



Preliminary Regulatory Analyses:

Including the:

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

Shoreline Management Act

*Chapter 173-18 WAC; Chapter 173-20 WAC;
Chapter 173-22 WAC; Chapter 173-26 WAC;
Chapter 173-27 WAC*

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For the

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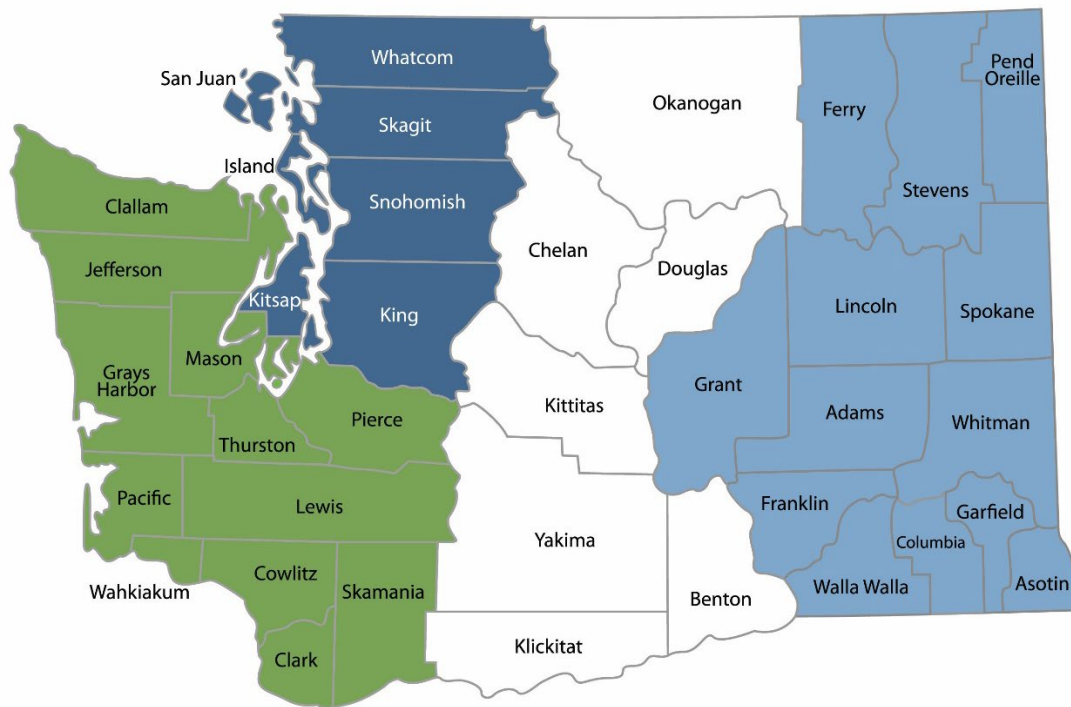
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¹ www.ecology.wa.gov/contact

Department of Ecology's Regional Offices

Map of Counties Served



Southwest Region
360-407-6300

Northwest Region
206-594-0000

Central Region
509-575-2490

Eastern Region
509-329-3400

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

APA	Administrative Procedures Act
GMA	Growth Management Act
OSM	Open Street Map
RCW	Revised Code of Washington
RFA	Regulatory Fairness Act
SLR	Sea Level Rise
SMA	Shoreline Management Act
SMP	Shoreline Master Program
WAC	Washington Administrative Code

Executive Summary

The Shoreline Management Act of 1971 (SMA, or “Act” hereafter) is a cornerstone state environmental law. Originating as a citizen initiative to the Legislature, it was adopted by Washington voters directly in 1972. It is intended to prevent the “inherent harm in an uncoordinated and piecemeal development of the state’s shorelines.” The SMA directs the Department of Ecology to work in partnership with cities and counties to protect, restore, and responsibly develop Washington’s 28,000 miles of stream, lake, and marine shorelines. The Act has three broad objectives:

- Protect the shoreline environment
- Promote access to public shorelines
- Prioritize uses requiring a shoreline location

There are five sections of rules that implement the SMA, which provides umbrella guidance to local jurisdictions who write Shoreline Master Programs (SMPs). SMPs are local land use policies and regulations which directly govern development activity along the state’s shorelines.

In 2023, the Legislature passed Engrossed Second Substitute House Bill 1181, which directed Ecology to amend the SMA components of the Washington Administrative Code (WAC) to require that SMPs address the impact of sea level rise and increased storm severity. Proposed rule amendments would identify areas exposed to sea level rise hazards in SMPs, and set minimum requirements for new development within areas projected to be impacted including new restrictions and prohibitions.

In addition, the proposed rule contains changes that will impact local governments, the regulated community, Ecology’s internal processes, as well as many editorial revisions and clarifications. Local jurisdictions would incur additional costs in preparing their SMPs to meet the new standards. By statute, however, Ecology provides grants to cover those costs as described in subsection 2.2.4.

When last surveyed in 1996, Washingtonians placed tremendous value on the preservation of, and access to, shorelands. Updating their responses for inflation and using the current estimate of households, Washingtonians expressed a willingness-to-pay of \$1.7 billion dollars per year to protect the state of Washington’s shorelines at that time. Paired with an estimated annual rate of affected shoreline development, a portion of this value anchors our quantitative estimate of the proposed rule’s benefits.

Costs were quantified, where possible, by applying available costs categories to applicable expected rates of affected shoreline development.

Our quantified estimates of the proposed amendments’ costs and benefits are presented in Table 1 below and our discussion of qualitative costs and benefits follows.

Table 1: Summary of quantitative estimates of costs and benefits

Proposed amendments	Estimated annual cost	Present Value of costs out to 2050	Quantitative 2030 benefit	Present Value of benefits out to 2050
Sea level rise restrictions	\$2.7–11.1 million ²	See total below	See total below	See total below
Vegetation conservation	\$ 1.3–\$9.7 million	See total below	See total below	See total below
Generating exemption letters	\$0.013 million	See total below	See total below	See total below
Total quantified costs or benefits	\$4.1–\$21 million	\$65-\$335 million	\$0.6 to \$1.7 million	\$135-\$404 million

Note: The present value from lower cost assumptions should generally be compared to the present value from lower benefit assumptions, and vice versa. This reflects our expectation that benefits grow with spending on shoreline protection. We apply a 2% real private discount rate to the estimated cost, and a 0.41% social discount rate to benefits (see Section 5.1 for additional discussion).

Not shown in Table 1, by 2100, we estimate the high-end benefits of the proposed rule at more than 3-fold the estimated high-end costs.

Due to data limitations, we describe only qualitatively the remainder of the expected cost and benefits of the proposed rule (See Chapter 3 and 4). We note that under the Administrative Procedures Act (APA), quantitative and qualitative arguments have equal footing in cost-benefit analyses.

As discussed in Chapter 2 and 3, the proposed amendments may generate additional, qualitative, costs associated with:

- On-site stormwater treatment or tie-in alternatives associated with restricting stormwater outfalls in future land subdivisions,
- Ensuring parking availability and signage about public access,
- Planning around shoreline buffers to the degree it impacts future development,
- Planning around wetland regulation to the degree it impacts future development.

Additionally, we expect qualitative benefits from proposed rule. Most generally, we expect the proposed amendments to better meet the overall goals and objectives of the Shoreline Management Act of 1971, bringing the benefit of realizing the Legislature’s intent and the voter’s preference.

As discussed in Chapter 2 and 4, these include but are not limited to:

² Includes estimated impacts to residential, commercial, multifamily housing and stabilization projects.

- Reduced future spending on shoreline stabilization and property protection as sea level rises and storms become more severe,
- Reduced loss of property and business function due to sea level rise and storm severity,
- New, spatially explicit, public information on sea level rise and storm severity,
- More information to Ecology and the public regarding ongoing shoreline development,
- Ensuring public access through language clarity and signage requirements,
- Regulatory clarity, and in some cases increased stringency, regarding other shoreline issues. These include water quality protection, preserving shoreline function, and vegetation conservation. See Section 4.2.5 for greater detail,
- Better documentation of effectiveness of SMPs, including documentation of optimization of SMA principles for Shorelines of Statewide Significance

Most of Washington’s population lives in counties that have marine shorelands, and these will be impacted by sea level rise. In addition to being highly valued, preserving the ecological function of these shorelands, and protecting public access to them, is enshrined in law. The proposed rule, in its considerable detail, further advances the goals and objectives of the Shoreline Management Act of 1971 while updating it to address the impacts of sea level rise, as required.

Considering both qualitative and quantitative arguments, we estimate the benefits of the proposed rule outweigh the costs.

Chapter 1: Background and Introduction

1.1 Introduction

This report presents the determinations made by the Washington State Department of Ecology as required under Chapters 34.05 and 19.85 of the Revised Code of Washington (RCW), for the proposed rule that amends Chapters 173-18; 173-20; 173-22; 173-26; 173-27 of the Washington Administrative Code (WAC), (referred to collectively as “the rule” where appropriate). This includes the:

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

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

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

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

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

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

1.1.1 Background

The Shoreline Management Act of 1971 (SMA, or “Act” hereafter) is a cornerstone state environmental law. Originating as a citizen initiative to the Legislature, it was adopted by Washington voters directly in 1972. It is intended to prevent the “inherent harm in an

uncoordinated and piecemeal development of the state's shorelines."³ The SMA directs the Department of Ecology to work in partnership with cities and counties to protect, restore, and responsibly develop Washington's 28,000 miles of stream, lake, and marine shorelines. The Act has three broad objectives:

- Protect the shoreline environment
- Promote access to public shorelines
- Prioritize uses requiring a shoreline location

Specifically, RCW 90.58.020 states: "In the implementation of this policy the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally. To this end uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the state's shoreline."⁴

To implement the SMA, cities and counties adopt land-use policies and regulations, called Shoreline Master Programs (SMPs), that guide the use of shorelines in their jurisdictions. Chapter 173-26 WAC, which the proposed rule would amend, dictates what must be in SMPs along with the procedures for adopting and amending them. Adopted provisions do not become effective until they are incorporated into SMPs after they are locally tailored with technical support from Ecology. Upon Ecology review and approval, individual SMPs collectively become the state SMP. At the time of this writing, 258 cities and counties have locally tailored SMPs for their regulated shoreline areas.

We note that proposed revisions to Chapter 173-27 WAC for implementation and enforcement of SMPs are effective upon rule adoption.

Key Terms

Development: pursuant to RCW 90.58.030(3)(a), "Development" means a use consisting of the construction or exterior alteration of structures; dredging; drilling; dumping; filling; removal of any sand, gravel, or minerals; bulkheading; driving of piling; placing of obstructions; or any project of a permanent or temporary nature which interferes with the normal public use of the surface of the waters overlying lands subject to this chapter at any state of water level.

Shorelands: those lands extending a minimum of 200 feet, in all directions, from the ordinary high water mark; floodways and contiguous floodplain areas landward 200 feet; and all wetlands and river deltas associated with the streams, lakes, and tidal waters subject to the SMA.⁵

Shoreline master program (SMP): consistent with RCW 90.58.030(3)(c) and (d), "Master program" means the comprehensive use plan for a described area, and the use regulations

³ [RCW 90.58.020](https://apps.leg.wa.gov/rcw/default.aspx?cite=90.58.020); <https://apps.leg.wa.gov/rcw/default.aspx?cite=90.58.020>

⁴ [RCW 90.58.020](https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.020); <https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.020>

⁵ [RCW 90.58.030\(2\)\(d\)](https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.030(2)(d)); [https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.030\(2\)\(d\)](https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.030(2)(d))

together with maps, diagrams, charts, or other descriptive material and text, a statement of desired goals, and standards developed in accordance with the policies enunciated in RCW 90.58.020. "State master program" is the cumulative total of all master programs approved or adopted by the department of ecology;

Shorelines of the state (roughly): water, the land under it, shorelands, and associated wetlands of streams with mean annual flow of over 20 cubic feet per second, and lakes of 20 acres or more, plus shorelines of statewide significance⁶

Shorelines of statewide significance: Lakes of 1000 acres or more, Puget Sound and other marine waters, rivers with average flow of 1000 cubic feet per second W. of Cascades, 200 cubic feet per second east of the Cascades, or after 300 sq. miles of drainage, whichever is longer.

1.2 Reasons for the proposed rule amendments

Ecology is seeking to amend the five state rules that implement the SMA to ensure they are current, reflect statutory changes, and help local governments uphold the Act. Broadly, amendments in this rulemaking are intended to address issues identified over years of reviewing, adopting, and implementing Shoreline Master Programs (SMP)s; that includes clarity around SMP permitting, amendments, enforcement, and approvals. The proposed rule also updates the list of streams, rivers, and lakes in completed SMPs, and clarifies shoreland and wetland designations associated with shorelines of the state.

The rulemaking is needed now to help local governments address the impact of sea level rise ("SLR" and sea level rise are used interchangeably throughout this document) and increased storm severity in their SMPs, as recently required by state law (see E2SHB 1181, RCW 90.58.630).⁷

1.3 Summary of the proposed rule amendments

Note that Chapters 173-18, 173-20, 173-22, 173-26, and 173-27 WAC have all been opened for proposed amendments as part of the current rulemaking. While these are separated in the state code, their contents work together to administer the Shoreline Management Act, among other shoreline development policies. For this reason, the following list of amendments are presented by policy theme, and may refer to a collection of proposed changes in multiple chapters. Specific chapters and subsections in which amendments take place are provided in more detail in Section 2.3.

The proposed rule amendments would:

- Establish requirements for addressing the impact of sea level rise and increased storm severity, as required by RCW 90.58.630.

⁶ RCW 90.58.030; <https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.030>

⁷ RCW 90.58.630: Shoreline master programs—Impact of sea level rise and storm severity.

- Require that Critical Area protections within shorelines of the state be developed under Shoreline Management Act rules. Incorporating protections from other planning documents by reference would no longer be permitted.
- Differentiate between shoreline modifications to address erosion versus flooding and establish new requirements for stabilization, emphasizing nature-based solutions.
- Make revisions adding and clarifying requirements for better overall compliance with the Shoreline Management Act and local Shoreline Master Programs.
- Consolidate, clarify, and amend principles and standards that were previously found throughout the WAC to meet objectives of the SMA, including no net loss of shoreline function and public access.
- Establish a new requirement that local governments review and evaluate SMP implementation and document how the SMP continues to optimize the policies of the Shoreline Management Act for Shorelines of Statewide Significance, considering the state and public interest, at each periodic review.
- Clarify the process, scope, and minimum requirements for Periodic Reviews and locally initiated amendments to Shoreline Master Programs.
- Clarify statutory options for extending shorelands, in addition to updating the lists of shoreline waterbodies.

1.4 Document organization

The chapters of this document are organized as follows:

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

Chapter 2: Baseline and Proposed Rule Amendments

2.1 Introduction

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

2.2 Baseline

The baseline for our analysis generally consists of existing laws and rules. This is what allows us to make a consistent comparison between the state of the world with and without the proposed rule amendments. We summarize these rules and laws by chapter below, then compare and contrast sections and subsections in greater detail relevant to rule amendments in Section 2.3.⁸

It is frequently the case that proposed amendments to the Washington Administrative Code (WAC) are made to make it consistent with passed legislation. Changes of this type are considered to be dictated by statute and are not subject to a cost-benefit analysis of Ecology's actions.

For this rulemaking, the baseline includes:

- Chapter 90.58 RCW Shoreline Management Act Of 1971 (SMA)
- Chapter 36.70A RCW Growth Management—Planning By Selected Counties And Cities
- Chapter 173-18 WAC Streams And Rivers Constituting Shorelines Of The State
- Chapter 173-20 WAC Lakes Constituting Shorelines Of The State
- Chapter 173-22 WAC Adoption Of Designations Of Shorelands And Wetlands Associated With Shorelines Of The State
- Chapter 173-26 WAC State Master Program Approval/Amendment Procedures And Master Program Guidelines
- Chapter 173-27 WAC Shoreline Management Permit And Enforcement Procedures

2.2.1 Shoreline Management Act Of 1971

In Chapter 90.58.020 RCW The Legislature finds that Washington's shorelines are valuable, fragile, and under increasing pressure from additional and sometimes competing uses. Because

⁸ Where appropriate, rule and statutory language may be paraphrased throughout this document for the purposes of synthesis, brevity and plain language. Summaries presented here and elsewhere in this analysis do not supersede language as written in statute, adopted rules, or the rule as proposed to be amended.

much shoreline property is privately owned, and unrestricted construction is not in the public interest, the statute emphasizes the need for coordinated planning by federal, state, and local governments. Coordination is essential to prevent harm in an “uncoordinated and piecemeal development” of the state’s shorelines. The statute further requires the Department of Ecology and local governments to give preference to uses in the following order:

1. Recognize and protect the statewide interest over local interest;
2. Preserve the natural character of the shoreline;
3. Result in long term over short term benefit;
4. Protect the resources and ecology of the shoreline;
5. Increase public access to publicly owned areas of the shorelines;
6. Increase recreational opportunities for the public in the shoreline;
7. Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary (master program contents)

The goals of the Act, taken together, ensure that shoreline development decisions work toward long-term public benefit, ecological protection, and public access, while avoiding fragmented, piecemeal development that could contribute to shoreline degradation. RCW 90.58.030(2)(d) allows local governments to include lands necessary for buffer for critical areas that occur within shoreline of the state. In other words, an SMP can extend shoreline jurisdiction to include additional area beyond the minimum 200 feet from the ordinary high-water mark as needed to protect critical areas and the shoreline ecological functions they provide.

To administer and meet the goals of the Act, local governments must develop and periodically amend their master programs for regulation of uses of the shorelines of the state consistent with the required elements of the guidelines [rules] adopted by Ecology. Under the SMA, there is a periodic review required for all SMPs every 10 years.

2.2.2 Growth Management Act

Originally passed in 1990, Washington’s Growth Management Act (GMA) sets umbrella rules under which local jurisdictions prepare comprehensive growth management plans. It is routinely amended.⁹ By statute, the fastest growing communities must develop regulations to guide future growth. For all communities, comprehensive plans must also protect environmentally critical areas and set urban growth boundaries.¹⁰ Under the GMA, there is a periodic update required for the comprehensive growth plans every 10 years.

Current statute states that shorelands within communities are to be governed by the SMA: “The goals and policies of a shoreline master program for a county or city approved under

⁹ [GMA-amendments-1995-2026.pdf](https://deptofcommerce.app.box.com/s/41vk2hbhsder8movy8kmlylbwac6v7ik),

<https://deptofcommerce.app.box.com/s/41vk2hbhsder8movy8kmlylbwac6v7ik>

¹⁰ [WA Commerce GMA guide](https://deptofcommerce.app.box.com/s/y0oj1ejjilqjnzdj7i4jwm6g5zyunma), <https://deptofcommerce.app.box.com/s/y0oj1ejjilqjnzdj7i4jwm6g5zyunma>

Chapter 90.58 RCW shall be considered an element of the county or city's comprehensive plan.”¹¹ However, the policies, goals, and provisions of chapter 90.58 RCW and applicable guidelines are the sole basis for determining compliance of a shoreline master program with the GMA, except for internal consistency requirements.¹²

The GMA establishes that critical areas include the following areas and ecosystems: (a) wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas. The GMA provides that critical areas within shorelines of the state are protected under the SMA and are not subject to the procedural or substantive requirements of the GMA and that cities and counties are not authorized to adopt regulations applicable to shorelands that are consistent with the SMA.¹³ The current statute also provides that SMPs must not only protect critical area functions but also provide a level of protection to critical areas located within shorelines of the state that assures no net loss of shoreline ecological functions as defined by Ecology’s rules.

2.2.3 Existing Rules (WACs)

State rules that guide and regulate shoreline master program development, updates, and implementation are contained in chapters 173-18, -20, -22, 26, and -27 WAC. This collection of rules defines the waters and lands under shoreline jurisdiction, specifying minimum requirements to manage the shoreline jurisdiction, and sets a permit and enforcement framework that ensures Shoreline Master Programs (SMPs) foster reasonable and appropriate use of shorelines of the state while protecting shoreline ecological functions, planning for shoreline restoration, and maintaining or establishing public access consistent with the policy goals above in RCW 90.58.020.

Specifically, WAC 173-18 and WAC 173-20 identify which streams, rivers, and lakes constitute shorelines of the state, using flow and drainage thresholds for streams and rivers and county-by-county listings for lakes. In other words, these rules list the waterbodies that are subject to the SMA or direct the reader to the appropriate comprehensively updated SMP for that list. However, the waterbodies that constitute shorelines of the state and subject to a local SMP is dictate by the definitions contained within RCW 90.58.030.

Pursuant to RCW 90.58.030(2)(d), Ecology is tasked with designating the shorelands associated with streams, lakes, and tidal waters which are subject the SMA and SMPs. Chapter 173-22 WAC provides the specific designation criteria for shoreland areas associated with tidal waters, lakes, and streams. This section also defines and establishes the criteria for determining associated wetlands. WAC 173-22-030 requires the when delineating wetlands, specific procedures must be followed. The determination of shoreland and associated wetland

¹¹ [RCW 36.70a.480](https://app.leg.wa.gov/rcw/default.aspx?cite=36.70a.480); <https://app.leg.wa.gov/rcw/default.aspx?cite=36.70a.480>

¹² [RCW 36.70a.480\(3\)](https://app.leg.wa.gov/rcw/default.aspx?cite=36.70a.480); <https://app.leg.wa.gov/rcw/default.aspx?cite=36.70a.480> subsection (3)

¹³ [RCW 36.70a.480](https://app.leg.wa.gov/rcw/default.aspx?cite=36.70a.480) and [RCW 36.70a.481](https://app.leg.wa.gov/rcw/default.aspx?cite=36.70a.481); <https://app.leg.wa.gov/rcw/default.aspx?cite=36.70a.480> and <https://app.leg.wa.gov/RCW/default.aspx?cite=36.70A.481>

boundaries must be completed on a site-by-site and as-needed basis following specific procedures.

Chapter 173-26 WAC provides the central framework and standards for how SMPs are to be developed, periodically reviewed, amended, and approved by Ecology to manage the shoreline jurisdiction. These include but are not limited to the establishment of shoreline policies, creation of and management of environment designations, general provisions, regulations for shoreline uses and modifications, and critical area protections. This chapter also describes the public process for SMP adoption and periodic review.

WAC 173-27 describes the SMP permit system including substantial development, conditional use, and variance permits, developments that are statutorily exempt from the substantial development permit process, and activities that are statutorily excluded from local review and permitting. This chapter also includes SMA and SMP enforcement actions that can be taken by either the local government or Ecology.

2.2.3 Master Program Handbook and Existing SMPs

The Shoreline Master Programs Handbook¹⁴ (Handbook) is a guide for local governments developing or updating Shoreline Master Programs (SMP) in Washington. This Handbook provides guidance for meeting the requirements of the Shoreline Management Act (SMA, RCW 90.58), the Shoreline Master Program Guidelines (WAC 173-26, Part III), and the SMP procedural rules (WAC 173-26, Parts I and II.) The Handbook also provides information and resources to help in making decisions on SMP environment designations, policies and regulations.

Despite not being a direct a part of the proposed rulemaking, the Handbook is guidance and recommendations made by Ecology that may impact the outcome of SMP development. These include topics not explicitly outlined in the rules, but critical to local planning, such as SLR (see Appendix A in the Handbook). The existing handbook will be updated following the adoption of the proposed rules to ensure alignment between the rules and guidance.

2.2.4 Master Program Periodic Review Costs

According to the schedule provided in RCW 90.58.080(4), each master program must be reviewed and amended as necessary at least once every ten years. The deadline for completion for master program periodic reviews is two years after the date that a grant is provided to a local government by Ecology for this review.

The proposed rule would change the requirements for local governments during the periodic review process. We expect that these additional requirements will create costs for local

¹⁴ [Shoreline Master Programs Handbook](https://apps.ecology.wa.gov/publications/SummaryPages/1106010.html); <https://apps.ecology.wa.gov/publications/SummaryPages/1106010.html>

governments, as the increased level of planning is significant, especially for jurisdictions subject to sea level rise.

However, those costs are assumed to be covered by the state funding grants provided pursuant to RCW 90.58.080(6) and 90.58.250. As stated in 90.58.250(1), “The legislature... intends that the state will provide funding to local governments that is reasonable and adequate to accomplish the costs of developing and amending shoreline master programs consistent with the schedule established by RCW 90.58.080.”

Therefore, as cited throughout this PRA, costs associated with proposed rule amendments that affect periodic review requirements are considered covered by the grants and are not factored into the cost-benefit analysis.

2.3 Proposed rule amendments

The proposed rule amendments would:

- Establish requirements for addressing the impact of sea level rise and increased storm severity, as required by RCW 90.58.630.
- Require that Critical Area protections within shorelines of the state be developed under Shoreline Management Act rules. Incorporating protections from other planning documents by reference would no longer be permitted.
- Differentiate between shoreline modifications to address erosion versus flooding and establish new requirements for stabilization, emphasizing nature-based solutions.
- Make revisions adding and clarifying requirements for better overall compliance with the Shoreline Management Act and local Shoreline Master Programs.
- Consolidate, clarify, and amend principles and standards that were previously found throughout the WAC to meet objectives of the SMA, including no net loss of shoreline function and public access.
- Establish a new requirement that local governments review and evaluate SMP implementation and document how the SMP continues to optimize the policies of the Shoreline Management Act for Shorelines of Statewide Significance, considering the state and public interest, at each periodic review.
- Clarify the process, scope, and minimum requirements for Periodic Reviews and locally initiated amendments to Shoreline Master Programs.
- Clarify statutory options for extending shorelands, in addition to updating the lists of shoreline waterbodies.

2.3.1 Establish requirements for addressing the impact of sea level rise and increased storm severity, as required by RCW 90.58.630.

Baseline

RCW 90.58.630 reads in its entirety: “The department [of Ecology] shall update its shoreline master program guidelines to require shoreline master programs to address the impact of sea level rise and increased storm severity on people, property, and shoreline natural resources and the environment.”¹⁵ This addition is within and part of the broader goals of the Shoreline Management Act of 1971, and should be taken together as maintaining and ensuring that the goals of the Act are met (See Section 2.2.1) in the face of SLR and increased storm severity.

During SMP development or the amendment process, local governments must to the extent feasible, use natural and social sciences, consult with expert agencies, conduct further research, and employ modern scientific and computer methods for data analysis (RCW 90.58.100). Although the SMA does not specifically mention shifts in shoreline jurisdiction due to SLR, it does identify that the OHWM is located “as it may naturally change” [RCW 90.58.030 (2)(c)].

The state’s Master Program Guidelines (Chapter 173-26 WAC) do not call out SLR in detail. However, the rule has long guided shoreline regulation dynamically by requiring the use of scientific and technical information in conjunction with 100-year floodplains, floodways, and future erosion. For example:

- WAC 173-26-201(2)(a) states that local governments shall identify and assemble the most current, accurate, and complete scientific and technical information available that is applicable to the issues of concern, and base master program provisions on an analysis of science and technical information.
- WAC 173-26-221(3)(b) states that over the long term, the most effective means of flood hazard reduction is to prevent or remove development in flood-prone areas, and further that “Development in flood plains should not significantly or cumulatively increase flood hazard” (WAC 173-26-221(3)(c)(i)). Flood plain is synonymous with a one-hundred-year flood plain (WAC 173-26-020(19)).
- WAC 173-26-231(2)(iii)(A) reads: “New development should be located and designed to avoid the need for future shoreline stabilization to the extent feasible. New development on steep slopes or bluffs shall be set back sufficiently to ensure that shoreline stabilization is unlikely to be necessary during the life of the structure. New development that would require shoreline stabilization which causes significant impacts to adjacent or down-current properties and shoreline areas should not be allowed.”¹⁶

Citing existing law and rule, Ecology’s Handbook Appendix A, “Addressing Sea Level Rise in Shoreline Master Programs,” states that local governments may respond to new sea level rise projections or local data by updating shoreline jurisdiction maps. In some cases, this may call

¹⁵ [RCW 90.58.630](https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.630); <https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.630>

¹⁶ [WAC 173-26-231\(2\)\(iii\)\(A\)](https://app.leg.wa.gov/WAC/default.aspx?cite=173-26-231); <https://app.leg.wa.gov/WAC/default.aspx?cite=173-26-231>

for adjustments to environment designations, policies, or regulations. Some local governments have already incorporated sea level rise considerations into their SMPs.

Proposed

The proposed amendments, predominantly contained within proposed new section WAC 173-26-246, include the explicit inclusion of sea level rise regulations intended to meet the recent legislative directive. To meet minimum requirements of the proposed chapter, Ecology, under WAC 173-26-246(6), will provide spatially explicit information about four hazards, to the extent that information is reasonably available:

1. tidal inundation,
2. coastal storm flooding,
3. groundwater and saltwater intrusion,
4. coastal erosion.

Under three sea level rise scenarios:

1. Current conditions without projected sea level rise,
2. The intermediate amount of relative sea level rise approximately 30 years in the future,
3. The intermediate amount of relative sea level rise approximately 70 years or more in the future.

Ecology will also provide an inventory of available information describing shoreline features and assets exposed to hazard scenarios, including but not limited to land uses and zoning, critical areas, habitat, facilities related to water quality and treatment, public access, water-dependent uses, transportation infrastructure, and cultural sites.

The local government is required to produce conclusions from these data about where new development and redevelopment should be located and regulated to avoid losses to ecological function and meet other goals of the Act (WAC 173-26-246(7)). The rule proposes minimum master program requirements for this purpose under WAC 173-26-246(9)(c). Here, focusing on key restrictions or new requirements, the master program will:

- Prohibit new primary structures in areas projected to transition to aquatic environment conditions under the long-term sea level rise scenario (except for water-dependent, recreation, or public access use),¹⁷
- Prohibit redevelopment, replacement, or expansion of existing primary structures in areas projected to transition to aquatic environment conditions under the long-term sea level rise scenario, scenario (except for water-dependent, recreation, or public access use),

¹⁷ For the purpose of this section, areas subject to “aquatic environment conditions” refers to those areas waterward of the ordinary high water mark.

- Exclude developable area from plats and subdivisions that overlap areas exposed to sea level rise hazards and ensure services and access can be provided for the life of the development that would occur when subdivision is proposed,
- Prohibit most new development and redevelopment that would require new or expanded onsite sewage systems in areas projected to be exposed to sea level rise hazards (except for water-dependent or public access use),
- Prohibit new development for storage, processing, and handling of materials that could adversely affect soil or water quality in areas projected to be exposed to sea level rise hazards, or require containment and protection to prevent releases.
- Specify additional submittal requirements for projects proposed in areas exposed to sea level rise hazards.

Expected Impact

Sixty-five local government jurisdictions would be subject to the SLR requirements.¹⁸ As discussed in section 2.2.4, the legislature intends to cover the costs to local governments associated with developing and amending shoreline master programs under the baseline (RCW 90.58.250; RCW 90.58.080). Because of this assumption, we do not consider in this analysis increased costs to local governments for SMP updates to address sea level rise that result from this rulemaking.

Because some jurisdictions have already adopted sea level rise regulations and planning into their SMPs based on existing rules and guidance, our expectation is that some adaptation to sea level rise would continue in the absence of the rule, albeit selective and piecemeal. This would not assure the goals and objectives of the statute. In this way, a core impact, and benefit of these amendments, is to ensure the SMA is upheld, including the avoidance of piecemeal development of the shoreline.

Predicting the full extent of impacts (cost and benefits) of the proposed rule is not possible because of data limitations and local discretion when implementing the rule. As of this writing, Ecology's technical assistance and geospatial data infrastructure is still in development to estimate areas projected to transition to aquatic environment or subject to sea level rise hazards. It is also not possible to know for certain the locations and rates of future development that would occur with and without the proposed rule.

What follows is a qualitative discussion of potential incremental impacts of the rule based on general economic theory and literature. In Section 3 and 4 of the regulatory analysis we apply historical permitting data, secondary data from Climate Central and Zillow on risk and infrastructure, and various willingness to pay studies on shoreline functioning to estimate possible ranges of values.

Discussion of costs

¹⁸ Listed in proposed WAC 173-26-246(2).

Because the minimum requirements of the rule apply specifically to future development, it does not generate any direct costs to existing property, infrastructure, transportation, utilities etc. Any sea level rise adaptation actions undertaken for existing property, structures, or infrastructure would be at the discretion of property owners and would be subject to updated SMP requirements.¹⁹ In other words, the new rule does not apply retroactively to existing development and does not require adaptation actions to be undertaken unless additional development is proposed.

When development is proposed under updated SMPs adopted pursuant to the new rules there will be several requirements and restrictions that could reasonably translate to a private cost to individuals and firms.^{20,21}

At the project level, these may include:

- **Alternative project siting and/or land acquisition costs.** When all or part of a parcel or subdivision is projected to transition to an aquatic environment, the allowed locations for development or redevelopment would shift landward, or to an alternative parcel. Alternative locations could be more costly to prepare for development relative to a site under baseline, as would any new property acquisition.
- **Design and construction cost,** In developable but newly designated as SLR exposed areas, new cost to future development might include higher foundations and first floors, the use of flood-resistant materials, and utility relocation. There may also be new costs from on-site sewage system (septic) location and design studies, alternative systems, off-site and higher-elevation siting, or new land acquisition when siting is not feasible.
- **New permit costs** related to hazard exposure documentation, adaptive design details, and other professional service costs associated with compliance demonstrations in an SLR exposed area.

Because the rule applies only to future development and redevelopment, there would be no immediate or direct costs to existing uses. That is, existing development would not be required to move or augment structures, construct flood hazard reduction or stabilization, or resubmit permit applications or fees for their continued use. However, indirectly, market values for existing property and supporting structures in the shoreline jurisdiction may be impacted. Shifts in value related to shoreline risk and land use regulation would likely occur heterogeneously over space, and in potentially opposing directions; the net effect of which is unknown in the context of the proposed rule amendment.²²

¹⁹ We assume that for any current development taking on adaptation measures voluntarily because of information provided by the proposed rule, is because the private benefit of doing so outweighs their private costs. In this way net benefits to existing development would remain strictly positive.

²⁰ And toward a benefit to the same individual or firm avoiding the total or partial loss of the development as discussed in this section and Chapter 4.

²¹ We note that there are several exceptions for water-dependent, recreation, or public access use.

²² See [Beltran et al., 2018](#)

For example, values may decrease in areas exposed to sea level rise hazards to reflect new limits on development and the present values of future costs of redevelopment. Others may be unaffected if risk was locally known and already incorporated into siting and design elements.²³

Reducing uncertainty around risk could increase value for some. Department data, and local government analysis required by the rule would provide new information about existing development and developable land that is projected to be unimpacted by sea level rise hazards during its lifetime. Simultaneously, restricting the supply of developable waterfront could also lead to existing and allowed new development to become more valuable. Finally, there is evidence that cohesive shoreline policies can increase the value for both directly impacted waterfront properties, and properties in nearby neighborhoods or “behind” affected shoreline property by providing assurance that alterations in the face of sea level rise will be appropriate and uniform.²⁴

Discussion of benefits

Because the proposed rule requirements apply strictly to future development and redevelopment, direct benefits to existing property, infrastructure, transportation, utilities etc. are limited for the purposes of this analysis. That is, any adaptation or risk reduction measures taken on by existing property, structures, or infrastructure, would be at the discretion of individuals or local government master programs.²⁵ However, any future shifts in siting, construction, and mitigation taken on because of the proposed rule to avoid risk would likely generate incremental private and public benefits.

Private benefits in this context are the avoided damages to individuals and businesses from taking on mitigative actions because of the proposed rule. This may be on account of updated information on sea level rise risks,²⁶ or minimum regulation that translate risk into appropriate avoidance and adaptation behavior.²⁷ At the property level, avoided damages could range from partial and intermittent up to the avoidance of a total loss within the lifetime of the development (including septic repairs and damages). Determining this range depends on the siting, risk level, and design under the proposed rule compared to baseline.

Over time, the rule would help prevent liability being originated and transferred from property developers to owners, and from owner to owner who may face different incentives and risk tolerances. Taking the longest view, the rule would also work to reduce some transfer of liability from the private sector to local and state governments. Evidence suggest that major public programs and infrastructure alternatives that would be necessary to protect, remediate, or compensate for unabated baseline patterns of risky development in the future would come

²³ See [Bernstein et al., 2019](#) on housing pricing and SLR exposure.

²⁴ See [Severen and Plantinga, 2018](#)

²⁵ We assume that for any current development taking on adaptation measures voluntarily because of information provided by the proposed rule, is because the private benefit of doing to outweigh their private costs. In this way net benefits to existing development would remain strictly positive.

²⁶ See [Fairweather et al., 2024](#)

²⁷ Research suggest that hazard information alone may not be sufficient to price and appropriately disincentivize development in hazardous places (see [Hino and Burke, 2021](#); [Bin and Landry, 2013](#)).

at an extremely high cost to society; as playing out in other parts of the US (see section 4.2.1 for a discussion).

Public benefits in this context originate from changes to individual behavior because of the proposed rule, but that extend or “spill over” to the others nearby or to all Washingtonians. There are several categories of public benefits associated with the proposed rule requirements, one or all of which could be generated from an impacted project. These include, but are not limited to, protecting ecological function, water quality, and the natural characteristics of the shore.

For example, the prospect of future flooding, erosion, and storm damage may lead to new seawalls, dikes, and tidal barriers in the absence of the rule. It may also lead to inundation of structures. Under the rule, controlling the construction, placement, and replacement of these structures in some areas would avoid new impacts to the natural shoreline environment, including the species they support, such as forage fish, shorebirds, and salmon.²⁸ Outside of values derived from their direct enjoyment by the public and Tribes, these aspect of the physical and natural world hold existence and cultural values.

Restrictions on new or expanded septic systems and requirements to adapt outfalls, pipes, drains, and treatment assets to rising water levels lowers the probability of sewage releases and contamination into soils and waters. In addition to ecological protection, we would expect public benefits from ensuring aquifers and freshwater sources remain safe to drink, and all waters safe for recreation.

Costs and benefits would accumulate incrementally over time as new development was proposed, but at different rates. Costs from the proposed amendments would be additive. In other words, the cost from mitigating one project because of proposed amendments would double with an identical second project, all else equal, and so on.²⁹ Benefits would grow cumulatively each year over time. An illustration would be that the benefits of a mature tree continue each year of its life (shade, lower heating and air conditioning costs, aesthetics), whereas the planting cost occurs only once.³⁰

2.3.2 Require that Critical Area protections within shorelines of the state be developed under Shoreline Management Act rules. Incorporating protections from other planning documents by reference would no longer be permitted.

Baseline

²⁸ [Glick et al., 2007](#); Ecology SMP Handbook - Addressing Sea Level Rise in Shoreline Master Programs.

²⁹ For illustration. This assumes identical sites and conditions, but independence of the project proponents. There are likely cost savings from economies of scale for all components of developments, including regulatory costs.

³⁰ Benefits are also likely non-linear. Extending the scenario; for the second, third, or 100th tree protected, a network of ecological connections provide greater public benefits than the sum of their individual parts. We do not attempt to model those nonlinearities directly.

Critical areas (by statute) “... include the following areas and ecosystems: (a) wetlands; (b) areas with a critical recharging effect on aquifers used for potable water; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas.”³¹

Regarding shoreline critical areas, current statute specifies the primacy of the SMA over other comprehensive planning statutes like the Growth Management Act. Added in 2010, RCW 90.58.610, referencing the Growth Management Act, reads in its entirety:

“RCW 36.70A.480 governs the relationship between shoreline master programs and development regulations to protect critical areas that are adopted under chapter 36.70A RCW.”³²

In turn, RCW 36.70A.480 says: “...The shoreline master program shall be adopted pursuant to the procedures of chapter 90.58 RCW rather than the goals, policies, and procedures set forth in this [general growth management] chapter for the adoption of a comprehensive plan or development regulations.”³³

Chapter 36.70A is entitled: “Growth Management—Planning by Selected Counties and Cities.”

Current WAC 173-26-191, “Master Program Contents,” reads in part: “For the purposes of completeness and consistency, local governments may include other locally adopted policies and regulations within their master programs... Shoreline master programs may include other policies and regulations by referencing a specific, dated edition.”³⁴

Proposed

The proposed amendments would ensure the statute referenced above is followed by not allowing critical areas protections from other land-use management plans to be adopted into SMPs by reference. As noted above, current WAC 173-26-191(2)(b) explicitly allows other policies and regulations to be adopted by reference, including those pertaining to critical areas.

Additionally, frequently flooded area regulations aimed at adhering to National Flood Insurance Program standards could no longer be adopted by reference.

The proposed amendments would also incorporate and expound upon statutory language regarding critical areas, revising standards to better address both hazard reduction and ecological protection. Subsections describing critical area types that were missing from rule would be added, specifically: frequently flooded areas, fish and wildlife habitat conservation areas, and critical aquifer recharge areas. Also, language updating the wetland and geologically hazardous areas sections would be added. Also proposed is a subsection describing establishment of optional compound critical area designations for channel migration zones and sea level rise zones, where several hazards and ecological considerations are present.

Expected Impact

³¹ [RCW 36.70a.030](https://app.leg.wa.gov/rcw/default.aspx?cite=36.70a.030); <https://app.leg.wa.gov/rcw/default.aspx?cite=36.70a.030>

³² [RCW 90.58.610](https://app.leg.wa.gov/rcw/default.aspx?cite=90.58.610); <https://app.leg.wa.gov/rcw/default.aspx?cite=90.58.610>

³³ [RCW 36.70A.480](https://app.leg.wa.gov/RCW/default.aspx?cite=36.70A.480); <https://app.leg.wa.gov/RCW/default.aspx?cite=36.70A.480>

³⁴ [WAC 173-26-191](https://app.leg.wa.gov/WAC/default.aspx?cite=173-26-191); <https://app.leg.wa.gov/WAC/default.aspx?cite=173-26-191>

The statute passed in 2010 stresses that critical areas protection in shorelands be governed by provisions of the SMA. “The shoreline master program shall be adopted pursuant to the procedures of chapter 90.58 RCW rather than the goals, policies, and procedures set forth in this chapter [“Growth Management—Planning by Selected Counties and Cities.”] for the adoption of a comprehensive plan or development regulations.”³⁵ The alignment of the proposed amendments with legislative directive is not part of Ecology’s discretion.

The proposed additional language describing critical area types and elaboration on requirements within statute would provide greater regulatory clarity and bring the WAC into better alignment with existing statute.

This proposal will entail more work on the part of local jurisdictions when conducting periodic reviews of their SMPs. As noted in Section 2.2.4, state grants will be provided to facilitate that process. For this reason, we estimate neither costs nor benefits to the regulated community from this change due to this proposed change.

2.3.3 Differentiate between shoreline modifications to address erosion versus flooding and establish new requirements for stabilization, emphasizing nature-based solutions.

Baseline

WAC 173-26-231(3)(a)(ii) details that shoreline hardening leads to adverse impacts to shoreline ecological functions, and distinguishes “hard” structural stabilization as those with solid, hard surfaces, such as concrete bulkheads. The existing rule describes “soft” stabilization as measures that rely on less-rigid materials, such as biotechnical vegetation measures or beach enhancement. Hard to soft stabilization options are presented as a range under the current rule, with soft being required when possible.

Generally, under WAC 173-26-231(4)(c)(iv)(D), hard armoring solutions should not be authorized except when a geotechnical report confirms that there is a significant possibility a primary structure will be damaged within three years as a result of shoreline erosion. Where the need is not as immediate, the report may still be used to justify soft measures. Shoreline modifications should not result in a net loss of ecological functions (WAC 173-26-231(2)).

Flood hazard reduction projects are authorized if it is determined (through a geotechnical analysis) that no other alternative to reduce flood hazard to existing development is feasible. New structural flood hazard reduction measures shall be placed landward of the associated wetlands (173-26-221(3)(c)(iii)).

Proposed

The proposed amendments to WAC 173-26-231 effectively remove the use of “soft” when referring to stabilization options and instead emphasizes “nature-based” solutions. While many soft stabilization options listed in the baseline rule could qualify as a nature-based solution, that

³⁵ [RCW 36.70A.480](https://app.leg.wa.gov/RCW/default.aspx?cite=36.70A.480); <https://app.leg.wa.gov/RCW/default.aspx?cite=36.70A.480>

determination in the proposed rule would be location- and context-specific. This is because nature-based solutions, defined in WAC 173-26-231(4)(a)(iii), are intended to function dynamically with natural shoreline processes to reduce erosion, accommodate sediment transport, and allow controlled shoreline movement, rather than fixing the shoreline in a static position. In this way, and as opposed to a range from soft to hard in the baseline rule, static elements, like riprap rock, concrete, steel, or other hard stabilization, shall not be considered nature-based stabilization, even if vegetation or other natural elements are incorporated as secondary features.

As with soft stabilization in the baseline rule, nature-based solutions should be prioritized over other types of interventions. However, where nature-based solutions are an option, projects must demonstrate how they are aligned with local shoreline processes in their geotechnical reports along with other demonstrations that any new, expanded, or replacement stabilization will not result in net loss of shoreline ecological functioning (WAC 173-26-231(2)(g); WAC 173-26-231(2)(d)).

The proposed rule amendments make explicit that stabilization is not an appropriate solution to mitigate the impacts of flooding (WAC 173-26-231(4)(b)(ix)), and adds that in coastal areas, flood hazard reduction measures should be placed *as far landward from the shoreline as feasible* to avoid interference with shoreline ecological functions and processes (WAC 173-26-231(5)(ii)(v)).

Expected Impact

Science and understanding of shoreline dynamics, stabilization, and flood control measures has evolved in ways that require new definitions, like nature-based stabilization, and clarity on how to effectively apply them. While a geotechnical report is required under the baseline for both shoreline stabilization and new structural flood hazard reduction measures, properly evaluating whether and which nature-based solutions will address erosion or flooding is expected to require a more detailed analysis. This would likely increase the average unit cost of the analysis and would apply to all applicants ranging from private landowners to local governments and utilities.

The proposed requirements may also result in a different method of stabilization or flood control than would have been implemented under the current rule. It remains unclear, however, whether alternatives under the rule, if different from baseline equivalents, would come at a consistently higher or lower cost. Note, however, that any nature-based stabilization, selected and constructed in lieu of hard alternatives because of the rule, could help avoid mitigation costs required to achieve no net loss.

We would not expect that placing flood reduction measures “as far landward as practical” to consistently impose new costs on individuals or hamper risk reduction. The amendment could impact the perceived esthetic qualities of some properties compared to baseline or limit some personal access to the shoreline.

The proposed rule would ensure that stabilization and flood controls are appropriately selected, sized, and applied to shorelines. In this way, we expect public benefits from the

proposed amendment to cumulate from ensuring ecological functioning of the shoreline, the natural character of the shoreline, and avoiding piecemeal development, among other goals of the SMA.

The lack of specificity in the current rule has led to various geotechnical reporting requirements across individual master programs. This can lead to permitting delays as additional information is often requested of applicants in order to review the projects against existing requirements. The proposed amendments are expected to streamline permitting and reduce some costs during permit review.

2.3.4 Make revisions adding and clarifying requirements for better overall compliance with the Shoreline Management Act and local Shoreline Master Programs.

Baseline

Chapter 173-27 WAC contains the specific procedural requirements for complying with the SMA. It is entitled: “Shoreline Management Permit and Enforcement Procedures.” It contains two parts, the first pertaining to permits and the second to enforcement.

The permit matters addressed include substantial development permits, conditional use permits, variance permits, and exemptions. Presently, when considering conditional use or variance permits, local jurisdictions must demonstrate, and Ecology verify, that no significant adverse effects to the shoreline occur and that the public interest does not suffer.³⁶

Substantial development is defined as any development whose value is in excess \$8,504 as of July 1, 2022.³⁷ This dollar amount is next scheduled to be adjusted for inflation on July 1, 2027.³⁸ Conditional use permits allow local jurisdictions some flexibility in permitting activities depending on special circumstances. Variances provide some regulatory relief from bulk and dimensional requirements where not meeting those would not compromise the goals and intent of the SMA. Some projects may need all three types of permits.

Currently, local governments may grant exemptions from the substantial development permit process if a project type qualifies. 17 exemption types are listed in the current WAC, including the project being of lower value than the limit mentioned above. They also include single family residences, normal maintenance or repair, construction in support of farming, etc.³⁹ Local jurisdictions may add conditions prior to approving the exemption to ensure consistency with their SMP. However, “letters of exemption” are required only for projects that also need federal permits.

³⁶ [WAC 173-27-160](https://app.leg.wa.gov/wac/default.aspx?cite=173-27-160); <https://app.leg.wa.gov/wac/default.aspx?cite=173-27-160>

³⁷ See [RCW 90.58.030](https://leg.wa.gov/RCW/default.aspx?cite=90.58.030) and current WAC [173-27-030](https://app.leg.wa.gov/wac/default.aspx?cite=173-27-030)(6) for full definitions.

³⁸ [Ecology substantial dev. value](https://ecology.wa.gov/regulations-permits/permits-certifications/shoreline-permits-enforcement), <https://ecology.wa.gov/regulations-permits/permits-certifications/shoreline-permits-enforcement>

³⁹ [WAC 173-27-040](https://app.leg.wa.gov/WAC/default.aspx?cite=173-27&full=true#173-27-040), <https://app.leg.wa.gov/WAC/default.aspx?cite=173-27&full=true#173-27-040>

Generally, projects needing federal permits would be those on or over navigable waters or projects involving discharge of dredge or fill material in any water or wetland area.⁴⁰

Currently, local jurisdictions submit the final permit documents to Ecology via return receipt mail.

Presently, applications for substantial development, conditional use and variance permits must indicate the vegetation type(s) present in their site plan of the proposed development.

Proposed

The proposed rule would require letters of exemption to be written for all projects granted exemptions. It would also require that the application and letter of exemption be sent to Ecology. Additionally, minimum information requirements would be stipulated for exemption applications along with the content requirements of the letter of exemption.

When considering conditional use and variance permit applications, local jurisdictions would be required to use available measures to ensure projects minimize their exposure to hazards including sea level rise, erosion, and flooding in their evaluation.

Additionally, electronic submission of permits would now be allowed via Ecology's Shoreline Permits Tracking System.

Under the proposed rule, applications for substantial development, conditional use, or variance permits would have to indicate impacts to vegetation on the site-plan portion of the document. This would include impacts to vegetation during all phases of the project, along with descriptions of mitigation efforts.

Expected Impact

Currently, along with submission of data regarding permit issuances, some data regarding exemptions is submitted to Ecology. That data does not always indicate the reason for the exemption and, depending on the local jurisdiction, may include exemption letters not required due to a federal permit being needed.

The proposed rule will require local jurisdictions to transmit exemption letters to Ecology for all exemptions. This will constitute an ongoing cost increase for local jurisdictions. We expect the benefit of improved knowledge on ongoing shoreline development, allowing better adherence to the broad and diverse goals of the SMA.

The cost of more detailed vegetation information on site plans along with descriptions of planned mitigation efforts will likewise add some cost for applicants and reviewers. The new information requested in the plans would better facilitate vegetation conservation, which we expect to aid in preserving and/or improving riparian habitat.

The more general requirements of the proposed rule regarding sea level rise is considered in Sections 2.3.1, 3.2.1 and 4.2.1 in this document.

⁴⁰ [WAC 173-27-050](https://app.leg.wa.gov/WAC/default.aspx?cite=173-27-050); <https://app.leg.wa.gov/WAC/default.aspx?cite=173-27-050>

2.3.5 Consolidate, clarify, and amend principles and standards that were previously found throughout the WAC to meet objectives of the SMA, including no net loss of shoreline function and public access.

Baseline

As detailed in Section 2.2.1, the overarching goals of the SMA under RCW 90.58.020 are to ensure that shoreline development decisions work toward avoiding fragmented, piecemeal development that could threaten long-term ecological protection.

Under current rule, local master programs shall include policies and regulations designed to achieve no net loss of ecological functions. The principles, concepts, and requirements for no net loss of shoreline ecological function and mitigation sequencing are governing principles of the guidelines, which include compensatory measures and environmental design (WAC 173-26-186; WAC 173-26-201(2)(e); 173-26-211). Achieving no net loss is referenced extensively throughout the chapter with respect to new development in critical areas like wetlands (WAC 173-26-221(2)(i)), structural flood hazard reductions (WAC 173-26-221(3)), shoreline vegetation conservation (WAC 173-26-221(5)), and shoreline modifications (173-26-231). The current rule stipulates that use regulations, to the extent they occur within shoreline jurisdiction, must be designed to assure no net loss of ecological functions associated with the shoreline (173-26-241). Relevant to the proposed rule, this includes but is not limited to residential development uses (WAC 173-26-241(3)(j)).

In conjunction with other guiding principles of the SMA, such as public access, existing rules and laws determine specific master program provisions and requirements. We categorize these below by theme:

- **Water quality.** Under current rule WAC 173-26-221(6) master programs shall protect against adverse impacts to the public health, to the land and its vegetation and wildlife, aquatic life, ecological function, aesthetic qualities, or recreational opportunities. The rule calls for mutual consistency between shoreline management provisions and other regulations [standards] that address water quality and stormwater quantity.
- **Shoreline buffers.** The current rule does not contain a centralized discussion or requirement for shoreline buffers but describes buffers as a management policy for shoreline environment designations and includes them as an option for vegetation conservation,. The exceptions are wetland regulations, which do require a wetland buffer zone that ensures long-term protection under WAC 173-26-221(2)(c)(i)(D). Even though the shoreline buffer requirement is not explicit in the current rule, all master programs currently rely on buffers or setbacks from the shoreline waterbody as a protection or management method, either as applied by shoreline environment designation or as a waterbody specific standard for streams, lakes, or marine waters.
- **Critical areas.** The current rule establishes that SMPs must provide for the management of critical area with specific critical area and flood hazard reduction provisions that

provide a level of protection to critical areas within shorelines of the state that assures no net loss of shoreline ecological function. "critical areas" include: (a) wetlands; (b) areas with a critical recharging effect on aquifers used for potable waters; (c) fish and wildlife habitat conservation areas; (d) frequently flooded areas; and (e) geologically hazardous areas. In addition, the current rule includes specific critical area subsections for critical saltwater habitats and critical freshwater habitats. Local governments may include within the SMP "land necessary to for buffers for critical areas." If the local government does not extend shoreline jurisdiction as described above, those buffer areas will continue to be regulated by the critical areas ordinance adopted pursuant to the GMA. Planning objectives for critical areas include both protection of existing ecological functions and ecosystem-wide processes; and the restoration of degraded ecological functions and ecosystem-wide processes. The current rule includes a list of critical area policies and standards for wetlands, geologically hazardous areas, and flood hazard reduction which should be implemented by the SMP regulations. Relevant for comparison to rule amendments:

- **Floodplains.** "Floodplain" is synonymous with one hundred-year floodplain and means that land area susceptible to inundation with a one percent chance of being equaled or exceeded in any given year (WAC 173-26-020(19)). Under WAC 173-26-221(3)(b) master programs shall consider integrating master program flood hazard reduction provisions with other [floodplain] regulations and programs.
- **Wetlands.** Under the current rule WAC 173-26-221(2)(b)(i)(A) regulations shall address the removal of soil and organic material, fill, draining, and construction of any structure on a wetland. Regulations shall address significant vegetation removal, provided that these activities are not part of a forest practice governed under chapter 76.09 RCW.
- **Vegetation conservation.** Under the current rule WAC 173-26-221(5), master programs shall include "planning provisions that address vegetation conservation and restoration, and regulatory provisions that address conservation of vegetation; as necessary to assure no net loss of shoreline ecological functions...."⁴¹ The current rule allows local jurisdictions to implement this objective through their SMPs using a variety of measures including clearing and grading regulations, setback and buffer standards, critical area regulations, conditional use requirements for specific uses or areas, mitigation requirements, incentives, and nonregulatory programs.
- **Public access.** Current rule WAC 173-26-221(4) contains provisions stating that local governments should plan for an integrated shoreline area public access system that identifies specific public needs and opportunities to provide public access. Where new piers or docks are allowed, master programs should contain provisions to require new residential development of two or more dwellings to provide joint use or community

⁴¹ [WAC 173-26-221\(5\)\(b\)](https://app.leg.wa.gov/WAC/default.aspx?cite=173-26-221), <https://app.leg.wa.gov/WAC/default.aspx?cite=173-26-221>

dock facilities, when feasible, rather than allow individual docks for each residence (WAC 173-26-231(3)(a)(iii)(b)(F)).

Proposed

The following outlines amendments to the baseline rule by theme and as planning or regulatory requirements:

- **Water quality.** Proposed amendments in WAC 173-26-221(7) add explicit details about water quality information and data that local governments should be considering in shoreline planning including data related to surface water quality standards (Chapter 173-201A WAC), and the state's 303(d) list. Proposed amendments in WAC 173-26-241(3)(j)(v - vi) restrict the ability of subdivisions to install new stormwater outfalls discharging to shoreline waterbodies.
- **Shoreline buffers.** A proposed new section WAC 173-26-221(5) defines and requires shoreline buffers to protect shoreline ecological functions while still fostering appropriate shoreline uses. The proposed amendment adds that local governments shall establish buffer widths that consider existing development, shoreline conditions, and the science around shoreline ecological functions to protect existing functions. When impacts to shoreline buffers are allowed, or when the existing buffer is too degraded to minimize the impacts of any new proposed development or use, the SMP shall require that the buffer be restored or expanded as needed to minimize the impacts of the proposed development.
- **Critical areas.** The proposed rule establishes that SMPs must provide for the protection of critical area located within shorelines of the state through the implementation of general critical area principles and specific regulatory requirement that provide a level of protection to critical areas that ensures no net loss of shoreline ecological function. WAC 173-26-221 is re-organized and expanded to include subsections on definitions, functions, protection policies, identification and mapping, standards and regulations sections for each of the following critical areas in shoreline jurisdiction: wetlands; geologically hazardous areas; fish and wildlife habitat conservation areas (non-shoreline waterbodies, critical saltwater and critical freshwater habitats, other priority habitat and species); frequently flooded areas; critical aquifer recharge areas; and an optional additional designation for compound critical areas such as channel migration zones, and sea level rise zones.⁴² Of note:
 - **Floodplains.** Proposed amendments in WAC 173-26-191(2)(b)(iv) state that floodplains for the purpose of inclusion in the master program is the 100-year flood plain, but now emphasizes that SMP regulatory requirements are different from those necessary under the National Flood Insurance Program or chapter 86.16 RCW. Proposed amendments clarify that frequently flooded areas include floodways as

⁴² Ecology intends to provide model language and other guidance to assist local governments.

defined in RCW 90.58.030(iv)(E)(II). Amendments to WAC 173-26-221 include flood hazard reduction measures in a new frequently flood areas section.

- **Wetlands.** *Amendments to WAC 173-26-221* The proposed amendment to WAC 173-26-221(2)(e)(i)(F) does not allow the removal of soil and organic material, fill, draining, and construction of any structure on a wetland, unless part of a forest practice governed under chapter 76.09 RCW.
- **Vegetation conservation.** Proposed amendments to WAC 173-26-221(6)(a)(i) state that vegetation conservation policies and regulations shall be applied throughout shoreline jurisdiction, within shoreline water bodies and shorelands. The proposed rule draws from the science in the Department of Fish and Wildlife's *Riparian Ecosystem, Volumes 1 and 2* publications to emphasize that the applicable area of rule is equivalent to the publications' Riparian Management Zone.⁴³ The proposed rule would explicitly add tree retention to the existing list of mitigation options, and require compensation for unavoidable impacts associated with vegetation removal and increased impervious surface.
- **Public access.** The proposed amendments to WAC 173-26-221(4)(d)(iv) require that public access, when required by rule, remain open for the life of the development. Proposed amendments require the installation and maintenance of public access signage and adequate parking to ensure that public access is clearly available and accessible. Private recreational or residential piers and docks serving individual parcels, lots, units, or developable tracts within multiunit residential development shall be prohibited (WAC 173-26-241(3)(j)(v)(C)).

Expected Impact

We first note that there is no direct impact from the proposed WAC 173-26-206, as its contents are taken from existing language in various other sections of the existing rule without material change. There would, however, be a general benefit to local governments and the public from centralizing concepts used and referenced by several amendments discussed below made to ensure no net loss of shoreline ecological function.

Several amendments determined to impose new planning requirements are expected to generate minimal to no costs for the purposes of this analysis and in some cases incremental benefits. Other proposed amendments, determined to represent new regulatory requirements, will likely generate a higher rate of both cost and benefits.

- **Water quality.** Baseline and proposed rules both must implement state standards and guidance and are protective of water quality. Specifying the information and data that should be applied when updating or implementing a master program is a benefit to local

⁴³ [Riparian Ecosystems Volume 1](https://wdfw.wa.gov/publications/01987) can be found at: <https://wdfw.wa.gov/publications/01987> and [Riparian Ecosystems Volume 2](https://wdfw.wa.gov/publications/01988) at: <https://wdfw.wa.gov/publications/01988>

governments and would provide additional transparency to the public and regulated community.

Restricting stormwater outfalls could generate costs for future subdivision by requiring on-site treatment or tie-in alternatives. However, these would only apply to a narrow set of subdivisions otherwise requiring outfalls, in locations where the community does not have a stormwater manual in place, or where under a manual, outfalls are the only feasible option. For any future project otherwise considering outfalls, but restricted because of the amendment, we expect public benefits to cumulate from avoiding the incremental loss of shoreline ecological function and upholding other goals of the SMA.

- **Shoreline buffers.** The vast majority of comprehensively updated SMPs already employ shoreline buffers as a central regulatory component of achieving no net loss and to meet requirements for vegetation conservation, under existing rules. The new requirement provided in the rule will ensure consistent application of shoreline buffers across SMPs and is necessary for effective implementation of the updated vegetation conservation area provisions described below. Consideration of functions provided by the buffer (intact or degraded) in relation to the uses and developments allowed by the SMP will allow for better planning level decision about both allowed uses and buffer widths. However, restoration or expanding of degraded buffers is currently only considered as part of buffer averaging or shoreline variance proposals where the buffer is being impacted.

Under the proposed rule, requirements to restore or expand degraded buffers that would otherwise not have been considered in the baseline, may impose new costs on some future development. Cost impacts are not limited to any use category and data describing buffer degradation and the location of future development is limited. For any buffer restored or expanded under the amendment that would not have been otherwise, we expect public benefits to cumulate from avoiding the incremental loss of shoreline ecological function and upholding other goals of the SMA.

- **Critical areas.** Critical areas provisions incorporated by reference into SMPs may have included allowances for vegetation removal or developments within critical areas and buffers that are not consistent with the no net loss of shoreline ecological function principle. Under the proposed rule all critical area provisions will need to follow the procedures and standards of the SMA as required by RCW 36.70A.480 and RCW 90.58.610. The explicit list of critical areas that occur within shorelines of the state provides clarity for local governments and the regulated community and will increase consistency across master programs. Providing additional detail in the rule regarding critical area definitions, protection policies, identification and mapping, standards and regulations, should provide more consistency across individual SMPs and create a more predictable pathway for applicants. Of note:
 - **Floodplains.** Floodplain ecological protection and flood hazard reduction provisions are now consolidated under frequently flooded area section in WAC

173-26-221. Flood hazard reduction modification provisions were relocated to WAC 173-26-231.

The definition of the 100-year flood plain is already in WAC 173-26-020 and RCW 90.58.030; however, the rule explicitly decouples flood hazard reduction provisions from links to other state and federal regulation. The proposed amendment does not in and of itself generate impacts beyond ensuring that flood regulations elsewhere in the rule are contained in the WAC and applied consistently across the shoreline jurisdiction.

Wetlands. The proposed amendment is providing clarity to ensure the wetland regulations are implemented with a stricter line, without changing authority. In this way, the amendment would likely reduce variability in the issuance of variances at minimal cost beyond the intended interpretation of the baseline.

- **Vegetation conservation.** Future shoreland development proposed beyond existing buffers, but inside the shoreline jurisdiction, might face new costs compared to the existing rule in the form of tree retention, replacement, or compensation, among other potential actions. The extent of impact on a project would depend on the chosen landscape and the interaction between its vegetation and the riparian ecosystem. Some future projects may choose to sort into less sensitive ecosystems, or outside of shoreline jurisdiction altogether to avoid mitigation and compensation costs; but trade off some amenity value from proximity to the shoreline. For each project taking on new mitigation, or avoidance of vegetation removal in the shoreline jurisdiction because of the amendment, we expect public benefits to cumulate from avoiding the incremental loss of shoreline ecological function and upholding other goals of the SMA.
- **Public access.** Maintaining public access for the life of a project, when access is required by law, is practically implied under the baseline and has limited impact for the purposes of this analysis beyond the benefit of added enforceability.

In limited situations public parking requirements in the proposed rule may lead to new opportunities for public access, largely from ensuring and enforcing existing access requirements in the baseline through clear, more concise, language. In this way, the amendment would likely reduce variability in public parking access at minimal cost to project proponents.

The proposed rule requiring signage about public access, not otherwise strictly in rule, could impose new costs to future non-water oriented commercial or industrial projects, and multiunit developments through the purchase and installation of signage. Benefits would also cumulate as awareness of public access and availability is expanded.

Several of the proposed amendments above would likely require additional effort by local governments to amend their SMPs during the periodic review. As discussed in section 2.2.4, the intent of the legislature is to provide state grants to cover local government costs associated

with master program periodic reviews under the baseline (RCW 90.58.250; RCW 90.58.080). Because these grants are required by law, we do not consider increased costs to local governments for SMP periodic reviews that result from this rulemaking.

Costs and benefits would accumulate incrementally over time as new development was proposed, but at potentially different rates. Costs from the proposed amendments would typically be additive. In other words, the cost from mitigating one project because of proposed amendments would double with an identical second project, all else equal.⁴⁴ Some benefits for the same project(s), are likely multiplicative or non-linear. That is, avoiding the construction of a single bulkhead, or leaving additional vegetation around a new development provides some unit of benefit in the form of natural aesthetic or ecological function. After the second, third, or 100th instance of mitigation, however, public benefits may become greater than the sum of their individual parts by providing cohesive access, view-scape, or a network of ecological connections.

2.3.6 Establish a new requirement that local governments review and evaluate SMP implementation and document how the SMP continues to optimize the policies of the Shoreline Management Act for Shorelines of Statewide Significance, considering the state and public interest, at each periodic review.

Baseline

Current WAC 173-26-251 reads: “[T]he Shoreline Management Act calls for a higher level of effort in implementing its objectives on shorelines of statewide significance. RCW [90.58.090](#)(5) states:

"The department [of Ecology] shall approve those segments of the master program relating to shorelines of statewide significance only after determining the program provides the optimum implementation of the policy of this chapter to satisfy the statewide interest."

Additionally, consistency with other planning regulations is required:

SMPs must “... assure that other local comprehensive plan provisions are consistent with and support as a high priority the policies for shorelines of statewide significance. Specifically, shoreline master programs should include policies that incorporate the priorities and optimum implementation directives of chapter [90.58](#) RCW into comprehensive plan provisions and implementing development regulations.”⁴⁵

Current WAC 173-26-251 specifies the meaning of optimization: “Optimum implementation involves special emphasis on statewide objectives and consultation with state agencies. The state's interests may vary, depending upon the geographic region, type of shoreline, and local

⁴⁴ For illustration. This assumes identical sites and conditions, but independence of the project proponents. There are likely cost savings from economies of scale for all components of developments, including regulatory costs.

⁴⁵ [Chapter 173-26-251 WAC\(3\)\(e\)](#), [https://app.leg.wa.gov/WAC/default.aspx?cite=173-26&full=true#173-26-251\(3\)\(e\)](https://app.leg.wa.gov/WAC/default.aspx?cite=173-26&full=true#173-26-251(3)(e)).

conditions. Optimum implementation may involve ensuring that other comprehensive planning policies and regulations support Shoreline Management Act objectives.

Because shoreline ecological resources are linked to other environments, implementation of ecological objectives requires effective management of whole ecosystems. Optimum implementation places a greater imperative on identifying, understanding, and managing ecosystem-wide processes and ecological functions that sustain resources of statewide importance.”⁴⁶

Proposed

The proposed rule would require that local jurisdictions evaluate and document the effectiveness of SMPs by reviewing permitting and development outcomes during the decadal periodic reviews. Features of the review would include documented impacts on development, shoreline function, public access, procedural integrity, and the general priorities of the SMA. After conducting such an evaluation, jurisdictions must analyze and document whether revisions in their master programs might be warranted. (See Section 2.3.7.)

Regarding shorelines of statewide significance, proposed WAC 173-26-090(2)(b)(iii) (F) stipulates that local jurisdictions: “... document that the master program policies and regulations affecting those shorelines of statewide significance *continue to optimize* the policy and objectives of the act consistent with RCW 90.58.020 and WAC 173-26-251.”

When considering and planning for sea level rise, jurisdictions with shorelines of statewide significance must ensure that their policies and regulations increase the resilience of these shorelines. The planning process, described in detail in proposed WAC 173-26-246, must be “rigorous and thorough,” and the resulting regulations must meet the general requirements of the SMA.

Expected Impact

Establishing a system for effectiveness documentation and its subsequent evaluation happens during periodic reviews. These reviews are funded by state-issued grants.⁴⁷

For shorelines of statewide significance, documenting the optimization of the SMA would be an extension of the proposed documentation requirement. For this reason, we estimate no additional cost to local jurisdictions in implementing this requirement.

We expect the benefit of a documented, systematic evaluation as to whether SMPs are effectively meeting the goals and objectives of the SMA for shorelines of statewide significance. This would provide improved transparency and greater assurance that statutory requirements are being met for these shorelines.

The proposed amendments specifically addressing sea level rise planning are considered above in Section 2.3.1. Applying those requirements to shorelines of statewide significance entails

⁴⁶ [WAC 173-26-251](https://app.leg.wa.gov/wac/default.aspx?cite=173-26-251), <https://app.leg.wa.gov/wac/default.aspx?cite=173-26-251>

⁴⁷ [RCW 90.58.080\(6\)\(a\)](https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.080), <https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.080>

reiterating the general statutory requirements of elevating the state and public interest along with optimization.

In addressing the impacts of sea level rise to shorelines of statewide significance, the amendments proposed here emphasize the importance of managing shorelines of statewide significance for resilience to sea level rise.⁴⁸ We estimate neither costs nor benefits of these provisions in addition to or separately from the overall costs estimated for the sea level rise requirements described in 3.2.1.

2.3.7 Clarify the process, scope, and minimum requirements for Periodic Reviews and locally initiated amendments to Shoreline Master Programs.

Baseline

Local governments are required by statute to update their SMPs every 10 years.⁴⁹ By current rule, the purpose of the update is to:

“(A) To assure that the master program complies with applicable law and guidelines in effect at the time of the review; and

(B) To assure consistency of the master program with the local government's comprehensive plan and development regulations adopted under chapter [36.70A](#) RCW, if applicable, and other local requirements.”⁵⁰

Local jurisdictions are to consider changes in the SMA, Ecology guidance and their local circumstances and consider whether amendments are needed to their SMP during periodic reviews.

Presently, local jurisdictions have the option of using the standard language in WAC 173-27-080 regarding non-conforming developments, uses, and lots within their shorelands.

Proposed

The proposed rule would add a requirement for next periodic review cycle (2029-2032) that local jurisdictions establish and implement procedures for tracking all shoreline project authorizations. This data is to be used in subsequent reviews for evaluating the effectiveness of SMPs in complying with the SMA. Ecology is to assist with technical guidance for conducting this evaluation.

The proposed changes better distinguish between the requirements of the comprehensive update process and ongoing periodic reviews and locally initiated amendments. They would

⁴⁸ [RCW 90.58.630](#); <https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.630>

⁴⁹ [RCW 90.58.080\(4\)](#), <https://app.leg.wa.gov/WAC/default.aspx?cite=173-26-090>; <https://app.leg.wa.gov/rcw/default.aspx?cite=90.58.080>

⁵⁰ [WAC 173-26-090](#), <https://app.leg.wa.gov/WAC/default.aspx?cite=173-26-090>

also clarify the state review and approval process and the submittal requirements for master program amendments.

The proposed amendments would add a requirement that local governments submit geospatial data in addition to static maps in their SMP submittal.

The proposed amendments would add new requirements for the next round of periodic reviews to establish locally tailored nonconforming development, use and lot provisions. Jurisdictions would also establish a system for tracking and monitoring permit authorizations. During subsequent periodic review cycles, local governments would use this system to review and evaluate master program implementation.⁵¹

Expected Impact

We expect the proposed amendments to add some cost to the periodic review, which is when SMPs are statutorily required to be reviewed and, if necessary, updated. We expect the state grants mandated to cover the cost of the SMP updates will do so.⁵² For this reason we estimate no additional cost for local jurisdictions from this aspect of the proposed rule.

We expect the benefit of improved regulatory clarity would make the update process go more smoothly with less need for ongoing consultation with Ecology.

We expect the added data collection and project tracking process to allow for more thorough evaluation of SMP effectiveness and greater confidence that the objectives of the SMA are realized.

Regarding locally tailored provisions addressing non-conforming developments, we expect a variation in policies among the local jurisdictions.

2.3.8 Clarify statutory options for extending shorelands, in addition to updating the lists of shoreline waterbodies.

Baseline

WAC 173-18-040(3) states that rivers constituting shorelines of the state listed in rule are in effect until superseded by an approved shoreline master program. Similarly, WAC 173-18-044 states that master programs shall contain a list of streams constituting shorelines of the state within the jurisdiction of the master program; and goes on to establish that when approved, supersedes the list contained under WAC 173-18-050 through 173-18-430.

Likewise, WAC 173-20-040 states that [lake] listings in WAC 173-20-050 through 173-20-810 are in effect until superseded by an approved shoreline master program. Similarly, WAC 173-20-044 states that master programs shall include a list of lakes constituting shorelines of the state

⁵¹ Proposed WAC 173-26-090, -100, -104, -110, -120, & -201

⁵² [RCW 90.58.080\(6\)\(a\)](https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.080), <https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.080>

within the jurisdiction of the master program; and goes on to establish that when approved, supersedes the list contained under WAC 173-20-050 through 173-20-810.

RCW 90.58.020 provides that shorelines of the state may change over time based on authorized or permitted alterations and changes resulting from natural processes, and shall be revised when circumstances warrant.

Additionally, RCW 90.58.030 states that buffers for critical areas may be designated as shorelands and regulated under the SMA: “Any city or county may also include in its master program land necessary for buffers for critical areas ...”.⁵³

Proposed

The proposed amendments to WAC 173-18-044 and WAC 173-20-044 state that each local government shall review the list contained within its master program as part of each subsequent master program periodic review to ensure that the list remains current and accurate over time. This review and subsequent confirmation of streams, rivers, and lakes, and streams, rivers, and lakes of statewide significance shall be submitted to Ecology along with updated geospatial mapping information for integration into the department’s public facing shoreline mapping resources.

Streams and rivers listed in WAC 173-18-050 through 173-18-430 for Chelan, Clallam, Cowlitz, Ferry, Franklin, Grays Harbor, King, Lincoln, Mason, Pacific, Pierce, San Juan, Skamania, Snohomish, Spokane, Stevens, Walla Walla, Whatcom, and Whitman Counties were deleted from the WAC. Lakes listed in WAC 173-20-050 through 173-20-810 for Chelan, Clallam, Cowlitz, Ferry, Franklin, Grays Harbor, King, Lincoln, Mason, Pacific, Pierce, San Juan, Skamania, Snohomish, Spokane, Stevens, Walla Walla, Whatcom, and Whitman Counties were deleted from the WAC. Deletions were made because these counties and all the cities and towns within them have completed their SMP comprehensive updates, as stated and references in the WAC as amended.

Additionally, the proposed rule in Chapter 173-22 WAC would reiterate and elaborate on language currently in statute, which allows local jurisdictions to add buffers for critical areas and flood plains to their designated shorelands.

Expected impact

The proposed amendments to WAC 173-18-044 and WAC 173-20-044 are nearly identical and clarify that revising shorelines of the state “when circumstances warrant,” as stated in statute, is to also mean “as part of each subsequent master program periodic review.” Considering that WAC 173-18-044 and WAC 173-20-044 already require lists to be maintained in a master program, this proposed amendment has little impact beyond baseline requirements, as would removing shorelines listed in WAC 173-18-050 through 173-18-430 WAC and 173-20-050 through 173-20-810 by amendment.

⁵³ [RCW 90.58.030](https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.030); <https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.030>

Maintaining geospatial mapping information associated with shorelines should be common practice for most local and county government levels. However, requiring it as part of the master program update is not explicitly required under baseline, and for some select few, may represent added cost. Receiving shoreline data geospatial formats will also benefit the public through representation in the department's shoreline mapping resources.

We estimate no impact from added language reiterating statute regarding critical area buffers, aside from perhaps greater clarity for local jurisdictions. This may reduce their need to consult Ecology when considering such designations.

Chapter 3: Likely Costs of the Proposed Rule Amendments

3.1 Introduction

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

3.2 Cost Analysis

The proposed rule amendments would:

- Establish requirements for addressing the impact of sea level rise and increased storm severity, as required by RCW 90.58.630.
- Require that Critical Area protections within shorelines of the state be developed under Shoreline Management Act rules. Incorporating protections from other planning documents by reference would no longer be permitted.
- Differentiate between shoreline modifications to address erosion versus flooding and establish new requirements for stabilization, emphasizing nature-based solutions.
- Make revisions adding and clarifying requirements for better overall compliance with the Shoreline Management Act and local Shoreline Master Programs.
- Consolidate, clarify, and amend principles and standards that were previously found throughout the WAC to meet objectives of the SMA, including no net loss of shoreline function.
- Establish a new requirement that local governments review and evaluate SMP implementation and document how the SMP continues to optimize the policies of the Shoreline Management Act for Shorelines of Statewide Significance, considering the state and public interest, at each periodic review.
- Clarify the process, scope, and minimum requirements for Periodic Reviews and locally initiated amendments to Shoreline Master Programs.
- Clarify statutory options for extending shorelands, in addition to updating the lists of shoreline waterbodies.

We note three limiting factors in attempting to quantify impacts of the above amendments:

1. Local government SMPs may have already adopted various, legally binding, regulations through their SMPs that, when compared to the proposed rule, would require only minimal additional adjustment. In this way we expect the actual degree of impact on

SMP amendments, and those governed by them, to vary widely and to a degree that is currently unknown systematically.

2. If or when incorporated into master programs by local governments, amendment would apply only to future shoreline development, and depend in some cases on proposed location, use, size, and other factors. Because it is impossible to know the actual details of future development, estimating their costs and benefits is limited.
3. For any impacted future development, the range of possible options and changes that might be required by a prospective homeowner, businesses, or local government would vary widely, including potentially zero new cost or change.

Considering these challenges, the remainder of this chapter proceeds by discussing observed development trends against a wide range of possible costs. Except where otherwise noted, we assume that local government plans meet, but do not exceed, minimum requirements in the rule.

Historical development as a future assumption

As discussed above, it is impossible to know what future development would be impacted by the proposed rule. To understand and illustrate the scope of what may be impacted, we instead summarize available data on current shoreline development and assume that a similar annual average would persist.

Permits required for shoreline development can include substantial development permits, conditional use, and variance permits. We note that exempt development falling under WAC 173-27-040 are submitted to Ecology by only a small subset of counties and local governments and therefore were excluded from tables below.⁵⁴ Residential single family construction, outside of special circumstances in which it requires a variance (e.g., due to the project's location within a mapped flood hazard area or other buffer), is an exempt category, as is low value projects, normal maintenance or repair, construction in support of farming, etc.⁵⁵ Where possible, we attempt to incorporate exempt development by extrapolating known exemption rates, or by using ancillary information about coastal housing.

Available permit data were cleaned and synthesized in the following ways:

1. The years 2022 to 2025 were selected because 2022 was the first year that information on use (e.g., commercial), development type (e.g., new development), and locational information like permittee address was available in electronic database form. At the time of this writing 2026 was only a partial year.
2. We include only records for new development, redevelopment, or expansion. Other development type categories, like repair and maintenance, would not generally be impacted by the proposed rule.

⁵⁴ Under the current rule, reporting exempt development to Ecology is not required for most local governments.

⁵⁵ [WAC 173-27-040](https://app.leg.wa.gov/WAC/default.aspx?cite=173-27&full=true#173-27-040), <https://app.leg.wa.gov/WAC/default.aspx?cite=173-27&full=true#173-27-040>

3. To simplify figures, we combined agricultural and aquaculture uses, boating and recreational uses, and commercial and industrial into combined use categories. All other uses besides residential single family and residential multifamily are represented in the “other” category. These include utilities, transportation and parking, scientific/research, and NULL (empty) values. In some instances where multiple uses were coded under the same development they were assigned to residential single or multifamily if those uses were present; otherwise, the first use in the comma-delimited list was taken.
4. We note that information in the Ecology database, as currently designed and cataloged, is not sufficient to confidently or consistently delineate some specific modifications, including those considered water-dependent.
5. For organization, we combine water body types described as “West Coast” and “Marine” in the data as Marine, and rivers and lakes as Non-marine.

Table 2 illustrates annual permitted development, by use-year, broken out into marine and non-marine areas, along with averages by use from 2022 to 2025.

Table 2: Permitted Development by Use-Year

Area	Use	2022	2023	2024	2025	Average
<i>Non-Marine</i>	Single Family	154	153	106	92	126
<i>Non-Marine</i>	Boating / Rec	28	38	40	45	38
<i>Non-Marine</i>	Other	25	24	21	45	29
<i>Non-Marine</i>	Commercial / Industrial	20	22	16	21	20
<i>Non-Marine</i>	Multi Family	11	13	17	16	14
<i>Non-Marine</i>	Ag / Aquaculture	1	1	2	4	2
Non-Marine Total		239	251	202	223	229
<i>Marine</i>	Single Family	42	56	57	60	54
<i>Marine</i>	Boating / Rec	15	9	16	19	15
<i>Marine</i>	Commercial / Industrial	10	8	11	6	9
<i>Marine</i>	Other	5	8	9	13	9
<i>Marine</i>	Multi Family	3	4	7	9	6
<i>Marine</i>	Ag / Aquaculture	2	2	3	2	2
Marine Total		77	87	103	109	95

Note: Includes substantial development, conditional use, and variance permits. Values do not include exempt development or stabilization projects, but includes development in which stabilization is a component

Table 3 breaks annual averages from Table 2 into permitted development type by use.⁵⁶ In subsequent section in this chapter, we add additional distinctions to this table to describe rule-relevant locational category such as potential SLR exposure (see Section 3.2.1), and other regulatory information like business applications (see Chapter 7).

⁵⁶ Note that due to rounding, average counts across tables and subcategories may differ slightly.

Table 3: Annual Permitted Development by Use-Type (Average 2022-2025)

Area	Use	New Development	Redevelopment or Expansion
<i>Non-Marine</i>	Single Family	38	88
<i>Non-Marine</i>	Boating / Rec	11	27
<i>Non-Marine</i>	Other	3	26
<i>Non-Marine</i>	Commercial / Industrial	5	15
<i>Non-Marine</i>	Multi Family	7	7
<i>Non-Marine</i>	Ag / Aquaculture	0	2
Non-Marine Total		64	165
<i>Marine</i>	Single Family	8	46
<i>Marine</i>	Boating / Rec	2	12
<i>Marine</i>	Commercial / Industrial	0	8
<i>Marine</i>	Other	1	8
<i>Marine</i>	Multi Family	1	4
<i>Marine</i>	Ag / Aquaculture	1	1
Marine Total		13	79

Note: Includes substantial development, conditional use, and variance permits. Values do not include exempt development or stabilization projects, but includes development in which stabilization is a component

3.2.1 Establish requirements for addressing the impact of sea level rise and increased storm severity, as required by RCW 90.58.630.

Under the proposed amendment (see Section 2.3.1), we expect that some sea level rise risk would be mitigated through building requirements or avoidance measures compared to baseline. These actions would come at an initial cost to prospective development but are expected to provide private and social benefit (see Chapter 2 and 4).

To estimate cost from the proposed amendment, we first assume that the annual average development by use and location generally represents future development demand and preferences for similar locations. Second, we estimate approximate sea level rise exposure similar to what might partially be incorporated into local master programs following the adoption of the rule.⁵⁷

To determine the locations (latitude and longitude) of recent development, we geocoded addresses associated with development applications using the “tidygeocoder” package in R.⁵⁸ Tidygeocoder allows its users to choose from various open source (e.g. open street maps “OSM”) and proprietary (e.g. ESRI, Google) interfaces. After running addresses through open street maps and the Census, another freely available option, OSM was able to code roughly three quarters of the data, while the Census only coded roughly one third. We therefore started

⁵⁷ But omitting several other factors that could inform hazardous areas and related provisions including groundwater and saltwater intrusion, coastal erosion, and localized information.

⁵⁸ See <https://jessecambon.github.io/tidygeocoder/>

with OSM coordinates, and supplemented null values with Census results where they happened to provide a match. This two-step process still left some 10 percent of the data un-geocoded, which were largely associated with missing or dramatically incomplete addresses.⁵⁹

To approximate flooding with a 20-year return frequency extreme water level event, (approximately 2.9ft) and long-term SLR sea level rise and storm surge (approximately 3ft), we downloaded publicly available sea level rise vectors from NOAA representing 6 feet of sea level rise across the Washington coast and Puget Sound.⁶⁰ This hazard area is an approximation, and is not the same as the hazard areas local governments may use for planning under the proposed rules.

Geocoded points, whether placed in a parcel centroid, building footprint, or near a road network edge, cannot accurately capture whether some other part of the associated parcel could be impacted and therefor fall under proposed requirements. To account for this we intersected geocoded points with the Washington parcel database (already spatialized as polygons), where possible.⁶¹ Many parcels show extending into waters, and if left unmitigated, would automatically intersect even current sea levels. To adjust for this, we clipped parcels by NOAA's mean higher high water (MHHW) vectors, plus an additional 10 meter buffer to avoid scenarios in which any amount of SLR beyond the MHHW would suggest an impact.⁶²

Finally, we intersect the adjusted parcels or points, representing where historical development occurred, with 6ft NOAA SLR vectors. This process is illustrated in Figure 1, and results are shown in Table 4 by use and development type.

⁵⁹ We note that geocode accuracy and placement can vary dramatically. By the nature of their respective uses, addresses that were geocoded through OSM are more likely to be placed on a parcel or facility centroid, while those coded by the Census may be placed closer to road network.

⁶⁰ [Sea Level Rise Vectors](https://coast.noaa.gov/slrdata/Sea_Level_Rise_Vectors/index.html). For data see https://coast.noaa.gov/slrdata/Sea_Level_Rise_Vectors/index.html. For [online viewer](https://coast.noaa.gov/digitalcoast/tools/slr.html) see <https://coast.noaa.gov/digitalcoast/tools/slr.html>.

⁶¹ [WaTech Current Parcels](https://geo.wa.gov/maps/2b603a599a0842a3b2284c04c8927f35). See <https://geo.wa.gov/maps/2b603a599a0842a3b2284c04c8927f35>

⁶² For example SLR + storm surge represented by the 6 foot scenario would have to reach at least 10 meters inland before we count its intersection as impacted.

Figure 1. Geospatial Operations

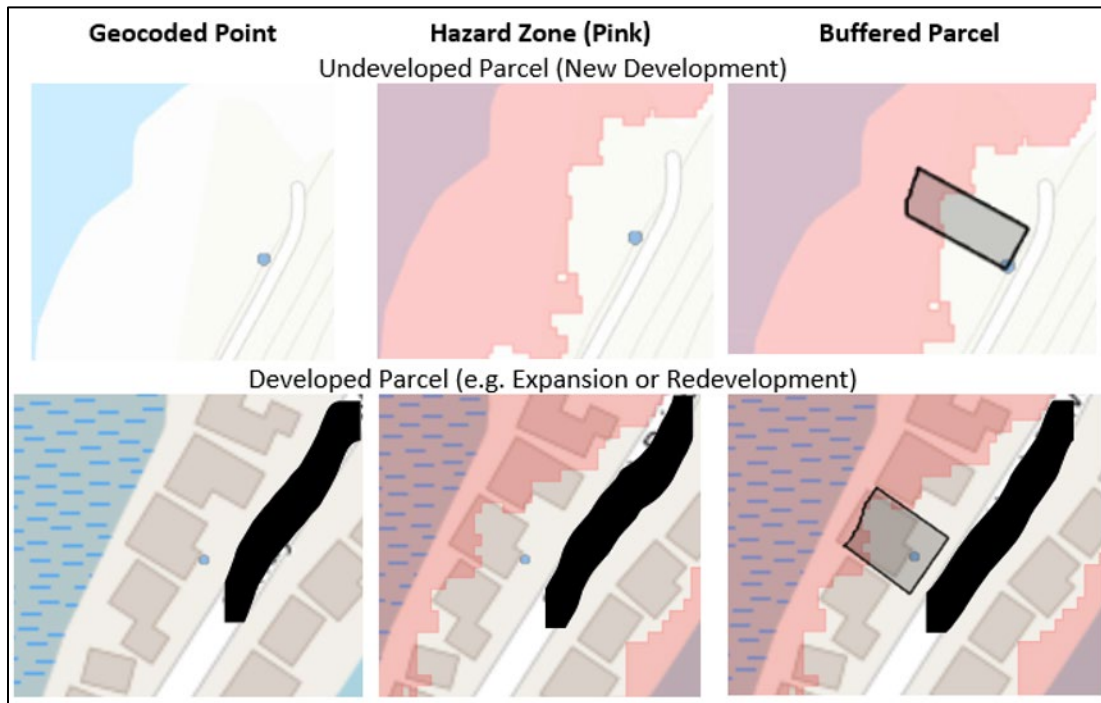


Table 4: Permitted Development by Use-Type and Hazard Exposure (Average 2022-2025)

Use (Marine)	New Development	New Development (Exposed)	Redevelopment or Expansion	Redevelopment or Expansion (Exposed)
Single Family	8	4	46	16
Boating / Rec	2	2	12	5
Commercial / Industrial	0	0	8	4
Other	1	0	8	4
Multi Family	1	0	4	2
Ag / Aquaculture	1	0	1	0
Total	13	6	79	31

Note: Includes substantial development, conditional use, and variance permits. Values do not include exempt development or stabilization projects, but includes development in which stabilization is a component

Table 4 represents our best estimate of average permitted development rates, by use, that could potentially be impacted by some sea level rise related restrictions annually. The proposed rules, local policies and regulations also apply to development that is exempt from the requirements for a substantial development permit. These would include a preponderance of

single family development potentially exposed to SLR.⁶³ We note that single family counts in Table 4 describe only proposed projects located within an existing buffer (which could be, among other things, a mapped flood hazard area) and require a variance.⁶⁴

To supplement our lack of exemption data, in particular exposed single family development rates, we turn to Climate Central and Zillow, which offer a publicly available online tool to estimate housing development rates and value that is at risk due to sea level rise. The tool analyses sea level rise projections under high, medium, and low greenhouse gas emissions scenarios and combines those projections with a storm of expected annual frequency. The medium emissions scenario is roughly in line with the Paris Agreement of 2015, the targets of which appear in jeopardy.⁶⁵ Projections are then made for the years 2050 and 2100; which are also roughly consistent with the proposed rule's SLR scenario requirements.⁶⁶

Based on data from 2010 to 2017 in Washington, the annual residential building rate in the sea level rise hazard zone is shown in Table 5. For example, an estimated 38.5 residential buildings are being built each year within the area projected to be exposed to coastal flooding by 2100 under a high emissions scenario. This is obtained by dividing the reported 308 homes built in 2010 or later by eight years. The data is assumed through 2017, given the report was published in 2018.

It is important to note that the area exposed to sea level rise hazards used in the Climate Central and Zillow study is not the same hazard area local governments will use for planning under the proposed rules, and also not the same as the hazard area used in the permit analysis above. Therefore, results should be taken as illustrative, not strictly comparative.

Table 5: Washington residential building rates (2010 to 2017) exposed to sea level rise hazard

Year of projection	Medium emissions scenario (average units annually)	High emissions scenario (average units annually)	Medium emissions scenario (average value annually)	High emissions scenario (average value annually)
2050	16.7	17.6	\$14.9 million	\$15.5 million
2100	31.5	38.5	\$28.3 million	\$32.4 million

We lack data to quantify any remainder of exempt development types exposed to SLR risk. In this way, estimates below may be understated. Future development rates and uses identified

⁶³ Including the project being of low value, normal maintenance or repair, and construction in support of farming, etc. (see [WAC 173-27-040](#)).

⁶⁴ This fact limits its usefulness in describing total impacts to single family development, but offers information about this subset of single family development that may not receive a variance under the proposed rule without additional mitigating action or avoidance (4 out of 8 new developments, and 16 out of 46 redevelopments or expansions).

⁶⁵ [IIED report on Climate targets](#),

https://www.iied.org/sites/default/files/uploads/2025/01/HH_launch_research_media_briefing_Sep_2023.pdf

⁶⁶ [Homes at Risk of Coastal Flooding by 2050 - Zillow Research](#), <https://www.zillow.com/research/ocean-at-the-door-21931/>

above as potentially subject to SLR hazards could face some or all of the following costs categories because of the proposed amendments (reprinted from Chapter 2):

- **Alternative project siting and/or land acquisition costs.** When all or part of a parcel or subdivision is projected to transition to an aquatic environment, the allowed locations for development or redevelopment would shift landward, or to an alternative parcel. Alternative locations could be more costly to prepare for development relative to a site under baseline, as would any new property acquisition.⁶⁷
- **Design and construction costs.** In developable but newly designated as an SLR-exposed areas, new costs to future development might include higher foundations and first floors, the use of flood-resistant materials, and utility relocation. There may also be new costs from on-site sewage system (septic) location and design studies, alternative systems, off-site and higher-elevation siting, or new land acquisition when siting is not feasible.
- **New permit costs** related to hazard exposure documentation, adaptive design details, and other professional service costs associated with compliance demonstrations in an SLR exposed area.

New costs associated with these actions would vary widely on a case-by-case basis and by use. For example, residential projects that go forward at the average value of \$0.88 million per project (per Zillow data) might experience an average cost increase of 5 to 20 percent in order to comply. This is an assumption for the purposes of calculating potential cost increases and is not an actual estimate of project cost increases attributable to specific rule requirements. Based on this assumption, the cost increase per project, adjusted 33 percent for inflation to 2026, would be \$58,520 to \$234,080.⁶⁸ About 35 residences per year are being built in areas projected to be flooded. We obtain this by averaging across the area affected under the medium emissions scenario and the high emissions scenario by 2100, resulting in an annual estimated additional cost of \$2.0 million to \$8.2 million.

The potential cost of compliance to future multifamily development could be higher than that of single family uses, given a generally larger size, footprint, and supporting infrastructure (e.g. larger or multiple onsite septic systems, parking lots, and pathways) . Here we assume that on average, cost might double that of the single family range, or \$117,040–\$468,160 per future impacted development. Applied to the rate of residential multifamily expansion or redevelopment permits in Table 2 identified to fall into a potential hazard zone (2 annually), our estimated costs for this component would be \$0.23 million–\$0.94 million per year.

We assume that costs to future impacted development for commercial and industrial use would, on average, be closer to those assumed for residential multifamily. Multiplying by the

⁶⁷ In some cases, the rule might effectively prevent others from being built at all. We note that projects that don't go forward would not incur construction expenses, but owners would also forgo the enjoyment, or equivalent of rental income or production, from the project. The forgone capital investment in construction could earn a return elsewhere, however.

⁶⁸ [Inflation Calculator](https://www.bls.gov/data/inflation_calculator.htm). https://www.bls.gov/data/inflation_calculator.htm.

rate of industrial and commercial development in Table 4 identified to fall into a potential hazard zone (4 annually), our estimated cost for this component would be \$0.468 million–\$1.87 million per year.

We do not attempt to quantify cost of this proposed amendment to potential development in boating and recreational uses or those in the “other” category subjected to hazard areas. That is because they will more likely than not be exempt based on their use or take on a very wide range of possible impacts associated with the proposed development.

3.2.2 Require that Critical Area protections within shorelines of the state be developed under Shoreline Management Act rules. Incorporating protections from other planning documents by reference would no longer be permitted.

We estimate no cost due to Ecology’s action for this provision. As noted in Section 2.3.2:

“The statute passed in 2010 stresses that critical areas protection in shorelands be governed by provisions of the SMA. “The shoreline master program shall be adopted pursuant to the procedures of chapter 90.58 RCW rather than the goals, policies, and procedures set forth in this chapter [“Growth Management—Planning by Selected Counties and Cities.”] for the adoption of a comprehensive plan or development regulations.”⁶⁹ The alignment of the proposed amendments with legislative directive is not part of Ecology’s discretion.”

Regarding expounding on critical area types, the proposed additional language describing critical area types constitutes an elaboration of requirements within existing statute, producing no additional costs.

3.2.3 Differentiate between shoreline modifications to address erosion versus flooding and establish new requirements for stabilization, emphasizing nature-based solutions.

New requirements of geotechnical analyses again include properly evaluating whether and which nature-based solutions will address erosion or flooding; and expected to require a more detailed analysis of alternatives and ecological suitability. This would likely increase the average unit cost of the analysis and apply to all applicants ranging from private landowners, businesses, and local governments.

To prepare a geotechnical study in advance of a stabilization application under the current rule we assume an average of 40 hours would be required by a mid-level environmental engineer at base rate of \$60.32/hr.⁷⁰ After applying 20 percent overhead to the base wage, we estimate the average cost of the baseline technical report to be \$2,895. We assume that investigating

⁶⁹ [RCW 36.70A.480](https://app.leg.wa.gov/RCW/default.aspx?cite=36.70A.480); <https://app.leg.wa.gov/RCW/default.aspx?cite=36.70A.480>

⁷⁰ Wage data take from [BLS May 2025 Occupational Employment and Wage Statistics](https://www.bls.gov/oes/tables.htm): <https://www.bls.gov/oes/tables.htm> for Washington.

additional alternatives, more in-depth ecological suitability, and other components could increase this effort between 50% and 100% of baseline, or by an additional \$1,448 to \$2,895. Based on an average rate of 26 new stabilization applications observed in the permit data (see Table 6) per year, we estimate that the total additional annual cost from the proposed amendments could range from \$37,648 to \$75,270.

Table 6: Permitted Stabilization by Year

Area	2022	2023	2024	2025	Average
Marine	7	6	19	20	13
Non-Marine	11	18	10	13	13

Note: Includes stabilization in which other permitted development or variance was a component

The proposed requirements may also result in different methods of stabilization or flood control than would have been implemented under the current rule. It remains unclear, however, whether alternatives under the rule, if different from baseline outcomes, would come at a consistently higher or lower cost. We also note that any nature-based stabilization, selected and constructed in lieu of hard alternatives, could help avoid other mitigation costs required by the current rule to achieve no net loss. For this reason, we do not attempt to quantify the costs of stabilization alternatives themselves.

We would not expect that placing flood reduction measures “as far landward as practical,” as described in the amended rule, to consistently impose new costs on individuals or hamper risk reduction. The amendment could impact subjective aesthetic qualities of some properties compared to baseline or limit some personal access to the shoreline, however.

3.2.4 Make revisions adding and clarifying requirements for better overall compliance with the Shoreline Management Act and local Shoreline Master Programs.

The proposed rule will require local jurisdictions to send exemption letters to Ecology for all exemptions. This will constitute an ongoing cost increase for local jurisdictions, relative to baseline.

At present, some letters of exemption are being submitted to Ecology either as a matter of local policy or due to federal permits being required for the proposed development. Ecology estimates 53 of 258 local jurisdictions are submitting exemption letters as a matter of policy. Based on the 370 annual letters from those jurisdictions under the current rule, the number that would required by the proposed rule is estimated at 1,800 per year.⁷¹

Evaluating and processing exemptions is an ongoing process and the proposed requirement of forwarding the information to Ecology would be facilitated by its Shoreline Permits Tracking System. We estimate an additional 10 minutes of personnel time per issued exemption to result from this proposed requirement. Using an estimated average hourly wage for environmental

⁷¹ Communications Ecology Shorelines program, 7/21/26

planners in Washington of \$42 per hour plus 20 percent overhead, we estimate an added cost of \$15,120 per year from this aspect of the proposed rule.⁷²

The cost of more detailed vegetation information on site plans, along with descriptions of planned mitigation efforts will likewise add some cost for applicants and reviewers. We estimate four additional hours for a project currently needing to submit site plans as part of its permit requirement. Using the wage rate cited above for an environmental planner, the added site plan requirement would add an estimated \$202 per project. Using the average number of permits annually for projects from Table 2, we estimate 324 projects would annually fall under this proposed revision: $324 \times \$202 = \$65,318$. This estimate does not account for exempted projects, which may fall under this requirement. Absent data to be required by the proposed rule, we don't have a credible estimate of the number of these projects that would fall under this requirement.

The cost of the vegetation mitigation efforts themselves are considered in Section 3.2.5.

3.2.5 Consolidate, clarify, and amend principles and standards that were previously found throughout the WAC to meet objectives of the SMA, including no net loss of shoreline function and public access.

The most likely costs from amendments in this section are born from regulatory requirements associated with vegetation conservation, and to a lesser degree, public access (see discussion in Chapter 2.3.5).

The proposed rule would require three trees be planted for each one removed. For a project that may need to mitigate vegetation removal by planting three trees, we estimate that cost at \$1,970–\$2,387 per project, using Tacoma area wages. These costs would scale by the number of trees required to be planted.⁷³ NOAA reported lower planting costs in 2020, \$13 to \$288 per tree, but also considered maintenance costs of \$15–81 per tree, presumably per year.⁷⁴ Considering this range of cost estimates per tree, and assuming an average project removing between one and four trees mitigated at the 3:1 planting ratio, we estimate the cost range of this aspect of the proposed rule to be \$1,250 to \$9,600 per project.

Using the summed annual average value of 1,000 for development activity from the tables in Section 3.1.1, plus assumed exempted development as discussed in Section 4.2.1 below, we obtain a cost range of \$1.25 million to \$9.6 million per year for the proposed vegetation conservation requirement.

The proposed amendments strengthening enforceability of public access requirements and are expected to add minimal costs. Facility parking spaces near shoreline access must be made available to the public and signage must indicate this. This must be maintained for the life of

⁷² [GovSalaries](https://govsalaries.com/salaries/WA/washington-state-department-of-natural-resources/j/environmental-planner), <https://govsalaries.com/salaries/WA/washington-state-department-of-natural-resources/j/environmental-planner>

⁷³ [Cost to Plant Tree Calculator - 2026](https://www.homewyse.com/maintenance_costs/cost_to_plant_tree.html), https://www.homewyse.com/maintenance_costs/cost_to_plant_tree.html

⁷⁴ [Nature-Based Solutions Installation and Maintenance Costs](https://coast.noaa.gov/data/digitalcoast/pdf/nature-based-solutions-installation-maintenance.pdf), <https://coast.noaa.gov/data/digitalcoast/pdf/nature-based-solutions-installation-maintenance.pdf>

the development. We expect some costs associated with planning future facilities and signage to accommodate this access. We do not attempt a quantitative estimate, expecting it to be an unusual circumstance where an entity would have to build out more facility parking to accommodate this requirement.⁷⁵

Restricting stormwater outfalls could generate costs for future subdivision by requiring on-site treatment or tie-in alternatives. However, these would only apply to a narrow set of subdivisions otherwise requiring outfalls, in locations where the community does not have a stormwater manual in place, or where under a manual, outfalls are the only feasible option. After reviewing permit data, we determined that permit applications for subdividing land with outfalls in the shoreland jurisdictions occur roughly once per year on average. While we acknowledge some incremental cost the proposed amendment are possible over time, we do not attempt to quantify these directly given the limited frequency of historical occurrence, and uncertainty about cost differentials between outfalls and other stormwater solutions.

3.2.6 Establish a new requirement that local governments document how they are optimizing the policies of the Shoreline Management Act for Shorelines of Statewide Significance, considering the state and public interest, at each periodic review.

Establishing a system for effectiveness documentation and its subsequent evaluation happen during period reviews. These reviews are funded by state-issued grants.⁷⁶

For shorelines of statewide significance, documenting the optimization of the SMA would be an extension of the proposed system of data collection and effectiveness documentation requirement. For this reason, we estimate no additional cost to local jurisdictions in implementing this requirement.

3.2.7 Clarify the process, scope, and minimum requirements for Periodic Reviews and locally initiated amendments to Shoreline Master Programs.

We expect the proposed amendments to add some cost to the periodic review, which is when SMPs are typically updated. We expect the state grants mandated to cover the cost of the SMP updates will do so.⁷⁷ For this reason we estimate no additional cost for local jurisdictions from this aspect of the proposed rule.

⁷⁵ Communications with Ecology Shorelines team, 8/17/26.

⁷⁶ [RCW 90.58.080\(6\)\(a\)](https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.080), <https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.080>

⁷⁷ [RCW 90.58.080\(6\)\(a\)](https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.080), <https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.080>

3.2.8 Clarify statutory options for extending shorelands, in addition to updating the lists of shoreline waterbodies.

We estimate no additional costs to the proposed amendments to Chapters 173-18, -20 and -22 WAC.

The requirements pertaining to updating lists of shorelines of the state and requiring geospatial mapping information happen during SMP periodic reviews.

As discussed in section 2.2.1, state grants cover local government costs associated with developing and amending shoreline master programs under the baseline (RCW 90.58.250; RCW 90.58.080). Because these grants are required by law, we do not consider increased costs to local governments for SMP reviews that result from this rulemaking.

The amendments regarding critical areas buffers in the proposed Chapter 173-22 WAC are essentially a reiteration of statute, so the changes are not a result of Ecology's discretion.

The proposed amendments to WAC 173-18-044 and WAC 173-20-044 are nearly identical and clarify that revising shorelines of the state "when circumstances warrant," as stated in statute, is to also mean "as part of each subsequent master program periodic review." Considering that WAC 173-18-044 and WAC 173-20-044 already require lists to be maintained in a master program, this proposed amendment has little impact beyond baseline requirements, as would removing shorelines listed in WAC 173-18-050 through 173-18-430 WAC and 173-20-050 through 173-20-810 by amendment.

Maintaining geospatial mapping information associated with shorelines should be common practice for most local and county government levels. However, requiring it as part of the master program update is not explicitly required under baseline, and for some select few, may represent added cost. Receiving shoreline data geospatial formats will also benefit the public through representation in the department's shoreline mapping resources.

We estimate no costs from added language reiterating statute regarding critical area buffers.

3.2.9 Environmental justice costs⁷⁸

We do not expect this rulemaking to cause environmental harm. We also do not expect this rulemaking to cause harm to overburdened communities or vulnerable populations.

This rulemaking may create barriers to some types of shoreline development and may increase the costs associated with some types of development. In addition, this rulemaking may increase the shoreline planning and permitting workload of local governments.

⁷⁸ Any input received from likely impacted communities helped to inform the proposed rule amendments and our analysis of costs and benefits. See Chapter 6 for discussion of alternative rule content suggested during rule development, that was not included in the proposed rule. Ecology's formal Environmental Justice Assessment will be published along with the final rule.

Shoreline property owners may experience barriers to some types of shoreline development and increased costs associated with some types of development. Local governments may see increased costs or capacity needs.

If implemented effectively at the local level, the environmental protection and hazard resilience improvements proposed by this rulemaking could improve water quality and reduce exposure to sea level rise and related shoreline hazards.

Chapter 4: Likely Benefits of the Proposed Rule Amendments

4.1 Introduction

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

4.1.1 Public value of Shorelines

Measuring the benefits associated with natural amenities would be easier if the resource in question were a marketed commodity and information on prices and the quantities consumed were available. This information could be used to define a demand curve allowing quantification of the benefits.

Unfortunately, many of the expected benefits from the proposed amendments are not associated with a market, and no market prices exist. Moreover, we do not know the quantity of benefits produced by the amendments, because each project proposal will be unique, and the cause and effect relationship is not linear or predictable. Although it is impossible to assess these benefits directly, alternative methods have been developed in economics to analyze broad policy shifts that may have a wide range of beneficial impacts.

One of the most frequently used methods is the contingent valuation (CV) method, which uses survey techniques to indirectly derive people's willingness to pay (WTP) for natural amenities and therefore derive the benefits.

To our knowledge the last representative state survey of this kind on shoreline protection and environmental benefits was conducted by the social and economic science research center of Washington State University (WSU) for Ecology in 1996. It asked Washingtonians about what they would be willing to spend, annually, for protection of habitat and wildlife, water quality, reduced flooding, and recreational benefits of and along shorelines.⁷⁹ The mean and median of WTP for each Washington household in 1996 was calculated based on the distribution of their answers. The mean estimate was \$373.19 per household per year, and the median was \$248.47 per household per year.⁸⁰

⁷⁹ [Shoreline Survey Summary](https://apps.ecology.wa.gov/publications/documents/0406028.pdf), <https://apps.ecology.wa.gov/publications/documents/0406028.pdf>

⁸⁰ The specific valuation question read: "Now, please think about things that could happen if shoreline [DEF] protection is reduced: things like increased litter, poor water quality, increased flooding, increased development in the shoreline areas, less protection of fish and wildlife habitats, or decreased recreational opportunities. Would it be worth at least \$[x] per month, that is \$[y] per year to your household in these INDIRECT COSTS [DEF] to prevent such things from happening to Washington's shorelines?" The "x" and "y" in the question were replaced with specified dollar amounts.

Estimates in the WSU study are unfortunately dated. To adjust these figures to better reflect the current economy, median value was adjusted for inflation up to 2026 (113 percent increase to \$529.24) for this analysis.⁸¹ We also adjust the total number of households in Washington to 3.1 million in 2025, and expect a one percent growth rate thereafter.^{82, 83}

Based on these assumptions, the study estimates a total willingness to pay to protect shoreline amenities for Washington households over the 20-year period of analysis (2030-2050) of \$37.6 billion. The estimate for the year 2030, the year after the first updated SMPs would go into effect, is \$1.7 billion. We apply these survey results proportional to an assumed rate of protections afforded by the proposed rule in the benefit analysis below.

4.2 Benefits analysis

The proposed rule amendments would:

- Establish requirements for addressing the impact of sea level rise and increased storm severity, as required by RCW 90.58.630.
- Require that Critical Area protections within shorelines of the state be developed under Shoreline Management Act rules. Incorporating protections from other planning documents by reference would no longer be permitted.
- Differentiate between shoreline modifications to address erosion versus flooding and establish new requirements for stabilization, emphasizing nature-based solutions.
- Make revisions adding and clarifying requirements for better overall compliance with the Shoreline Management Act and local Shoreline Master Programs.
- Consolidate, clarify, and amend principles and standards that were previously found throughout the WAC to meet objectives of the SMA, including no net loss of shoreline function.
- Establish a new requirement that local governments review and evaluate SMP implementation and document how the SMP continues to optimize the policies of the Shoreline Management Act for Shorelines of Statewide Significance, considering the state and public interest, at each periodic review.
- Clarify the process, scope, and minimum requirements for Periodic Reviews and locally initiated amendments to Shoreline Master Programs.
- Clarify statutory options for extending shorelands, in addition to updating the lists of shoreline waterbodies.

⁸¹ [BLS CPI calculator](https://www.bls.gov/data/inflation_calculator.htm), https://www.bls.gov/data/inflation_calculator.htm

⁸² [Washington population growth slowing - Office of Financial Management](https://ofm.wa.gov/news-publications/washington-population-growth-slowng/), <https://ofm.wa.gov/news-publications/washington-population-growth-slowng/>

⁸³ [U.S. Census Bureau QuickFacts: Washington](https://www.census.gov/quickfacts/fact/table/WA/PST045225), <https://www.census.gov/quickfacts/fact/table/WA/PST045225>

As noted in Section 4.1.1, Washingtonians highly value natural shorelines. The current rule already offers numerous protections against shoreline and ecological degradation; however, some of these protections may be variable or become less effective over time as sea level rises and climate change affects our environment. In this way, we assume that much of the social benefit from avoided degradation described in Section 4.1.1 is currently realized by the rule, and that the proposed rule amendments ensure that *some proportion* of current value is maintained incrementally over time as new development would become affected.

That proportion of protection associated with the current rule vs. the amended rule would vary heavily by location, use, and other attributes that may or may not intersect with new development requirements, restrictions, and mitigation. Considering limited data on any specific component, we illustrate the value of the proposed rule by assuming the proportion of protections, on average, that the proposed amendments could collectively represent per project relative to the current rule, ranges from 15 – 30 percent.

From the data in Section 3.2.1 and 3.2.3, we estimate an annual average of 350 permitted projects in both marine and non-marine environments, including stabilization projects. From Section 3.2.4 we estimate that the proposed rule would require 1,800 letters annually documenting issuances of exemptions from development permits.

Repair and maintenance and single-family construction are both heavily present throughout exempted development descriptions. As an approximation, we assume a third of the expected annual letters of exemption would be for single-family home construction or re-development that could be impacted by the SLR components or other requirements (e.g., vegetation conservation) of the proposed rule. Adding that 600 to the estimated 350 annual permits, we further round to estimate 1,000 parcels statewide whose projects are impacted by the proposed rule annually.

We estimate that roughly 292,500 parcels intersect with current shorelands or are exposed to sea level rise hazards; 46% (135,920) of which are marine, and 54% (156,580) adjacent to lakes or streams. These were derived by taking the most recent spatialized statewide tax parcel database, and returning parcels within 200 feet of streams, lakes, and marine areas that represent the current SMA jurisdiction. As a proxy for parcels exposed to sea level rise hazards, we again intersect parcel data with 6ft NOAA SLR vectors, and remove duplicates already located in established marine shorelands.⁸⁴ Due to computational constraints, we performed this analysis using a 5% random sample (166,113 parcels) of all state parcels (3.3 million), and therefore totals and proportions are approximate.^{85,86}

⁸⁴ Six feet of sea level rise approximates flooding with a 20-year return frequency extreme water level event (approximately 2.9ft), and long-term SLR sea level rise and storm surge (approximately 3ft). See section 3.2.1 for additional discussion and limitations on the selection and use of SLR vectors.

⁸⁵ Analysis performed using R statistical language, using public SMA jurisdiction shapefiles (current as of May 2019) from [Ecology's GIS Data page](#) and [spatialized tax parcels](#) from WaTech (updated April 9, 2026).

⁸⁶ As a check on validity, other work on [Puget Sound SLR vulnerability](#), <https://www.mdpi.com/2071-1050/15/6/5401> have derived similar figures.

To transfer these estimates to gauge the impact of the proposed rule, we suggest that 1,000/292,500, or 0.34 percent, of shoreline properties could be impacted in one or more ways by the proposed amendments. Using the public's shoreline valuation from Section 4.1.1, the 0.34 percent just discussed, and the 10 to 30 percent benefit share of the proposed rule, we estimate a value of $0.0034 \times \$1.7 \text{ billion} \times 0.10 \text{ to } 0.3 = \$0.6 \text{ to } \$1.7 \text{ million per year}$. These protections, added to those from the existing rule, would grow cumulatively each year over time. An illustration would be that the benefits of a mature tree continue each year of its life (shade, lower heating and air conditioning costs, aesthetics), whereas the planting cost occurs only once.⁸⁷

Using a real discount rate of 0.41 percent based on the 20-year average for rates issued for U.S. Treasury inflation protected I-Bonds, we estimate that by the year 2050, the annual benefit from the protections afforded by the proposed rule reach \$12 to 37 million per year, with a cumulative benefit of \$135 to 404 million by that date.⁸⁸ Further extrapolating to the year 2100 with these assumptions produces an annual valuation of \$44 to 133 million per year and a cumulative benefit of \$1.6 to 4.7 billion.

For completeness, the remainder of this chapter discusses or reiterates qualitative benefits and narrative around individual rule amendments where practical.

4.2.1 Establish requirements for addressing the impact of sea level rise and increased storm severity, as required by RCW 90.58.630.

Defending development against sea level rise is expensive to private individuals, to governments leveraging public resources, and to the environment, as armoring and stabilization become increasingly necessary and widespread.

Take as an alternative case study Charleston South Carolina, which is experiencing sea level rise greater than what is forecast for Washington. Combined with land subsidence, the sea level there is expected to rise four feet by the end of the century, whereas two to three feet is expected by that time around Washington.⁸⁹ In order to protect its core downtown area, a \$1.3 billion dollar seawall is being proposed.⁹⁰ While it may protect the core downtown for a time, many surrounding neighborhoods would not be protected, and much of the functioning of the natural coast could be lost.

By ensuring new development is adapted to sea level rise, the proposed rule works to avoid the need for shoreline stabilization and may reduce public spending to defend development in hazard areas. By avoiding new development in these areas, the public interest in preserving

⁸⁷ Benefits are also likely non-linear. Extending the scenario; for the second, third, or 100th tree protected, a network of ecological connections provide greater public benefits than the sum of their individual parts. We do not attempt to model those nonlinearities directly.

⁸⁸ [I bonds — TreasuryDirect](https://www.treasurydirect.gov/savings-bonds/i-bonds/), <https://www.treasurydirect.gov/savings-bonds/i-bonds/>

⁸⁹ Not counting storm surge and other related hazards. See [Sea Level Rise Overview](https://wacoastalnetwork.com/sea-level-rise-overview/) <https://wacoastalnetwork.com/sea-level-rise-overview/>

⁹⁰ [Building towards disaster, Charleston](https://floodlightnews.org/building-toward-disaster-growth-collides-with-rising-seas-in-charleston/), <https://floodlightnews.org/building-toward-disaster-growth-collides-with-rising-seas-in-charleston/>

shoreline ecological function is maintained, despite uncertainty. From a legal perspective, the rule ensures that the goals and objectives of the SMA under rising sea level conditions are better met.

In addition to contributing to the social benefits discussed in Section 4.2, we note there are likely, additional, private benefits to property owners equivalent to future damages or loss of structure(s) that were mitigated because of the proposed rule. For any affected property, benefits would develop over time as the threat from sea level and storm severity grows. The onset, degree, and rate of loss avoidance is highly speculative, however, as is continued investment in vulnerable areas in the absence of the rule.

4.2.2 Require that Critical Area protections within shorelines of the state be developed under Shoreline Management Act rules. Incorporating protections from other planning documents by reference would not be permitted.

We estimate no benefits from barring adoption by reference of critical areas protections, as alignment of the proposed amendments with legislative directive is not part of Ecology's discretion.

The statute passed in 2010 stresses that critical areas protection in shorelands be governed by provisions of the SMA. "The shoreline master program shall be adopted pursuant to the procedures of chapter 90.58 RCW rather than the goals, policies, and procedures set forth in this chapter ["Growth Management—Planning by Selected Counties and Cities."] for the adoption of a comprehensive plan or development regulations."⁹¹

The proposed additional language describing critical area types constitutes an elaboration on requirements within statute and would provide the benefit of greater regulatory clarity and bring the WAC into better alignment with existing statute. Local jurisdictions would be better able to find the necessary information for their shoreline planning efforts in the proposed WAC.

4.2.3 Differentiate between shoreline modifications to address erosion versus flooding and establish new requirements for stabilization, emphasizing nature-based solutions.

The proposed rule would ensure that stabilization and flood controls are appropriately selected, sized, and applied to shorelines. In this way, this amendment, in conjunction with others in the proposed rule, contributes to public benefits discussed in Section 4.2 by ensuring ecological functioning of the shoreline, protecting the natural character of the shoreline, and avoiding piecemeal development, among other values held by the public and goals of the SMA.

⁹¹ [RCW 36.70A.480](https://app.leg.wa.gov/RCW/default.aspx?cite=36.70A.480); <https://app.leg.wa.gov/RCW/default.aspx?cite=36.70A.480>

4.2.4 Make revisions adding and clarifying requirements for better overall compliance with the Shoreline Management Act and local Shoreline Master Programs.

Requiring letters of exemption to be submitted to Ecology would considerably expand Ecology's awareness of authorized shoreline development in the state. Currently, some jurisdictions do report on their issuances of exemptions. In some of those instances, they make up the majority of development in the jurisdiction. (Pierce County, for example, had 600 exemptions out of 708 shoreline authorizations over the past four years).⁹² Adhering to the broad and diverse objectives of the SMA would be better facilitated by adopting the increased reporting requirement.

More detailed vegetation information on site plans along with descriptions of planned mitigation efforts would better document, and thereby facilitate, vegetation conservation efforts, which is crucial to improving riparian habitat.

Consideration of sea level rise when evaluating conditional use and variance permits is a general requirement of RCW 90.58.630. We estimate no benefits due to Ecology's discretion, as it would align the rule with the Legislature's requirement.

The more general requirements of the proposed rule regarding sea level rise are considered in Sections 2.3.1, 3.2.1 and 4.2.1 in this document.

4.2.5 Consolidate, clarify, and amend principles and standards that were previously found throughout the WAC to meet objectives of the SMA, including no net loss of shoreline function and public access.

The proposed amendments would provide benefits from increased regulatory clarity for local jurisdictions, allowing them to more effectively meet the goals and objects of the SMA, including no net loss of shoreline function. We note that there is no direct impact from the proposed WAC 173-26-206, as its contents are taken from existing language in various other sections of the existing rule without material change. There would, however, be a general benefit to local governments and the public from centralizing concepts used and referenced by several amendments discussed below proposed to ensure no net loss of ecological function.

Proposed changes are repeated here from Chapter 2 and edited to contain only benefits. For consistency, we again categorize by theme. These amendments, in conjunction with others in the proposed rule, contribute to public benefits estimated in Section 4.2.

- **Water quality.** Baseline and proposed rules both must implement state standards and guidance and are protective of water quality. Specifying the information and data that should be applied when updating or implementing a master program is a benefit to local

⁹² Communications with Shorelines program, 7/16/26.

governments and would provide additional transparency to the public and regulated community.

For any future project otherwise considering outfalls, but restricted because of the amendment, we expect public benefits to cumulate from avoiding the incremental loss of shoreline ecological function and upholding other goals of the SMA.

- **Shoreline buffers.** The vast majority of comprehensively updated SMPs already employ shoreline buffers as a central regulatory component of achieving no net loss, and to meet requirements for vegetation conservation, flood protection, and stabilization under existing rules. The new requirement provided in the rule will ensure consistent application of shoreline buffers across SMPs and is necessary for effective implementation of the updated vegetation conservation area provisions. For any buffer restored or expanded under the amendment that would not have been otherwise, we expect public benefits to cumulate from avoiding the incremental loss of shoreline ecological function and upholding other goals of the SMA.
- **Critical areas.** The explicit list of critical areas that occur within shorelines of the state provides clarity for local governments and the regulated community and will increase consistency across master programs. Providing additional detail in the rule regarding critical area definitions, protection policies, identification and mapping, standards and regulations, should provide more consistency across individual SMPs and create a more predictable pathway for applicants. Of note:
 - **Flood plains.** The definition of the 100-year flood plain is already in WAC 173-26-020 and RCW 90.58.030; however, the rule explicitly decouples flood hazard reduction provisions from links to other state and federal regulation. The proposed amendment does not in and of itself generate benefits beyond ensuring that flood regulations elsewhere in the rule are contained in the WAC and applied consistently across the shoreline jurisdiction.
 - **Wetlands.** The proposed amendment would provide clarity to ensure the wetland regulations are implemented with a stricter line, without changing authority. In this way, the amendment would likely reduce variability in the issuance of variances
- **Vegetation conservation.** For each project taking on new mitigation, or avoidance of vegetation removal in the riparian management zone because of the amendment, we expect public benefits to cumulate from avoiding the incremental loss of shoreline ecological function and upholding other goals of the SMA.
- **Public access.** Maintaining public access for the life of a project, when access is required by law, is practically implied under the baseline and has limited impact for the purposes of this analysis beyond the benefit of added enforceability.

In limited situations public parking requirements in the proposed rule may lead to new opportunities for public access, largely from ensuring and enforcing existing access requirements in the baseline through clear, more concise, language. In this way, the

amendment would likely reduce variability in public parking access. Benefits would also cumulate as signage about public access increases awareness and use.

4.2.6 Establish a new requirement that local governments review and evaluate SMP implementation and document how the SMP continues to optimize the policies of the Shoreline Management Act for Shorelines of Statewide Significance, considering the state and public interest, at each periodic review.

We expect the benefit of a documented, systematic evaluation as to whether SMPs are effectively optimizing the goals and objectives of the SMA for shorelines of statewide significance. This would provide improved transparency and greater assurance that statutory requirements are being met for these shorelines.

The proposed amendments specifically addressing the sea level rise planning are considered above in Section 4.2.1. The amendments considered here apply to shorelines of statewide significance and essentially reiterate general statutory requirements and the sea level rise component analyzed in Section 4.2.1, but also optimized for shorelines of statewide significance.

4.2.7 Clarify the process, scope, and minimum requirements for Periodic Reviews and locally initiated amendments to Shoreline Master Programs.

We expect the benefit of improved regulatory clarity would make the update process go more smoothly with less need for ongoing consultation with Ecology.

We expect the added data collection and project tracking process to allow for more thorough evaluation of SMP effectiveness and greater confidence that the objectives of the SMA are realized.

4.2.8 Clarify statutory options for extending shorelands, in addition to updating the lists of shoreline waterbodies.

We expect receiving shoreline data in geospatial formats will benefit the public. Through this proposed requirement, all shorelines would be represented among Ecology's shoreline mapping resources.

Added language from the RCW reiterating statute regarding critical area buffers may add greater regulatory clarity for local jurisdictions. This may reduce their need to consult Ecology when considering making such designations.

4.2.9 Environmental justice benefits⁹³

Over the long term, we expect the proposed rule to benefit overburdened communities and vulnerable populations who rely on healthy shorelines for subsistence, employment, and cultural values. Upon implementation at the local level, we would expect better protection of shoreline ecological functions.

Generally, this rulemaking will benefit shoreline ecosystems and the plant and animal communities that make up those ecosystems. It would also benefit the people of the state who share a common interest in coordinated management of shorelines of the state along with property owners and future property owners. The latter will be more informed about shoreline hazards and be required to make more forward-looking decisions about development.

Chapter 5: Cost-Benefit Comparison and Conclusions

5.1 Summary of costs and benefits of the proposed rule amendments

Aggregated from Chapter 3 and 4, quantitative benefit estimates based on current shoreline development activity are presented in Table 7 below, alongside quantitative cost estimates where available. Considering the costs and benefits into the future, we estimate the present values (PV) of annual costs and benefits out to the year 2050. Since the costs fall on private individuals, who would typically have a shorter time horizon than society at large, we use a conservative real discount rate of two percent for illustration.^{94,95} For a social discount rate we use a 20 year average of I-Bond rate of 0.41 percent as discussed in Section 4.2. We apply this rate to the cost estimates as well in the footnote below for the sake of comparison.⁹⁶

⁹³ Any input received from likely impacted communities helped to inform the proposed rule amendments and our analysis of costs and benefits. See Chapter 6 for discussion of alternative rule content suggested during rule development, that was not included in the proposed rule. Ecology's formal Environmental Justice Assessment will be published along with the final rule.

⁹⁴ Individuals face greater uncertainty regarding their future than does an overall society. A cost or benefit impacting a general population is more likely to be realized than one impacting an individual, whose plans or fate may more easily change. For this reason, we discount future costs or benefits to private actors at a higher rate.

⁹⁵ Nesticò, A., et. al., 2023 review the rationale for dual discounting, as does Yang, 2003. See References.

⁹⁶ Using the lower social discount rate of 0.41 percent, we estimate the PV cost range in 2050 at \$81 – \$414 million. Note that by the year 2053, the high-estimate cumulative social benefit surpasses the highest cost estimates in this largely illustrative comparison.

Table 7: Summary of quantitative costs and benefits

Proposed amendments	Estimated annual cost	Present Value of costs out to 2050	Quantitative 2030 benefit	Present Value of benefits out to 2050
Sea level rise restrictions	\$2.7–11.1 million ⁹⁷	See total below	See total below	See total below
Vegetation conservation	\$ 1.3–\$9.7 million	See total below	See total below	See total below
Generating exemption letters	\$0.013 million	See total below	See total below	See total below
Total quantified costs or benefits	\$4.1–\$21 million	\$65-\$335 million	\$0.6 to \$1.7 million	\$135-\$404 million

Note: The present value from lower cost assumptions should generally be compared to the present value from lower benefit assumptions, and vice versa. This reflects our expectation that benefits grow with spending on shoreline protection. We apply a 2% real private discount rate to the estimated cost, and a 0.41% social discount rate to benefits (see Section 5.1 for additional discussion).

Due to data limitations, we describe only qualitatively the remainder of expected costs and benefits of the proposed rule. As discussed in Chapters 2 and 3, the proposed amendments may generate additional, qualitative, costs associated with:

- On-site stormwater treatment or tie-in alternatives associated with restricting stormwater outfalls in future land subdivisions,
- Ensuring parking availability and signage about public access,
- Planning around shoreline buffers to the degree it impacts future development,
- Planning around wetland regulation to the degree it impacts future development.

Additionally, we expect qualitative benefits from proposed rule. Most generally, we expect the proposed amendments to better meet the overall goals and objectives of the Shoreline Management Act of 1971, bringing the benefit of realizing the Legislature’s intent and the voter’s preference.

As discussed in Chapter 2 and 4, these include but are not limited to:

- Reduced future spending on shoreline stabilization and property protection as sea level rises and storms become more severe,
- Reduced loss of property and business function due to sea level rise and storm severity,
- New, spatially explicit, public information on sea level rise and storm severity,
- More information to Ecology and the public regarding ongoing shoreline development,

⁹⁷ Includes estimated impacts to residential, commercial, multifamily housing and stabilization projects.

- Ensuring public access through language clarity and signage requirements,
- Regulatory clarity, and in some cases increased stringency, regarding other shoreline issues. These include water quality protection, preserving shoreline function, and vegetation conservation. See Section 4.2.5 for greater detail,
- Better documentation of effectiveness of SMPs, including documentation of optimization of SMA principles for Shorelines of Statewide Significance.

We note again that the proposed rule applies only to future new projects and development. As such, costs and benefits would accumulate incrementally over time by project, but at potentially different rates. Costs from the proposed amendments would typically be additive. In other words, the cost from mitigating one project because of proposed amendments would double with an identical second project, all else equal.⁹⁸

Benefits for the same project(s) grow cumulatively each year over time. An illustration would be that the benefits of a mature tree continue each year of its life (shade, lower heating and air conditioning costs, aesthetics), whereas the planting cost occurs only once.⁹⁹

5.2 Conclusion

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

⁹⁸ For illustration. This assumes identical sites and conditions, but independence of the project proponents. There are likely cost savings from economies of scale for all components of developments, including regulatory costs.

⁹⁹ Benefits are also likely non-linear. Extending the scenario; for the second, third, or 100th tree protected, a network of ecological connections provide greater public benefits than the sum of their individual parts. We do not attempt to model those nonlinearities directly.

Chapter 6: Least-Burdensome Alternative Analysis

6.1 Introduction

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

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

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

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

6.2 Goals and objectives of the authorizing statute

The authorizing statute for this rule is Chapter 90.58 RCW, Shoreline Management Act [(SMA)] of 1971. Its goals and objectives are:

- Protect the shoreline environment
- Promote access to public shorelines
- Prioritize uses requiring a shoreline location

- Specifically, RCW 90.58.020 states: “In the implementation of this policy the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally. To this end uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the state's shoreline.”¹⁰⁰

6.3 Alternatives considered and why they were excluded

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

- Require the updating of Shoreline Master Programs (SMPs) every five years
- Modify regulatory requirements pertaining to restoration projects
- Require that local governments update restoration plans and public access plans as part of the periodic review process.
- Allow the GMA’s definitions, housing, and critical areas elements to guide regulations within SMPs.
- Require each local government to independently compile and analyze sea level rise data.
- Require the designation of a Sea Level Rise Hazard Area and new permit application requirements

6.3.1 Requiring the updating of Shoreline Master Programs (SMPs) every five years

We considered requiring five-year check-ins between master program periodic reviews.

This alternative would have been more burdensome on covered parties.

The authorizing statute does not contemplate this level and frequency of implementation reporting. The Growth Management Act (GMA) provides this five-year check-in directly in statute as part of its periodic update schedule. Adding this five-year check-in to the SMP update schedule would require additional technical assistance, guidance, department staff, local government capacity, and funding. RCW 90.58.080(4) requires that master programs go through a periodic review once every ten years; adding another obligation outside the statutory schedule would impose excess burden on local governments relative to the statutory direction.

¹⁰⁰ [RCW 90.58.020](https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.020); <https://app.leg.wa.gov/RCW/default.aspx?cite=90.58.020>

6.3.2 Modify regulatory requirements pertaining to restoration projects

We considered revisiting the restoration relief language (WAC 173-27-215) to ensure that restoration projects are effectively prioritized and promoted through regulatory relief due to landward shifts in the ordinary high water mark (OWHM) and hence shoreline jurisdiction. The process and documentation required to obtain relief from the local government is onerous and complex and does not provide sufficient assurance for property owners to advance restoration projects, which often carry substantial financial risk. For example, the relief requested must have a direct nexus to the regulatory hardship; it does not provide relief from all shoreline regulatory requirements introduced by the landward movement of the OWHM. When applied to a property with no precise plans for development or redevelopment, this can be impossible to articulate and can introduce sufficient risk of property value loss due to changes in buffers and setbacks that restoration projects do not advance.

This alternative would have failed to meet the goals and objectives of the authorizing statute.

The authorizing statute, RCW 90.58.580, establishes this relief mechanism along with the process and criteria for meeting the relief allowances. There is insufficient evidence to support that further expanding upon the statutory language in RCW 90.58.580 would meet the goals and objectives of the authorizing statute.

6.3.3 Require that local governments update restoration plans and public access plans as part of the periodic review process.

We considered requiring local governments to update restoration plans and public access plans as part of the periodic review process.

This alternative would have been more burdensome on covered parties.

Updating the non-regulatory shoreline restoration plans and optional public access plans as part of master program periodic reviews would be a significant undertaking, especially while local governments are addressing the impacts of sea level rise and incorporating the statutory and rule language changes into their master programs. This work could also be duplicative of many other federal, state, and regional restoration planning efforts such as watershed planning, salmon recovery plans, and kelp and eelgrass recovery plans. This new information and improved data can be reviewed and used for shoreline planning without having to update the master program restoration plans. Requiring updates to restoration plans and public access plans would be more burdensome to local governments.

6.3.4 Allow the GMA's definitions, housing, and critical areas elements to guide regulations within SMPs.

We considered aligning the new rules with the Growth Management Act (GMA, chapter 36.70A RCW) housing element requirements, allow incorporation by reference of critical area

ordinances adopted under the GMA, and rely on GMA and Commerce rules for definitions used in master programs, and maintaining consistency with GMA requirements and terminology.

This alternative would have failed to meet the goals and objectives of the authorizing statute.

The authoring statute has authorities, purpose, policies, goals, and objectives that are separate and distinct from the Growth Management Act. RCW 90.58.610, RCW 36.70A.480, and RCW 36.70A.481 establish the relationship between the SMA and GMA and how critical areas are to be protected under the SMA. Additionally, some of our local governments with master programs are only partially planning under the GMA and not subject to many of the GMA planning goals and objectives, but they are required by the SMA to adopt and periodically review their master program. The SMA has only three major policy objectives: protection of shoreline ecological function, promoting public access, and fostering water-oriented uses. Relying so heavily on GMA and implementing the GMA elements within shoreline jurisdiction would not meet the goals and objects of the SMA.

6.3.5 Require each local government to independently compile and analyze sea level rise data.

We considered requiring each local government to individually compile sea level rise and spatial data to inform sea level rise policies and regulations.

We received feedback on the preliminary draft highlighting concerns with funding shortfalls, a lack of local capacity and expertise to complete this work, and time constraints for the upcoming period review cycle.

For these reasons , we determined that this alternative would have been more burdensome to covered parties.¹⁰¹

6.3.6 Require the designation of a Sea Level Rise Hazard Area and new permit application requirements

We considered a requirement to designate a Sea Level Rise Hazard Area as part of proposed section WAC 173-26-246 and included permit application requirements for projects in the Sea Level Rise Hazard Area section for chapter 173-27.

We determined that this alternative would have been more burdensome to covered parties, as it did not provide the necessary flexibility for local governments to address the various hazards

¹⁰¹ We determined that the least burdensome alternative would be for Ecology to compile and provide technical assistance materials and spatial data to local governments. These materials and data will be the base information for each local government's assessment, analysis, policy, and regulatory review (see Section 2.3.1 for additional discussion of the proposed amendment).

associated with sea level rise and the variety of shorelines that will be subject to these hazards.¹⁰²

6.4 Conclusion

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

¹⁰² See Section 2.3.1 for additional discussion

Chapter 7: Regulatory Fairness Act Compliance

7.1 Introduction

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

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

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

7.2 Analysis of relative compliance cost burden

A portion of future development subject to rule amendments would be completed by individuals and local governments. However, some businesses, including small businesses, could also be affected in the future across two general categories. The first are the businesses themselves located or proposed to be located in the shoreline area. These might range from restaurants to office buildings, industrial facilities, and warehouses. The second are general contractors, subcontractors, landscapers, engineers, and other industries supporting the construction, expansion, or redevelopment of any development potentially affected by the rule.

As with other components of this analysis, our ability to describe impacts is limited by not knowing what will be developed in the future and by whom. To provide an illustration, however, we again leverage available data on current shoreline development and assume similar annual average by use and types would persist into the future. We hand coded organization names in the data that appeared to be a business, rather than a private individual or government entity.¹⁰³

Based on this exercise, we found that among 350 permits received annually on average across all uses and development types, 41 or roughly 13% were listed as business organizations.

¹⁰³ Time and resources only allowed for the coding of development that held a substantial development permit.

However quality within the field used to identify business is inconsistent. It was not always clear whether applicants had populated this information with the business being developed or a company or companies performing work, both, or neither (e.g. providing individual names despite work being performed on or by a company). Regardless of the project owner, it is likely that all substantial shoreline projects are primarily performed by contracted labor rather than by individuals, even if it is an individual listed as the applicant.

We also attempted to obtain information about business sizes (e.g., employment, sales) by cross referencing the proprietary business database Dunn and Bradstreet. This exercise returned a only small fraction of employment information for known commercial entities due to poor match quality with organization names in our development data. Given the litany of data limitations, we do not attempt to describe employment counts for the largest 10 percent of businesses impacted, nor the average employee count for firms with less than 50 employees.

While some cost associated with the rule amendments might scale with the size (and footprint) of a business, it is reasonable to expect that that the largest firms involved in shoreline development would face disproportionately lower per-employee cost impacts than the smallest firms. This could be due to larger firms employing more individuals by area or being more likely to have ongoing non-shoreline projects to distribute the cost impacts across at the highest owner operator level.

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

7.3 Action taken to reduce small business impacts

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

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

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

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

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

The substantive regulatory requirements, for example, planning for sea level rise, were not relaxed as that would not have met the goals and objectives of the statute. Likewise, reporting and record keeping are critical in meeting the statutory requirements. The benefits of options chosen to lessen the rule’s impact would fall mostly on local jurisdictions. The option of not having five-year check-ins would be an example of this.

Finally, we included the following elements in the proposed rule amendments to reduce costs to small businesses.

DISCUSSION OF MITIGATION ACTIONS

Mitigation actions were aimed at local jurisdictions that the proposed rule would directly impact. It is unclear whether these mitigative actions would filter down to small businesses. These actions were:

- Not requiring check-ins with Ecology on SMP implementation every five years; see Section 6.3.1
- Not requiring local governments to update restoration plans and public access plans as part of this periodic review process; see Section 6.3.3.

Some additional mitigation actions are likely more relevant to small businesses. We added greater specificity around the requirements for shoreline armoring and nature-based solutions projects, and as described above, are providing the minimum necessary data to inform local sea level rise planning. These two changes may provide greater consistency for small businesses operating across multiple jurisdictions, which may reduce their operating costs. In addition, small businesses that support water-dependent and water-oriented uses continue to be fostered and supported by the rules; this is unchanged by the rule proposal.

7.4 Small businesses and government involvement

We involved the general public, local governments, and other interested parties in development of the proposed rule amendments. Opportunities for the general public were open to and may have included small business representatives. These efforts are summarized in the table below.

Table 8: Summary of outreach efforts in development of the proposed rule.

Audience	Approximate Count	Description
General Public	35	Webinars, presentations, listening sessions, requested meetings, virtual open houses

Audience	Approximate Count	Description
Local Government	18	Sounding board meetings, presentations, requested meetings
Tribes & Tribal Organizations	21	Listening sessions, informational meetings, requested meetings
Overburdened Communities	6	Listening session, virtual open houses
State Agencies	45	Meetings, coordination calls
All Interested Parties	16	GovDelivery quarterly update newsletters and additional bulletins

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

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

Business associated with construction or expansion of shoreline development (contracted labor):

- 236115 New Single-Family Housing Construction (except For-Sale Builders)
- 562991 Septic Tank and Related Services, Septic tank cleaning services
- 561730 Landscaping Services, Landscape care and maintenance services
- 541360 Geophysical Surveying and Mapping Services Mapping services, geophysical

Businesses with a shoreline location, most likely those featuring water dependent or oriented uses:

- 72 Accommodation and Food Services
- 71 Arts, Entertainment, and Recreation
- 44-45 Retail Trade
- 53 Real Estate and Rental and Leasing

7.6 Loss of sales or revenue and impacts on jobs

Businesses that would incur costs could experience reduced sales or revenues if the proposed rule amendments significantly affect the prices of the goods they sell. The degree to which this

could happen is strongly related to each business's production and pricing model (whether additional lump-sum costs would significantly affect marginal costs), as well as the specific attributes of the markets in which they sell goods, including the degree of influence each firm has on market prices, as well as the relative responsiveness of market demand to price changes. Finally, overall shifts in economic activity in the state, including competition within markets and attributes of the labor market simultaneously adjust in response to changes in compliance costs.

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

The direct impacts of the proposed amendments would fall on local jurisdictions when they conduct the next scheduled periodic review of their SMPs. The requirements imposed on property owners and contractors, the costs of which we estimated in Chapter 3, would vary by local implementation requirements. These costs may filter through the broader economy. However, the relatively small size of the estimated costs in this analysis, and the uncertainty associated with their distribution, combined with the variation expected in local requirements, prevent us from attempting an overall economic impact analysis. (The estimated annual costs constitute around 0.001 percent of the state's estimated 2025 GDP.¹⁰⁴)

¹⁰⁴ Per U.S. Bureau of Economic Analysis, Washington's GDP in 2025 was \$895 billion.

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Appendix A: Administrative Procedure Act (RCW 34.05.328) Determinations

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

See Chapter 6 of the regulatory analysis.

The authorizing statute for this rulemaking is chapter 90.58 RCW, Shoreline Management Act.

Authorizing statute purpose and intent: The Shoreline Management Act, [chapter 90.58 RCW](#), requires coordinated planning for and the regulation of development along Washington's shorelines to achieve environmental protection, provide public access, and promote water-oriented uses.

Goals: The Shoreline Management Act (SMA) was enacted in 1971 and adopted by the voters in 1972 to manage and protect the shorelines of the state by regulating development in the shoreline area. A major goal of the SMA is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines" ([RCW 90.58.020](#)).

Ecology's role: To accomplish this, the SMA establishes a state-local partnership for the development, periodic review, and implementation of approximately 250 locally tailored and adopted Shoreline Master Programs (SMPs), which are subject to approval by the Department of Ecology. Each SMP is the local expression of the policies and goals of the SMA tailored to community needs but consistent with the SMA and state guidelines found in chapter 173-26 WAC. The cumulative total of all master programs approved or adopted by the Department of Ecology are the state master program.

The primary responsibility for administering this regulatory program is assigned to local governments. The Department of Ecology plays a significant oversight role with the authority to adopt rules for the adoption of, the policy and regulatory content of, and the administration system for permitting and enforcement of master programs. These SMA rules are contained in chapters 173-27 and 173-26 WAC. In addition, the waterbodies and adjacent upland areas subject to the SMA and applicable master programs are contained within chapters 173-18, 173-20, and 173-22.

Ecology's rulemaking authority:

[RCW 90.58.200](#) authorizes Ecology to adopt such rules as are necessary and appropriate to carry out the provisions of the chapter.

[RCW 90.58.060](#) specifically authorizes and directs Ecology to periodically review and adopt rules to implement the SMA.

(1) *The department shall periodically review and adopt guidelines consistent with RCW [90.58.020](#), containing the elements specified in RCW [90.58.100](#) for:*

(a) Development of master programs for regulation of the uses of shorelines; and

(b) Development of master programs for regulation of the uses of shorelines of statewide significance.

(3) *The department may adopt amendments to the guidelines not more than once each year. Such amendments shall be limited to:*

(a) Addressing technical or procedural issues that result from the review and adoption of master programs under the guidelines; or

(b) issues of guideline compliance with statutory provisions.

Specific objectives of the statute (SMA) that this rule implements.

Shoreline master program implementation: Permitting, compliance, and enforcement.

[RCW 90.58.020](#) provides, in part:

Permitted uses in the shorelines of the state shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water.

[RCW 90.58.140](#) Development permits—Grounds for granting— Administration by local government, conditions—Applications—Notices— Rescission—Approval when permit for variance or conditional use, provides, in part:

A development shall not be undertaken on the shorelines of the state unless it is consistent with the policy of this chapter and, after adoption or approval, as appropriate, the applicable guidelines, rules, or master program.

The local government shall establish a program, consistent with rules adopted by the department, for the administration and enforcement of the permit system provided in this section. The administration of the system so established shall be performed exclusively by the local government.

[RCW 90.58.210](#), [-220](#), and [-230](#) provide the framework for civil penalty, general penalty, the liability of violators for damage resulting from violations.

Critical areas protection in shoreline areas.

[RCW 90.58.610](#) and [RCW 36.70A.480](#) establish the relationship between the SMA and the Growth Management Act (GMA) under chapter 36.70A RCW.

The legislature intends that critical areas within the jurisdiction of the shoreline management act shall be governed by the shoreline management act and that critical areas outside the jurisdiction of the shoreline management act shall be governed by the growth management act.

The policies, goals, and provisions of chapter [90.58](#) RCW and applicable guidelines shall be the sole basis for determining compliance of a shoreline master program with this chapter except as the shoreline master program is required to comply with the internal consistency provisions of [RCW 36.70A.070](#), [36.70A.040\(4\)](#), [35.63.125](#), and [35A.63.105](#).

Shoreline master programs shall provide a level of protection to critical areas located within shorelines of the state that assures no net loss of shoreline ecological functions necessary to

sustain shoreline natural resources as defined by department of ecology guidelines adopted pursuant to RCW [90.58.060](#).

Shoreline master program amendments.

[RCW 90.58.090](#) establishes the master program approval procedures

A master program, segment of a master program, or an amendment to a master program shall become effective when approved by the department as provided in subsection (7) of this section. Within the time period provided in RCW [90.58.080](#), each local government shall have submitted a master program, either totally or by segments, for all shorelines of the state within its jurisdiction to the department for review and approval.

[RCW 90.58.080](#)(4) establishes the timeline, process, and content requirements for SMP periodic reviews.

Local governments shall conduct a review of their master programs at least once every 10 years as required by (b) of this subsection. Following the review required by this subsection (4), local governments shall, if necessary, revise their master programs. The purpose of the review is:

To assure that the master program complies with applicable law and guidelines in effect at the time of the review; and

To assure consistency of the master program with the local government's comprehensive plan and development regulations adopted under chapter [36.70A](#)

In 2023, the legislature also amended this statute, expanding the SMP periodic review schedule to 10 years and updating due dates.

[RCW 90.58.100](#) establishes the master program amendment process and content requirements.

No net loss of shoreline ecological functions.

[RCW 90.58.020](#), the policy of the SMA, provides:

The legislature finds that the shorelines of the state are among the most valuable and fragile of its natural resources and that there is great concern throughout the state relating to their utilization, protection, restoration, and preservation.

[RCW 90.58.100](#)(2)(f) provides that each master program shall contain:

A conservation element for the preservation of natural resources, including but not limited to scenic vistas, aesthetics, and vital estuarine areas for fisheries and wildlife protection;

Sea level rise and storm severity.

[RCW 90.58.630](#) - Shoreline master programs—Impact of sea level rise and storm severity.

In 2023, the state legislature directed Ecology to update these guidelines to require local SMPs to address the “impact of sea level rise and increased storm severity on people, property, and shoreline natural resources and the environment.”

Shoreline modifications and stabilization.

Shoreline modifications, including shoreline stabilization, are actions and developments that are subject to the applicable master program.

RCW 90.58.020, the policy of the SMA, provides:

The legislature finds that the shorelines of the state are among the most valuable and fragile of its natural resources and that there is great concern throughout the state relating to their utilization, protection, restoration, and preservation.

In addition it finds that ever increasing pressures of additional uses are being placed on the shorelines necessitating increased coordination in the management and development of the shorelines of the state.

The legislature further finds that much of the shorelines of the state and the uplands adjacent thereto are in private ownership; that unrestricted construction on the privately owned or publicly owned shorelines of the state is not in the best public interest; and therefore, coordinated planning is necessary in order to protect the public interest associated with the shorelines of the state while, at the same time, recognizing and protecting private property rights consistent with the public interest.

In the implementation of this policy the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally. To this end uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the state's shoreline. Alterations of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for single-family residences and their appurtenant structures, ports, shoreline recreational uses including but not limited to parks, marinas, piers, and other improvements facilitating public access to shorelines of the state, industrial and commercial developments which are particularly dependent on their location on or use of the shorelines of the state and other development that will provide an opportunity for substantial numbers of the people to enjoy the shorelines of the state.

RCW 90.58.100(6) requires that each master program include standards governing the protection of single-family residences against damage or loss due to shoreline erosion.

The standards shall govern the issuance of substantial development permits for shoreline protection, including structural methods such as construction of bulkheads, and nonstructural methods of protection.

The standards shall provide for methods which achieve effective and timely protection against loss or damage to single-family residences and appurtenant structures due to shoreline erosion.

The standards shall provide a preference for permit issuance for measures to protect single-family residences occupied prior to January 1, 1992, where the proposed measure is designed to minimize harm to the shoreline natural environment.

Shorelines of statewide significance.

RCW 90.58.020, the policy of the SMA, provides:

The legislature declares that the interest of all of the people shall be paramount in the management of shorelines of statewide significance. The department, in adopting guidelines for shorelines of statewide significance, and local government, in developing master programs for shorelines of statewide significance, shall give preference to uses in the following order of preference which:

Recognize and protect the statewide interest over local interest;

Preserve the natural character of the shoreline;

Result in long term over short term benefit;

Protect the resources and ecology of the shoreline;

Increase public access to publicly owned areas of the shorelines;

Increase recreational opportunities for the public in the shoreline;

Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary.

[RCW 90.58.090](#)(5) provides that Ecology

shall approve those segments of the master program relating to shorelines of statewide significance only after determining the program provides the optimum implementation of the policy of this chapter to satisfy the statewide interest.

RCW 34.05.328(1)(b):

Determine that the rule is needed to achieve the general goals and specific objectives of the statute. See chapters 1 and 2.

This proposed rulemaking considers revisions to Chapters 173-18, -20, -22, -26, and -27 under the Shoreline Management Act (chapter 90.58 RCW).

We are reviewing and revising sections of chapters **173-18 and -20 WAC** to reflect streams, rivers, and lakes identified in completed shoreline master program updates and revising Chapter **173-22 WAC** to clarify designations of shorelands and wetlands associated with shorelines of the state for consistency with **RCW 90.58.020**:

Alterations of the natural condition of the shorelines and shorelands of the state shall be recognized by the department. Shorelines and shorelands of the state shall be appropriately classified and these classifications shall be revised when circumstances warrant regardless of whether the change in circumstances occurs through man-made causes or natural causes. Any areas resulting from alterations of the natural condition of the shorelines and shorelands of the state no longer meeting the definition of “shorelines of the state” shall not be subject to the provisions of chapter 90.58 RCW.

Revise permitting, compliance, and enforcement provisions within **chapter 173-27 WAC** for consistency with **RCW 90.58.020, RCW 90.58.140, RCW 90.58.210, RCW 90.58.220, and RCW 90.58.230.**

Revisions throughout chapter 173-27 WAC clarify requirements to achieve better compliance with the SMA and local SMPs. Permit transmittal data sheets are updated to better inform the

compliance feedback loop. We clarified the situations where development is exempt from a substantial development permit and added a new requirement for local governments to transmit exemptions to Ecology. We added specificity around the review and approval criteria for the different types of shoreline permits. We added new sections addressing the following:

Overview of the required shoreline permitting system & permit types

Clarification around the process for administrative interpretations

Monitoring, evaluation, and adaptive management requirements for local governments to assess master program implementation and inform changes to improve shoreline management over time

Clarification of enforcement authorities under the Shoreline Management Act and inclusion of new tools related to enforcement orders, liability, and rescissions.

Amendments to **chapter 173-26 WAC** are needed for consistency with **RCW 90.58.020, RCW 90.58.080, RCW 90.58.090, RCW 90.58.100, RCW 90.58.610, and RCW 90.58.630:**

Added requirements for local governments to address the impact of sea level rise and increased storm severity on people, property, and shoreline natural resources and the environment, and

Addressed issues that we have identified through the review, adoption, and implementation of shoreline master programs (SMPs). These revisions provide clarity around SMP amendment procedures, critical areas protection, no net loss of shoreline ecological functions, shoreline modifications, and shorelines of statewide significance.

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

Ecology believes the proposed rule amendments are necessary to achieve the statutory purpose, goals, and objectives of the Shoreline Management Act more effectively and efficiently. However, we did consider a no-action alternative for the rulemaking as a whole and the following alternatives actions and rule content for each significant proposed rule amendment topic. We considered but did not take these actions or include these amendments for the reasons discussed in each section below:

Alternative 1: A no-action alternative, not proposing the rule (status quo).

The authorizing statute requires Ecology to write rules for master programs to address the impact of sea level rise and increased storm severity. Failing to include these provisions in a rulemaking would fail to achieve this clear direction and objective of the SMA.

This alternative would not address the requirements of RCW 90.58.060 for Ecology to *periodically review and adopt guidelines consistent with RCW 90.58.020 to address technical and procedural issues that result from the review and adoption of master program and issues of guideline compliance with statutory provisions.*

The authorizing statute provides a master program periodic review cycle which local jurisdictions are required to complete at least once every ten years according to a staggered schedule set by statute (RCW 90.58.080(4)(a)). The next periodic review deadlines begin in 2029.

Without the proposed rule, this next update cycle will not address the clarifications, shorelines of statewide significance policy, critical areas protections, or no net loss of shoreline ecological function improvements and could result in less than optimal implementation of the SMA.

Alternative 2: Adding only the new section that addresses the impacts of sea level rise and increased storm severity.

This alternative would implement the requirements of RCW 90.58.630,

This alternative would not address the requirements of RCW 90.58.060 for Ecology to *periodically review and adopt guidelines consistent with RCW 90.58.020 to address technical and procedural issues that result from the review and adoption of master program and issues of guideline compliance with statutory provisions.*

Alternative content: Below, we describe options we considered for different approaches to addressing the statutory requirements of RCW 90.58.630 and RCW 90.58.060 for several topic areas.

Alternative 3: content for addressing the impacts of sea level rise and increased storm severity.

A. In our preliminary draft we proposed requiring each local government to individually compile sea level rise and asset spatial data.

We received feedback on the preliminary draft highlighting concerns with funding shortfalls, a lack of local capacity and expertise to complete this work, and time constraints for the upcoming period review cycle.

As a result, we determined that the least burdensome alternative would be for Ecology to compile and provide technical assistance materials and spatial data to local governments. These materials and data will be the base information for each local government's assessment, analysis, policy, and regulatory review.

B. We also proposed, in the preliminary draft, a requirement to designate a Sea Level Rise Hazard Area as part of proposed section WAC 173-26-246 and included permit application requirements for projects in the Sea Level Rise Hazard Area section for chapter 173-27.

We ultimately determined that this approach could be overly burdensome to the regulated community and did not provide the necessary flexibility for local governments to address the various hazards associated with sea level rise and the variety of shorelines that will be subject to these hazards. We are instead providing options for the spatially explicit regulatory tools a local government may choose to apply to manage areas exposed to sea level rise, such as establishing a critical area or updating their environment designations.

Alternatives to the rulemaking scope and content clarifying the SEPA process for master program amendments and shoreline permits, reorganization of several sections to separate master program periodic reviews from locally initiated amendments, and to combine critical areas protection provisions with new no net loss of shoreline ecological functions section.

We provided preliminary drafts of possible proposed rule language that included these topics.

Comments received and feedback provided during our preliminary comment period suggested that these provisions were unnecessary and that the reorganizations proposed were causing confusion. We decided to not include these actions in this rulemaking.

Not including additional provisions addressing shorelines of statewide significance.

Our preliminary draft did not include additional clarification around shorelines of statewide significance. However, as a result of Tribal comments and feedback, the CR-102 proposal includes additions to WAC 173-26-251, WAC 173-26-090, and WAC 173-26-186(11).

We determined these changes were necessary for consistency with RCW 90.58.020.

We established a new requirement that local governments document how they are optimizing the policies of the SMA for shorelines of statewide significance at each periodic review. We also added provisions establishing the state's interest and the public interest in shoreline management and clarified how master programs need to address shorelines of statewide significance pursuant to RCW 90.58.020.

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

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

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

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

This rulemaking improves compliance with the following policy of the SMA (RCW 90.58.020), in the public and statewide interest:

It is the policy of the state to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses. This policy is designed to insure the development of these shorelines in a manner which, while allowing for limited reduction of rights of the public in the navigable waters, will promote and enhance the public interest. This policy contemplates protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary rights incidental thereto.

The legislature declares that the interest of all of the people shall be paramount in the management of shorelines of statewide significance.

Permitted uses in the shorelines of the state shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water.

Benefits:

Clarity of expectation for local governments completing master program periodic reviews.

Addressing the impact of sea level rise and increased storm severity within master programs through a planning process provides for locally informed master program policies and regulations.

Improved permitting, compliance, and enforcement procedures for local governments and shoreline property owners.

Improved protection of critical areas in shoreline jurisdiction and more effectively achieve no net loss of shoreline ecological function.

See Chapters 1–5.

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

Yes, See Chapter 6.

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

This rulemaking will not require those to whom it applies to take an action that violates requirements of another federal or state law. There are no other federal or state agencies that administer the Shoreline Management Act and no other rules that implement it.

Many of the local governments that adopt and administer shoreline master programs are also subject to the Growth Management Act under chapter 36.70A RCW, but the relationship between these two state laws is clearly defined within RCW 90.58.610, RCW 36.70A.480 and RCW 36.70A.481.

Many of the local governments that adopt and administer shoreline master programs also participate in the National Flood Insurance Program, but this rulemaking is intended to clarify how these authorities are separate by no longer encouraging or allowing the incorporation by reference of flood development regulations into master programs.

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

The rule does not impose more-stringent performance requirements on private entities than on public entities. The rules within chapter 173-26 WAC apply to all local governments with shorelines of the state within their jurisdictional boundaries. Once adopted at the local level and approved at the state level by Ecology, these master programs are applied equally to all entities. Any entity, private or public, must adhere to the SMA, the master programs adopted consistent with these rules, and the permitting system contained within chapter 173-27 WAC.

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

No, there are no other federal regulations or statutes that regulate the new uses and developments in the same manner as the SMA and these proposed rules, and there are no other federal or state agencies that administer the SMA.

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

☐ (i) A state statute explicitly allows Ecology to differ from federal standards. [If checked, provide the citation included quote of the language.]

☐ (ii) Substantial evidence that the difference is necessary to achieve the general goals and specific objectives stated in Chapter 6.

[If checked, explain.]

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

The Shoreline Management Act is not implemented with any other federal or state agencies or laws. However, we will continue to coordinate with state agencies that have specific expertise in critical area protections, including the Department of Fish and Wildlife and the Department of Natural Resources' Washington Geological Survey, as well as other Ecology programs and units with expertise in flood plain, wetlands, and water quality. Additionally, the scope of the rule includes ensuring that master programs are coordinated with local growth management plans and regulations under the Growth Management Act consistent with the requirements of RCW 90.58.610, RCW 36.70A.480 and RCW 36.70A.481.