consider hotel and motel properties to be residential properties with respect to the rule, but other short and long-term residential property rentals will be considered residential and must comply with the rule.

---

<sup>27</sup> RCW 19.85.040 Small business economic impact statement—Purpose—Contents. Accessed July 31, 2022 at: <https://app.leg.wa.gov/RCW/default.aspx?cite=19.85.040>.

<sup>28</sup> ORIA. 2021. Regulatory Fairness Act Support. Accessed July 31, 2022 at: [https://www.oria.wa.gov/site/alias\\_\\_oria/934/regulatory-fairness-act-support.aspx](https://www.oria.wa.gov/site/alias__oria/934/regulatory-fairness-act-support.aspx).

<sup>29</sup> WA Attorney General Office. 2021. Small Business Economic Impact Statements - Frequently Asked Questions. Accessed July 31, 2022 at: [https://www.oria.wa.gov/Portals/\\_oria/VersionedDocuments/RFA/Regulatory\\_Fairness\\_Act/DRAFT\\_SBEIS\\_FAQ.pdf](https://www.oria.wa.gov/Portals/_oria/VersionedDocuments/RFA/Regulatory_Fairness_Act/DRAFT_SBEIS_FAQ.pdf).

<sup>30</sup> Personal communication with WDFW staff on July 27, 2022.

Absent detailed data on businesses that own residential properties along marine shorelines of Washington, we rely upon the best available information regarding the potential extent of businesses affected by the rule. We begin by describing the extent of shoreline properties that may be affected by the proposed rule, and then describe the universe of businesses that could incur costs as a result of the rule.

#### 2.1.1 EXTENT OF AFFECTED SHORELINE PROPERTY

Owners of marine shoreline property in Washington, whether individuals or businesses, are only affected by the proposed rule under the following circumstances:

- The property is identified as residential;
- The property already has existing shoreline stabilization in place; and
- Existing requirements with respect to the local jurisdictions' SMPs do not already require the use of a qualified professional to develop the requisite site assessment and alternatives analysis.

Available data suggest 66 percent of Washington's marine shoreline parcels (63,733 tax parcels) are affirmatively identified as residential tax parcels, most of which are single family residential.<sup>31,32</sup> Of the 96,957 tax parcels of all types along Washington's marine shoreline, 46,373 (48 percent) are identified as single family residential. Another 12,074 of the parcels (12 percent) are identified as multi-unit residential. Exhibit 2-1 identifies the tax parcels along the marine shoreline identified as residential.<sup>33</sup>

For residential property owners, costs are only incurred when and if there is shoreline stabilization on their property that needs to be repaired or replaced. Of the 63,733 residential tax parcels along the Washington's marine shorelines, 38,872 (61 percent) may be modified by some type of anthropogenic intervention.<sup>34,35</sup>

Finally, even in cases where residential property has existing shoreline stabilization that may require replacement, a substantial portion of Washington's marine shoreline is

---

<sup>31</sup> For this analysis, we define the marine shoreline as the extent of Washington's shoreline identified by WDFW as including marine tax parcels. This covers the coastlines of Puget Sound, the Strait of Juan de Fuca, the Pacific Coast, and major coastal estuaries. The Marine Parcel dataset includes parcel polygon data with county, city (if available), land use (if available) and owner data as specified by the county assessor, limited to parcels WDFW has identified as being located on marine shorelines.

<sup>32</sup> Private geospatial data identifying existing marine shoreline parcels provided via secure server to IEc by WDFW on May 23, 2022. Residential parcels are identified using the property type code included in the data. Of the parcels within the area of focus, 4 percent do not include a property type code, and may also be residential.

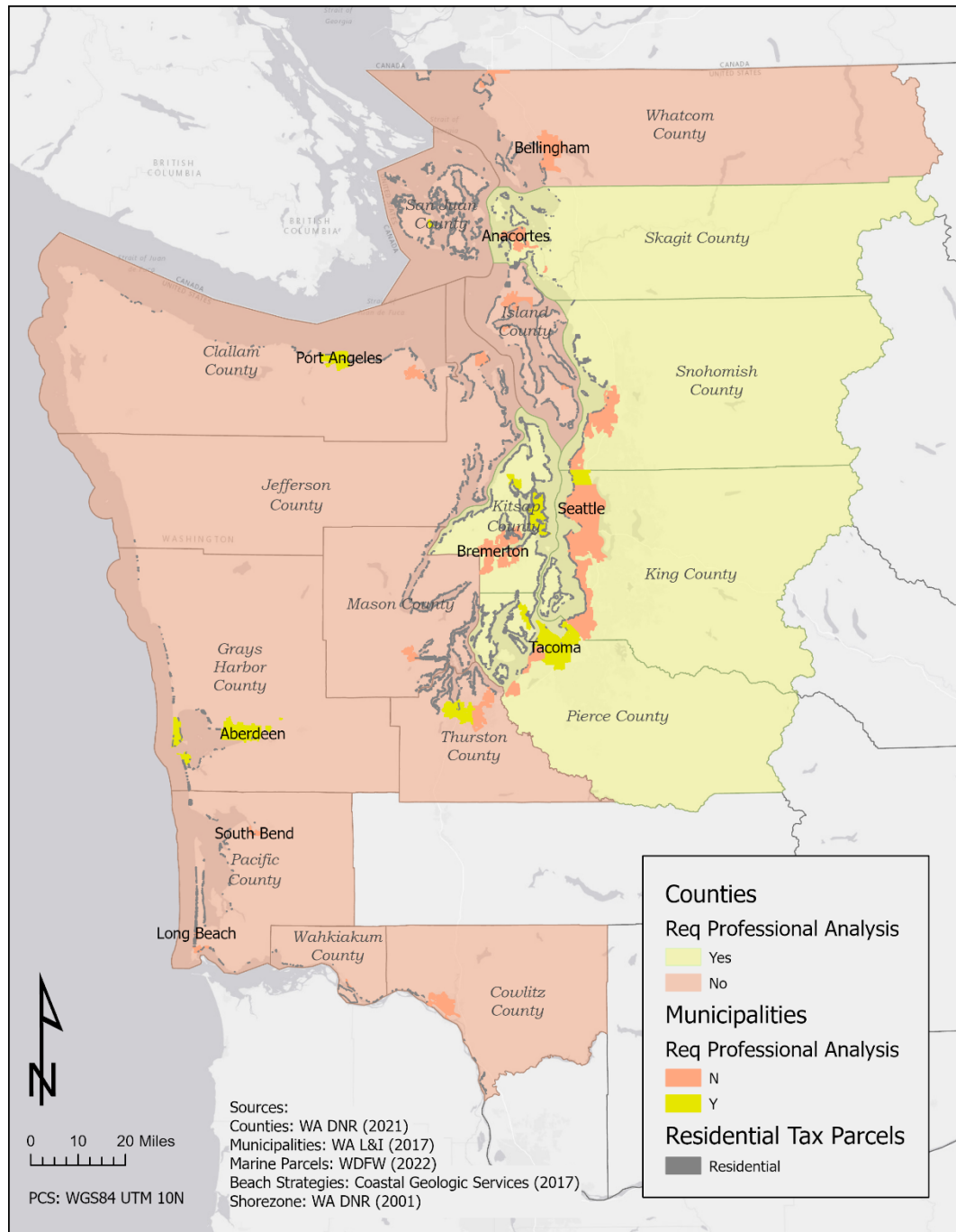
<sup>33</sup> For this analysis, residential parcels are identified by land use zoning code. However, WDFW does not administer the Hydraulic Code based on these designations. Rather, permitting decisions are made based on actual land use, which may not always align with the parcel's assigned land use zoning code.

<sup>34</sup> Publicly accessible geospatial data from the Washington State Shorezone Inventory. Developed by the Nearshore Habitat Program between 1994 and 2000. Downloaded July 2022. Available at: <https://www.dnr.wa.gov/programs-and-services/aquatics/aquatic-science/nearshore-habitat-inventory>.

<sup>35</sup> Publicly accessible geospatial data from the Beach Strategies Geodatabase (2017), Coastal Geologic Services, Available at: <https://fortress.wa.gov/dfw/public/PublicDownload/Habitat/BeachStrategies>.

already subject to the requirements that are being clarified in the proposed rule (i.e., the requirement for use of a qualified professional to develop the site assessment and alternatives analysis). Specifically, five counties and 13 municipalities specifically require that a qualified professional be used to develop the requisite analyses. Exhibit 2-1 displays those counties and municipalities where the requirement to employ a qualified professional to complete the requisite reports is already in place. Residential property owners located in these jurisdictions are not expected to incur costs due to the rule. While 11 counties and 30 municipalities do not identify this requirement, interviews with county and municipal planners conducted in July and August 2022 suggest that it would be impossible or very challenging for an individual without the relevant professional background to fulfill the necessary requirements. Therefore, residential applicants looking to replace their shoreline stabilization in the counties where SMPs do not describe that a qualified professional must be hired for the analyses are still likely to hire qualified professionals for this purpose. Residential property owners (potentially including small businesses) within these jurisdictions needing to repair or rehabilitate shoreline stabilization are unlikely to, but could potentially, incur costs as a result of the rule.

**EXHIBIT 2-1. RESIDENTIAL MARINE SHORELINE TAX PARCELS AND EXISTING REQUIREMENTS FOR USE OF QUALIFIED PROFESSIONAL FOR SITE ASSESSMENT AND ALTERNATIVES ANALYSIS BASED ON COUNTY AND MUNICIPAL SMPS**



### 2.1.2 IDENTIFICATION OF POTENTIALLY AFFECTED BUSINESSES

Costs of residential shoreline stabilization projects are generally borne by the property owners, which are frequently residents (i.e., households) and not businesses. In some cases, however, businesses may own residential properties or otherwise bear costs for replacing or rehabilitating residential shoreline stabilizations. Specifically, businesses that may incur costs as a result of the proposed rule may include those within the following North American Industry Classification System (NAICS) codes defining economic sectors:

- 813990 - *Business, Professional, Labor, Political, and Similar Organizations/Other Similar Organizations (except Business, Professional, Labor, and Political Organizations)*: Includes (but is not limited to) property owners associations, condominium and homeowners' associations, and tenants' associations.<sup>36</sup>
- 531110 – *Lessors of Residential Buildings and Dwellings*

Additionally, businesses that are run out of an individual's residence may be affected by the rule. There are a wide range of business types that may fit this description and data are not available identifying the numbers and types of businesses associated with residential shoreline properties.

Data limitations do not allow for a specific enumeration and identification of the potentially affected businesses. Specific limitations include:

- NAICS code 813990 (*Other Similar Organizations*) includes a substantially greater universe of businesses than the property owners' associations that are of interest to this analysis;
- Businesses in NAICS code 53110 (*Lessors of Residential Buildings and Dwellings*) do not comprehensively pay Business and Occupation (B&O) tax to the Department of Revenue, and thus are not comprehensively tracked by the agency;<sup>37</sup>
- It is not possible to isolate businesses that are located on marine shorelines (which are the only ones potentially affected by the rule), so any counts of these businesses would grossly overstate the number of potentially affected businesses; and finally

---

<sup>36</sup> Homeowners' associations, tenants' associations, and property owners' associations would only be considered businesses to the extent they are incorporated. RCW 64.38.010 (Definitions) defines HOAs as a "corporation, *unincorporated association*, or other legal entity, each member of which is an owner of residential real property located within the association's jurisdiction, as described in the governing documents, and by virtue of membership or ownership of property is obligated to pay real property taxes, insurance premiums, maintenance costs, or for improvement of real property other than that which is owned by the member." The inclusion of "unincorporated association" within the definition suggests that not all HOAs are considered businesses in Washington.

<sup>37</sup> Specifically, businesses offering long-term rentals are exempted from paying B&O tax (Personal communication with the Department of Revenue on July 8, 2022.)

- Data are not available to identify businesses being operated out of residential homes.

As described in Section 2.1.1., most residential property owners with existing shoreline stabilization are likely already using qualified professionals to develop site assessments and alternatives analyses (either because their local SMP requires it or they have determined the analyses require a professional's services) and are unlikely to incur costs as a result of the proposed rule. Nonetheless, there is some potential that individual property owners outside of areas where qualified professionals are required may incur the costs of utilizing a professional as a result of the proposed rule, and these property owners may include businesses.

Data limitations preclude the specific identification of businesses that have the potential to incur costs as a result of the rule. Instead, Exhibit 2-1 provides contextual information *related to* the businesses that could potentially be affected by the proposed rule.

However, this information should not be interpreted as identifying or limited to the businesses that may or are likely to be affected by the rule. Within the counties with marine shorelines, there are 12,400 businesses representing NAICS 813990 (organizations including homeowners' association) and 4,589 representing NAICS 531110 (lessors of residential properties). Of this universe of businesses in counties with marine shorelines, over 99 percent of those businesses are small (i.e., employ fewer than 50 people). Importantly, these businesses may be located anywhere within the county, are not specifically located on the marine shoreline, and are not specifically located on residential property. Data on home-based businesses are not available. This analysis conservatively assumes that all home-based businesses employ fewer than 50 individuals and are small.

"Minor cost" is defined in RCW 19.85.020 as, "a cost per business that is less than 0.3 percent of annual revenue or income or one hundred dollars, whichever is greater, or one percent of annual payroll." Data limitations prevent identification of the average annual revenues for the potentially affected businesses. As such, we conservatively assume a minor cost threshold of \$100 for this analysis, which is more likely to underestimate than overestimate the minor cost threshold for a given business.



EXHIBIT 2-2. NUMBER OF BUSINESSES, AVERAGE ANNUAL REVENUES, AND MINOR COST THRESHOLD FOR RELEVANT INDUSTRIES - PUGET SOUND AND PACIFIC OCEAN-ADJACENT COUNTIES

TYPE OF BUSINESS (NAICS CODE) <sup>1</sup>	NUMBER OF BUSINESSES ON RESIDENTIAL MARINE-FRONTING PROPERTY	NUMBER OF BUSINESSES IN MARINE-ADJACENT COUNTIES <sup>2</sup>	PERCENTAGE OF BUSINESSES CONSIDERED SMALL <sup>3</sup>	AVERAGE ANNUAL REVENUES (2021\$)	MINOR COST THRESHOLD
813990 - Other similar organizations, including homeowners' and property owners' associations <sup>4</sup>	Unknown	12,400	>99 percent	Unknown	\$100
531110 - Lessors of Residential Buildings and Dwellings	Unknown	4,589	>99 percent	Unknown	\$100
Home-based business	Unknown	Unknown	Assume 100 percent	Unknown	\$100
<p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>1. Type of business as identified by primary North American Industry Classification System (NAICS) code. Relevant business types identified through interviews with county and municipal planners conducted in July and August 2022.</li> <li>2. Represents the total number of businesses within each identified NAICS code within Washington counties with marine shorelines. Count is not limited to businesses actually located along marine shorelines, or to businesses located on residential tax parcels.</li> <li>3. Percent of businesses with &lt;50 employees based on employment data obtained from the D&amp;B Hoovers database for businesses within each NAICS code within Washington counties with marine shorelines. Count is not limited to businesses actually located along marine shorelines, or to businesses located on residential tax parcels.</li> <li>4. NAICS code includes a variety of other business/organization types that are not associated with residential property including athletic associations.</li> </ol> <p><b>Source:</b> Business records for businesses within each identified NAICS code within Washington counties with marine shorelines obtained from the D&amp;B Hoovers database on August 2, 2022, <a href="https://www.dnb.com/products/marketing-sales/dnb-hoovers.html">https://www.dnb.com/products/marketing-sales/dnb-hoovers.html</a>.</p>					

## 2.2 COST OF COMPLIANCE

Consistent with RCW 77.55.040, this analysis evaluates the relevance of the following potential categories of costs to comply with the proposed rule:

- **Reporting, recordkeeping, and other compliance requirements:** As described in Section 1.3.3, the proposed rule does not include any new reporting or recordkeeping requirements beyond what is already required by RCW 77.55.231. The sole compliance requirement that is incremental to existing regulation is the need for use of a qualified professional to conduct the site assessment and alternatives analysis.
- **Professional services that a small business is likely to need in order to comply with such requirements:** The rule requires residential shoreline property owners (which, in some cases, may be small businesses) to acquire professional services to support HPA applications for replacing shoreline stabilizations. The rule

requires that applicants use of qualified professionals, which may be permitting facilitators, geotechnical engineers, coastal engineers, or shoreline stabilization design and construction firms, to provide site assessment and alternatives analysis support.

- **Costs required to comply with the proposed rule, including costs of equipment, supplies, labor, professional services, and increased administrative costs:** As previously described, the costs of professional services are relevant to the rule proposal and described in detail below.
- **Based on input received, determine whether compliance with the rule will cause businesses to lose sales or revenue:** The proposed rule does not restrict the regulated business' economic activities or projects. Additionally, the costs of professional services, as described below, are relatively low and only incurred at the time that shoreline stabilizations need replacement. Thus, the rule proposal is not anticipated to affect sales or revenues of regulated businesses.

Based on these findings, the following discussion focuses on the compliance costs of the rule; specifically, the need for HPA permit applicants for marine shoreline residential replacement or rehabilitation stabilization projects to employ a qualified professional to prepare the required site assessment and alternatives analysis report. As detailed in Section 1.2.1, many Washington state counties and municipalities already require the use of a qualified professional to complete the report, while in other counties and municipalities residential property owners regularly elect to employ a qualified professional for this purpose even though it is not explicitly required. For those areas, the proposed rule would not trigger additional costs. The rule would only generate additional costs to residential shoreline property owners if, absent the rule, they would comply with existing requirements without the use of a qualified professional (e.g., by submitting photographs to document slope instability). The proposed rule is largely unlikely to result in additional costs. To the extent that a residential shoreline property owner's use of a qualified professional results specifically from the proposed rule, this section identifies the costs associated with having a qualified professional complete this report and describes the factors that could influence the magnitude of these costs.

The cost estimates developed for this analysis are based primarily on interviews with professional firms providing site assessment and alternatives analysis services. Firms interviewed for this process included firms identifying as permitting facilitators, geotechnical engineers, coastal engineers, and shoreline stabilization design and construction firms. The interview process included nine individual firms whose work collectively represents the majority of the study area, though representation of firms who have completed relevant residential property analysis on the outer (i.e., Pacific) coast was limited. Each interviewee was asked to provide the average range of costs for the services required by the proposed rule, and a description of factors that dictate the specific cost for a given project.

The cost of employing a qualified professional to complete the site assessment and alternatives analysis ranges from \$3,000 to \$10,000.<sup>38</sup> This range of costs represents estimates from industry representative interviews and email communications. This range of costs is relevant to multiple project types (new armoring structure project, rehabilitation or replacement shoreline stabilization project), proposed armoring types (e.g., hard armoring, hybrid armoring, soft-shore armoring), number of considered alternatives, and residential property shoreline length. This is because the base level of geotechnical analysis and reporting is unchanged across these metrics. For the same reasons, costs are also similar whether a residential applicant is applying for a general HPA permit or an emergency or expedited permit.<sup>39</sup> The range of costs is also unlikely to differ between residential property owners who operate their property as a business and property owners who simply reside within their property.

If a qualified professional can complete the site assessment and alternatives analysis in short order and DFW does not have questions or requests regarding the analysis and reporting, total costs tend toward the low end of the specified cost range. However, the magnitude of incurred costs for any given project is dependent upon the following factors:

- **Upcharges and project delays instigated by demand backlog for a qualified professional:** Only a select number of firms employ qualified professionals who have the expertise to complete the site assessment and alternatives analysis report for residential property owners. This is due to larger engineering firms allocating most (if not all) of their efforts toward non-residential projects with local governments or other clients. Since RCW 77.55.231 was codified in 2021, smaller firms have experienced larger volumes of residential property owners requesting a qualified professional's support for their rehabilitation or replacement bank protection project, leading to a backlog of potential permit applicants. This has led firms to charge more for the same services, and potentially increased costs to the residential property owner due to the delay in successfully acquiring the services of a qualified professional.
- **Need to bring in additional support to complete assessment and report:** If a project has site-specific characteristics that are require extensive critical thinking, a qualified professional may need to bring in additional support to address them (e.g., unclear sources of instability, assess what alternatives are appropriate, whether they can prove need for replacement).

---

<sup>38</sup> Before RCW 77.55.231 was codified, permit applicants for residential rehabilitation and replacement bank protection projects in select areas spent as low as \$1,000 to provide proof of slope instability to necessitate the proposed work. However, since RCW 77.55.231 changed the reporting requirements for these applicants, we assume that the costs to prepare these deliverables are on average no lower than \$3,000.

<sup>39</sup> Personal and email communication with representatives of firms providing shoreline stabilization-related services conducted in July 2022.

- **Location of residential property:** Site-specific factors contribute to the level of effort required to conduct the needed site assessment, including but not limited to the types of existing shoreline stabilizations at the site and at surrounding sites.
- **Additional time to communication/educate residential property owners:** If the permit applicant is not knowledgeable about either the reporting requirements or the makeup of their existing stabilization structure, the qualified professional may need to spend additional labor to educate them on the general process of their analysis and selection of the least impacting technically feasible alternative.
- **Additional time to respond to state and/or local government comments:** If the qualified professional needs to respond to state and/or local government comments to their initial submission, the residential property owner will incur additional costs to have the qualified professional address feedback.

In rare instances, costs can reach \$20,000, which could be attributable to several of the above factors, most notably higher than anticipated consultant time spent to respond to WDFW-provided comments. However, based on interviewee feedback, most residential replacement or rehabilitation bank protection projects will incur costs between \$3,000 and \$10,000 to employ a qualified professional to complete the site assessment and alternatives analysis report.

### 2.3 ASSESSMENT OF MINOR COST

As described in Section 2.1.2, given data limitations, the minor cost threshold for businesses potentially incurring costs due to the proposed rule (i.e., located on a residential, marine-facing parcel, having existing shoreline stabilization that requires replacement, and not already required to engage a qualified professional to develop a site assessment and alternatives analysis due to local ordinances) is assumed to be \$100 (Exhibit 2-1). Because the minor cost threshold is the greater of \$100 or 0.3 percent of average annual revenues, this assumption is more likely to understate than overstate the minor cost threshold for these businesses.<sup>40</sup> As noted above, the cost of engaging a qualified professional to develop the requisite report could range on average from \$3,000 to \$10,000. As described previously, it is unlikely that businesses will experience new costs as a result of this rule. To the extent that a business will incur costs as a result of the proposed rule, those costs are likely to be more than minor.

### 2.4 DISPROPORTIONATE ECONOMIC IMPACT ANALYSIS

When proposed rule changes cause more than minor costs to small businesses, the RFA (RCW 19.85.040) requires an analysis that compares the cost of compliance for small business with the cost of compliance for the ten percent of businesses that are the largest businesses required to comply with the proposed rules to determine whether the costs are

---

<sup>40</sup> For businesses whose true minor cost threshold is greater than \$100, this analysis would identify that the minor cost threshold has been exceeded at cost point that is lower than the true minor cost threshold. For businesses who true minor costs are lower than \$100, \$100 is the appropriate minor cost threshold to use.

considered disproportionate. As described in Section 2.1.2, over 99 percent of the businesses operating within the counties with marine shorelines in the relevant NAICS code categories are small, and the analysis assumes that most home-based businesses are also small. As such, this analysis finds that to the extent that businesses will incur costs associated with the rule, the proposed rule is likely to disproportionately impact small businesses. Accordingly, this SBEIS identifies and documents cost mitigation strategies.<sup>41</sup>

## 2.5 COST MITIGATION STRATEGIES

RCW 19.85.030 requires that, when a rule is expected to disproportionately impact small businesses, the agency consider several methods for reducing the impact of the rule on small businesses. These methods may include decisions that were made in determining the provisions of the rule itself, or opportunities to reduce the costs of implementing the rule as written. As described previously, data limitations inhibit the ability to definitively determine the universe and size of affected businesses that would allow for identifying whether the rule will disproportionately impact small businesses. Nonetheless, WDFW has considered the following opportunities to limit the costs of the rule to businesses.

WDFW acknowledges that the pool of qualified professionals who possess the skills to prepare site assessment and alternatives analysis reports is limited. WDFW has partnered with Sea Grant and the Shore Friendly program to develop the *Alternatives to Bulkheads* training series. The series is geared toward shoreline planners, consultants, and marine contractors. It is WDFW's hope that training more practitioners will increase industry capacity and minimize costs by reducing the potential for project delays and/or increased costs that may result from high demand and low supply of qualified professionals. The first two units of the series were launched through the Coastal Training Program in the spring of 2022.

WDFW has chosen to apply new rule requirements only to residential shoreline stabilization replacement, mirroring the legislative changes in SSB 5273. However, the ecological impacts of replacing shoreline stabilization are accrued for all such projects, including commercial and industrial properties, and not just residential projects. Commercial and industrial shorelines are much more likely to have small business landowners than residential sites. By not expanding the rule to include commercial and industrial shorelines at this time, WDFW is taking the potential effects on small businesses into consideration.

RCW 19.85.030(2) specifies particular options that the agency must consider in mitigating rule costs. Exhibit 2-2 identifies each type of cost mitigation opportunity and how WDFW has considered them during this rule proposal process.

---

<sup>41</sup> The RFA provides several options for comparing costs, including: (a) Cost per employee; (b) Cost per hour of labor; (c) Cost per one hundred dollars of sales (RCW 19.85.040(1)). In the absence of sufficient data to calculate disproportionate impacts, an agency whose rule imposes more than minor costs must mitigate the costs to small businesses, where legal and feasible, as defined in this chapter (RCW 19.85.030(4)).

**EXHIBIT 2-2. WDFW ASSESSMENT OF COST MITIGATION OPPORTUNITIES OUTLINED IN RCW 19.85.030**

RCW 19.85.030 (2) REQUIREMENTS	WDFW RESPONSE
a) Reducing, modifying, or eliminating substantive regulatory requirements	WDFW considered reducing, modifying, or eliminating substantive regulatory requirements in the proposal. The resulting requirements are limited to those necessary to align WAC 220-660 with SSB 1382 (Laws of 2021, chapter 279) and clarify the intent of the WAC.
b) Simplifying, reducing, or eliminating recordkeeping and reporting requirements	The proposed rule does not create any new recordkeeping or reporting requirements.
c) Reducing the frequency of inspections	The proposed rule does not generate any new inspection requirements.
d) Delaying compliance timetables	The new requirement of the proposed rule is intended to reduce regulatory uncertainty for the regulated community. Thus, delaying compliance timetables in this case may have the effect of increasing the time it takes for HPA approvals if applicants produce site assessments and reports that require additional work and iteration in order to comply with the existing requirements of RCW 77.55.231.
e) Reducing or modifying fine schedules for noncompliance	The proposed rule does not introduce fines for noncompliance.
f) Any other mitigation techniques, including those suggested by small businesses or small business advocates.	WDFW has been and will continue working with the regulated community to identify and implement actions to lessen impacts.

## 2.6 INVOLVEMENT OF SMALL BUSINESSES IN RULE PROPOSAL PROCESS

This section describes how WDFW has sought to engage affected parties, including small businesses, in the rule proposal process, and how small businesses were involved in the development of the SBEIS.

### 2.6.1 INVOLVEMENT IN THE PRESENT RULE PROPOSAL

The proposed rule targets shoreline stabilization activities on residential properties and does not directly regulate a specific industry or group of businesses. While residential property owners may be businesses, this is generally not the case. However, in order to ensure due consideration of potential effects on small businesses, WDFW took a broad approach to outreach, communicating the objectives of the rule proposal and capturing input from diverse stakeholders. This provided opportunities for potentially affected small businesses to be involved in the rule proposal process. The outreach activities and events to date are summarized in Exhibit 2-3.

## EXHIBIT 2-3. WDFW OUTREACH ACTIVITIES FOR PROPOSED RULE

DATE	PERSON(S)	ACTIVITY
12/16/2021	Hydraulic Code Implementation Advisory Group (HCIAG)	Presentation and discussion on implementation of SSB 5273
1/27/2022	Consultant and contractor businesses; Sea Grant Shoreline and Coastal Planners listserve	Information regarding implementation of SSB 5273
3/10/2022	Sea Grant Shoreline Local Government Working Group	Presentation and discussion on SSB 5273 and rule proposal
5/12/2022	Sea Grant Shoreline Local Government Working Group	Further discussion on rule proposal to implement SSB 5273
5/24/2022	Tribes	Email notification of rule proposal initiation and overview
6/22/2022	Stakeholders and Agencies; Sea Grant Shoreline and Coastal Planners listserve	Email notification regarding publication of CR-101
8/3/2022	Tribes	Rule proposal distributed for review
8/4/2022	Fish and Wildlife Commission Habitat Committee	Introduction to rule proposal in response to SSB 5273
8/12/2022	Tribes	Webinar to review the rule proposal and take comments
8/15/2022	Selected stakeholders	Rule proposal distributed for preliminary review
<p><b>Note:</b> Information was not available to directly identify businesses operating on residential properties along marine shorelines that may be affected by the proposed rule. Instead, WDFW focused outreach on entities that communicate and provide assistance directly to residential shoreline property owners with respect to the Hydraulic Code, some of whom would presumably be the small businesses potentially affected by the proposed rule.</p>		

## 2.6.2 INVOLVEMENT IN SBEIS DEVELOPMENT

As described previously, because this rule proposal does not directly regulate a specific industry or group of businesses, it was not possible to directly identify and target outreach activities with respect to SBEIS development at small businesses that may incur costs as a result of the rule. Outreach activities attempted to solicit small business involvement through the following approaches:

- Using WDFW-provided permit information extracted from their Aquatic Protection Permitting System (APPS) database, searched permit applicant name field for terms and acronyms that might suggest applicant was a business (e.g., LLC, company, Co.);
- Attempted contact with 25 residential shoreline property owners who had successfully applied for and received a permit for their residential bank protection project within the last four years, anticipating residentially-based small businesses may be represented in that group; and

- Directly solicited recommendations from interviewed firms for past clients that were residentially based businesses.

Ultimately, outreach efforts were not able to successfully engage any potentially affected small business in providing data and input for the SBEIS.

A more complete description of the outreach activities conducted to support this analysis is included in Attachment A.

## 2.7 JOBS CREATED OR LOST

Through the requirement that residential property owners wishing to replace or rehabilitate existing marine shoreline stabilization utilize a qualified professional to develop a site assessment and alternatives analysis, the rule has the potential to impose costs on small businesses operating on residential marine parcels. These costs would only be incremental costs of the proposed rule if the requirement to use a qualified professional to develop a site assessment and alternatives analysis is not already in place through the local government's SMP and would only be incurred in the event that existing shoreline stabilization requires replacement or rehabilitation. As repair and replacement for a given shoreline stabilization project occurs infrequently, these costs are generally anticipated to be incurred one time, or infrequently (rather than being ongoing costs). Although the costs are more than minor, they are relatively low and would occur only infrequently, and it is thus unlikely that the costs incurred would result job loss.

A requirement that a qualified professional be used to develop a site assessment and alternatives analysis may result in an increased demand for those services. Several individuals interviewed identified that there exists a relatively limited pool of qualified individuals to perform these services in the region. To the extent that increased demand for these services results in qualified professional firms hiring additional staff, that creation of jobs could be considered an indirect effect of the rule. However, whether this would occur, and the number of businesses or jobs affected, is uncertain.

## 2.8 SUMMARY CONCLUSIONS

This rule proposal applies specifically to residential shoreline property owners who need to replace existing shoreline stabilization. The rule proposal requires this population, which may include small businesses, to employ a qualified professional in developing site assessments and alternatives analyses. It is unlikely that this rule will generate costs and, if it does, the costs to small businesses are likely to be very limited for the following reasons:

- Residential shoreline property owners include but are not limited to businesses. However, it is likely that businesses that do own residential shoreline properties are small.
- Shoreline property owners are required to comply with existing requirements under RCW 77.55.231, including the need to develop a compliant site assessment



and alternatives analysis. The new rule proposal does not generate requirements for new reports.

- Many existing SMPs for counties and municipalities require the use of a qualified professional to develop these reports. In these cases, the new rule proposal does not impose any new requirements.
- While some property owners may attempt to accomplish the analysis and reporting requirements without the use of a qualified professional, outreach and interviews conducted in the context of this SBEIS identify that most of the time, property owners recognize a need to rely upon the expertise of a qualified professional, even absent the requirement being written into regulation.
- The rule proposal may reduce the costs of HPA permits for the subset of residential property owner that would attempt to comply with reporting requirements without the use of a qualified profession absent this rule proposal. This is because not using a qualified professional may result in non-compliant reports and analyses that result in comments from DFW and require re-analysis and revision. Use of a qualified professional reduces the risk of submitting non-compliant reports the first time.

Available data do not allow for a specific identification of the number of small businesses operating on marine shoreline residential properties that may experience costs as a result of the rule, or the extent to which those businesses are small. Employment data for businesses potentially operating on residential parcels within the affected counties suggest 99 percent of these businesses are small. It is unlikely that residential property owners, including small businesses, will incur costs as a result of this rule. However, to the extent that businesses do incur these costs, the costs would be borne disproportionately by small businesses, and are likely to be more than minor.

## REFERENCES

### DATA FROM PRIMARY RESEARCH, MONITORING ACTIVITIES, OR OTHER SOURCES

Email communication between WDFW and IEc on May 19, 2022, May 23, 2022, June 28, 2022, June 29, 2022, June 30, 2022, July 7, 2022, and July 27, 2022.

Personal communication between WDFW staff and IEc, May 19, 2022, June 15, 2022, June 29, 2022, July 13, 2022, and July 27, 2022.

Personal and email communication with geotechnical/engineering firms conducted in July 2022.

Personal and email communication with local government representatives conducted in July 2022 and August 2022.

Personal and email communication with marine shoreline residential property owners conducted in July 2022.

Personal and email communication with the Washington State Department of Revenue conducted in July 2022.

### LEGAL AND POLICY DOCUMENTS

RCW, (Revised Code of Washington) 19.85

RCW 77.55.021

RCW 77.55.231

RCW, 90.58

WAC (Washington Administrative Code) WAC 220-660-370

Washington Department of Ecology. 2022. Shoreline Management Act (SMA). Viewed at <https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Shoreline-laws-rules-and-cases#:~:text=The%20state%20Shoreline%20Management%20Act,shoreline%20use%20in%20their%20jurisdictions>, July 29, 2022.

Washington Department of Ecology. 2022. State approved Shoreline Master Programs. Viewed at <https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/State-approved-Shoreline-Master-Programs>, 1 August, 2022.

**ATTACHMENT A | OUTREACH SUMMARY AND LIST OF INDIVIDUALS  
INTERVIEWED IN JULY/AUGUST 2022**

To support development of this SBEIS, the analysis relies on outreach and participation of local government officials, firms that provide permitting support, site assessment and alternatives analysis, or engineering and construction services, and residential marine shoreline property owners to provide data and information to evaluate the potential costs of the rule on small businesses. IEc relied upon several sources to identify and obtain contact information for these entities, including county and municipal Shoreline Master Programs and DFW-provided permit information extracted from their Aquatic Protection Permitting System (APPS) database.

IEc conducted interviews with representatives chosen per a variety of selection criteria. County and municipal interviewees were chosen based on whether their area's Shoreline Master Program contains current requirements for residential rehabilitation and replacement bank protection projects that either closely match that of the proposed rule or are widely different. This was done to capture the full extent of potential involvement across local areas. Area representatives were also identified by whether they contained a large concentration of marine residential properties and businesses that contain existing shoreline modification. Firms were chosen based on whether they are highly represented in WDFW's provided APPS database, which IEc took as evidence that they would have much experience developing the required site assessment and alternatives analysis report.<sup>42</sup> Some industry interviewees were also chosen per WDFW and Washington Department of Ecology recommendation. Residential property owners were chosen based on if they had successfully applied for and received a permit for their residential bank protection project within the last four years.

Between July 6, 2022, and August 2, 2022, IEc reached out by email to invite representatives to participate in an interview. Potential interviewees who IEc did not initially hear from received at least one additional outreach email, and interviewees who did respond were generally available to meet via video call during Pacific Daylight Time business hours. For potential contacts who did not respond to either the initial or follow-up email, IEc assumed those contacts had elected not to participate in the process, and no further effort was made to contact them. Altogether, IEc attempted to connect with 22 local government officials, 15 engineering consulting firms, and 25 marine shoreline

---

<sup>42</sup> In some instances, IEc found that the listed contacts in WDFW's APPS database were representatives that managed the overall permit application process and outsourced the site assessment and alternatives analysis services to a separate firm. During these meetings, IEc requested for and received contact information for several geotechnical engineering firms that perform the site assessment and alternatives analysis in house and met with several of them after contacting them through email.

residential property owners. Of the 62 total individuals IEC contacted, 37 either declined to participate or did not respond to IEC's outreach emails. Ultimately, IEC conducted interviews with 13 local government officials, nine firms, and three marine shoreline residential property owners (see Exhibit A-1). Interviews generally followed the list of questions presented in Attachment B, though interviewees were invited to provide additional thoughts as they deemed relevant.

**EXHIBIT A-1. LIST OF INTERVIEWEES**

DESCRIPTION OF INTERVIEWEES <sup>1</sup>
Shoreline planner at King County
Shoreline planner at Kitsap County
Shoreline planner at Pierce County
Shoreline planner at Snohomish County
Shoreline planner at Mason County
Shoreline planner at Jefferson County
Shoreline planner at Island County
Shoreline planner at Grays Harbor County
Shoreline planner at Thurston County
Shoreline planner in Olympia
Shoreline planner in Anacortes
Shoreline planner in Bainbridge Island
Shoreline planner in Gig Harbor
Consulting/engineering professional at Soundview Consultants, LLC
Consulting/engineering professional at Leon Environmental, LLC
Consulting/engineering professional at Sealevel Bulkhead Builders, Inc.
Consulting/engineering professional at Saratoga Environmental, LLC
Consulting/engineering professional at Coastal Solutions, LLC
Consulting/engineering professional at Aspect Consulting, LLC
Consulting/engineering professional at Blue Coast Engineering
Consulting/engineering professional at Qwg Applied Geology
Consulting/engineering professional at GeoResources, LLC
Residential marine shoreline property owner in Mason County
Residential marine shoreline property owner in Pierce County
Residential marine shoreline property owner in Island County
<b>Notes:</b>
1. Individuals are not identified by name to protect the privacy of interview participants.

## ATTACHMENT B | INTERVIEW GUIDE

## INTERVIEW QUESTIONS

## INTRODUCTION

- IEc is an environmental and economic consulting firm with expertise in developing regulatory analyses for state and federal agencies.
- IEc has been retained by the Washington Department of Fish and Wildlife to develop a Cost Benefit Analysis and a Small Business Economic Impact Statement for a forthcoming proposed rule that would modify the state’s hydraulic code.
- The Cost Benefit Analysis compares the costs and benefits that would result from the rule, while the SBEIS considers whether the rule will disproportionately affect small businesses or impose more than minor costs on them (defined as businesses employing <50 people).
- The existing regulations were recently updated to require that residential shoreline property owners wishing to replace existing shoreline protection structures must use the least impactful technically feasible alternative and must include in their permit application a site assessment and alternatives analysis.
- The proposed rule would clarify the existing process for complying with those requirements, including confirming that the site assessment and alternatives analysis be conducted by a certified professional.
- Our analysis is focused on the costs and benefits associated with the requirement to use a certified professional to develop the site assessment and alternatives analysis. It does not consider costs associated with the requirement to use the “least impactful technically feasible alternative”, as that requirement is already in statute, and is not part of the proposed rule. (Noting that the cost of evaluating those options within a report would be considered a cost of the rule).
- We are conducting a series of interviews with county and municipal planners, firms that provide site assessment services, and residential shoreline property owners to better understand the requirements as they stand today, the costs of complying with those requirements, and how or if the rule might result in additional costs to residential property owners.

**QUESTIONS FOR FIRMS PROVIDING SITE ASSESSMENT AND ALTERNATIVES ANALYSIS SERVICES**

- What geographic areas (counties and municipalities) does your firm service?
- Please describe the types of analyses/reports you provide for property owners with respect to shoreline stabilization and/or armoring. Site assessments? Alternatives analysis? Design Rationale?
- Are there standard analyses and information that is included in all reports you produce or are there different types of analyses that might be done depending on the regulatory need (e.g., alternatives analysis)?
- Are there differences in the types/costs of services you have typically provided for new residential shoreline protection structures vs. those that are being rehabilitated or replaced?
- How much do you charge for your services, broken out by individual item/analysis type, if applicable? What variables drive the cost of the report? For example,
  - New structure vs. replacement?
  - Existing armoring type?
  - How many/which types of alternatives need to be considered (e.g., including consideration of soft/nature-based protection)?
  - Project location?
  - Property type?
  - Shoreline length/slope?
  - Other?
- Would a new requirement that residential replacement structures use the least impactful technically feasible alternative, and that they demonstrate that they are doing so through an alternatives analysis, change the cost of your services for the permit applicant?
- Within the areas where you provide services, do you have a sense of which county/municipal codes currently require a geotechnical analysis/qualified professional's report for repair/replacement of structures on residential property?
- What is the life expectancy for shoreline protection structures of different types? How long do structures of each type typically last before they need to be rehabilitated or replaced?
- For residential property owners that you have provided services for, do you have a sense of any that might be considered businesses?

## QUESTIONS FOR COUNTIES AND MUNICIPALITIES

- What are the primary objectives and targeted benefits of current shoreline armoring requirements within your county/municipality?
- The hydraulic code (WAC) currently requires that a property owner that wants to construct *new* shoreline protection or *replace existing protection waterward of the existing protection* use the least impactful, technically feasible option, and submit a qualified professionals report that includes a site assessment, alternatives analysis, and design rationale (*details below, which we can read to them*). How do these requirements compare to what is required by your Shoreline Management Program (SMP)?
- What baseline shoreline stabilization and/or armoring construction/replacement reporting or analysis requirements (if any) are currently in place with respect to alternatives analysis, site assessment, and report development within your jurisdiction's SMP? Are they the same as what is required by the existing WAC? More stringent?
  - Do they apply only to new structures?
  - What requirements are in place for replacement structures?
  - Do you require use of a certified professional to complete any required assessments?
- Could someone meet these requirements without the use of a certified professional?
- The proposed rule would extend the existing requirement for new residential structures to have a qualified professional conduct a site assessment and alternatives analysis, to replacement structures. Are these things your SMP already requires for residential replacement structures, or would they go above and beyond your requirements?
- For residential property permit requests for shoreline armoring, can you estimate the proportion each year that are for new structures vs. replacement or rehabilitation?
- For the SBEIS, we are particularly interested in understanding the locations and numbers of shoreline residential properties that may be businesses.
  - Do you have a sense of the types of businesses that might be relevant here?
  - Are there particular locations in which these types of businesses are concentrated?
- Are these businesses considered to be commercial or residential properties with respect to compliance with the existing WAC?

**QUESTIONS FOR RESIDENTIAL PROPERTY OWNERS**

- What is your relationship to/interest in the property? Are you a homeowner that resides on the property? Is it a rental property? Do you own and manage the property as a business that provides housing?
- Was your project for constructing a new shoreline protection structure, or replacing or rehabilitating an existing structure? If it was a replacement or rehabilitation project:
  - What type of structure were you replacing?
  - Do you know the age of the structure and/or when it was last rehabilitated?
- What information, reports, and analyses were you required to submit with your permit application? For example:
  - Assessment of risk?
  - Proof of erosion?
  - Assessment of alternatives for protection (e.g., soft, natural protection vs hard structures)?
  - Design rationale?
- Did you use a certified professional to fulfill these requirements?
  - If yes, how much did you pay for those services? Do you have information about the respective costs of different elements of the work or analyses that were done for you?
  - If no, how did you meet those requirements and what costs did you incur to do so?
- Were there other costs that you incurred associated with these reporting requirements aside from paying for the report?



## ATTACHMENT C | DATA DICTIONARY

DATA ITEM	SOURCE
Costs of employing a qualified professional to complete marine shoreline residential bank protection geotechnical analysis	Personal and email communication with representatives of firms providing shoreline stabilization-related services conducted in July 2022.  Personal and email communication with marine shoreline residential property owners conducted in July 2022.
Identification of counties and municipalities with existing requirements for qualified professional's report	Personal and email communication with representatives of county and municipal planning departments conducted in July and August 2022.  Review of SMPs for all marine shoreline jurisdictions.
Total tax parcels, residential tax parcels, single family residential tax parcels, and multi-unit residential tax parcels	Private geospatial data identifying existing marine shoreline parcels provided via secure server to IEC by WDFW on May 23, 2022.
Marine shoreline with anthropogenic modification	Publicly accessible geospatial from the Washington State Shorezone Inventory, Available at: <a href="https://www.dnr.wa.gov/programs-and-services/aquatics/aquatic-science/nearshore-habitat-inventory">https://www.dnr.wa.gov/programs-and-services/aquatics/aquatic-science/nearshore-habitat-inventory</a>  Beach Strategies Geodatabase (2017), Coastal Geologic Services, Available at: <a href="https://fortress.wa.gov/dfw/public/PublicDownload/Habitat/BeachStrategies/">https://fortress.wa.gov/dfw/public/PublicDownload/Habitat/BeachStrategies/</a>
Permit database including project description and project applicant and permitting agent contact information	Personal and email communication with DFW representatives conducted in May 2022 and June 2022.  Aquatic Protection Permitting System accessed online in July 2022, Available at <a href="https://www.govonlinesaas.com/WA/WDFW/Public/Client/WA_WDFW/Shared/Pages/Main/Login.aspx">https://www.govonlinesaas.com/WA/WDFW/Public/Client/WA_WDFW/Shared/Pages/Main/Login.aspx</a>



Residential Marine Shoreline  
Stabilization Proposed Rule

Cost Benefit Analysis

Final Report | September 16, 2022

prepared for:

Washington State Department of Fish and Wildlife  
Natural Resources Building  
1111 Washington St. SE  
Olympia WA 98501

prepared by:

Industrial Economics, Incorporated  
2067 Massachusetts Avenue  
Cambridge, MA 02140  
617/354-0074

## TABLE OF CONTENTS

### LIST OF ACRONYMS AND ABBREVIATIONS

### EXECUTIVE SUMMARY

#### CHAPTER 1 | INTRODUCTION

- 1.1 Requirements for Cost-Benefit Analysis 1-1
- 1.2 Summary of the Proposed Rule 1-2
- 1.3 Report Organization 1-3

#### CHAPTER 2 | BASELINE FOR THE PROPOSED RULE

- 2.1 Hydraulic Code Rules 2-1
- 2.2 Shoreline Management Act/Shoreline Master Program Requirements 2-3
- 2.3 Use of Qualified Professional to Develop Site Assessment and Alternatives Analysis 2-3

#### CHAPTER 3 | REGULATED POPULATION

- 3.1 Data Sources 3-1
- 3.2 Identification of Potentially Affected Entities 3-3
  - Step 1: Identify Residential Marine Parcels 3-4
  - Step 2: Identify Residential Parcels that Have Existing Shoreline Modification 3-5
  - Step 3: Identify Residential Parcels with Existing Shoreline Modification in Jurisdictions that Do Not Require a Qualified Professional to Complete a Site Assessment and Alternatives Analysis 3-6

#### CHAPTER 4 | PROBABLE COSTS OF PROPOSED RULE

- 4.1 Costs of Compliance 4-1
- 4.2 Rate of Permit Applications 4-3
- 4.3 Summary of Probable Costs 4-5

#### CHAPTER 5 | PROBABLE BENEFITS OF PROPOSED RULE

#### CHAPTER 6 | COMPARISON OF THE PROBABLE COSTS AND BENEFITS OF THE PROPOSED RULE

### REFERENCES

- ATTACHMENT A: OUTREACH SUMMARY AND LIST OF INDIVIDUALS  
INTERVIEWED IN JULY AND AUGUST 2022
- ATTACHMENT B: INTERVIEW GUIDE
- ATTACHMENT C: DATA DICTIONARY

## LIST OF ACRONYMS AND ABBREVIATIONS

APPS	Aquatic Protection Permitting System
CBA	Cost-Benefit Analysis
GIS	Geographic Information Systems
HPA	Hydraulic Project Approval
RCW	Revised Code of Washington
SMP	Shoreline Master Program
SSB	Substitute Senate Bill
WA L&I	Washington Labor & Industries
WAC	Washington Administrative Code
WADNR	Washington Department of Natural Resources
WDFW	Washington Department of Fish and Wildlife

## EXECUTIVE SUMMARY

This report evaluates the potential costs and benefits of a Washington State Department of Fish and Wildlife (WDFW) proposed rule that updates Washington State’s Hydraulic Code. The proposed rule clarifies how residential shoreline property owners should comply with recent legislation regarding residential marine shoreline stabilization. This Cost Benefit Analysis (CBA) was developed in accordance with Revised Code of Washington (RCW) 34.05.328 to determine whether the, “...probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and specific directives of the statute being implemented.” A CBA is required for all rules identified as “legislatively significant”, which includes rules adopted by WDFW to implement 77.55 RCW (i.e., the state’s hydraulic code). The primary sources of information for this analysis include the following:

- Information gathered through outreach to county and municipal planners, businesses providing the services required by the proposed rule, and residential property owners who have experience with marine shoreline stabilization replacement;
- County and municipal Shoreline Master Program (SMP) documents;
- Tax parcel data identifying land use types along marine shorelines;
- Data identifying location of existing shoreline stabilization along the marine shoreline; and
- Historical Hydraulic Project Approval (HPA) permit data provided by WDFW.

### BACKGROUND

Washington State’s Hydraulic Code (WAC 220-660-370) outlines requirements for shoreline bank protection in saltwater (i.e., marine) waters of the state in order to protect fish life from the habitat alteration that can result from certain types of shoreline protection. The existing requirements specify new shoreline protection, or replacements for existing stabilizations *that extends waterward of the existing protection*, utilize the least impacting, technically feasible protection technique. Existing requirements additionally specify the need for a site assessment, alternatives analysis, and design rationale completed by a qualified professional as part of the permit application. In 2021, the State Legislature passed Substitute Senate Bill 5273, which amends RCW 77.55.231 to extend these requirements to the replacement of existing shoreline stabilization on residential properties. WDFW is now updating WAC 220-660-370 to be consistent with the 2021 updates to RCW 77.55.231, and to provide additional clarification with respect to the requirements.

## SCOPE OF PROPOSED RULE

The proposed rule affects activities occurring on residential properties along Washington's marine shorelines, including the shorelines of Puget Sound, the Strait of Juan de Fuca, the outer coast, and along coastal estuaries. It does not change existing requirements with respect to commercial or other types of properties, nor does it affect activities occurring on residential properties along non-marine shorelines (e.g., rivers, ponds, or inland lakes). The proposed rule specifically addresses the requirements related to the *replacement or rehabilitation* of existing shoreline stabilization and does not change the requirements for installation of new structures, or replacement of existing structures where the replacement occurs waterward of the existing stabilization structure.

## BASELINE FOR THE COST BENEFIT ANALYSIS

RCW 77.55.231 requires that residential property owners on all marine shorelines of Washington State that wish to replace existing shoreline stabilization use the least impacting technically feasible alternative and submit a site assessment and alternatives analysis as part of their permit application package.<sup>1</sup> In certain jurisdictions, existing county and municipal Shoreline Master Programs (SMPs) specify that a qualified professional must be used to develop those reports. Although the requirement to use a qualified professional is not specified for all jurisdictions, interviews with county and municipal planners conducted in July and August 2022 suggest that it would be impossible or very challenging for an individual without the relevant professional background to fulfill the necessary requirements.<sup>2</sup> WDFW has also confirmed that individual permit applicants are likely to use qualified professionals for report development even when not required to do so.<sup>3</sup> Therefore, residential applicants looking to replace their shoreline stabilization in the counties where SMPs do not describe that a qualified professional must be hired for the analyses are still likely to hire qualified professionals for this purpose.

## PROPOSED RULE REQUIREMENTS

The proposed rule would update WAC 220-660-370 clarifying the approach to implementing the RCW 77.55.231 requirement for HPA permit applicants for residential marine shoreline stabilization or armoring replacement or rehabilitation projects. Specifically, the proposed rule includes the following:

- Revises existing language in WAC 220-660-370 to require HPA applicants to use the least impacting technically feasible bank protection alternatives for

---

<sup>1</sup> Ecological and other benefits stemming from the selection of the least impacting technically feasible alternative result from RCW 77.55.231 and are not incremental outcomes of the proposed rule. According to WDFW, the proposed rule would not change the selection of the stabilization technique to be employed for a given application (Personal and email communication with WDFW in July and August 2022).

<sup>2</sup> Personal and email communication with representatives of county and municipal planning departments conducted in July and August 2022.

<sup>3</sup> Email communication with WDFW staff on September 7, 2022.

*replacement or rehabilitation of residential bank protection projects, and specifies preferences for available alternatives;*<sup>4</sup>

- Specifies the reporting elements that must be included in an HPA application for residential replacement projects; and
- Requires that HPA permit applicants for replacement or rehabilitation of residential bank protection provide a site assessment, alternatives analysis and design rationale for the proposed method *that is prepared by a qualified professional.*<sup>5</sup>

As previously described, RCW 77.55.231 constitutes a pre-existing requirement regarding replacement of residential shoreline stabilizations; that is, the requirements of RCW 77.55.231 are part of the baseline of this analysis. Thus, costs resulting from the following requirements specified in RCW 77.55.231 are part of the baseline and are not incremental costs of the proposed rule:

- Use of the least impacting technically feasible bank protection alternative for the protection of fish life for replacement or rehabilitation of residential shoreline stabilizations.
- Need to conduct a site assessment to consider the least impactful alternatives and proposing a hard armor technique only after considering site characteristics in an analysis of alternatives.

The focus of this analysis is on the incremental costs of the proposed rule that are above and beyond the baseline costs. RCW 77.55.231 does not specify the need to rely on a qualified professional for the analysis and reporting. Thus, the new requirement specified in the proposed rule is that, when existing stabilization requires replacement or rehabilitation, the permit applicants must hire a qualified professional to complete the site assessment and alternatives analysis. This new requirement may generate incremental compliance costs.

#### IDENTIFICATION OF AFFECTED ENTITIES

Owners of marine shoreline property in Washington are only affected by the proposed rule where the property is identified as residential, the property already has existing shoreline stabilization in place, the replacement plan does not contemplate construction of a new structure stabilization structure waterward of the existing stabilization structure, and existing requirements with respect to the local jurisdictions' SMPs do not already

---

<sup>4</sup> WAC 220-660-370(3)(b) provides common alternatives for (1) new bank protection and (2) replacement or rehabilitation of bank protection that extends waterward of an existing bank protection structure projects. The proposed rule would modify WAC 220-660-370 to include common alternatives for replacement or rehabilitation of residential bank protection projects, adapted from RCW Section 77.55.231.

<sup>5</sup> Per WAC 220-660-030, a "qualified professional" is a scientist, engineer, or technologist specializing in a relevant applied science or technology. This person may be certified with an appropriate professional organization, or could be someone who, through demonstrated education, experience, accreditation, and knowledge relevant to the particular matter, may be reasonably relied on to provide advice within that person's area of expertise.



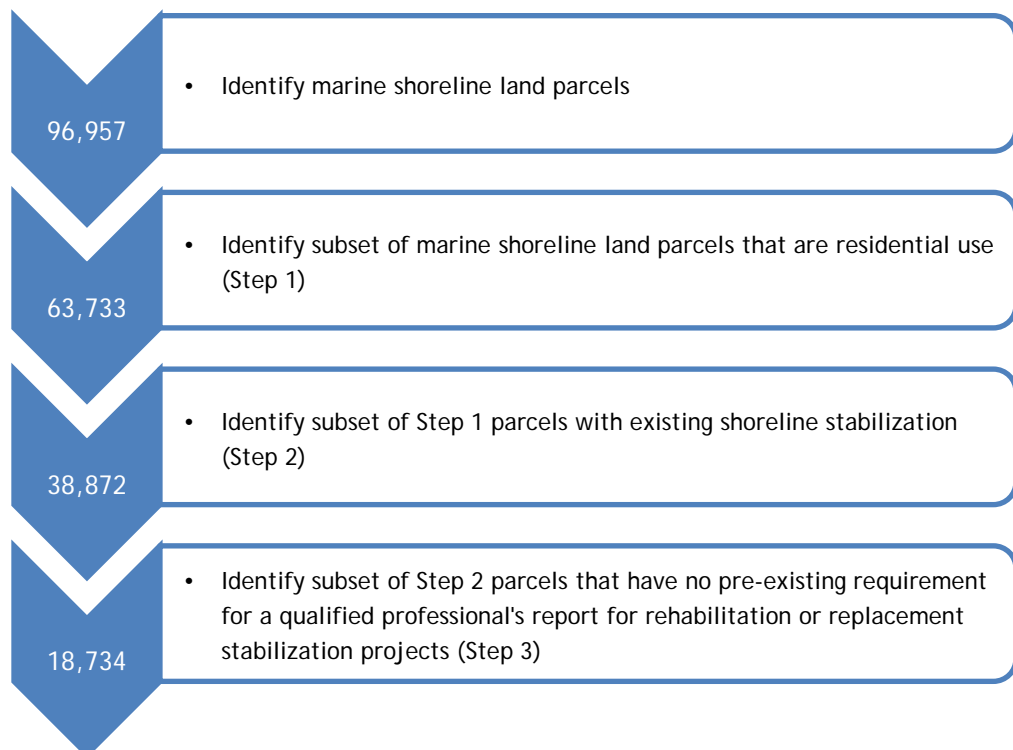
require the use of a qualified professional to develop the requisite site assessment and alternatives analysis.

This analysis first evaluates the universe of marine shoreline tax parcels most likely to be affected by the proposed rule based on the following approach:

1. Identify marine shoreline parcels with a designated residential use.
2. Identify residential marine shoreline parcels that contain existing shoreline modification.
3. Identify the subset of the parcels identified in Step 2 that are located in counties or municipalities that do not currently require use of a qualified professional to fulfill reporting requirements for replacement of existing shoreline stabilization.

Exhibit ES-1 summarizes the results of the analysis, which indicate 18,734 total residential parcels with no existing shoreline stabilization and no pre-existing requirement to employ a qualified professional to develop the requisite reports. This is approximately 29 percent of the total residential shoreline parcels for which the proposed rule may generate a new requirement.<sup>6</sup>

#### EXHIBIT ES-1. STEP-WISE IDENTIFICATION OF POTENTIALLY AFFECTED MARINE SHORELINE LAND PARCELS

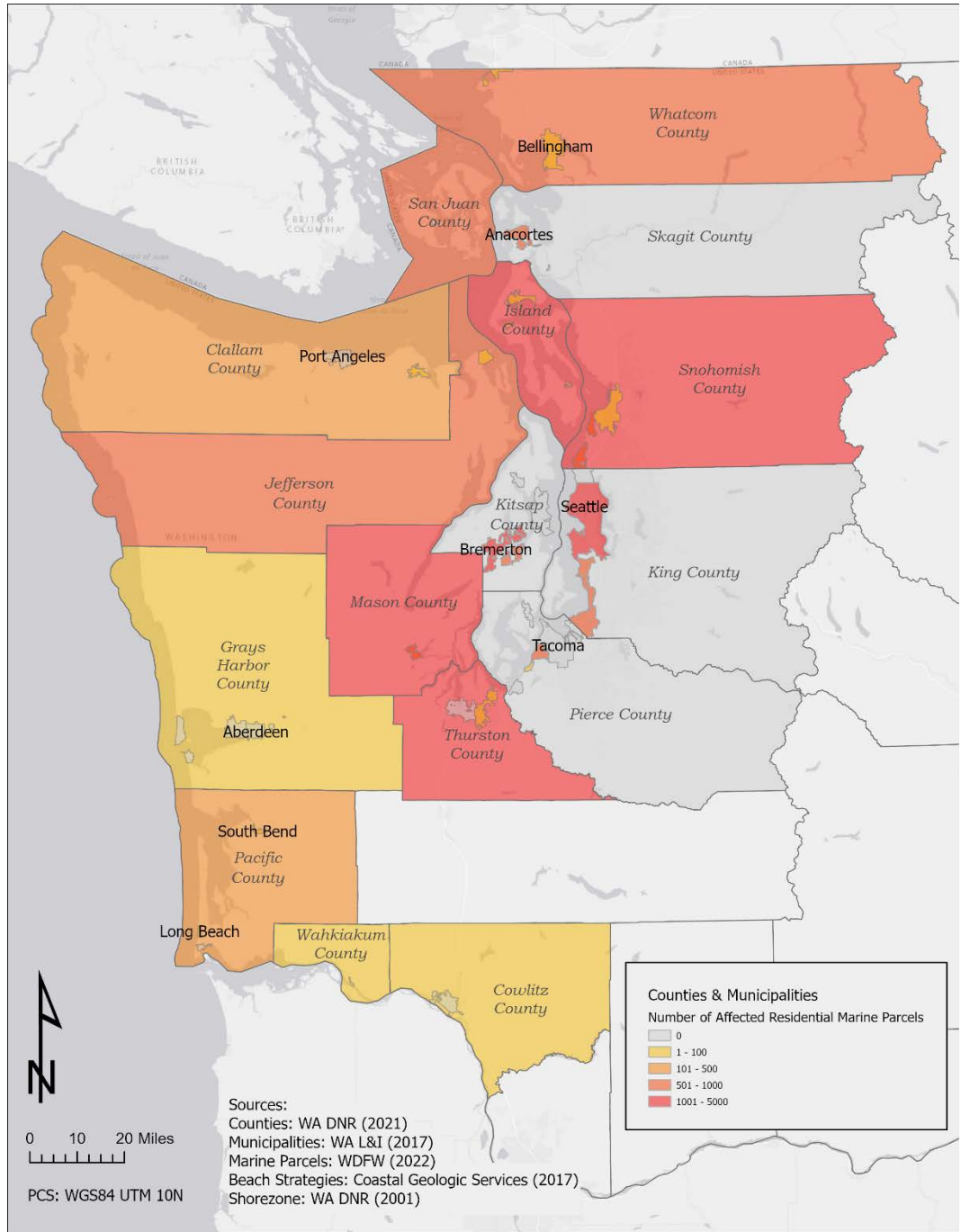


<sup>6</sup> Of these, some portion may elect to replace the existing shoreline stabilization with a new structure stabilization structure waterward of the existing stabilization structure. In these cases, a qualified professional's report is already required, and the property owner would not incur new costs as a result of the proposed rule.

Importantly, interviews with county and municipal planners and communications with WDFW identified that even if their SMPs did not explicitly clarify the need for a qualified professional to undertake the analyses, residential applicants looking to replace their shoreline stabilization are still likely to hire qualified professionals due to the need for their expertise. If, in fact, residential marine shoreline property owners would generally employ qualified professionals to meet the existing requirement for site assessment and alternatives analysis under RCW 77.55.231 even absent the rule, the rule would not affect the costs of residential shoreline stabilizations.

Exhibit ES-2 identifies the range in potentially affected residential marine shoreline properties within each municipality and unincorporated county area.

EXHIBIT ES-2. RELATIVE NUMBER OF AFFECTED RESIDENTIAL PARCELS WITHIN EACH SMP JURISDICTION



## COST OF COMPLIANCE

Based on existing management plans and outreach undertaken for this analysis, it is likely that most residential property owners with existing shoreline stabilization are likely to use qualified professionals to develop site assessments and alternatives analyses regardless of this rule. However, in limited cases, property owners may attempt to apply for a rehabilitation or replacement stabilization permit without using a qualified professional to complete the required analyses. In such instances, the costs of hiring a qualified professional would be incremental costs triggered by the rule.

The cost of employing a qualified professional to complete the site assessment and alternatives analysis ranges from \$3,000 to \$10,000.<sup>7</sup> This range of costs reflects data collected from interviews and email communications with firms providing site assessment and alternatives analysis services. The range of costs is relevant to multiple project types (new armoring structure project, rehabilitation or replacement shoreline stabilization project), proposed armoring types (e.g., hard armoring, hybrid armoring, soft-shore armoring), number of alternatives, and shoreline length. Costs are likely in this range whether a residential applicant is applying for a general HPA permit or for an emergency or expedited permit.<sup>8</sup>

The number of permit applicants that may experience these added costs over time is uncertain. Data are not available to identify the timing with which specific residential shoreline stabilization structures may need rehabilitation or replacement and which applications in a given year would employ a qualified professional to develop the reports even absent the rulemaking. To identify the potential annualized costs of the rule, this analysis relies on historical permit application data by county from WDFW's Aquatic Protection Permitting System (APPS) to quantify an expected annual rate of permit applications.<sup>9</sup> This analysis identifies an average annual rate of applications of 132 HPA stabilization permits. This includes non-residential permits as well as permits for new stabilizations and is thus an overestimate of the number of permits relevant to this rule making.<sup>10</sup>

If all permit applicants in a given year were to experience an added cost of \$3,000 to \$10,000, the proposed rule would generate costs of \$400,000 to \$1.3 million in annual costs (2022\$). However, as previously noted, the 132 annual stabilization permit applicants includes applicants to which the rule would not apply and applicants to which

---

<sup>7</sup> Before RCW 77.55.231 was codified, permit applicants for residential rehabilitation and replacement bank protection projects in select areas spent as low as \$1,000 to provide proof of slope instability to necessitate the proposed work. However, since RCW 77.55.231 changed the reporting requirements for these applicants, we assume that the costs to prepare these deliverables are on average no lower than \$3,000.

<sup>8</sup> Personal and email communication with representatives of firms providing shoreline stabilization-related services conducted in July 2022.

<sup>9</sup> The APPS database only allows users to identify county-specific permit submissions. Thus, any county-level permit data not only includes permits within that county, but also permits in municipalities within the county and any unincorporated county areas.

<sup>10</sup> A review of historical rates of applications over the last five years did not identify any meaningful trends within the data. As such, this analysis relies on an annual average application rate.

the rule would apply but would not generate additional costs. Again, it is likely that a substantial percentage of shoreline armoring permit applicants would use a qualified professional even absent the proposed rule given existing requirements and the historical behavior of permit applicants. Thus, the range of annualized costs, even at the low end, likely overstates the costs of the rule and is not considered a “probable” cost for the purposes of this analysis.

*Overall, the probable costs of the rule are very limited and closer to \$0 than to the annualized costs of \$400,000 to \$1.3 million.*

#### BENEFITS OF THE PROPOSED RULE

The proposed rule is expected to yield benefits related to greater uniformity in application processes and expectations across the state, increased accuracy in applicants’ geotechnical reports, and clearer language describing expedited and emergency permit processes. The rule incorporates residential replacement projects into rule language which already applies to other types of projects, allowing uniform handling across project types. As a result of the proposed rule, the Hydraulic Code will be made consistent with RCW 77.55, better allowing WDFW to carry out its authority under RCW 77.55. Consistency between the Hydraulic Code and RCW additionally clarifies the complete set of requirements for the regulated community in a single location, rather than having requirements distributed across both the Hydraulic Code and statute. Increased uniformity across the Hydraulic Code and RCW is likely to lead to greater efficiencies in application and review processes by saving time and administrative costs both for residential applicants and WDFW.

Additionally, the use of a qualified professional to develop the required reports reduces the risk of a non-compliant analysis and report being rejected by WDFW, which would require the applicant to revise and resubmit application materials. Thus, the rule likely generates some offsetting time and cost savings for the limited subset of the regulated population that would attempt to avoid the use of a qualified professional absent the rule making.

*Overall, the probable benefits of the rule are consistency with existing statutory requirements and clarity regarding what constitutes a complete permit application. This leads to increased regulatory certainty and generates time and cost savings both for WDFW and the regulated community.*

#### SUMMARY FINDINGS

This rule proposal applies specifically to residential shoreline property owners who need to rehabilitate or replace existing shoreline stabilization. The rule proposal requires this population to employ a qualified professional in developing site assessments and alternatives analyses.

Overall, this analysis finds that the probable benefits of the rule outweigh the probable costs for the following reasons:

- The requirement in this rule making above and beyond the existing requirements of RCW 77.55.231 is the need for a qualified professional to develop the required analyses and reports.
- Many existing SMPs for counties and municipalities require the use of a qualified professional to develop these reports. In these cases, the new rule making does not impose any new requirements and the probable cost of the rule for property owners in these counties and municipalities is \$0.
- Other counties and municipalities do not specify the need for reliance on a qualified professional and, absent the rule, some property owners in these areas may attempt to accomplish the analysis and reporting requirements without the use of a qualified professional. However, outreach and interviews conducted in the context of this analysis identify that, most of the time, property owners recognize a need for the expertise of a qualified professional, even absent the requirement being written into regulation. For property owners that would rely on a qualified professional to develop the analyses and reports as the best way to comply even absent the rule, the probable cost of the rule is \$0.
- The category of applicants most likely to be affected by the rule are those that would attempt to develop the required analyses and reports without the use of a qualified professional absent this rule making. For this limited subset of property owners, the need to hire a qualified profession to develop the reports may generate costs of up to \$10,000. Even in these instances, however, the rule may result in some offsetting cost savings for these property owners. This is because not using a qualified professional may result in non-compliant reports and analyses that may be rejected by WDFW and require re-analysis and revision. Use of a qualified professional reduces the risk of submitting non-compliant reports the first time, saving costs and time in the HPA process. Thus, even for the applicants for which the rulemaking changes behavior, some level of offsetting cost savings is likely.
- The probable benefits of the rule are consistency with existing statute and clarity to property owners regarding what constitutes a compliant HPA application for residential shoreline stabilization rehabilitation or replacement. This regulatory certainty benefit generates time and cost savings both for DFW and for permit applicants.

## CHAPTER 1 | INTRODUCTION

This report evaluates the potential costs and benefits of a Washington State Department of Fish and Wildlife (WDFW) proposed rule that updates Washington State’s Hydraulic Code (77.55 Revised Code of Washington [RCW]). The proposed rule clarifies how residential shoreline property owners should comply with recent legislation regarding residential marine shoreline stabilization. This Cost Benefit Analysis (CBA) was developed in accordance with RCW 34.05.328 to determine whether the, “...probable benefits of the rule are greater than its probable costs, taking into account both the qualitative and quantitative benefits and costs and specific directives of the statute being implemented.” The primary sources of information for this analysis include the following:

- Information gathered through outreach to county and municipal planners, businesses providing the services required by the proposed rule, and residential property owners who have experience with marine shoreline stabilization replacement;
- County and municipal Shoreline Master Program (SMP) documents;
- Tax parcel data identifying land use types along marine shorelines;
- Data identifying location of existing shoreline stabilization along the marine shoreline; and
- Historical Hydraulic Project Approval (HPA) permit data provided by WDFW.

### 1.1 REQUIREMENTS FOR COST-BENEFIT ANALYSIS

RCW 34.05.328 describes specific requirements that agencies must address before adopting rules that are considered “legislatively significant,” including development of a cost-benefit analysis (CBA). Per RCW 34.05.328(5), rules adopted by WDFW implementing 77.55 RCW (i.e., the state’s hydraulic code) are considered legislatively significant. In accordance with RCW 34.05.328, the objective of this CBA is to evaluate the proposed changes to WAC 220-660-370 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 statute being implemented.” Consistent with the requirements of RCW 34.05.328, the primary goal of this CBA is to identify whether the probable benefits of the rule outweigh the probable costs. The weighing of benefits and costs takes into consideration both quantitative and qualitative information.

## 1.2 SUMMARY OF THE PROPOSED RULE

WDFW is proposing changes to WAC 220-660-370 regarding bank protection in saltwater areas. These changes address a 2021 requirement in RCW 77.55.231, which states that anyone desiring to replace residential marine shoreline stabilization must use the least impacting, technically feasible bank protection alternative for the protection of fish life, proven through the completion of a site assessment and alternatives analysis. The proposed rule will clarify the requirement that residential property owners applying for an HPA permit complete a site assessment and alternatives analysis and specify the need for a qualified professional to develop the analysis and reporting for residential shoreline stabilization rehabilitation or replacement projects.<sup>11</sup>

The proposed rule would update WAC 220-660-370 to be consistent with the existing RCW 77.55.231 requirement for HPA permit applicants for residential marine shoreline stabilization replacement or rehabilitation projects. Specifically, the proposed rule prescribes the following:

- Revises existing language in WAC 220-660-370 to require HPA applicants to use the least impacting technically feasible bank protection alternatives for *replacement or rehabilitation of residential* bank protection projects, and specifies preferences for available alternatives;<sup>12</sup>
- Specifies the specific reporting elements that must be included in an HPA application for residential replacement projects; and
- Requires that HPA permit applicants for replacement or rehabilitation of residential bank protection provide a site assessment, alternatives analysis and design rationale for the proposed method *that is prepared by a qualified professional*.

As described in Section 2.1, revisions made to RCW 77.55.231 as a result of SSB 5273 have already put into place the requirement to employ the least impacting technically feasible stabilization technique, and requirements for a site assessment and alternatives analysis with respect to replacement of residential shoreline stabilization. Costs incurred due to these requirements are thus not considered to be incremental costs of the proposed rule. Thus, the key rule change implemented by the proposed rule is that permit applicants of replacement or rehabilitation of residential bank protection projects must hire a qualified professional to complete the requisite reports. Applicants for these project types were not previously required existing state law to submit a qualified professionals report. However, as described in Chapter 2, many permit applicants are subject to this

---

<sup>11</sup> Ecological and other benefits stemming from the selection of the least impacting technically feasible alternative result from RCW 77.55.231 and are not incremental outcomes of the proposed rule. According to WDFW, the proposed rule would not change the selection of the stabilization technique to be employed for a given application (Personal and email communication with WDFW in July and August 2022).

<sup>12</sup> WAC 220-660-370 provides common alternatives for (1) new bank protection and (2) replacement or rehabilitation of bank protection that extends waterward of an existing bank protection structure projects. The proposed rule would modify WAC 220-660-370 to provide common alternatives for replacement or rehabilitation of residential bank protection projects, adapted from RCW Section 77.55.231.



requirement under county or municipal shoreline management plans or generally employ qualified professionals to complete the applications due to the need for their expertise.

The proposed rule also outlines exemptions to the above requirements. WDFW may grant an exemption to the above-described requirements under the following conditions:

- The department may grant an exemption depending on the scale and nature of the project; or
- Projects for the removal of an existing bank protection structure and restoration of the beach are exempted. These projects may include other passive techniques such as controlling upland drainage or planting native vegetation.

Finally, the proposed rule also clarifies the requirements for permit applicants seeking expedited or emergency permits, whether for new or replacement of existing shoreline stabilization), under RCW 77.55.021(12), RCW 77.55.021(14), or RCW 77.55.021(16). These applications should include all deliverables outlined in RCW 77.55.021(2), but a site assessment and alternatives analysis report are not required at the time of application. The proposed rule states that any HPA permit applicant who submits an emergency or expedited application must submit within 90 days from the permit issuance a site assessment and alternatives analysis report, unless WDFW issues an exemption. After review of these deliverables, the HPA permit applicant may be required to modify the project to achieve the least impacting technically feasible alternative.

WAC 220-660-370 currently requires the submission of a site assessment and alternatives analysis report for all new shoreline modification, regardless of the type of application (standard, expedited, or emergency) unless the department provides an exemption depending on the scale and nature of the project. RCW 77.55.231 requires the same for replacement of existing shoreline stabilization. The proposed rule thus does not effectively change the existing requirement for *new* or *replacement* shoreline stabilization expedited or emergency applicants, other than specifying the timeframe within which the requisite report must be submitted.

### 1.3 REPORT ORGANIZATION

The remainder of the report is organized as follows:

- Chapter 2 describes the baseline for the analysis, characterizing existing requirements and behaviors of permit applicants absent the proposed rule.
- Chapter 3 identifies the regulated population, including the number of marine residential shoreline properties that may experience new regulatory requirements as a result of the rule.
- Chapter 4 quantifies the total costs that may be incurred as a result of the proposed rule.
- Chapter 5 provides a qualitative description of the benefits of the proposed rule.
- Chapter 6 weighs the probable benefits of the rule against the probable costs.

## CHAPTER 2 | BASELINE FOR THE PROPOSED RULE

This section describes the existing state and local regulations and policies that guide the placement and modification of shoreline stabilization on Washington’s marine shorelines, which forms the baseline for this analysis. The baseline for this analysis includes existing Hydraulic Code requirements, SMP requirements, and the historical behavior of permit applicants regarding the use qualified professionals to develop site assessments and alternatives analyses regardless of this rule. Overall, the analysis finds that the population regulated by the proposed rule most likely implements the proposed rule requirements even absent the rule making.

### 2.1 HYDRAULIC CODE RULES

The current language of the WAC for bank protection in saltwater areas requires HPA permit applicants for either a *new* residential bank protection or the *replacement or rehabilitation of residential bank protection that extends waterward of an existing bank protection structure* (“waterward replacement”) to use the least impacting technically feasible bank protection alternative.<sup>13</sup> These requirements do not currently apply to replacement or rehabilitation of residential bank protection that *does not* extend waterward of an existing structure. The section stipulates that HPA applicants should propose a hard armoring technique only after considering relevant site characteristics and other factors in an alternatives analysis.

In addition, HPA applicants for *new* or *waterward replacement* of existing bank protection structures are required to submit a site assessment and design rationale for the proposed stabilization method. These deliverables, in conjunction with the alternatives analysis, must be prepared by a qualified professional.<sup>14</sup> This “qualified professionals report” must be provided as part of the complete HPA application, which should include the following:

- An assessment of the level of risk to existing buildings, roads, or services being threatened by the erosion;
- Evidence of erosion and/or slope instability to warrant the stabilization work;

---

<sup>13</sup> The WAC defines “feasible” as available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

<sup>14</sup> Per WAC 220-660-030, a “qualified professional” is a scientist, engineer, or technologist specializing in a relevant applied science or technology. This person may be certified with an appropriate professional organization, or could be someone who, through demonstrated education, experience, accreditation, and knowledge relevant to the particular matter, may be reasonably relied on to provide advice within that person’s area of expertise.

- Alternatives considered and the technical rationale specific to the bank protection technique proposed;
- An analysis of the benefits and impacts associated with the chosen protection method; and
- An explanation of the method chosen, design parameters, types of materials, quantities, staging, and site rehabilitation.

These requirements apply across all land use zones for the applicable project types (i.e., new shoreline bank protection or waterward replacements of existing protection). However, these WAC requirements *do not* apply to HPA permit applicants that wish to *replace* existing marine residential shoreline stabilization.

Property owners also have the option of applying for an emergency or expedited permit per requirements stipulated in RCW 77.55.021(12), RCW 77.55.021(14), and RCW 77.55.021(16). Per RCW 77.55.021(14), if WDFW determines that an imminent danger exists, they can issue an expedited written permit for work to remove any obstructions, repair existing structures, restore banks, or protect property. Per RCW 77.55.021(16), WDFW may also issue an expedited written permit in those instances where normal permit processing would result in significant hardship for the applicant or unacceptable damage to the environment. Expedited permit requests, like standard permits, require a complete written application as required in RCW 77.55.021(2), which should include the following:

- General plans for the overall project;
- Complete plans and specifications of the proposed construction or work within the mean higher high water line in salt water or within the ordinary high water line in fresh water;
- Complete plans and specifications for the proper protection of fish life;
- Notice of compliance with any applicable requirements of the state environmental policy act, unless otherwise provided for in this chapter; and
- In the event that any person or government agency desires to undertake mineral prospecting or mining using motorized or gravity siphon equipment or desires to discharge effluent from such an activity to waters of the state, the person or government agency must also provide proof of compliance with the requirements of the federal clean water act issued by the department of ecology.

WAC 220-660-030 requires a qualified professional's report for all new bank protection projects, whether the new shoreline stabilization project applicants are applying for a general HPA, expedited, or emergency permit, unless WDFW grants an exemption depending on the scale and nature of the project.

In 2021, Washington Legislature (via Substitute Senate Bill [SSB] 5273) passed a requirement (codified in RCW 77.55.231) that anyone desiring to *replace* residential marine shoreline stabilization must use the least impacting technically feasible bank protection alternative for the protection of fish life. Further, unless WDFW provides an

exemption based on the scale and nature of the project, a property owner that desires to replace residential marine shoreline stabilization must complete a site assessment and alternatives assessment to consider the least impacting alternatives before proposing a hard armoring technique. The RCW does not specify that these analyses and report be completed by a “qualified professional.”

## 2.2 SHORELINE MANAGEMENT ACT/SHORELINE MASTER PROGRAM REQUIREMENTS

The Shoreline Management Act (SMA) (Chapter 90.58 RCW) establishes partnerships between state and local governments for “managing, accessing, and protecting Washington’s shorelines.”<sup>15</sup> The SMA requires local governments within shoreline areas in the state of Washington to develop SMPs within their jurisdictions. The statewide rules that translate the broad policies of the SMA into guidance for the development of local SMPs are found in the state’s Shoreline Master Program Guidelines (Chapter 173-26 WAC). To ensure that county and municipal governments are complying with changing state standards for SMPs during review periods, the Act requires that local governments amend their SMPs at least once every eight years. Local SMPs must at minimum address specific topics of statewide significance and may elect to go above and beyond statewide requirements to regulate the shoreline within their local jurisdiction.

With respect to shoreline modifications, including shoreline stabilization, for new structures, the SMP Guidelines require geotechnical reports that address the need for the modification, risk, and rate of erosion, and justification for hard armoring where it is being proposed. The SMP Guidelines do not specify that geotechnical reports must be developed by a qualified professional. The SMP Guidelines do not specify the need for a geotechnical report with respect to replacement stabilization. Of note, regardless of whether a local jurisdiction’s SMP explicitly states the need for site assessment and alternatives analysis, permittees in those jurisdictions are still subject to those requirements based on RCW 77.55.231.

## 2.3 USE OF QUALIFIED PROFESSIONAL TO DEVELOP SITE ASSESSMENT AND ALTERNATIVES ANALYSIS

As outlined above, WAC 220-660-370 requires that for *new* shoreline stabilization, a qualified professional must address a suite of requirements including a risk assessment, evidence of erosion, alternatives for bank protection techniques, and the benefits and impacts of the selected technique. The WAC does not currently include the same requirements for residential property owners who wish to *replace or rehabilitate* existing shoreline stabilization. However, these requirements are already in place for residential

---

<sup>15</sup> Washington Department of Ecology. 2022. Shoreline Management Act (SMA). Viewed at <https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Shoreline-laws-rules-and-cases#:~:text=The%20state%20Shoreline%20Management%20Act,shoreline%20use%20in%20their%20jurisdictions>, July 29, 2022.

shoreline stabilization replacements in some counties and municipalities through their local SMPs.

Exhibit 2-1 below describes each county's reporting requirements for replacing residential shoreline stabilization according to their respective SMPs. For each county, Exhibit 2-1 highlights whether requisite analyses are to be undertaken by a qualified professional according to the text of the local SMP.<sup>16</sup> While SMPs are separate from HPA requirements, some SMPs specify overlapping requirements regarding replacement of shoreline stabilizations, and therefore provide insight regarding the expected behaviors of permittees absent this rule making.

**EXHIBIT 2-1. COUNTY SMP REQUIREMENTS FOR RESIDENTIAL REPLACEMENT SHORELINE STABILIZATION**

COUNTY NAME	ANALYSES TO BE COMPLETED BY QUALIFIED PROFESSIONAL? <sup>1</sup>	SOURCE
Clallam	Need for a qualified professional not specified	Clallam County Shoreline Master Program
Cowlitz	No requirement for site assessment and alternatives analysis specified	Cowlitz County Shoreline Master Program
Grays Harbor	No requirement for site assessment and alternatives analysis specified	Interview with county shoreline planner; Grays Harbor County Shoreline Master Program
Island	Need for a qualified professional not specified	Interview with county shoreline planner; Island County Shoreline Master Program
Jefferson	No requirement for site assessment and alternatives analysis specified	Interview with county shoreline planner; Jefferson County Shoreline Master Program
King	Yes	Interview with county shoreline planner; King County Shoreline Master Program
Kitsap	Yes	Interview with county shoreline planner; Kitsap County Shoreline Master Program
Mason	No requirement for site assessment and alternatives analysis specified	Interview with county shoreline planner; Mason County Shoreline Master Program
Pacific	No requirement for site assessment and alternatives analysis specified	Pacific County Shoreline Master Program
Pierce	Yes	Interview with county shoreline planner; Pierce County Shoreline Master Program

<sup>16</sup> Again, even where an SMP suggests that a site assessment and alternatives analysis is not required, individuals in those jurisdictions are in fact subject to those requirements based on RCW 77.55.231.

COUNTY NAME	ANALYSES TO BE COMPLETED BY QUALIFIED PROFESSIONAL? <sup>1</sup>	SOURCE
San Juan	Need for a qualified professional not specified	San Juan County Shoreline Master Program
Skagit	Yes	Skagit County Shoreline Master Program
Snohomish	Yes	Interview with county shoreline planner; Snohomish County Shoreline Master Program
Thurston	No requirement for site assessment and alternatives analysis specified	Interview with county shoreline planner; Thurston County Shoreline Master Program
Wahkiakum	No requirement for site assessment and alternatives analysis specified	Wahkiakum County Shoreline Master Program
Whatcom	Need for a qualified professional not specified	Whatcom County Shoreline Master Program
<b>Notes:</b> 1. Where SMPs do not explicitly specify use of a certified professional, per IEc's interviews with selected counties it is unlikely that a residential property owner would be able to complete a compliant geotechnical report without the support of the appropriate qualified professional. Therefore, the instances where it is "not specified" whether a professional is required, applicants are likely to hire a qualified professional to fulfill the geotechnical analysis requirement. <b>Sources:</b> Shoreline Master Programs for each county. Interviews with Grays Harbor, Island, Jefferson, King, Kitsap, Mason, Pierce, Snohomish, and Thurston Counties conducted from July through August 2022.		

Interviews with shoreline planners from selected counties and municipality and the SMPs of each county and municipality informed this analysis. Several county and municipal shoreline planners stated in interviews that even if their SMPs did not explicitly state the need for a qualified professional to undertake the analyses, it would be impossible or very challenging for an individual without the relevant professional background to fulfill the necessary requirements. Therefore, residential applicants looking to replace their shoreline stabilization in the counties where SMPs do not describe that a qualified professional must be hired for the analyses are still likely to hire qualified professionals for this purpose.

Of the 16 counties with marine shorelines, five explicitly state the requirement for use of a qualified professional in developing site assessment and alternatives analysis reports. Four do not specify the need for a qualified professional to develop the requisite analyses, and although seven do not currently describe a requirement for geotechnical reports of any kind for applicants replacing residential shoreline stabilization, those residents are required to develop these reports by RCW 77.55.231 when applying for an HPA permit. In both cases, as described previously, it is likely that qualified professionals are being used to fulfill those requirements.

Exhibit 2-2 displays the same information as Exhibit 2-1 at the municipal level. This analysis includes all municipalities that contain marine tax parcels within its municipal

boundaries.<sup>17</sup> Of the 43 municipalities that meet these criteria, 13 specifically state a requirement that a qualified professional develop the requisite reports for replacement residential shoreline stabilization structures. Two municipalities—Anacortes and Seattle—do not specify that a qualified professional must provide the reports, but as described above, it is likely residents are nonetheless hiring qualified professionals to fulfill these requirements. For the remainder, although the SMP does not specify the need for an alternatives analysis and site assessment, individuals in those jurisdictions must do so because of the requirements of RCW 77.55.231, and for the same reason previously described, are most likely to be using qualified professionals to fulfill those requirements.

**EXHIBIT 2-2. MUNICIPAL REQUIREMENTS FOR RESIDENTIAL REPLACEMENT SHORELINE STABILIZATION**

MUNICIPALITY NAME <sup>1</sup>	ANALYSES TO BE COMPLETED BY QUALIFIED PROFESSIONAL? <sup>2</sup>	SOURCE
Aberdeen	Yes	Aberdeen Shoreline Master Program
Anacortes	Need for qualified professional not specified	Interview with municipal planner; Anacortes Shoreline Master Program
Bainbridge Island	Yes	Interview with municipal planner; Bainbridge Island Shoreline Master Program
Bellingham	No requirement for site assessment and alternatives analysis specified	Bellingham Shoreline Master Program
Blaine	No requirement for site assessment and alternatives analysis specified	Blaine Shoreline Master Program
Bremerton	No requirement for site assessment and alternatives analysis specified	Bremerton Shoreline Master Program
Burien	No requirement for site assessment and alternatives analysis specified	Burien Shoreline Master Program
Cathlamet	No requirement for site assessment and alternatives analysis specified	Cathlamet Shoreline Master Program
Coupeville	No requirement for site assessment and alternatives analysis specified	Coupeville Shoreline Master Program
Des Moines	No requirement for site assessment and alternatives analysis specified	Des Moines Shoreline Master Program
DuPont	No requirement for site assessment and alternatives analysis specified	DuPont Shoreline Master Program

<sup>17</sup> Marine tax parcels identified using private geospatial data identifying existing marine shoreline parcels provided via secure server to IEc by WDFW on May 23, 2022. Municipalities were specified by identifying marine tax parcels falling within municipal boundaries from publicly available geospatial data from WA DNR (2021).

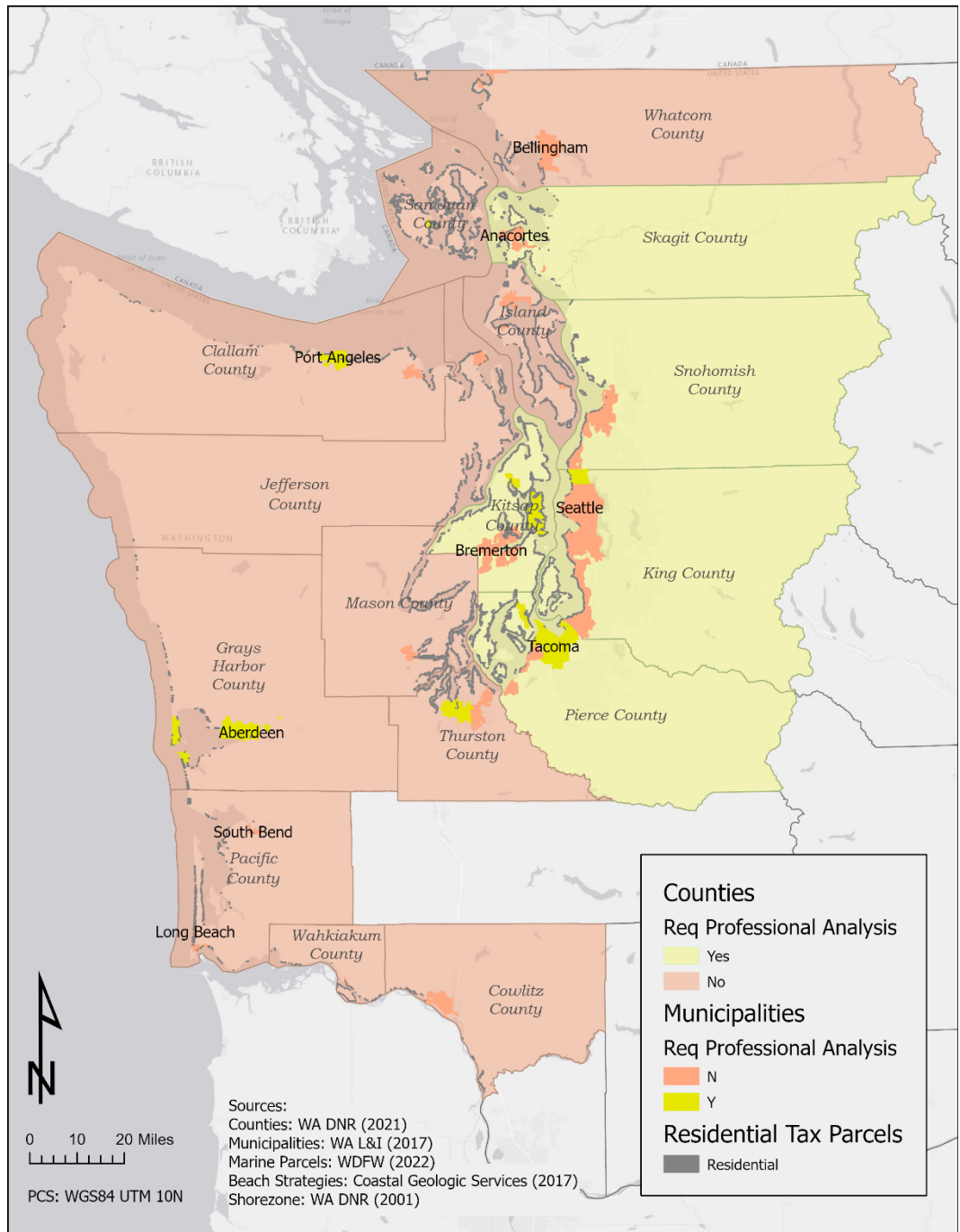
MUNICIPALITY NAME <sup>1</sup>	ANALYSES TO BE COMPLETED BY QUALIFIED PROFESSIONAL? <sup>2</sup>	SOURCE
Edmonds	No requirement for site assessment and alternatives analysis specified	Edmonds Shoreline Master Program
Everett	No requirement for site assessment and alternatives analysis specified	Everett Shoreline Master Program
Federal Way	No requirement for site assessment and alternatives analysis specified	Federal Way Shoreline Master Program
Friday Harbor	Yes	Friday Harbor Shoreline Master Program
Gig Harbor <sup>3</sup>	Yes	Interview with municipal planner; Gig Harbor Shoreline Master Program
Hoquiam	Yes	Hoquiam Shoreline Master Program
Ilwaco	No requirement for site assessment and alternatives analysis specified	Ilwaco Shoreline Master Program
La Conner	No requirement for site assessment and alternatives analysis specified	La Conner Shoreline Master Program
Lacey	No requirement for site assessment and alternatives analysis specified	Lacey Shoreline Master Program
Langley	No requirement for site assessment and alternatives analysis specified	Langley Shoreline Master Program
Longview	No requirement for site assessment and alternatives analysis specified	Longview Shoreline Master Program
Long Beach	No requirement for site assessment and alternatives analysis specified	Long Beach Shoreline Master Program
Mukilteo	No requirement for site assessment and alternatives analysis specified	Mukilteo Shoreline Master Program
Normandy Park	No requirement for site assessment and alternatives analysis specified	Normandy Park Shoreline Master Program
Oak Harbor	No requirement for site assessment and alternatives analysis specified	Oak Harbor Shoreline Master Program
Ocean Shores	Yes	Ocean Shores Shoreline Master Program
Olympia <sup>4</sup>	Yes	Interview with municipal planner; Olympia Shoreline Master Program
Port Angeles	Yes	Port Angeles Shoreline Master Program
Port Orchard	No requirement for site assessment and alternatives analysis specified	Port Orchard Shoreline Master Program



MUNICIPALITY NAME <sup>1</sup>	ANALYSES TO BE COMPLETED BY QUALIFIED PROFESSIONAL? <sup>2</sup>	SOURCE
Port Townsend	No requirement for site assessment and alternatives analysis specified	Port Townsend Shoreline Master Program
Poulsbo	Yes	Poulsbo Shoreline Master Program
Ruston	Yes	Ruston Shoreline Master Program
Seattle	Need for qualified professional not specified	Seattle Shoreline Master Program
Sequim	No requirement for site assessment and alternatives analysis specified	Sequim Shoreline Master Program
Shelton	No requirement for site assessment and alternatives analysis specified	Shelton Shoreline Master Program
Shoreline	Yes	Shoreline Shoreline Master Program
South Bend	No requirement for site assessment and alternatives analysis specified	South Bend Shoreline Master Program
Steilacoom	No requirement for site assessment and alternatives analysis specified	Steilacoom Shoreline Master Program
Tacoma	Yes	Tacoma Shoreline Master Program
University Place	No requirement for site assessment and alternatives analysis specified	University Place Shoreline Master Program
Westport	Yes	Westport Shoreline Master Program
Woodway	No requirement for site assessment and alternatives analysis specified	Woodway Shoreline Master Program
<p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>1. Municipalities with marine tax parcels within municipal boundaries. Marine tax parcels identified using private geospatial data identifying existing marine shoreline parcels provided via secure server to IEc by WDFW on May 23, 2022. Municipalities were specified by identifying marine tax parcels falling within municipal boundaries from publicly available geospatial data from the Washington Department of Natural Resources (WA DNR) (2021).</li> <li>2. Some SMPs do specify that a qualified professional is required for shoreline stabilization analyses and report but that these reporting requirements are not relevant for replacement structures. Of note, where SMPs do not explicitly specify use of a certified professional, per IEc's interviews with selected counties it is unlikely that a residential property owner would be able to complete a compliant geotechnical report without the support of the appropriate qualified professional. Therefore, the instances where it is "not specified" whether a professional is required, applicants are likely to hire a qualified professional to fulfill the geotechnical analysis requirement.</li> <li>3. Interviewee described that although the requirements are not specified in the SMP in detail, they are being implemented in practice.</li> <li>4. Municipal SMP requires that a qualified professional conduct most, but not all of those analyses.</li> </ol> <p><b>Sources:</b> Shoreline Master Programs for each municipality. Interviews with representatives from Olympia, Gig Harbor, Bainbridge Island, and Anacortes conducted from in July 2022.</p>		

Exhibit 2-3 identifies the tax parcels along the marine shoreline identified as residential, and visually depicts the findings from Exhibits 2-1 and 2-2 with respect to SMP requirements for use of a qualified professional to develop site assessment and alternatives analyses.

**EXHIBIT 2-3. RESIDENTIAL MARINE SHORELINE TAX PARCELS AND EXISTING REQUIREMENTS FOR USE OF QUALIFIED PROFESSIONAL FOR SITE ASSESSMENT AND ALTERNATIVES ANALYSIS BASED ON COUNTY AND MUNICIPAL SMPS**



## CHAPTER 3 | REGULATED POPULATION

The proposed rule affects activities occurring on residential properties along Washington’s marine shorelines, including the shorelines of Puget Sound, the Strait of Juan de Fuca, the outer coast, and along coastal estuaries. It does not change existing requirements with respect to commercial or other types of properties, nor does it affect activities occurring on residential properties along non-marine shorelines (e.g., rivers, ponds, or inland lakes). The proposed rule specifically addresses the requirements related to the *replacement or rehabilitation* of existing shoreline stabilization and does not change the requirements for installation of new structures, or replacement of existing structures where the replacement occurs waterward of the existing structure. Accordingly, the regulated population is the subset of residential property owners with existing shoreline stabilization.

As specified in Exhibits 2-1 and 2-2, several SMPs require a qualified professional to complete the required site assessment and alternatives analysis. Although the proposed rule still applies to these property owners, it does not generate additional requirements for their HPA applications. Furthermore, as described in this chapter, it is likely that the majority of HPA applicants would rely upon the expertise of qualified professionals for reporting and analysis requirements regardless of whether this is codified as a requirement.

This chapter identifies the universe of property owners to which the proposed rule applies and describes the rationale for the subpopulation that may experience additional costs. This information provides context and perspective for the weighing of probable costs and benefits in this analysis.

### 3.1 DATA SOURCES

This analysis relies on five input databases to identify potentially affected residential property owners, described in Exhibit 3-1. The Marine Parcels tax parcel database (“Marine Parcels”) provided by WDFW identifies all land parcels located on marine shorelines, and provides the starting point for this analysis. Using the process described in the sections that follow, these parcels are pared down by the rulemaking criteria and baseline behavior of the regulated population to identify the potentially affected parcels. Assuming each parcel would require a separate HPA permit application, with accompanying site assessment and alternatives analysis, the number of parcels reflect the number of analyses and reports that would need to be developed by a qualified professional under the proposed rule.

The proposed rule will only affect residential property owners whose property contains existing shoreline stabilization. The analysis relies on the results of two past armoring

survey efforts along Washington’s marine shorelines. The Beach Strategies armoring database (“Beach Strategies”) contains armoring identification data resulting from 2016 and 2017 survey efforts specifically along Puget Sound shorelines facilitated by Coastal Geologic Services. The Shorezone armoring database (“Shorezone”) contains shoreline modification identification information pertaining to armoring survey efforts conducted between 1994 and 2000 led by the Washington Department of Natural Resources’ (WA DNR) Nearshore Habitat Program. The Beach Strategies database reports more recent identification of shoreline modification; however, the geographic scope of the underlying survey is limited to Puget Sound shorelines. The Shorezone armoring survey includes Puget Sound, as well as the outer coast and key coastal estuaries. This analysis thus identifies shoreline modification in Puget Sound with the Beach Strategies data, and modification in all other marine areas with the Shorezone data.<sup>18</sup>

The County and Municipality boundary data are used to identify the applicable SMP that outlines local policies and requirements with respect to replacement of existing residential shoreline modifications.

#### EXHIBIT 3-1. DATASETS

DATASET NAME	DATASET DESCRIPTION	PURPOSE	SOURCE
Marine Parcels	Tax parcel polygon data with county, city (if available), land use (if available) and owner data as specified by the county assessor, limited to parcels WDFW has identified as being located on marine shorelines.	Identify residential parcels on marine shorelines.	Private WDFW database provided via secure online information sharing portal
Counties	Polygon data with all Washington counties	Identify applicable SMA jurisdiction of individual residential marine parcels.	WA DNR (2021)
Municipalities	Polygon data with all Washington incorporated municipalities	Identify applicable SMA jurisdiction of individual residential marine parcels.	Washington Department of Labor & Industries (WA L&I) (2017)
Beach Strategies	Polyline data from 2016 & 2017 armoring survey efforts that report the presence of shoreline armoring across Puget Sound	Identify presence of existing marine shoreline stabilization along Puget Sound shoreline.	Coastal Geologic Services (2017)
Shorezone	Polyline data from 1997 through 2000 armoring survey efforts that report the percentage of shoreline modification (0-100) across Puget Sound and select areas along the outer coast	Identify presence of existing marine shoreline stabilization along outer coast shoreline.	WA DNR (2001)

<sup>18</sup> An initial check to compare the number of residential parcels with existing shoreline modification across both databases in only Puget Sound areas identified that the total number of parcels only differ by approximately 1.5 percent, which could potentially be attributed to external factors outside the scope of this analysis (e.g., differences in survey extents, land use zoning changes between 2000 and 2016, etc.)

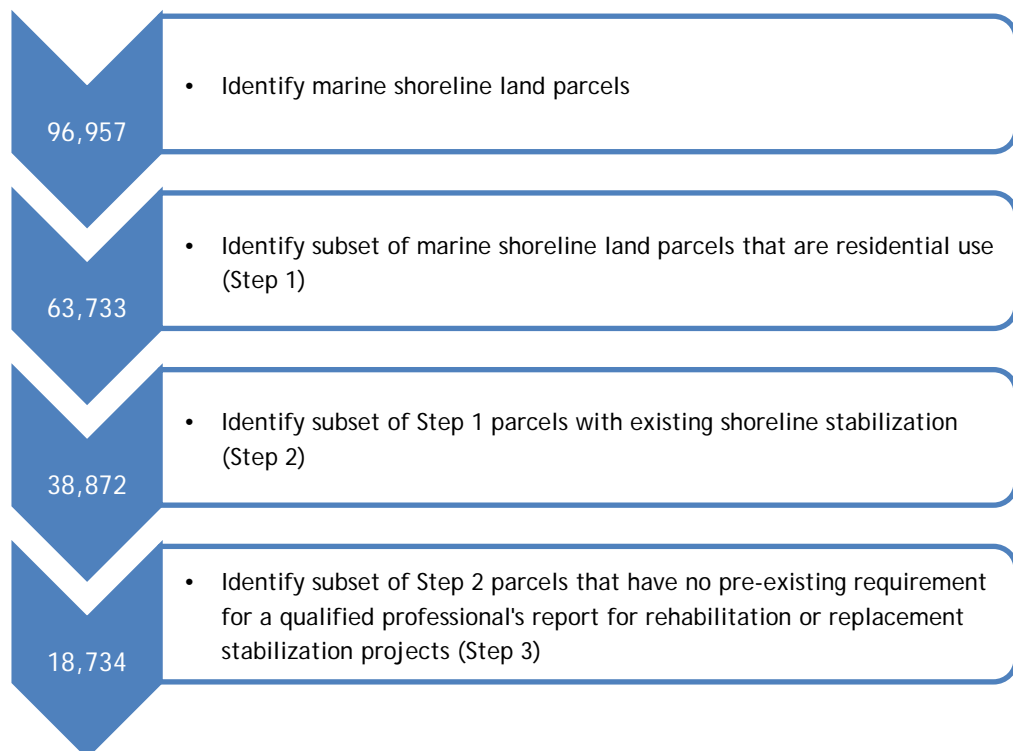
### 3.2 IDENTIFICATION OF POTENTIALLY AFFECTED ENTITIES

Using the previously described datasets, the analysis filters the Marine Parcels data to identify the potentially affected parcels/entities using a three-step analysis:

1. Identify the subset of marine shoreline parcels with a designated residential use.
2. Identify the subset of residential marine shoreline parcels that contain existing shoreline modification.
3. Identify the subset of residential marine shoreline parcels with existing shoreline modifications that are located in counties or municipalities that do not currently require use of a qualified professional to fulfill reporting requirements for replacement of existing shoreline stabilization.

Exhibit 3-2 summarizes the results of this analysis, specifying the number of parcels relevant at each step. This analysis finds 18,734 total residential parcels with no pre-existing requirement to employ a qualified professional to develop the requisite reports.<sup>19</sup> This is approximately 29 percent of the total residential shoreline parcels for which the proposed rule may generate a new requirement.

EXHIBIT 3-2. STEP-WISE IDENTIFICATION OF POTENTIALLY AFFECTED MARINE SHORELINE LAND PARCELS



<sup>19</sup> Of these, some portion may elect to replace the existing shoreline stabilization with a new structure stabilization structure waterward of the existing stabilization structure. In these cases, a qualified professional's report is already required, and the property owner would not incur new costs as a result of the proposed rule.

Importantly, as described in Section Chapter 2, interviews with county and municipal planners identified that even if their SMPs did not explicitly clarify the need for a qualified professional to undertake the analyses, residential applicants looking to replace their shoreline stabilization are still likely to hire qualified professionals due to the need for their expertise. It is also WDFW’s experience that permit applicants typically use a qualified professional even when not required to do so.<sup>20</sup> If, in fact, residential marine shoreline property owners would generally employ qualified professionals to meet the existing requirement for site assessment and alternatives analysis under RCW 77.55.231 even absent the rule, the rule would not affect the costs of residential shoreline stabilization replacements.

#### STEP 1. IDENTIFY RESIDENTIAL MARINE PARCELS

The proposed rule will only affect activities occurring on residential parcels along marine shorelines. The Marine Parcel data include only those tax parcels WDFW considers to be located on marine shorelines. Using land use codes contained within the Marine Parcels data, the analysis selects only those parcels identified as residential use.<sup>21</sup> Exhibit 3-3 specifies all land use codes which are defined as residential for this analysis.<sup>22</sup>

#### EXHIBIT 3-3. RESIDENTIAL LAND USE CODES

LAND USE CODE	LAND USE CODE DESCRIPTION
11	Household, single-family units
12	Household, 2-4 units
13	Household, multiunit (5 or more)
14	Residential condominiums
15	Mobile home parks or courts
17	Institutional lodging
18	All other residential not elsewhere coded
19	Vacation and cabin
111	Residential household (Island County coding system)
112	Residential household (Island County coding system)
113	Residential household (Island County coding system)
Source: WAC 458-53-030	

<sup>20</sup> Email communication with WDFW on September 7, 2022.

<sup>21</sup> For this analysis, residential parcels are identified by land use zoning code. However, WDFW does not administer the Hydraulic Code based on these designations. Rather, permitting decisions are made based on actual land use, which may not always align with the parcel’s assigned land use zoning code.

<sup>22</sup> WAC 458-53-030(5) defines “Hotels/motels” as residential under land use code 16. However, WDFW has specified that they will not consider hotel and motel properties to be residential properties with respect to the rule, but other short and long-term residential property rentals will be considered residential and must comply with the rule (Personal communication with WDFW staff on July 27, 2022).

Approximately five percent of all marine parcels do not have assigned land use codes. This analysis conservatively assumes all parcels with undesignated land use codes are residential, potentially overstating the number of potentially affected entities as a result. This step filtered 33,224 parcels from the original Marine Parcels dataset, identifying 63,733 marine parcels in residential use.

#### STEP 2. IDENTIFY RESIDENTIAL PARCELS THAT HAVE EXISTING SHORELINE MODIFICATION

Marine residential properties are only affected by the proposed rule if there is existing shoreline stabilization on the property. To identify these properties, the analysis overlays the marine residential tax parcels identified in Step 1 with each respective armoring survey's polyline data. Parcels containing a mapped armoring segment are identified as having existing shoreline modification. For Beach Strategies, the key identifier was whether the "Contains Armoring" field returned "Yes." For Shorezone, the key identifier was whether the "Percent Shoreline Modification" field returned a reading of ten percent or higher.<sup>23</sup>

Based upon that analysis, all residential parcels from Step 2 are assigned one of the following three identifiers:

- "Yes" – residential parcel was identified by the armoring survey as containing existing shoreline modification
- "No" - residential parcel was identified by the armoring survey as *not* containing existing shoreline modification
- "No Armoring Survey" – residential parcel was not mapped by the armoring survey, and thus the presence of shoreline modification is unknown.

For most counties and municipalities that were generally included in an armoring survey, there are some marine residential parcels that were not included in the survey. For each area, we calculate the ratio of mapped residential parcels with identified armoring to total mapped residential parcels and apply it to the total number of residential parcels with a "No Armoring Survey" designation. For counties that were not subject to any armoring survey (i.e., Cowlitz and Wahkiakum Counties), we identify the nearest county that was subject to an armoring survey (e.g., Pacific County for Cowlitz County) and apply that area's ratio of "yes" (i.e., contains shoreline modification) to "no" (i.e., does not contain shoreline modification) to the total number of residential parcels in the specified area. This step provides an estimate of the total residential marine tax parcels not included in a shoreline modification survey that do have existing shoreline modification.

---

<sup>23</sup> The polyline data from both datasets does not perfectly align with the parcel boundaries from the Marine Parcels database. For instance, there could be a residential parcel that contains two separate mapped armoring segments, one with identification of armoring, and one that does not. Thus, each merged dataset returned many duplicates, which required post-processing in Excel to avoid double counting in Step 3.

This estimate is combined with the total count of mapped residential parcels with existing shoreline modification to arrive at a final estimated count of residential marine parcels with existing shoreline modification. This step identified 24,861 marine residential parcels with no existing shoreline modification, resulting in 38,872 marine residential parcels with existing shoreline stabilization.

### STEP 3. IDENTIFY RESIDENTIAL PARCELS WITH EXISTING SHORELINE MODIFICATION IN JURISDICTIONS THAT DO NOT REQUIRE A QUALIFIED PROFESSIONAL TO COMPLETE A SITE ASSESSMENT AND ALTERNATIVES ANALYSIS

As described in Chapter 2, certain jurisdictions already require the use of a qualified professional to develop a site assessment and alternatives analysis for replacement of existing shoreline modifications. The proposed rule will not introduce any new requirements or costs to residential property owners in these jurisdictions. This step of the analysis removes any residential marine parcels within jurisdictions in which the use of a qualified professional is already explicitly required.

First, we identify the SMP relevant to each parcel, dependent on whether each parcel is located in an incorporated municipality or within the unincorporated county. To assign the SMP jurisdiction, the analysis overlays the Marine Parcels data with the County and Municipal geospatial files to properly assign a local area jurisdiction to each marine shoreline parcel.<sup>24</sup> For parcels within a municipal boundary, the municipal jurisdiction is assigned. Otherwise, the parcel is assigned to the corresponding unincorporated county.

Next, the analysis considers whether the applicable SMP specifies that a qualified professional must complete a required geotechnical assessment (i.e., site assessment and alternatives analysis) for residential rehabilitation or replacement shoreline stabilization projects. Exhibits 2-1 and 2-2 identify whether a qualified professional is required within a given jurisdiction. Parcels within jurisdictions that definitively require a qualified professional's report are removed from the analysis, as they would not experience new requirements as a result of the rule.

Exhibit 3-4 presents all affected residential parcels subject to the proposed rule, summarized by general location. Puget Sound comprises of 97 percent of all affected residential parcels, whereas the outer coast comprises 3 percent.

---

<sup>24</sup> The raw Marine Parcels database contains parcels that overlap with each other. Merging this dataset with the county and municipal geospatial files led to the formation of multiple duplicate parcels as a result. Before proceeding, all duplicate parcels were removed to ensure the same parcel would not be double counted throughout the remaining steps of the analysis.

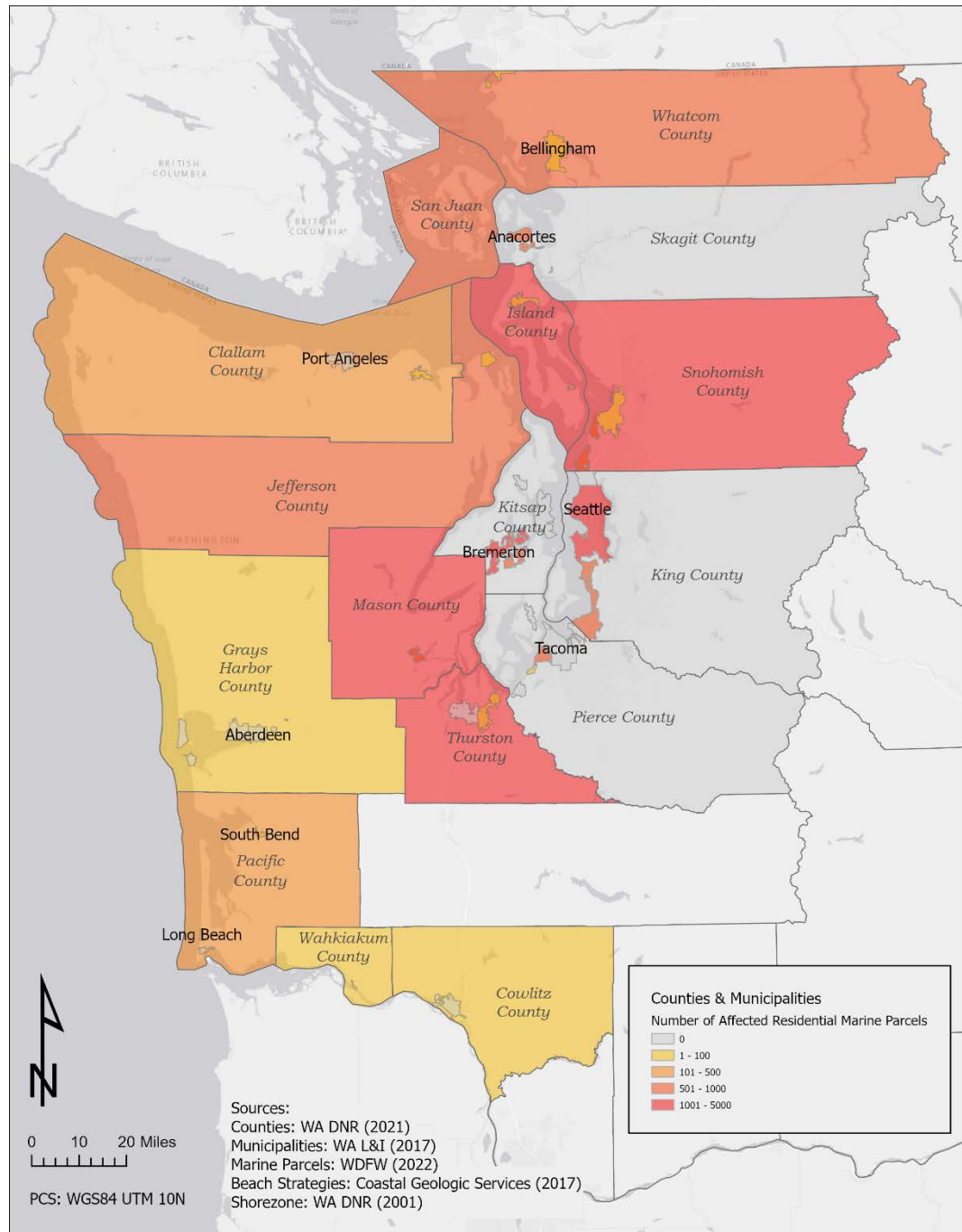


## EXHIBIT 3-4. NUMBER OF RESIDENTIAL PARCELS AFFECTED BY THE PROPOSED RULE (SUMMARY BY LOCATION)

LOCATION	TOTAL ESTIMATED COUNT OF AFFECTED RESIDENTIAL PARCELS	PERCENT OF TOTAL
Puget Sound	18,150	97%
Outer Coast	584	3%
<b>Total</b>	<b>18,734</b>	<b>100%</b>
Sources: WDFW Marine Parcels database, Beach Strategies geodatabase, Shorezone geodatabase, WA DNR County boundaries geospatial data, WA L&I municipal boundaries geospatial data		

Exhibit 3-5 depicts graphically the relative extent of affected residential marine shoreline parcels by relevant SMP jurisdiction. Residential property owners in jurisdictions identified in gray are not expected to incur costs as a result of the rule because qualified professionals are already required to develop requisite site assessment and alternatives analysis reports in those jurisdictions. Within unincorporated county areas, Mason, Island, Snohomish, and Thurston Counties comprise the majority of potentially affected residential marine parcels. The municipalities of Bremerton and Seattle also contain a large number affected residential parcels.

EXHIBIT 3-5. RELATIVE NUMBER OF AFFECTED RESIDENTIAL PARCELS WITHIN EACH SMP JURISDICTION



Step 3 of the analysis identifies 18,734 residential parcels with existing shoreline stabilization that do not currently have a requirement to employ a qualified professional to develop the requisite analyses and reports. This means that approximately 29 percent of residential shoreline property owners may be subject to new requirements when

existing shoreline stabilizations require rehabilitation or replacement.<sup>25</sup> It is important to note that these parcels would not all be subject to the new requirements at the time the rule is finalized. In fact, a small subset of these property owners may apply for a HPA permit for rehabilitation or replacement of their stabilization in a given year. For property owners with recently developed stabilizations, the rulemaking may not generate additional requirements for 30 years or more, depending on the design life of the existing stabilization.<sup>26</sup>

Furthermore, as described in Chapter 2, interviews with county and municipal planners identified that even where relevant SMPs do not explicitly require the use of a qualified professional to undertake the analyses and reporting requirements, residential applicants generally recognize the need for their expertise. It is also WDFW's experience that permit applicants are likely to hire a qualified professional to develop necessary reports, even where it is not explicitly required.<sup>27</sup> Thus, though the specific number is uncertain, it is most likely that few of the permit applicants will change their behavior as a result of the rulemaking. That is, the population affected by the proposed rule is most likely very limited.

---

<sup>25</sup> Individual property owners may own two or more parcels that together comprise a single property for stabilization/permitting purposes.

<sup>26</sup> Lifespan of shoreline stabilization based on personal and email communication with geotechnical/engineering firms conducted in July 2022.

<sup>27</sup> Email communication from WDFW on September 7, 2022.

## CHAPTER 4 | PROBABLE COSTS OF PROPOSED RULE

The proposed rule has the potential to result in new costs to the residential property owners. To evaluate the probable costs of the proposed rule, this analysis relies upon historical permit data and data collected from outreach to industry stakeholders. This chapter additionally describes the uncertainties that preclude a quantitative assessment of total rule costs and identifies other potential costs not quantified in the analysis.

### 4.1 COSTS OF COMPLIANCE

The compliance costs of the proposed rule stem from the need for HPA permit applicants for marine shoreline residential replacement or rehabilitation stabilization projects to employ a qualified professional to prepare the required site assessment and alternatives analysis report. As detailed in Chapter 2, many Washington state counties and municipalities already require the use of a qualified professional to complete the report, while in other counties and municipalities residential property owners regularly elect to employ a qualified professional for this purpose even though it is not explicitly required. In those cases, the proposed rule would not trigger additional costs. The rule would only generate additional costs to residential shoreline property owners if, absent the rule, they would comply with existing requirements without the use of a qualified professional (e.g., by having their construction contractor, rather than a geotechnical expert, document slope instability). Because most property owners are already employing qualified professionals to complete reporting requirements, the proposed rule is largely unlikely to result in additional costs. To the extent that a residential shoreline property owner's use of a qualified professional results specifically from the proposed rule, this section identifies the costs associated with having a qualified professional complete this report and describes the factors that could influence the magnitude of these costs.

The cost estimates developed for this analysis are based primarily on interviews with professional firms providing site assessment and alternatives analysis services. Firms interviewed for this process included firms identifying as permitting facilitators, geotechnical engineers, coastal engineers, and shoreline stabilization design and construction firms. The interview process included nine individual firms whose work collectively represents the majority of the study area, though representation of firms who have completed relevant residential property analysis on the outer coast was limited. Each interviewee was asked to provide the average range of costs for the services required by the proposed rule, and a description of factors that dictate the specific cost for a given project.

The cost of employing a qualified professional to complete the site assessment and alternatives analysis ranges from \$3,000 to \$10,000.<sup>28</sup> This range of costs represents estimates from industry representative interviews and email communications. This range of costs is relevant to multiple project types (new armoring structure project, rehabilitation or replacement shoreline stabilization project), proposed armoring types (e.g., hard armoring, hybrid armoring, soft-shore armoring), number of considered alternatives, and residential property shoreline length. Costs are similar whether a residential applicant is applying for a general HPA permit or an emergency or expedited permit.<sup>29</sup>

If a qualified professional can complete the site assessment and alternatives analysis in short order and WDFW does not have questions or requests regarding the analysis and reporting, total costs tend toward the low end of the specified cost range. However, the magnitude of incurred costs for any given project is dependent upon the following factors:

- **Upcharges and project delays instigated by demand backlog for a qualified professional:** Only a select number of firms employ qualified professionals who have the expertise to complete the site assessment and alternatives analysis report for residential property owners. This is due to larger engineering firms allocating most (if not all) of their efforts toward non-residential projects with local governments or other clients. Since RCW 77.55.231 was codified in 2021, smaller firms have experienced larger volumes of residential property owners requesting a qualified professional's support for their rehabilitation or replacement bank protection project, leading to a backlog of potential permit applicants. This has led firms to charge more for the same services, and potentially increased costs to the residential property owner due to the delay in successfully acquiring the services of a qualified professional.
- **Need to bring in additional support to complete assessment and report:** If a project has site-specific characteristics that require extensive critical thinking, a qualified professional may need to bring in additional support to address them (e.g., unclear sources of instability, assess what alternatives are appropriate, whether they can prove need for replacement).
- **Location of residential property:** Site-specific factors contribute to the level of effort required to conduct the needed site assessment, including but not limited to the types of existing shoreline stabilizations at the site and at surrounding sites.
- **Additional time to communication/educate residential property owners:** If the permit applicant is not knowledgeable about either the reporting requirements or

---

<sup>28</sup> Before RCW 77.55.231 was codified, permit applicants for residential rehabilitation and replacement bank protection projects in select areas spent as low as \$1,000 to provide proof of slope instability to necessitate the proposed work. However, since RCW 77.55.231 changed the reporting requirements for these applicants, we assume that the costs to prepare these deliverables are on average no lower than \$3,000.

<sup>29</sup> Personal and email communication with representatives of firms providing shoreline stabilization-related services conducted in July 2022.

the makeup of their existing stabilization structure, the qualified professional may need to spend additional labor to educate them on the general process of their analysis and selection of the least impacting technically feasible alternative.

- **Additional time to respond to state and/or local government comments:** If the qualified professional needs to respond to state and/or local government comments to their initial submission, the residential property owner will incur additional costs to have the qualified professional address feedback.

In rare instances, costs can reach \$20,000, which could be attributable to several of the above factors, most notably higher than anticipated consultant time spent to respond to WDFW-provided comments. However, based on interviewee feedback, the probable range in costs for use of qualified professionals to develop the required analyses and reports is between \$3,000 and \$10,000.<sup>30</sup>

#### 4.2 RATE OF PERMIT APPLICATIONS

As described in Chapter 2, it is likely that a narrow subset of the residential shoreline property owners will experience incremental costs as a result of the rule. This analysis finds that approximately 29 percent of residential shoreline property owners may be subject to new requirements when existing shoreline stabilizations require rehabilitation or replacement and the majority of that population would likely employ qualified professionals even absent the rule. Additionally, a small subset of these property owners may apply for a HPA permit for rehabilitation or replacement of their stabilization in a given year.

For perspective on the annual rate of permit applications, this analysis uses permit application data acquired through WDFW's Aquatic Protection Permitting System (APPS) to calculate the annual rate of permit submissions by county over the past five years (2017-2021), specified in Exhibit 4-1.<sup>31,32</sup> The exported APPS permit data includes all standard, expedited, and emergency permits that were applied for and issued for a "Shoreline Armoring – Marine" project type. The data on permit applications include applications for both new and replacement structures and for all land use types (i.e., not solely residential properties that are subject to the proposed rule). Interviews with county and municipal planners and communication with WDFW during July and August 2022 confirmed that the majority of permit applications are for stabilization replacements.

---

<sup>30</sup> Personal and email communication with representatives of firms providing shoreline stabilization-related services conducted in July 2022.

<sup>31</sup> The APPS database only allows users to identify county-specific permit submissions. Thus, any county-level permit data not only includes permits within that county, but also permits in municipalities within the county and any unincorporated county areas.

<sup>32</sup> A review of historical rates of applications over the last five years did not identify any meaningful trends within the data. As such, this analysis relies on an annual average application rate.

EXHIBIT 4-1. ANNUAL AVERAGE HISTORICAL SHORELINE STABILIZATION PERMIT APPLICATION RATES (2017-2021)

COUNTY NAME	ANNUAL AVERAGE PERMIT RATE
Clallam	5
Cowlitz	<1
Grays Harbor	1
Island	22
Jefferson	5
King	18
Kitsap	17
Mason	16
Pacific	3
Pierce	23
San Juan	2
Skagit	4
Snohomish	7
Thurston	4
Wahkiakum	<1
Whatcom	3
Total	132
Source: WDFW APPS Database, Accessed August 10, 2022. Note: This table includes permit applications for all types of applicants (residential property owners, commercial, industrial, and other) and is inclusive of both new stabilization requests and rehabilitation or replacement permits. Thus, only a subset of these applications would be subject to the proposed rule.	

Overall, this analysis finds an average annual rate of 132 HPA permit applications for shoreline armoring. If all permit applications in a given year experienced an incremental cost for relying on a qualified professional for analysis and reporting requirements due to the rule, the cost would range between \$400,000 and \$1.3 million. However, this estimate overstates the probable costs of the rule in a given year for the following key reasons:

- The permit data overstate the number of HPA applications as they include other land use/landowner categories other than residential properties and because they include applications for new stabilizations and replacements that include construction of a new stabilization waterward of an existing stabilization, and not just rehabilitation or replacement.
- Of the subset of the 132 average annual applications that are residential property owners seeking rehabilitation or replacement permits, a majority are likely to employ a qualified professional for analysis and reporting requirements regardless of the proposed rule.

#### 4.4 SUMMARY OF PROBABLE COSTS

The probable costs of the rule range from \$3,000 to \$10,000 *per permit* for residential shoreline property owners that would employ a qualified professional to address the associated analysis and reporting requirements of rehabilitation or replacement stabilization permits. The number of permit applicants for which the proposed rule would trigger these costs is uncertain. This is because only a subset of the 132 HPA average annual shoreline stabilization permit applicants are residential shoreline property owners for rehabilitation replacement projects. Moreover, a narrow subset of those applicants would not rely upon a qualified professional absent the rule making (and thus experience additional costs due to the rule). However, based on review of existing SMPs and interviews with stakeholders, the probable costs of rule are limited and closer to \$0 than to the annualized reporting costs (across all shoreline stabilization HPA applications) of \$400,000 to \$1.3 million.

The proposed rule may also result in other costs that are not quantified in the analysis and are too uncertain to be characterized as “probable.” Specifically, increased demand for a qualified professional in a limited pool of experts may lead to an increased wait time to retain the services of a qualified professional, resulting in project delays. However, these costs may be offset by time savings that are gained due to efficiencies in WDFW review, and increased likelihood that the application package will be accepted without further revisions needed. Both of these potential rule benefits are described in greater detail in Chapter 5.



**CHAPTER 5 | PROBABLE BENEFITS OF PROPOSED RULE**

The proposed rule is expected to yield benefits related to greater uniformity in application processes and expectations across the state, increased accuracy in applicants' geotechnical reports, and clearer language describing expedited and emergency permit processes. The rule incorporates residential replacement projects into rule language which already applies to other types of projects, allowing uniform handling across project types. As a result of the proposed rule, the Hydraulic Code will be made consistent with RCW 77.55, better-allowing WDFW to carry out its authority under RCW 77.55. Consistency between the Hydraulic Code and RCW additionally clarifies the complete set of requirements for the regulated community in a single location, rather than having requirements distributed across both the Hydraulic Code and statute. Increased uniformity across the Hydraulic Code and RCW is likely to lead to greater efficiencies in application and review processes by saving time and administrative costs for residential applicants and WDFW. Applicants will also benefit from the clarification in requirements from the proposed rule and will have a greater understanding of what constitutes a complete geotechnical report.

The requirement to submit a report prepared by a qualified professional will lead to additional benefits related to efficiency. As a result of the proposed rule, geotechnical reports submitted by applicants are more likely to contain the required elements and address all requirements accurately. This results in benefits to applicants and those reviewing the applications. Specifically, the use of a qualified professional to develop the required reports reduces the risk of an incomplete or low-quality analysis and report being rejected by WDFW, which would require the applicant to revise and resubmit application materials. Thus, the rule likely generates some offsetting time and cost savings for the limited subset of the regulated population that would attempt to avoid the use of a qualified professional absent the rule making.

The proposed rule clarifies the requirements for expedited or emergency permits for new and replacement shoreline stabilization, providing greater regulatory certainty for applicants for these types of projects as well as those at WDFW evaluating expedited and emergency permit applications. Greater regulatory certainty is likely to lead to benefits in efficiency, as outlined above. The requirement to submit a site assessment and alternatives analysis within 90 days from the permit issuance allows WDFW to determine whether the least impacting technically feasible alternative is being used within each project. This requirement opens a regulatory pathway for applicants to meet the required standard, which benefits fish and aquatic resources and ensures greater uniformity across requirements for different project types.

As discussed previously, the requirement to use the least impacting technically feasible type of shoreline stabilization is not introduced by this proposed rule, and thus the ecological benefits of that requirement are not directly attributable to this rule. Nonetheless, the proposed rule's requirement for use of a qualified professional does contribute to the achievement of the ecological benefits that are the goal of the state's shoreline stabilization rules more broadly.

Overall, the probable benefits of the rule are consistency with existing statutory requirements and clarity regarding what constitutes a compliant permit application. This leads to increased regulatory certainty and generates time and cost savings both for WDFW and the regulated community.

## CHAPTER 6 | COMPARISON OF THE PROBABLE COSTS AND BENEFITS OF THE PROPOSED RULE

In accordance with RCW 34.05.328, the objective of this CBA is to evaluate the proposed changes to WAC 220-660-370 to “determine that the probable benefits of the rule are greater than its probable costs, taking into account both the quantitative and qualitative benefits and costs, and the specific directives of the statute being implemented.” As described in Chapters 4 and 5, this analysis provides primarily qualitative information on probable costs and benefits, with some quantitative cost information to provide perspective and context to the assessment. Exhibit 6-1 summarizes the analysis of costs and benefits.

### EXHIBIT 6-1. SUMMARY OF KEY FINDINGS OF ANALYSIS OF COSTS AND BENEFITS

COSTS	BENEFITS
<ul style="list-style-type: none"> <li>• Incremental cost of \$3,000 to \$10,000 per residential permit applicant for a narrow subset of permit applicants that would not rely upon a qualified professional absent the rulemaking               <ul style="list-style-type: none"> <li>○ No incremental costs for residential parcels with no existing shoreline stabilization</li> <li>○ No incremental costs in areas where local requirements currently require a qualified professional</li> <li>○ No incremental costs for permit applicants that would rely on a qualified profession for analysis and reporting requirements regardless of the rule</li> </ul> </li> <li>• Some potential for time delay costs due to increase in demand for limited supply of qualified professionals</li> </ul>	<ul style="list-style-type: none"> <li>• Consistency across Hydraulic Code and RCW in permit application processes and expectations.</li> <li>• Regulatory certainty generated by increased clarity regarding analysis and reporting requirements.</li> <li>• Time and cost savings in permitting process for some rehabilitation or replacement of residential shoreline stabilizations.               <ul style="list-style-type: none"> <li>○ Time and cost savings for WDFW review and comment of applications due to improved quality of analysis and reports.</li> <li>○ Time and cost savings for permit applicants that, absent the rule, may submit reports that require additional analysis and revision due to insufficient expertise.</li> </ul> </li> </ul>

This rule making applies specifically to residential shoreline property owners who need to rehabilitate or replace existing shoreline stabilization. The rule making requires this population to employ a qualified professional in developing site assessments and alternatives analyses.

Overall, this analysis finds that the probable benefits of the rule outweigh the probable costs for the following reasons:

- The requirement in this rule making above and beyond the existing requirements of RCW 77.55.231 is the need for a qualified professional to develop the required analyses and reports.
- Many existing SMPs for counties and municipalities require the use of a qualified professional to develop these reports. In these cases, the new rule making does not impose any new requirements and the probable cost of the rule for property owners in these counties and municipalities is \$0.
- Other counties and municipalities do not specify the need for reliance on a qualified professional and, absent the rule, some property owners in these areas may attempt to accomplish the analysis and reporting requirements without the use of a qualified professional. However, outreach and interviews conducted in the context of this analysis identify that, most of the time, property owners recognize a need for the expertise of a qualified professional, even absent the requirement being written into regulation. For property owners that would rely on a qualified professional to develop the analyses and reports as the best way to comply even absent the rule, the probable cost of the rule is \$0.
- The category of applicants most likely to be affected by the rule are those that would attempt to develop the required analyses and reports without the use of a qualified professional absent this rule making. For this limited subset of property owners, the need to hire a qualified professional to develop the reports may generate costs of up to \$10,000. Even in these instances, however, the rule may result in some offsetting cost savings for these property owners. This is because not using a qualified professional may result in non-compliant reports and analyses that may be rejected by WDFW and require re-analysis and revision. Use of a qualified professional reduces the risk of submitting non-compliant reports the first time, saving costs and time in the HPA process. Thus, even for the applicants for which the rulemaking changes behavior, some level of offsetting cost savings is likely.
- The probable benefits of the rule are consistency with existing statute and clarity to property owners regarding what constitutes a compliant HPA application for residential shoreline stabilization rehabilitation or replacement. This regulatory certainty benefit generates time and cost savings both for WDFW and for permit applicants.

## REFERENCES

### DATA FROM PRIMARY RESEARCH, MONITORING ACTIVITIES, OR OTHER SOURCES

- Coastal Geologic Services. 2017. Beach Strategies geodatabase. Available at <https://fortress.wa.gov/dfw/public/PublicDownload/Habitat/BeachStrategies/BeachStrategies.zip>
- Email communication between WDFW and IEc on May 19, 2022, May 23, 2022, June 28, 2022, June 29, 2022, June 30, 2022, July 7, 2022, and July 27, 2022.
- Nearshore Habitat Program. 2001. The Washington State ShoreZone Inventory. Washington State Department of Natural Resources, Olympia, WA.
- Personal communication between WDFW staff and IEc, May 19, 2022, June 15, 2022, June 29, 2022, July 13, 2022, and July 27, 2022.
- Personal and email communication with geotechnical/engineering firms conducted in July 2022.
- Personal and email communication with local government representatives conducted in July 2022 and August 2022.
- Personal and email communication with marine shoreline residential property owners conducted in July 2022.
- Personal and email communication with the Washington State Department of Revenue conducted in July 2022.
- The U.S. Office of Management and Budget, February 7, 2011. “Regulatory Impact Analysis: Frequently Asked Questions (FAQs).” Accessed at [https://www.whitehouse.gov/wp-content/uploads/legacy\\_drupal\\_files/omb/assets/OMB/circulars/a004/a-4\\_FAQ.pdf](https://www.whitehouse.gov/wp-content/uploads/legacy_drupal_files/omb/assets/OMB/circulars/a004/a-4_FAQ.pdf), May 17, 2022.
- Washington Department of Fish and Wildlife. 2022. Aquatic Protection Permitting System Database. Accessed August 10, 2022.
- Washington Department of Fish and Wildlife. 2022. Marine Parcels database. Received through secure online information sharing server May 23, 2022.
- Washington Department of Natural Resources. 2021. Washington County Boundaries. Available at [https://fortress.wa.gov/dnr/admins/gisdata/datadownload/WA\\_County\\_Bndys.zip](https://fortress.wa.gov/dnr/admins/gisdata/datadownload/WA_County_Bndys.zip)
- Washington Labor and Industries. 2017. City Limits (Statewide). Available at <https://geo.wa.gov/datasets/LNI::li-city-limits-statewide/explore?location=47.305033%2C-120.944400%2C7.16>

**LEGAL AND POLICY DOCUMENTS**

RCW, (Revised Code of Washington) 19.85

RCW 77.55.021

RCW 77.55.231

RCW, 90.58

WAC (Washington Administrative Code) WAC 220-660-370

WAC 458-53-050

Washington Department of Ecology. 2022. Shoreline Management Act (SMA). Viewed at <https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Shoreline-laws-rules-and-cases#:~:text=The%20state%20Shoreline%20Management%20Act,shoreline%20use%20in%20their%20jurisdictions>, July 29, 2022.

Washington Department of Ecology. 2022. State approved Shoreline Master Programs. Viewed at <https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/State-approved-Shoreline-Master-Programs>, 1 August, 2022.

**ATTACHMENT A | OUTREACH SUMMARY AND LIST OF INDIVIDUALS  
INTERVIEWED IN JULY/AUGUST 2022**

To support development of this analysis and the accompanying Small Business Economic Impact Statement (SBEIS), we relied on outreach and participation of local government officials, firms that provide permitting support, site assessment and alternatives analysis, or engineering and construction services, and residential marine shoreline property owners. IEc relied upon several sources to identify and obtain contact information for these entities, including county and municipal Shoreline Master Programs and WDFW-provided permit information extracted from their Aquatic Protection Permitting System (APPS) database.

IEc conducted interviews with representatives chosen per a variety of selection criteria. County and municipal interviewees were chosen based on whether their area's Shoreline Master Program contains current requirements for residential rehabilitation and replacement bank protection projects that either closely match that of the proposed rule or are widely different. This was done to capture the full extent of potential involvement across local areas. Area representatives were also identified by whether they contained a large concentration of marine residential properties and businesses that contain existing shoreline modification. Firms were chosen based on whether they are highly represented in WDFW's provided APPS database, which IEc took as evidence that they would have much experience developing the required site assessment and alternatives analysis report.<sup>33</sup> Some industry interviewees were also chosen per WDFW and Washington Department of Ecology recommendation. Residential property owners were chosen based on if they had successfully applied for and received a permit for their residential bank protection project within the last four years.

Between July 6, 2022, and August 2, 2022, IEc reached out by email to invite representatives to participate in an interview. Potential interviewees who IEc did not initially hear from received at least one additional outreach email, and interviewees who did respond were generally available to meet via video call during Pacific Daylight Time business hours. For potential contacts who did not respond to either the initial or follow-up email, IEc assumed those contacts had elected not to participate in the process, and no further effort was made to contact them. Altogether, IEc attempted to connect with 22 local government officials, 15 engineering consulting firms, and 25 marine shoreline

---

<sup>33</sup> In some instances, IEc found that the listed contacts in WDFW's APPS database were representatives that managed the overall permit application process and outsourced the site assessment and alternatives analysis services to a separate firm. During these meetings, IEc requested for and received contact information for several geotechnical engineering firms that perform the site assessment and alternatives analysis in house and met with several of them after contacting them through email.

residential property owners. Of the 62 total individuals IEC contacted, 37 either declined to participate or did not respond to IEC's outreach emails. Ultimately, IEC conducted interviews with 13 local government officials, nine firms, and three marine shoreline residential property owners (see Exhibit A-1). Interviews generally followed the list of questions presented in Attachment B, though interviewees were invited to provide additional thoughts as they deemed relevant.

**EXHIBIT A-1. LIST OF INTERVIEWEES**

DESCRIPTION OF INTERVIEWEES <sup>1</sup>
Shoreline planner at King County
Shoreline planner at Kitsap County
Shoreline planner at Pierce County
Shoreline planner at Snohomish County
Shoreline planner at Mason County
Shoreline planner at Jefferson County
Shoreline planner at Island County
Shoreline planner at Grays Harbor County
Shoreline planner at Thurston County
Shoreline planner in Olympia
Shoreline planner in Anacortes
Shoreline planner in Bainbridge Island
Shoreline planner in Gig Harbor
Consulting/engineering professional at Soundview Consultants, LLC
Consulting/engineering professional at Leon Environmental, LLC
Consulting/engineering professional at Sea-level Bulkhead Builders, Inc.
Consulting/engineering professional at Saratoga Environmental, LLC
Consulting/engineering professional at Coastal Solutions, LLC
Consulting/engineering professional at Aspect Consulting, LLC
Consulting/engineering professional at Blue Coast Engineering
Consulting/engineering professional at Qwg Applied Geology
Consulting/engineering professional at GeoResources, LLC
Residential marine shoreline property owner in Mason County
Residential marine shoreline property owner in Pierce County
Residential marine shoreline property owner in Island County
<b>Notes:</b>
1. Individuals are not identified by name to protect the privacy of interview participants.



## ATTACHMENT B | INTERVIEW GUIDE

### INTERVIEW QUESTIONS

#### INTRODUCTION

- IEc is an environmental and economic consulting firm with expertise in developing regulatory analyses for state and federal agencies.
- IEc has been retained by the Washington Department of Fish and Wildlife to develop a Cost Benefit Analysis and a Small Business Economic Impact Statement for a forthcoming proposed rule that would modify the state’s hydraulic code.
- The Cost Benefit Analysis compares the costs and benefits that would result from the rule, while the SBEIS considers whether the rule will disproportionately affect small businesses or impose more than minor costs on them (defined as businesses employing <50 people).
- The existing regulations were recently updated to require that residential shoreline property owners wishing to replace existing shoreline protection structures must use the least impactful technically feasible alternative and must include in their permit application a site assessment and alternatives analysis.
- The proposed rule would clarify the existing process for complying with those requirements, including confirming that the site assessment and alternatives analysis be conducted by a certified professional.
- Our analysis is focused on the costs and benefits associated with the requirement to use a certified professional to develop the site assessment and alternatives analysis. It does not consider costs associated with the requirement to use the “least impactful technically feasible alternative”, as that requirement is already in statute, and is not part of the proposed rule. (Noting that the cost of evaluating those options within a report would be considered a cost of the rule).
- We are conducting a series of interviews with county and municipal planners, firms that provide site assessment services, and residential shoreline property owners to better understand the requirements as they stand today, the costs of complying with those requirements, and how or if the rule might result in additional costs to residential property owners.

**QUESTIONS FOR FIRMS PROVIDING SITE ASSESSMENT AND ALTERNATIVES ANALYSIS SERVICES**

- What geographic areas (counties and municipalities) does your firm service?
- Please describe the types of analyses/reports you provide for property owners with respect to shoreline stabilization and/or armoring. Site assessments? Alternatives analysis? Design Rationale?
- Are there standard analyses and information that is included in all reports you produce or are there different types of analyses that might be done depending on the regulatory need (e.g., alternatives analysis)?
- Are there differences in the types/costs of services you have typically provided for new residential shoreline protection structures vs. those that are being rehabilitated or replaced?
- How much do you charge for your services, broken out by individual item/analysis type, if applicable? What variables drive the cost of the report? For example,
  - New structure vs. replacement?
  - Existing armoring type?
  - How many/which types of alternatives need to be considered (e.g., including consideration of soft/nature-based protection)?
  - Project location?
  - Property type?
  - Shoreline length/slope?
  - Other?
- Would a new requirement that residential replacement structures use the least impactful technically feasible alternative, and that they demonstrate that they are doing so through an alternatives analysis, change the cost of your services for the permit applicant?
- Within the areas where you provide services, do you have a sense of which county/municipal codes currently require a geotechnical analysis/qualified professional's report for repair/replacement of structures on residential property?
- What is the life expectancy for shoreline protection structures of different types? How long do structures of each type typically last before they need to be rehabilitated or replaced?
- For residential property owners that you have provided services for, do you have a sense of any that might be considered businesses?

## QUESTIONS FOR COUNTIES AND MUNICIPALITIES

- What are the primary objectives and targeted benefits of current shoreline armoring requirements within your county/municipality?
- The hydraulic code (WAC) currently requires that a property owner that wants to construct *new* shoreline protection or *replace existing protection waterward of the existing protection* use the least impactful, technically feasible option, and submit a qualified professionals report that includes a site assessment, alternatives analysis, and design rationale (*details below, which we can read to them*). How do these requirements compare to what is required by your Shoreline Management Program (SMP)?
- What baseline shoreline stabilization and/or armoring construction/replacement reporting or analysis requirements (if any) are currently in place with respect to alternatives analysis, site assessment, and report development within your jurisdiction's SMP? Are they the same as what is required by the existing WAC? More stringent?
  - Do they apply only to new structures?
  - What requirements are in place for replacement structures?
  - Do you require use of a certified professional to complete any required assessments?
- Could someone meet these requirements without the use of a certified professional?
- The proposed rule would extend the existing requirement for new residential structures to have a qualified professional conduct a site assessment and alternatives analysis, to replacement structures. Are these things your SMP already requires for residential replacement structures, or would they go above and beyond your requirements?
- For residential property permit requests for shoreline armoring, can you estimate the proportion each year that are for new structures vs. replacement or rehabilitation?
- For the SBEIS, we are particularly interested in understanding the locations and numbers of shoreline residential properties that may be businesses.
  - Do you have a sense of the types of businesses that might be relevant here?
  - Are there particular locations in which these types of businesses are concentrated?
- Are these businesses considered to be commercial or residential properties with respect to compliance with the existing WAC?

## QUESTIONS FOR RESIDENTIAL PROPERTY OWNERS

- What is your relationship to/interest in the property? Are you a homeowner that resides on the property? Is it a rental property? Do you own and manage the property as a business that provides housing?
- Was your project for constructing a new shoreline protection structure, or replacing or rehabilitating an existing structure? If it was a replacement or rehabilitation project:
  - What type of structure were you replacing?
  - Do you know the age of the structure and/or when it was last rehabilitated?
- What information, reports, and analyses were you required to submit with your permit application? For example:
  - Assessment of risk?
  - Proof of erosion?
  - Assessment of alternatives for protection (e.g. soft, natural protection vs hard structures)?
  - Design rationale?
- Did you use a certified professional to fulfill these requirements?
  - If yes, how much did you pay for those services? Do you have information about the respective costs of different elements of the work or analyses that were done for you?
  - In no, how did you meet those requirements and what costs did you incur to do so?
- Were there other costs that you incurred associated with these reporting requirements aside from paying for the report?

## ATTACHMENT C | DATA DICTIONARY

DATA ITEM	SOURCE
Costs of employing a qualified professional to complete marine shoreline residential bank protection geotechnical analysis	Personal and email communication with representatives of firms providing shoreline stabilization-related services conducted in July 2022.  Personal and email communication with marine shoreline residential property owners conducted in July 2022.
Identification of counties and municipalities with existing requirements for qualified professional's report	Personal and email communication with representatives of county and municipal planning departments conducted in July and August 2022.  Review of SMPs for all marine shoreline jurisdictions.
Total tax parcels, residential tax parcels, single family residential tax parcels, and multi-unit residential tax parcels	Private geospatial data identifying existing marine shoreline parcels provided via secure server to IEc by WDFW on May 23, 2022.
Marine shoreline with anthropogenic modification	Publicly accessible geospatial from the Washington State Shorezone Inventory, Available at: <a href="https://www.dnr.wa.gov/programs-and-services/aquatics/aquatic-science/nearshore-habitat-inventory">https://www.dnr.wa.gov/programs-and-services/aquatics/aquatic-science/nearshore-habitat-inventory</a>  Beach Strategies Geodatabase (2017), Coastal Geologic Services, Available at: <a href="https://fortress.wa.gov/dfw/public/PublicDownload/Habitat/BeachStrategies/">https://fortress.wa.gov/dfw/public/PublicDownload/Habitat/BeachStrategies/</a>
Permit database including project description and project applicant and permitting agent contact information	Personal and email communication with WDFW representatives conducted in May 2022 and June 2022.  Aquatic Protection Permitting System accessed online in July 2022, Available at <a href="https://www.govonlinesaas.com/WA/WDFW/Public/Client/WA_WDFW/Shared/Pages/Main/Login.aspx">https://www.govonlinesaas.com/WA/WDFW/Public/Client/WA_WDFW/Shared/Pages/Main/Login.aspx</a>