DEPARTMENT OF
ECOLOGY
State of Washington

Washington Coastal Zone Management

Section 309 Assessment & Strategy, 2021-2025

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This report is available on the Department of Ecology's website at
http://www.ecy.wa.gov/programs/sea/czm/Grants.html
http://www.ecy.wa.gov/programs/sea/czm/309-improv.html

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Contents

Glossary

Common Terms

ADA	Americans with Disabilities Act
APC	Areas of Particular Concern
CAOs	Critical Areas Ordinances
CoSMoS	Coastal Storm Modeling System
CSI	cumulative and secondary impacts
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
CZMP	Coastal Zone Management Program
EIS	Environmental Impact Statement
ESA	Endangered Species Act
GLD	Geographic Location Description
GMA	Growth Management Act
HABs	Harmful algal blooms
HMA	Hazard Mitigation Assistance
ISUs	Important, Sensitive, and Unique habitats
MSP	Marine Spatial Plan
NEPA	National Environmental Policy Act
NGO	Non-governmental organization
ORMA	Ocean Resources Management Act
RAD	Washington Coast Resilience Action Demonstration
RiskMAP	Risk Mapping, Assessment, and Planning Program
SAMP	Special Area Management Plans
SEHMP	State Enhanced Hazard Mitigation Plan
SEPA	State Environmental Policy Act
SMA	Shoreline Management Act
SMP	Shoreline Master Program
WCZMP	Washington Coastal Zone Management Program

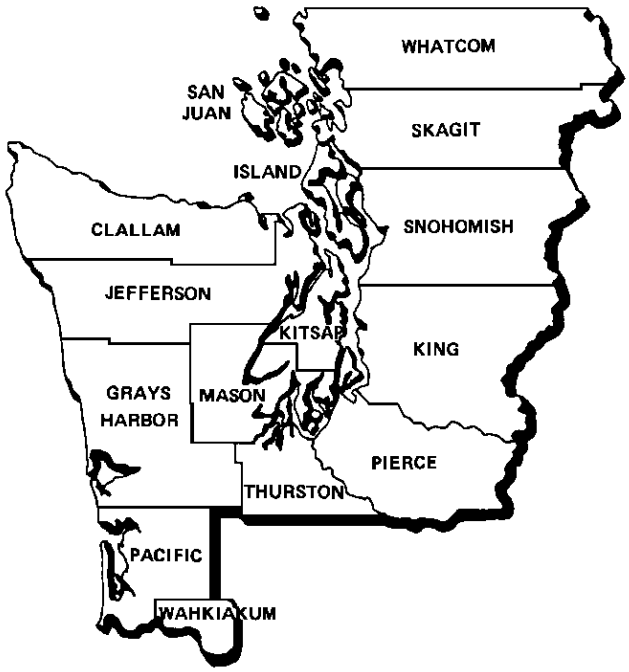
Agencies and Organizations

BOEM	Bureau of Ocean Energy Management
CHRN	Coastal Hazards Resilience Network
COG	Council of Governments
COHORT	Coastal Hazards Organizational Resilience Team
EFSEC	Washington State Energy Facility Site Evaluation Council
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
IPC	Intergovernmental Policy Council
NANOOS	Northwest Association of Networked Ocean Observing Systems
NCCOS	National Centers for Coastal Ocean Science
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NWIFC	Northwest Indian Fisheries Commission
OCM	NOAA's Office for Coastal Management
OCNMS	Olympic Coast National Marine Sanctuary
OCNMSAC	Olympic Coast National Marine Sanctuary Advisory Council
OFM	Office of Financial Management
SHB	Shoreline Hearings Board
SOC	State Ocean Caucus
USFWS	U.S. Fish and Wildlife Service
WA EMD	Washington Emergency Management Division
WCMAC	Washington Coastal Marine Advisory Council
WDFW	Washington Department of Fish and Wildlife
SOC	Washington State Ocean Caucus
USACE	U.S. Army Corps of Engineers
USDA/WSDA	U.S. Department of Agriculture/Washington State Department of Agriculture
USFWS	United State Fish and Wildlife Service
USGS	U.S. Geologic Survey
WCC	Washington State Conservation Corps
WDFW	Washington Department of Fish and Wildlife
WEC	Washington Environmental Council
WRIA	Washington Water Resource Inventory Areas
WSCC	Washington State Conservation Commission
WSDOT	Washington State Department of Transportation

Introduction

Washington is one of thirty-four states that participate in the nation-wide Coastal Zone Management Program (CZMP), established under the Coastal Zone Management Act of 1972 (CZMA). The CZM program is a voluntary state-federal partnership which encourages states to adopt their own management programs in order to meet the federal goals of protection, restoration, and appropriate development of coastal zone resources.

Washington became the first state to achieve a federally-approved state CZM Program in 1976. Washington's CZM Program (WCZMP)[1] is based primarily upon our Shoreline Management Act (SMA) of 1971,[2] as well as other state land use and resource management laws. The WCZMP applies to the fifteen coastal counties.



Washington State's federally approved Coastal Zone Program applies to the fifteen coastal counties and extends from the shoreline seaward three nautical miles. Federal and tribal lands are excluded.

The Office for Coastal Management (OCM) of the National Oceanic and Atmospheric Administration (NOAA) administers the CZMA. The Coastal Zone Management Section 309 Enhancement Grants Program was established by Congress in its 1990 reauthorization of the CZMA, and expanded in its 1995 reauthorization. Congress has set aside special funding to encourage the states to make improvements to their federally approved coastal zone management programs in one or more of nine specific improvement areas:

1. Protection, restoration, or enhancement of the existing ***coastal wetlands*** base, or creation of new coastal wetlands.
2. Preventing or significantly reducing threats to life and destruction of property by eliminating development and redevelopment in ***coastal high hazard areas***, managing development in other hazard areas, and anticipating and managing the effects of potential sea level rise.
3. Attaining increased opportunities for ***public access***, taking into account current and future public access needs, to coastal areas of recreational, historical, aesthetic, ecological, or cultural value.

[1] For more information on the Washington Coastal Program: http://www.ecy.wa.gov/programs/sea/czm/prgm.html
[2] Shoreline Management Act of 1972 (RCW 90.58): http://apps.leg.wa.gov/rcw/default.aspx?cite=90.58

4. Reducing ***marine debris*** entering the Nation's coastal and ocean environment by managing uses and activities that contribute to the entry of such debris.
5. Development and adoption of procedures to assess, consider, and control ***cumulative and secondary impacts of coastal growth and development***, including the collective effect on various individual uses or activities on coastal resources, such as coastal wetlands and fishery resources.
6. Preparing and implementing ***special area management plans*** for important coastal areas.
7. Planning for the use of ***ocean resources***.
8. Adoption of procedures and enforceable policies to help facilitate the ***siting of energy and government facilities***, which may be of greater than local significance.
9. Adoption of procedures and policies to evaluate and facilitate the siting of public and private **aquaculture facilities** in the coastal zone, which will enable States to formulate, administer, and implement strategic plans for marine aquaculture.

Every five years, states and territories are encouraged to conduct self-assessments of their coastal management programs to determine problems and enhancement opportunities within each of the nine enhancement areas—and to assess the effectiveness of existing management efforts to address identified problems. Each coastal management program identifies high priority management issues as well as important needs and information gaps the program must fill to address those issues.

Federal law and regulation strictly define activities that are eligible for Section 309 funding.[3] In addition to using the funds to develop the assessment and strategy, or to revise the assessment and strategy as needed during the five-year cycle, Section 309 funds can be used to carry out strategies, development and submission of program changes, and for implementation of program changes.

A program change is a change to a state's or territory's federally-approved coastal management program. As defined by the OCM, program changes include the following:

1. A change to coastal zone boundaries;
2. New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
3. New or revised local coastal programs and implementing ordinances;
4. New or revised coastal land acquisition, management, and restoration programs;

[3] Coastal Zone Management Act 1972: http://coast.noaa.gov/czm/act/sections/?redirect=301ocm

5. New or revised Special Area Management Plans (SAMP) or plans for Areas of Particular Concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,
6. New or revised guidelines, procedures and policy documents which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government and other agencies that will result in meaningful improvements in coastal resource management.

Section 309 funds can also be used to implement Section 309 program changes. Implementation activities include administrative actions to carry out and enforce program change policies, authorities, and other management techniques, including the development, collection, and analysis of measurable management objectives and performance measures. All implementation activities are described in the strategy and must meet the following general requirements:

- Advance the objectives of a high priority 309 enhancement area for the CZMP
- Relate to at least one 309 program change identified in an approved strategy
- Demonstrate cost effectiveness and technical soundness

It is also important to note, Section 309 priorities do not directly determine the overall goals of the WCZMP, but rather supplement them. Federal rules and policies for implementation of the 309 Program require identification of one or more improvement areas in which a state will be eligible to receive grants. Therefore, the strategies contained in this document should not be taken to be the sole priorities of the WCZMP, but rather those priorities identified that fit within the constraints of the Section 309 program.

Allocation of Section 309 Funds & State Budget

There are two types of Section 309 funding: weighted formula and competitive projects of special merit.

Weighted Formula Funding

Weighted formula (or base) funding intended to provide a predicable level of funding over the multi-year strategy period to achieve core milestones. The Office for Coastal Management (OCM) allocates weighted formula funding to CZMPs according to the size of their coastal population and length of shoreline. During the 2016-2020 Program Enhancement cycle, Washington received an allocation of $458,000 annually. Weighted formula funding is predictable and best used for supporting the basic functions necessary to achieve the core strategy milestones. Therefore, the WCZMP uses this source to fund portions of approximately 10-15 staff annually, depending on the activities that will be completed under the 309 strategies.

Projects of Special Merit

Funding for projects of special merit is intended to offer CZMPs the opportunity to develop innovative projects that will further the approved enhancement area strategies within

identified areas of national importance. Projects of special merit funding is competitive and shall not be dependent on long-term levels of funding to succeed. During the 2016-2020 Program Enhancement cycle, Washington received the following project of special merit awards:

- Federal fiscal year 2019 ($250,000) "Washington Coast Resilience Action Demonstration Project."
- Federal fiscal year 2018 ($187,603) "Ensuring Effective Implementation of the Marine Spatial Plan for Washington's Pacific Coast."
- Federal fiscal year 2015 ($179,994) "Supporting Successful Local Shoreline Master Programs in Washington's Coastal Zone Using Oblique Aerial Photography."[4]

[4] Washington Oblique Aerial Photography (2017). Washington State Department of Ecology: https://fortress.wa.gov/ecy/publications/SummaryPages/1706026.html

History of Section 309 Efforts

Since the inception of the CZM Section 309 Improvement Grants Program in 1990, Washington has participated in all six enhancement cycles. Each round includes a collaborative self-assessment to determine problems and enhancement opportunities within each of the nine enhancement areas – and to assess the effectiveness of existing management efforts to address identified problems. The WCZMP then works with OCM to identify high priority management issues as well as important needs and information gaps the program must fill to address these issues.

This chapter summarizes Washington's past 309 Program efforts. The following table includes the prioritization of enhancement areas for the WCZMP from 1992-2025. Due to Legislative mandates and increasing growth and development of our shorelines, the greatest emphasis of these efforts has been updating the implementation of Washington's SMA, which continues to be a high priority for the WCZMP. Final Section 309 Assessment and Strategy documents for each of these rounds can be found on Ecology's Coastal Zone Management website.[5]

[5] Washington Coastal Program Section 309: http://www.ecy.wa.gov/programs/sea/czm/309-improv.html

History of WCZMP Priority Areas 1992-2025

Required Enhancement Areas	1992-1995	1996-2000	2001-2005	2006-2010	2011-2015	2016-2020	2021-2025
Aquaculture	N/A	Medium	High	Medium	Medium	High	Medium
Coastal Hazards	High	High	High	Medium	Medium	High	High
Coastal Wetlands	Medium	Medium	High	Medium	High	Medium	Medium
Cumulative and Secondary Impacts	High	High	High	High	High	High	High
Marine Debris	Low	Low	Low	Low	Low	Low	Low
Ocean Resources	Low	Low	Low	Medium	High	High	High
Public Access	Medium	Medium	Medium	Medium	Medium	Medium	Medium
Siting Energy and Government Facilities	Low	Low	Low	Low	Medium	Medium	Medium
Special Area Management Plans	Medium	High	Medium	Low	Low	Medium	Low

1992 – 1995 Assessment and Strategy

Throughout the first 309 Program phase, Washington State worked in two enhancement areas:

1. Cumulative and Secondary Impacts
2. Coastal Hazards

Cumulative and Secondary Impacts of Growth

Under this improvement area, the state addressed the need to better integrate local and state government implementation of the 1971 SMA with the newly adopted Growth Management Act (GMA) of 1990 (and 1991 amendments).

Coastal Hazards

Washington's second focus was the Coastal Erosion Management Study (CEMS),[6] which addressed Puget Sound coastal erosion management, the impacts of shoreline armoring, and policy alternatives to minimize the adverse effects. CEMS followed three research threads: Appropriate engineering and geotechnical approaches to erosion management and bluff stabilization; adverse environmental effects of those practices; and public policy alternatives.

We incorporated the results from the work in these two 309-improvement areas into the Shoreline Master Program Guidelines Rule (Guidelines) adopted in December 2003.

1996 – 2000 Assessment and Strategy

During the second 309 Program phase, Washington State worked in three enhancement areas:

1. Cumulative and Secondary Impacts
2. Coastal Hazards
3. Special Area Management Planning

Cumulative and Secondary Impacts

Ecology's Section 309 Growth Management Project steadily evolved to meet changing legislative mandates and the needs of local government. Initially Ecology designed the project to respond to the overlapping requirements of the 1990 GMA, the 1991 GMA Amendments, and the SMA. By 2000, in response to legislative regulatory reform mandates and Endangered Species Act (ESA) listings, the Growth Management Project emphasis shifted. The goals that addressed the cumulative and secondary impacts resulting from land use practices in sensitive coastal areas remained unchanged, however. They were:

- To foster consistency at the local government level between GMA-mandated comprehensive plans
- To create development regulations
- To develop or update Critical Areas Ordinances (CAOs)
- To comprehensively update SMA-mandated local Shoreline Master Programs (SMPs)

[6] For more information on the CEMS: http://www.ecy.wa.gov/programs/sea/swces/

In 1995, the Washington State legislature adopted legislation amending the SMA as a part of a broad regulatory reform effort aimed at achieving better integration of GMA, SMA, and the State Environmental Policy Act (SEPA). While not changing the broad goals of the SMA, this legislation did require changes to all of the SMA implementation rules.

Consequently, the emphasis of the Growth Management Project shifted beginning with the 1995-96 fiscal year. Throughout the 1995-97 period, the Growth Management Project placed emphasis on amending the SMA implementation rules. Accordingly, in September 1996, Ecology adopted the SMP Approval and Amendment Procedures rule (WAC 173-26) and the Shoreline Management Permit and Enforcement rule (WAC 173-27).[7] Additionally, the wetlands delineation manual rule was adopted in February 1997.

The proposed Guidelines produced significant controversy and, as a result, these regulations were not adopted in 1997 as anticipated. Many raised questions about the proper relationship between the SMA and GMA, the content of the Guidelines and extent of the changes from the existing Guidelines. A subcommittee, the State Land Use Study Commission, first debated these issues. Later, a broad based Shorelines Guidelines Commission did the same.

The potential listing of certain native fish species under the federal ESA surfaced as another controversial issue at the same time. While this provided some momentum towards action on the Guidelines, in the end, this issue only further complicated the task.
The Guidelines Commission recommended adoption of a set of Guidelines, though it was not a consensus decision of the Commission. The proposed Guidelines were submitted for formal public review and comment. Ecology received substantial comments in writing and in the public hearings. Based on these comments, Ecology began a redrafting process. The new draft provided two alternative approaches: A more flexible, policy driven approach (Path A); and a more prescriptive approach (Path B). Endorsed by the National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS), Path B provided the certainty of protecting the listed fish species that require protection.

Ecology released this set of Guidelines for formal public review during 2000 and subsequently adopted them on November 29, 2000. The Association of Washington Business (AWB) (joined by a coalition of business and industry associations and some local governments) promptly appealed the adoption of the new rules to the Shorelines Hearings Board. The Washington Environmental Council led a coalition that intervened on behalf of the Department of Ecology in supporting the adopted rule (continued in 2001-2005).

Coastal Hazards
As a follow-up to the Round 1 CEMS project, Ecology carried out an inventory and characterization of alternatives to traditional shoreline armoring. Over thirty beach nourishment projects in Puget Sound were documented, illustrating a wide variety of techniques. Reporting of the project provided the consulting community, local governments,

[7] WAC 173-26 and WAC 123-27: http://apps.leg.wa.gov/WAC/default.aspx?cite=173-26

and resource managers with information on the design and management of beach nourishment projects, and other adaptive management alternatives to armoring. The Shoreline Master Program Guidelines Rule adopted in December 2003 incorporated the results of this work.

Special Area Management Planning
As mandated in the original Grays Harbor Estuary Management Plan (GHEMP)[8], the Grays Harbor Council of Governments (COG) reconvened the GHEMP Task Force for a five-year plan review and update. While work progressed on basic plan elements, fundamental questions emerged regarding overall plan value and effectiveness.

As the GHEMP Task Force reviewed, streamlined, and updated various sections of the plan, major policy and regulatory shifts were surfacing from state and federal agencies, which presented potentially substantive effects upon the update effort.

The anticipated Endangered Species Act (ESA) listing of one or more anadromous fish species within Grays Harbor and the resulting "4d" rulings, in addition the proposed amendment of the state SMA Guidelines for local SMPs, created a problematic situation for the update. With the status, degree of impact, and timing unclear for the aforementioned efforts, continuing the GHEMP update became increasingly futile. The Task Force decided to place the update effort on hold pending clarification of impacts resulting from the ESA listings and the SMA Guideline amendment. The Department of Ecology concurred.

2001 – 2005 Assessment and Strategy

During the third 309-improvement program phase, Washington State worked on one enhancement area:

1. Cumulative and Secondary Impacts of Growth

Cumulative and Secondary Impacts of Growth
Throughout 2000, adoption of the new rule remained controversial, especially regarding the dual path approach (Path A and Path B). In December 2000, the AWB — representing a coalition of business organizations, cities, and counties — and the Washington Aggregates and Concrete Association appealed the new Guidelines rule to the Shoreline Hearings Board (SHB). The Washington Environmental Council (WEC) led an environmental coalition that intervened in support of the Guidelines.

The SHB, in a split decision on August 27, 2001, ruled that Ecology had failed to properly conduct the rule review process and that certain provisions of Path B exceeded Ecology's statutory authority. The ruling invalidated the new Guidelines, but did not invalidate Ecology's repeal of the previous rule (WAC 173-16). This left the state with no SMP Guidelines rule. Existing local master programs remained in effect.

[8] GHEMP: http://www.co.grays-harbor.wa.us/info/pub_svcs/EstuaryPlan.htm

Quickly, parties to the original SHB appeal moved to appeal the SHB decision to Thurston County Superior Court. However, Ecology director Tom Fitzsimmons believed that mediation would be more beneficial than lengthy litigation. The Governor and the Attorney General convened mediation talks aimed at reaching a negotiated settlement. Mediators were selected and the parties to the lawsuit appointed representatives. These mediated negotiations extended from early 2001 through late 2002.

By autumn 2002, the parties negotiated and completed a new draft SMP Guidelines rule. Shortly after that, all the other necessary agreements (e.g. funding and local adoption schedules) were in place. The parties entered into a formal settlement agreement on December 20, 2002.

In January 2003, in conformance with the settlement agreement, Ecology initiated the public process for formal adoption of the negotiated settlement draft Guidelines rule. In July, Ecology released drafts of the rule, plus the associated environmental and economic assessment documents, for public review and comment. Ecology responded to comments by expanding and/or clarifying the economic and environmental assessment documents, and by making minor clarifications to the rule itself. Ecology formally adopted the rule on December 17, 2003. It took effect on January 17, 2004.

As the Guidelines rule adoption process neared completion, the 2003 State Legislature amended the SMA to extend the local government deadlines for updating their SMPs. The new SMP Guidelines outlined a sliding schedule through 2014 for completion of all SMPs.

Additionally, the Legislature appropriated $2 million of state general fund monies for the 2003-05 biennium. The Legislature also committed to providing local governments with “reasonable and adequate” future funding through 2014.

Ecology submitted the new SMP guidelines to OCM for inclusion in our WCZMP on October 6, 2004. OCM began reviewing the guidelines and issued preliminary approval on July 29, 2005. OCM determined that it would need to complete a National Environmental Policy Act (NEPA) process for this action and that final approval would follow the completion of this process. OCM subsequently initiated the NEPA process and began preparing an Environmental Impact Statement (EIS).

Following adoption of the Guidelines, Ecology developed and implemented a process for dispersing the funds for comprehensive SMP updates to the statutorily defined “early adopter” local governments. These included Whatcom and Snohomish counties, the cities of Port Townsend and Bellingham. In addition, Ecology solicited grant applications and selected 12 different local governments from across the state (four counties and eight cities, half of which reside in the coastal zone) to receive the remaining funding.

The actions of the State Legislature set in motion a new major effort to update all 263 local SMPs (133 of these in the coastal zone) across the state, with a corresponding workload for

Ecology and local governments. This effort to update SMPs will happen over the next five years and beyond - on a seven-year review cycle.

In the process, Ecology is obliged to work in partnership with and support local governments as they complete their individual SMP updates. This has required Ecology to prepare a wide variety of new policy and technical guidance materials. Additionally, Ecology must conduct training and outreach for local government planners and their consultants and provide targeted guidance on acceptable methodologies for completing the shoreline inventories and analyses that form the basis for the local SMP updates.

In addition to maintaining this level of technical assistance to local governments and citizens, Ecology is now in the process of dispersing an additional $4 million in grant funds for a new round of local government SMP updates. This level of effort is expected to continue for at least the next three biennia.

2006 – 2010 Assessment and Strategy

During the fourth 309-improvement program phase, Washington State again worked on one enhancement area:

1. Cumulative and Secondary Impacts of Growth

Cumulative and Secondary Impacts of Growth

From 2006 to 2010, Ecology and local governments worked to implement the new SMP Guidelines. Using Section 309 funds, Ecology has developed guidance, provided technical assistance, and reviewed draft and final SMPs.

In order to assist local governments in developing their SMPs, Ecology staff have produced guidance on a variety of subjects relevant to the planning process including GMA/SMA integration, shoreline armoring, and intertidal shellfish aquaculture. These guidance pieces have been presented to local governments on our website and at quarterly meetings hosted by Ecology where all local governments updating their SMPs gather to learn more about the planning process.

Ecology staff have also been working for the past 3 years on developing a Shoreline Master Program Handbook[9] for local governments updating their SMPs. Several chapters are now finalized and available on Ecology's website. As of August 1, 2010, completed chapters include:

- Chapter 4 - No Net Loss of Shoreline Ecological Functions
- Chapter 5 – Shoreline Jurisdiction
- Chapter 6 – Public Participation
- Chapter 7 – Shoreline Inventory and Characterization

[9] Shoreline Master Program Handbook: http://www.ecy.wa.gov/programs/sea/shorelines/smp/handbook/index.html

- Chapter 17 – Cumulative Impacts Analysis
- Nonconforming Uses and Development Guidance section (to be included in the future Administrative Provisions chapter)
- Appendix A: Addressing Sea Level Rise in Shoreline Master Programs

Staff in Ecology's regional offices have provided technical assistance to all local governments working on SMPs in the coastal zone. Typically, this assistance involves consulting with local planners on interpreting the guidelines, sharing lessons learned from other jurisdictions farther along in the update process, and pointing out data and other resources that can inform the SMP. Regional staff also review draft SMP products as they are developed, and work with headquarters staff to conduct the final SMP review and approval process. By August 1, 2010, Ecology approved 17 SMPs in the coastal zone.

2011 – 2015 Assessment and Strategy

During the third 309-improvement program phase, Washington State worked on two enhancement areas:

1. Cumulative and Secondary Impacts of Growth
2. Ocean Resources

Cumulative and Secondary Impacts of Growth

From 2011 to 2015, Ecology and local governments continued to implement the new SMP Guidelines. Using Section 309 funds, Ecology has maintained resources to develop guidance, provide technical assistance, reviewed draft SMPs, and approved and defended final SMPs.

In order to assist local governments in developing their SMPs, Ecology staff produce and continue to maintain existing guidance on a variety of subjects relevant to the planning process. These guidance pieces have been presented to local governments on our website and at quarterly meetings hosted by Ecology where all local governments updating their SMPs gather to learn more about the planning process.

Staff in Ecology's regional offices have provided technical assistance to all local governments working on SMPs in the coastal zone. Typically, this assistance involves consulting with local planners on interpreting the guidelines, sharing lessons learned from other jurisdictions farther along in the update process, and pointing out data and other resources that can inform the SMP. Regional staff then also review draft SMP products as they are developed, and work with headquarters staff to conduct the final SMP review and approval process. As of December 31, 2014, Ecology approved 81 SMPs

Ocean Resources

In 2012, the Washington State Legislature funded the development of a Marine Spatial Plan (MSP) for Washington's Pacific Coast under a recent law for comprehensive marine waters

management (RCW 43.372).[10] This funding supported a variety of projects to develop data on coastal resources and uses, create online tools, conduct analyses, and assist with stakeholder engagement. WCZMP staff led and coordinated the overall development of this plan with 309 resources. This work includes coordinating an interagency team of state agencies responsible for plan development; consulting and communicating with tribes, local governments and federal agencies; managing a gubernatorial Advisory Council; and overseeing projects, research and analyses to support plan development.

2016 – 2020 Assessment and Strategy

During the third 309-improvement program phase, Washington State worked on three enhancement areas:

1. Coastal Hazards
2. Cumulative and Secondary Impacts of Growth
3. Ocean Resources

Coastal Hazards

As coastal hazards become more frequent and severe, there has been state and national priority in helping communities prepare and respond. WCZMP plays a key role in these efforts in partnership with local governments, state and federal agencies, Tribes, academic institutions, non-profits, and consultants. The 2016-2020 coastal hazards 309 strategy included steps that clarified the needs of local governments and completing pilot projects that explored how the WCZMP could best grow to meet the business need. Achievements include:

- Completed a review of needs assessment surveys conducted from 2009 through 2014 and used this information to develop and implement a climate adaptation series of trainings as part of the Washington Coastal Training Program.[11]
- Worked with local governments to explore new shoreline management guidelines and updated sea level rise guidance for Shoreline Master Programs.[12]
- Completed a study that explored existing efforts by state agencies in Washington to incorporate sea level rise considerations into state capital funding guidelines and projects. This rapid study identified successes, challenges, needs, and opportunities.[13]
- Updated and launched the new Coastal Hazards Resilience Network (CHRN) website.[14] The goal of CHRN is to strengthen the resilience of Washington's coastal communities through collaboration, education and knowledge exchange. The website was redesigned as an orientation tool for relevant science, best practices and other resources related to coastal hazards. This includes the new Washington Coastal Hazards Risk Reduction

[10] Washington State Marine Spatial Planning: http://www.msp.wa.gov/
[11] Padilla Bay National Estuarine Research Reserve Coastal Training Program Climate Adaptation Series: http://www.coastaltraining-wa.org/Climate-Training-Courses
[12] Washington State Department of Ecology Shoreline Master Programs Handbook Appendix A: https://fortress.wa.gov/ecy/publications/SummaryPages/1106010.html
[13] Washington State Department of Ecology 2020 - Publication #20-06-015. Sea Level Rise Considerations in Washington State Capital Grant Programs – Inventory and Lessons Learned: https://fortress.wa.gov/ecy/publications/documents/2006015.pdf
[14] Washington Coastal Hazards Resilience Network website: https://wacoastalnetwork.com/

Project Mapper, which displays a collection of coastal hazard resilience project case studies. It is designed to assist communities and local governments as they identify practical approaches to coastal hazards and learn from others facing similar issues in Washington.

- Completing the federal fiscal year 2019 Project of Special Merit, the Washington Coast Resilience Action Demonstration (RAD) project. The goal of RAD is to move community-driven resilience projects off the shelf and onto the shore by connecting communities with scientific and technical expertise, agency support, and funding.[15] Findings will be used to help support the Washington Coastal Marine Advisory Council develop resilience recommendations to the Governor on capital and operational investment, programmatic support, and improvements to policies and regulations.

Cumulative and Secondary Impacts of Growth

Ecology concluded a decade-long endeavor to review and approve every SMP in Washington's Coastal Zone. As part of this effort, Ecology continued to develop SMP Handbook guidance documents that inform these SMP updates.

As the SMP update process transitions into more focused attention on implementation, there was an important opportunity to use the 2016-2020 Program Enhancement Strategy to develop and implement a systematic approach to assess compliance and effectiveness of permits, and adopt a state rule defining the process for periodic review of locally adopted shoreline regulations, and complete review for jurisdictions in the Puget Sound region. Accomplishments include:

- Completed federal fiscal year 2015 Project of Special Merit, Supporting Successful Local Shoreline Master Programs in Washington's Coastal Zone Using Oblique Aerial Photography.[16]
- Adopted a State Rule defining the Periodic Review Process for SMPs.
- Review and approved over 60 amendments submitted under "periodic review".
- Developed a systematic approach to assess compliance and effectiveness of permits.
- Completed the review and approval of 123 of the 133 Comprehensive SMP Updates.

Ocean Resources

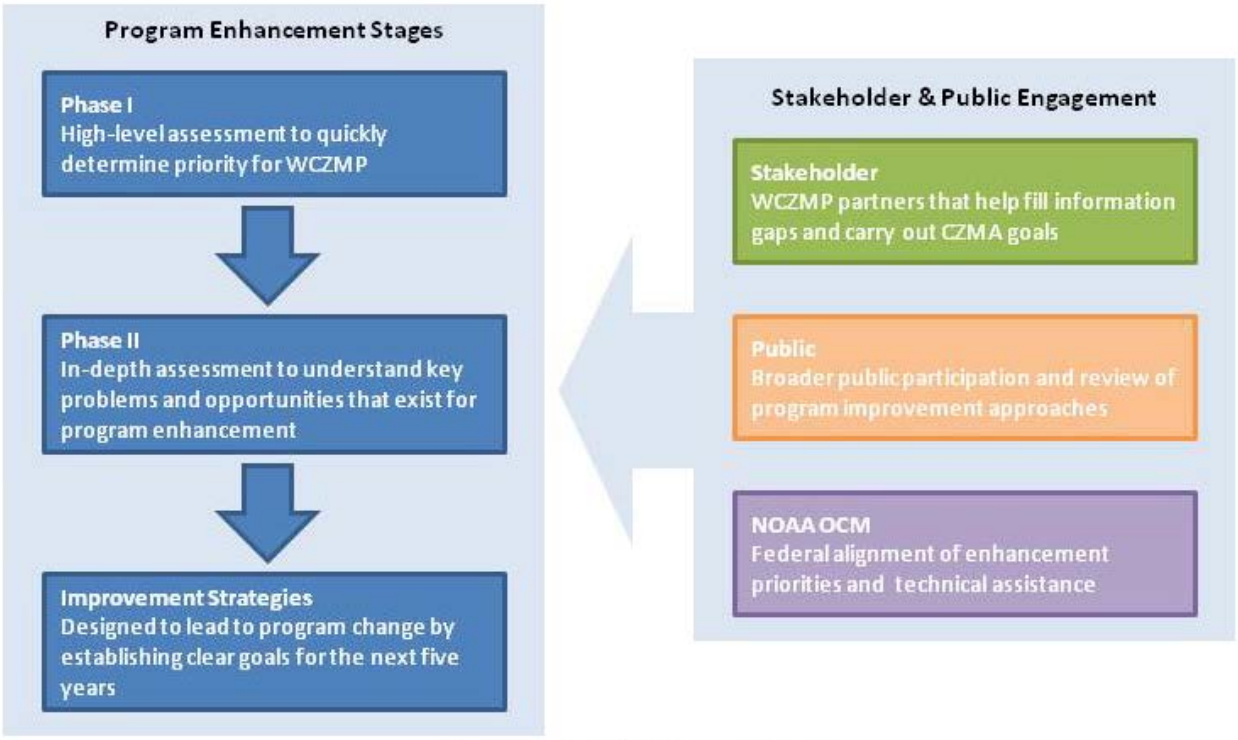
The 2016-2020 Program Enhancement cycle was a major advancement in Washington's ocean resource management efforts. Activities ensure more wide-spread use and consideration of the Marine Spatial Plan for improved decision-making as well as increase knowledge and information needed to decrease uncertainty for management decisions and to adapt or refine guidelines and procedures for siting ocean uses. Accomplishments include:

[15] Federal fiscal year 2019 NOAA Office for Coastal Management Project of Special Merit (NA19NOS4190144)
[16] Washington Oblique Aerial Photography (2017). Washington State Department of Ecology: https://fortress.wa.gov/ecy/publications/SummaryPages/1706026.html

- The completion and adoption of the Marine Spatial Plan[17] for Washington's Coast.
- The Marine Spatial Plan was adopted as an Enforceable Policy in Washington's CZMP.
- The MSP guidance document is finalized. This includes an FAQ doc and MSP implementation checklists, and it is intended to be an informative resource for state agency and local government implementers, as well as new ocean use applicants.
- The Ocean Resource Management Act (ORMA) guidance document has also been finalized and is intended to be utilized by state agency or local government reviewers, as well as applicants of proposed ocean and coastal projects.
- Completed guidance documents for local coastal planners within MSP jurisdiction on how to include relevant MSP and ORMA policies into their Shoreline Master Programs (SMPs) in order to make them consistent with state policy and regulation.
- Work with local, state, tribal and federal resource managers, academic institutions, and key stakeholders to evaluate scientific data and information available through the MSP and identify the remaining and high-priority scientific data needs for ocean resource planning and management. This information is summarized in a report that can be used to maintain and update existing datasets and inform future data acquisition.

[17] 2018 Marine Spatial Plan for Washington's Pacific Coast: https://msp.wa.gov/wp-content/uploads/2018/06/WA_final_MSP.pdf

2021-2025 Assessment and Strategy Process



Assessment and Strategy Process

To better understand what program improvements are needed in 2021-2025, the WCZMP conducted an assessment for each of the nine enhancement areas. The assessment was broken down into two stages:

Phase I (high-level) was intended to measure the extent to which problems and opportunities for program enhancement exist within each of the enhancement area objectives, and determine whether the enhancement area is a high priority enhancement objective for the WCZMP that warrants a more in-depth assessment.

Phase II (in-depth) determined the effectiveness of existing management efforts to address identified problems, and identified high priority needs for program enhancement. Phase II assessments are only required for areas ranked "high" in Phase I.

For this assessment, OCM provided a variety of tools to help CZMPs more easily respond to the guidance questions required by NOAA. While this national data offered informative baseline information, it was also coarse and in many areas did not reflect the most current or helpful information to accurately characterize existing conditions and trends in Washington State. Therefore, the WCZMP used more regionally appropriate data and information, when available, and where gaps existed, stakeholder outreach was used to connect with local partners to help acquire relevant data.

After completing the Phase II assessment questions, WCZMP staff identified, in consultation with OCM, which enhancement areas it will develop a strategy for. Strategies are designed to lead to a program change (as described in "Eligible Activities" above), and must address high priority needs for program enhancement within one or more enhancement areas that were identified through the WCZMP's self-assessment. Strategies establish clear goals and a pathway and method to reach those goals during the next five years. It is important to recognize that there is no requirement to develop a strategy for every enhancement area that was designated as a high priority, unless specifically designated by OCM as an "area of national importance"; rather states are encouraged to focus their strategies on the greatest opportunity for improvement and likely resources available to achieve the strategy goals. Furthermore, CZMPs only develop strategies for activities the state intends to fund and work on given their anticipated level of Section 309 funding.

OCM can choose to designate one or more enhancement areas as "areas of national importance." Designating areas of national importance helps to further focus Section 309 funding and demonstrate a national impact for the National CZMP by aligning resources to address one or more critical coastal management issues across the county. While not required to do so, CZMPs are strongly encouraged to develop one or more strategies to improve the effectiveness of their program in designated areas of national importance. For the 2021-2025 assessment and strategy cycle, "coastal hazards" remains the only enhancement area of national importance.

Stakeholder Engagement

The CZMA encourages the participation, coordination, and cooperation with and among appropriate local, state, federal, and regional groups to help carry out the goals of the CZMA. In keeping with the intent of the CZMA, a number of Ecology staff and representatives of other state agencies participated in the development of the draft assessment and strategy.

Washington has a rich level of existing partnerships for coastal management. This strong network allowed staff to reach out to a number of internal and external representatives from state and federal agencies to gather data, information, and expertise. The level of involvement and input varied based on the enhancement area, however, this work included individual and group meetings, review and feedback on draft documents, and coordinated efforts to align strategies with key partnering agencies. For a full list of agencies and stakeholder groups that WCZMP staff consulted in the 2021-2025 Assessment and Strategy process, please see Appendix A.

Public Review Process

The CZMA also places a strong emphasis on public participation. The draft document was described and posted on our CZMP website,[18] and the agency Public Involvement Calendar.[19] These are the main tools used by the program for public input on other efforts (e.g., Shoreline

[18] CZMP 309 Assessment and Strategy websites: http://www.ecy.wa.gov/programs/sea/czm/Grants.html; http://www.ecy.wa.gov/programs/sea/czm/309-improv.html

[19] Washington Department of Ecology Public Involvement Calendar: https://fortress.wa.gov/ecy/publiccalendar/

Master Programs). The public comment period was open for 32 days, December 2, 2020 through January 4, 2021.. More information and a summary of public comments and CZMP response is provided in Appendix B.

Phase I: High-Level Assessment

Purpose: To quickly determine whether the enhancement area is a high-priority enhancement objective for the CZMP that warrants a more in-depth assessment. The more in-depth assessments of Phase II will help the CZMP understand key problems and opportunities that exist for program enhancement and determine the effectiveness of existing management efforts to address those problems.

Aquaculture

Section 309 Enhancement Objective: Adoption of procedures and policies to evaluate and facilitate the siting of public and private aquaculture facilities in the coastal zone, which will enable states to formulate, administer, and implement strategic plans for marine aquaculture. §309(a) (9)

Resource Characterization:

1. In the table below, characterize the existing status and trends of aquaculture facilities in the state's coastal zone based on the best-available data. Your state Sea Grant Program may have information to help with this assessment. Washington State Aquaculture Production Data

Status and Trends of Aquaculture Facilities and Activities[20]

Type of Facility/Activity	Number of Facilities	Approximate Economic Value	Change Since Last Assessment (↑, ↓, –, unknown)
Food Fish Farm	9	NA	unknown
Mollusks	112	NA	unknown
Misc. Aquaculture	1	NA	unknown
Total Farms	121	207,685	↓ decrease from last assessment
Method Used			
Pond Farms	15	NA	unknown
Flow through raceways	35	NA	unknown
Recirculating systems	7	NA	unknown
Non-Recirculating systems	16	NA	unknown
Cages or pens	6	NA	unknown
Aquaponics system	2	NA	unknown
Mollusks on bottom	105	NA	unknown
Mollusks off bottom	59	NA	unknown
Other production methods	8	NA	unknown

Notes: NA – this table was generated from the 2018 Agricultural census data, the monetary amounts are withheld to avoid disclosing data for individual farms. Unknown – the changes since the last assessment are unknown because of the data gaps that existed.

2. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends or potential impacts from aquaculture activities in the coastal zone since the last assessment.

[20] https://www.nass.usda.gov/Publications/AgCensus/2017/index.php#subject_series: Agricultural Census 2018. This report is generated yearly to provide a current and comprehensive picture of the aquaculture sector at the State and national levels. The aquaculture census collects detailed information relating to production methods, surface water acres and sources, production, sales, point of first sale outlets, and aquaculture distributed for restoration, conservation, enhancement, or recreational purposes.

There have been several studies and reports that have been published since the last assessment that affect aquaculture activities in the coastal zone. However, Ecology's Shorelands and Environmental Assistance Program has been the lead on only a few products. Staff have engaged in non-Ecology efforts through participation on technical committees or by providing other in-kind resources.

Cypress Island Atlantic Salmon Net Pen Failure: An Investigation and Review (2017)[21]
This report presents the findings of the Investigation and Review Panel ("Panel") that examined the Cypress Island Atlantic salmon net pen failure that occurred in the summer of 2017. This report documents the facts of the failure and presents the Panel's conclusions based on those facts.

State of the Science on Net-Pen Aquaculture in Puget Sound (2019)[22]
The State of Science on Net-Pen Aquaculture in Puget Sound, Washington was produced by the National Centers for Coastal Ocean Science (NCCOS), part of NOAA, to help provide information to the state of Washington about the safe and effective management of commercial marine net-pen finfish aquaculture. The project began in 2016 led by the Washington Department of Ecology to identify the environmental risks and potential impacts associated with finfish aquaculture. As part of the process, NCCOS agreed to provide a technical report that compiled the latest science associated with the industry.

This compilation process was underway when a commercial net pen off Cypress Island in Puget Sound suffered catastrophic failure on August 19, 2017, in which approximately 240,000 nonnative Atlantic salmon escaped to state marine waters. The incident attracted significant public attention and concern about the industry and potential risks that operations raising non-native salmon might pose to native fish populations. As a result, the Washington Legislature passed a new law that effectively terminates non-native finfish aquaculture when current state aquatic lands leases expire in 2022.

The measure also directed the Washington departments of Agriculture, Ecology, Fish and Wildlife, and Natural Resources to continue their effort to update guidance and informational resources for planning and permitting commercial marine finfish net-pen aquaculture in state waters.

To fulfill this mandate, the state and NCCOS continued to develop this report, which was intended to include new guidance and management recommendations. However, for a variety of reasons, the task to develop a document that captured the latest science and management recommendations proved challenging and time-consuming. As a result, the state and NCCOS agreed to complete a state of the science report, with the understanding the state would develop a separate guidance and management recommendations document for future marine net-pen aquaculture activities.

[21] https://www.dnr.wa.gov/sites/default/files/publications/aqr_cypress_investigation_report.pdf?vdqi7rk: Cypress Island Atlantic Salmon Net Pen Failure: An Investigation and Review (2017)
[22] https://fortress.wa.gov/ecy/ezshare/sea/Shorelines/StateScience.pdf: State of the Science on Net-Pen Aquaculture in Puget Sound (2019)

This report provides a significant collection of scientific studies that have analyzed the environmental impacts of fin-fish aquaculture. It should be noted, however, that the document:

- Was not formally peer reviewed, although experts in marine aquaculture contributed to its development.
- Contains portions which may be inconsistent with the state's understanding of the biological, physical, and cultural environment in Washington State.
- Is but one source of information that state agencies are using to inform their recommendations.
- Does not necessarily represent the management or policy views of the state

Marine Spatial Plan (2018)[23]

Aquaculture in the MSP Study Area consists exclusively on shellfish aquaculture occurring in Willapa Bay in Grays Harbor.

The aquaculture industry is currently enjoying strong demand for its products. These products primarily include oysters and Manila Clams. According to the Washington Department of Fish and Wildlife (WDFW) data for 2013, Pacific Oysters account for about 82% of the shellfish farmed and harvested in Pacific and Grays Harbor Counties. Manila Clams account for about 16% of harvest. Small amounts of Eastern Oysters, Kumomoto Oysters, and Blue and Bay Mussels are also produced. By value, Pacific Oysters accounted for approximately 83% of the relative value for shellfish in Pacific and Grays Harbor Counties, with Manila Clams accounting for about 11%.

Approximately 21,000 acres of state-owned aquatic lands are under lease for aquaculture throughout the state, with around 80% being used for commercial oyster cultivation. One issue that is harming the aquaculture industry in WA State is burrowing shrimp. They destabilize the sediment, and cause beds to become too soft to support oysters and aquaculture equipment. This has a dramatic economic influence on the aquaculture industry.

Implicitly included in the total economic contribution to the state economy from shellfish aquaculture are revenue to the state from aquaculture land leases, from license and permit fees paid by shellfish farmers, and from sales of access to the state-owned Willapa Bay Oyster

Reserves for commercial harvest. Six Department of Natural Resources (DNR)-leased lands generated about $327,230 in revenue in 2010. Oyster sales from the Oyster Reserves have averaged about $173,000 per year, and clam sales average about $15,000 per year.

[23] https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Ocean-management/Marine-spatial-planning: Washington State Marine Spatial Plan (2018)

Management Characterization:

1. Indicate if the approach is employed by the state or territory and if there have been any state- or territory-level changes (positive or negative) that could facilitate or impede the siting of public or private aquaculture facilities in the coastal zone.

Significant Changes in Aquaculture Management

Management Category	**Employed by State or Territory** (Y or N)	**CMP Provides Assistance to Locals that Employ** (Y or N)	**Significant Changes Since Last Assessment** (Y or N)
Aquaculture comprehensive siting plans or procedures	Y	Y	N
Other aquaculture statutes, regulations, policies, or case law interpreting these	Y	Y	Y

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:

WA State Department of Ecology's role as a regulatory agency for shellfish aquaculture in state waters includes, which is not 309 driven:

- Ensuring Coastal Zone Management Act consistency
- Reviewing and approving local shoreline master programs and issuing guidance on aquaculture planning
- Ensuring Shoreline Management Act consistency through review and approval of certain Shoreline Permits
- Issuing 401 Water Quality Certifications for new and expanded aquaculture operations
- Issuing National Pollutant Discharge Elimination System (NPDES) permits for herbicide and pesticide applications

Ecology is co-regulator of aquaculture with our sister state agencies, the Departments of Agriculture, Fish and Wildlife, Health, and Natural Resources. We also work closely with federal agencies that include the US Army Corps of Engineers and National Marine Fisheries Service, and federally recognized tribes. What these partners decide affect our work. Summarized below are significant changes that have affected our relationship or role in Washington aquaculture.

- Washington State's multi-agency Shellfish Initiative, led by the Governor's Office to address regulatory burdens and other management issues that pose barriers to the shellfish industry, has been active since 2011. The group was less active in 2019 but we expect an increase in efforts in the coming years, which was supported by 306 funding historically.

- In 2017, Ecology updated its guidance on Shoreline Master Program Planning[24]. This handbook chapter provides direction to shoreline planners working on SMP updates and amendments and includes information relevant to review of aquaculture permit proposals. This chapter reviews state and national aquaculture policy and the SMP Guidelines. Discussion addresses specific types of aquaculture, protection of ecological functions and native eelgrass, and potential impacts. Appendices include an overview of state and federal aquaculture regulations, the (SMP) Guidelines aquaculture provisions, information sources used in the chapter and useful for the SMP supporting documents, and obsolete aquaculture provisions. (Note: Interim aquaculture guidance was previously published in June 2012. This chapter replaces that guidance.) Section 309 has supported the staff necessary to support local governments in the development and adoption process of comprehensive SMP updates.

- In 2018, the Washington State Legislature passed HB 2957 and it was signed into law by the Governor. It effectively bans the production of non-native finfish aquaculture in state waters after their current permits and aquatic lands leases expire. Additionally, the legislation directs state agencies to develop new guidance and recommendation for future marine finfish aquaculture operations. Ecology and Washington State Department of Fish and Wildlife are lead agencies, but this is a multi-agency effort to update management guidance based on the best available information. Once state agencies develop new guidance and recommendation for marine finfish aquaculture, this information will be incorporated in agency policy as well as our Shoreline Master Programs Handbook. This work has been conducted under Section 306.

Enhancement Area Prioritization:

1. What level of priority is the enhancement area for the coastal management program?

High ___
Medium __X___
Low _____

[24] https://fortress.wa.gov/ecy/publications/parts/1106010part16.pdf: Chapter 16 Aquaculture – Shoreline Master Program Planning Process

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

   Aquaculture was classified as a high priority in the last assessment and strategy, but will be a medium priority for the program in the next five years for the following reasons:

   - Emerging aquaculture needs and high interest in expanding new forms of aquaculture will require additional policies and guidance on siting and management.
   - Shellfish growers continue to face obstacles from ocean acidification and invasive species.
   - National interests are building to further explore offshore aquaculture facilities.
   - Industries are exploring native fin fish species due to the prohibition on non-native species in Washington State.

   However, we will not developing a strategy for this management area because it is unclear how the state will approach these issues, exactly what role Ecology will play, and what the desired outcome would be at this time.

Coastal Hazards

Section 309 Enhancement Objective: Prevent or significantly reduce threats to life and property by eliminating development and redevelopment in high-hazard areas, managing development in other hazard areas, and anticipating and managing the effects of potential sea level rise and Great Lakes level change. §309(a) (2)

Note: For purposes of the Hazards Assessment, coastal hazards include the following traditional hazards and those identified in the CZMA: flooding; coastal storms (including associated storm surge); geological hazards (e.g., tsunamis, earthquakes); shoreline erosion (including bluff and dune erosion); sea level rise; Great Lake level change; land subsidence; and saltwater intrusion.

Resource Characterization:

1. In the table below, indicate the general level of risk in the coastal zone for each of the coastal hazards. The following resources may help assess the level of risk for each hazards. Your state may also have other state-specific resources and tools to consult.

General Level of Hazard Risk in the Coastal Zone

Type of Hazard	General Level of Risk[25] (H, M, L)
Flooding	H
Coastal storms (including storm surge)	H
Geological hazards (e.g., tsunamis, earthquakes)	H
Shoreline erosion	H
Land subsidence	L
Saltwater intrusion	M

Note: Sea level rise is driver that exacerbates existing stressors (i.e., erosion, flooding, saltwater intrusion, etc.). Therefore, it was not included as a separate category in this assessment. However, the assessment does contain a section describing the impacts resulting in changing shore and climate conditions.

2. If available, briefly list and summarize the results of any additional data or reports on the level of risk and vulnerability to coastal hazards within your state since the last assessment. The state's multi-hazard mitigation plan or climate change risk assessment or plan may be a good resource to help respond to this question.

   Over the past five years, coastal hazards have significant improvements to technology and research that provide the level of information to evaluate risk. Much of this information is characterized in the Washington State Enhanced Hazard Mitigation Plan (SEHMP) [26]. The

[25] Risk is defined as "the estimated impact that a hazard would have on people, services, facilities and structures in a community; the likelihood of a hazard event resulting in an adverse condition that causes injury or damage." *Understanding Your Risks: Identifying Hazards and Estimating Losses. FEMA 386-2. August 2001*

[26] https://mil.wa.gov/enhanced-hazard-mitigation-plan: Washington State Emergency management Division - Washington State Enhanced Hazard Mitigation (SEHMP) Plan

SEHMP profiles hazards, identifies risks and vulnerabilities and proposes strategies and actions to reduce risks to people, property, the economy, the environment, infrastructure and first responders. The Washington SEHMP is a multi-agency statewide document. It incorporates best practices, programs and knowledge from multiple state agencies, tracks progress in achieving mitigation goals through state and local programs and strategies. It also communicates that progress among agency partners and elected leadership.

Management Characterization:

1. In the tables below, indicate if the approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) have occurred that could impact the CZMP's ability to prevent or significantly reduce coastal hazards risk since the last assessment.

Significant Changes in Hazards Statutes, Regulations, Policies, or Case Law

Topic Addressed	**Employed by State or Territory** (Y or N)	**CMP Provides Assistance to Locals that Employ** (Y or N)	**Significant Changes Since Last Assessment** (Y or N)
Elimination of development/redevelopment in high-hazard areas[27]	y	y	n
Management of development/redevelopment in other hazard areas	y	y	y
climate change impacts, including sea level rise or Great Lakes level change	y	y	y

Significant Changes in Hazards Planning Programs or Initiatives

Topic Addressed	**Employed by State or Territory** (Y or N)	**CMP Provides Assistance to Locals that Employ** (Y or N)	**Significant Changes Since Last Assessment** (Y or N)
Hazard mitigation	y	y	y
Climate change impacts, including sea level rise or Great Lakes level change	y	y	y

[27] Use state's definition of high-hazard areas.

Significant Changes in Hazards Mapping or Modeling Programs or Initiatives

Topic Addressed	Employed by State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Sea level rise	y	y	y
Other hazards	y	y	y

2. Briefly state how "high-hazard areas" are defined in your coastal zone.

The Washington Coastal Program directly addresses high-hazard areas through Shoreline Management Act policies and state guidelines. The Act requires that the impact of natural hazards be considered during the preparation, review, and approval of shoreline master programs. The programs require consideration of erosion, flooding, geological hazards, and natural protective features including beaches, dunes, and wetlands.

3. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:

a. Describe the significance of the changes;
b. Specify if they were 309 or other CZM-driven changes; and
c. Characterize the outcomes or likely future outcomes of the changes.

Significant Changes in Hazards Statutes, Regulations, Policies, or Case Law

- **Shoreline Master Programs**
  Ecology adopted amended Shoreline Master Program (SMP) Guidelines in 2003. These Guidelines direct the comprehensive updating of every local shoreline master program in the Coastal Zone. Since 2003, 121 out of 132 coastal zone communities have had their comprehensively updated SMPs approved by Ecology. There are 11 coastal zone jurisdictions that are behind their statutory deadlines but making progress. Section 309 has supported the staff necessary to support local governments in the development and adoption process of comprehensive SMP updates. The outcome of this state and local partnership includes more accurate identification of hazard areas, and policy and regulations help ensure the impacts are minimized or avoided while also meeting the goals and objectives of the Shoreline Management Act (SMA) and Coastal Zone Management Act (CZMA).

Significant Changes in Hazards Planning Programs or Initiatives

- **State Enhanced Hazard Mitigation Plan Update**
  Every five years, state agencies, led by the Washington Emergency Management Division (WA EMD), convene to update the State Enhanced Hazard Mitigation Plan

(SEHMP). The SEHMP is a FEMA-required plan that helps make Washington state cities, counties, towns, special districts and certain non-profits eligible for grants or aid through FEMA's Hazard Mitigation Assistance (HMA) and Public Assistance (PA) programs. As one of 12 "Enhanced" states, Washington also maintains a "comprehensive mitigation program" to support local jurisdictions in writing local hazard mitigation plans and in qualifying for grants through these programs. The "Enhanced" designation provides additional funding for hazard mitigation in the event of a Presidential Disaster Declaration. The SEHMP is just the first step in securing mitigation funding. Washington counties, tribes and incorporated cities and towns must also be part of a local hazard mitigation plan to be eligible to apply for Hazard Mitigation Assistance grants.

This was not a 309 driven change, however, Washington Coastal Program participated in the recent 2018 update of the SEHMP. While the plan did not significantly change our understanding of coastal hazard risks in Washington, it does include a specific section dedicated to coastal resilience (for the first time). Specifically, coastal erosion has been the only hazard that has not been well understood or communicated. In preparation for the next plan update, the Coastal Program is partnering with the EMD and FEMA Region X to improve data and information to better characterize and evaluate risk from coastal processes and shoreline change.

- **Local Hazard Mitigation Plans**
  The federal Disaster Mitigation Act of 2000 (Public Law 106-390) requires state and local governments to develop all-hazard mitigation plans as a condition of federal grant assistance. The act also established a Hazard Mitigation Grant Program to help communities prepare for and protect against future disasters, following a major disaster declaration by the president. Local Hazard Mitigation Plans are reviewed and approved in partnership between FEMA and State EMD. A community must review and revise an existing plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities and resubmit it for approval within 5 years to continue to be eligible for FEMA mitigation project grant funding. This ongoing process is not included in the WCZMP 309 strategy.

- **Pacific Coast Hazards Resilience Initiatives**
  In addition to addressing the adverse consequences of hazards on communities (e.g., health, safety, welfare, environmental), one of the main priorities of hazards resilience planning is the recognition that some areas and communities will be disproportionately affected by the consequences of chronic and episodic disaster events. Environmental and economic costs tend to disproportionately impact lower income and marginalized groups. A focus of the Coastal Program's efforts are on Washington's Pacific Coast, where there are significant capacity constraints at the local level and communities that are most vulnerable.

In 2016, coastal entities in Grays Harbor County, in partnership with the office of U.S. Representative Derek Kilmer's Office, and Ecology contracted with the William D. Ruckelshaus Center to conduct an assessment that explores long-term resilience opportunities in response to growing concerns about the impact on coastal communities, infrastructure, and the natural environment. The *Washington State Coast Resilience Assessment*[28] informs the next generation of strategies for enhancing coast-wide resilience.

Washington's Coastal Program has been partnering with Washington Sea Grant to follow through on recommendations and key leveraging actions listed in the Assessment Final Report. This effort includes strategic planning to develop a durable and well organized state coastal resilience program, and an FY2019 Project of Special Merit, *Resilience Action Demonstration Project (RAD),* to test a multi-agency approach to deliver a package of technical assist local communities, addressing immediate needs by getting resilience projects off the shelf and on-the-ground.

Significant Changes in Hazards Mapping or Modeling Programs or Initiatives

There have been some recent additions to the states inventory of hazards that were used to update the SEHMP or have been developed after the plan was adopted in 2018. The following contributions provide updates to the important baseline of data, mapping, and modeling to identify and evaluate hazard risks:

- **Geologic Hazards**
  The Washington Geological Survey is led by the Washington State Department of Natural Resources (DNR). The Survey is the primary source of geological products on landslides, active faults and earthquakes, tsunamis and services in support of decision making by Washington's government agencies, its businesses, and the public. DNR has updated mapping and communication of data, which has been centered on interactive and easily accessible data for the public use.[29]

- **Flooding**
  The state has partnered with FEMA's Risk Mapping, Assessment, and Planning Program (RiskMAP).[30] RiskMAP updates the state FIRMs which outline flood hazards in a community. A FIRM may include flood insurance risk zones, 1 percent and 0.2 percent annual chance floodplains, floodways, base flood elevations or depths, roads, streams, and more. In FEMA Region 10, this process has also included an all hazards approach to providing communities with updated risk information. Risk MAP has completed the process for all but two counties in Washington's Coastal Zone, anticipate the remaining

[28] http://mrsc.org/getmedia/0498ef44-89e8-46c7-b834-469b992196c6/Washington-Coast-Resilience-Assessment-Report.aspx: Washington State Coast Resilience Assessment (2017).
[29] Washington State Department of Natural Resources Geologic Hazards Information: https://www.dnr.wa.gov/programs-and-services/geology/geologic-hazards-and-environment
[30] https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Hazards/Floods-floodplain-planning/Risk-MAP: Washington State Risk Mapping, Assessment, and Planning Program (RiskMAP)

counties to be complete by 2022. This information provides a new baseline to pursue management strategies to address flooding.

- **Erosion**

  The dynamics of natural processes have had impacts on people, economy, and natural resources on the Washington coast for decades. The frequency and severity of these conditions under a changing climate pose increased threats. Working proactively to understand and delineate hazardous areas can improve how communities plan to avoid or minimize risk, and respond to disaster events in ways that better prepare them for the future.

  For the first time, shoreline change and coastal erosion was identified as a severe threat in the State's 2018-2023 Enhanced Hazard Mitigation Plan.[31] However, the Plan highlights "there is not a comprehensive understanding of erosion risk in Washington because there hasn't been the investment needed to collect the data and analysis to accurately determine risk." In preparation for future planning efforts (state and local), Washington State agencies are partnering and working opportunistically to fill this information gap.

  Washington State Department of Ecology (Ecology) has partnered with Washington's Emergency Management Division (EMD) and FEMA on improving hazard mitigation planning/risk reduction with scientific technical assistance. This partnership has been a strategic investment, leveraging resources and expertise to provide a robust multi-hazard dataset used to guide more comprehensive resilience action. Specifically, this partnership has supported the state in the development of the first erosion hazard profile for marine shorelines.

  Over the past five years, Ecology has worked with pilot communities on the Pacific Coast to test and refine methods for delineating and characterizing erosion hazards. This has included working with communities to identify best practices for the appropriate scale and communication of erosion hazard information. The recently completed North Cove Erosion hazard projections[32] and Grays Harbor County Erosion hazard Profile[33] are examples of this targeted community level work. Each of these examples provides a successful template for expanding similar efforts statewide.

  While there have been successes at the local scale, the current comprehensive source of information for hazards related to shoreline change are published in the 2012, *USGS National Assessment of Shoreline Change: Historical Shoreline Change Along the Pacific*

[31] Washington State Enhanced Hazard Mitigation Plan, Approved October 1, 2018: https://www.mil.wa.gov/other-links/enhanced-hazard-mitigation-plan

[32] Assessment of Coastal Erosion and Future Projections for North Cove, Pacific County: https://fortress.wa.gov/ecy/publications/SummaryPages/1706010.html

[33] July 2018, Grays Harbor County 2018 Multi-Jurisdiction Hazard Mitigation Plan – Chapter 8. Erosion Coastal: http://www.co.grays-harbor.wa.us/Emergency%20Management/Planning/Grays%20Harbor%20County%20HMP_Plan_Final_2018.pdf

Northwest Coast.[34] This information provides a good scientific overview of coastal processes, but it does not provide delineated erosion hazard areas at a community scale, or a characterization of risk useful for local government decision making.

In January 2019, EMD funded Ecology for an 18-month project to complete an assessment of shoreline change and coastal erosion to supplement the Coastal Hazards risk profile in the SEHMP. The results will also be useful for, and made available to, local jurisdictions completing local hazard mitigation plan updates. The deliverables of this project will include a coastal erosion risk and vulnerability assessment for Washington's mainland Pacific Ocean coast encompassing Pacific, Grays Harbor, Jefferson, and Clallam counties plus the northern coastline of Clallam County. A limited assessment will be performed for islands and the estuaries of Grays Harbor and Willapa Bay; only a select number of sites known to have experienced erosion impacts based on input from the local communities will be included.

- **Future Conditions**

  In addition, another area of priority over the last five years has been addressing gaps in sea level rise projections for Washington. In 2016, the Washington CZMP partnered with Washington Sea Grant on a three-year grant, *The Washington Coastal Resilience Project (WCRP)*[35], funded under the NOAA Regional Coastal Resilience Grants Program (grant #NA16NOS4730015). Among other important contributions, the WCRP produced four specific products that improve the ability to accurately evaluate risk and vulnerability from sea level change in Washington:
  - Projected Sea Level Rise for Washington State
  - Extreme Coastal Water Level in Washington State: Guidelines to Support Sea Level Rise Planning
  - Guidelines for Mapping Sea Level Rise Inundation for Washington State
  - The University of Washington's Climate Impacts Group produced two different ways to visualize the Washington state 2018 relative sea level rise (RSLR) projections, using an interactive Tableau platform.

  The USGS Coastal Storm Modeling System (CoSMoS)[36] is using WCRP data to provide detailed predictions of coastal flooding due to future sea-level rise, storms, and river flooding driven by climate change. An emphasis for the first phase of modeling has been Puget Sound communities.

[34] Ruggiero, P., Kratzmann, M.G., Himmelstoss, E.A., Reid, D., Allan, J., and Kaminsky, G., 2013, National assessment of shoreline change—Historical shoreline change along the Pacific Northwest coast: U.S. Geological Survey Open-File Report 2012–1007, 62 p., http://dx.doi.org/10.3133/ofr20121007

[35] https://wacoastalnetwork.com/chrn/research/sea-level-rise/: Sea Level Rise data and information on the Washington Coastal Hazards Resilience Network Website.

[36] Puget Sound Coastal Storm Modeling System: https://www.usgs.gov/centers/pcmsc/science/ps-cosmos-puget-sound-coastal-storm-modeling-system?qt-science_center_objects=0#qt-science_center_objects

Enhancement Area Prioritization:

1. What level of priority is the enhancement area for the coastal management program?

High	__x__
Medium	_____
Low	_____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

Coastal communities in Washington State and around the country are already experiencing the impacts of natural stressors that will be exacerbated under a changing climate. By taking steps to become more resilient, communities can proactively mitigate the risk and exploit the opportunities associated with hazard events. Many of Washington's coastal communities have a heightened awareness of these risks and have expressed interest in taking action.

Over the past five years, we have taken several steps to accomplish Program Enhancements to advance coastal hazards resilience in Washington. We will build on this foundation and continue our efforts to improve information and resources to support communities.

Cumulative and Secondary Impacts

Section 309 Enhancement Objective: Development and adoption of procedures to assess, consider, and control cumulative and secondary impacts of coastal growth and development, including the collective effect on various individual uses or activities on coastal resources, such as coastal wetlands and fishery resources. §309(a)(5)

Resource Characterization:

1. Using National Ocean Economics Program Data on population and housing, please indicate the change in population and housing units in the state's coastal counties between 2012 and 2017. You may wish to add additional trend comparisons to look at longer time horizons as well (data available back to 1970), but at a minimum, please show change over the most recent five-year period data is available (2012-2017) to approximate current assessment period.

Trends in Coastal Population and Housing Units[37]

	2012	2017	Percent Change (2012-2017)
Number of people	4,743,371	5,148,215	8.53%
Number of housing units	2,042,289	2,170,140	6.26%

Development of population projections for the Growth Management Act (GMA) is a shared responsibility. As directed by state statute, Office of Financial Management (OFM) prepares a reasonable range of possible population growth for Washington counties participating in GMA.[38] County officials, also by law, are responsible for selecting a 20-year GMA planning target from within the range of high and low prepared by OFM. County officials select the county planning target; then within each county, population planning targets for cities, towns, and unincorporated areas are developed among all affected local jurisdictions as part of the city and county planning process.

[37] *www.oceaneconomics.org/Demographics/PHresults.aspx*. Enter "Population and Housing" section and select "Data Search" (near the top of the left sidebar). From the drop-down boxes, select your state, and "all counties." Select the year (2012) and the year to compare it to (2017). Then select "coastal zone counties."

[38] https://www.ofm.wa.gov/washington-data-research/population-demographics/population-forecasts-and-projections/growth-management-act-county-projections: Washington State Office of Financial Management Growth Management Act County Projections 2019.

Growth Management Act Population Change, April 1, 2009 to April 1, 2019

County	Fully Planning Under GMA	2009 Postcensal Estimate of Population	2019 Postcensal Estimate of Population	2009–19 Numeric Change in Population	2009–19 Percentage Change in Population
State	.	6,668,200	7,546,410	878,210	13.17
Clallam	Y	69,500	76,010	6,510	9.37
Grays Harbor	N	71,200	74,160	2,960	4.16
Island	Y	80,300	84,820	4,520	5.63
Jefferson	Y	29,000	31,900	2,900	10.00
King	Y	1,909,300	2,226,300	317,000	16.60
Kitsap	Y	247,600	270,100	22,500	9.09
Mason	Y	56,800	64,980	8,180	14.40
Pacific	Y	21,800	21,640	-160	-0.73
Pierce	Y	813,600	888,300	74,700	9.18
San Juan	Y	16,300	17,150	850	5.21
Skagit	Y	118,900	129,200	10,300	8.66
Snohomish	Y	704,300	818,700	114,400	16.24
Thurston	Y	249,800	285,800	36,000	14.41
Wahkiakum	N	4,100	4,190	90	2.20
Whatcom	Y	193,100	225,300	32,200	16.68

2. Using provided reports from NOAA's Land Cover Atlas,[39] please indicate the status and trends for various land uses in the state's coastal counties between 1996 and 2016. You may use other information and include graphs and figures, as appropriate, to help illustrate the information. Note that the data available for the islands may be for a different time frame than the time periods reflected below. In that case, please specify the time period that the data represent. Also note that Puerto Rico currently only has data for one-time point so will not be able to report trend data. Instead, Puerto Rico should just report current land use cover for developed areas and impervious surfaces.

   Unfortunately, the 2016 Coastal Change Analysis Program (CCAP) data was not updated in time to use for this 309A&S. Therefore, data from 2016. This is the best available information that we currently have on the distribution of land cover types in coastal counties.

[39] www.coast.noaa.gov/digitalcoast/tools/lca.html. Note that the 2016 data will not be available for all states until later Summer 2019. NOAA OCM will be providing summary reports compiling each state's coastal county data. The reports will be available after all of the 2016 data is available.

Distribution of Land Cover Types in Coastal Counties

Land Cover Type	Land Area Coverage in 2011 (Acres)	Gain/Loss Since 2006 (Acres)
Developed, High Intensity	277412.5	8392.3
Developed, Low Intensity	463396.9	10839.7
Developed, Open Space	160583.8	4872.4
Grassland	615888.8	199973.0
Scrub/Shrub	1650086.2	65942.3
Barren Land	545892.3	10034.7
Open Water	2402736.1	1325.3
Agriculture	482118.5	-4502.2
Forested	7529795.4	-295376.0
Wetlands	381585.8	-1039.0

Notes: Area within the state mapped by CCAP is 14509496.3 acres.

3. Using provided reports from NOAA's Land Cover Atlas,[40] please indicate the status and trends for developed areas in the state's coastal counties between 1996 and 2016 in the two tables below. You may use other information and include graphs and figures, as appropriate, to help illustrate the information. Note that the data available for the islands may be for a different time frame than the time periods reflected below. In that case, please specify the time period the data represents.

   Unfortunately, the 2016 CCAP data was not updated in time to use for this 309A&S. Therefore, data from 2016. This is the best available information that we currently have on the distribution of land cover types in coastal counties.

Development Status and Trends for Coastal Counties			
	2006	2011	Percent Net Change
Percent land area developed	877288.7 (6.0%)	901393.2 (6.2%)	24104.5 (2.7%)
Percent impervious surface area	322675.6 (2.2%)	331756.7 (2.3%)	9081.1 (2.8%)

[40] www.coast.noaa.gov/digitalcoast/tools/lca.html. Note that the 2016 data will not be available for all states until later Summer 2019. NOAA OCM will be providing summary reports compiling each state's coastal county data. The reports will be available after all of the 2016 data is available.

How Land Use is Changing in Coastal Counties	
Land Cover Type	**Areas Lost to Development Between 2006-2011** (Acres)
Barren Land	3534.3
Wetland	1181.6
Open Water	40.3
Agriculture	6685.2
Scrub/Shrub	2940.5
Grassland	4207.5
Forested	6415.2

4. Briefly characterize how the coastal shoreline has changed in the past five years due to development, including potential changes to shoreline structures such as groins, bulkheads and other shoreline stabilization structures, and docks and piers. If available, include quantitative data that may be available from permitting databases or other resources about changes in shoreline structures.

   Unfortunately, the 2016 CCAP data was not updated in time to use for this 309A&S. Therefore, data from 2016. This is the best available information that we currently have on the distribution of land cover types in coastal counties.

   However, the Puget Sound rates of growth continue. There have been ongoing efforts in the Puget Sound to understand and address the cumulative and secondary impacts.

   The Puget Sound Partnership is responsible for collecting and measuring Vital Signs of ecosystem health that guide the assessment of progress toward Puget Sound recovery goals. Each of the six Puget Sound recovery goals are expressed with one or more Vital Signs. Vital Signs represent an important component of the ecosystem (e.g. marine water, economic vitality). Each component is, in turn, represented by one or more indicators. The indicators are specific measures of Puget Sound conditions, including human wellbeing, while ecosystem recovery targets are policy statements that express desired future conditions for human health and quality of life, species and food webs, habitats, water quantity, and water. The 2019 State of the Sound Report captures the findings from the current information about how Washington is meeting the recovery goals.[41]

   A particular focus of the Coastal Zone Management Program is shoreline armoring. There have been several efforts to understand and address the impacts of shoreline armoring on Puget Sound. Two examples of this work included:

[41] https://stateofthesound.wa.gov/: Puget Sound Partnership State of the Sound Report December 2019.

- The Shoreline Armoring Implementation Strategy[42] describes the regional outcomes necessary to accelerate progress towards the Vital Sign indicator target. It is a road map for aligning opportunities across agencies, programs, projects, and funding and to highlight the areas requiring the most attention in order to sustain and accelerate the progress achieved to-date. This Implementation Strategy identifies four strategies: incentives; regulatory; design and technical training; and planning. Enactment of this Implementation Strategy should increase the health of Puget Sound shores while ensuring people and their property are safe and able to continue enjoying Puget Sound beaches.

- The Beach Strategies for Nearshore Restoration and Protection in Puget Sound.[43] This two-phase project aims to develop science-based strategies to guide future protection and restoration efforts on Puget Sound beaches. In Phase 1, completed in 2017, data were assessed and compiled, data gaps were filled, and an integrated geodatabase was established. In Phase 2, the best available data generated in Phase 1 will be organized and analyzed to provide nearshore recovery practitioners with a suite of tools to guide their decision making.

5. Briefly summarize the results of any additional state- or territory-specific data or reports on the cumulative and secondary impacts of coastal growth and development, such as water quality, shoreline hardening, and habitat fragmentation, since the last assessment.

Management Characterization:

1. Indicate if the approach is employed by the state or territory and if there have been any significant state-level changes (positive or negative) in the development and adoption of procedures to assess, consider, and control cumulative and secondary impacts of coastal growth and development, including the collective effect on various individual uses or activities on coastal resources, such as coastal wetlands and fishery resources, since the last assessment.

[42] https://pugetsoundestuary.wa.gov/2018/04/25/shoreline-armoring-implementation-strategy-finalized/: Shoreline Armoring Implementation Strategy
[43] https://salishsearestoration.org/wiki/Beach_Strategies_for_Nearshore_Restoration_and_Protection_in_Puget_Sound: The Beach Strategies for Nearshore Restoration and Protection in Puget Sound.

Significant Changes in Management of Cumulative and Secondary Impacts of Development

Management Category	Employed by State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Statutes, regulations, policies, or case law interpreting these	Y	Y	Y
Guidance documents	Y	Y	Y
Management plans (including SAMPs)	N	N	N

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:

a. Describe the significance of the changes;
b. Specify if they were 309 or other CZM-driven changes; and
c. Characterize the outcomes or likely future outcomes of the changes.

Statutes, regulations, policies, or case law interpreting these

a. Describe the significance of the changes;
b. Specify if they were 309 or other CZM-driven changes; and
c. Characterize the outcomes or likely future outcomes of the changes.

Guidance documents

a. Describe the significance of the changes;
b. Specify if they were 309 or other CZM-driven changes; and
c. Characterize the outcomes or likely future outcomes of the changes.

As described in previous Assessments, Ecology adopted amended Shoreline Master Program (SMP) Guidelines in 2003. These Guidelines direct the updating of every local shoreline master program in the Coastal Zone. Since 2003, 121 out of 132 coastal zone communities have had their comprehensively updated SMPs approved by Ecology. There are 11 coastal zone jurisdictions that are behind their statutory deadlines but making progress.

There have been a number of statutory amendments to Washington's Shoreline Act, most of which provide clarifications or additional tools local governments may deploy to address coastal issues. In addition, Ecology revised SMP guidelines in 2017 to address a legislative requirement to provide for Periodic Reviews of these SMP on an ongoing 8-year review cycle. The requirement is to review and, if necessary, update the local SMP. The 74 Coastal

communities located within King, Peirce, and Snohomish Counties have begun this Periodic Review process and 43 have completed this process.

As these local jurisdictions have worked to update or review SMPs, Ecology has supported these efforts. Regional staff provides day to day assistance on interpreting the guidelines, locating data and information, and producing required SMP components in a timely and consistent manner. Technical staff with expertise in the areas of wetlands, marine ecology, coastal geology, and hydrology review and provide input to local SMPs. Headquarters staff provide regular policy guidance and have developed handbook chapters to assist local governments in updating their SMPs. Outreach and education staff at headquarters and in the regions have communicated information about SMP updates and SMP grants to local governments and citizens through focus sheets, FAQ documents, and the website.

All of these changes were funded in part with CZM 309 and 306 dollars. The 121 approved master programs in the coastal zone represent a significant step forward in protecting Washington's shorelines from cumulative and secondary impacts of growth.

Enhancement Area Prioritization:

1. What level of priority is the enhancement area for the coastal management program?

   High __x___
   Medium _____
   Low _____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

   Completing the comprehensive update of local SMPs continues to be one of the highest priorities of Ecology's Coastal Zone Program. The importance of this effort is emphasized in Puget Sound Partnership () work programs, which are developed with extensive stakeholder involvement. As the comprehensive updates conclude, Ecology's emphasis is shifting to strengthening our role in implementing the new programs, and maintaining and improving them during the first Periodic Review process cycle between 2019 and 2022.

   There will be a continued need to develop and update guidance (publications, web resources, and education and outreach materials) to help local jurisdictions interpret and implement the Shoreline Management Act (SMA) and Shoreline Master Program (SMP) rules. Guidance will help the remaining communities comprehensively update their local plans, and will provide more clarity, resources, and best management practices for effective and efficient implementation. Guidance responds to questions and needs as they arise.

   Additionally, as the amount of SMP amendments decrease, there will be more opportunities and assistance staff needed to support local governments on emerging local

planning priorities and coastal management initiatives. This work includes coordination and facilitation of planning processes and project development, coordinating multi-agency involvement, identifying with and acquiring additional resources to support local efforts, organizing workshops and developing new outreach and education tools, etc. The Coastal Program has increased staff capacity and is thinking creatively about the use of state funded local government planning grants to focus on this Enhancement Area for the next five years.

Marine Debris

Section 309 Enhancement Objective: Reducing marine debris entering the nation's coastal and ocean environment by managing uses and activities that contribute to the entry of such debris. §309(a)(4)

Resource Characterization:

1. In the table below, characterize the existing status and trends of marine debris in the state's coastal zone based on the best-available data.

Existing Status and Trends of Marine Debris in Coastal Zone

Source of Marine Debris	**Significance of Source** (H, M, L, unknwn)	**Type of Impact** (aesthetic, resource damage, user conflicts, other)	**Change Since Last Assessment** (↑, ↓, –, unkwn)
Beach/shore litter	M	Aesthetic, Resource Damage	_
Land-based dumping	L	Aesthetic, Resource Damage	Unknown
Storm drains and runoff	H	Aesthetic, Resource Damage, Human Health, Water Quality	—
Land-based fishing (e.g., fishing line, gear)	L	Aesthetic, Resource Damage, Human Health, Water Quality	
Ocean/Great Lakes-based fishing (e.g., derelict fishing gear)	M	Aesthetic, Resource Damage, Water Quality	↓
Derelict vessels	H	Aesthetic, Resource Damage, Human Health, Water Quality, Navigational Hazard	_
Vessel-based (e.g., cruise ship, cargo ship, general vessel)	H	Resource Damage, user conflict	_
Hurricane/Storm	L	Aesthetic, Resource Damage, Navigational Hazard	_
Tsunami	L	Aesthetic, Resource Damage, Navigational Hazard, Human Health, Water Quality	↓
Other (Creosote Logs)	M	Aesthetic, Resource Damage, Water Quality	↓

2. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends or potential impacts from marine debris in the coastal zone since the last assessment.

   The Washington Coastal Program does not collect marine debris; therefore, the Program also does not track marine debris data. Since the last assessment, NOAA and several

Washington State partners completed a process to develop the 2018 Washington Marine Debris Action Plan.[44] While The Washington Coastal Program does not lead this effort, we were involved in the creation of the plan and continue to support the actions and partners.

Management Characterization:

1. Indicate if the approach is employed by the state or territory and if there have been any significant state- or territory-level management changes (positive or negative) for how marine debris is managed in the coastal zone.

Significant Changes in Marine Debris Management

Management Category	Employed by State/Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Marine debris statutes, regulations, policies, or case law interpreting these	Y	N	N
Marine debris removal programs	Y	N	Y

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes and likely future outcomes of the changes.

The 2018 Washington Marine Debris Action Plan outlines goals, strategies, ongoing actions, leads, and partners dedicated to marine debris prevention, removal, research, and coordination. A Marine Project Manager at Northwest Straits Foundation noted that a major change from previous efforts to the 2018 Action Plan is a shift in focus from removal of debris to prevention and outreach. One outcome of this shift was the NW Straits Foundation's 2016 Puget Sound Lost Crab Pot Prevention Plan[45], and a similar effort by The Nature Conservancy, the Quileute Indian Tribe, and NOAA Marine Debris Program.[46] The Washington Marine Debris Action Plan and other partner efforts have not been driven or supported by the WCZMP 309 strategy, but these efforts lead to positive outcomes and serve as important learning opportunities.

[44] 2018 Washington Marine Debris Action Plan: https://marinedebris.noaa.gov/regional-action-plan/washington-marine-debris-action-plan
[45] Puget Sound Lost Crab Pot Prevention Program: https://nwstraitsfoundation.org/download/puget-sound-lost-crab-pot-prevention-plan/
[46] Community-based Marine Debris Removal Grant: https://marinedebris.noaa.gov/removal/quileute-tribe-removes-derelict-crab-pots-and-develops-recovery-program

Enhancement Area Prioritization:

1. What level of priority is the enhancement area for the coastal management program?

High	_____
Medium	_____
Low	__X__

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

   Marine debris continues to have a low priority for the Coastal Program because there are more pressing needs in other areas of coastal management that we are engaged in. Furthermore, other organizations have taken the lead on this Enhancement Area in Washington and are effectively addressing the causes and cleanup of land and ocean-based debris. The Program continues to develop and maintain strong relationships with these organizations and will continue to find additional sources of funding and areas to better support their efforts where possible.

Ocean Resources

Section 309 Enhancement Objective: Planning for the use of ocean [and Great Lakes] resources. §309(a)(7)

Resource Characterization:

1. Understanding the ocean and Great Lakes economy can help improve management of the resources it depends on. Using Economics: National Ocean Watch (ENOW),[47] indicate the status of the ocean and Great Lakes economy as of 2015 (the most recent data) in the tables below. Include graphs and figures, as appropriate, to help illustrate the information. Note ENOW data are not available for the territories. The territories can provide alternative data, if available, or a general narrative, to capture the value of their ocean economy.

Status of Ocean and Great Lakes Economy for Coastal Counties (2016)

	All Ocean Sectors	Living Resources	Marine Construction	Ship & Boat Building	Marine Transportation	Offshore Mineral Extraction	Tourism & Recreation
Employment (# of Jobs)	140,287	14,098	2,826	18,980	22,220	1,162	80,999
Establishments (# of Establishments)	6,668	611	159	143	451	82	5,222
Wages (Millions/Billions of Dollars)	$5.7 b	$630.9 m	$240.1 m	$1.4 b	$1.5 b	$69 m	$1.9 b
GDP (Millions/Billions of Dollars)	$13.6 b	$1.6 b	$481.2 m	$4 b	$2.8 b	$199.6 m	$4.5 b

[47] www.coast.noaa.gov/digitalcoast/tools/enow.html. If you select any coastal county for your state, you are directed to various data displays for that county, In the upper left of the screen, click the "State" box, to the left of the county box so that the state name will be highlighted. Now the data will reflect statewide data for all of the state's coastal counties. Make sure "2015" is selected for the year (top right corner). You can then click through the sector types by selecting the icons along the top and the type of economic data (employment, wages, GDP, etc.), by clicking through the icons on the left.

Change in Ocean and Great Lakes Economy for Coastal Counties (2016)[48]

	All Ocean Sectors	Living Resources	Marine Construction	Ship & Boat Building	Marine Transportation	Offshore Mineral Extraction	Tourism & Recreation
Employment (# of Jobs)	27,693	4,461	464	2,579	3,981	164	16,044
Establishments (# of Establishments)	540	-65	1	-9	56	8	549
Wages (Millions/Billions of Dollars)	$1.8 m	$117.6 m	$94 m	$454 m	$443.6 m	$19 m	$788 m
GDP (Millions/Billions of Dollars)	$4.9 b	$524 m	$175.7 m	$1.5 b	$772 m	$40 m	$2 b

2. Understanding existing uses within ocean and Great Lakes waters can help reduce use conflicts and minimize threats when planning for ocean and Great Lakes resources. Using Ocean Reports[49], indicate the number of uses within ocean or Great Lakes waters off of your state. For energy uses (including pipelines and cables, see the "Energy and Government Facility Siting" template following). Add additional lines, as needed, to include additional uses that are important to highlight for your state. Note: The Ocean Reports tool does not include data for the Great Lakes states. Great Lakes states should fill in the table as best they can using other data sources.

[48] The trend data is available at the bottom of the page for each sector and type of economic data. Mouse over the data points for 2005 and 2015 to obtain the actual values and determine the change by subtracting 2005 data from 2015.

[49] www.coast.noaa.gov/digitalcoast/tools/ort.html. Go to "Quick Reports" and select the "state waters" option for your state or territory. Some larger states may have the "Quick Reports" for their state waters broken into several different reports. Use the icons on the left hand side to select different categories: general information, energy and minerals, natural resources and conservation, oceanographic and biophysical, transportation and infrastructure, and economics and commerce. Then scroll through each category to find the data to complete the table.

Uses within Ocean or Great Lakes Waters

Type of Use	Number of Sites
Federal sand and gravel leases *(Completed)*	"data not applicable to this location"
Federal sand and gravel leases *(Active)*	"data not applicable to this location"
Federal sand and gravel leases *(Expired)*	"data not applicable to this location"
Federal sand and gravel leases *(Proposed)*	"data not applicable to this location"
Beach Nourishment Projects	10
Ocean Disposal Sites	47
Principle Ports *(Number and Total Tonnage)*	9; total tonnage 103,554,547
Coastal Maintained Channels	35
Designated Anchorage Areas	40
Danger Zones and Restricted Areas	3
Other (please specify)	

3. In the table below, characterize how the threats to and use conflicts over ocean and Great Lakes resources in the state's or territory's coastal zone have changed since the last assessment.

Significant Changes to Ocean and Great Lakes Resources and Uses

Resource/Use	Change in the Threat to the Resource or Use Conflict Since Last Assessment (↑, ↓, –, unkwn)
Benthic habitat (including coral reefs)	↑ Threats from climate impacts, including more hypoxia events, ocean warming and ocean acidification. Though there are tighter restrictions on bottom trawling in fisheries, climate impacts continue to threaten these resources.
Living marine resources (fish, shellfish, marine mammals, birds, etc.)	↑ Threats from hypoxia events, harmful algal blooms, ocean warmings (marine heat waves, including "the blob"), ocean acidification, all of which impact ESA listed salmon and Southern Resident Killer Whales.
Sand/gravel	–
Cultural/historic	↑ The impact to living marine resources is culturally and historically important to coastal tribes. Additionally, shorelines with cultural and historical significance are being lost and threatened by coastal erosion.
Other (please specify) Water quality	↑ Hypoxia events, ocean acidification, ocean warming, and harmful algal blooms are all worsening. More traditional water quality parameters, such as harmful bacteria levels and nutrient loads are relatively stable.
Transportation/navigation	–
Offshore development[50]	– Adoption of the Marine Spatial Plan increases the ability to comprehensively review environmental impacts of offshore development. The improvement is generally offset by the increasing likelihood of offshore development, specifically marine renewable energy projects.
Energy production	– Adoption of the Marine Spatial Plan increases the ability to comprehensively review environmental impacts of energy projects. That improvement is generally offset by the increasing likelihood of new project proposals.
Fishing (commercial and recreational)	–/unknown While some fisheries are experiencing reduced stocks, others are not. It is uncertain how changing ocean conditions and management will affect shifts in fish stocks.
Recreation/tourism	–
Sand/gravel extraction	–
Dredge disposal	–
Aquaculture	↑ Shellfish growers are dealing with the challenge of burrowing shrimp in Willapa Bay and conflicts over prohibition of chemical controls. Aesthetic/environmental concerns are increasing in Puget Sound communities (particularly against geoduck). Commercial finfish aquaculture is transitioning to new species after restrictions on growing non-native species.
Other (please specify)	

[50] Offshore development includes underwater cables and pipelines, although any infrastructure specifically associated with the energy industry should be captured under the "energy production" category.

4. For the ocean and Great Lakes resources and uses in the table above that had an increase in threat to the resource or increased use conflict in the state's or territory's coastal zone since the last assessment, characterize the major contributors to that increase. Place an "X" in the column if the use or phenomenon is a major contributor to the increase.

Major Contributors to an Increase in Threat or Use Conflict to Ocean and Great Lakes Resources

	Land-based	Offshore development	Polluted runoff	Invasive species	Fishing (Comm	Aquaculture	Recreation	Marine Transports	Dredging	Sand/Mineral	Ocean Acidificatio	Other (Specify)
Benthic				x							x	Ocean warming, hypoxia, HABs
Living marine resources				x	x			x			x	Ocean warming, hypoxia, HABs
Cultural/historic				x							x	Coastal erosion
Water quality	x		x		x						x	Ocean warming, hypoxia, HABs
Aquaculture	x		x	x							X	Water quality, environmental/aesthetic concerns

5. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends of ocean and Great Lakes resources or threats to those resources since the last assessment to augment the national data sets.

In 2018, Washington adopted a Marine Spatial Plan.[51] A significant portion of the plan was dedicated to assessing the current state and trends of existing and emerging ocean uses.

In 2017, the Marine Resources Advisory council released an addendum to the 2012 Washington Blue Ribbon Panel Report on ocean acidification. This addendum updates the comprehensive strategy based on emerging science, management practices, and the new global network of partners working on this challenge.[52]

In 2015, the Puget Sound Partnership updated the Puget Sound Vital Signs measurement system. The update included descriptions of the scope of each Vital Sign and added specificity to the ecosystem components included in the Vital Signs. Vital Signs and indicators of human wellbeing were also selected. Currently the Vital Signs and Indicators revision project is underway and recommendations are expected in June 2020.[53]

[51] https://msp.wa.gov/wp-content/uploads/2018/06/WA_final_MSP.pdf: Marine Spatial Plan for Washington's Pacific Coast (2018).
[52] Ocean Acidification in Washington State: http://oainwa.org/
[53] Puget Sound Partnership Puget Sound Vital Signs: https://www.psp.wa.gov/evaluating-vital-signs.php

The Olympic Coast National Marine Sanctuary began to update its status report in 2019. The report is currently in progress, with results expected in 2020.

Management Characterization:

1. Indicate if the approach is employed by the state or territory and if any significant state- or territory-level changes (positive or negative) in the management of ocean and Great Lakes resources have occurred since the last assessment?

Significant Changes to Management of Ocean and Great Lakes Resources

Management Category	Employed by State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Statutes, regulations, policies, or case law interpreting these	Y	Y	Y
Regional comprehensive ocean/Great Lakes management plans	N	N	N
State comprehensive ocean/Great Lakes management plans	Y	Y	Y
Single-sector management plans	Y	N	N

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

Through a 2017 Washington State Supreme Court ruling, the scope of the Ocean Resources Management Act (ORMA) was expanded. In 2012, a project was proposed to store and transport crude oil in Grays Harbor. It was challenged by a group of Non-Governmental Organizations (NGOs), Quinault Indian Nation, and other organizations. Opponents of the project argued that ORMA applied to the project, while proponents and the Washington State Department of Ecology argued that it did not. The Washington State Supreme Court ruled in favor of the project opponents, and in their decision used language that expanded the authority of ORMA to include shore-based projects beyond oil and gas. The Washington Department of Ecology is working to understand how to revise our policy accordingly. This was part of a judicial

process and was not driven by the CZM program but is worth noting as it is a significant change that expands natural resource protection and authority.

The Marine Spatial Plan was adopted in 2018. It was a significant CZM and 309 driven effort which was submitted to NOAA as a major program change with new enforceable policies and was formally approved in 2019. The plan adds another layer for effective management of our marine resources if new ocean uses were to be proposed in coastal waters. The plan provides crucial data and a framework for evaluating new ocean uses when they are proposed in state waters. Additionally, the new enforceable policies provide: protection standards for Important, Sensitive and Unique habitats and infrastructure; Fisheries Use protection standards; and the obligation of project proponents to provide necessary data and information for the State's review of federal licenses and permits under CZMA. Taken together, Washington's ability to effectively protect ocean resources is greatly enhanced with the adoption of the Marine Spatial Plan.

3. Indicate if your state or territory has a comprehensive ocean or Great Lakes management plan.

Comprehensive Ocean/Great Lakes Management Plan	State Plan	Regional Plan
Completed plan (Y/N) (If yes, specify year completed)	Y	N
Under development (Y/N)	Y	N
Web address (if available)	www.msp.wa.gov	NA
Area covered by plan	State waters off Washington's Pacific Coast	NA

Enhancement Area Prioritization:

1. What level of priority is the enhancement area for the coastal management program?

High __X__
Medium _____
Low _____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

   Ocean resources are of extreme importance to Washington State residents, coastal tribes, and ocean stakeholders. The economic, cultural, and historic significance of ocean resources cannot be overstated. With the threats posed by changing ocean conditions and the potential for new ocean uses, Washington State will continue to prioritize this enhancement area for the foreseeable future.

Public Access

Section 309 Enhancement Objective: Attain increased opportunities for public access, taking into account current and future public access needs, to coastal areas of recreational, historical, aesthetic, ecological, or cultural value. §309(a)(3)

Resource Characterization:

1. Use the table below to provide data on public access availability within the coastal zone.

Protecting public access to the State's shorelines is one of three major policies of the Shoreline Management Act (SMA). "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…" [RCW 90.58.020]. The SMA requires Shoreline Master Programs (SMPs) to include a public access element to provide for public access to publicly-owned shorelines and a recreational element to preserve and enlarge recreational opportunities. [RCW 90.58.100(2)(b)(c)]. Public access to publicly owned shorelines is also a preferred use on shorelines of statewide significance. [RCW 90.58.020(5)(6)].

The SMP Guidelines address SMP public access requirements. These include a requirement to identify public access opportunities and comply with specific principles and standards. The Shoreline Master Programs Handbook provides guidance for how local governments can best meet the Guidelines[54]. However, Public access is sometimes a controversial topic during the SMP update process and during shoreline permit review. There are also legal issues related to public access in Washington.

Public access data is not comprehensively tracked in the Washington Coastal Program. However, local governments are required to include public access as part of their Shoreline Master Programs. The Coastal Program has not had the capacity to inventory the full set of data in the Coastal Zone and update the Coastal Atlas.

At this time, the best available data for the table above is from 2009 and was used on the previous assessment.

Regarding the category of Americans with Disabilities Act (ADA) compliant access sites, Washington State Parks hosts an interactive map where Washington residents and visitors can find ADA-compliant recreation options in the state. According to WDFW, the map is "a cooperative effort between Washington State Parks, Washington Department of Fish and Wildlife, the Recreation and Conservation Office, Department of Natural Resources, U.S. Forest Service, as well as various counties, cities, and private landowners." It is important to note that there are a range of ADA-compliant features a park could have (i.e., restrooms, trails, campsites); as a result, the parks included above are not uniform in their compliant features.

[54] SMP Handbook Chapter 9 – Shoreline Public Access: https://fortress.wa.gov/ecy/publications/parts/1106010part9.pdf

Coastal Atlas

A comprehensive, statewide inventory and GIS maps was developed in 2009 for marine shoreline public access and added to the Washington Coastal Atlas. This project represents a significant update to the last comprehensive public access inventory which was in 1986. Products include downloadable GIS map layers indicating both the lengths of public shoreline and the point where the shoreline can be accessed. Each access point feature is associated with around 50 descriptive attributes, allowing for both quantitative and qualitative analysis related to public access using the downloadable GIS data. The Coastal Atlas also features a public access search tool allowing users to search for access sites by county, by name, by location or by specific amenities and activities. As mentioned above, however, these datasets were not designed to deliver easy answers for some of these seemingly simple questions this assessment presents.

This is not a 309 change, but is supported with 306 funds.

Public Access Status and Trends

Type of Access	Current number	Changes or Trends Since Last Assessment (↑, ↓, –, unkwn)	Cite data source
Beach access sites	595 (beaches accessible without a boat)	Unknown	Marine Shoreline Public Access Project – WA Department of Ecology (2009).
Shoreline (other than beach) access sites	468 (110 are only "Visual" while another 358 are "Personal Watercraft" only)	Unknown	Marine Shoreline Public Access Project – WA Department of Ecology (2009).
Recreational boat (power or nonmotorized) access sites	260 (two sources of information with different numbers)	Unknown	WDFW Water Access Sites: http://wdfw.wa.gov/lands/water_access/county_map.html Marine Shoreline Public Access Project – WA Department of Ecology (2009).
Number of designated scenic vistas or overlook points	192	Unknown	Washington Public Shore Guide to Marine Waters - Department of Ecology (1986); Marine Shoreline Public Access Project – WA Department of Ecology (2009).
Number of fishing access points (i.e. piers, jetties)	89	Unknown	Marine Shoreline Public Access Project – WA Department of Ecology (2009).

Type of Access	Current number	Changes or Trends Since Last Assessment (↑, ↓, –, unkwn)	Cite data source
Coastal trails/ boardwalks *(Please indicate number of trails/boardwalks and mileage)*	No. of Trails/ boardwalks: ~200 access sites have trails of some sort	Unknown	Washington Public Shore Guide to Marine Waters - Department of Ecology (1986); Marine Shoreline Public Access Project – WA Department of Ecology (2009).
Number of acres parkland/open space	Total sites: 1063 public access sites With ~ 980 miles of public shoreline	Unknown	Marine Shoreline Public Access Project – WA Department of Ecology (2009).
	Sites per miles of shoreline: 1.08 sites per mile	Unknown	
Access sites that are Americans with Disabilities Act (ADA) compliant[55]	8 on Pacific coast, 24 in Puget Sound 32 state parks (with marine shorelines) with ADA-compliant features	Unknown	Washington State Parks ADA Recreation interactive map
Other (please specify)			

2. Briefly characterize the demand for coastal public access and the process for periodically assessing demand. Include a statement on the projected population increase for your coastal counties. There are several additional sources of statewide information that may help inform this response, such as the Statewide Comprehensive Outdoor Recreation Plan,[56] the National Survey on Fishing, Hunting, and Wildlife Associated Recreation,[57] and your state's tourism office.

   As Washington's population continues to grow (estimated to grow from 7.5 million in 2020 to 9 million by 2036[58]), the demand for access to outdoor recreation follows the same

[55] For more information on ADA see *www.ada.gov*.
[56] Most states routinely develop "Statewide Comprehensive Outdoor Recreation Plans", or SCROPs, that include an assessment of demand for public recreational opportunities. Although not focused on coastal public access, SCORPs could be useful to get some sense of public outdoor recreation preferences and demand. Download state SCROPs at*www.recpro.org/scorp-library*.
[57] The National Survey on Fishing, Hunting, and Wildlife Associated Recreation produces state-specific reports on fishing, hunting, and wildlife associated recreational use for each state. While not focused on coastal areas, the reports do include information on saltwater and Great Lakes fishing, and some coastal wildlife viewing that may be informative and compares 2016 data to 2011, 2006 and 2001 information to understand how usage has changed. See www.wsfrprograms.fws.gov/subpages/nationalsurvey/national_survey.htm
[58] State of Washington Forecast of the State Population, December 2019 Forecast: https://www.ofm.wa.gov/sites/default/files/public/dataresearch/pop/stfc/stfc_2019.pdf

trend. Many Washington residents who have interest in activities have not been able to pursue these activities. Much of Washington's shoreline is private property, and there is an increasing demand for public access.[59] The Washington State Recreation and Conservation Plan (2013) noted that, as of 2013, facilities satisfied only 30 to 40 percent of demand for recreation across the state. As of 2013, beach access was ranked 13 out of 45 for importance of an activity in Washington State. 75 percent of residents in WA participated in water-related activities (Swimming at beach: 39%, boating: 36%, beachcombing 33%), and 34 percent in fishing or shellfishing.[60]

3. If available, briefly list and summarize the results of any additional data or reports on the status or trends for coastal public access since the last assessment.

Management Characterization:

1. Indicate if the approach is employed by the state or territory and if there have been any significant state- or territory-level management changes (positive or negative) that could impact the future provision of public access to coastal areas of recreational, historical, aesthetic, ecological, or cultural value.

Significant Changes in Public Access Management

Management Category	**Employed by State or Territory** (Y or N)	**CMP Provides Assistance to Locals that Employ** (Y or N)	**Significant Changes Since Last Assessment** (Y or N)
Statutes, regulations, policies, or case law interpreting these	Y	Y	Y
Operation/maintenance of existing facilities	Y	N	N
Acquisition/enhancement programs	Y	N	N

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

[59] Washington Department of Ecology - The Washington Marine Shoreline Public Access Project 2009: https://fortress.wa.gov/ecy/publications/publications/0903019.pdf
[60] Washington State Recreation and Conservation Office - The 2013 State Comprehensive Outdoor Recreation Plan: http://www.recpro.org/assets/Library/SCORPs/wa_scorp_2013.pdf

Shoreline Master Program Updates
Shoreline Master Program (SMP) Guidelines require local governments to "identify public access needs and opportunities within the jurisdiction and explore actions to enhance shoreline recreation facilities" (WAC 173-26-201(3)(d)(v)). During the shoreline inventory phase, local governments identify current physical and visual public access sites. Then additional public access opportunities are identified during the inventory or through public scoping. Existing and potential public access sites are identified in the shoreline inventory and characterization report, preferably for each shoreline reach. However, the Coastal Program has not had the capacity to inventory the full set of data in the Coastal Zone.

To date, 121 of the 133 local governments in Coastal Zone have Ecology-approved SMPs, all containing a public access component. SMP updates are a 309-drive change.

Acquisition Programs or Policies
While Washington's CZM program does not directly acquire or protect public access, we do fund a staff member who works with state, local, and tribal governments, as well as land trusts and other nonprofit organizations, to connect interested groups with federal grants for acquisition and restoration. Many of the sites acquired have a public access component.

3. Indicate if your state or territory has a publically available public access guide. How current is the publication and how frequently it is updated?[61]

Publically Available Access Guide

Public Access Guide	Printed	Online	Mobile App
State or territory has? (Y or N)	N	Y – through the Coastal Atlas	Y - Go2Beach Washington Water Cruiser
Web address (if applicable)		https://fortress.wa.gov/ecy/coastalatlas/tools/PublicAccess.aspx	http://www.rco.wa.gov/recreation/index.shtml http://watercruiser.smartmine.com/#HomeScreen
Date of last update		2014	2014
Frequency of update		Updates to individual sites happen as needed, however, a comprehensive update has not occurred in many years.	Unknown

[61] Note some states may have regional or local guides in addition to state public access guides. Unless you want to list all local guides as well, there is no need to list additional guides beyond the state access guide. You may choose to note that the local guides do exist and may provide additional information that expands upon the state guides.

Enhancement Area Prioritization:

1. What level of priority is the enhancement area for the coastal management program?

   High _____
   Medium __X__
   Low _____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

   Public Access remains a medium priority in this assessment. It is one of the goals of the Shoreline Management Act, the cornerstone of Washington's CZMP. While the CZMP does not currently acquire or protect public access sites with CZM funds, it encourages public access through development of SMPs and provides access to information on the Coastal Atlas website.

Siting Energy and Government Facilities

Section 309 Enhancement Objective: Adoption of procedures and enforceable policies to help facilitate the siting of energy facilities and Government facilities and energy-related activities and Government activities which may be of greater than local significance. §309(a)(8)62

Resource Characterization:

1. In the table below, characterize the status and trends of different types of energy facilities and activities in the state's or territory's coastal zone based on best-available data. If available, identify the approximate number of facilities by type.

Status and Trends in Energy Facilities and Activities in the Coastal Zone[63]

Type of Energy Facility/Activity	Exists in Coastal Zone (# or Y/N)	Change in Existing Facilities/Activities Since Last Assessment (↑, ↓, –, unkwn)	Proposed in Coastal Zone (# or Y/N)	Change in Proposed Facilities/Activities Since Last Assessment (↑, ↓, –, unkwn)
Energy Transport				
Pipelines	8	Unknown	Y	-
Electrical grid (transmission cables)	Y	Unknown	N	Unknown
Ports	9	Unknown	N	N
Liquid natural gas (LNG)	N	Unknown	Y	-
Energy Activity				
Gas	Y	Unknown	Y	-
Coal	N	Unknown	N	-
Nuclear	N	Unknown	N	-
Wind	N	Unknown	Unknown	Unknown
Wave	N	Unknown	Unknown	Unknown
Tidal	N	Unknown	Unknown	Unknown
Current (ocean, lake, river)	N	Unknown	Unknown	Unknown
Hydropower	Y	Unknown	Unknown	Unknown
Ocean thermal energy conversion	N	Unknown	Unknown	Unknown
Solar	Y	Unknown	N	-
Biomass	Y	Unknown	N	-

[62] CZMA § 309(a)(8) is derived from program approval requirements in CZMA § 306(d)(8). NOAA regulations at 15 C.F.R. § 923.52 further describe what states need to do regarding national interest and consideration of interests that are greater than local interests.

[63] *www.coast.noaa.gov/digitalcoast/tools/ort.html:* The Coastal Program explored resources provided by NOAA and stakeholders to complete this assessment, but found limited information. There is no one source of high confidence data on siting of energy and government facilities.

2. If available, briefly list and summarize the results of any additional state- or territory-specific information, data, or reports on the status and trends for energy facilities and activities of greater than local significance in the coastal zone since the last assessment.

The Washington State Energy Facility Site Evaluation Council (EFSEC or the Council):
Provides a "one-stop" siting process for major energy facilities in the State of Washington. The council coordinates all of the evaluation and licensing steps for siting major energy facilities in Washington. If EFSEC approves a project, it then specifies the conditions of construction and operation; issues permits in lieu of any other individual state or local agency authority; and manages an environmental and safety oversight program of facility and site operations.

EFSEC is a state agency comprised of a Governor-appointed Chair, permanent representatives of five state agencies, and occasional representatives from other state agencies. The Council's responsibilities include siting large natural gas and oil pipelines, thermal electric power plants over 350 megawatts and their dedicated transmission lines, new oil refineries or major expansions of existing facilities, certain oil/petroleum terminals, and underground natural gas storage fields. In addition, energy facilities of any size which exclusively use alternative energy resources (wind, solar, geothermal, landfill gas, wave or tidal action, or biomass energy) can opt in to the EFSEC review and certification process.

EFSEC's authority does not extend to hydro-based power plants, thermal electric plants less than 350 megawatts, or general transmission lines. However, EFSEC has not received any of the proposed wave or tidal energy projects in state waters. These have, instead, turned to the Federal Energy Regulatory Commission (FERC) process for preliminary permits and licenses.

The Northwest Power and Conservation Council:
The Council was authorized by Congress in 1980 when it passed the Northwest Power Act, giving the states of Idaho, Montana, Oregon, and Washington a greater voice in how we plan our energy future and protect our fish and wildlife resources.

One of the Council's primary responsibilities, along with the fish and wildlife program, is to write a 20-year, least-cost power plan for the Pacific Northwest and update it at least every five years. The plan includes several key provisions, including an electricity demand forecast, electricity and natural gas price forecasts, an assessment of the amount of cost-effective energy efficiency that can be acquired over the life of the plan, and a least-cost generating resources portfolio. The plan guides Bonneville Power Administration's (BPA) resource decision-making to meet its customers' electricity load requirements.

The Seventh plan was adopted in 2016 and is the Council's current plan.[64] A key question for the plan was how the region could lower power system carbon dioxide emissions and at what costs. This includes evaluation of existing and new policies.

Marine Spatial Planning

In 2018, Washington State formally adopted a Marine Spatial Plan[65] (MSP) which compiled a significant amount of data and provided a management framework for new uses, including renewable energy projects on Washington's pacific coast. The development of the plan included:

- Potential for energy generation from offshore wind, wave, and tidal technologies has been estimated for Washington's Pacific coast. Significant energy resources were estimated for wind and wave power.
- Pacific National Marine Laboratories (PNNL) and Parametrix were contracted through the Marine Spatial Plan process to create suitability maps for wind, wave, and tidal devices.
- Industrial Economics, Inc. and BST Associates were contracted as a part of the Maine Spatial Plan process to produce a Sector Analysis for Marine Renewable Energy along Washington's Pacific coast. This sector analysis synthesized information to provide an overview of current economic activity, major trends in activity, and potential future resource uses and needs by drawing on publically available information and perspectives from experts.

Coastal Zone Management Program coordinates and facilitates a Washington interagency team, called the State Ocean Caucus (SOC). The SOC continues to be the planning body for the Washington MSP. The MSP is addressing marine renewable energy by collecting available information and identifying data gaps. The plan includes standards and a process to assess effects on existing resources to help siting of Marine Renewable Energy. The MSP has also provides a framework for coordinating state agency and local government review of proposed renewable energy development uses.

3. Briefly characterize the existing status and trends for federal government facilities and activities of greater than local significance[66] in the state's coastal zone since the last assessment.

   Over the past five years, there have been a number of high-profile energy facilities that have been proposed within the Washington Coastal Zone. This includes crude oil, alternative fuels and other commodities projects, and Liquefied Natural Gas (LNG). Of the proposed projects, however, Tacoma LNG is the only facility still moving forward. The

[64] https://www.nwcouncil.org/reports/seventh-power-plan: Seventh Power Plan (2016)
[65] https://msp.wa.gov/wp-content/uploads/2018/06/WA_final_MSP.pdf: Marine Spatial Plan for Washington's Pacific Coast
[66] The CMP should make its own assessment of what Government facilities may be considered "greater than local significance" in its coastal zone, but these facilities could include military installations or a significant federal government complex. An individual federal building may not rise to a level worthy of discussion here beyond a very cursory (if any at all) mention).

expansion and development of these facilities remain an interest in Washington and the Coastal Program will have a continued role in consistency determinations, state and local permitting, and environmental review.

Management Characterization:

1. Indicate if the approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) that could facilitate or impede energy and government facility siting and activities have occurred since the last assessment.

Significant Changes in Energy and Government Facility Management

Management Category	Employed by State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Statutes, regulations, policies, or case law interpreting these	Y	Y	Y
State comprehensive siting plans or procedures	Y	Y	Y

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

As described above, the Washington's Marine Spatial Plan was adopted in 2018. The state now has a framework for assessing renewable energy projects in coastal waters. This was a Coastal Program 309 driven change. The plan adds clarity for project proponents and provides authorities a logical framework for assessing whether or not new projects comply with the various local, state, and federal regulations.

Another significant change occurred in 2017, not driven by the WCZMP 309 strategy, with the Washington State Supreme Court ruling on the Ocean Resources Management Act (ORMA). The case was specific to a project in Grays Harbor County that would store and transport crude oil. Prior to this ruling, the Washington State Department of Ecology's interpretation was that ORMA did not apply to these types of projects. The ruling increased the jurisdiction and scope of the ORMA to include shorelines and also created uncertainty about what kind of projects the statute applied to. The Washington State Department of Ecology, including the Coastal Program, are currently analyzing the court decision and

developing guidance that clarifies these issues and how project proponents can demonstrate compliance with ORMA.

Enhancement Area Prioritization:

1. What level of priority is the enhancement area for the coastal management program?

   High _____
   Medium __X__
   Low _____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

   Though energy facility siting is classified as a medium priority in this assessment because of the trends in marine renewable energy, we will address it through our strategy developed to address the ocean resources enhancement area. Through tools such as Marine Spatial Plan, regional collaborations on ocean issues, and state interagency workgroups, we will address energy facility siting on Washington's coast.

Special Area Management Planning

Section 309 Enhancement Objective: Preparing and implementing special area management plans for important coastal areas. §309(a)(6)

The Coastal Zone Management Act defines a special area management plan (SAMP) as "a comprehensive plan providing for natural resource protection and reasonable coastal-dependent economic growth containing a detailed and comprehensive statement of policies; standards and criteria to guide public and private uses of lands and waters; and mechanisms for timely implementation in specific geographic areas within the coastal zone. In addition, SAMPs provide for increased specificity in protecting natural resources, reasonable coastal-dependent economic growth, improved protection of life and property in hazardous areas, including those areas likely to be affected by land subsidence, sea level rise, or fluctuating water levels of the Great Lakes, and improved predictability in governmental decision making."

Resource Characterization:

1. In the table below, identify geographic areas in the coastal zone subject to use conflicts that may be able to be addressed through a SAMP. This can include areas that are already covered by a SAMP but where new issues or conflicts have emerged that are not addressed through the current SAMP.

Geographic Area	**Opportunities for New or Updated Special Area Management Plans** Major conflicts/issues
Willapa Bay	Users in this geographic area continue to experience conflict related to the impacts of burrowing shrimp on shellfish growers and the prohibition of chemical controls to address the shrimp.

2. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends of SAMPs since the last assessment.

Management Characterization:

1. Indicate if the approach is employed by the state or territory and if there have been any significant state- or territory-level management changes (positive or negative) that could help prepare and implement SAMPs in the coastal zone.

Significant Changes in Special Area Management Planning

Management Category	Employed by State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
SAMP policies, or case law interpreting these	Y	Y	N
SAMP plans	Y	Y	N

Washington currently has one SAMP approved by the NOAA's Office for Coastal Management (OCM) – the Grays Harbor Estuary Management Plan (GHEMP). The GHEMP was first adopted in 1986 by the Grays Harbor area local governments and by the state and federal agencies with pertinent regulatory authorities. OCM formally certified the GHEMP in 1993.

The GHEMP does not eliminate or modify any of the laws, regulations, or policies which govern the actions and decisions of local, state, or federal agencies. GHEMP was not integrated into comprehensive updates of local SMPs - it was not relevant, or even necessary, given the updated Guidelines. It still exists, but there won't be an implementation mechanism. It is our understanding that none of the Federal agencies use it any longer.

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

While it is not an officially designated SAMP, it is important to note that the WCZMP adopted the Marine Spatial Plan (MSP) in 2018[67]. The MSP was a 309 driven process and includes coastal estuaries of Grays Harbor and Willapa Bay. This provides information on coastal uses and resources, provide analyses to support decision-making (e.g. Ecological modelling work by NOAA's NCCOS, Ecologically Important Areas and Use Analysis), and establish a framework and guidance that improves the coordination, siting, and evaluation of new ocean uses and assists in the implementation of Washington's state laws and policies, including the enforceable policies contained in the Ocean Resources Management Act and its regulations. The Plan covers a wide range of potential ocean uses, with a particular focus on marine renewable energy. The outcome of this plan achieves similar goals of a SAMP for Washington's Pacific Coast.

[67] https://msp.wa.gov/wp-content/uploads/2018/06/WA_final_MSP.pdf: Marine Spatial Plan for Washington's Pacific Coast (2018).

Enhancement Area Prioritization:

1. What level of priority is the enhancement area for the coastal management program?

   High _____
   Medium _____
   Low __X__

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

   The SAMP enhancement area is assigned a low priority because there is current interest from the state or local governments in using this management tool.

Wetlands

Section 309 Enhancement Objective: Protection, restoration, or enhancement of the existing coastal wetlands base, or creation of new coastal wetlands. §309(a)(1)

> *Note: For the purposes of the Wetlands Assessment, wetlands are "those areas that are inundated or saturated at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." [33 CFR 328.3(b)]. See also pg. 174 of the CZMA Performance Measurement Guidance[68] for a more in-depth discussion of what should be considered a wetland.*

Resource Characterization:

1. Using provided reports from NOAA's Land Cover Atlas,[69] please indicate the extent, status, and trends of wetlands in the state's coastal counties. You can provide additional or alternative information or use graphs or other visuals to help illustrate or replace the table entirely if better data are available. Note that the data available for the islands may be for a different time frame than the time periods reflected below. In that case, please specify the time period the data represents. Also note that Puerto Rico currently only has data for one time point so will not be able to report trend data. Instead, Puerto Rico should just report current land use cover for all wetlands and each wetlands type.

Unfortunately, the 2016 CCAP data was not ready in time to complete the 309A&S.

Wetlands in Washington's coastal zone counties, particularly in the Puget Sound, are under increasing pressure from development. Wetland losses are minimized to the greatest extent possible through local jurisdictional regulations. Though Ecology requires compensation for lost wetlands, it is more challenging to find estuarine restoration sites than freshwater sites. Despite this, there have been some major estuarine restoration projects in the last five years (i.e., the Snohomish estuary). The Floodplains by Design Program is also a significant contributor to restoration, but sites restored through the program can also have wetland impacts so it is unclear whether wetlands have been gained through these efforts.

2. If available, briefly list and summarize the results of any additional state- or territory-specific data or reports on the status and trends of coastal wetlands since the last assessment to augment the national data sets.

[68] https://coast.noaa.gov/czm/media/czmapmsguide2018.pdf
[69] https://coast.noaa.gov/digitalcoast/tools/lca.html. Note that the 2016 data will not be available for all states until later Summer 2019. NOAA OCM will be providing summary reports compiling each state's coastal county data. The reports will be available after all of the 2016 data is available.

In the absence of CCAP data, the wetlands team provided available data and a characterization (increased, decreased, unchanged, unknown) for the four land cover types listed in the table provided (see below).

Wetland impacts and mitigation associated with 401 and AOs in the CZM counties

	Acres of permit-estimated wetland loss*	Acres of required gain or mitigation (creation, restoration, enhancement, preservation, banks)*
1st half 2015	25.67	88.93
2nd half 2015	21.54	54.2
1st half 2016	14.19	31.44
2nd half 2016	2.78	13.72
1st half 2017	2.29	4.37
2nd half 2017	1.45	3.45
1st half 2018	6.67	15.87
2nd half 2018	8.92	34.51
1st half 2019	11.16	39.42
2nd half 2019	2.46	15.16
Total	**97.13**	**301.07**

*This does not include projects that used in-lieu fee credits since the fee paid cannot be converted to acreage.

Wetland Banks approved since last assessment

	Year approved	County	Acreage under conservation easement	Acres per credit	Credits used
Ocean Shores Weatherwax bank	2016	Grays Harbor	121.86	10.35	.0059
Keller Farm bank	2019	King	75.2	1.4	0

In the table above, credits represent the amount of mitigation needed for an impact to a moderate quality (Category III) wetland. The acreage for Ocean Shores is high because much of the bank is preservation of a forested interdunal wetland. The Ocean Shores Bank has been completed since 2016 and only two very minor impacts have used it.

Keller Farm involves the restoration and rehabilitation of riverine wetlands in the Bear Creek drainage. The site is one of the last remaining undeveloped parcels in the City of Redmond.

How Wetlands Are Changing

Land Cover Type	Change since last assessment
Development	Increased wetlands (see table above)
Agriculture	Unchanged
Barren Land	Unchanged
Water	Unknown

Also of note is that in the Puget Sound basin, the use of programmatic mitigation (i.e., wetland banking and in lieu fee programs) has increased. Programmatic mitigation results in larger mitigation parcels and has better success rates than permittee-responsible mitigation.

Management Characterization:

1. Indicate if there have been any significant changes at the state or territory level (positive or negative) that could impact the future protection, restoration, enhancement, or creation of coastal wetlands since the last assessment.

Significant Changes in Wetland Management

Management Category	Significant Changes Since Last Assessment (Y or N)
Statutes, regulations, policies, or case law interpreting these	Y
Wetlands programs (e.g., regulatory, mitigation, restoration, acquisition)	Y

2. For any management categories with significant changes, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information:
    a. Describe the significance of the changes;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

The following significant changes were not 309 driven changes, but portions of the work were funded under the annual 306 CZM awards.

Statutes, regulations, policies, or case law interpreting these
In 2015, Waters of the US (WOTUS) were defined in the Clean Water Rule. In 2019, that version of the rule was rescinded and replaced with former regulations determined by the US Army Corps of Engineers. In January 2020, a final rule redefining WOTUS has been released. The Wetlands Program at Ecology is working to understand impacts of this new rule. We are reaching out to local governments and effective industry groups as we evaluate the best path forward.

Wetlands programs (e.g., regulatory, mitigation, restoration, acquisition)

- The Voluntary Stewardship Program is in the beginning stages of implementation in coastal zone counties. Six coastal zone counties have finalized their watershed work plans for agriculture in critical areas.

- The Wetlands Program Plan was finalized in 2015. This interagency collaboration helped align multiple agencies' efforts around wetland protection programs. One notable result of that interagency working group was another interagency monitoring and assessment workgroup. This group is focused on wetlands needs and assessments and is developing a monitoring strategy. The Wetlands Program Plan will be updated in 2020.

- In 2016, the Wetlands Program completed guidance documents for local governments to use when writing critical area ordinances to protect wetlands. This guidance explains the Department of Ecology's policies and provides local governments with example code language that can be used in writing similar policies.

- The Wetlands Program has discontinued participation in "In lieu fee" interagency teams. The Program does still allow in lieu fees as compensatory mitigation, but as a program they are no longer actively involved in the interagency review team.

Enhancement Area Prioritization:

1. What level of priority is the enhancement area for the coastal management program?

   High _____
   Medium __X___
   Low _____

2. Briefly explain the reason for this level of priority. Include input from stakeholder engagement, including the types of stakeholders engaged.

   Wetlands is medium priority management area for the next five years. The CZMP is currently in the process of updating our wetlands strategic management plans with our partners. It is unclear exactly what role Ecology will play, and what the desired outcome would be at this time.

Phase II: In-Depth Assessment

Purpose: For any enhancement areas ranked as a high priority after the Phase I assessment, an in-depth assessment is required to further explore potential problems, opportunities for improvement, and specific needs.

Coastal Hazards

1. Based on the characterization of coastal hazard risk, what are the three most significant coastal hazards[70] within your coastal zone? Also indicate the geographic scope of the hazard, i.e., is it prevalent throughout the coastal zone, or are there specific areas most at risk?

	Type of Hazard	**Geographic Scope** (throughout coastal zone or specific areas most threatened)
Hazard 1	Flooding	Coastal Zone
Hazard 2	Shoreline Erosion	Coastal Zone
Hazard 3	Geological Hazards	Tsunami and seismic risk are equally great on Washington's ocean coast and in Puget Sound, however, the nature, source, and frequency of the risk varies.

* See High-level characterization for why these hazards are the most significant in the coastal zone.

2. Briefly explain why these are currently the most significant coastal hazards within the coastal zone. Cite stakeholder input and/or existing reports or studies to support this assessment.

   The Washington State Enhanced Hazard Mitigation Plan Risk and Vulnerability Assessment (2018) provides the most recent inventory and characterization of natural hazards statewide. For the first time, the 2018 update included a Coastal Hazards Profile. There are still many data gaps, which limits the state's ability to quantify and prioritize coastal hazards.

   For the past five years, however, there have been many efforts to increase technical assistance and planning efforts in partnership with local governments. Ecology, Washington Sea Grant, the University of Washington Climate Impacts Group, and FEAM, the State Emergency Management Division, and others have been working together to enhance the states capacity for resilience initiatives. Based on these experiences, local governments along marine and estuarine shorelines identify or have been impacted most frequently by flooding and shoreline erosion. They are also most concerned about the looming threat of tsunami and seismic risk, and sea level rise.

   In 2016, U.S. Representative Derek Kilmer's Office, Ecology, cities of Ocean Shores and Westport, the Quinault Indian Nation, Grays Harbor County Emergency Management, the Port of Grays Harbor, and other state and federal agencies partnered to create the Grays Harbor Resilience Coalition. Staff from U.S. Rep. Kilmer's Office and Ecology contacted the William D. Ruckelshaus Center (Center) seeking independent facilitation services, originally around convening the Coalition partners to develop a 2017-2019 biennial budget request

[70] See list of coastal hazards on pg. 24 of this assessment template.

for coastal resilience projects. Over a series of conversations, the Center suggested that— while the Coalition as presently constructed may decide to continue pursuing a budget request specific to Grays Harbor County— given the coast-wide scope and the shared interest in increasing coastal resilience it appeared to be an opportune time to begin developing a coast-wide approach. To identify a path forward that would be embraced by and meet the needs of both "top-down" and "grass roots" interests, the Center suggested conducting an assessment consisting of a series of interviews with key parties to explore opportunities that support long-term resilience to natural hazards for the Washington coast and coastal communities – "Washington State Coast Resilience Assessment Final Report (2017)".[71]

An Assessment Team composed of Center affiliated faculty and staff with assistance from a consultant carried out the assessment using an interview-based process. Interviews took place from mid-October 2016 through February 2017. The Assessment Team conducted 104 interviews and conversations with individuals who are involved in organizations with a particular role, interest in, or knowledge of coastal resilience efforts. The goal was to gather a range of perspectives, information, and insights about approaches, processes, structures, and resources needed to enhance and support resilience efforts for the coast and coastal communities. This assessment verified that flooding, erosion, geologic hazards, and sea level rise are high priority areas for local governments and communities.

3. Are there emerging issues of concern, but which lack sufficient information to evaluate the level of the potential threat? If so, please list. Include additional lines if needed.

Emerging Issue	Information Needed
Sea level rise	There have been significant improvements in sea level rise projections over the past five years, however, this has not included vulnerability and characterization to fully understand the risk to Washington State or individual communities.

The products of the Washington Coastal Resilience Project have increased the sea level rise data and information for Washington State. However, there are still many opportunities to improve the tools that support the use of this information in planning and project design. Further efforts to understand vulnerabilities and characterize the risk will help prioritize assistance efforts and quantify the severity of future impacts to help the state with fiscal impact analysis and investments.

In-Depth Management Characterization:
Purpose: To determine the effectiveness of management efforts to address identified problems related to the coastal hazards enhancement objective.

[71] https://s3.wp.wsu.edu/uploads/sites/2180/2013/06/Washington-Coast-Resilience-Assessment-Report_Final_5.1.17.pdf

1. For each coastal hazard management category below, indicate if the approach is employed by the state or territory and if there has been a significant change since the last assessment.

Significant Changes in Coastal Hazards Statutes, Regulations, and Policies

Management Category	**Employed by State/Territory** (Y or N)	**CMP Provides Assistance to Locals that Employ** (Y or N)	**Significant Change Since the Last Assessment** (Y or N)
Shorefront setbacks/no build areas	Y	Y	Y
Rolling easements	N	Y	N
Repair/rebuilding restrictions	Y	N	Y
Hard shoreline protection structure restrictions	Y	Y	Y
Promotion of alternative shoreline stabilization methodologies (i.e., living shorelines/green infrastructure)	Y	Y	Y
Repair/replacement of shore protection structure restrictions	Y	Y	Y
Inlet management	Y	N	N
Protection of important natural resources for hazard mitigation benefits (e.g., dunes, wetlands, barrier islands, coral reefs) (other than setbacks/no build areas)	Y	Y	Y
Repetitive flood loss policies (e.g., relocation, buyouts)	Y	Y	N
Freeboard requirements	Y	Y	N
Real estate sales disclosure requirements	N	N	N
Restrictions on publicly funded infrastructure	N	N	N
Infrastructure protection (e.g., considering hazards in siting and design)	Y	Y	N
Other (please specify)			

The Washington Coastal Program directly addresses high-hazard areas through Shoreline Management Act policies and state guidelines. The Act requires that the impact of natural hazards be considered during the preparation, review, and approval of shoreline master programs. The programs require consideration of erosion, flooding, geological hazards, and natural protective features including beaches, dunes, and wetlands.

Ecology adopted amended Shoreline Master Program (SMP) Guidelines in 2003. These Guidelines direct the updating of every local shoreline master program in the Coastal Zone.

Since 2003, 121 out of 132 coastal zone communities have had their comprehensively updated SMPs approved by Ecology. There are 11 coastal zone jurisdictions that are behind their statutory deadlines but making progress.

In addition, there have been significant improvements to coastal resilience resources. Ecology has completed updates to the Shoreline Planners Handbook and other information located in the online "shoreline planners toolbox"[72] as part of the Washington Coastal Resilience Project. The Coastal Hazards Resilience Network[73] (co-managed by Ecology and Washington Sea Grant) also provides a valuable website to aid in the process of learning about coastal hazards, direct users to tools and resources, provides examples of projects happening along the coast, and connects users with other people who are involved in this work. The Coastal Hazards Resilience network website was redesigned and launched in February 2020, and is maintained with new resources as they are produced.

Significant Changes to Coastal Hazard Management Planning Programs or Initiatives

Management Category	**Employed by State/Territory** (Y or N)	**CMP Provides Assistance to Locals that Employ** (Y or N)	**Significant Change Since the Last Assessment** (Y or N)
Hazard mitigation plans	Y	Y	Y
Sea level rise or climate change adaptation plans	N	Y	N
Statewide requirement for local post-disaster recovery planning	N	N	N
Sediment management plans	Y	Y	Y
Beach nourishment plans	N	Y	N
Special Area Management Plans (that address hazards issues)	Y	Y	N
Managed retreat plans	N	Y	N
Other (please specify)			

Since the Ruckelshaus "Washington State Coast Resilience Assessment Final Report" was published in May 2017, the Coastal Program has been working closely with the Governor's Office and other key agencies to find creative solutions to advance the wide range of actions identified with the limited resources available. In March 2018, Governor Jay Inslee added capacity to support these efforts by requesting the assistance of the Washington Coastal Marine Advisory Council (WCMAC).[74] WCMAC was originally tasked to advise the state on the development of the Washington Marine Spatial Plan. Once that project was completed, the Governor saw a natural transition to help address a similarly complex problem of coastal

[72] https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Shoreline-planners-toolbox: Shoreline planners toolbox
[73] https://wacoastalnetwork.com/: Washington Coastal Hazards Resilience Network Website
[74] The Washington Coastal and Marine Advisory Council is established in the executive office of the governor under RCW 43.143.050 to fulfill the duties outlined in RCW 43.143.060.

hazards resilience. Specifically, the Governor has asked WCMAC to prioritize needs and actions to carry out the recommendations in the Ruckelshaus Assessment (attached).

The WCMAC quickly responded, given the interest from members and alignment with its mission. After a year of learning and investigation, the group identified a number of areas where WCMAC could play an important role. The group decided that a priority should be placed on establishing a "coast-wide resilience initiative to enhance and integrate efforts."

> *A coast-wide approach would elevate existing resilience efforts, mobilize new efforts, and weave together local initiatives while providing a systems approach to issues, risk analysis, project evaluation, and shared strategy development. The initiative could be developed in a way that builds on the efforts and leadership of coastal tribes, Conservation Districts, government agencies, existing organizations, communities, groups, and individuals while also providing a vehicle to bridge government, non-governmental, and academic analysis and research.*

However, WCMAC knows that building this comprehensive approach will take time and resources. While this long-term interest is pursued, there are immediate opportunities to take initial steps and enhance resilience projects on-the-ground.[75] To best address this need, the Ruckelshaus report highlighted "a key role of state agencies and other institutions[76]…to serve as 'integrators' of information, best practices, efforts, and planning principles." The Ruckelshaus Center recommended the formation of a "Coastal Hazards Organizational Resilience Team" (COHORT). The COHORT would establish a formal partnership that would assist in aligning key resources and expertise, spearheading cross-fertilization of ideas, enhancing collaboration, and coordinating strategic investment in projects and programs.

The FFY19 309 Project of Special Merit launched the first efforts by Ecology and Washington Sea Grant to develop and test the COHORT concept. The Resilience Action Demonstration (RAD) project is a pilot, showing the value and benefits of delivering multi-agency support to achieve on-the-ground results. This project is demonstrating how backbone service programs can unlock and leverage the many strengths and assets that currently exist in communities by strategically increasing planning and technical assistance on the front end. This will yield a rapid increase in the joint development of resilience projects that achieve multiple benefits and are more eligible/competitive for implementation funding.

The RAD project is intended to set in motion a long-term strategy for delivering a package of multi-agency assistance to communities to become more resilient. The COHORT, led by Ecology and Washington Sea Grant, are using this initiative as strong rationale for increased state and federal investment to establish a more durable coastal resilience program for the future.

[75] Projects can be any activity needed to advance toward a resilience outcome (e.g., capital projects, research and analysis, policies and regulations, education and outreach strategies, acquisitions, tax incentive programs, etc.).
[76] The Ruckelshaus Report and WCMAC have identified a key partnership between Washington State University Extension, Sea Grant, Department of Ecology, Department of Natural Resources, Department of Commerce, and Emergency Management Division.

In addition, another effort that has been a high priority for the Coastal Program is the Mouth of the Columbia River regional sediment management. This has been over a decade of planning and adaptive management to encourage the beneficial use of dredge material.[77] Two significant changes to planning have been the update to the Mouth of the Columbia Regional Sediment Management Plan (in-progress), and the increased opportunities for developing a more statewide regional sediment management/beneficial use program in response to increased attention and investment from the federal government for these activities. One successful example over the past five years, is the Grays Harbor beneficial use project funded under the Army Corps of Engineer Section 1122 pilot program.

Significant Changes to Coastal Hazard Research, Mapping, and Education Programs or Initiatives

Management Category	**Employed by State/Territory** (Y or N)	**CMP Provides Assistance to Locals that Employ** (Y or N)	**Significant Change Since the Last Assessment** (Y or N)
General hazards mapping or modeling	Y	Y	Y
Sea level rise mapping or modeling	Y	Y	Y
Hazards monitoring (e.g., erosion rate, shoreline change, high-water marks)	Y	Y	N
Hazards education and outreach	Y	Y	Y
Other (please specify)			

* See Phase I Assessment for additional information on research, mapping, and education program or initiatives.

2. Identify and describe the conclusions of any studies that have been done that illustrate the effectiveness of the state's management efforts in addressing coastal hazards since the last assessment. If none, is there any information that you are lacking to assess the effectiveness of the state's management efforts?

   No studies have been conducted specifically assessing the effectiveness of management efforts. However, the "Washington State Coast Resilience Assessment" identifies the value of our multi-agency approach to hazards resilience assistance to communities. Furthermore, the RAD project is intended to provide this proof of concept and data demonstrating the needs and how well the COHORT can get to on-the-ground resilience results.

[77] Lower Columbia Solutions Group website: https://lowercolumbiasolutions.org/

Identification of Priorities:

1. Considering changes in coastal hazard risk and coastal hazard management since the last assessment and stakeholder input, identify and briefly describe the top one to three management priorities where there is the greatest opportunity for the CMP to improve its ability to more effectively address the most significant hazard risks.

   Management Priority 1: Develop a unified vision across state agencies for coastal hazards resilience and complete a comprehensive update to the Washington Enhanced Hazard Mitigation Plan to support strategic implementation.

   Description: The Coastal Program participated in the recent 2018 update of the State Enhanced Hazard Mitigation Plan (SEHMP), which includes a specific section dedicated to coastal hazards resilience (for the first time). Through this update process, there were many gaps and opportunities identified for improving the coastal hazards resilience section to prepare for a more integrated and robust framework for the SEHMP update in 2023. The Coastal Program has been working to address these needs and will participate/contribute to the State Hazard Mitigation Work Group to complete the next SEHMP.

   Management Priority 2: Strengthen strategies for addressing coastal flood risk in Washington's comprehensive flood hazard management guidance.

   Description: The first addition of the Comprehensive Flood Hazard Management guidance was developed in 1991 (Ecology Publication #91-44). There is a priority for the Coastal Program to work with the floodplain management team, Department of Commerce, Emergency Management Division, Washington Sea Grant, The Nature Conservancy, and local partners to update and expand this guidance to align with new data, reports, and best available science; specifically incorporate a holistic, multi-benefit approach to floodplain management that relies on concepts developed by the Floodplains by Design partnership and other related initiatives; and use broad stakeholder involvement and integrated Floodplain Management and coastal resilience concepts.

2. Identify and briefly explain priority needs and information gaps the CZMP has for addressing the management priorities identified above. The needs and gaps identified here should not be limited to those items that will be addressed through a Section 309 strategy but should include any items that will be part of a strategy.

Priority Needs	Need? (Y or N)	Brief Explanation of Need/Gap
Research	Y	- Direct and indirect impacts to the built and natural environment from changing ocean conditions and rising seas - Statewide understanding of sediment processes - Statewide shore change data - Monitoring of beneficial use of dredge material placement activities - Impacts analysis of beneficial use of dredge material during feasibility phase of site exploration
Mapping/GIS/modeling	Y	- Combine coastal hazards geospatial database - Statewide erosion hazard profile - Sediment budget and transport modeling at key areas - Financial support to complete the United States Geological Survey (USGS) Coastal Storm Modeling System (CoSMoS) and communication/decision-support tools
Data and information management	Y	- Clearing house of multi-hazard data and geospatial information - A collection of data and geospatial layers that can be used for conducting a vulnerability assessment in Washington communities
Training/Capacity building	Y	- Update Coastal Training Program climate adaptation series strategy and investment in increasing video training modules
Decision-support tools	Y	- Risk index and vulnerability assessment for all communities along marine and estuarine shorelines in Washington
Communication and outreach	Y	- Facilitation support for regional sediment management planning - Durable strategy and funding for the Coastal Hazards Resilience Network (CHRN) - Communication products for the Washington Coastal Resilience Project and Resilience Action Demonstration project
Other (specify)		

Enhancement Area Strategy Development:

1. Will the CMP develop one or more strategies for this enhancement area?
   Yes ___X___
   No _____

2. Briefly explain why a strategy will or will not be developed for this enhancement area.

After several years of exploring how to best grow our program to best help communities address natural hazards, lessons learned have clarified gaps and clarified areas to permanently invest. Supporting communities in proactive measures to reduce their risks allows for the integration of multi-benefit solutions.

Cumulative and Secondary Impacts

1. What are the three most significant existing or emerging cumulative and secondary stressors or threats within your coastal zone? Indicate the geographic scope of the stressor, i.e., is it prevalent throughout the coastal zone, or are there specific areas that are most threatened? Stressors can be coastal development and impervious surfaces; polluted runoff; agriculture activities; forestry activities; shoreline modification; or other (please specify). Coastal resources and uses can be habitat (wetland or shoreline, etc.); water quality; public access; or other (please specify). When selecting significant stressors, also consider how climate change may exacerbate each stressor.

	Stressor/Threat	**Coastal Resource(s)/Use(s) Most Threatened**	**Geographic Scope** (throughout coastal zone or specific areas most threatened)
Stressor 1	Development	Habitat, water quality	Coastal Zone
Stressor 2	Shoreline armoring	Habitat, water quality	Coastal Zone
Stressor 3	Climate Change	Public Access, Habitat	Coastal Zone

2. Briefly explain why these are currently the most significant cumulative and secondary stressors or threats from coastal growth and development within the coastal zone. Cite stakeholder input and/or existing reports or studies to support this assessment.

   Puget Sound has been and will continue to be the fastest growing area in the Coastal Zone, and is subsequently subject to the most significant cumulative and secondary stressors.

   Development: Washington State's population increases by about one million people every decade. Although Washington's Growth Management Act has had some success in stemming sprawling development through concentration of development in urban growth areas, there are inevitable environmental consequences of both rural and urban growth. Key threats include habitat loss due to clearing and proliferation of private docks and other shoreline modifications. Although environmental regulations, including the SMA, have slowed these losses considerably, development and creation of new impervious surfaces continue to threaten sustainability of habitat, including habitat for threatened anadromous fish species.

   Armoring: Bulkheads and other "hard" armoring disrupt the natural process of erosion that supplies much of the sand and gravel that forms and maintains our beaches. Erosion also creates habitat for herring, surf smelt, salmon, and many other species in Puget Sound. Over time, shoreline armoring may cause once sandy beaches to become rocky and sediment starved.

Climate Change: Strong climate variability is likely to persist for the Northwest, owing in part to the year-to-year and decade-to-decade climate variability associated with the Pacific Ocean. Periods of prolonged drought are projected to be interspersed with years featuring heavy rainfall driven by powerful atmospheric rivers and strong El Niño winters associated with storm surge, large waves, and coastal erosion. Continued changes in the ocean environment, such as warmer waters, altered chemistry, sea level rise, and shifts in the marine ecosystems are also expected. These changes would affect the Northwest's natural resource economy, cultural heritage, built infrastructure, and recreation as well as the health and welfare of Northwest residents.[78]

3. Are there emerging issues of concern, but which lack sufficient information to evaluate the level of the potential threat? If so, please list. Include additional lines if needed.

Emerging Issue	Information Needed
Public access and sea level rise	Inventory, analysis, and vulnerability assessment
Shoreline management compliance	Programmatic approach for monitoring and adaptive management
Sea level rise impacts	Consistent locally scaled mapping and vulnerability assessments of 2018 sea level rise projections[79]

In-Depth Management Characterization:
Purpose: To determine the effectiveness of management efforts to address identified problems related to the cumulative and secondary impacts (CSI) enhancement objective.

1. For each additional cumulative and secondary impact management category below that is not already discussed as part of the Phase I assessment, indicate if the approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) have occurred since the last assessment.

[78] https://nca2018.globalchange.gov/chapter/24/: Fourth National Climate Assessment - Chapter 24: Northwest

[79] https://wacoastalnetwork.com/chrn/research/sea-level-rise/: Washington Coastal Hazards Resilience Network

Significant Changes to Management of Cumulative and Secondary Impacts of Development

Management Category	Employed by State or Territory (Y or N)	CMP Provides Assistance to Locals that Employ (Y or N)	Significant Changes Since Last Assessment (Y or N)
Methodologies for determining CSI impacts	Y	Y	Y
CSI research, assessment, monitoring	Y	Y	Y
CSI GIS mapping/database	Y	Y	Y
CSI technical assistance, education and outreach	Y	Y	Y

2. For management categories with significant changes since the last assessment, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information.
    a. Describe significant changes since the last assessment;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

The basic approach to addressing cumulative and secondary impact threats in Washington's CZMP is through local Shoreline Master Programs (SMPs) that meet Ecology's standard of "no net loss of ecological functions necessary to sustain shoreline natural resources." The SMPs are the tool Ecology uses to address all of the management categories above. Ecology has approved 121 of 132 SMPs in the Coastal Zone. Ecology's review of these programs was funded in part with CZM 309 and 306 dollars. These reviews and updates are a 309 driven process. To ensure "no net loss of ecological functions" and protection of other shoreline functions and/or uses, master programs must contain policies, programs, and regulations that address adverse cumulative impacts.

Ecology's SMP Guidelines[80] require local government to evaluate and consider cumulative impacts of reasonably foreseeable future development on shoreline ecological functions. Each local government has prepared a cumulative impact analysis report that describes anticipated shoreline development within their jurisdiction and assesses the cumulative impacts of such development on shoreline ecological functions over the long term. The cumulative impacts analysis is used to determine how regulations most effectively protect shoreline ecological functions. The analysis is a key step in forecasting the future and proactively addressing anticipated impacts.

[80] https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Shoreline-coastal-planning/Shoreline-laws-rules-and-cases/Shoreline-Master-Program-guidelines: Shoreline Master Program Guidelines

As Ecology and our local government partners now complete Shoreline Management Act (SMA) required periodic reviews of these SMPs, we are reviewing to ensure that the critical areas protection standards are consistent with the most current, accurate, and appropriate scientific and technical information. Local governments are also considering amendments to their SMPs to addressing changing local circumstances or to incorporate new or improved data and information. This process is essential to ensure that the SMPs remain current, relevant, and consistent with the SMA. The outcome of these changes will be SMPs that are consistent with the most current standards for "no net loss of ecological functions" necessary to continue to address cumulative and secondary impact threats in Washington's CZMP.

3. Identify and describe the conclusions of any studies that have been done that illustrate the effectiveness of the state's or territory's management efforts in addressing cumulative and secondary impacts of development since the last assessment. If none, is there any information that you are lacking to assess the effectiveness of the state and territory's management efforts?

   No studies have been completed since the last assessment. Washington's Coastal Program will be using this Enhancement Cycle to develop a compliance program that will help inform data-driven adaptive management of SMPs over time. This work will include working with local, state, and federal partners to identify and prioritize data and information that will support the monitoring and adaptive management of SMPs as they are implemented over time.

Identification of Priorities:

1. Considering changes in cumulative and secondary impact threats and management since the last assessment and stakeholder input, identify and briefly describe the top one to three management priorities where there is the greatest opportunity for the CZMP to improve the effectiveness of its management effort to better assess, consider, and control the most significant threats from cumulative and secondary impacts of coastal growth and development. *(Approximately 1-3 sentences per management priority.)*

   Management Priority 1: Complete the review and approval of SMA required SMP Periodic Reviews for all remaining jurisdictions in Washington's Coastal Zone and provide guidance for our local partners.

   Description: The SMA requires each city and county to review, and, if necessary, revise their SMP at least once every eight years on a staggered cycle. Ecology's rules were updated in 2017 to define the explicit procedures for conducting the mandatory periodic review. The periodic review will include catching up with statutory amendments since the SMP was comprehensively updated. Through this strategy, Ecology will conclude the first round of SMP Periodic Reviews including review, associated SMP amendments, and approval for every remaining jurisdiction in Washington's Coastal Zone. As part of this effort, Ecology will

continue to develop guidance documents that inform these SMP reviews and amendments, including process and scope requirements.

Management Priority 2: Public Access

Description: Each comprehensively updated SMP includes state-mandated requirements to preserve existing and encourage new or expanded public access opportunities. Specifically, new non-water oriented commercial, industrial, and multifamily residential development should be providing public access. Ecology has an opportunity to ensure these regulations are effective through ongoing oversight of local permits. These efforts should be resulting in increased physical and visual shoreline access. Based on permit information, as well as, current and historic public access data, Ecology has an opportunity to evaluate this, update public access resources, and provide guidance on effective public access approaches.

Management Priority 3: Partner with communities located on Washington's Pacific Coast to update the Shoreline Master Program to align with the Marine Spatial Plan and Ecology's guidance for implementation.

Description: The state's Marine Spatial Plan (MSP) was formally adopted in 2018, and there has been considerable effort to incorporate the management framework and enforceable policies into local Shoreline Master Plans (SMPs). By 2021, guidance will be finalized that clearly articulates the requirements and responsibilities of local governments, state agencies, and project proponents in the event that a new ocean use, as defined by the MSP, is proposed in state waters. In the coming years, coastal counties and municipalities will be required to conduct a periodic update to their SMPs, and ensuring consistency with the MSP will be a top priority. As part of this strategy, we would monitor the SMP update process and flag any inconsistencies and report them to the legislature by 2022, as specified in Washington's marine planning law.

Management Priority 4: Develop a new funding program and support updates to Master Programs to address local priority enhancement areas.

Description: Repurpose the $3.2 million per biennium that had been dedicated to SMP updates to create a competitive grants program supporting other local priorities like sea level rise assessment and planning, and monitoring and adaptive management of SMPs. This approach will allow local governments and Ecology to work together to solve difficult problems and develop updated local Shoreline Master Programs that will act as sample/model ordinances; and identify lessons learned to inform future state statutory and regulatory amendments.

2. Identify and briefly explain priority needs and information gaps the CZMP has to help it address the management priorities identified above. The needs and gaps identified here do not need to be limited to those items that will be addressed through a Section 309 strategy but should include any items that will be part of a strategy.

Compliance Monitoring and Adaptive Management of SMP Implementation		
Priority Needs	**Need?** (Y or N)	**Brief Explanation of Need/Gap**
Research	Y	For those permits that are not reviewed by the agency, Ecology needs to understand if locally issued permits and decisions comply with SMPs and, ultimately, whether built projects comply with issued permits.
Mapping/GIS	Y	Ecology should evaluate the use of GIS applications for validating whether SMP implementation is resulting in no-net-loss.
Data and information management	Y	Ecology should enhance its Shoreline Permit Tracking System in ways that support compliance monitoring, cumulative impacts assessments, and adaptive management.
Training/Capacity building	Y	Ecology needs to develop learning opportunities that enhance SMA implementation and result in higher levels of compliance. Ecology should support opportunities for peer-to-peer learning around compliance monitoring and adaptive management. Ecology should support proven or innovate strategies for active monitoring.
Decision-support tools	Y	Ecology needs to support local communities in compliance monitoring and adaptive management through provision of programs, guidance, resources and/or tools.
Communication and outreach	Y	Support local communication and outreach plans aimed at increasing awareness, compliance and voluntary restoration.
Other (specify)		

Public Access		
Priority Needs	**Need?** (Y or N)	**Brief Explanation of Need/Gap**
Research	Y	Ecology must study the questions of how successfully public access is being provided through shoreline permits and what design elements result in quality public access.
Mapping/GIS	Y	Ecology should incorporate public access elements/points into a map-based database accessible to the public.
Data and information management	Y	Ecology should identify a process for capturing local data and information about new public access points/elements so that a statewide database can be maintained.
Training/Capacity building	N	Ecology needs to share the successes and failures of large and small communities that have conditioned permits for public access.
Decision-support tools	Y	Ecology must generate current case studies for local communities that examine a range of project types and the

Public Access		
Priority Needs	**Need?** (Y or N)	**Brief Explanation of Need/Gap**
		public access amenities that have been negotiated during the shoreline permitting process.
Communication and outreach	N	
Other (specify)		

Transparent, Consistent No-Net-Loss Mitigation		
Priority Needs	**Need?** (Y or N)	**Brief Explanation of Need/Gap**
Research	Y	Ecology must support local communities in making consistent, transparent compensatory mitigation decisions. Ecology should support the development of a suite of explicit mitigation strategies for different shoreline functional impacts and different shoreline environments.
Mapping/GIS	Y	Ecology should consider whether there is a need for a statewide mapping tool that identifies shoreline compensatory mitigation sites.
Data and information management	Y	Ecology should consider the need for cataloguing compensatory mitigation sites in a database with appropriate metadata and geospatial information.
Training/Capacity building	Y	Ecology should provide peer-to-peer learning opportunities, trainings and guidance documents on effective mitigation.
Decision-support tools	Y	Ecology should develop guidance document(s) on shoreline compensatory mitigation that will help local planners make consistent, no-net-loss decisions.
Communication and outreach	N	
Other (specify)		

Develop a competitive local grant program for funding: • **climate change impacts assessment and adaptation planning as part of SMPs;** • **monitoring and adaptive management of SMPs;**		
Priority Needs	**Need?** (Y or N)	**Brief Explanation of Need/Gap**
Research	Y	Work more directly with the local governments that are planning for climate change and/or adaptively managing their SMPs to compile resources and build upon these efforts by identifying options and best practices.
Mapping/GIS	N	

Develop a competitive local grant program for funding: • **climate change impacts assessment and adaptation planning as part of SMPs;** • **monitoring and adaptive management of SMPs;**		
Priority Needs	**Need?** (Y or N)	**Brief Explanation of Need/Gap**
Data and information management	Y	Build off the data and information we have from the Washington Coastal Hazards Resilience Project (WCRP) and CAO Handbook.
Training/Capacity building	Y	Ecology should provide peer-to-peer learning opportunities, trainings and guidance documents on climate change impacts assessment and adaptation planning and effective monitoring and adaptive management of SMPs.
Decision-support tools	Y	Ecology should develop guidance document(s) on climate change impacts assessment and adaptation planning as part of SMPs and monitoring and adaptive management strategies for SMPs. Funding guidelines will need to be developed.
Communication and outreach	Y	Communication and outreach aimed at increasing awareness of and participation in climate change impact planning and monitoring and adaptive management.
Other (specify)		

Enhancement Area Strategy Development:

1. Will the CMP develop one or more strategies for this enhancement area?

   Yes ___X___
   No _____

2. Briefly explain why a strategy will or will not be developed for this enhancement area.

   Ecology will develop strategies for this enhancement area to ensure our efforts are effective.

Ocean Resources

1. What are the three most significant existing or emerging stressors or threats to ocean and Great Lakes resources within your coastal zone? Indicate the geographic scope of the stressor, i.e., is it prevalent throughout the coastal zone, or are specific areas most threatened? Stressors can be land-based development; offshore development (including pipelines, cables); offshore energy production; polluted runoff; invasive species; fishing (commercial and/or recreational); aquaculture; recreation; marine transportation; dredging; sand or mineral extraction; ocean acidification; or other (please specify). When selecting significant stressors, also consider how climate change may exacerbate each stressor.

	Stressor/Threat	**Geographic Scope** (throughout coastal zone or specific areas most threatened)
Stressor 1	Changing ocean and ecosystem conditions: ocean acidification, marine heat waves ("the blob"), hypoxia, harmful algal blooms (HABs), shifting species distributions	Throughout. Hypoxia events have been focused near the Quinault canyon where upwelled water comes to the surface but effects have also been seen coast-wide.
Stressor 2	Coastal hazards: coastal erosion, Sea Level Rise (SLR), increasing storm intensity, coastal erosion	Throughout. Notable threatened locations include Benson Beach near Ilwaco, North Cove, Westport, Ocean Shores, Taholah, La Push, and Neah Bay.
Stressor 3	Offshore development and uses: marine renewable energy, oil and gas exploration and extraction, sea floor mining, aquaculture	Coastal waters south of the Olympic Coast National Marine Sanctuary are most likely to see pressure from offshore development.

2. Briefly explain why these are currently the most significant stressors or threats to ocean and Great Lakes resources within the coastal zone. Cite stakeholder input and/or existing reports or studies to support this assessment.

   Changing ocean conditions are causing disruptions to fisheries and aquaculture, and the people who rely upon them. The decline of the salmon fishery has impacted tribal communities, commercial fishermen, and the recreational charter boat industry. It has been well documented that ocean acidification has caused significant challenges to shellfish aquaculture, causing the industry to adopt new methods that add to operational costs. Emerging information regarding the effects of ocean acidification on the development of crab larvae is very troubling and could have devastating impacts on coastal communities that are tied to the Dungeness crab fishery.

   Several prolonged marine heat waves resulted in mass mortality events of marine bird species and is thought to be a major driver of poor salmon returns. Several Harmful Algal Blooms that were associated with marine heat waves caused the closure of razor clam and Dungeness crab harvests. There have been similar marine heat waves in recent years,

though they have been less intense and their duration has been shorter. There is a high likelihood that they will be more frequent and intense in the future.

Climate change and the associated ocean changes will continue to cause disruptions to the ecosystem and coastal communities. Many of these changes are unpredictable and difficult to manage. Even predictable changes, such as Sea Level Rise, are challenging to address as limited resources and political influence make it difficult to prioritize.

No offshore ocean development is currently proposed in coastal waters but there are signs that could change in the near future. The Bureau of Ocean Energy Management (BOEM) proposed a draft oil and gas lease program that included the waters off the Washington Coast and has been directed to evaluate the nation's offshore mineral potential, evaluate unconventional extraction methods, and reduce permitting barriers in order to increase domestic mineral production. Similarly, an executive order regarding offshore aquaculture aims to streamline permitting and prioritize expansion of the industry in aquaculture opportunity areas that are yet to be identified. Marine renewable energy projects, specifically wind farms, are being sited and installed on the east and west coasts. As the technology matures and the demand for renewable energy increases, the likelihood that industries will consider Washington waters increases.

Stakeholder Input
Through the Washington Coast Marine Advisory Council (WCMAC), the Olympic Coast National Marine Sanctuary Advisory Council (OCNMSAC), and the Intergovernmental Policy Council (IPC), we have heard concerns about all of these threats. Members of the WCMAC are very focused on the negative impacts from ocean development, ocean acidification, fishery declines, and invasive species in coastal estuaries. Tribal members on the IPC have described in detail the changes they are seeing in the ocean and on the shoreline and are very concerned about future trends.

Reports and Studies:
Washington State's Marine Spatial Plan
2017 Addendum to Ocean Acidification: From Knowledge to Action
Ecosystem Status Report of the California Current for 2019
Washington State Coastal Resiliency Report
Shifting Snowlines and Shorelines
Grays Harbor Coastal Futures Project
Projected Sea Level Rise for Washington State – A 2018 Assessment
2017–2022 Outer Continental Shelf Oil and Gas Leasing Proposed Final Program
National Offshore Wind Strategy
Executive Order on Promoting American Seafood Competitiveness and Economic Growth

In the next five years, Washington's coastal program and agencies should review former plans and strategies to determine if existing efforts and strategies are sufficiently focused

on the most important ocean issues, and if not, to develop a process to address the deficiencies. The list of former plans in the above section shows that there have been considerable efforts in this regard in the past.

3. Are there emerging issues of concern, but which lack sufficient information to evaluate the level of the potential threat? If so, please list. Include additional lines if needed.

Emerging Issue	Information Needed
Green crab invasion	Distribution and population, viable control options
Burrowing shrimp population expansion in Willapa Bay and Grays Harbor	Causes and impacts, population trends, control/management alternatives to pesticides

In-Depth Management Characterization:
Purpose: To determine the effectiveness of management efforts to address identified problems related to the ocean and Great Lakes resources enhancement objective.

1. For each of the additional ocean and Great Lakes resources management categories below that were not already discussed as part of the Phase I assessment, indicate if the approach is employed by the state or territory and if significant state- or territory-level changes (positive or negative) have occurred since the last assessment.

Significant Changes in Management of Ocean and Great Lakes Resources

Management Category	**Employed by State or Territory** (Y or N)	**CMP Provides Assistance to Locals that Employ** (Y or N)	**Significant Changes Since Last Assessment** (Y or N)
Ocean and Great Lakes research, assessment, monitoring	Y	N	Y
Ocean and Great Lakes GIS mapping/database	Y	Y	Y
Ocean technical assistance, education, and outreach	Y	Y	Y
Other (please specify)			

2. For management categories with significant changes since the last assessment, briefly provide the information below. If this information is provided under another enhancement area or section of the document, please provide a reference to the other section rather than duplicate the information.
    a. Describe significant changes since the last assessment;
    b. Specify if they were 309 or other CZM-driven changes; and
    c. Characterize the outcomes or likely future outcomes of the changes.

Research, assessment, and monitoring was greatly enhanced by the 309 CZM-driven development and implementation of Washington's Marine Spatial Plan (MSP). As part of that process, new data was collected and/or developed regarding sea floor mapping, species distribution, ecosystem monitoring, coastal recreational use and economics, Important Sensitive and Unique habitat identification, and more.

In addition to new data, a large volume of existing data was aggregated and made available through msp.wa.gov. The data can be viewed through a GIS-based mapping application or downloaded. This effort also allowed state agencies to evaluate existing data and identify gaps for future research. A 309 Project of Special Merit has allowed our program to take this one step further and begin a process to prioritize research and data needs that will be used in a collaborative manner to fill those gaps and seek funding opportunities as they arise.

The MSP process has resulted in better understanding of existing data and research, facilitated the collection of new data, and provided resource managers information on future needs. When a new ocean use is proposed in the future, the state now has a framework and process that will lead to a better review process and provides clarity for stakeholders and project proponents.

3. Identify and describe the conclusions of any studies that have been done that illustrate the effectiveness of the state's or territory's management efforts in planning for the use of ocean and Great Lakes resources since the last assessment. If none, is there any information that you are lacking to assess the effectiveness of the state's or territory's management efforts?

   Washington's Marine Spatial Plan was primarily developed to help improve management decisions regarding new ocean uses. Although a new use has yet to trigger the need for utilizing the plan, the state is certainly better prepared when a new project is proposed. Sea Grant programs from Washington and Rhode Island worked with the University of Rhode Island to conduct a case study of Washington's MSP process. A briefer summary of MSP efforts in three states also offered key lessons learned (links below) that included: understand the local history of resource management and user conflicts as those pre-existing tensions will certainly influence the process; set realistic expectations as some participants may not clearly understand the authority and scope of the effort, and; utilize a flexible and adaptable approach in order to keep stakeholders actively engaged.

   A Case Study of the Washington Coast Marine Spatial Planning Process
   Building an MSP Network

Identification of Priorities:

1. Considering changes in threats to ocean and Great Lakes resources and management since the last assessment and stakeholder input, identify and briefly describe the top one to three management priorities where there is the greatest opportunity for the CZMP to improve its ability to effectively plan for the use of ocean and Great Lakes resources. *(Approximately 1-3 sentences per management priority.)*

   Management Priority 1: Update Washington's Marine Spatial Plan (MSP) which will improve the state's ability to manage coastal resources and evaluate new ocean uses.

   Description: The Marine Spatial Planning process successfully aggregated a significant amount of ocean resource data, and funded additional studies that filled significant data gaps, that can be used for various ocean management activities including assessing the impacts of new ocean projects on existing resources and coastal communities. By nature, data is a single snapshot of conditions with spatial and temporal limitations and it may require updating in order to be adequately inform decision making. There are still considerable data gaps that could be addressed, including conditions and trends that are tied to climate change. As part of the FY18Project of Special Merit, these data challenges are being assessed and a suite of data is being prioritized based on input from a wide range of expertise. However, there is a need to update the MSP to include products of the FY18 Project of Special Merit, resource data, and additional studies that have filled data gaps.

   Management Priority 2: Ensure the effective implementation of the Geographic Location Descriptions for various ocean activities

   Description: With the formal adoption of the Washington State Marine Spatial Plan (MSP), the state has enhanced ability to assess new ocean uses and evaluate the potential for adverse impacts to existing sustainable ocean uses in state waters. However, there is a very high likelihood that new ocean uses could occur in federal waters, where the MSP would not apply, but could negatively impact state resources. In order to assure that the state has the ability to review such projects, Geographic Location Descriptions (GLDs) will be considered and developed for a variety of potential activities.

   Under our current 2016-2020 strategy, we have been working on laying the important ground work necessary to identify the appropriate path forward for the Washington GLDs. This section of the 2021-2025 strategy will fund staff time to gain approval from NOAA to officially incorporate GLDs as part of the Washington CZMP and develop the guidance necessary for implementation the GLDs.

   Management Priority 3: Updating ocean action plans and strategies

   Description: Review current and former action plans and strategies that were developed to guide ocean resource management and through a collaborative process, determine if it would be beneficial to revise those strategies or initiate a formal process to develop a new

action plan or strategies. This will help ensure plans are addressing key issues like climate change.

2. Identify and briefly explain priority needs and information gaps the CZMP has to help it address the management priorities identified above. The needs and gaps identified here do not need to be limited to those items that will be addressed through a Section 309 strategy but should include any items that will be part of a strategy.

Priority Needs	Need? (Y or N)	Brief Explanation of Need/Gap
Research	Y	Additional research is needed to better understand climate impacts (ocean acidification, sea level rise, etc.), habitat-species correlations, impacts from ocean uses and pilot projects, the status of marine resources and processes (e.g. upwelling) and stressors (e.g. water temperature, hypoxia). Research is not well coordinated, is not always tied to management issues or priorities, and often lacks consistent funding. Need to continue efforts to identify research priorities, improve connection of research to management needs, as well as identify mechanisms for consistent funding. (See Management Priority 1 & 3)
Mapping/GIS	Y	Specific mapping needs includes additional seafloor mapping (NOAA has been doing this for several years but only a fraction of the seafloor has been catalogued) and mapping of additional marine resources (e.g. paleo-shorelines, cultural resources). A Marine Spatial Planning database and viewer has been developed but we need to keep the data up to date and address data gaps.
Data and information management	Y	Data and information requires ongoing data management and updating. Additional synthesis and interpretation of data is needed for some audiences to improve accessibility of the information and that information needs to be conveyed in a manner that is digestible and compelling to resource managers and decision makers.
Training/Capacity building	Y	Training and capacity building are essential to build CZMP staff skills, but also for partner organizations and stakeholders to enable them to make the most of their participation. Common gaps across these groups include active listening, collaboration/negotiation, facilitation, communication, and project management.
Decision-support tools	N	We've shifted focus away from tools that look "pre-decisional" to avoid appearing prescriptive and also because all projects are unique, with different needs and impacts. We have provided some models for decision-making processes, but they are examples of ways decisions could be made.
Communication and outreach	Y	Addressing the management priorities above requires communication and outreach. Ocean conditions are changing rapidly and we need to clearly communicate what is happening. Decision makers, elected officials, and the general public needs to know how dire the situation is. The main challenge is that the science is highly technical and complicated so it's difficult to process and understand. We must tell a story about what is happening, especially about the communities that are seeing these impacts firsthand and whose resources are threatened.
Other (Specify)		

Enhancement Area Strategy Development:

1. Will the CMP develop one or more strategies for this enhancement area?

   Yes ___X___
   No _____

2. Briefly explain why a strategy will or will not be developed for this enhancement area.

   Ocean resources are extremely important to tribal communities and Washingtonians. It is imperative that we understand and manage the ecosystem and the various activities that rely upon it so that our coastal communities can thrive. In order to do so, we must develop wise policies based on the latest science to guide new and existing ocean uses and proactively prepare for changing ocean conditions.

Strategy

Purpose: Establish clear goals for high-priority areas and a pathway and method to reach those goals during the next five years. This includes, task descriptions, cost estimates, and milestones, as appropriate.

Coastal Hazards

Issue Area(s)
The proposed strategy or implementation activities will support the following high-priority enhancement areas:

- ☐ Aquaculture
- ☐ Energy & Government Facility Siting
- ☒ Coastal Hazards
- ☐ Ocean/Great Lakes Resources
- ☐ Special Area Management Planning
- ☐ Cumulative and Secondary Impacts
- ☐ Wetlands
- ☐ Marine Debris
- ☐ Public Access

Strategy Description
The proposed strategy will lead to, or implement, the following types of program changes*:*

- ☐ A change to coastal zone boundaries;
- ☐ New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
- ☐ New or revised local coastal programs and implementing ordinances;
- ☐ New or revised coastal land acquisition, management, and restoration programs;
- ☐ New or revised special area management plans (SAMP) or plans for areas of particular concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,
- ☒ New or revised guidelines, procedures, and policy documents which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government, and other agencies that will result in meaningful improvements in coastal resource management.

STRATEGIES

Strategy: Updating key state plans and guidance that are used to address coastal hazards in Washington communities.

Part 1: Partner with Washington Emergency Management Division to Update the State Enhanced Hazard Mitigation Plan and Provide Leadership on the Coastal Resilience Strategy

Goal
Develop a unified vision across state agencies for coastal hazards resilience and complete a comprehensive update to the Washington Enhanced Hazard Mitigation Plan to support strategic implementation.

Description

The Coastal Program participated in the recent 2018 update of the State Enhanced Hazard Mitigation Plan (SEHMP), which includes a specific section dedicated to coastal hazards resilience (for the first time). Through this update process, there were many gaps and opportunities identified for improving the coastal hazards resilience section to prepare for a more integrated and robust framework for the SEHMP update in 2023. The Coastal Program has been working to address these needs and will participate/contribute to the State Hazard Mitigation Work Group to complete the next SEHMP.

Needs and Gaps Addressed

Every five years, state agencies, led by the Washington Emergency Management Division (WA EMD), convene to update the State Enhanced Hazard Mitigation Plan (SEHMP). The SEHMP is a FEMA-required plan that helps make Washington state cities, counties, towns, special districts and certain non-profits eligible for grants or aid through FEMA's Hazard Mitigation Assistance (HMA) and Public Assistance (PA) programs. As one of 12 "Enhanced" states, Washington also maintains a "comprehensive mitigation program" to support local jurisdictions in writing local hazard mitigation plans and in qualifying for grants through these programs. The "Enhanced" designation provides additional funding for hazard mitigation in the event of a Presidential Disaster Declaration.

Benefits to Coastal Management

The efforts to integrate emergency management and coastal management to address natural hazards resilience has been a strong partnership in Washington. The SEHMP is an opportunity to identify common priorities, identify roles and responsibilities, and coordinate on strategic investments. This level of collaboration between agencies benefits coastal communities and coastal management because it helps improve efficiency and effectiveness of the limited resources available for resilience actions.

Likelihood of Success

The 2018 SEHMP included a new approach to coordination and collaboration by establishing a more diverse State Hazard Mitigation Workgroup and reorganizing the format of the planning document. This approach leverages the expertise and technical resources from each agency involved. FEMA provides funding to WA EMD to lead this planning process. This plan update is a required element in order to for the state to be eligible for federal support and resources. The state has prioritized the completion of this plan and we anticipate similar importance will be placed on this update cycle. Given the coordinated and collaborative approach, and necessity, this has a high likelihood of success. Especially, with the shared missions and objectives of the Washington CZMP.

Part 2: Update and expand Washington's comprehensive flood hazard management guidance.

Goal

Strengthen strategies for addressing coastal flood risk in Washington's comprehensive flood hazard management guidance.

Description

The first addition of the Comprehensive Flood Hazard Management guidance was developed in 1991 (Ecology Publication #91-44). There is a priority for the Coastal Program to work with the floodplain management team, Department of Commerce, Emergency Management Division, Washington Sea Grant, The Nature Conservancy, and local partners to update and expand this guidance to align with new data, reports, and best available science; specifically incorporate a holistic, multi-benefit approach to floodplain management that relies on concepts developed by the Floodplains by Design partnership and other related initiatives; and use broad stakeholder involvement and integrated Floodplain Management and coastal resilience concepts.

Needs and Gaps Addressed

Increasing resilience to flooding begins with understanding risk and planning for ways to reduce that risk. Communities need to understand where they are vulnerable to flood hazards, how those hazards may change over time, and what actions they need to take to reduce their risk.

Flood hazard management plans help communities identify and prioritize strategies for reducing their risk. They can also identify ways to achieve other benefits (salmon recovery, preservation of agricultural lands, etc.) while reducing flood hazards. Having up-to-date flood plans also makes communities more competitive when seeking grants from federal and state grant programs like FEMA's Hazard Mitigation Grant Program or Ecology's Floodplains by Design grant program.

While most communities have some kind of flood hazard management plan, many have not been updated since the 1990s. Some counties and cities have been able to invest in modern flood planning, but most – especially rural or less affluent jurisdictions – have not. Furthermore, much of the focus in past guidance has been on floodplain management in the riverine environment. There have been many advancements in our understanding and tools for planning in the coastal sector. For example, FEMA Risk MAP (mapping, assessment, and planning), the Washington Coastal Resilience Project, the Coastal Hazards Resilience Network, and the Puget Sound Puget Sound Coastal Storm Modeling System (CoSMoS). Updating the state Comprehensive Flood Hazard Management guidance provides the opportunity for better integration across shoreline types to help communities reduce flood risk through a multi-benefit approach.

Benefits to Coastal Management

This request is essential to implementing a priority in Ecology's strategic plan because it supports integrated water solutions by making sure flood hazard mitigation efforts are

compatible with activities such as salmon recovery, irrigation systems, transportation routes, and other floodplain activities. It supports healthy communities by preventing and mitigating flood damages and keeping people safe. And it supports strong economies by limiting the impact of flooding on local economies due to things like direct flood damage to property and infrastructure, keeping transportation routes open, and preventing businesses from closing.

Flood planning, and the projects resulting from a community plan, would be undertaken by local governments or tribes. The Comprehensive Flood Hazard Management guidance will benefit citizens living in or near flood hazard areas targeted by these funds. The broader community will also benefit since public infrastructure (e.g. roads and utilities) would be less at risk. The value of both private and public property in the flood hazards zones around the state runs into the billions of dollars in places. The actual value of property protected would vary based on the community and the mitigation actions they choose to undertake.

Updating Comprehensive Flood Hazard Management guidance will help communities develop plans that are better positioned to compete for other federal and state hazard reduction grants that will provide even greater protection from flood risk.

Likelihood of Success
Funding for Ecology's floodplain management team to complete a Comprehensive Flood Hazard Management guidance update is being provided by FEMA and the State Emergency Management Division. 309 is essential for staff participation and technical expertise in strengthening the coastal flood planning element of this guidance update. This has a high likelihood of success.

WORK PLAN

Total Years: 2021-2025
Total Budget: $229,000

July 1, 2021-June 2022:

Major Milestone(s):
- Update and expand comprehensive flood hazard management guidance

July 2022-June 2024:

Major Milestone(s):
- Recommendations for the Coastal Hazards Strategy in the State Enhanced Hazard Mitigation Plan Update.

July 2024-June 2026:

Major Milestone(s):

- Support the Washington Hazard Mitigation Work Group by participating in meetings, reviewing and providing feedback, and engaging stakeholders in formal approval process of the State Enhanced Hazard Mitigation Plan update. and drafting

Fiscal Needs

309 funding for staff participation will be sufficient to accomplish this strategy.

Technical Needs

Coastal hazards resilience efforts and risk management authority and technical expertise distributed among several agencies. The strategies listed in this section will all require strong partnerships. The Phase II Assessment lists priority needs and information gaps the CZMP has for addressing the management priorities.

However, one of the biggest challenges among our partnership in Washington is staff capacity. Without sustainable/secure funding from the state to grow our resilience program, agencies will continue to be faced with constant turnover and lack of technical expertise to support community needs. Competitive grant funding has been crucial to pilot efforts and demonstrate the benefits of resilience initiatives, but we are at a point where the needs and direction are identified and a transition to a secure funding source is needed to establish durable programs that can maintain institutional knowledge, outreach and assistance, relationships, coordination, and collaboration.

Project of Special Merit Ideas

- Facilitation support for a multi-agency joint strategy for coastal resilience, including communications strategy and materials/products that can be used for advocacy and provide the rationale for state investment in developing a long-term coastal resilience program.
- Conduct a baseline study to identify suitable locations and assess the feasibility for beneficial use activities across Washington's Coastal Zone.

Cumulative and Secondary Impacts

Issue Area(s)

The proposed strategy or implementation activities will support the following high-priority enhancement areas:

- ☐ Aquaculture
- ☐ Energy & Government Facility Siting
- ☒ Coastal Hazards
- ☒ Ocean/Great Lakes Resources
- ☐ Special Area Management Planning
- ☒ Cumulative and Secondary Impacts
- ☐ Wetlands
- ☐ Marine Debris
- ☒ Public Access

Strategy Description

The proposed strategy will lead to, or implement, the following types of program changes*:*

- ☐ A change to coastal zone boundaries;
- ☐ New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
- ☒ New or revised local coastal programs and implementing ordinances;
- ☐ New or revised coastal land acquisition, management, and restoration programs;
- ☐ New or revised special area management plans (SAMP) or plans for areas of particular concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,
- ☒ New or revised guidelines, procedures, and policy documents which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government, and other agencies that will result in meaningful improvements in coastal resource management.

STRATEGIES

Strategy Update Shoreline Master Programs and guidance

Part 1: Complete Required Shoreline Master Program Periodic Reviews

Goal

Complete the review and approval of Shoreline Management Act (SMA) required Shoreline Master Program (SMP) Periodic Reviews for all remaining jurisdictions in Washington's Coastal Zone and provide guidance for our local partners.

Description

The SMA requires each city and county to review, and, if necessary, revise their SMP at least once every eight years on a staggered cycle.[81] Ecology's rules were updated in 2017 to define

[81] RCW 90.58.080(4)

the explicit procedures for conducting the mandatory periodic review. The periodic review will include catching up with statutory amendments since the SMP was comprehensively updated. Through this strategy, Ecology will conclude the first round of SMP Periodic Reviews including review, associated SMP amendments, and approval for every remaining jurisdiction in Washington's Coastal Zone. As part of this effort, Ecology will continue to develop guidance documents that inform these SMP reviews and amendments, including process and scope requirements.

Needs and Gaps Addressed

The fundamental approach to addressing Cumulative and Secondary Impacts of Growth assessment is through local government SMPs. Ecology has been deploying 309 resources for many years to ensure all local programs are consistent with state guidelines through the comprehensive update process. The periodic review process provides the method for bringing shoreline master programs into compliance with the requirements of the act that have been added or changed since the last review and for responding to changes in guidelines adopted by the department, together with a review for consistency with amended comprehensive plans and regulations. Local governments must also consider and, if needed, incorporate amendments to reflect changed circumstances, new information, or improved data. The review ensures that shoreline master programs do not fall out of compliance over time through inaction.

This implementation activity continues our efforts to address the growth stressors from development, shoreline armoring, and climate change, by ensuring each SMP remains consistent with the SMA and by allowing the mechanism for changed circumstances, new information, or improved data to be incorporated into the local program. This effort is further informed or could be further informed by compliance monitoring and adaptive management principles outlined in Management Priority 1.

Benefits to Coastal Management

Washington's SMA shares the goals of the CZMA, namely the balancing of environmental protection, provision of public access, and prioritization of water-dependent uses where development is allowed in the shoreline. Under the SMA, all local governments in Washington State with "shorelines of the state" in their jurisdiction must develop SMPs to regulate development within these areas. While allowing for appropriate development of our shorelines, SMPs help protect water quality; protect lives and property from flood and landslide damage; protect fish and wildlife habitat; promote recreational opportunities; and foster water-dependent uses.

Under the new SMP Guidelines, all local governments in Washington State with "shorelines of the state" in their jurisdiction must review and if necessary amend their SMPs during this periodic review cycle. This review process provides the method for bringing SMPs into compliance with new or changed requirements of the SMA and allows for consideration of changed circumstances, new information, or improved data to ensure the SMP remains accurate and relevant overtime.

Likelihood of Success
The process of periodically reviewing SMPs is already underway. CZM 309 funds support staff assistance to local governments as they complete the periodic review process, review of the plans for final approval by the state, and support with public notice. Ecology has previously been able to secure grant funds from the state Legislature to pass through to local governments support capacity to undertake and complete the SMP periodic reviews. We will need to secure additional state funds in future biennia in order to be able to complete SMPs in the remainder of the coastal zone in order for many communities to have the ability to complete the periodic review update, but this funding is likely. Meeting the local target dates in statute is more difficult to predict given the variability in capacity and resources at the local level.

Part 2: Update SMPs to Ensure Consistency with the Marine Spatial Plan

Goal
Partner with communities located on Washington's Pacific Coast to update the Shoreline Master Program to align with the Marine Spatial Plan (MSP) and Ecology's guidance for implementation.

Description
The state's Marine Spatial Plan was formally adopted in 2018, and there has been considerable effort to incorporate the management framework and enforceable policies into local Shoreline Master Plans (SMPs). By 2021, guidance will be finalized that clearly articulates the requirements and responsibilities of local governments, state agencies, and project proponents in the event that a new ocean use, as defined by the MSP, is proposed in state waters. In the coming years, coastal counties and municipalities will be required to conduct a periodic update to their SMPs, and ensuring consistency with the MSP will be a top priority. As part of this strategy, we would monitor the SMP update process and flag any inconsistencies and report them to the legislature by 2022, as specified in Washington's marine planning law.

Needs and Gaps Addressed
There are currently inconsistencies between the MSP, the enforceable policies that grew from the plan, and the local Shoreline Master Plans This is largely due to the fact that local governments who were tasked with updating their SMPs finished their comprehensive updates prior to completion of the MSP. Fortunately, all of those plans will undergo periodic reviews in the coming years, which provides the opportunity to address the inconsistencies.

Benefits to Coastal Management
Ensuring consistency between the local SMPs, the state's MSP and the MSP-related enforceable policies will streamline the permitting process and guarantee that there are not conflicting policies and regulations that could create confusion for permitting entities, decision makers, and project proponents.

Likelihood of Success
This part of our strategy has a high likelihood of success because new guidance has been created to help local governments understand how to align their Shoreline Master Program with the Marine Spatial Plan. Additionally, there will be staff technical assistance provided to local governments as they undertake this update.

Part 3: Develop funding guidelines and administer a competitive local grant program for Shoreline Master Program enhancements

Goal
Develop a new funding program and support updates to Shoreline Master Programs (SMP or Master Programs) to address local priority enhancement areas.

Description New SMP Guidelines were adopted by the Legislature in 2004. This included requirements for local governments to complete a one-time Comprehensive Update of their SMP and periodic reviews every eight years to make sure these programs stay current.

The 2023-2025 biennium will be the first time in almost 20 years when local governments and Ecology will be finished with state-required SMP updates. This benchmark is important for three reasons:

- Local governments can free up staff time for other purposes;
- Ecology can redirect staff capacity to deliver technical assistance beyond the minimum requirements of SMPs to address emerging issues and local priorities; and,
- Ecology can repurpose the $3.2 million per biennium that had been dedicated to SMP updates to create a competitive grants program supporting other local priorities like sea level rise assessment and planning.

This part of our strategy is an important transition that will require a significant amount of work to develop a new funding program and support updates to Master Programs to address local priority enhancement areas. In particular, this new competitive grant program is important because it will have an opportunity to identify priority enhancement areas. Priority areas are intended help encourage forward thinking projects and innovative enhancements to SMPs. This approach will allow local governments and Ecology to work together to solve difficult problems and develop updated local Shoreline Master Programs that will act as sample/model ordinances; and identify lessons learned to inform future state statutory and regulatory amendments. Two likely priority enhancement areas are:

<u>Climate change impacts assessment and adaptation planning</u>.
While public awareness and concern for sea level rise impacts has grown over the years, the SMA and SMP Guidelines do not require local governments to address future conditions. Consequently, not much capacity and few resources have been available for the state and local governments to address sea level rise in the SMPs. This funding program could offer helpful

support to local governments in developing adaptation strategies and using the SMP as one tool for effective implementation.

Monitoring and adaptive management of SMPs

There is a compelling state interest in building state and local capacity for effective and efficient implementation of environmental regulations, by building adaptive management feedback loops. This funding program would provide an opportunity to enhance local government's efforts to ensure authorized development is achieving SMP goals, including "no net loss."

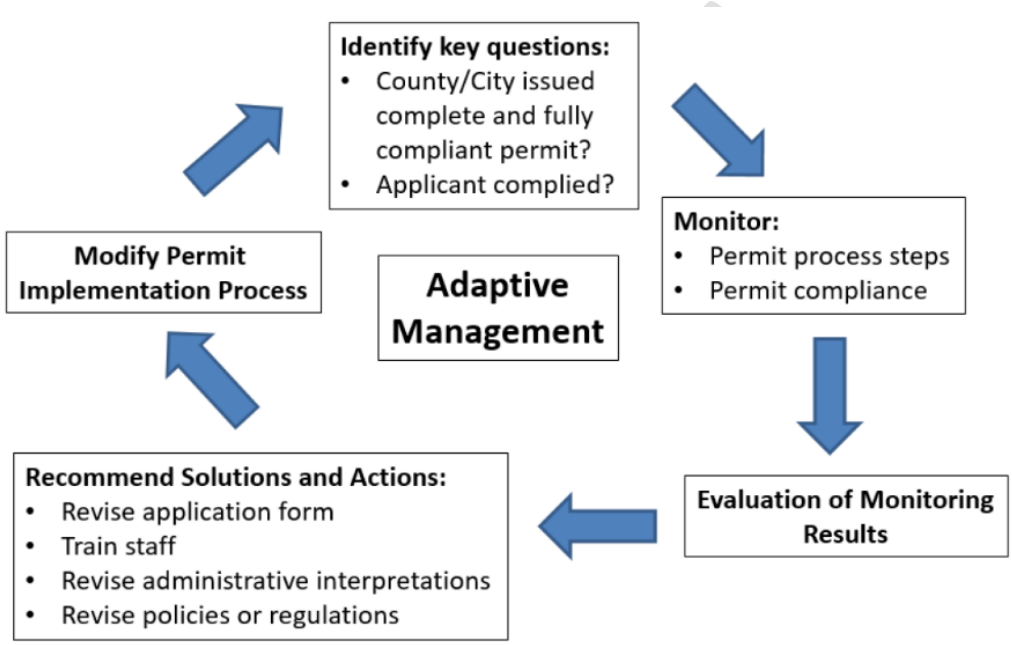


Figure 1. The five steps in developing an adaptive management program for permit implementation. From Commerce 2018 Critical Areas Ordinance Handbook.

This would include efforts to establish or enhance local government monitoring and adaptive management strategies. This permit implementation feedback loop funded through this program would provide resources for local governments to **focus on implementation** of plans and regulations, and use this information to make data driven improvements to their SMPs.

Needs and Gaps Addressed

Washington's Coastal Zone Management Program (CZMP) is administered by the Department of Ecology (Ecology). A core part of our CZMP is a strong state law about shoreline management ratified by voters in 1972, known as the Shoreline Management Act (SMA). Much like the successful state-federal partnership established under the Coastal Zone Management Act (CZMA), the SMA establishes a local-state cooperative program, where local governments have the primary responsibility for initiating the planning required under the SMA and administering local policies and regulations embodied in a Shoreline Master Program (SMP). Ecology acts primarily in a supportive and review capacity, with an emphasis on providing assistance to local

governments and on ensuring compliance with state statutes. However, this partnership includes an obligation for Ecology to formally approve final SMPs.

Climate change impacts assessment and adaptation planning

For the past decade, Ecology has seen an increase in the awareness and concern around the impacts of coastal hazards and interest from local governments on how to use SMPs are part of their overall planning strategy to reduce risk. Several local governments have requested technical assistance and financial support to conduct vulnerability assessments and use this information to develop appropriate SMP policies and regulations. Together with FEMA and other federal agencies, a partnership of state agencies, academic institutions, local governments, tribes, nonprofits, and consulting organizations have produced a substantial body of applicable science, informational resources and decision support tools that are now available online to assist communities in evaluating and reducing their risks. This includes information generated by key initiatives like Risk MAP[82], the Washington Coastal Resilience Project (WCRP)[83], the Coastal Hazards Resilience Network (CHRN)[84], and the Resilience Action Demonstration (RAD) Project.

In addition to these products, one of the more valuable outcomes of the WCRP was the strengthening of partnerships and coordination for delivering multi-agency assistance to communities. This pilot is a timely follow-on opportunity to further refine how these products and related technical assistance can be applied in coordination with pass-through grants to local governments.

Monitoring and adaptive management of SMPs

The SMA is a primary implementation tool for Washington's CZMP and Enforceable Policies. Washington's SMA shares the goals of the CZMA, namely the balancing of environmental protection, provision of public access, and prioritization of water-dependent uses where development is allowed in the shoreline. Under the SMA, all local governments in Washington State with "shorelines of the state" in their jurisdiction must develop SMPs to regulate development within these areas. While allowing for appropriate development of our shorelines, SMPs help protect water quality; protect lives and property from flood and landslide damage; protect fish and wildlife habitat; promote recreational opportunities; and foster water-dependent uses.

Ecology has spent considerable time and resources over the last 15 years working with local governments to bring their SMP into compliance with the updated SMP Guidelines adopted in 2003. These new SMPs were intended to result in a number of environmental benefits,

[82] Washington's Risk Mapping, Assessment, and Planning (Risk MAP) Program: https://ecology.wa.gov/Water-Shorelines/Shoreline-coastal-management/Hazards/Floods-floodplain-planning/Risk-MAP

[83] Washington Coastal Resilience Project was a 3-year grant from NOAA for Coastal Hazard Resilience Network (CHRN) partners (Washington Sea Grant, the Department of Ecology, the University of Washington Climate Impacts Group, and The Nature Conservancy) to rapidly increase our state's capacity to prepare for natural hazards that threaten our coasts. This effort was specifically focused on improving the state's information, guidance, and planning around sea level rise: https://wacoastalnetwork.com/chrn/research/sea-level-rise/

[84] The Washington Coastal Hazards Resilience Network (CHRN) is a membership of over 100 practitioners dedicated to strengthen the resilience of Washington's coastal communities through collaboration, education and knowledge exchange. The CHRN website is the networks orientation tool to relevant science, best practices and other resources related to coastal hazards: https://wacoastalnetwork.com/

including: ensuring the overall health of shorelines and public waters by requiring "no net loss" of ecological functions; protecting water quality; reducing impacts of hazards such as floods and landslides; and protecting critical habitat for fish and wildlife. Updated SMPs also provide economic benefits to local governments, including: protecting lives and property by keeping development from occurring in unstable or unsafe areas; helping cities and counties to realize their vision for future waterfront development and uses; providing public access and recreational opportunities; and avoiding costly future restoration of degraded shorelines.

Now that the vast majority of local SMPs have been comprehensively updated, we are shifting our focus to ensuring effective implementation of these SMPs. In 2018, the Washington State Department of Commerce, in collaboration with other state agencies including Ecology, released a Monitoring and Adaptive Management Chapter of the Critical Areas Ordinance (CAO) Handbook which outlines a framework for developing feedback loops for permit implementation for both CAOs and SMPs. In preparing the guidance, Commerce, Ecology and WDFW held workshops around the state that were attended by more than 200 planners. The workshops affirmed the importance of this work, but local governments were unanimous in voicing the need for technical help and grants.

Benefits to Coastal Management

<u>Climate change impacts assessment and adaptation planning</u>

- Washington's first sea level rise planning grant program for local governments –
  This pilot will not only be the first for Washington, but it will lay the important groundwork needed to help justify existing or enhanced appropriations from the State Legislature to support sea level rise planning.
- Bottom up approach to inform future state statutory and regulatory amendments –
  There are a growing number of coastal states that have now taken legislative action to address the impacts of sea level rise. These examples offer a top down approach, a prescribed framework and appropriated funding for local governments to complete the required sea level rise planning. Washington is a rare example of a bottom up approach, creating the organizational infrastructure, training programs, capacity, and resources to support locally led initiatives. Lessons learned from these community processes inform other locally driven efforts and potential future state statutory and regulatory amendments. While there are tradeoffs to each of these approaches, this project will contribute additional information and lessons learned to a national community of practice.
- Addressing Equity in Washington –
  In addition to addressing the adverse consequence of hazards on communities (health, safety, welfare, environmental), one of the main priorities of hazards resilience planning is the recognition that some areas and communities will be disproportionately affected by the consequences of chronic and episodic disaster events. Ecology and Washington Sea Grant have been dedicated to understanding these dynamics and finding opportunities to best address equity issues into coastal resilience efforts in Washington.

<u>Monitoring and adaptive management of SMPs</u>

- Provide time and resources for local governments to **focus on implementation** of plans and regulations;
- Provide capacity for local governments to gather the necessary base of information to determine if SMPs/CAOs are **effective at protecting habitat**. This will allow for detailed information to evaluate "enhanced implementation" of the No Net Loss standard;

Likelihood of Success

This program enhancement is building on the experiences and lessons learned from past efforts, most notably the Washington Coastal Resilience Project and the coastal Resilience Action Demonstration project. Experience gained from these previous efforts should make this effort more durable and effective. Additionally, the feedback loops created through the monitoring and adaptive management grants will provide an opportunity to test the effectiveness of our previous efforts of comprehensively updated SMPs. Local governments and the state have a unique partnership in developing and implementing SMPs, which is outlined in State Statute. By continuing to support and work together to solve complex problems with local governments, we will increase the effectiveness and efficiency of decision-making. Ecology has previously been able to secure grant funds from state sources to pass through to local governments engaged in SMP updates. As we complete this work and in years outside the existing periodic review cycle these funds may be available for other SMP enhancement work. We will need to continue to secure additional state funds in future biennia in order to be able to pilot these programs, but this funding is likely.

WORK PLAN

Total Years: 2021-2025
Total Budget: $1,603,000

July 1, 2021-June 2022:

Major Milestone(s):

- Complete review and approval of final comprehensive SMP updates
- Complete review and approval of 75% of the SMP periodic reviews (of the 133 jurisdictions in Washington's Coastal Zone).
- Coordinate with local governments and shoreline planners to ensure that the MSP and the state's enforceable policies are being incorporated into SMPs during periodic updates

- Develop the pilot competitive local grant program for local priorities and SMP enhancements.

July 2022-June 2024:

Major Milestone(s):

- Complete review and approval of remaining SMP periodic reviews for all jurisdictions in Washington's Coastal Zone.

- Coordinate with local governments and shoreline planners to ensure that the MSP and the state's enforceable policies are being incorporated into SMPs during periodic updates
- Using state appropriations, begin funding grants under Part 3..

July 2024-June 2026:

Major Milestone(s):

- Complete local grants under Part 3 and develop lessons learned and next steps for program improvement.

Fiscal Needs

309 funds will support the staff time necessary to complete this strategy. However, additional resources could help support the associated resources that would enhance these efforts. Specifically, Part 3.

Technical Needs

Shoreline Management efforts often require technical expertise distributed among several agencies. While the strategies listed in this section will be completed by Ecology we must include our local government partners, other state agencies, and subject matter experts to fully accomplish these goals. These partnerships have been formed and are continually fostered through our SMP update, permit implementation technical assistance, and state working group partnerships.

Project of Special Merit Ideas

- Conduct a public access inventory and evaluation of SMP implementation to ensure these regulations are effective through ongoing oversight of local permits. Update SMP public access resources and guidance on effective public access approaches.
- Contract support to help support a collaborative process to develop funding guidelines, guidance, and resources for the effective implementation of a competitive pass through grant program to local governments for incorporating sea level rise into SMPs. Non-competitive 309 funding will provide the capacity for staff to develop basic guidelines, however, from our experiences working with communities, there are many resources that could enhance (above and beyond) the usefulness of the guidelines. This includes supplemental case studies, web resources and tutorials, design elements and graphics, broader outreach to diverse stakeholders, community workshop and training modules, and communication expertise.

Ocean Resources

Issue Area(s)

The proposed strategy or implementation activities will support the following high-priority enhancement areas:

- ☐ Aquaculture
- ☐ Energy & Government Facility Siting
- ☐ Coastal Hazards
- ☒ Ocean/Great Lakes Resources
- ☐ Special Area Management Planning
- ☐ Cumulative and Secondary Impacts
- ☐ Wetlands
- ☐ Marine Debris
- ☐ Public Access

Strategy Description

The proposed strategy will lead to, or implement, the following types of program changes*:*

- ☐ A change to coastal zone boundaries;
- ☒ New or revised authorities, including statutes, regulations, enforceable policies, administrative decisions, executive orders, and memoranda of agreement/understanding;
- ☐ New or revised local coastal programs and implementing ordinances;
- ☐ New or revised coastal land acquisition, management, and restoration programs;
- ☐ New or revised special area management plans (SAMP) or plans for areas of particular concern (APC) including enforceable policies and other necessary implementation mechanisms or criteria and procedures for designating and managing APCs; and,
- ☒ New or revised guidelines, procedures, and policy documents which are formally adopted by a state or territory and provide specific interpretations of enforceable CZM program policies to applicants, local government, and other agencies that will result in meaningful improvements in coastal resource management.

STRATEGIES

Strategy: Updating key state plans and management tools, and guidance that are used to address ocean resources

Part 1: Implementation and refinement of Washington's Marine Spatial Plan

Goal

Update Washington's Marine Spatial Plan (MSP) which will improve the state's ability to manage coastal resources and evaluate new ocean uses.

Description

The Marine Spatial Planning process successfully aggregated a significant amount of ocean resource data, and funded additional studies that filled significant data gaps, that can be used for various ocean management activities including assessing the impacts of new ocean projects on existing resources and coastal communities. By nature, data is a single snapshot of

conditions with spatial and temporal limitations and it may require updating in order to be adequately inform decision making. There are still considerable data gaps that could be addressed, including conditions and trends that are tied to climate change. As part of the FY18Project of Special Merit, these data challenges are being assessed and a suite of data is being prioritized based on input from a wide range of expertise. However, there is a need to update the MSP to include products of the FY18 Project of Special Merit, resource data, and additional studies that have filled data gaps.

Needs and Gaps Addressed

One of the original MSP products was a map of Important, Sensitive, and Unique habitats (ISUs). These maps are especially relevant because protection of ISUs is now one of Washington's approved enforceable policies. Since it carries significant policy and management weight, these maps should be routinely reviewed and updated with the latest available data. This strategy would assess the feasibility and appropriate frequency of updating those maps.

In addition to physical and biological data, there is an increasing interest in understanding and linking socioeconomic conditions and how they interact with each other. This type of research need has been strongly promoted by coastal stakeholders as they emphasize their dependence on ocean resources.

As described above, this update of the MSP will include a process to reassess data needs, prioritize the importance of each, and develop a strategy for opportunistically filling these information gaps over time.

Benefits to Coastal Management

Updated MSP will ensure the best available information is being used in as the plan is implemented. This strategy will also greatly enhance and focus research efforts off Washington's coast. An organized approach to data prioritization will help guide what research is needed to best address pressing management and socioeconomic needs. These identified priorities will be shared with our partners, including coastal tribes, the Northwest Indian Fisheries Commission (NWIFC), National Marine Fisheries Service (NMFS), Northwest Association of Networked Ocean Observing Systems (NANOOS), the Olympic Coast National Marine Sanctuary (OCNMS) and others, which will hopefully influence the research and data collection that they choose to fund. That data can then be used to inform ocean management and planning processes, including Washington's MSP.

Likelihood of Success

Success for this strategy is fairly high, with certain aspects very attainable, while other will be more challenging to achieve. Ensuring that coastal SMPs will be consistent following periodic updates should be relatively easy given that we have developed guidance for the update process that includes a checklist and example language. The data prioritization effort is much harder to predict and can also be considered successful or not with different metrics. Developing a ranked list of research projects is very attainable, but successfully securing

funding and conducting research for the projects will involve many independent variables, including funding, state and federal agency priorities, and available expertise.

Part 2: Implement the Geographic Location Descriptions

Goal
Ensure the effective implementation of the Geographic Location Descriptions (GLDs) for various ocean activities

Description
With the formal adoption of the Washington State Marine Spatial Plan (MSP), the state has enhanced ability to assess new ocean uses and evaluate the potential for adverse impacts to existing sustainable ocean uses in state waters. However, there is a very high likelihood that new ocean uses could occur in federal waters, where the MSP would not apply, but could negatively impact state resources. In order to assure that the state has the ability to review such projects, GLDs will be considered and developed for a variety of potential activities. Under our current 2016-2020 strategy, we have been working on laying the important ground work necessary to identify the appropriate path forward for the Washington GLDs. This section of the 2021-2025 strategy will fund staff time to gain approval from NOAA to officially incorporate GLDs as part of the Washington CZMP and develop the guidance necessary for implementation the GLDs.

Needs and Gaps Addressed
While the Code of Federal Regulations allow states to review projects outside of their coastal zone for federal consistency, if Washington wants to review such projects, i.e. federal activity projects or projects requiring federal licenses or permits, the process is cumbersome. There are many steps to follow, and Washington must request from NOAA, permission to review such projects. The states are encouraged to develop GLDs that encompass areas outside the coastal zone where impacts from certain activities are likely. Washington is working on developing a GLD to cover areas off our coast in the Pacific Ocean and which will list certain activities with certain impacts. The 2021-2025 strategy will adopt the GLDs and develop the guidance necessary for implementation.

Benefits to Coastal Management
Once a GLD is established, then Washington's CZM program will have the ability to review such projects without following an elaborate process nor needing permission from NOAA, and can thus request a Consistency Determination/Consistency Certification from the project proponent. The benefit of this effort would ensure that the state has the ability and guidance necessary to review new ocean uses that could occur in federal waters, where the MSP would not apply, but could negatively impact state resources.

Likelihood of Success
There is a very high likelihood of success for this strategy, largely due to the fact that a significant amount of data collection was already completed during the Marine Spatial Planning

process and several potential new ocean uses have been evaluated. We have already consulted with NOAA's CZM staff to discuss the process, requirements, and limitations. As such, some preliminary work has already occurred that will allow the technical and formal development process to begin.

Part 3: Updates to action plans and strategies to address new and evolving issues

Goal

Review current and former action plans and strategies that were developed to guide ocean resource management and, through a collaborative process, determine if it would be beneficial to revise those strategies or initiate a formal process to develop a new action plan or strategies. This will help ensure plans are addressing key issues like climate change.

Description

There are many existing and emerging threats to ocean resources, many of which are directly or indirectly related to climate change, including ocean acidification, Harmful Algal Blooms (HABs), hypoxia events, marine heat waves, shifts in species distribution, and sea level rise. When facing such a wide range of issues it can be difficult to focus efforts in an orderly and strategic manner. In such a case, it is often beneficial to develop a formal strategy or action plan that can prioritize activities and help resource managers focus their time and effort in an orderly and productive way.

In the past several decades, Washington State has developed a handful of different strategies to address important ocean issues, including:

- ***Managing Washington's Coast*** (2001)
- ***Action for Washington's Ocean*** (2005)
- ***Washington's Ocean Action Plan*** (2006)
- ***Implementing Washington's Ocean Action Plan*** (2007)
- ***Ocean Acidification: From Knowledge to Action*** (2012, 2017 addendum)
- ***Marine Spatial Plan for Washington's Pacific Coast*** (2018)

In the next five years, it would be wise for Washington's coastal program and agencies to review former plans and strategies and determine if new or updated versions would be a useful tool for resource managers. This would be done through a collaborative effort by engaging state agencies and the governor's office through the State Ocean Caucus, coastal users and stakeholders through the Washington Coast Marine Advisory Council, and coastal tribes.

Needs and Gaps Addressed

The primary need for this approach is to determine if existing efforts and strategies are sufficiently focused on the most important ocean issues, and if not, to develop a process to address those deficiencies. The list of former plans in the above section shows that there have

been considerable efforts in this regard in the past. This strategy would review those plans, and if necessary, update them or develop a new plan altogether.

Benefits to Coastal Management

This strategy would benefit Washington's management of ocean and coastal resources by providing guidance and direction on how to address the most pressing threats. A formal plan, with clear goals and identified actions, would also provide a standard by which the state and other resource managers could measure their success in addressing prioritized actions. Alternatively, if it is determined that there is already sufficient direction, then it will clarify that current efforts are being successful and that they should be continued. This is a deliberate approach that is intended to maximize efficiencies and not to create additional processes that could negatively impact management by unnecessarily using resources for planning efforts.

Likelihood of Success

It is highly likely that an effort to assess past and current strategies would be successful. The State Ocean Caucus is the perfect venue to begin such efforts and have had similar discussions in the past. If it is determined that a formal ocean action plan is necessary, then the likelihood of success would decrease as additional resources would most certainly need to be assigned in order to complete such a project.

Developing a formal strategy or action plan would require significant planning, coordination, outreach and education, and writing. To successfully achieve the desired outcome, staff priorities would need to be adjusted or additional capacity brought on board to not only finalize strategy or plan, but to also ensure that it is being implemented.

WORK PLAN

Total Years: 2021-2025
Total Budget: $458,000

July 1, 2021-June 2022:

Major Milestone(s):

- Finalize data prioritization list with support from partners and stakeholders
- Coordinate with partners and seek funding opportunities for prioritized research needs
- Coordinate with local governments and shoreline planners to ensure that the Marine Spatial Plan (MSP) and the state's enforceable policies are being incorporated into Shoreline Master Programs (SMPs) during periodic updates
- Consult with NOAA in advance of formal submittal
- Submit and seek approval of Geographic Location Descriptions (GLDs)
- Review Action Plans and Strategies listed above for goals that have and have not been achieved

- Coordinate review activities with the State Ocean Caucus (SOC), Washington Coast Marine Advisory Council (WCMAC), and coastal tribes

July 2022-June 2024:

Major Milestone(s):

- Assess data prioritization list and update if necessary
- Coordinate with partners and seek funding opportunities for prioritized research needs
- Evaluate potential federal permits and activities that might warrant a GLD but were not pursued in the initial submission
- If necessary, repeat above process
- Collaboratively determine the need for new a new Ocean Action Plan
- If it is determined that a new plan is needed then:
  - Seek additional resources for formal development
  - Begin collaborative process to identify and refine a new Ocean Action Plan
  - Engage SOC, WCMAC, and coastal tribes
- If it is determined that a new plan is not needed then:
  - Document process and decision
  - Share decision with SOC, WCMAC, coastal tribes, and NOAA's CZM program

July 2024-June 2026:

Major Milestone(s):

- Assess data prioritization list and update if necessary
- Coordinate with partners a seek funding opportunities for prioritized research needs
- Coordinate with local governments and shoreline planners to ensure that the MSP and the state's enforceable policies are being incorporated into SMPs during periodic updates, if necessary
- Review strategy for effectiveness
- Develop draft Ocean Action Plan
- Share draft plan with the SOC, WCMAC, and coastal tribes for review
- Finalize plan
- Make Ocean Action Plan available for public comment
- Publish Ocean Action Plan
- Begin implementation of Ocean Action Plan

Fiscal Needs

If it is determined that developing a new Ocean Action Plan is needed, then additional capacity to undertake the above work plan would most likely be necessary. Since such a determination has not yet been made, no additional funds have been sought yet.

Technical Needs

The state has the knowledge and skill to achieve this strategy, assuming that the needed resources and capacity are provided.

Project of Special Merit Ideas

- Ecosystem indicators have been of particular interest for several years and conceptual models for the major marine habitat types were initially developed for the MSP. At this time, a post-doctoral student is further developing ecosystem indicator models for several priority habitat types that exist on the Washington coast with funding provided by the Washington Coastal Marine Advisory Council (WCMAC). It would be beneficial to develop models for the habitat types that will build on the FY18 Project of Special Merit, if funding can be secured.
- Coordinating data collection and research with partners, as well as applying for grants.

5-Year Budget Summary by Strategy

Strategy Title	Year 1 Funding	Year 2 Funding	Year 3 Funding	Year 4 Funding	Year 5 Funding	Total Funding
Coastal Hazards	$45,800	$91,600	$45,800	$45,800	$45,800	$229,000
Cumulative and Secondary Impacts	$320,600	$320,600	$320,600	$320,600	$320,600	$1,603,000
Ocean Resources	$91,600	$91,600	$91,600	$91,600	$91,600	$458,000
Total Funding	$458,000	$458,000	$458,000	$458,000	$458,000	$2,290,000

Appendix A: Stakeholder Engagement

Washington has a rich level of existing partnerships for coastal management. This strong network allowed staff to reach out to a number of internal and external representatives from state and federal agencies to gather data, information, and expertise. The level of involvement and input varied based on the enhancement area, however, this work included individual and group meetings, review and feedback on draft documents, and coordinated efforts to align strategies with key partnering agencies:

This section will be updated once outreach is complete

Appendix B: Public Comments and Response Summary

The public comment period for the 2021-2025 Assessment and Strategy was open for 32 days, December 2, 2020 through January 4, 2021. In addition to the stakeholder collaboration described in Appendix A, the draft document was described and posted on our CZMP website,[85] available on the agency Public Involvement Calendar, and sent to key shoreline and coastal management mailing lists (e.g., Shoreline Master Program Interested Parties).[86]

[85] CZMP 309 Assessment and Strategy websites: http://www.ecy.wa.gov/programs/sea/czm/Grants.html; http://www.ecy.wa.gov/programs/sea/czm/309-improv.html

[86] Washington Department of Ecology Public Involvement Calendar: https://fortress.wa.gov/ecy/publiccalendar/