



Senn MP 0.89 Bridge Scour Project

Shoreline Conditional Use Permit Application and Project Narrative

Submitted to:

Rodney Lakey
Lewis County
57 West Main Street
Chehalis, WA 98532

Prepared by:

Otak, Inc.
700 Washington Street
Suite 300
Vancouver, WA 98660

July 2026

Project No. 21588.A

Table of Contents

	Page
Section 1. Introduction	1
1.1. Project Description	1
Section 2. Existing Habitat Conditions and Shoreline Functions	2
Section 3. Shoreline Ecological Functions: Project Impacts, Mitigation Sequencing, and Functional Lift Assessment.....	12
3.1. Avoidance and Minimization	12
3.2. Unavoidable, Minimized Project Impacts	13
3.3. Proposed On-Site Restoration and No Net Loss Determination	14
Section 4. Shoreline Master Program Compliance Narrative.....	16
4.1. Shoreline Management Goals	16
4.1.1. [SMP 2.01] Shoreline Master Program Goals	16
4.1.2. [SMP 2.02] Economic Development Goal	16
4.1.3. [SMP 2.03] Public Access Goal	16
4.1.4. [SMP 2.04] Recreational Goal	16
4.1.5. [SMP 2.05] Circulation Goal.....	17
4.1.6. [SMP 2.06] Shoreline Use Goal	17
4.1.7. [SMP 2.07] Conservation Goal	17
4.1.8. [SMP 2.08] Historic, Cultural, Scientific, and Educational Goal.....	17
4.1.9. [SMP 2.09] Flood Hazard Prevention Goal.....	18
4.1.10. [SMP 2.10] Restoration Goal	18
4.2. General Policies and Regulations	18
4.2.1. [SMP 4.02] Archaeological and Historic Resources	18
4.2.2. [SMP 4.03] Environmental Impacts and Mitigation	19
4.2.3. [SMP 4.04] Critical Areas and Shoreline Vegetation Conservation	20
4.2.4. [SMP 4.05] Flood Hazard Management.....	31
4.2.5. [SMP 4.06] Public Access	34
4.2.6. [SMP 4.07] Water Quality	37
4.3. Specific Shoreline Use Policies and Regulations.....	38
4.3.1. [SMP 5.02] General Shoreline Use.....	38
4.3.2. [SMP 5.03] Allowed Shoreline Uses	39
4.3.3. [SMP 5.04] Development Standards.....	43
4.3.4. [SMP 5.05] Agriculture	45
4.3.5. [SMP 5.06] Aquaculture	47
4.3.6. [SMP 5.07] Boating and Water Access Facilities.....	49
4.3.7. [SMP 5.08] Commercial Development.....	57
4.3.8. [SMP 5.09] Forest Practices	59
4.3.9. [SMP 5.10] Industrial Development	60
4.3.10. [SMP 5.11] Mining.....	61
4.3.11. [SMP 5.12] Parking	62
4.3.12. [SMP 5.13] Recreational Development.....	63
4.3.13. [SMP 5.14] Residential Development	65
4.3.14. [SMP 5.15] Signs	67
4.3.15. [SMP 5.16] Transportation Facilities	67
4.3.16. [SMP 5.17] Utilities.....	69
4.4. Shoreline Modification Policies and Regulations.....	71

	Page
4.4.1. [SMP 6.02] General Shoreline Modification Provisions	71
4.4.2. [SMP 6.03] Clearing, Grading, and Fill	72
4.4.3. [SMP 6.04] Dredging and Dredge Material Disposal	74
4.4.4. [SMP 6.05] In-Water Structures	77
4.4.5. [SMP 6.06] Restoration	79
4.4.6. [SMP 6.07] Shoreline Stabilization.....	81
4.4.7. [SMP 6.08] Structural Flood Hazard Reduction Measures	86

TABLES

Table 1: Wetland 1 Summary.....	3
Table 2: Wetland 2 Summary.....	4
Table 3: Wetland 3 Summary.....	5
Table 4: Wetland 4 Summary.....	6
Table 5: Wetland 5 Summary.....	7
Table 6: Wetland 6 Summary.....	8
Table 7: Lucas Creek Summary	9
Table 8: Tributary 1 Summary	10
Table 9: Tributary 2 Summary	11
Table 10: Stream Impacts Summary	14
Table 11: Riparian Vegetation Impacts Summary	14

Section 1. Introduction

The Lewis County Department of Public Works (County) is proposing to install scour countermeasures at the Senn Road milepost (MP) 0.89 Bridge spanning Lucas Creek (Lewis County Bridge No. 77) in unincorporated Lewis County. The 60-foot three span bridge was originally constructed in 1966 and is currently classified as scour critical.

The proposed project is located on Senn Road at the crossing of Lucas Creek in unincorporated Lewis County, Washington. It is located in Section 2, Township 13 North, Range 1 West, in Water Resource Inventory Area (WRIA) 23 – Upper Chehalis. Lucas Creek flows through the project area from northeast to southwest passing under Senn Road at milepost (MP) 0.89. Lucas Creek continues west of the project area approximately 3,000 feet before discharging into the North Fork Newaukum River, a tributary to the Chehalis River. The entire project is located within the 100-year floodplain of Lucas Creek.

The project is anticipated to require a Shoreline Conditional Use Development permit per Lewis County's Shoreline Master Program (SMP). This report includes a discussion of existing ecological conditions and functions in Section 2, and the proposed project impacts and functional lift analysis in Section 3. The goals listed in Chapter 2 of the Lewis County Shoreline Master Program (SMP), and the general policies and regulations and specific use regulations listed in Chapters 4 and 5 of the Lewis County SMP, respectively, are addressed in Section 4 (Applicable Shoreline Regulations).

The majority of the codes in these sections are not applicable to the Senn Road MP 0.89 Bridge Scour Repair Project because it is an existing bridge requiring maintenance due to its scour critical rating. The project appears to qualify for the maintenance exemption at Washington Administrative Code (WAC) 173-27-040(2)(b) because it is a usual activity on bridges to prevent its lapse or cessation from a lawfully established condition, and the scour critical rating occurred due to elements (Lucas Creek). However, projects that qualify for an exemption must still comply with the Lewis County SMP. This shoreline compliance narrative documents the project's consistency with the Lewis County SMP.

1.1. Project Description

Lewis County Department of Public Works (County) is planning the Senn Road MP 0.89 Bridge Scour Repair Project (Project). The 60-foot three span bridge was originally constructed in 1966 and is currently classified as scour critical. The project includes completing necessary repairs to the bridge in order to maintain vehicular access and protect public safety along Senn Road.

The project will involve the need to excavate the channel bed under and near the bridge to place appropriate riprap protection for the piers and banks. After isolating the work area from surface waters, existing riprap and streambed material around the bridge abutments and piles will be excavated and replaced with new scour countermeasures (e.g., angular riprap) and then topped with streambed material to restore preexisting grades in the channel and comply with no-rise requirements for work in a Special Flood Hazard Area. Impacts to Lucas Creek will not result in a loss of stream habitat. Temporarily impacted vegetation will be restored on-site. Habitat enhancements include installing large wood material upstream and downstream of the crossing, and removing invasive plants and restoring native riparian habitat in the project area.

Section 2. Existing Habitat Conditions and Shoreline Functions

Land used in the project area primarily consists of low density single family residential, agricultural, and existing roadways of Senn Road and Lucas Creek Road. Six wetlands and three streams were delineated within the project area during a site visit in December 2024 as documented in the *Wetland and Stream Delineation Report* (Otak 2025).

Six wetlands (Wetlands 1 – 6) were identified in the vicinity of the project area. Per the hydrogeomorphic (HGM) classification system, Wetlands 1, 2, and 6 are depressional wetlands and Wetlands 3, 4, and 5 are riverine wetlands. All six wetlands were rated as Category III wetlands per the *Washington State Wetland Rating System for Western Washington – 2014 Update* Version 2.0 (Hruby and Yhanke 2023). All six wetlands have a standard buffer width of 150 feet per Lewis County Code 17.38.270 (Required wetland buffers) based on category, habitat score, and impact intensity.

Three streams (Lucas Creek, Tributary 1, and Tributary 2) were identified in the study area. Lucas Creek is a Type S (Shoreline of the State) stream with an assigned buffer of 0 feet per the Lewis County Shoreline Master Program (Table 4-1, Section 4.04.02). Tributary 1 is located along the east side of Senn Road and enters Lucas Creek east of Lewis County Bridge No. 77 from the south. Tributary 1 is a perennial Type F (Fish Habitat) stream with an assigned buffer of 100 feet per Table 17.38-6 in LCC 17.38.420 (Fish and Wildlife Habitat Conservation Areas – Designations). Tributary 2 is an intermittent Type Ns (Seasonal, Non-fish Habitat) stream located to the east of Lucas Creek. Tributary 2 enters Lucas Creek from the east through Wetland 3. Tributary 2 has an assigned buffer of 75 feet per Table 17.38-6 in LCC 17.38.420 (Fish and Wildlife Habitat Conservation Areas – Designations).

The project is located within the 100-year floodplain of Lucas Creek. The project falls within Rural Conservancy Shoreline Environment Designation per the Lewis County Shoreline Master Program.

Table 1: Wetland 1 Summary

WETLAND 1 – INFORMATION SUMMARY			
Location:		Field to the east of Senn Road and Tributary 1 and south of Lucas Creek	
		Local Jurisdiction	Lewis County
		WRIA	23 – Upper Chehalis
		Ecology Rating (Hruby & Yhanke 2023)	III (Habitat Score – 6)
		Buffer Width	75 feet
		Wetland Size	4.95 acres
		Cowardin Classification	PSS, PEM
		HGM Classification	Depressional
		Upland Data Sheet	W1-DP2
		Wetland Data Sheet	W1-DP1
		Flag color	Pink flagging
Dominant Vegetation	Slough sedge (<i>Carex obnupta</i>), soft rush (<i>Juncus effusus</i>) in PEM habitats. PSS habitat includes redosier dogwood (<i>Cornus sericea</i>) and salmonberry (<i>Rubus spectabilis</i>).		
Soils	Loam; Depleted Matrix of 10YR 4/2 with 7.5YR 4/6 redoximorphic concentrations in the matrix and pore linings to depth of 20 inches.		
Hydrology	Oxidized Rhizospheres along Living Roots, Water-Stained Leaves, Drainage Patterns, and FAC-Neutral Test		
Rationale for Delineation	Satisfies all three wetland criteria.		
Rationale for Local Rating	Follows Ecology rating system (Hruby & Yhanke 2023) per LCC 17.38.230 (Wetlands – Classification) (Lewis County 2025b).		
Wetland Functions Summary	Wetland 1 scored low to high for water quality functions. Wetland 1 scored moderate for hydrologic functions. Wetland 1 scored low to high for habitat function. A complete assessment of functions is provided in Appendix D.		

Table 2: Wetland 2 Summary

WETLAND 2 – INFORMATION SUMMARY			
Location:		Field to the west of Senn Road and south of Lucas Creek	
		Local Jurisdiction	Lewis County
		WRIA	23 – Upper Chehalis
		Ecology Rating (Hruby & Yhanke 2023)	III (Habitat Score – 6)
		Buffer Width	75 feet
		Wetland Size	0.42 acres
		Cowardin Classification	PEM
		HGM Classification	Depressional
		Upland Data Sheet	W2-DP2
		Wetland Data Sheet	W2-DP1
		Flag color	Pink flagging
Dominant Vegetation	Kentucky bluegrass (<i>Poa pratensis</i>) and soft rush		
Soils	Loam; 10YR 3/2 to depth of 2 inches. Below 2 inches depleted matrix of 10YR 4/2 with 7.5YR 4/6 redoximorphic concentrations in the matrix and pore linings. Saturated at 4 inches.		
Hydrology	Saturation, High Water Table, Oxidized Rhizospheres along Living Roots, Geomorphic Position, and FAC-Neutral Test		
Rationale for Delineation	Satisfies all three wetland criteria.		
Rationale for Local Rating	Follows Ecology rating system (Hruby & Yhanke 2023) per LCC 17.38.230 (Wetlands – Classification) (Lewis County 2025b).		
Wetland Functions Summary	Wetland 2 scored low to high for water quality functions. Wetland 2 scored moderate for hydrologic functions. Wetland 2 scored low to high for habitat function. A complete assessment of functions is provided in Appendix D.		

Table 3: Wetland 3 Summary

WETLAND 3 – INFORMATION SUMMARY			
Location:		Along east bank of Lucas Creek upstream of Senn Road crossing	
		Local Jurisdiction	Lewis County
		WRIA	23 – Upper Chehalis
		Ecology Rating (Hruby & Yhanke 2023)	III (Habitat Score – 6)
		Buffer Width	75 feet
		Wetland Size	0.007 acres
		Cowardin Classification	PEM
		HGM Classification	Riverine
		Upland Data Sheet	W3-DP2
		Wetland Data Sheet	W3-DP1
		Flag color	Pink flagging
Dominant Vegetation		Reed canarygrass (<i>Phalaris arundinacea</i>) and Sitka willow (<i>Salix sitchensis</i>)	
Soils		Loam; Depleted Matrix of 10YR 4/2 with 10YR 4/6 redoximorphic concentrations in the matrix to depth of 20 inches. Saturated at the soil surface. Soil mixed with approximately 40 percent gravel through the profile.	
Hydrology		Saturation, High Water Table, Geomorphic Position, and FAC-Neutral Test	
Rationale for Delineation		Satisfies all three wetland criteria.	
Rationale for Local Rating		Follows Ecology rating system (Hruby & Yhanke 2023) per LCC 17.38.230 (Wetlands – Classification) (Lewis County 2025b).	
Wetland Functions Summary		Wetland 3 scored moderate to high for water quality functions. Wetland 3 scored low to moderate for hydrologic functions. Wetland 3 scored low to high for habitat function. A complete assessment of functions is provided in Appendix D.	

Table 4: Wetland 4 Summary

WETLAND 4 – INFORMATION SUMMARY			
Location:		Along west bank of Lucas Creek upstream of Senn Road crossing	
		Local Jurisdiction	Lewis County
		WRIA	23 – Upper Chehalis
		Ecology Rating (Hruby & Yhanke 2023)	III (Habitat Score – 6)
		Buffer Width	75 feet
		Wetland Size	0.01 acres
		Cowardin Classification	PEM
		HGM Classification	Riverine
		Upland Data Sheet	W4-DP2
		Wetland Data Sheet	W4-DP1
		Flag color	Pink flagging
Dominant Vegetation	Reed canarygrass, slough sedge, and creeping buttercup (<i>Ranunculus repens</i>)		
Soils	Loam; Depleted Matrix of 10YR 4/1 with 7.5YR 4/6 redoximorphic concentrations in the matrix and pore linings to depth of 20 inches. Saturated at a depth of 8 inches.		
Hydrology	High Water Table, Saturation, Oxidized Rhizospheres along Living Roots, Geomorphic Position, and FAC-Neutral Test		
Rationale for Delineation	Satisfies all three wetland criteria.		
Rationale for Local Rating	Follows Ecology rating system (Hruby & Yhanke 2023) per LCC 17.38.230 (Wetlands – Classification) (Lewis County 2025b).		
Wetland Functions Summary	Wetland 4 scored moderate to high for water quality functions. Wetland 4 scored low to moderate for hydrologic functions. Wetland 4 scored low to high for habitat function. A complete assessment of functions is provided in Appendix D.		

Table 5: Wetland 5 Summary

WETLAND 5 – INFORMATION SUMMARY			
Location:		Along north bank of Lucas Creek downstream of Senn Road Crossing	
		Local Jurisdiction	Lewis County
		WRIA	23 – Upper Chehalis
		Ecology Rating (Hruby & Yhanke 2023)	III (Habitat Score – 6)
		Buffer Width	75 feet
		Wetland Size	0.03 acres
		Cowardin Classification	PEM
		HGM Classification	Riverine
		Upland Data Sheet	W5-DP2
		Wetland Data Sheet	W5-DP1
		Flag color	Pink flagging
Dominant Vegetation		Slough sedge and soft rush	
Soils		Clay loam; Depleted Matrix of 10YR 4/2 with 10YR 4/6 redoximorphic concentrations in the matrix and pore linings to depth of 20 inches. Saturated at the soil surface.	
Hydrology		High Water Table, Saturation, Oxidized Rhizospheres along Living Roots, Geomorphic Position, and FAC-Neutral Test	
Rationale for Delineation		Satisfies all three wetland criteria.	
Rationale for Local Rating		Follows Ecology rating system (Hruby & Yhanke 2023) per LCC 17.38.230 (Wetlands – Classification) (Lewis County 2025b).	
Wetland Functions Summary		Wetland 5 scored low to high for water quality functions. Wetland 5 scored low to moderate for hydrologic functions. Wetland 5 scored low to high for habitat function. A complete assessment of functions is provided in Appendix D.	

Table 6: Wetland 6 Summary

WETLAND 6 – INFORMATION SUMMARY			
Location:		Field to the west of Senn Road and north of Lucas Creek	
		Local Jurisdiction	Lewis County
		WRIA	23 – Upper Chehalis
		Ecology Rating (Hruby & Yhanke 2023)	III (Habitat Score – 6)
		Buffer Width	75 feet
		Wetland Size	0.05 acres
		Cowardin Classification	PEM
		HGM Classification	Depressional
		Upland Data Sheet	W6-DP2
		Wetland Data Sheet	W6-DP1
		Flag color	Pink flagging
Dominant Vegetation	Slough sedge, soft rush, velvetgrass (<i>Holcus lanatus</i>), and Kentucky bluegrass.		
Soils	Loam; 10YR 3/2 to depth of 2 inches. Below 2 inches depleted matrix of 10YR 4/2 with 10YR 4/6 redoximorphic concentrations in the matrix and pore to a depth of 18 inches.		
Hydrology	Oxidized Rhizospheres along Living Roots, Geomorphic Position, and FAC-Neutral Test		
Rationale for Delineation	Satisfies all three wetland criteria.		
Rationale for Local Rating	Follows Ecology rating system (Hruby & Yhanke 2023) per LCC 17.38.230 (Wetlands – Classification) (Lewis County 2025b).		
Wetland Functions Summary	Wetland 6 scored low to high for water quality functions. Wetland 6 scored low to moderate for hydrologic functions. Wetland 6 scored low to high for habitat function. A complete assessment of functions is provided in Appendix D.		

Otak biologists identified and delineated three watercourses (Lucas Creek, Tributary 1, and Tributary 2) in the project area. Lucas Creek does not have a stream buffer for the bridge scour protection project per the Lewis County SMP. Per the SMP, shoreline buffers for bridge projects are 0 feet regardless of the land use intensity or shoreline designation. Stream buffers for Tributary 1 and Tributary 2 have been reduced to intervening road edges where applicable in accordance with the contiguous vegetation requirement per LCC 17.10.020. Stream classifications, buffer widths, and characteristics are summarized in Tables 7 to 9.

Table 7: Lucas Creek Summary

Lucas Creek Information Summary			
Location:		Looking south/downstream, upstream of bridge	
	Stream Name		Lucas Creek
	Local Jurisdiction		Lewis County
	Stream Type		Type S
	Buffer Width		0 Feet
	Cowardin Class		R5UBH
Documented Fish Use	The Statewide Integrated Fish Distribution (SWIFD) (WDFW 2025b) inventory lists the documented presence of coastal cutthroat trout (<i>Oncorhynchus clarkii</i>); the documented spawning of steelhead (<i>Oncorhynchus mykiss</i>), coho salmon (<i>Oncorhynchus kisutch</i>), and Chinook salmon (<i>Oncorhynchus tshawytscha</i>); and the presumed presence of rainbow trout (<i>Oncorhynchus mykiss</i>). According to NOAA Fisheries, Lucas Creek is not Critical Habitat nor are any of the aforementioned fishes protected under the Endangered Species Act.		
Stream Buffer Condition	Lucas Creek does not have a stream buffer for the bridge scour protection project per the Lewis County Shoreline Master Program (SMP). Per the SMP, shoreline buffers for bridge projects are 0 feet regardless of the land use intensity or shoreline designation. East of Senn Road, the Lucas Creek riparian area is forested with mixed coniferous and deciduous trees. West of Senn Road, the Lucas Creek riparian area is dominated by pastures with a mix of grasses, rushes, and sedges. A few trees are also located along Lucas Creek		
Flow Regime and Flow Path	Lucas Creek originates on forested slopes of the Cascade foothills approximately 5.5 miles east of the study area. Lucas Creek continues west of the study area approximately 3,000 feet before discharging into the North Fork Newaukum River. The North Fork Newaukum River flows generally southwest for approximately 4.2 river miles and discharges to the Newaukum River. From the confluence of the North Fork and South Fork Newaukum Rivers, the Newaukum River flows generally Northwest for approximately 6.75 miles and discharges to the Chehalis River. The Chehalis River flows northwest for approximately 60 miles and outlets to Grays Harbor.		

Table 8: Tributary 1 Summary

Tributary 1 Information Summary			
Location:		East of Senn Road, Parallel to Senn Road, Looking south	
	Stream Name	Tributary 1	
	Local Jurisdiction	Lewis County	
	Stream Type	Type F	
	Buffer Width	100 feet	
	Cowardin Class	R5UBH	
Documented Fish Use	The SWIFD (WDFW 2025b) inventory lists the documented presence of steelhead and coho salmon and the presumed presence of rainbow trout (<i>Oncorhynchus mykiss</i>). According to NOAA Fisheries, Tributary 1 is not Critical Habitat nor are any of the aforementioned fishes protected under the Endangered Species Act.		
Stream Buffer Condition	The standard buffer width for Type F streams per the LCC is 150 feet; however, Tributary 1 is less than 10 feet wide. LCC 17.38.420 allows for the reduction of buffers on Type F streams that are less than 10 feet wide from 150 feet to 100 feet. The buffer of Tributary 1 is truncated to the west by Senn Road. To the east, the buffer is dominated by pastures with a mix of grasses, rushes, and sedges. Woody shrubs are present along the banks of Tributary 1.		
Flow Regime and Flow Path	Tributary 1 begins in the hills approximately 3,000 feet southeast of the study area. In the study area, Tributary 1 flows north along Senn Road and discharges to Lucas Creek just east of Lewis County Bridge No. 77. Lucas Creek continues west of the study area approximately 3,000 feet before discharging into the North Fork Newaukum River. The North Fork Newaukum River flows generally southwest for approximately 4.2 river miles and discharges to the Newaukum River. From the confluence of the North Fork and South Fork Newaukum Rivers, the Newaukum River flows generally Northwest for approximately 6.75 miles and discharges to the Chehalis River. The Chehalis River flows northwest for approximately 60 miles and outlets to Grays Harbor.		

Table 9: Tributary 2 Summary

Tributary 2 Information Summary		
Location:	East of Lucas Creek and Wetland 3, Looking east from Wetland 3	
	Stream Name	Tributary 2
	Local Jurisdiction	Lewis County
	Stream Type	Type Ns
	Buffer Width	75 feet
	Cowardin Class	R4
Documented Fish Use	There is no documented fish use in Tributary 2. Tributary 2 does not meet the definition of fish habitat as outlined in the Washington Administrative Code (WAC) 222-16-030 – Water Typing.	
Stream Buffer Condition	The buffer on both sides of Tributary 2 consists of mixed upland forest with invasive Himalayan blackberry in the understory.	
Flow Regime and Flow Path	Tributary 2 is a short, intermittent stream that flows for approximately 55 feet in the study area. Tributary 2 discharges to Lucas Creek through Wetland 3. Lucas Creek continues west of the study area approximately 3,000 feet before discharging into the North Fork Newaukum River. The North Fork Newaukum River flows generally southwest for approximately 4.2 river miles and discharges to the Newaukum River. From the confluence of the North Fork and South Fork Newaukum Rivers, the Newaukum River flows generally Northwest for approximately 6.75 miles and discharges to the Chehalis River. The Chehalis River flows northwest for approximately 60 miles and outlets to Grays Harbor.	

Section 3. Shoreline Ecological Functions: Project Impacts, Mitigation Sequencing, and Functional Lift Assessment

The following section includes avoidance and minimization measures to reduce project impacts to critical areas per LCC 17.38.050 (Critical Areas – Administration) and a summary of the mitigation plan to offset temporary impacts to wetland buffer and aquatic priority habitats. The project will not result in a net loss of shoreline ecological functions.

As required per LCC 17.38.080 (General Mitigation Requirements) and LCC 17.38.510 (Fish and wildlife habitat mitigation plan), the project has been designed to mitigate impacts to Lucas Creek in the following prioritized order:

- Avoiding the adverse impact altogether by not taking a certain action or parts of an action, or by moving the action
- Minimizing adverse impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology and engineering, or by taking affirmative steps to avoid or reduce adverse impacts
- Rectifying the adverse impact by repairing, rehabilitating or restoring the affected environment
- Reducing or eliminating the adverse impact over time by preservation and maintenance operations during the life of the action
- Compensating for the adverse impact by replacing, enhancing, or providing similar substitute resources or environments, monitoring any adverse impact and mitigation, and taking appropriate corrective or adaptive management measures
- Monitoring the impact and taking appropriate corrective measures

3.1. Avoidance and Minimization

Permanent impacts to wetlands in the project area and Tributary 2 have been completely avoided and impacts to Lucas Creek and Tributary 1 have been minimized to the extent practicable. Construction Best Management Practices (BMPs) and temporary erosion and sediment control (TESC) measures will be employed to minimize impacts. Clearing limits will be established using high visibility fencing. Equipment staging will occur within upland areas adjacent to the road to minimize temporary impacts to vegetation. Tree removal has been minimized and avoided where practicable.

A temporary gravity-fed stream bypass system will be installed prior to installation of the scour countermeasures to protect water quality. Gravel bags or similar material will be placed across the channel upstream and downstream of the work area, and a stream bypass pipe installed to convey the river water through the work area. Within the work area, sediment-laden seepage and groundwater will be pumped out of the construction area and discharged upslope of the river through filter bags and discharged downstream outside of the work area. Fish moving will be completed for the work area prior to dewatering. Dewatering of the work area shall occur at a rate slow enough to allow for the safe capture and relocation of fish to avoid stranding. Approximately 4,881 square feet (SF) of Lucas Creek and 221 SF of Tributary 1 will be temporarily impacted from dewatering as shown on Sheet 10 of the JARPA drawings.

Temporary and permanent vegetation clearing within riparian areas is unavoidable because installation of the scour countermeasures and protection of the bridge piers and abutments requires access through riparian habitat. Impacts to vegetation in shoreline jurisdiction have been minimized to the extent practicable. Approximately 2,970 SF of shoreline vegetation will be permanently impacted, and approximately 35,713 SF of temporarily impacted vegetation within shoreline jurisdiction will be restored and replanted with willow stakes, riparian and upland seed mixes, and native trees and shrubs. Two deciduous trees will be removed near the bridge because they occur within the limits of the scour countermeasures. The proposed riparian habitat restoration will include willow stakes around the edges of the rock blanket to provide shading and allochthonous inputs to support aquatic habitat. In addition, nine logs with rootwads will be installed in Lucas Creek and three logs with rootwads will be installed in Tributary 1 to improve habitat quality and cover for fish in the project area following construction.

Following isolation of the work areas, existing streambed material will be excavated to a depth of approximately three to six feet and replaced with riprap on top of geotextile fabric with blended streambed aggregate placed on top of the riprap as shown on JARPA drawing Sheets 5, 6 and 7. The streambed will be over excavated and replaced with the scour protection to achieve no-rise within the mapped floodway. The stream bypass system will be removed following construction prior to the end of the approved in-water work window.

3.2. Unavoidable, Minimized Project Impacts

Following isolation of the work area, existing riprap, debris, and streambed material will be excavated and hauled away for installation of buried riprap overlaid with blended streambed aggregate. The in-water stream impacts are expected to result in minor benefit to stream habitat within Lucas Creek and Tributary 1 from removing the existing angular rock and replacing it with buried riprap with streambed material on top, and adding twelve large wood pieces. Streambed grading will comply with no-rise requirements for work in the regulated floodway, and there will be no loss of stream habitat below the existing OHWM. The proposed scour countermeasures will extend up the bank to protect the bridge abutments, and will result in the permanent loss of 2,970 SF of shrub and grass vegetation in shoreline jurisdiction that is typical of maintained roadside areas. Two deciduous trees will be removed near the bridge. The proposed impacts are shown on JARPA drawing Sheet 14.

The project will result in approximately 3,130 SF of permanent impacts Lucas Creek and approximately 448 SF of permanent impacts to Tributary 1 from the installation of scour countermeasures. The permanent stream impacts will not result in a loss of stream habitat because streambed material will be placed over the angular rock used for scour protection. Approximately 4,881 SF of temporary impacts to Lucas Creek and approximately 221 SF of temporary impacts to Tributary 1 will result from dewatering activities during construction.

Overall, approximately 2,970 SF of permanent vegetation clearing within shoreline jurisdiction will occur, and approximately 35,713 SF of vegetation will be temporarily impacted. The whole project occurs within shoreline jurisdiction. Of the 2,970 SF of permanent vegetation impacts in shoreline jurisdiction, 7 SF are to wetland buffer, 1,343 SF are to overlapping wetland and stream buffer, and 1,620 SF are to vegetated areas in shoreline jurisdiction not classified as wetland or stream buffer (Table 11).

The in-stream work area will be isolated to minimize the impacts of excavation to water quality and aquatic wildlife. The stabilization measures to be installed have been selected specifically for the ecological lift they will provide to the river. Large woody material log jams will contribute roughness and habitat diversity for aquatic life. Native willow stakes will be planted around the rock revetment to provide bank stabilization and erosion control, water quality improvement, stream shading, and habitat structural

complexity. The streambed will be restored with 8-inch streambed cobbles and regraded to pre-existing contours. Upon completion of construction, all impacts to Lucas Creek and Tributary 1 will be restored.

Permanent impacts to Lucas Creek and Tributary 1 will not result in a loss of stream habitat because the scour countermeasures will be installed below the existing grade with 8-inch streambed cobbles at the surface. The majority of impacted vegetation within shoreline jurisdiction is dominated by invasive Himalayan blackberry (*Rubus armeniacus*) and non-native roadside herbaceous plants. Project impacts are summarized in Tables 10 and 11.

Table 10—Stream Impacts Summary

Regulated Feature	Impact Area (Square Feet)	Duration
Lucas Creek	4,881	Temporary
	3,130	Permanent
Tributary 1	221	Temporary
	448	Permanent

Table 11—Riparian Vegetation Impacts Summary

Impact Type	Temporary Impacts (square feet)	Permanent Impacts (square feet)
Overlapping Wetland and Stream Buffer	9,793	1,343
Wetland Buffer	5,870	7
Vegetation in Shoreline Jurisdiction	20,050	1,620
Total Vegetation Impacts within Shoreline Jurisdiction	35,713	2,970

3.3. Proposed On-Site Restoration and No Net Loss Determination

The Wetland, Stream and Shoreline Vegetation Restoration Plan (Otak 2026) prepared for the project is meant to restore temporarily impacted vegetation communities and increase structural and species diversity along Lucas Creek and its tributaries in the project area so there is no loss of ecological functions after the scour countermeasures are installed. A watershed approach was used for the restoration design by focusing on restoring functions at the project site where the impacts occur rather than purchasing credits from a mitigation bank lower in the watershed. Restoration details are provided on Sheets 12 and 13 of the JARPA plan set.

The onsite restoration plan includes installing 2,024 SF of live stakes of native willows (*Salix sp.*) (Planting Zone 1) around the rock revetment to mitigate thermal impacts, increase shading and

allochthonous inputs, and slow water velocities during high flow events. A total of 225 live stakes will be installed at three-feet on-center. The sloped banks of Lucas Creek and Tributary 1, an area of approximately 4,318 SF, will be planted with a riparian seed mix and 147 native shrubs (Planting Zone 2).

Temporarily disturbed areas east of Lucas Creek and Tributary 1 and above the sloped banks (Planting Zone 4), approximately 4,655 SF, will be seeded with an upland seed mix and planted with 24 native trees and 127 native shrubs. Planted native woody species will provide shading and additional cover in the project reaches of Lucas Creek and Tributary 1, and provide a functional lift relative to the current conditions by enhancing 6,342 SF of low functioning riparian area (e.g., grass) west of the bridge with native trees and shrubs. Disturbed areas above the banks of Lucas Creek and Tributary 1 and west of Senn Road (Planting Zone 3), approximately 25,519 SF, will be seeded with an upland seed mix to restore these pasture areas to pre-existing conditions. Plant areas, plant schedules, and planting details are provided on Sheets 12 and 13 of the JARPA plan set.

The project has been designed following the mitigation sequencing avoid and minimize unavoidable project impacts to critical areas as required per Section 4.04 (Critical Areas and Shoreline Vegetation Conservation) of the Lewis County SMP, LCC 17.38.080 (General Mitigation Requirements), and LCC 17.38.510 (Fish and wildlife habitat mitigation plan). All temporary impacts will be restored following construction, and the installation of the scour countermeasures below the OHWM of Lucas Creek will not result in the loss of aquatic habitat. Installing the scour countermeasures will not result in a rise of the base flood elevation for compliance with the floodplain regulations. The project will result in a minor net benefit of ecological function in the project area from the removal of non-native, invasive vegetation and installation of native trees and shrubs along the riparian corridor that will provide increased shading, habitat diversity, and cover for aquatic wildlife. The project will not result in a loss of shoreline ecological functions

Section 4. Shoreline Master Program Compliance Narrative

The following section includes the project compliance narrative for the Goals and Policies of the Lewis County SMP and SMP regulations. SMP goals and policies and regulations are shown in *italics*, and compliance statements are provided in **bold**.

4.1. Shoreline Management Goals

4.1.1. [SMP 2.01] Shoreline Master Program Goals

The State SMP Guidelines (WAC 173-26-186(3)) require that all relevant policy goals must be addressed in the planning policies of the SMP. This section contains goals that express the long-term vision of the County's citizens for their shorelines. Goals provide the basis for the more detailed SMP shoreline environments, policies, regulations, and administrative procedures in subsequent chapters.

The project has been designed with respect to the goals of the Lewis County Shoreline Master Program while still achieving project goals. The proposed project will result in no net loss of shoreline ecological functions as detailed in Section 3 of this report.

4.1.2. [SMP 2.02] Economic Development Goal

Utilize shoreline resources to improve the standard of living for residents of the County, while assuring that the resources are utilized in a manner consistent with minimizing adverse effects to the shoreline environment.

The bridge scour repair project will maintain the standard of living for residents of the County by maintaining access along Senn Road. Failure to address the bridge scour would ultimately result in unsafe conditions for continued bridge use. Senn Road provides access to rural residential and agricultural properties in Lewis County. Adverse effects to the shoreline environment have been minimized to the amount practicable while still achieving project goals. The proposed project will result in no net loss of shoreline ecological functions as detailed in Section 3 of this report. See Section 3 of this report for a discussion of existing shoreline ecological functions, project impacts, mitigation sequencing and a functional lift analysis.

4.1.3. [SMP 2.03] Public Access Goal

Provide a variety of public access opportunities that are safe, compatible with natural features, and widely distributed to avoid concentration of user pressure. Assure that intrusions created by public access will not endanger life, property, public or private property rights, or have detrimental effects on fragile natural features.

The project area does not include public access to the shoreline. The project is located in County-owned transportation right-of-way. No public access opportunities will be impacted by the proposed project. Visibility of Lucas Creek will not be impacted by the project

4.1.4. (SMP 2.04] Recreational Goal

Provide shoreline recreational opportunities that serve the demands of the citizens and visitors to the County.

The project area does not include any recreation opportunities within the shoreline. The project is located in County-owned transportation right-of-way. No recreation opportunities will be impacted by the proposed project. Visibility of Lucas Creek will not be impacted by the project.

4.1.5. [SMP 2.05] Circulation Goal

Encourage a multi-modal transportation system, which provides efficient and safe movement of people and vehicles with minimum disruption to the shoreline.

The Lucas Creek crossing is an existing connection at Senn Road MP 0.89. The bridge provides access to rural residential and agricultural use areas in the shoreline environment associated with Lucas Creek. No additional traffic capacity is anticipated. The proposed project preserves the existing use of the shoreline environment while maintaining existing shoreline ecological functions.

4.1.6. [SMP 2.06] Shoreline Use Goal

Assure that shoreline development in the County corresponds with the character and physical limitations of the land and water. Promote a viable pattern of land and water use without disrupting environmental quality.

The proposed bridge scour repair project in the shoreline area will not result in adverse effects on existing shoreline use and development or shoreline ecological functions and/or processes. The Senn Road MP 0.89 bridge at the crossing of Lucas Creek is classified as scour critical and within shoreline jurisdiction. The proposed project will result in no net loss of shoreline ecological functions as detailed in Section 3 of this report. See Section 3 of this report for a discussion of existing shoreline ecological functions, project impacts, mitigation sequencing and a functional lift analysis.

4.1.7. [SMP 2.07] Conservation Goal

Encourage sensible management of renewable shoreline resources and the preservation of shoreline resources.

See Section 3 of this report for a discussion of existing shoreline ecological functions, project impacts, mitigation sequencing, and a functional lift analysis that shows the project will not result in a net loss of shoreline ecological functions. The proposed project avoids and minimizes impacts to vegetation within shoreline jurisdiction to the maximum extent feasible.

Existing pile and abutment protection (heavy loose riprap) located above and below the OHWM of Lucas Creek will be replaced to protect the bridge from stream scour during high flow events. The proposed project protects ecosystem processes and functions while achieving the project goal of improved safety at the bridge crossing. No new bulkheads, levees, groins or similar are proposed. The proposed project will result in no net loss of shoreline ecological functions as detailed in Section 3 of this report.

4.1.8. [SMP 2.08] Historic, Cultural, Scientific, and Educational Goal

Protect, preserve, and restore areas and sites having historic, cultural, educational, or scientific values.

The project will not impact existing buildings or structures eligible for the national or local preservation registers. If any cultural or historical artifacts are found during project activity, work will stop, the site will be protected from further disturbance, and the County will notify the Tribes and all appropriate federal, state and county agencies, including DAHP. The project will not compromise any scientific or educational value of the site.

4.1.9. [SMP 2.09] Flood Hazard Prevention Goal

Recognize the hydrologic functions of floodplains, and protect frequently flooded areas.

The project is located within the 100-year floodplain of Lucas Creek. The existing bridge structure provides approximately three to four feet of clearance above the 500-year flood elevation of 359.1 feet. The project complies with the County's flood hazard regulations, and a floodplain development permit will be acquired. The project complies with the no-rise requirement for work within a regulated floodway. The proposed project will result in no net loss of shoreline ecological functions as detailed in Section 3 of this report.

4.1.10. [SMP 2.10] Restoration Goal

Encourage restoration of previously degraded areas so that they may be renewed or restored to an ecologically functional condition.

The proposed project will result in no net loss of shoreline ecological functions. Temporarily impacted vegetation will be restored with a native grass seed mix and plantings of live native trees and shrubs following construction to restore pre-existing conditions. A total of approximately 35,713 SF of vegetation within shoreline jurisdiction will be temporarily impacted and restored within one growing season. Temporary impacts are generally to existing low functioning pastures and hayfields immediately adjacent to the roadway. Two deciduous trees will be removed as part of this project and replaced with 24 planted trees. See Section 3 of this report for a discussion of existing shoreline ecological functions, project impacts, mitigation sequencing, and the no net loss of shoreline ecological functions analysis.

4.2. General Policies and Regulations

4.2.1. [SMP 4.02] Archaeological and Historic Resources

The purpose of this section is to prevent destruction or damage to sites containing irreplaceable 19 archeological or historic resources within shoreline jurisdiction. The policies and regulations 20 apply to areas of known or supposed archeological and historic resources as recorded by the 21 Washington State Department of Archaeology and Historic Preservation (DAHP), the County, 22 affected tribes, as well as sites that are uncovered during site development.

Policies

- A. Encourage consultation with professional archaeologists and historians to identify areas 25 containing potentially valuable archaeological or historic resources, and establish 26 procedures for salvaging the resource. Appropriate agencies to consult include, but are 27 not limited to, the Lewis County Historical Society, DAHP, the White Pass Country 28 Historical Society, the Confederated Tribes of the Chehalis Reservation, the Cowlitz 29 Indian Tribe, the Nisqually Indian Tribe, and the Quinault Indian Nation.*
- B. Where a professional archaeologist has identified an area or site as having significant value, or where an area or site is listed in local, State, or Federal historical registers, the Shoreline Administrator may condition the development approval to preserve the features. Potential conditions may include measures to preserve or retrieve the resources, modify the site development plan to reduce impacts, or mitigate the impacts as authorized through the State Environmental Policy Act (SEPA), or other County, State, or Federal laws.*
- C. The applicant shall stop work immediately and contact the County, the DAHP, and affected tribes if any archaeological resources are uncovered during work within shoreline jurisdiction.*

- D. *Prevent the destruction of or damage to a site that has been inadvertently uncovered and has historic, cultural, scientific, or educational value as identified by the appropriate authorities, including affected tribes and the DAHP.*
- E. *Where development or demolition activity is proposed adjacent to an identified archaeological or historic site, design and operate the proposed development to be compatible with the continued protection of the site.*

Regulations

- A. *Permits issued in areas documented to contain archaeological resources shall require a site inspection or evaluation by a professional archaeologist in coordination with affected tribes and DAHP prior to any ground disturbance. Failure to complete a site survey shall be considered a violation of the shoreline permit.*
- B. *Where a professional archaeologist has identified an area or site as having significant value, or where an area or site is listed in local, State, or Federal historical registers, the Shoreline Administrator may condition the development approval to preserve the features. Potential conditions may include measures to preserve or retrieve the resources, modify the site development plan to reduce impacts, or mitigate the impacts as authorized through the State Environmental Policy Act (SEPA), or other County, State, or Federal laws.*
- C. *The applicant shall stop work immediately and contact the County, the DAHP, and affected tribes if any archaeological resources are uncovered during work within shoreline jurisdiction.*

The project will not impact existing buildings or structures eligible for the national or local preservation registers. If any cultural or historical artifacts are found during project activity, work will stop, the site will be protected from further disturbance, and the County will notify the Tribes and all appropriate federal, state and county agencies, including DAHP.

4.2.2. [SMP 4.03] Environmental Impacts and Mitigation

This section addresses the requirements for no net loss of ecological functions in shoreline jurisdiction by requiring mitigation for shoreline impacts. These provisions apply throughout shoreline jurisdiction.

Policies

- A. *Avoid or mitigate impacts in shoreline jurisdiction to ensure the standards of no net loss to ecological function are met.*
- B. *Proposals to impact and/or conduct mitigation actions on State-owned aquatic lands should be reviewed by WDNR to ensure project feasibility.*

Regulations

- A. *The environmental impacts of development proposals shall be analyzed and include measures to mitigate environmental impacts not otherwise avoided or mitigated by compliance with the SMP and other applicable regulations.*
- B. *Mitigation measures shall be considered and applied in the following sequence of steps, listed in order of priority:*
 - 1. *Avoiding the impact altogether by not taking a certain action or parts of an action;*

2. Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology or by taking affirmative steps to avoid or reduce impacts;
 3. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 4. Reducing or eliminating the impact over time by preservation and maintenance operations;
 5. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and
 6. Monitoring the impact and the compensation projects and taking appropriate corrective measures.
- C. *In determining appropriate mitigation measures applicable to development in shoreline jurisdiction, lower priority measures should be applied only where higher priority measures are determined to be infeasible or inapplicable.*
- D. *Mitigation shall not be required that exceeds what is necessary to assure the development will result in no net loss of ecological functions in shoreline jurisdiction.*
- E. *When compensatory measures are appropriate pursuant to the mitigation priority sequence above, preferential consideration shall be given to measures that replace the impacted functions directly and in the immediate vicinity of the impact. However, alternative compensatory mitigation measures that have been identified within a watershed plan, and address limiting factors or other critical resource conservation needs in the shoreline jurisdiction may be authorized. Authorization of compensatory mitigation measures may require appropriate safeguards, terms, or conditions as necessary to ensure no net loss of ecological functions.*

See Section 3 of this report for a discussion of existing shoreline ecological functions, project impacts, mitigation sequencing, and a functional lift analysis that shows the project will not result in a net loss of shoreline ecological functions. The proposed project avoids and minimizes impacts to vegetation within shoreline jurisdiction to the maximum extent feasible.

4.2.3. [SMP 4.04] Critical Areas and Shoreline Vegetation Conservation

This section is intended to protect and restore the ecological functions and ecosystem-wide processes performed by critical areas, buffers, and vegetation in shoreline jurisdiction. Within the SMP, buffers for lakes and streams that are Shorelines of the State are considered “shoreline buffers” while the buffers for all other critical areas regulated under Lewis County Code (LCC) Chapter 17.38 are called “critical areas buffers.” Native vegetation conservation is emphasized within both of the areas. Native vegetation supports many ecological functions or processes in shoreline and critical area buffers, and retaining the vegetation will help the County to meet the SMA requirement of no net loss of shoreline ecological functions.

Provisions for shoreline vegetation conservation within this section include regulations regarding natural plant clearing, vegetation restoration, and the control of invasive weeds and non-native species. These provisions apply to any activity, development, or use in shoreline jurisdiction unless otherwise stated, whether or not that activity requires a shoreline permit. Such activities include clearing, grading, grubbing, and trimming of vegetation. Provisions also apply to vegetation protection and enhancement activities, but exclude agricultural activities and activities covered under the FPA, unless otherwise stated.

SMP Appendix 2: Critical Areas Regulations applies to the management of critical areas in shoreline jurisdiction in the County, including wetlands, critical aquifer recharge areas, fish and wildlife habitat conservation areas, frequently flooded areas, and geologically hazardous areas. Exceptions to the applicability of the provisions in Appendix 2: Critical Areas Regulations within shoreline jurisdiction are outlined in SMP Section 4.04.02(A) below.

Policies

- A. Ensure no net loss of shoreline ecological functions through the effective integration of the SMP with existing County critical areas regulations.*
- B. Include critical areas objectives in the protection and restoration of degraded ecological functions and ecosystem-wide processes.*
- C. Balance the various facets of the SMP in critical area regulations, including public access, water-dependent uses, aesthetic considerations, and the maintenance of shoreline ecological functions.*
- D. Protect and restore ecological functions and ecosystem-wide processes provided by native vegetation along shorelines.*
- E. Explore opportunities to eliminate non-native vegetation and invasive species and encourage the planting and enhancement of native vegetation within shoreline jurisdiction.*
- F. Replant cleared and disturbed sites promptly after completion of any clearance or construction. Use native vegetation in those locations where there was previously native vegetation, or native or other species in those areas previously vegetated with non-native or ornamental species.*
- G. Allow the selective pruning of trees for safety and view protection.*
- H. Conduct removal or modification of aquatic vegetation in a manner that minimizes adverse impacts to native plant communities and wildlife habitats, and appropriately handles and disposes of weed materials and attached sediments.*
- I. Permit clearing of vegetation associated with dike or levee maintenance as necessary to provide protection from flood hazards.*

Regulations

- A. Critical Areas Ordinance Adopted and Modified*
 - 1. Whether or not a shoreline permit or written statement of exemption is required, the provisions of this section shall apply to all uses, alterations, or developments within shoreline jurisdiction or shoreline buffers. All shoreline uses and activities shall be located, designed, constructed, and managed to protect the ecological functions and ecosystem wide processes provided by critical areas and shoreline vegetation.*
 - 2. The Critical Areas Regulations adopted June 25, 2018 through Ordinance 1284, and amended on September 14, 2021 through Ordinance 1327, which are contained in the Lewis County Critical Areas Ordinance (CAO), LCC Chapter 17.38, and include LCC 17.10 (Definitions), are integral and applicable to the SMP, and are hereby adopted by reference. All uses and development occurring within critical areas or their buffers within*

shoreline jurisdiction shall comply with these regulations except as modified in SMP Section 4.04.02(A)(5) below.

3. *LCC 15.35 Flood Damage Regulations applies within shoreline jurisdiction but is not incorporated as specific regulations of this SMP.*
4. *If there are any conflicts or unclear distinctions between the provisions in LCC Chapter 17.38, and this section, the requirements most consistent with the SMA shall apply, as determined by the Shoreline Administrator.*
5. *To ensure consistency with the SMA, exceptions to the applicability of the regulations in LCC Chapter 17.38 in shoreline jurisdiction are listed below:*
 - a. *Where there is a difference in a definition between the CAO and the SMP, the SMP definition shall apply.*
 - b. *Within shoreline jurisdiction, critical area review, approval, notice, and appeal periods/processes, shall be integrated with the associated shoreline permit or exemption found in SMP Chapter 7: Shoreline Administration. If a development is located within a special flood hazard area, the requirements of LCC 15.35, including the need for a flood hazard zone permit shall be met.*
 - c. *In shoreline jurisdiction, the definition of hydric soil in LCC 17.10.080 does not apply. The definition of hydric soils shall be derived from the language found in the Natural Resources Conservation Service (NRCS) Field Indicators of Hydric Soils in the United States, Version 8.2. United States Department of Agriculture, 21 NRCS. 2018, or as amended.*

Within shoreline jurisdiction, the reasonable use and variance procedures in LCC 17.38.1010 are not available for relief from critical area standards. Instead, applicants seeking relief from critical area standards shall apply for a shoreline variance under SMP Section 7.04.03.
 - d. *LCC 17.38.130 relating to activities allowed without a permit in critical areas and buffers does not apply in shoreline jurisdiction. In shoreline jurisdiction, exempt activities are limited to those listed in 7.04.04(B) and require review. Exemptions are from the permit process only and not from the standards of the SMP, including the critical area regulations and the requirements for no net loss.*
 - e. *LCC 17.38.280(1) – Reduction in Buffer Width by Reducing the Intensity of Land Use Impacts. In shoreline jurisdiction, buffer width reduction is addressed in SMP Section 4.04.02(C)(2).*
 - f. *LCC 17.38.280(2) – Reductions in Buffer Widths Where Existing Roads or Structures Lie within the Buffer. In shoreline jurisdiction, interrupted buffer is addressed in SMP Section 4.04.02(C)(3).*
 - g. *LCC 17.38.280(3) – Common Line Buffers. In shoreline jurisdiction, common line buffer is addressed in SMP Section 4.04.02(C)(4).*

- h. LCC 17.38.290 – Buffer width averaging. In shoreline jurisdiction, buffer averaging is addressed in SMP Section 4.04.02(C)(1).
 - i. LCC 17.38.430 – Buffer width reduction or averaging. In shoreline jurisdiction, buffer averaging, interrupted buffer, and common line are addressed in SMP Section 4.04.02(C)(1), Section 4.04.02(C)(3), and Section 4.04.02(C)(4).
 - j. LCC 17.38.080 – General mitigation requirements. In shoreline jurisdiction, on site mitigation activities (LCC 17.38.080(4)(a) may include, but are not limited to, planting native vegetation, installing low impact development (LID) facilities such as rain gardens to mitigate stormwater impacts, installing large woody debris, and removing bulkheads or other hard shoreline stabilization structures. Mitigation projects involving instream work such as the installation of large woody debris shall be designed to ensure there are no adverse effects to upstream or downstream properties. Off-site mitigation (LCC 17.38.080(4)(b) shall occur in a similar habitat type as the project impact and in a location that will provide the greatest ecological benefit to affected species or habitats and have the greatest likelihood of success.
 - k. LCC 17.38.630 – Standards. In shoreline jurisdiction, uses and activities that may be authorized in CMZs are listed in SMP Section 4.05.02(F).
 - l. LCC 15.35.310 – Floodways. Within shoreline jurisdiction, uses and activities that may be authorized within floodways or the SMP flood course are listed in SMP Section 4.05.02(F).
6. The provisions of the County's critical areas regulations do not extend shoreline jurisdiction beyond the limits specified in SMP Section 1.06.01.

B. Shoreline Buffers

- 1. The required critical area buffers for Type S streams, as established in SMP Table 4-1: Shoreline Buffers, shall be considered shoreline buffers.
- 2. The minimum required aquatic habitat critical area buffers for lakes, as established in SMP Table 4-1: Shoreline Buffers, shall be considered shoreline buffers.
- 3. The buffers for all other critical areas shall be established in accordance with the standards of LCC Chapters 17.38, except as modified by SMP Section 4.04.02(A).
- 4. New uses and development that are not water-dependent, water-related, or water enjoyment, accessory to water-dependent, water-related, or water-enjoyment uses or development, or that do not facilitate public access to waters of the State generally will not be authorized in shoreline buffers. Some uses or developments not meeting the criteria above may be authorized through buffer averaging or through issuance of a shoreline variance.
- 5. SMP Table 4-1: Shoreline Buffers establishes shoreline buffers by shoreline environment designation.
- 6. Shoreline buffers shall be measured horizontally in a landward direction from the OHWM.

7. *"N/A" in SMP Table 4-1: Shoreline Buffers means the requirement is not applicable.*
8. *The minimum shoreline buffer from the OHWM for a particular use is determined by finding the use and the most appropriate subcategory row and then finding the intersection with the appropriate shoreline environment designation column.*
9. *Building setbacks of 15 feet are required from the landward edge of the shoreline buffer in accordance with LCC 17.38.1030. Building setbacks are used to protect the shoreline buffer from disturbance during construction and from the impacts related to use of a structure. Where no shoreline buffer is required in Table 4-1, no building setback shall be required.*

Table 4-1: Shoreline Buffers

Standard Shoreline Buffer from the OHWM (1)	High Intensity	Shoreline Residential	Rural/Urban Conservancy	Natural
Agriculture (New agricultural activities only)				
High intensity agricultural uses	100 feet	100 feet	100 feet	100 feet
Low intensity agricultural uses	50 feet	50 feet	50 feet	50 feet
Aquaculture				
Water-dependent structures and uses	0 feet	0 feet	0 feet	N/A
Water-related structures and uses	75 feet	75 feet	75 feet	N/A
Non-water-dependent structures and uses	150 feet	150 feet	150 feet	N/A
Boating and Water Access facilities				
Water-dependent structures and uses	0 feet	0 feet	0 feet	N/A
Water-related and water-enjoyment structures and uses	75 feet	75 feet	75 feet	N/A
Non-water-dependent structures and uses	150 feet	150 feet	150 feet	N/A
Commercial Development				
Water-dependent structures and uses	0 feet	0 feet	0 feet	N/A
Water-related and water-enjoyment structures and uses	75 feet	75 feet	75 feet	N/A
Non-water-oriented structures and uses	(2)	(2)	(2)	N/A
Forest Practices (3)	150 feet	150 feet	150 feet	200 feet
Industrial Development				
Water-dependent structures and uses	0 feet	N/A	0 feet (4)	N/A
Water-related structures and uses	75 feet	N/A	75 feet (4)	N/A
Non-water-oriented structures and uses	(5)	N/A	(4)(5)	N/A
Mining	150 feet	N/A	150 feet	N/A
Parking	150 feet	150 feet	150 feet	N/A

Standard Shoreline Buffer from the OHWM (1)	High Intensity	Shoreline Residential	Rural/Urban Conservancy	Natural
Recreational Development (6)				
Water-dependent structures and uses	0 feet	0 feet	0 feet	0 feet
Water-related and water-enjoyment structures and uses	75 feet	75 feet	75 feet	100 feet
Non-water-oriented structures and uses	150 feet	150 feet	150 feet	N/A
Residential Development	150 feet	150 feet	150 feet	200 feet
Transportation Facilities				
Bridges for motorized and non-motorized uses	0 feet	0 feet	0 feet	0 feet
Expansion of roads within existing right-of-way	(7)	(7)	(7)	(7)
New roads related to permitted shoreline uses	(8)	(8)	(8)	(8)
Expansion of roads outside of a right-of-way or relocation of existing roads	(8)	(8)	(8)	(8)
Utilities				
Water-dependent structures	0 feet	N/A	0 feet	N/A
Water-related structures	75 feet	N/A	75 feet	N/A
Non-water-oriented structures	150 feet (9)	N/A	150 feet (9)	N/A
Transmission facilities	(10)	(10)	(10)	(10)

Notes:

- a. *Reductions in the shoreline buffer from the OHWM may be authorized according to the standards in SMP Section 4.04.02(C) below.*
- b. *Non-water oriented commercial uses are only allowed subject to 5.08.02(B).*
- c. *Other than conversions to nonforest land use and harvest on Shorelines of Statewide Significance, forest practices regulated under Chapter 76.09 RCW are not subject to additional regulations under this SMP. For the standards for forest practices subject to the SMP, see Section 5.09.02.*
- d. *Industrial uses in the Rural Conservancy shoreline environment designation are limited to low intensity, water-oriented uses where those uses have located in the past, or at unique sites in rural communities that possess shoreline conditions and services to support the use.*

- e. *Non-water-oriented industrial uses are only allowed subject to 5.10.02(B).*
- f. *Passive, water-oriented recreational uses are allowed within shoreline buffers subject to 5.13.02(E).*
- g. *Only allowed within existing right-of-way.*
- h. *Only allowed within shoreline jurisdiction when no other option for the location of the facility exists in accordance with SMP Section 5.16.02.*
- i. *Only allowed within shoreline jurisdiction when no other option for the location of the facility exists in accordance with SMP Section 5.17.02.*
- j. *Transmission facilities shall be sited in accordance with 4.04.02(D), or in an existing road right-of-way.*

C. *Buffer Width Reduction Options*

Shoreline and critical area buffers, with the exception of geologically hazardous areas buffers, may be reduced using the following procedures. Only one buffer width reduction option below may be selected per development:

1. *Buffer Averaging*

The width of a buffer may be averaged following the requirements of LCC 17.38.290 and LCC 17.38.430, thereby reducing the width of a portion of the buffer and increasing the width of another portion of the buffer.

2. *Buffer Width Reduction*

Reductions of certain buffers may be approved administratively if buffer averaging in SMP Section 4.04.02(C)(1), common line buffer in SMP Section 4.04.02(C)(3), or interrupted buffer provisions in SMP Section 4.04.02(C)(4) are infeasible, following the requirements of LCC 17.38.280(1). The buffer width reduction:

- a. *Shall include appropriate measures to reduce potential impacts from LCC 17.38.280(1)(b).*
- b. *Shall be designed to ensure no net loss of shoreline ecological functions occurs when the reduction is utilized.*

3. *Common Line Buffer (Applicable to Shoreline Buffers Only)*

To accommodate adequate shoreline views comparable to adjacent existing residences, the Shoreline Administrator may reduce the shoreline buffer for a new single-family residence consistent with the following criteria:

- a. *The proposed residence must be located within 300 feet of an adjacent legally established single-family residential primary structure that encroaches on the shoreline buffer. Accessory structures such as sheds or garages shall not be used to determine a common line buffer.*

- b. *For the purpose of this standard, the nearest corners of the adjacent residences are those closest to the side-yard property line of the proposed residence.*
- c. *Existing Residences on Both Sides: Where there are existing residences adjacent on both sides of the proposed residence, the buffer shall be determined as the greater of either:*
 - 1) *A common line drawn between the nearest corners of each adjacent residence, or*
 - 2) *A common line calculated by the average of both adjacent residences' existing setbacks from the OHWM.*
- d. *Existing Residence on One Side: Where there is only one existing residence adjacent to the proposed residence, the common line buffer shall be determined as the greater of either:*
 - 1) *A common line drawn between nearest corner of the foundation for the adjacent residence and the nearest point of the standard buffer on the adjacent vacant lot; or*
 - 2) *A common line calculated by the average of the adjacent residence's setback from the OHWM and the standard buffer for the adjacent vacant lot.*

4. Interrupted Buffer Provisions

- a. *The Shoreline Administrator may allow a reduced buffer where a legally established substantial improvement such as a road, railroad, or structure serves to eliminate or greatly reduce the impact of a proposed activity upon a wetland or shoreline buffer.*
- b. *Where such a substantial improvement exists, the buffer may be reduced to the waterward edge of the existing substantial improvement.*
- c. *If a project has the potential to impact the functions of a shoreline or wetland, or its buffer, even though such an improvement exists, the Shoreline Administrator shall require the applicant to submit a critical area report to ensure that no-net loss of shoreline ecological functions will occur.*
- d. *As used within this section only, substantial improvements shall include developed public infrastructure such as roads and railroads, and private improvements such as homes or commercial structures. Substantial improvements shall not include paved trails, sidewalks, private driveways, parking areas, or accessory buildings that do not require a building permit.*

D. General Buffer Regulations

1. Shoreline Buffers

The following new uses and activities are allowed within shoreline buffers without a

shoreline variance, when located, constructed, and maintained in a manner that minimizes adverse impacts on shoreline ecological functions, and when otherwise in compliance with this SMP:

- a. Uses and activities authorized to locate in shoreline buffers in SMP Chapter 5: Specific Shoreline Use Policies and Regulations, SMP Chapter 6: Shoreline Modification Policies and Regulations, and LCC 17.38.130.*
- b. Accessory Uses. Uses and development accessory to water-dependent uses shall be located outside the shoreline buffer unless at least one of the following criteria is met:*
 - 1) A location in the shoreline buffer is necessary for operation of the primary water-dependent use or development, such as a road to a boat launch facility; or*
 - 2) The accessory use is on legally established public lands and is primarily related to access, enjoyment, and use of the water; and the use does not conflict with or limit opportunities for other water-oriented uses.*
- c. Essential Public Facilities. Essential public facilities, as defined by RCW 36.70A.200, may be located and expanded in the shoreline buffer if the use cannot be reasonably accommodated or accomplished outside of the standard or reduced shoreline buffer.*
 - 1) Essential public facilities must demonstrate that alternative sites are not available.*
 - 2) These uses must be designed and located to minimize intrusion into the shoreline buffer and shall be consistent with the mitigation sequence in SMP Section 4.03 and applicable critical area regulations.*
- d. Water-oriented education, scientific research, and passive recreational uses. These uses may include, but are not limited to fishing, bird watching, hiking, hunting, boating, horseback riding, skiing, swimming, canoeing, and bicycling. Such uses are allowed within shoreline buffers provided the use does not include construction. Wildlife viewing structures and permeable trails or raised boardwalks may be allowed on a limited basis within riparian and wetland buffers in accordance with the mitigation sequence in SMP Section 4.03 and applicable critical area regulations.*
- e. Site investigative work necessary for land use application submittals such as surveys, soil logs, drainage tests, and other related work, including monitoring of restoration or mitigation sites. In every case, shoreline buffer impacts should be avoided or minimized and disturbed areas shall be immediately restored.*

2. Critical Areas Buffers

The uses and activities allowed within critical areas buffers in LCC Chapter 17.38.130 as modified in 4.04.02(A)(5)(h), and riparian buffers for waters that are not Shorelines of the State per LCC 17.38.470, may be allowed without a shoreline variance, when located,

constructed, and maintained in a manner that minimizes adverse impacts on shoreline ecological functions, and in compliance with the SMP.

E. Vegetation Conservation Standards

- 1. Shoreline buffers protect the ecological functions of the shoreline, help to reduce the impacts of land uses on the water body or aquatic resource, and provide a transition between aquatic and upland areas.*
- 2. Authorized uses shall be designed to avoid removing existing native vegetation to the maximum extent feasible within shoreline and critical areas buffers consistent with safe construction practices, and other provisions of this section. Any impacts to existing native vegetation must follow the mitigation sequence in SMP Section 4.03 above and comply with any applicable critical area regulations, as modified in SMP Section 4.04.02(A) above.*
- 3. Removal of vegetation within shoreline and critical areas buffers shall require a critical area report and/or a mitigation plan in coordination with the requirements of the applicable critical areas regulations. The Shoreline Administrator may require a critical area report for CAO-exempt activities if necessary to document compliance with the provisions in the SMP.*
- 4. Removal of native vegetation from shoreline buffers must be compensated at a minimum 1:1 ratio, which the Shoreline Administrator may increase if necessary to assure no net loss of shoreline ecological functions. Increases may be necessary to compensate for temporal losses, uncertainty of performance, and differences in ecological functions and values.*
- 5. Mitigation ratios shall be based on a scientifically valid measure of habitat function, value, and area. Critical area reports shall include a description of how the proposal complies with the mitigation sequence in SMP Section 4.03 and how mitigation areas will be monitored and maintained to ensure no net loss of shoreline ecological functions.*
- 6. Vegetation conservation standards shall not apply retroactively to existing, legally established uses and developments. Existing, lawfully established landscaping and gardens within shoreline buffers may be maintained in their existing condition. In the context of this regulation, maintenance includes, but is not limited to, mowing lawns, weeding, removal of noxious and invasive species, harvesting and replanting of garden crops, pruning, and replacement planting of ornamental vegetation or indigenous native species to maintain the condition and appearance of such areas.*
- 7. Clearing of invasive, noxious non-native vegetation in shoreline buffers is allowed by hand labor or with light equipment. Removal of noxious weeds as listed by the State in Chapter 16-750 WAC is allowed in a manner consistent with State Noxious Weed Control Board regulations. Native vegetation shall be promptly reestablished in the disturbed area.*
- 8. In shoreline buffers, pruning shall comply with the National Arborist Association pruning standards, unless the tree is a hazard tree as defined in LCC 17.10.080. Trees that are felled in shoreline buffers should be left in place.*

9. *In those instances where the management of vegetation required by this Section conflicts with provisions in State, Federal or other flood hazard agency documents that govern licensed or certified flood hazard reduction measures, the requirements of the SMP will not apply. The applicant shall submit documentation of conflicting provisions with a shoreline permit application and shall comply with all other provisions of the SMP that are not strictly prohibited by certifying or licensing agencies.*

F. Revegetation

1. *Surfaces that are cleared of vegetation in shoreline or critical area buffers, aside from normal maintenance described in SMP Section 4.04.02(E)(6), and are not developed must be replanted within one year. Replanted areas shall be planted and maintained such that within three years the vegetation cover is at least 90% reestablished.*
2. *Vegetation shall be planted in similar quantities and species to what existed previously on the site to achieve no net loss of ecological function. Disturbed ornamental landscapes, including grass, may be replaced with similar species, unless mitigation is necessary to address project impacts.*
3. *Native plants are preferred for all revegetation. Non-native species on the County's list of invasive species shall not be allowed.*

G. Aquatic Vegetation Control

1. *Aquatic vegetation control shall only occur when native plant communities and associated habitats are threatened or where an existing water-dependent use is restricted by the presence of weeds. Aquatic vegetation control shall occur in compliance with all other applicable laws and standards, including WDFW requirements such as the Aquatic Plants and Fish Pamphlet, which serves as the Hydraulic Project Approval (HPA) for some types of aquatic weed or plant control and removal.*
2. *The application of herbicides or pesticides in lakes, canals, wetlands, or ditches requires a permit from Ecology and may require preparation of a SEPA checklist for review by other agencies. The applicator must have a pesticide applicator license from the Washington State Department of Agriculture.*

The project is in compliance with all applicable sections of LCC Chapters 15.35 – Flood Damage Regulations and 17.38 – Critical Areas. Section 3 of this report addresses avoidance and minimization of impacts and onsite restoration. The project will not result in a net loss of shoreline ecological functions. The proposed project will temporarily impact approximately 35,713 SF of vegetation within shoreline jurisdiction and permanently impact approximately 2,970 SF of vegetation within shoreline jurisdiction. Approximately 6,342 SF of low functioning riparian area (e.g., grass) will be enhanced with native trees and shrubs, and 12 pieces of large wood material will be installed to improve stream habitat conditions.

4.2.4. [SMP 4.05] Flood Hazard Management

This section applies to actions taken to reduce flood hazards in shoreline jurisdiction as well as uses, development, and shoreline modifications that may increase flood hazards. Measures to reduce flood hazards may consist of:

- *Nonstructural measures, such as shoreline buffers, land use controls, wetland restoration, dike removal, use relocation, biotechnical measures, and stormwater management programs; and*
- *Structural measures, such as dikes, levees, revetments, floodwalls, dams, channel realignment, and elevation of structures consistent with the National Flood Insurance Program.*

The County currently implements flood hazard management through:

- *The Lewis County Comprehensive Plan;*
- *The Lewis County CAO;*
- *The latest edition of the Stormwater Management Manual as prepared by Ecology;*
- *The Lewis County Comprehensive Flood Hazard Management Plan;*
- *The Lewis County Multi-Jurisdictional Hazard Mitigation Plan;*
- *Chehalis River Basin Comprehensive Flood Hazard Management Plan;*
- *Watershed Management Plans; and*
- *CMZ studies including the Geomorphic Evaluation and Channel Migration Zone Analysis Addendum Cowlitz River, near Packwood and Randle, Lewis County, Washington.*

Standards for shoreline stabilization measures are addressed in SMP Chapter 6: Shoreline Modification Policies and Regulations.

Policies

- Assure flood hazard protection measures do not result in a net loss of shoreline ecological functions.*
- Facilitate returning river and stream conditions to more natural hydrological conditions where feasible and appropriate.*
- Achieve flood hazard management through a coordinated and integrated approach of plans, regulations, and programs.*
- Prefer nonstructural flood hazard management measures to structural measures where feasible. New structural flood hazard reduction measures should only be allowed when demonstrated to be necessary, nonstructural methods are insufficient, and mitigation is accomplished.*
- Limit development and shoreline modifications that interfere with the natural process of channel migration within the CMZ.*

Regulations

- All proposed flood hazard management measures shall comply with the County's Comprehensive Flood Hazard Management Plan.*
- Development in floodplains shall not increase flood hazards.*

- C. *No development is allowed within the SMP flood course or floodway in shoreline jurisdiction, unless a hydraulics and hydrology study shows that it is:*
1. *Not in a SMP flood course or floodway; or*
 2. *Will not impact the pre-project base flood elevations, floodway elevations, or floodway data widths.*
- D. *Within the CMZ, SMP flood course or floodway, new development or uses, including subdivision of land, shall not be established when it would be reasonably foreseeable that the development or use would require new structural flood hazard reduction measures.*
- E. *New development within floodways, the SMP flood course, and the CMZ shall not interfere with the process of channel migration or cause a net loss of ecological functions. If existing CMZ studies are not available for an area of known channel migration, a site analysis may be required to ensure that development does not interfere with the process of channel migration. Areas of known channel migration are shown in the SMP Map Folio Figure 28 in the Shoreline Inventory and Characterization.*
- F. *Development in the CMZ, SMP flood course, and floodways, is limited to:*
1. *Actions that protect or restore ecosystem-wide processes or ecological functions;*
 2. *Forest practices in compliance with the FPA;*
 3. *Existing and ongoing agricultural practices, provided no new restrictions to channel movement occur;*
 4. *Mining uses conducted consistent with the shoreline environment designation and the provisions of WAC 173-26-241(3)(h);*
 5. *Bridges, utility lines, and other public utility and transportation structures where no other feasible alternative exists or the alternative would result in an unreasonable and disproportionate cost;*
 6. *Repair and maintenance of an existing legal use, provided that the repair and maintenance does not cause significant ecological impacts or increase flood hazards to other uses;*
 7. *Modifications or additions to an existing nonagricultural legal use, provided that channel migration is not further limited and that the new development includes appropriate protection of ecological functions;*
 8. *Development in UGAs, as defined in Chapter 36.70A RCW, where existing structures prevent active channel movement and flooding; or*
 9. *Measures to reduce shoreline erosion, if it is demonstrated that the erosion rate exceeds that which would normally occur in a natural condition, the measure does not interfere with fluvial hydrological and geomorphological processes normally acting in natural conditions, and the measure includes appropriate mitigation of impacts to ecological functions associated with the river or stream.*

- G. *New structural flood hazard management measures may be permitted if consistent with applicable provisions in SMP Chapter 6: Shoreline Modification Policies & Regulations.*
- H. *New publicly-funded structural flood hazard management measures, including dikes and levees, shall dedicate and improve public access except in those instances as listed in SMP Section 4.06.02(B).*
- I. *Removal of gravel for flood management purposes shall be permitted only after a biological and geomorphological study demonstrates that the extraction:*
 - 1. *Provides a long-term benefit to flood hazard management;*
 - 2. *Does not result in a net loss of ecological functions; and*
 - 3. *It is part of a comprehensive flood management solution.*

The project is located within the 100-year floodplain of Lucas Creek. The existing bridge structure provides approximately three to four feet of clearance above the 500-year flood elevation of 359.1 feet. Streambed grading will result in no-net rise in the stream elevation, and there will be no loss of stream habitat below the OHWM. The proposed project will result in no net loss of shoreline ecological functions as detailed in Section 3 of this report. A floodplain development permit will be acquired prior to construction.

4.2.5. [SMP 4.06] Public Access

This section applies to shoreline public access. As provided in WAC 173-26-221(4), public access to the Shorelines of the State is the ability of the public "...to reach, touch, and enjoy the water's edge, to travel on the waters of the State, and to view the water and the shoreline from adjacent locations." Allowing for appropriate public access to Shorelines of the State is a key component of the SMA.

Policies

- A. *Protect and enhance the public's visual and physical access to Shorelines of the State to the greatest extent feasible.*
- B. *Increase the amount and diversity of public access opportunities to shorelines where appropriate and consistent with adopted parks and recreation plans, the natural shoreline character, private property rights, public safety, and public rights under the Public Trust Doctrine.*
- C. *Design public access to minimize potential impacts to private property.*
- D. *Ensure public access opportunities do not include the right to enter or cross private property, except where dedicated public rights-of-way or easements are established or where a development is specifically designed to accommodate public access.*
- E. *Maintain, enhance, and increase public access in accordance with the following priorities unless found infeasible:*
 - 1. *Maintain existing public access sites and facilities, rights-of-way, and easements.*
 - 2. *Enhance public access opportunities on existing public lands and easements.*

3. *Acquire property or easements to add opportunities for public access to shorelines. Tailor acquisitions to implement adopted plans or to protect areas that hold unique value for public enjoyment.*
 4. *Encourage public access to shorelines as part of shoreline development.*
- F. *Ensure shoreline development plans by public entities, including the County, port districts, State agencies, and public utility districts, include public access measures unless it is unsafe, unsecure, or negatively affects the shoreline environment.*
- G. *Ensure that development minimizes interference with the public's visual access to the water through standards for design, construction, and operation. Provisions such as maximum shoreline height limits, shoreline buffers, and building setbacks should each be considered to preserve and/or enhance views from private or public property.*

Regulations

- A. *Shoreline public access shall be required for the following shoreline developments and uses:*
1. *Shoreline recreation in accordance with SMP Section 5.13;*
 2. *New structural public flood hazard reduction measures, such as dikes and levees;*
 3. *Shoreline development by public entities, including the County, port districts, State agencies, and public utility districts;*
 4. *New marinas when water-enjoyment uses are associated with the marina; and*
 5. *All other development and use types that are required to incorporate shoreline public access as identified in the SMP, or other State or Federal requirements.*
- B. *Shoreline public access is not required when any of the following conditions are present:*
1. *The subdivision of land into four or fewer parcels;*
 2. *A development consisting of a building containing four or fewer dwelling units;*
 3. *Unavoidable health or safety hazards to the public exist that cannot be prevented by any feasible means;*
 4. *Inherent security requirements of the use cannot be satisfied through the application of alternative design features or other solutions;*
 5. *Significant environmental impacts will result from the public access that cannot be mitigated;*
 6. *Significant undue and unavoidable conflict between any access provisions and the proposed or adjacent uses would occur and cannot be mitigated;*
 7. *The cost of providing the access, easement, or amenity is unreasonably disproportionate to the total long-term cost of the proposed development;*
 8. *Legal limitations preclude public access;*

9. *The subject site is separated from the shoreline waterbody by intervening public or private improvements such as roads, railroads, existing structures, and/or other similar improvements, and public access is not desirable or feasible; or*
 10. *Adequate public access already exists along the subject shoreline and there are no gaps or enhancements that need to be addressed;*
- C. *In addressing SMP Section 4.06.02(B) above, the applicant must demonstrate that all feasible alternatives to allow public access have been exhausted, including:*
1. *Regulating access by such means as limiting hours of use to daylight hours;*
 2. *Separating uses by such means as fences, terracing, landscaping, signage, etc.;*
 3. *Providing access that is physically separated from the proposal, such as a nearby street end, an offsite viewpoint, or a trail system; or*
 4. *Where physical access is not feasible, visual access shall be provided instead.*
- D. *A determination that no physical or visual public access is feasible must be supported by the Shoreline Administrator within the findings in the underlying permit.*
- E. *Public access shall be designed to achieve no net loss of ecological functions. Where impacts are identified, mitigation shall be required.*
- F. *Physical public access shall be designed to connect to existing public rights-of-way or existing or future public access points on adjacent or abutting properties. Appropriate design and safety standards should be utilized in the design of the access.*
- G. *Public access facilities shall be compatible with adjacent private properties using vegetative buffering or other techniques to define the separation between public and private space.*
- H. *Where there is an irreconcilable conflict between water-dependent shoreline uses, physical public access, and maintenance of views from adjacent properties, water dependent uses and physical public access shall have priority, unless there is a compelling reason to the contrary.*
- I. *Public access easements or tracts and relevant permit conditions shall be recorded as a separate document or on the face of a plat or short plat. Recording with the Lewis County Auditor shall occur prior to or at the time of permit approval.*
- J. *The applicant shall construct, install, and maintain approved signs that indicate the public's right to access the shoreline and the hours of operation for the shoreline access. These signs shall be placed in conspicuous locations at public access sites. Where public access is prohibited, property owners may install signs subject to size and location restrictions found in SMP Section 5.15 that indicate that no public access is permitted.*
- K. *Required public access sites must be fully developed and available for public use at the time of occupancy or use of the development.*
- L. *The County may not vacate any road, street, or alley abutting a body of water except as provided under RCW 35.79.035.*

The project area does not include public access to the shoreline. The project is located in County-owned transportation right-of-way. No public access opportunities will be impacted by the proposed project. Visibility of Lucas Creek will not be impacted by the project.

4.2.6. [SMP 4.07] Water Quality

This section articulates policies and regulations to prevent impacts to the quality of ground and surface waters and stormwater impacts that could affect aesthetic qualities, recreational opportunities or result in a net loss of ecological functions.

Policies

- A. *Use existing regulations to protect surface water quality and quantity within Lewis County.*

Regulations

- A. *All development in shoreline jurisdiction shall comply with the appropriate requirements of the SMP and the latest edition of the Stormwater Management Manual as prepared by Ecology.*
- B. *Septic systems should be located as far landward of the OHWM and flood course as feasible. Where the systems cannot be located outside of a shoreline or critical area buffer, the system may be sited in accordance with the requirements in 4.04.02(D).*
- C. *Uses in Critical Aquifer Recharge Areas shall meet the applicable requirements in LCC 17.35 or 17.35A.*
- D. *Potentially harmful materials, including but not limited to oil, chemicals, tires, or hazardous materials, shall not be allowed to enter any body of water or wetland, or be discharged onto the land in shoreline jurisdiction. Potentially harmful materials should be stored outside of shoreline jurisdiction if feasible, and shall be maintained in safe and leak-proof containers.*
- E. *Herbicides, fungicides, fertilizers, and pesticides shall not be applied within 25 feet of a water body, except by a qualified professional in accordance with State and Federal laws. Further, pesticides subject to the final ruling in Washington Toxics Coalition, et al., v. EPA shall not be applied within 60 feet for ground applications or within 300 feet for aerial applications of the subject water bodies and shall be applied by a qualified professional in accordance with State and Federal law.*

Appropriate TESC measures and BMPs will be implemented prior to the start of excavation to protect water quality in the project area. Work to be completed below the OHWM of Lucas Creek will be isolated via a stream bypass system. The project has been designed to meet the latest Washington Department of Ecology stormwater manual. The proposed project will result in no net loss of shoreline ecological functions.

4.3. Specific Shoreline Use Policies and Regulations

4.3.1. [SMP 5.02] General Shoreline Use

These policies and regulations apply to all developments and uses within shoreline jurisdiction, whether or not shoreline permits, or written letters of exemption are required.

Policies

- A. Shorelines are a limited ecological and economic resource. Apply the following priorities in the order presented below when determining allowable uses or resolving use conflicts in shoreline jurisdiction:*
 - 1. Reserve appropriate areas for protecting and restoring ecological functions to control pollution and prevent damage to the natural environment and public health;*
 - 2. Reserve shoreline areas for water-dependent and associated water-related uses. Mixed-use developments that include water-dependent uses may be allowed when specific conditions are met;*
 - 3. Reserve shoreline areas for other water-related and water-enjoyment uses that are compatible with ecological protection and restoration objectives;*
 - 4. Locate single-family residential uses where they are appropriate and can be developed without significant impact to ecological functions or displacement of water-dependent uses; and*
 - 5. Limit non-water-oriented uses to those locations where the uses described above are inappropriate or where non-water-oriented uses demonstrably contribute to the objectives of the SMA.*
- B. Where feasible, locate non-water dependent accessory structures or uses (such as parking, service buildings or areas, access roads, utilities, signs and storage) landward of required shoreline buffers, water-oriented developments and other approved uses.*
- C. Locate, design, and manage uses and development to minimize impacts through bulk and dimensional regulations, shoreline buffers, and other measures to:*
 - 1. Ensure that the development will not result in a net loss of shoreline ecological functions; and*
 - 2. Support the long-term beneficial use of the shoreline, and protect and maintain shoreline ecological functions and processes.*
- D. Develop regulations for shoreline buffers consistent with protecting existing ecological functions, accommodating water-oriented and preferred uses, recognizing existing development patterns, and minimizing the creation of non-conforming uses and developments.*
- E. Do not permit uses where they would result in a net loss of shoreline ecological functions, adversely affect the quality or extent of habitat for native species, adversely affect other habitat conservation areas, or interfere with navigation or other water dependent uses.*

- F. *Avoid adverse impacts to the shoreline or, if that is not feasible, minimize to the extent feasible and mitigate unavoidable impacts.*

Regulations

- A. *Use and development standards shall not apply retroactively to existing, legally established structures, or uses and developments in place at the time of the adoption of the SMP update. Existing structures, uses and developments, including residential appurtenances, may be maintained, repaired, and operated within shoreline jurisdiction and the shoreline buffers established in the SMP.*
- B. *Development shall comply with the most restrictive bulk and dimensional requirements in LCC Title 17 or SMP Section 5.04.*
- C. *Accessory uses, such as parking, stormwater management facilities, and utilities shall be located outside of shoreline and critical area buffers, and associated building setbacks, unless authorized in SMP Section 4.04.02(D) .*
- D. *Shoreline uses and developments shall be designed to complement the setting of the property and minimize glare. Shoreline applicants shall demonstrate efforts to minimize potential impacts to the extent feasible.*

The proposed bridge scour repair project is located within the Senn Road right-of-way and will not result in any change of use. The project is classified as a transportation facility and does not include any shoreline buffer. Unavoidable temporary impacts to vegetation within shoreline jurisdiction will be restored on-site. See Section 3 of this report for a discussion of existing shoreline ecological functions, project impacts, mitigation sequencing, and a functional lift analysis that shows the project will not result in a net loss of shoreline ecological functions. Construction staging will occur in an existing pasture that will be reseeded after construction. The proposed project avoids and minimizes impacts to vegetation within shoreline jurisdiction to the maximum extent feasible.

4.3.2. [SMP 5.03] Allowed Shoreline Uses

- A. *Table 5-1: Permitted, Conditional, and Prohibited Uses establishes the uses and development allowed or prohibited in each shoreline environment designation. Uses and developments allowed in the table must, in all cases, be consistent with other applicable provisions of the SMP in order to be authorized. Where there is a conflict between the table and the written provisions in the SMP, the written provisions shall apply.*
- B. *Authorized uses and development are subject to the policies and regulations of the SMP and are only allowed in shoreline jurisdiction where allowed by the underlying zoning.*
- C. *Uses and development identified as “Permitted” require either a shoreline substantial development permit in accordance with SMP Section 7.04.01 or an exemption from the requirement to obtain such a permit in accordance with SMP Section 7.04.04. If any part of a proposed development is not eligible for an exemption, then a shoreline substantial development permit is required for the entire proposed development.*
- D. *Uses identified as “Conditional” require a shoreline conditional use permit pursuant SMP Section 7.04.02. Any use not listed in SMP Table 5-1: Permitted, Conditional, and Prohibited Uses shall require a shoreline conditional use permit.*

- E. Uses identified as “Prohibited” are not allowed in shoreline jurisdiction.*
- F. Accessory or appurtenant structures and development shall be subject to the same SMP provisions as the primary use. The structures and development shall not be constructed prior to the establishment of the primary use, except when the accessory or appurtenant development is related to the installation of utilities and septic systems for the primary use.*

Table 5-1: Permitted, Conditional, and Prohibited Uses

Shoreline Uses (1)	High Intensity	Shoreline Residential	Rural/Urban Conservancy	Natural	Aquatic (2)
Key: P = Permitted Use, C = Conditional Use, X = Prohibited					
Agriculture (New agricultural activities only) (3)(4)	P	P	P	C	X
Aquaculture	C	C	C	X	C
Boating and Water Access Facilities					
Boat Ramps and Launches	P	P	P	X	See adjacent upland shoreline environment designation
Boat Launching Rails	P	P	P	X	
Boat Lifts and Canopies	P	P	P	X	
Moorage Covers (Open Sides, Structural Roof)	C	C	C	X	
Mooring Buoys	P	P	P	X	
Private Single / Joint-Use Docks and Piers	P	P	P	X	
Public Piers / Docks / Marinas	P	P	P	X	
Recreational Floats	P	P	P	X	
Commercial Development (5)	P	C	C	X	(6)
Forest Practices	P	P	P	C	X
Industrial Development (7)	P	X	C (8)	X	(6)
Mining	P	X	C	X	X
Parking (9)	P	P	P	X	X
Recreational Development (10)					
Water-oriented	P	P	P	C (11)	P (12)
Non-water-oriented	P	P	P	X	X
Trails	P	P	P	C	X
Residential Development (13)	P	P	P	C	X
Signs	P	P	P	X	X
Transportation Facilities					
Bridges for motorized and non-motorized uses	P	P	P	C	C
Expansion of roads within existing right-of-way	P	P	P	P	X
New roads for permitted shoreline uses	P	P	P	C	X
Expansion of roads outside of a right-of-way or movement of existing roads	C	C	C	C	X

Shoreline Uses (1)	High Intensity	Shoreline Residential	Rural/Urban Conservancy	Natural	Aquatic (2)
Utilities					
Production and processing facilities	P	X	C	X	X
Transmission facilities within an existing right-of-way	P	P	P	C	C
Transmission facilities outside an existing right-of-way	P	P	C	C	C
Accessory utilities	Reviewed as part of primary use				
Other	C	C	C	C	C

Notes:

1. Any use that would substantially degrade ecological functions in shoreline jurisdiction should not be allowed. In addition, development shall be subject to the underlying zoning.
2. Where a use would be located both upland and overwater, the more restrictive standards apply.
3. Includes agricultural commercial uses such as roadside stands, on-farm markets, pumpkin patches, and Christmas tree farms. New agricultural activities in the Natural shoreline environment designation are limited to very low intensity uses.
4. Upland finfish facilities in shoreline jurisdiction require a shoreline conditional use permit.
5. New non-water-oriented commercial development is only permitted when the use is allowed in the shoreline designation and the activity meets the criteria in SMP Section 5.08.02(B).
6. Water dependent development is allowed in the Aquatic shoreline environment when the use is authorized in the adjacent upland shoreline designation.
7. New non-water-oriented industrial development is only permitted when the use is allowed in the shoreline designation and the activity meets the criteria in SMP Section 5.10.02(B).
8. Industrial uses in the Rural Conservancy shoreline environment designation are limited to low intensity, water-oriented uses where those uses have located in the past or at unique sites in rural communities that possess shoreline conditions and services to support the use.
9. Parking may be allowed as an accessory use to an approved use. Off-street parking lots or parking structures are prohibited as a primary use in all shoreline environment designations.

10. *Concession stands, gift shops, and interpretive centers are permitted as accessory uses when limited to the minimize size necessary for the use and serving a related, permitted recreational use in the High Intensity, Shoreline Residential or Rural/Urban Conservancy shoreline environment designations.*
11. *Water-oriented recreational development and uses in the Natural shoreline environment designation are limited to low intensity uses.*
12. *Only water-dependent uses are permitted in the Aquatic shoreline environment designation.*
13. *Home-based businesses, as established by LCC 17.142.110. Home-based businesses are incidental and accessory to a residential use. Use the 'Residential' use category to determine whether they are allowed in a particular shoreline environment designation.*

The proposed bridge scour repair project is located in designated Rural Conservancy shoreline environment. Bridges for motorized use are a permittable shoreline use for transportation facilities.

4.3.3. [SMP 5.04] Development Standards

Density and Lot Coverage

- A. *Density and maximum lot coverage of residential uses allowed in the shoreline jurisdiction shall be in accordance with the underlying zoning requirements of the LCC.*

Shoreline Height

- A. *To limit the obstruction of views from public property or residences, the SMP Table 5-2: Shoreline Height Regulations sets the maximum height for new or expanded buildings or structures above average grade level in shoreline jurisdiction.*
- B. *The following structures are exempt from the shoreline height standard requirements: dams, shipping cranes or other freight moving equipment, power or light poles, bridges, chimneys, tanks, towers, cupolas, steeples, flagpoles, smokestacks, silos, elevators, fire or parapet walls, open railings, and/or similar necessary building appurtenances. These structures may exceed the shoreline height limit provided all other requirements of the County are met and no usable floor space above the shoreline height limit is added.*

Table 5-2: Shoreline Height Regulations

Height Standard	High Intensity	Shoreline Residential	Rural/Urban Conservancy	Natural	Aquatic
Maximum Shoreline Height	50 feet (1)	35 feet (2)	35 feet (2)	35 feet	20 feet

Notes:

1. *The maximum height may be up to that allowed by the Lewis County Code. Provided that when a structure is proposed to exceed 35 feet, a view corridor review per 5.04.02(C) is required.*
2. *Height may be increased to the maximum height limit specified in LCC 17.145.030 or otherwise designated in LCC Title 17 subject to approval of a view corridor analysis under SMP Section 5.04.02(C) and demonstration that the proposal meets the shoreline variance criteria in Section 7.04.03.*

C. View Corridor Review Process

1. *Applicants for new or expanded buildings or structures exceeding 35 feet in height above average grade level shall address impacts to views from substantial numbers of residences and public areas as follows:*
 - a. *Site design shall provide for view corridors between buildings using building separation, building setbacks, upper story setbacks, pitched roofs, and other mitigation.*
 - b. *To determine appropriate view corridor location, the Shoreline Administrator shall review shoreline public access plans, location of State- or Federal designated scenic highways, government-prepared view studies, SEPA documents, or applicant-prepared studies.*
 - c. *The maximum width of a view corridor shall not exceed 25% of the lot width.*
2. *The following view analysis standards and procedures apply to the view corridor review process:*
 - a. *The applicant shall prepare a view analysis conducted consistent with the application requirements in SMP Section 7.02.03. The view analysis shall address:*
 - 1) *The cumulative view obstruction created by the proposed development combined with other developments that exceed 35 feet in height within a 1,000-foot radius of the proposed development;*
 - 2) *Available view corridors; and*

- 3) *Surface water views lost, compromised, or retained.*
- b. *For phased developments, the view analysis shall be prepared in the first phase and include all proposed buildings.*
- c. *Applicants proposing building or structure heights above 35 feet in the High Intensity shoreline environment designation that are consistent with the SMP and underlying zoning allowances, may be approved if the following criteria are met:*
 - 1) *The building or structure will not affect a substantial number of residences. The applicant shall review residences in the area adjoining the project area.*
 - 2) *The development will not cause an obstruction of view from public properties or substantial number of residences. The applicant shall demonstrate through photographs, videos, photo-based simulations, or computer-generated simulations that the proposed development will obstruct less than 30% of the view of the shoreline enjoyed by a substantial number of residences on areas adjoining such shorelines.*

The scour repair project will be located beneath the bridge at Senn MP 0.89. The project will be well below the allowed maximum shoreline height of 35 feet for Rural Conservancy Shoreline Environment Designations. The project will not obstruct any views or view corridors.

4.3.4. [SMP 5.05] Agriculture

For purposes of the SMP, refer to the definitions of agricultural activities, agricultural products, agricultural equipment and facilities and agricultural land found in WAC 173-26-020(3).

Policies

- A. *Permit all agricultural activities existing as of the effective date of the updated SMP to continue.*
- B. *Locate and design new agricultural activities on land not currently used for agricultural activity to assure no net loss of ecological functions and not to have a significant adverse impact on other resources and values in shoreline jurisdiction.*
- C. *Implement best management practices (BMPs) to protect the shoreline and aquatic environments from bank failure, erosion, siltation, and surface runoff, consistent with critical area regulations.*
- D. *Maintain vegetative cover in areas subject to frequent flooding.*
- E. *Prohibit the storage of toxic or hazardous chemicals used for agricultural practices in shoreline areas subject to flooding.*
- F. *Permit upland finfish facilities in the shoreline jurisdiction as a shoreline conditional use to allow the County and Ecology to review proposals on a case-by-case basis using the most current and best information.*

Regulations

A. Applicability

The SMA permits specific agricultural activities to be excepted from regulation under the SMP. Other agricultural practices qualify for a more limited exemption from the requirement to obtain a shoreline substantial development permit.

1. **Notes: Excepted Activities.** *If an activity qualifies as agricultural activity on agricultural land, as defined in RCW 90.58.065, and the activity existed as of the date of adoption of the SMP, then the provisions of this SMP do not apply and a shoreline permit is not required for that activity. In all other cases not specifically excepted under the SMA, all substantive SMP provisions apply.*
2. **Date of Existing Agricultural Activity.** *This is the date of adoption of the first Lewis County Shoreline Master Program prepared under the guidelines in effect under Chapter 173-26 WAC and includes all amendments incorporated through required periodic review. See WAC 173-26-120, State process for approving/amending shoreline master programs and WAC 173-26-171, Authority, purpose, and effects of guidelines.*
3. **Permit-Exempt Activities.** *If an activity does not qualify as excepted as described in SMP Section 5.05.02(A)(1) above, it may still qualify for an exemption from the requirement to obtain a shoreline Substantial Development Permit under RCW 90.58.030(3)(e) and WAC 173-27-040(2). Pursuant to WAC 173-27-040(1), such exemptions are to be construed narrowly, and an exemption from the substantial development permit process is not an exemption from compliance with the SMP.*
4. *A shoreline substantial development permit is required for all agricultural development not specifically exempted by the provisions of RCW 90.58.030(3)(e)(iv).*

B. Development Standards for New Agriculture Activities

1. *Agricultural uses and development shall be consistent with the shoreline environment designation in which it is proposed, ensure no net loss of ecological function, and not have a significant adverse impact on other shoreline resources and values.*
2. *Agricultural practices must prevent and control erosion of soils and bank materials within shoreline areas.*
3. *Pesticides and herbicides must be handled, applied, and disposed of in accordance with provisions of the Washington Pesticide Application Act (Chapter 17.21 RCW) and the Washington Pesticide Control Act (Chapter 15.58 RCW).*
4. *Feedlot operations and animal waste retention and storage areas must not be located within shoreline jurisdiction unless direct manure runoff is prevented.*
5. *The application of biosolids and the bulk disposal of inorganic farm wastes, chemicals, fertilizers, and associated containers and equipment within shoreline jurisdiction is prohibited.*
6. *The storage of toxic or hazardous chemicals used for agricultural practices is prohibited in shoreline areas subject to flooding.*

7. *Agricultural-commercial uses are allowed where indicated in SMP Table 5-1: Permitted, Conditional, and Prohibited Uses.*
8. *Conversion of agricultural land to non-agricultural uses shall be consistent with the shoreline environment designation in which it is proposed. Conversions shall be subject to the general regulations and those use-specific regulations applicable to the proposed use, and shall not result in a net loss of shoreline ecological functions.*
9. *Upland finfish facilities require a shoreline conditional use permit. The review of the application by the Shoreline Administrator will include consideration of the following:*
 - a. *Specific site conditions;*
 - b. *Current and locally applicable science;*
 - c. *Potential use conflicts;*
 - d. *Cumulative impacts; and*
 - e. *Potential mitigation and monitoring requirements.*

The project will not create any new agricultural land uses within shoreline jurisdiction.

4.3.5. [SMP 5.06] Aquaculture

Aquaculture is the culture or farming of fish, shellfish, or other aquatic plants and animals, excluding upland finfish facilities, which are regulated in SMP Section 5.05. Aquaculture is a preferred use in the shoreline jurisdiction. Locations for aquaculture are relatively restricted due to requirements for water quality, temperature, flows, oxygen content, and adjacent land uses.

Review as part of this SMP is required for new aquaculture facilities or farms, as well as projects that seek to expand an aquaculture use beyond the area for which a previous permit was issued. Ongoing maintenance, harvest, replanting, or changing of culture techniques or species do not require review under the SMP, unless the cultivation of the new species or the use of a new culture technique has the potential for significant adverse environmental impacts.

Policies

- A. *Design, locate, and operate aquaculture uses in a manner that supports the long-term beneficial use of the shoreline and protects and maintains shoreline ecological functions and processes.*
- B. *Do not allow aquaculture in locations that would result in a net loss of shoreline ecological functions, adversely affect the quality or extent of habitat for native species, or interfere with navigation or other water-dependent uses.*
- C. *Minimize the potential of cumulative adverse impacts from aquaculture on water quality, sediment quality, benthic and pelagic organisms, wild fish populations, or other Federal Endangered Species Act (ESA) listed species because of antibiotic resistant bacteria, escapement of non-native species, and/or other factors.*
- D. *Give latitude when implementing regulations for this use, because the technology associated with some forms of aquaculture is in formative stages.*

- E. Minimize potential aesthetic impacts associated with aquaculture uses through the consideration of view impacts on surrounding properties and public access points.*
- F. Protect legally established aquaculture enterprises from incompatible uses that may seek to locate nearby and uses or developments that have a high probability of damaging or destroying the aquaculture operations.*
- G. Recognize limited availability of suitable locations for aquaculture uses because of specific requirements related to water quality, temperature, oxygen content, currents, adjacent land use, wind protection and navigation.*

Regulations

A. Location

- 1. Water-dependent portions of aquaculture facilities and their necessary accessories may be located waterward of the OHWM in the Aquatic shoreline environment as well as in the shoreline buffer. Water intakes and discharge structures, water and power conveyances, and fish collection and discharge structures are considered water-dependent or accessory to water-dependent facilities.*
- 2. All other elements of aquaculture facilities shall be located outside the shoreline buffer, unless those facilities are deemed water-related and proximity to the water dependent project elements is critical to implementation of the facility's purpose.*
- 3. Sites shall be selected to avoid or minimize alteration to the shorelines. Applicants for aquaculture operations shall be required to demonstrate that the location of the proposed facilities avoids and minimizes impacts to on-site critical areas and habitats to the maximum extent feasible, and limits impacts on existing public access points, navigable waters, and other water-dependent uses.*
- 4. Aquaculture facilities shall be designed and located so as not to spread disease to native aquatic life, establish new non-native species that cause significant ecological impacts, or significantly affect the aesthetic qualities of the shoreline.*

B. General Requirements

- 1. Aquaculture that involves substantial aquatic substrate modification or sedimentation through dredging, trenching, digging, or other mechanisms, shall not be permitted in areas where the proposal would have long-term adverse impacts on the strength or viability of native stocks. The degree of proposed substrate modification shall be the minimum necessary for feasible aquaculture operations at the site.*
- 2. New aquaculture proposals shall comply with the mitigation sequence in SMP Section 4.03. Aquaculture uses that would have a significant adverse impact on natural shoreline processes, result in a net loss of shoreline ecological functions, interfere with navigation, or conflict with other water-dependent uses are prohibited.*
- 3. New aquatic species that were not previously found or cultivated in the County shall not be introduced into fresh waters without prior written approval of the WDFW.*

4. *Permanent water-dependent instream facilities must be properly anchored to prevent channel migration, erosion or a safety hazard, and must evaluate and mitigate potential adverse effects on adjacent properties upstream and downstream.*
5. *No processing of aquaculture products, except for the sorting or culling of the cultured organism and the washing or removal of surface materials or organisms after harvest, shall occur in or over the water unless specifically approved by permit.*
 - a. *All other processing facilities shall be located on land. If within shoreline jurisdiction, such facilities shall be subject to the applicable policies and regulations of SMP Sections 5.06.*
6. *Aquaculture structures and equipment shall be of sound construction and shall be so maintained. Abandoned or unsafe structures or equipment shall be removed or repaired promptly by the owner.*
7. *Aquaculture uses shall comply with all applicable noise, air, and water quality standards. All projects shall be designed, operated, and maintained to minimize odor and noise.*
8. *Aquaculture facilities shall not substantially degrade the aesthetic qualities of the shoreline. Aquaculture structures and equipment, except navigation aids, shall be designed, operated, and maintained to blend into their surroundings.*

C. Submittal Requirements

1. *Commercial aquaculture shall conform to all applicable State and Federal regulations. The County may accept application documentation required by other permitting agencies for new and expanded aquaculture uses and development to minimize redundancy in permit application requirements.*
2. *Additional studies or information may be required by the County, which may include but is not limited to monitoring and adaptive management plans and information on the presence of and potential impacts to, including ecological and visual impacts, existing shoreline or water conditions and/or uses, vegetation and overwater structures.*

The project does not include any aquaculture development.

4.3.6. [SMP 5.07] Boating and Water Access Facilities

This section applies to all in-water and overwater structures and uses that facilitate water access or the launching or mooring of vessels, including all public and private docks, piers, marinas, mooring buoys, launch ramps, and recreational floats. Construction of dock structures for the private noncommercial use of the owner, lessee, or contract purchaser of single- and multifamily residences are exempt from the requirement for a shoreline substantial development permit pursuant to RCW 90.58.030(3)(e)(vii) and WAC 173-27-040(h). An HPA from WDFW may still be required.

Policies

- A. *Encourage the construction and operation of boating and water access facilities to allow public access for enjoyment of County shorelines.*

- B. Site, design, construct, and operate boating and water access facilities to incorporate BMPs and ensure no net loss of shoreline ecological functions.*
- C. Balance the encouragement of public access and the protection of ecological functions in the expansion of existing or construction of new boating and water access facilities.*
- D. Minimize the amount of shoreline modification, in-water structures, overwater cover, changes to water circulation and quality, and effects to fish and wildlife habitat from boating and water access facilities. The length, width, and height of overwater structures should be no greater than that required for safety and feasibility for the primary use.*
- E. Ensure that boating and water access facilities do not impact the navigability of the water body or adversely affect other water-dependent uses.*
- F. Plan and coordinate public boating and water access facilities needs regionally. Shorelines particularly suitable for public boat launch facilities are limited and should be identified and reserved on a regional basis.*
- G. Only allow the construction of new docks and piers for public access or water dependent uses.*
- H. Allow recreational floats only where they support public or private recreational uses.*
- I. Minimize impacts to adjacent uses and users, such as aesthetic or noise-related impacts, impacts to public visual access to the shoreline, or offsite impacts caused by public access to the shoreline. If impact avoidance is not feasible, require mitigation.*
- J. Limit the lighting of boating and water access facilities to the minimum extent necessary.*

Regulations

A. Location Standards

- 1. New boating and access facilities shall maintain the rights of navigation on the waters of the State.*
- 2. Boating and other water access facilities shall be sited and designed to ensure no net loss of shoreline ecological functions.*
- 3. Boating and other water access facilities shall meet WDNR requirements and other State guidance if located in or over State-owned aquatic lands.*
- 4. Boating and water access facilities shall be located where:*
 - a. There is adequate water mixing and flushing;*
 - b. Such facilities will not adversely affect flood channel capacity or otherwise create a flood hazard;*
 - c. Water depths are adequate to minimize spoil disposal, the placement of fill, beach enhancement, and other channel maintenance activities; and*
 - d. Water depths are adequate to prevent the facility from grounding out at the lowest low water or the facility includes stoppers to prevent grounding.*

5. *Boating and water access facilities shall not be located:*
 - a. *Along braided or meandering river channels where the channel is subject to change in alignment;*
 - b. *On point bars or other accretion beaches;*
 - c. *Where new dredging or new ongoing maintenance dredging will be required;*
 - d. *In areas with important habitat for aquatic species or where wave action caused by boating use would increase bank erosion rates; or*
 - e. *In areas where it would be incompatible with the need to protect the public health, safety, and welfare.*
6. *Boating and water access facilities shall be designed to ensure that lawfully existing or planned public shoreline access is not blocked, obstructed, or made dangerous.*
7. *Major boating and water access facilities, such as marinas, shall be located only where adequate utility services are available, or can be provided concurrently.*

B. General Design Standards for Boating and Water Access Facilities

1. *All boating and water access facilities shall be designed and operated to avoid or minimize impacts. Unavoidable impacts must be mitigated consistent with the mitigation sequence in SMP Section 4.03 and critical areas in SMP Section 4.04.*
2. *All boating and water access facilities and shoreline modifications to support these uses shall be the minimum size necessary to accommodate the anticipated demand for the facility.*
3. *Boating and water access facilities shall be designed to provide physical and/or visual public access to the shoreline for as many water-oriented recreational uses as feasible, commensurate with the scale of the proposal, including, but not limited to, physical and visual access to waterbodies, public piers, or fishing platforms.*
4. *Project applicants shall comply with all local and State policies and regulations, including all applicable health, safety, and welfare requirements associated with the primary or accessory use. These standards include but are not limited to WDNR and WDFW standards and regulations including Hydraulic Code Rules (Chapter 220-660 WAC).*
5. *All boating or water access facilities shall be constructed and maintained in a safe condition. Abandoned or unsafe boating or water access facilities shall be removed or repaired promptly by the owner.*
6. *Wooden components of boating or water access facilities that will be in contact with water or installed over water shall not be treated or coated with herbicides, fungicides, paint, pentachlorophenol, arsenate, creosote, or similar toxic substances. Boating or water access facilities shall be made out of materials that have been approved by applicable State and Federal agencies.*

7. *Lighting associated with boating or water access facilities shall be shielded to avoid causing glare on adjacent properties or waterbodies. Illumination levels shall be the minimum necessary for safety.*
8. *Boating or water access facilities must be limited to day moorage only. No live aboard vessels or floating homes are allowed.*
9. *Upland boat storage may be allowed within the shoreline jurisdiction provided impervious surface limitations and other standards are met, mitigation sequencing is followed, and impacts can be mitigated to achieve no net loss.*

C. Supplementary Standards for Boat Ramps, Launches, and Rails

1. *New boat ramps and launches shall follow BMPs and the standards in WAC 220-660-150 to avoid impacts to shoreline ecological functions, such as effects to nearshore habitat.*
2. *Boat ramps, launches, and rails may be permitted for marinas, recreational developments, and community facilities serving more than four residential units subject to SMP Table 5-1: Permitted, Conditional, and Prohibited Uses.*
3. *Boat ramps, launches, and rails shall be sited to minimize impacts to aquatic and upland wildlife habitats, native emergent vegetation, fluvial processes, water quality, and navigation. All facilities shall be located and designed using mitigation sequencing.*
4. *Boat ramps, launches, and rails shall be located where water depths are adequate to eliminate or minimize the need for dredging, the placement of fill, beach enhancement, or other maintenance activities.*
5. *The design of boat ramps, launches, and rails shall comply with all regulations stipulated by State and Federal agencies, affected tribes, or other agencies with jurisdiction.*
6. *The applicant shall demonstrate that the proposed length of a boat ramp, launch, or rail is the minimum necessary to launch the intended craft safely. In no case shall the boat launch ramp or rail extend beyond the point where the water depth is eight feet below the OHWM, unless the Shoreline Administrator determines that a greater depth is needed for a public boat launch facility.*
7. *Boat ramps, launches, or rails shall be designed and constructed by using methods and technology recognized and approved by State and Federal resource agencies as BMPs.*

D. Supplementary Standards for Boat Lifts and Canopies

1. *New boat lifts and canopies shall follow BMPs and the standards in WAC 220-660-140 to avoid impacts to shoreline ecological functions, such as effects to nearshore habitat.*
2. *New boat lifts and accessory boat lift canopies may be permitted as part of an approved dock or pier as specified in SMP Table 5-1: Permitted, Conditional, and Prohibited Uses, so long as the following requirements are met:*
 - a. *The boat lift is placed as far waterward of the OHWM as is feasible and safe.*

- b. *The bottom of a boat lift canopy is elevated above the boat lift to the maximum extent feasible. The lowest edge of the canopy must be at least four feet above the water surface, and the top of the canopy must not extend more than seven feet above an associated pier.*
- c. *No hydraulic fluid other than water shall be used in the boat lift system. A backflow protection may be required.*
- 3. *A maximum of two cubic yards of clean rock fill or pre-cast concrete blocks are permitted to anchor the boat lift if the substrate prevents the use of anchoring devices.*
- 4. *One boat lift or up to two Jet Ski lifts is allowed per dock or pier.*

E. *Supplementary Standards for Docks and Piers*

- 1. *New docks and piers shall follow BMPs and the standards in WAC 220-660-140 to avoid impacts to shoreline ecological functions, such as effects to nearshore habitat.*
- 2. *New docks and piers shall be allowed only for public access and water-dependent uses, including single-family residences, so long as the dock or pier complies with the regulations contained in this section. Docks and piers shall meet the following standards:*
 - a. *Docks and piers serving a single-family residence are allowed, provided they are designed and intended as a facility for access to watercraft. To be authorized, the residential use and the associated dock or pier must be allowed in the underlying upland shoreline environment designation. In instances on Mayfield and Riffe Lake, where a buffer owned by Tacoma Power exists between the water and the upland property, the upland property owner may utilize their allowance for a dock on the portion of the buffer property between their lot and the water with the permission of Tacoma Power.*
 - b. *New docks and piers that are not associated with residences shall be permitted only when they are intended for public use or when the applicant demonstrates that the new dock or pier supports a water-dependent use.*
 - c. *No more than one dock or pier is permitted for each single-family residence existing as of the effective date of this SMP.*
 - d. *Only joint-use overwater structures and launching facilities are allowed for new residential development or subdivisions of two or more waterfront dwellings occurring after the effective date of this SMP.*
 - e. *No more than one pier, dock, or other moorage structure is allowed for a water dependent commercial use or a multifamily development.*
- 3. *When individual lots have less than 50 feet of water frontage, a joint-use dock or pier that is shared with neighboring properties shall be required, provided that an individual dock may be allowed subject to the requirements of SMP Table 5-1: Permitted, Conditional, and Prohibited Uses when lots on either side of the subject lot have legal pre-existing docks or piers and the applicant demonstrates to the satisfaction of the Shoreline*

Administrator that a shared use agreement is not feasible. In this case, a lot with less than 50 feet of minimum shoreline frontage may be permitted an individual dock or pier.

4. *The maximum dimensions of a dock or pier shall meet the following development standards. An explanation of why the dock or pier length was chosen shall be submitted with the application.*
 - a. *Residential docks and piers shall be no greater than the widths allowed for HPA permits in WAC 220-660-140(3) and shall not exceed 150 feet beyond the OHWM.*
 - b. *Docks and piers for commercial, recreational, or public access use may be up to ten feet in width and shall not exceed 200 feet beyond the OHWM.*
 - c. *Docks and piers shall be set back a minimum of ten feet from side property lines. Provided that joint-use facilities may be located closer to or upon a side property line when agreed to by contract or covenant with the owners of the affected properties. A copy of such agreement shall be recorded with the Lewis County Auditor and filed with the shoreline permit application.*
 - d. *Proposed docks and piers that do not comply with the dimensional standards above may only be approved if they obtain a shoreline variance. Pursuant to WAC 173-27-040 (2)(b), any existing legal nonconforming dock or pier may be repaired or restored to its original size, dimension, and location without the need for a variance, if it is below the replacement thresholds found in SMP Section 5.07.02(J)(1). Projects undertaken pursuant to this section must be permitted within two years of the removal of the pre-existing, nonconforming structure.*
5. *Non-water-dependent elements and uses, such as decks and gazebos built on docks or piers, are not allowed.*

F. Supplementary Standards for Marinas

1. *New marinas shall follow BMPs and the standards in WAC 220-660-140 to avoid impacts to shoreline ecological functions, such as effects to nearshore habitat.*
2. *Marinas shall be designed to:*
 - a. *Provide thorough flushing of all enclosed water areas;*
 - b. *Allow the free movement of aquatic life in shallow water areas; and*
 - c. *Avoid and minimize any interference with geohydraulic processes and disruption of existing shore forms.*
3. *New marinas shall provide public access amenities such as viewpoints, interpretive displays, and public access to water-enjoyment uses such as restaurants.*
4. *Marinas shall have adequate facilities and procedures for fuel handling and storage, and the containment, recovery, and mitigation of spilled petroleum, sewage, and other potentially harmful or hazardous materials, and toxic products.*

5. *Sufficient utility services must be provided concurrent with the development of a marina. New marinas must include adequate restroom and sewage disposal facilities, such as pump out, holding, and/or treatment facilities.*
6. *The marina operator shall be responsible for the collection and dumping of sewage, solid waste, and petroleum waste.*

G. Supplementary Standards for Moorage Covers

1. *New moorage covers may be permitted as a shoreline conditional use in the locations specified in SMP Table 5-1: Permitted, Conditional, and Prohibited Uses, if the proposal addresses the following*
 - a. *The applicant demonstrates that the moorage cover is the minimum size necessary to provide for the water-dependent use;*
 - b. *The moorage cover does not create any potential adverse impacts to public safety;*
 - c. *The moorage cover is placed as far waterward of the OHWM as feasible and safe, within the limits of the dimensional standards for docks and piers established in this section;*
 - d. *There is only one moorage cover or boat lift with canopy per dock or pier, including joint use docks or piers; and*
 - e. *The moorage cover complies with all other conditional use criteria in WAC 173-27-160 and SMP Section 7.04.02.*

H. Supplementary Standards for Mooring Buoys

1. *New mooring buoys shall follow BMPs and the standards in WAC 220-660-140 to avoid impacts to shoreline ecological functions, such as effects to nearshore habitat.*
2. *Up to one mooring buoy is allowed per dwelling unit in lieu of a dock or pier.*
3. *Mooring buoys shall be anchored in accordance with all State and Federal requirements.*

I. Supplementary Standards for Recreational Floats

1. *New recreational floats shall follow BMPs and the standards in WAC 220-660-140 to avoid impacts to shoreline ecological functions, such as effects to nearshore habitat.*
2. *New recreational floats shall not exceed 400 square feet in size.*
3. *New recreational floats may be permitted as specified in SMP Table 5-1: Permitted, Conditional, and Prohibited Uses, so long as the following requirements are met:*
 - a. *The recreational float complies with all requirements established by State and Federal agencies, affected tribes, and other agencies that have jurisdiction.*
 - b. *The recreational float is located as close to the shore as feasible and no farther waterward than the existing floats and established swimming areas.*

4. *Recreational floats shall be designed and intended for swimming or other non6 motorized uses.*
5. *Recreational floats must be built so that the deck surface is one foot above the water's surface.*
6. *Retrieval lines for recreational floats shall not float at or near the surface of the water.*

J. Existing Uses and Structures

1. Replacement

- a. *If any of the following are proposed, the project is considered a new boating and water access facility and must be designed consistent with any applicable standards for new boating and water access facilities.*
 - 1) *Replacement of the entire overwater boating and water access facility;*
 - 2) *Replacement of 75% or more of support piles on a cumulative basis over the life of the facility; or*
 - 3) *Replacement of 75% or more of a boat launch on a cumulative basis over the life of the boat launch.*

2. Modification or Enlargement

- a. *Applicants must demonstrate that there is a need for modification or enlargement due to increased or changed use or demand, safety concerns, or inadequate depth of water.*
- b. *Enlarged portions of boating and water access facilities must comply with any applicable design and mitigation standards for new facilities.*

3. Repair

- a. *Repairs to existing legally established boating and water access facilities that fall below the standards identified in SMP Section 5.07.02(J)(1) are permitted consistent with all other applicable codes and regulations.*
- b. *All repairs must utilize any material standards specified for new facilities.*

K. Mitigation

1. *New or expanded boating and water access facilities should follow the mitigation sequence in SMP Section 4.03.*
2. *Appropriate impact minimization measures include ensuring the facility is the minimum size necessary, using grating, placing the facility to avoid the need to dredge, and avoiding critical habitat.*
3. *Compensatory mitigation proposals must provide mitigation at a minimum 1:1 ratio, by area, of new overwater cover to mitigation action using one or more of the potential mitigation measures listed below. The ratio should be increased if the measure will take*

more than one year to provide equivalent function or if the measure does not have a high success rate, as determined by a qualified professional.

4. *For new development and expansion of existing boating and water access facilities, appropriate compensatory mitigation may include items including but not limited to, one or more of the following measures:*
 - a. *Removal of any legal existing overwater or in-water structures that are not the subject of the application or otherwise required to be removed;*
 - b. *Removal or ecological improvement of hardened shoreline, including existing 19 launch ramps or structural shoreline stabilization;*
 - c. *Removal of man-made debris waterward of the OHWM, such as car bodies, oil drums, concrete or asphalt debris, remnant docks, or other material detrimental to ecological functions and ecosystem-wide processes; or*
 - d. *Planting of native vegetation along the shoreline immediately landward of the OHWM consisting of a density and composition of trees and shrubs typically found in undisturbed areas adjacent to the subject waterbody.*
5. *In-kind measures are preferred over out-of-kind measures when consistent with the objective of compensating for adverse impacts to ecological function.*

L. Submittal Requirements

In addition to the general application requirements, the following submittals, as applicable, are necessary for all new or expanded boating and water access facilities:

1. *For new or expanded marina facilities, applicants must provide an assessment of need and demand for the facility, including but not limited to:*
 - a. *Existing approved facilities, or pending applications, within the service range of the proposed new or expanded facility;*
 - b. *The expected population served by the facility; and*
 - c. *Boat ownership characteristics of the population, if that information supports justification for specific design elements related to facility length or width, necessary water depth, or other design factors.*

The project does not include any boating or water access facilities.

4.3.7. [SMP 5.08] Commercial Development

Commercial uses and developments are those uses that are involved in wholesale and retail trade or business activities. Many commercial developments are intensive users of space because of extensive floor areas and facilities, such as parking, necessary to service them.

Policies

- A. *Encourage the development of water-oriented commercial developments, which utilize their location to offer opportunities for substantial numbers of people to enjoy the shoreline. Water dependent commercial uses are a priority over non-water dependent commercial uses.*
- B. *Encourage new commercial development along shorelines to locate in areas where current commercial uses exist, if the locations are suitable for such use.*
- C. *Encourage non-water-oriented commercial development to locate outside of the shoreline jurisdiction.*
- D. *Design new commercial development to protect the public's health, safety, and welfare; provide public access where feasible; and ensure no net loss of shoreline ecological functions.*
- E. *Minimize the adverse impacts that may result from commercial buildings, such as blocked views, aesthetic impacts, or noise.*
- F. *Public access should be required where commercial uses are proposed on land in public ownership.*

Regulations

- A. *Commercial development shall not result in a net loss of shoreline ecological functions or have significant negative impacts to shoreline uses, resources, and values such as navigation, recreation, and public access.*
- B. *Where commercial uses are allowed, new non-water-oriented commercial development is prohibited unless it meets one of the following criteria:*
 - 1. *The commercial use is part of a mixed-use project that includes a water-dependent, water-related, or water-enjoyment use and provides a significant public benefit such as providing public access or ecological restoration. The non-water-oriented portion of the project must be located landward of the water-oriented portion of the development.*
 - 2. *The proposal is an expansion of a commercial use that existed at the time of the SMP update that does not move any closer to the shoreline;*
 - 3. *Navigability is severely limited at that location and the commercial use provides a significant public benefit such as public access or ecological restoration. The standard shoreline buffer shall be 150 feet from the OHWM; or*
 - 4. *The commercial use is physically separated from the shoreline by another property, railroad, or public right-of-way.*
- C. *Water-dependent commercial uses and development shall be given preference over water-related and water-enjoyment commercial uses. Water-oriented uses shall be given preference over non-water oriented uses. The applicant shall demonstrate that the proposed design, layout, and operation of commercial uses meet the definitions of water-dependent, water-related or water-enjoyment.*
- D. *Non-water-dependent commercial uses over water are prohibited in the shoreline jurisdiction.*

The project does not include any commercial uses, wholesale and retail sales, or business activities.

4.3.8. [SMP 5.09] Forest Practices

Forest management practices are those methods used for the protection, production, and harvesting of timber. The FPA (Chapter 76.09 RCW) is the basis of management of commercial forest uses within shoreline jurisdiction. The WDNR regulates forest practices including those within shoreline jurisdiction in the County. A forest practice that only involves timber cutting is not a development under the act and does not require a Shoreline Substantial Development Permit or a shoreline exemption. A forest practice that includes activities other than timber cutting may be a development under the act and may require a Substantial Development Permit, as required by WAC 222-50-020.

Policies

- A. Effectively balance timber harvesting with the preservation of shoreline ecological functions, public access to shorelines, and other shoreline goals.*
- B. Ensure State and Federal water quality standards are maintained while conducting timber-harvesting practices in shoreline jurisdiction.*
- C. Prevent the accumulation of slash and other debris in waterways during logging and thinning operations.*
- D. Ensure that timber harvesting in Shorelines of Statewide Significance does not exceed the limitations established in RCW 90.58.150, except in cases where selective logging is found to be ecologically detrimental or inadequate for the preparation of land for other uses authorized in the SMP.*
- E. Ensure the maintenance of shoreline buffers while conducting logging within shoreline jurisdiction.*
- F. Promote proper road and bridge design, location and construction, and maintenance practices to prevent development of roads and structures that would adversely affect shoreline resources.*
- G. Ensure that forest practice conversions to non-forestry uses do not result in a net loss of ecological functions or significant adverse impacts to other shoreline uses, resources, and values such as navigation, recreation, and public access.*

Regulations

- A. All forest practices, including forest conversions, undertaken on shorelines shall comply with the applicable policies and provisions of the FPA, the SMP, Chapter 76.09 RCW as amended, and Chapter 222 WAC.*
- B. Preparatory work associated with the conversion of land to non-forest practices or developments shall:
 - 1. Limit the conversion to the minimum necessary to accomplish the purpose and intent of the SMP on the subject property.**

2. *Ensure no net loss of shoreline ecological functions or significant adverse impacts to shoreline uses, resources, and values provided for in RCW 90.58.020 such as navigation, recreation, and public access.*
 3. *Demonstrate that conversion practices are conducted in a manner consistent with the shoreline environment designation in which they are located.*
- C. *Within shoreline jurisdiction along Shorelines of Statewide Significance, only selective commercial timber cutting may be permitted so that no more than 30% of the merchantable timber may be harvested in any ten-year period.*
1. *Other timber harvesting methods may be permitted with a shoreline conditional use permit in those limited instances where the topography, soil conditions, or silviculture practices necessary for regeneration render selective logging ecologically detrimental.*
 2. *Clear cutting of timber solely incidental to the conversion and preparation of land for uses authorized in the SMP may be permitted.*

The project does not include any commercial forest uses. The project does require the removal of two small-diameter deciduous trees within shoreline jurisdiction to allow for equipment access to Lucas Creek. Site restoration includes planting 24 trees. See Section 3 of this report for a complete assessment of impacts and proposed restoration plan. The project will not result in a net loss of shoreline ecological functions.

4.3.9. [SMP 5.10] Industrial Development

Industrial development encompasses manufacturing, production, processing, and storage of raw materials and other finished products.

Policies

- A. *Ensure a sufficient amount of land is designated to accommodate water-dependent or water-related industry. Water dependent industrial uses are a priority over non-water dependent industrial uses.*
- B. *Locate, design, and construct industrial development in a manner that assures no net loss of shoreline ecological functions and does not have significant adverse impacts to other shoreline resources and values.*
- C. *Encourage new industrial development to locate in areas where environmental cleanup and restoration can be incorporated in the project.*
- D. *Encourage public access to the shoreline as part of industrial developments where feasible.*

Regulations

- A. *Water-dependent industrial uses and development shall be given preference over water-related and nonwater-oriented industrial uses. Water-related uses shall be given preference over non-water oriented uses. The applicant shall demonstrate that the proposed design, layout, and operation of industrial uses meet the definitions of water dependent or water-related uses.*

- B. Where industrial uses are allowed, new non-water-oriented industrial uses are prohibited unless they meet one of the following criteria:*
- 1. It is part of a mixed-use project that includes a water-dependent, water-related, or water-enjoyment use and provides a significant public benefit such as providing public access or ecological restoration. The non-water-oriented portion of the project must be located landward of the water-oriented portion of the development.*
 - 2. The proposal is an expansion of an industrial use that existed at the time of the SMP update that does not move any closer to the shoreline;*
 - 3. Navigability is severely limited on the site and the industrial use provides a significant public benefit such as providing public access or ecological restoration. The standard shoreline buffer shall be 150 feet from the OHWM; or*
 - 4. The site is physically separated from the shoreline by another property or public right-of-way.*
- C. Public access shall be incorporated in industrial developments where feasible. Public access shall be required where feasible for new industrial development on publicly owned land.*
- D. Industrial development shall not result in a net loss of shoreline ecological functions or have significant negative impacts to shoreline use, resources, and values such as navigation, recreation, and public access.*
- E. Industrial development and redevelopment are encouraged to locate where State and Federal requirements for environmental cleanup and restoration of the shoreline area can be incorporated.*

The project does not include any industrial development, manufacturing, production, processing, and storage of raw materials and other finished products.

4.3.10. [SMP 5.11] Mining

Mining is the removal of sand, soil, gravel, minerals, and other materials for commercial and other uses. Mining in the shoreline can alter the natural character, resources, and ecology of shorelines.

Policies

- A. Design and conduct new mining and associated uses to result in no net loss of shoreline ecological functions and processes.*
- B. Do not locate new mining on shorelines where unavoidable adverse impacts on other uses or resources, when taken together, equal or outweigh the benefits from the mining.*
- C. Minimize the negative impacts from mining on existing public access points and water dependent or enjoyment uses. Potential impacts may include aesthetic impacts, dust, noise, etc.*
- D. Begin land reclamation immediately after the termination of mining operations. The use of reclaimed mine property must be consistent with the SMP, advance appropriate ecological functions that are suited for the site, and be consistent with the State Surface Mining Reclamation Act requirements.*

Regulations

- A. *Application for mining permits within shoreline jurisdiction shall be accompanied by operation plans, reclamation plans, and an analysis of environmental impacts sufficient to make a determination as to whether the project will result in net loss of shoreline ecological functions over the course of the mining and reclamation.*
- B. *Mining operations and subsequent uses shall not cause permanent impairment or loss of floodwater storage, wetlands, or other stream corridor features and habitats. Mitigation shall provide for the replacement of impacted functions at the ratio or rate necessary to achieve no net loss of shoreline ecological function.*
- C. *The evaluation of impacts of mining shall be integrated with relevant environment review requirements of SEPA (Chapter 43.21 RCW) and SEPA rules (Chapter 197-11 WAC).*
- D. *New mining waterward of the OHWM of a shoreline waterbody shall not be permitted.*
- E. *In considering renewal, extension, or reauthorization of mining waterward of the OHWM in locations where mining was previously conducted, compliance with WAC 173-26-241(3)(h)(ii)(D) shall be required where no such review has previously been conducted. Where there has been a prior review of the mining activities, the Shoreline Administrator shall review the previous determinations to assure compliance under current site conditions.*
- F. *Mining within any CMZ that is within shoreline jurisdiction shall require a shoreline conditional use permit.*
- G. *For mining proposals that meet the definition of surface mine in RCW 78.44.031, the proposal shall be consistent with WDNR Surface Mine Reclamation standards found in Chapter 332-18 WAC and Chapter 78.44 RCW. A reclamation plan that complies with the format and standards of Chapter 78.44 RCW shall be included with a shoreline permit application.*
- H. *In reviewing the permit application and reclamation plan, the Shoreline Administrator shall determine whether the plan is consistent with the SMP and other applicable County regulations. After the applicant has been given reasonable opportunity to revise the plan, an inconsistent reclamation plan shall constitute sufficient grounds for denial of a shoreline permit. Subsequent use of reclaimed sites shall be consistent with the shoreline environment designation and the use criteria provisions of the SMP.*

No commercial mining activities are proposed as part of the bridge scour repair project. Excavation of existing riprap and streambed material will be required prior to the installation of new scour countermeasures. See Section 3 of this report for a complete assessment of impacts and proposed restoration plan. The project will not result in a net loss of shoreline ecological functions.

4.3.11. [SMP 5.12] Parking

Parking is the temporary storage of automobiles or other motorized vehicles. The following provisions apply to parking that is allowed as an accessory to a permitted shoreline use. Stand alone parking facilities are prohibited in shoreline jurisdiction.

Policies

- A. *Minimize the amount of parking in the shoreline jurisdiction.*
- B. *Locate and design parking facilities to have the least impact on shoreline features, including shoreline ecological functions and existing or planned water-dependent uses.*
- C. *Locate and design parking to minimize adverse impacts including those related to stormwater run-off, water quality, visual qualities, public access, vegetation, and habitat.*

Regulations

- A. *Parking facilities are allowed only as accessories to authorized shoreline uses. Stand alone parking facilities not supporting an authorized primary use are prohibited in shoreline jurisdiction.*
- B. *Parking facilities in shoreline jurisdiction shall be located upland from the principal use or structure being served, except in the following cases:*
 - 1. *When parking facilities are within or beneath the structure and adequately screened.*
 - 2. *Where the existing configuration of a commercial or industrial building has parking situated between the structure and the shoreline. No expansion of the parking area towards the water shall be allowed.*
 - 3. *When parking to address specific Americans with Disabilities Act requirements is required and cannot be placed in another location.*
- C. *Exterior parking facilities shall be designed and landscaped to minimize adverse impacts to adjacent and abutting properties in shoreline jurisdiction.*
- D. *Existing parking areas that are of a non-paved surface, such as gravel, may be paved provided such facilities comply with all applicable water quality, stormwater, landscaping, and other applicable requirements and regulations. Paved parking areas shall be designed to incorporate LID practices, such as permeable surfaces and bioswales, to the extent feasible.*

The project does not include any new permanent parking facilities. Temporary parking of motor vehicles and construction equipment during project construction will occur upland of the bridge scour repair activities. Temporary impacts from parking in shoreline will be restored following project construction. See Section 3 of this report for a complete assessment of impacts and proposed restoration plan. The project will not result in a net loss of shoreline ecological functions.

4.3.12. [SMP 5.13] Recreational Development

Recreational development includes commercial and public facilities that provide recreational opportunities to the public. This section applies to public and private recreational uses and development, accessory recreational uses and development, and excludes private recreational uses associated with residential development.

Policies

- A. *Prevent recreational development from causing a net loss of shoreline ecological functions.*
- B. *Encourage the development of recreational facilities that allow the public to access and enjoy shorelines.*

- C. Create new public access points to shorelines on public lands.*
- D. Promote the ongoing maintenance of shoreline public access.*
- E. Work to link shoreline parks and public access points.*
- F. Protect the rights of private property owners, and help to minimize the adverse impacts on private land associated with neighboring public access points.*
- G. Ensure sufficient water and wastewater facilities are available to accommodate the demands of recreational development proposals.*
- H. Encourage preservation of scenic views and vistas.*

Regulations

- A. Recreational uses and facilities proposed within the shoreline jurisdiction shall be primarily designed to promote access, enjoyment, and use of the water and Shorelines of the State. Non-water-related recreational uses shall predominantly be located outside of the shoreline jurisdiction.*
- B. Where recreation facilities include overwater structures designed for public access to shorelines, such as public viewing or fishing platforms, the structures shall comply with the relevant requirements of SMP Section 5.07.*
- C. Where applicable, an applicant shall submit plans that demonstrate the BMPs and methods to be used to prevent chemical applications and resultant leachate from entering adjacent waterbodies.*
- D. Recreational facilities shall make adequate provisions, such as screening, buffer strips, fences, and signs, to minimize impacts to neighbors and prevent the overflow of pedestrians onto adjacent private properties.*
- E. Wildlife viewing structures and permeable trails or raised boardwalks are allowed within shoreline and wetland buffers in accordance with the mitigation sequence in SMP Section 4.03 and the critical area regulations in SMP Section 4.04.*
- F. Trails shall be planted or landscaped to provide a visual buffer for adjoining dissimilar uses or scenic areas. The Shoreline Administrator may condition proposals to:

 - 1. Select species that are suitable for the local climate and have minimal demands for water, minimal vulnerability to pests, and minimal demands for fertilizers; and*
 - 2. Incorporate native species.**
- G. Recreational development proposals shall include facilities for water supply, wastewater, and garbage disposal in conformance with County standards.*
- H. Recreational development shall be located, designed, and constructed in a manner that assures no net loss of shoreline ecological functions.*

The proposed bridge scour repair project does not include any elements for recreational development.

4.3.13. [SMP 5.14] Residential Development

Residential development includes single-family residences, multifamily development, and appurtenant structures and uses, including garages, sheds, fences, necessary utilities, and driveways as well as the creation of new residential lots through land division. Single-family residences are a priority use when developed in a manner consistent with no net loss of 11 ecological functions.

The construction of a single-family residence by an owner, lessee, or contract purchaser for their own use or for the use of their family that does not exceed a height of 35 feet above average grade level may be exempt from the requirement for a shoreline substantial development permit but must be consistent with all applicable policies and regulations in the SMP. Refer to the application and interpretation of exemptions in WAC 173-27-040(2)(g).

Policies

- A. Develop residential uses in a manner that ensures no net loss of shoreline ecological functions and is consistent with provisions relating to shoreline buffer areas, shoreline armoring, vegetation conservation requirements, on-site sewage system standards, and aesthetic enhancement.*
- B. Control residential uses and development in areas subject to environmental limitations, such as wetlands, stream buffers, and areas of frequent flooding.*
- C. Set back residential development and uses from steep slopes and shorelines vulnerable to erosion so that structural shoreline stabilization or flood hazard reduction measures are not required to protect such structures.*
- D. Prohibit new overwater residential development.*
- E. Encourage public access to the shoreline as part of new residential development, and require public access in accordance with SMP Section 4.06 for new multifamily residential development and subdivisions that include more than four parcels.*
- F. Consider single-family residences a priority use in planning for uses in the shoreline jurisdiction when developed with no net loss of ecological functions.*
- G. Consider accessory and appurtenant developments, such as driveways, utilities, and septic systems, as part of the primary residential use and review the developments under the standards of this section.*

Regulations

- A. Residential uses and development may be allowed in conformance with the development requirements of the County and the provisions of the SMP.*
- B. Residential subdivisions shall:*
 - 1. Comply with all applicable subdivision, critical areas, and zoning regulations.*
 - 2. Include facilities for water supply, wastewater, stormwater, solid waste, access, utilities, and other support facilities in conformance with County standards.*
 - 3. Be designed, configured and developed to:*

- a. *Assure that no net loss of ecological functions will result from the initial division of the land, at full build-out of all the lots, and throughout all phases of development.*
 - b. *Avoid critical areas and their buffers in accordance with SMP Section 4.03.*
 - c. *Prevent the need for new hard or soft shoreline stabilization or flood hazard reduction measures in accordance with SMP Sections 4.05, 6.07 and 6.08.*
 - d. *Minimize physical impacts to vegetation and other natural features within the shoreline.*
 - e. *Assure that lots in proposed subdivisions are sufficiently sized and oriented to allow future residential development, without these residential uses requiring a shoreline variance. Lot configurations shall plan for building sites outside of required shoreline and critical area buffers.*
- 4. *Clustering may be permitted, as allowed by the LCC, to achieve these provisions.*
- C. *Each residential structure, including accessory and appurtenant structures and uses, shall:*
 - 1. *Comply with all applicable zoning regulations.*
 - 2. *Meet all applicable critical areas, vegetation conservation, and water quality standards of SMP Chapter 4: General Policies & Regulations.*
 - 3. *Be designed, sited, and constructed to:*
 - a. *Assure no net loss of shoreline ecological functions.*
 - b. *Prevent the need for new structural flood hazard management measures to the greatest extent feasible.*
 - c. *Be sufficiently set back from steep slopes and shorelines vulnerable to erosion, in accordance with the required critical area and shoreline buffers, to ensure that structural improvements and stabilization structures are not necessary to protect such structures and uses.*
- D. *New multifamily developments and subdivisions over four lots in size shall provide public access under SMP Section 4.06.*
- E. *The primary residential use on any lot shall be established prior to any accessory or appurtenant structures.*
- F. *Accessory and appurtenant developments and structures shall be subject to the same regulations as the primary residence. Provided that septic systems, drainfields and other accessory or appurtenant developments may be located within a critical area or shoreline buffer when no other option exists, and the proposal meets the requirements in Section 4.04.02(D).*
- G. *Primary residential uses are prohibited over the water.*
- H. *Residential accessory and appurtenant structures and uses shall be prohibited over the water, unless clearly water-dependent.*

The proposed bridge scour repair project does not include any elements for residential development.

4.3.14. [SMP 5.15] Signs

The following provisions apply to any commercial or advertising sign directing attention to a business, professional service, community, site, facility, or entertainment.

Policies

- A. Limit off-premise outdoor advertising signs within the shoreline environment.*
- B. Ensure that signs are sized and placed to protect the vistas and views of shorelines, waterbodies, and surrounding landscapes from public properties and rights-of-way.*

Regulations

- A. Signs shall comply with applicable County regulations.*
- B. All signs shall be located and designed to minimize interference with visual access to shoreline jurisdiction.*
- C. Signs may be allowed if they:*
 - 1. Do not obstruct sight distance of drivers and non-motorized roadway users;*
 - 2. Conform with Washington State Department of Transportation (WSDOT) standards for signs on public highways; and*
 - 3. Meet one of the following two conditions:*
 - a. Are official in nature, such as traffic control, wayfinding, monument, historic, or cultural site markers, etc., and are located within the public right-of-way; or*
 - b. Are located on the public or private property that contains the use advertised.*

The proposed bridge scour repair project does not include any commercial or advertising sign directing attention to a business, professional service, community, site, facility, or entertainment.

4.3.15. [SMP 5.16] Transportation Facilities

Transportation facilities include structures that provide for the movement of people, goods, and services by land, air, and water. Transportation facilities include highways, bridges, bikeways, airports, and other related facilities. This section applies to new and expanded transportation facilities within shoreline jurisdiction. A driveway for an individual single-family residence is considered part of the primary use and should be reviewed as part of Section 5.14.

Policies

- A. Plan, locate, and design new transportation facilities where routes will have the least adverse effect on shoreline features, shoreline ecological functions, and existing or planned water-dependent uses.*
- B. Maintain and reconstruct roads in accordance with the BMPs adopted by the County and WSDOT.*

- C. *Require that public and private developments provide circulation facilities including roads, streets, alleys, pedestrian, bicycle, and public transportation facilities in a manner consistent with County, State, and Federal standards and adopted levels of service.*
- D. *Preserve the aesthetic values of the shoreline environment along roadways.*
- E. *Promote the creation and upkeep of viewpoints, rest areas, and picnic areas that are located along transportation facilities in the shoreline jurisdiction.*
- F. *Seek to provide for safe pedestrian and non-motorized travel along scenic corridors, public roadways, and multi-use trails in the shoreline jurisdiction.*
- G. *Design road and railroad structures so that flood debris will not be trapped by the structure.*

Regulations

- A. *New transportation facilities shall only be placed within shoreline jurisdiction, when no other option for the location of the facility exists.*
- B. *When located within the shoreline jurisdiction, new and expanded transportation facilities shall:*
 - 1. *Be set back from the OHWM as far as feasible and locate any new water crossings as near to perpendicular with the waterbody as feasible, unless an alternate path would minimize the disturbance of native vegetation or result in the avoidance of critical areas;*
 - 2. *Be designed with the minimum pavement area required;*
 - 3. *Minimize adverse effects to unique or fragile shoreline features;*
 - 4. *Implement the mitigation sequence in SMP Section 4.03 and ensure no net loss of shoreline ecological functions;*
 - 5. *Include a mitigation plan prepared by a qualified professional consistent with the provisions of Section 4.04;*
 - 6. *Avoid adverse impacts on existing or planned water-dependent uses;*
 - 7. *Allow the joint use of the right-of-way with nonmotorized uses and existing or planned primary utility facilities to consolidate the crossings of waterbodies and minimize adverse impacts to shoreline jurisdiction, where feasible; and*
 - 8. *Provide and/or maintain visual access to scenic vistas on public roads, where feasible. Visual access may include, but is not limited to turnouts, rest areas, and picnic areas.*
- C. *Crossings of waterbodies, such as bridges, shall be designed to minimize impacts to aquatic habitat, allow for fish passage, and permit the passage of flood debris.*
- D. *Existing roads that are of a non-paved surface, such as gravel, may be paved, if the facilities comply with all applicable mitigation, water quality, stormwater, and landscaping standards, as well as other requirements of the SMP and local regulations.*
- E. *Seasonal work windows may be required for construction projects to minimize impacts to shoreline functions.*

- F. Where public access to shorelines across transportation facilities is intended, facility designs must provide safe pedestrian and non-motorized vehicular crossings.*

The proposed project is for scour repair installation at the Senn Road MP 0.89 crossing of Lucas Creek. The proposed project will complete repairs to an existing bridge which is classified as scour critical. The scour repair will not adversely affect the aesthetic values of the shoreline environment. The project has been designed so that flood debris will not be trapped by the scour countermeasures. Any work below the OHWM of Lucas Creek will be completed during the WDFW-approved in-water-work-window. Impacts to the aquatic habitat of Lucas Creek and its associated shorelands have been minimized to the extent practicable while still achieving project goals. See Section 3 of this report for a complete assessment of impacts and proposed restoration plan. The project will not result in a net loss of shoreline ecological functions as documented in the restoration plan.

4.3.16. [SMP 5.17] Utilities

The provisions of this section apply to public and private facilities that produce, convey, store, or process power, gas, sewage, water, communications, oil, or waste. Utilities serving an individual use, or on-site utility features serving a primary use, such as an electrical line or water, sewer or gas lines, are considered accessory utilities and shall be considered under the standards for the primary use of the property. Water intake and water or fish conveyances between a waterbody and an aquaculture facility are not considered utilities under this section. Consult Section 5.06.

Policies

- A. Ensure that the installation of new utilities results in no net loss of shoreline ecological functions.*
- B. Locate utility lines and facilities outside of the shoreline environment where feasible.*
- C. Locate water-oriented utilities, such as sewage treatment, water reclamation, and some power facilities, where they do not interfere with other public uses of the water and shoreline.*
- D. Locate and design utilities to accommodate future growth and development.*
- E. Locate utilities so as not to obstruct or destroy scenic views wherever facilities must be placed in a shoreline area. Place utility lines underground when feasible to minimize damage to the shoreline aesthetic quality.*
- F. Locate utilities in existing rights of way or corridors whenever feasible.*
- G. Restore shoreline areas damaged by the installation or maintenance of utilities.*
- H. Provide public access to the shoreline whenever a major utility line or facility utilizes a shoreline location or crossing, unless the utility presents a serious hazard to the public.*

Regulations

- A. All utility system projects and maintenance activities shall be designed, located, installed and conducted in a manner that results in no net loss of ecological function.*
- B. If a utility is sited in shoreline jurisdiction, a mitigation plan prepared by a qualified professional must be developed consistent with the provisions of Section 4.04.*

C. *Where utilities are located in shoreline jurisdiction, the utilities must:*

1. *Be designed and constructed to meet all adopted engineering standards of the County.*
2. *Provide for compatible, multiple use sites, and rights-of-way whenever feasible. Compatible uses may include shoreline access points, trails, and other forms of recreation and transportation, provided that the uses do not interfere with the operation of the utility, endanger public health or safety, or cause a significant or disproportionate liability for the owner.*
3. *Minimize processes affecting the rate of channel migration and/or shoreline erosion. Where increased rates of shoreline erosion may occur, the Shoreline Administrator may require a monitoring and adaptive management plan that is prepared by a qualified professional.*
4. *Limit clearing to the minimum necessary for installation or maintenance. Impacts associated with clearing shall be mitigated on site.*

D. *In addition to the standards above, utility lines within the shoreline jurisdiction shall:*

1. *Be undergrounded in areas developed at a more urban level, such as UGAs, Limited Areas of More Intensive Rural Development (LAMIRDs), and resorts, except where technical, environmental, or geological conditions make undergrounding infeasible.*
2. *Be sited within the footprint of an existing rights-of-way or utility easement, wherever feasible, especially in locations where right-of-ways and easements exist.*
3. *Avoid paralleling the shoreline or following a down-valley course near the channel, except where located in an existing road or easement footprint.*

E. *If an underwater location is necessary for the siting of utilities, the following performance standards apply:*

1. *The design, installation, and operation shall minimize impacts to the waterway and the resident aquatic ecosystems.*
2. *Seasonal work windows may be made a condition of approval.*
3. *All State and Federal permits must be obtained.*
4. *A maintenance schedule and emergency repair protocol shall be prepared and recorded.*

F. *Dredging/trenching for underwater utilities is only allowed if no feasible alternative location for the utilities exists, and:*

1. *Impacts to fish and wildlife habitat are minimized to the maximum extent feasible;*
2. *The utility installation does not increase or decrease the natural rate, extent, or chance of channel migration; and*
3. *Appropriate BMPs are employed to prevent water quality impacts or other environmental degradation.*

- G. *After the installation of a utility system or the completion of a maintenance project, the disturbed area shall be regraded to match the natural terrain, replanted to prevent erosion and provide appropriate vegetative cover, and meet any other applicable standards from SMP Section 4.04.*

Overhead line utilities currently exist in the project right-of-way. The proposed bridge scour repair project does not include any new or modification of any existing utilities. The project will not result in a net loss of shoreline ecological functions.

4.4. Shoreline Modification Policies and Regulations

4.4.1. [SMP 6.02] General Shoreline Modification Provisions

The following provisions apply to all shoreline modification activities, whether shoreline modifications address a single or multiple properties. Where other requirements may conflict with the provisions contained in this chapter, the more restrictive standard shall apply.

Policies

- A. *Ensure shoreline modifications individually and cumulatively do not result in a net loss of ecological functions.*
- B. *Limit the number and extent of shoreline modification activities to reduce the negative effects of shoreline modifications to the greatest extent feasible.*
- C. *Plan for enhancement of impaired ecological functions where it is feasible, appropriate, and accommodates permitted uses.*
- D. *Allow only shoreline modifications that are appropriate to the specific shoreline environmental designation in which they are located.*
- E. *Prefer those types of shoreline modifications that have a lesser impact on ecological functions. Promote soft over hard shoreline modification measures.*

Regulations

- A. *Structural shoreline modifications may be allowed if they are demonstrated to be necessary to support or protect a legally permitted shoreline structure or use that is in danger of loss or substantial damage or are necessary for mitigation or enhancement.*
- B. *Shoreline modifications shall be limited in number and extent.*
- C. *The Shoreline Administrator shall base all decisions regarding shoreline modification on available scientific and technical information and a comprehensive analysis of site specific conditions provided by the applicant.*
- D. *Shoreline modifications must be designed and located to ensure that they will not result in a net loss of shoreline ecological functions and will not have significant adverse impacts to shoreline uses, resources, and values provided for in RCW 90.58.020.*
- E. *Shoreline modifications and uses shall be designed and managed to prevent degradation of water quality and alteration of natural hydrographic conditions.*
- F. *Shoreline modification standards shall not apply retroactively to existing, legally established shoreline modifications. Existing structures may be maintained, repaired, and operated within*

shoreline jurisdiction and within the shoreline buffers established in the SMP. Repair and replacement provisions in later sections of this chapter may apply to specific modifications.

- G. All disturbed upland areas shall be restored and protected from erosion by using native vegetation or other means.*
- H. All shoreline modifications are subject to the mitigation sequence in SMP Section 4.03, with appropriate mitigation required for unavoidable impacts to ecological functions. If critical areas in shoreline jurisdiction are impacted, the project is also subject to relevant requirements of SMP Section 4.04.*

The proposed project is for scour repair installation at the Senn Road MP 0.89 crossing of Lucas Creek. The proposed project will complete repairs to an existing bridge which is classified as scour critical. Impacts to the aquatic habitat of Lucas Creek and its associated shorelands have been minimized to the extent practicable while still achieving project goals. See Section 3 of this report for a complete assessment of impacts and proposed restoration plan. The project will not result in a net loss of shoreline ecological functions.

4.4.2. [SMP 6.03] Clearing, Grading, and Fill

Clearing, grading, and the placement of fill are the activities associated with preparing a site for development, as well as physically altering topography. The clearing and grading regulations in this section apply to activities landward of the OHWM and the placement of fill applies both waterward and landward of the OHWM.

See SMP Section 6.04 for dredging for purposes of flood control, navigation, the construction of 19 water-dependent portions of essential public facilities, or restoration.

Policies

- A. Protect shoreline ecological functions, including channel migration, by regulating clearing, grading, and the placement of fill.*
- B. Permit clearing, grading, and the placement of fill only to the minimum extent necessary to accommodate an approved shoreline use or development and with no net loss of shoreline ecological functions and processes.*
- C. Require that BMPs be utilized during clearing, grading, and fill activity.*
- D. Permit clearing, grading, and the placement of fill associated with dike or levee maintenance as necessary to provide protection from flood hazards when consistent with the flood hazard management provisions in SMP Section 4.05.*
- E. Ensure that the placement of fill does not result in a loss of flood storage.*
- F. Encourage the enhancement and voluntary restoration of landforms for habitat along shorelines.*

Regulations

- A. Clearing, grading, and the placement of fill shall be minimized to the extent feasible and only allowed when necessary to accommodate an approved shoreline use or development.*

- B. All clearing, grading, and the placement of fill shall be located, designed, and constructed to protect shoreline ecological functions and ecosystem-wide processes, including channel migration.*
- C. Speculative clearing, grading, and the placement of fill are prohibited.*
- D. When clearing, grading, or the placement of fill will cause adverse impacts to ecological functions, a mitigation plan, prepared by a qualified professional, must be completed consistent with the provisions of SMP Section 4.04.*
- E. Clearing, grading, and the placement of fill within wetlands, floodways, or CMZs, and/or the placement of fill waterward of the OHWM, is only allowed when:*
 - 1. Due consideration has been given to the site specific conditions;*
 - 2. All impacts have been mitigated;*
 - 3. All required State and Federal permits, and necessary approvals from WDNR for State-owned aquatic lands, have been obtained; and*
 - 4. The shoreline use or development is one of the following:*
 - a. A water-dependent use or public access to the shoreline;*
 - b. The cleanup and disposal of contaminated sediments as part of an interagency environmental clean-up plan;*
 - c. The disposal of dredged material considered suitable under, and conducted in accordance with, the WDNR's Dredged Material Management Program and the United States Army Corps of Engineers' (USACE) Dredged Material Management Office. See also SMP Section 6.04;*
 - d. The expansion or alteration of transportation facilities of statewide significance that are currently located in the shoreline, where alternatives to fill are infeasible;*
 - e. Ecological enhancement, restoration or mitigation, when consistent with an approved plan; or*
 - f. The protection of historic or cultural resources when fill is the most feasible method to avoid continued degradation, disturbance, or erosion of a site. Such fill must be coordinated with any affected tribes and comply with applicable provisions of SMP Section 4.02.*
- F. Upland clearing, grading and the placement of fill outside of wetlands, floodways, and CMZs is permitted provided it:*
 - 1. Is the minimum necessary to implement the approved use or modification;*
 - 2. Does not significantly change the topography of the landscape in a manner that affects hydrology or increases the risk of slope failure, consistent with the applicable provisions of SMP Section 4.04; and*

3. *Is conducted outside required shoreline buffers, unless specifically authorized by the SMP, or is necessary to provide protection to historic or cultural resources.*
- G. *Grading, the placement of fill, and beach nourishment shall be designed to blend physically and visually with the existing topography whenever feasible, so as not to interfere with lawful access and enjoyment of scenery.*
- H. *Clearing, grading, and the placement of fill shall not be located where shoreline stabilization will be necessary to protect the materials placed or removed, except when part of an approved plan for the protection of historic or cultural resources, or as part of an approved environmental cleanup plan or project.*
- I. *Cut and fill slopes shall generally be sloped no steeper than one foot vertical for every two feet horizontal (1:2) unless a specific engineering analysis has been provided that demonstrates the stability of a steeper slope.*
- J. *A temporary erosion and sediment control plan, including BMPs, consistent with the County's stormwater manual, shall be submitted to and approved by the Shoreline Administrator prior to commencement of all clearing, grading, and fill activities.*
- K. *To prevent a loss of flood storage, compensatory storage shall be provided commensurate with the amount of fill placed in the floodway per SMP Section 4.05.*
- L. *The placement of fill on State-owned aquatic lands must comply with WDNR and WDFW standards and regulations.*

The proposed bridge scour repair project will require clearing, grading, and fill activities to complete the project. Clearing, grading, and fill activities have been avoided and minimized to the extent practicable while still accomplishing project goals. Cleared areas will be replanted following the installation of scour countermeasures. Temporary erosion and sediment control measures and best management practices will be installed prior to the start of any clearing, grading, and fill activities. See Section 3 of this report for a complete assessment of impacts and proposed restoration plan. The project will not result in a net loss of shoreline ecological functions.

4.4.3. [SMP 6.04] Dredging and Dredge Material Disposal

This section is intended to cover dredging and dredge material disposal. It is not intended to cover mining or other excavations waterward of the OHWM that are incidental to construction of an authorized use or modification such as bulkhead replacements, large woody debris installations, boat launch ramp installation, or pile placement. These in-water substrate modifications should be conducted in accordance with all applicable regulations for the proposed use found in the SMP.

Policies

- A. *Conduct dredging in a manner that utilizes mitigation sequencing and ensures no net loss of shoreline ecological functions.*
- B. *Allow dredging for navigation channels when needed to assure safe and efficient accommodation of existing navigational uses only when significant ecological impacts are minimized and mitigated.*

- C. *Permit dredging as part of restoration or enhancement, public access, flood storage as part of a flood hazard management program, or navigation if deemed consistent with the SMP.*
- D. *Prohibit dredging waterward of the OHWM to obtain fill material except when the dredge material is necessary for the restoration of shoreline ecological functions.*
- E. *Site new development to avoid the need for new and maintenance dredging. Where avoidance is not feasible, ensure the site is designed to minimize the need for dredging.*
- F. *Prefer the disposal of dredged material on land outside of the shoreline jurisdiction to open water disposal.*
- G. *Coordinate local, State, and Federal permit requirements for dredging.*

Regulations

A. Dredging

- 1. *Dredging and dredge disposal proposals shall utilize the mitigation sequence in SMP Section 4.03. Where adverse impacts are unavoidable, a mitigation plan shall be prepared by a qualified professional consistent with the provisions of SMP Section 4.04.*
- 2. *Dredging shall only be permitted for the following activities:*
 - a. *Development of new or expanded moorages or water-dependent industrial uses where there are no other feasible alternatives, significant ecological impacts are minimized, and mitigation is provided.*
 - b. *Development of essential public facilities where no feasible alternative location exists.*
 - c. *Maintenance of irrigation reservoirs, drains, canals, and ditches for agricultural purposes, when the facility is not already exempt from the SMP.*
 - d. *Restoration or enhancement of shoreline ecological functions and processes that benefit water quality or fish and wildlife habitat.*
 - e. *Establishment, expansion, relocation, or reconfiguration of navigation channels where necessary to assure the safe and efficient accommodation of existing navigational uses.*
 - f. *Maintenance dredging of established navigation channels and basins, so long as the dredging is restricted to the previously dredged or authorized location, depth, and width.*
 - g. *Flood hazard reduction.*
- 3. *Applicants must receive all applicable State and Federal permits prior to the commencement of any dredging.*
- 4. *Dredging shall be prohibited for the primary purpose of obtaining fill material, except when necessary for the restoration of shoreline ecological functions and consistent with the following:*

- a. *Dredge material must be placed waterward of the OHWM.*
 - b. *The project must be associated with either a MTCA or CERCLA habitat restoration project or, if the project is approved through a shoreline conditional use permit, the project may be another significant habitat enhancement project.*
- 5. *New development shall be sited and designed to avoid or minimize the need for new or maintenance dredging.*

B. Dredge Material Disposal

- 1. *Dredge material disposal within shoreline jurisdiction may be permitted so long as:*
 - a. *Shoreline ecological functions and processes are preserved, restored, or enhanced. Factors to consider include surface and groundwater protection, erosion, sedimentation, and the impacts of floodwaters or runoff.*
 - b. *The disposal will not adversely affect public or private property.*
- 2. *The disposal of dredged material is considered suitable under, and conducted in accordance with, the Washington State Department of Natural Resources' (WDNR's) Dredged Material Management Program and the United States Army Corps of Engineers' (USACE) Dredged Material Management Office.*
- 3. *Disposal of dredge material within CMZs is discouraged. In the limited instances where it is allowed, such disposal shall require a shoreline conditional use permit. This provision is not intended to address the discharge of dredge material into the flowing current of a river or in deep water within the channel where it does not substantially affect the geohydrologic character of the CMZ.*
- 4. *Dredge material disposal in open waters may be approved when authorized by applicable State and Federal agencies and when one of the following conditions apply:*
 - a. *Land disposal is infeasible, inconsistent with the SMP, or prohibited by law; or*
 - b. *Disposal as part of a program to restore or enhance shoreline ecological functions and processes is not feasible.*
- 5. *If applicable, the use of dredge material to benefit shoreline resources shall be addressed through the implementation of a regional interagency dredge material management plan or watershed plan.*

C. Submittal Requirements

A detailed description of the purpose of the proposed dredging and an analysis of compliance with the policies and regulations of the SMP shall be required for all dredging applications. Materials prepared for State or Federal permits such as an HPA may be used to support the analysis.

No dredging is proposed for the scour repair project. Excavation waterward of the OHWM of Lucas Creek is concurrent with the installation of the bridge scour countermeasures. The project will require excavation to a depth of approximately six feet. Excavated material will be disposed of

at a County-approved facility. The project will not result in a net loss of shoreline ecological functions.

4.4.4. [SMP 6.05] In-Water Structures

This section applies to in-water structures as defined in Chapter 8 of this SMP.

Policies

- A. Design in-water structures to be compatible with the long-term use of resources, such as public access, recreation, and fish migration.*
- B. Locate, design, construct, and maintain in-water structures to give due consideration to:*
 - 1. The full range of public interests;*
 - 2. Watershed processes, including prevention of damage to other properties and other shoreline resources from alterations to geologic and hydrologic processes;*
 - 3. Scenic vistas;*
 - 4. Historic and cultural resources; and*
 - 5. Ecological functions, with special emphasis on protecting and restoring priority habitats and species.*
- C. Site and design in-water structures to be consistent with appropriate engineering principles, including guidelines of the WDFW, NRCS, and the USACE.*
- D. Incorporate applicable watershed, surface water management, and restoration plans in the planning and design of in-water structures.*
- E. Encourage nonstructural and non-regulatory methods to protect, enhance, and restore shoreline resources and ecological functions as an alternative to in-water structures.*
- F. Consider alternatives to hard in-water structures, such as soft in-water structures or several smaller discontinuous structures, as part of an application where physical conditions make such alternatives with less impact feasible.*
- G. Incorporate native vegetation as part of the design of in-water structures to enhance ecological functions, create a more natural appearance, and improve ecological processes.*
- H. Require a shoreline conditional use permit for dams, weirs, and similar structures, except for those structures installed to protect or restore ecological functions, such as woody debris, engineered logjams, or habitat-forming rock weirs installed in streams.*
- I. Only allow groins and weirs to be placed waterward of the OHWM in limited instances.*

Regulations

- A. In-water structures shall require a shoreline conditional use permit, except for those structures installed to protect or restore ecological functions, such as woody debris installed in streams.*

- B. In-water structures shall be designed, constructed, and maintained to ensure no net loss of shoreline ecological functions.*
- C. A professional engineer licensed in the State shall certify the designs of all in-water structures and include a monitoring and maintenance schedule.*
- D. Appropriate engineering principles and BMPs, including guidelines of the WDFW, NRCS, and the USACE, shall be used in the design of in-water structures, provided that their use infringes on private property rights to the minimum extent necessary to serve the primary purpose of the in-water structure. WDFW's Integrated Streambank Protection Guidelines may be used for BMPs for in-water structures.*
- E. The mitigation sequence in SMP Section 4.03 shall be required, with mitigation required for all unavoidable impacts to ecological functions. If critical areas in the shoreline jurisdiction are impacted, the project is subject to SMP Section 4.04.*
- F. Projects involving in-water work may not commence without having obtained all applicable County, State, and Federal permits and approvals.*
- G. If at any time, because of in-water work, fish are observed to be in distress or water quality problems develop, immediate notification shall be made to the appropriate State or Federal agencies, including Ecology, WDFW, National Marine Fisheries Service, or United States Fish and Wildlife Service.*
- H. Alteration or disturbance of the bank and bank vegetation shall be limited to the minimum necessary to perform the in-water work. All disturbed areas shall be protected from erosion and be restored using vegetation or other means.*
- I. Waste material resulting from the installation and removal of an in-water structure shall be deposited in an approved upland disposal site outside of the shoreline jurisdiction.*
- J. Natural in-water features such as snags, uprooted trees, or stumps should be left in place unless removal is approved by WDFW.*
- K. Motor vehicles, appliances, or other solid waste shall not be used as in-water structures. Demolition debris and reclaimed materials that are non-toxic and non-chemically contaminating may be used.*
- L. In-water structures designed by public entities shall include public access under SMP Section 4.06 whenever feasible. At a minimum, in-water structures should not decrease public access or the use potential of shorelines.*
- M. In-water structures and uses shall be sited and designed to avoid the need for future shoreline stabilization and dredging.*
- N. New, expanded, or replacement in-water structures shall only be permitted if it can be demonstrated that:*
 - 1. The proposed structure utilizes BMPs and will not result in a net loss of shoreline ecological functions;*

2. *The proposed in-water structure supports water-dependent uses, public access, shoreline stabilization, shoreline restoration, or some other specific public purpose; and*
3. *The benefits to the region outweigh the short and long-term resource losses from such work.*

The project includes the installation of scour countermeasures (riprap), blended streambed aggregate, and large woody material log jams below the OHWM of Lucas Creek. The work area will be temporarily dewatered and isolated prior to construction. The installation of in-water structures will occur during the WDFW-approved in-water-work-window. Design of the project has followed the mitigation sequence in SMP Section 4.03 with prioritization given to impact avoidance and minimization. Section 3 of this report describes avoidance, minimization, and restoration measures to assure no net loss of shoreline ecological functions. In-water structures associated with the Senn Road MP 0.89 bridge scour repair project will not result in a net loss of shoreline ecological function

4.4.5. [SMP 6.06] Restoration

Shoreline habitat and natural systems enhancement and restoration projects include those activities proposed and conducted specifically for the purpose of establishing, restoring, or enhancing habitat for priority species in shorelines.

Examples of shoreline habitat and natural systems enhancement projects include floodplain restoration projects, fish passage barrier removal or improvement, and projects to increase shoreline habitat complexity, among others.

Policies

- A. *Use principles of landscape and conservation ecology to design restoration and enhancement actions and improve shoreline ecological functions and processes. Consider the restoration of ecosystem-wide physical and biological processes that affect shoreline habitat structure and functions as the primary goal of these actions.*
- B. *Encourage cooperative shoreline restoration and enhancement programs between local, State, and Federal agencies, tribes, nonprofit organizations, and landowners to improve impaired ecological functions.*
- C. *Target restoration and enhancement projects that support the life cycles of priority species, such as Chinook salmon and other anadromous fish; locally important plants, fish and wildlife; and other populations or habitats for which a prioritized restoration or recovery plan is available.*
- D. *Encourage restoration and enhancement projects by developing project permitting and processing guidelines that streamline permit review.*
- E. *Seek and support funding opportunities to implement restoration and enhancement projects.*
- F. *Avoid adverse impacts to critical areas, fish and wildlife habitat conservation areas, water quality, and water storage capacity in all shoreline restoration and enhancement projects.*

Regulations

- A. *The Lewis County Shoreline Restoration Plan, and the plans of the Lower Columbia Fish Recovery Board, the Chehalis Basin Lead Entity, and other salmon recovery lead entities, identify potential restoration priorities and projects in shoreline areas throughout the County. These plans may be used as a guide for shoreline restoration and enhancement projects.*
- B. *All shoreline restoration and enhancement projects shall be designed and implemented by qualified professionals using best available science (BAS) and BMPs.*
- C. *Shoreline restoration and enhancement projects shall protect the integrity of onsite and adjacent natural resources, including aquatic and terrestrial habitats, processes, and properties.*
- D. *Shoreline restoration and enhancement projects shall demonstrate that no significant adverse change to river current, sediment transport, or water quality will result from the project.*
- E. *Restoration and enhancement projects shall be designed, maintained, and monitored to ensure long-term success. Measures to ensure the success of the project shall be identified by a qualified professional in any plan or details submitted for the project. Monitoring periods should generally not be less than three years.*
- F. *Shoreline restoration and enhancement efforts shall not significantly interfere with the normal public use of the navigable waters of the State without appropriate mitigation. For projects on State-owned aquatic lands, project proponents must coordinate with the WDNR to ensure the project will be appropriately located, prior to the solicitation of permits from regulatory agencies.*
- G. *Shoreline restoration and ecological enhancement projects are permitted in all shoreline environment designations and may include shoreline modification actions such as clearing, shoreline stabilization, dredging or filling, provided that the primary purpose of such actions is clearly restoration of the natural character and ecological functions of the shoreline.*
- H. *Review of restoration projects shall occur as follows:*
 - 1. *Projects that qualify as streamlined fish enhancement projects per RCW 77.55.181 shall be reviewed by the Department of Fish and Wildlife, and not be considered under this section.*
 - 2. *Restoration projects that are not subject to RCW 77.55.181 shall be reviewed under this section. Certain projects may be exempt from the requirement for a Shoreline Substantial Development per RCW 90.58.147.*
- I. *In accordance with RCW 90.58.580, a shoreline substantial development permit may not be required for development within an UGA that takes place on land that is brought under shoreline jurisdiction due to a shoreline restoration project. Any relief granted shall be strictly in accordance with the limited provisions of RCW 90.58.580, including the specific approval of Ecology.*

Section 3 of this report describes avoidance, minimization, and restoration measures to assure no net loss of shoreline ecological functions. Impacts will be restored on-site to minimize project impacts. The restoration efforts have been developed by qualified professionals at Otak and Lewis County and are based on best available science and federal, state, and local guidance.

4.4.6. [SMP 6.07] Shoreline Stabilization

Shoreline stabilization includes structural and nonstructural measures taken to address erosion impacts caused by natural processes, such as currents, floods, and waves. "Hard" structural shoreline stabilization measures include solid, hard surfaces, such as concrete or boulder bulkheads. "Soft" structural shoreline stabilization measures rely on less rigid materials, such as anchored logs, limited rock placement in conjunction with other components, and beach enhancement.

Generally, the harder the structural shoreline stabilization measure, the greater the impact on shoreline processes. Nonstructural shoreline stabilization measures include shoreline buffers, relocation of structures, groundwater management, and planning and regulatory measures to avoid the need for stabilization structures.

Policies

- A. Use structural shoreline stabilization measures only when nonstructural shoreline stabilization measures have been determined to be infeasible. The use of shoreline stabilization measures should be based on the following hierarchy of preference:*
 - 1. Take no action. Allow the shoreline to retreat naturally, increase shoreline buffers, and relocate structures.*
 - 2. Use flexible, bioengineered structures constructed of natural materials such as protective berms, large woody debris, or vegetative stabilization.*
 - 3. Employ rigid structures constructed of artificial materials such as riprap or concrete.*
- B. Locate and design shoreline stabilization measures to fit the physical character of the specific shoreline reach, which may differ substantially from adjacent reaches.*
- C. Coordinate the development of shoreline stabilization measures between affected property owners and public agencies and ensure those measures infringe on private property rights to the minimum extent necessary.*
- D. Consider the probable effects of proposed shoreline stabilization measures on neighboring properties.*
- E. Restrict the size of new shoreline stabilization structures to the minimum necessary.*
- F. Only permit new or expanded shoreline stabilization structures in limited instances.*
- G. Locate, design, and maintain shoreline stabilization structures to protect and maintain shoreline ecological functions, ongoing shoreline processes, and the integrity of shoreline features.*
- H. Locate and design shoreline stabilization structures to avoid the need for future structures where feasible.*
- I. Prohibit the installation of shoreline stabilization structures to create additional property.*
- J. Design land subdivisions to assure that future development on created lots will not require shoreline stabilization structures for reasonable development to occur.*

- K. *Require new development on steep slopes or bluffs to be set back so that the need for shoreline stabilization structures is unlikely during the life of the development.*
- L. *Prohibit new development requiring shoreline stabilization structures that are likely to cause adverse impacts to adjacent or down-current properties and shoreline areas.*
- M. *Incorporate multiple uses, restoration, and public shoreline access in the location, design, and maintenance of shoreline stabilization structures for public developments, whenever compatible with the primary purpose of the shoreline stabilization.*
- N. *Utilize BMPs in the design of shoreline stabilization structures.*
- O. *Allow new or expanded shoreline stabilization structures for ecological enhancement and restoration projects, or hazardous substance remediation projects only when nonstructural measures are infeasible or would be insufficient to achieve enhancement, restoration, or remediation objectives.*

Regulations

A. Design and Location of New Development

- 1. *New development shall be located and designed to avoid the need for future shoreline stabilization measures to the extent feasible.*
- 2. *New developments that require shoreline stabilization measures that cause significant impacts to adjacent or down-current properties and shorelines shall not be allowed.*
- 3. *Land subdivisions shall be designed to assure that future development of the created lots will not require shoreline stabilization structures for reasonable development to occur as demonstrated by a geotechnical analysis of the site and shoreline conditions.*
- 4. *New development on steep slopes or bluffs shall be set back sufficiently to ensure that shoreline stabilization structures are unlikely to be necessary during the life of the development as demonstrated by a geotechnical analysis.*
- 5. *If the applicant submits a proposal that is consistent with the critical area buffer requirements in SMP Appendix 2: Critical Areas Regulations, and is expected to have little need for future shoreline stabilization as proposed, the Shoreline Administrator may waive the need for a geotechnical analysis to be conducted per Sections 6.07.02(A)(3) and (4).*

B. Repair and Maintenance of Existing Shoreline Stabilization Structures

- 1. *The following items distinguish between maintenance and repair of a shoreline stabilization structure and a new structure:*
 - a. *Maintenance and repair includes modifications to an existing shoreline stabilization structure that is designed to ensure the continued function of the existing structure.*
 - b. *A modification that increases the size of the existing shoreline stabilization structure shall be considered a new structure, not maintenance or repair.*

- c. *Replacement of greater than 50 percent of an existing shoreline stabilization structure, as measured on a cumulative basis since the structure was established, is not considered repair or maintenance, and is considered a new structure.*
 - d. *Removal of an existing shoreline stabilization structure, including its footing or bottom course of rock, prior to the placement of a new structure, is considered a new structure for the purposes of this section. Removal of only the material above the footings or bottom course of rock is not considered a new structure and qualifies as maintenance and repair.*
 - e. *The placement of a new shoreline stabilization structure landward of a failing shoreline stabilization structure shall be considered a new structure subject to all the requirements of SMP Section 6.07, not maintenance or repair.*
2. *When an application proposes repair and maintenance of an existing legally established shoreline stabilization structure, it is subject to the following standards:*
- a. *Repair and maintenance of existing shoreline stabilization structures must be consistent with the requirements of SMP Section 4.04.*
 - b. *Areas of temporary disturbance within the shoreline buffer associated with maintenance and repair shall be restored to their pre-project condition within 30 days.*
3. *Repair of shoreline stabilization structures meeting all the criteria for exemption from a shoreline substantial development permit must still comply with SMP Section 6.07.02(E) and the SMP.*

C. Replacement or Enlargement of Existing Shoreline Stabilization Structures

- 1. *Replacement or enlargement of an existing shoreline stabilization structure shall be considered a new structure.*
- 2. *For purposes of this section, replacement means the construction of a new structure to perform the shoreline stabilization function of an existing structure that can no longer adequately serve its purpose.*

D. Standards to Demonstrate Need for Other Shoreline Stabilization Structures

- 1. *New shoreline stabilization structures shall only be allowed, when the following standards are met :*
 - a. *Natural processes are causing the shoreline erosion;*
 - b. *Site erosion is not being caused by upland conditions, such as drainage and the loss of vegetation;*
 - c. *Nonstructural measures, such as planting vegetation or installing on-site drainage improvements, are not feasible or sufficient to address erosion causes or impacts adequately; and*

- d. The need to protect primary structures or water dependent uses from damage due to erosion is demonstrated through a geotechnical analysis. Normal sloughing, erosion of steep bluffs, or shoreline erosion in itself, without a geotechnical analysis, is not demonstration of need.*
- 2. Shoreline stabilization structures may also be allowed to protect historic or cultural resources, or as part of restoration or hazardous substance remediation projects pursuant to Chapter 70.105D RCW, when nonstructural measures, such as planting vegetation or installing on-site drainage improvements, are not feasible or sufficient to adequately address the causes of erosion or avoid continued degradation, disturbance, or erosion of a site.*
- 3. A geotechnical analysis is not required when an applicant proposes to replace an existing shoreline stabilization structure with a softer measure, unless an analysis is deemed necessary by the Shoreline Administrator. To help determine the need for a geotechnical analysis, the applicant shall submit site photographs and a written narrative that describes the need to protect the primary uses or structures from erosion caused by waves or other natural processes operating at or waterward of the OHWM.*
- 4. Replacement of hard shoreline stabilization structures shall not encroach waterward of the OHWM or the existing shoreline stabilization measure unless the primary residence was constructed prior to January 1, 1992, and there are overriding safety or environmental concerns. In such cases, the replacement for the shoreline stabilization structure shall be attached to and waterward of the existing structure. All other replacement of hard stabilization structures shall be located at or landward of the existing shoreline stabilization measure.*

E. General Design Standards

- 1. Shoreline stabilization measures shall not result in a net loss of shoreline ecological function.*
- 2. When a hard or soft shoreline stabilization structure is demonstrated to be necessary, the following design standards shall be incorporated as part of the design:*
 - a. Impacts to sediment transport shall be avoided, minimized, or mitigated.*
 - b. Shoreline stabilization structures shall be the minimum size necessary by height, depth, and mass, and not extend waterward more than the minimum amount needed to achieve effective stabilization, except for those elements that enhance shoreline ecological functions and minimize impacts.*
 - c. Soft structural shoreline stabilization measures shall be used to the maximum extent feasible for new, enlarged, or replacement shoreline stabilization structures, unless demonstrated insufficient to protect primary structures in a geotechnical analysis.*
 - d. When feasible, hard structural shoreline stabilization measures shall be limited to the portion of the site necessary to protect primary structures or connect to existing shoreline stabilization measures on adjacent properties.*

- e. *All clearing, grading, and the placement of fill associated with shoreline stabilization structures shall be conducted landward of the OHWM to the maximum extent feasible unless it is infeasible due to safety or environmental concerns.*
- f. *The placement of fill behind shoreline stabilization structures is limited to one cubic yard per running foot of stabilization. The placement of fill in excess of this amount shall be subject to the regulations in SMP Section 6.03 and require a shoreline substantial development permit or shoreline conditional use permit.*
- g. *All approved new, enlarged, or replacement shoreline stabilization structures shall be designed using BMPs, including WDFW's Integrated Streambank Protection Guidelines, and minimize and mitigate unavoidable adverse impacts to public and private properties and ecological functions, consistent with SMP Section 4.04.*
- h. *All new, enlarged, or replacement shoreline stabilization structures shall mitigate adverse impacts to ecological functions and public and private properties. Mitigation measures shall be identified by the project proponent as part of the project application, and may be supplemented by the County, or State or Federal agencies, depending on the level of impact.*
- i. *When a new shoreline stabilization structure is proposed on a site where adjacent properties do not have shoreline stabilization structures, the new structure shall tie in with the existing contours of the adjoining properties, as feasible, to prevent erosion of the neighboring land.*
- j. *When a new shoreline stabilization structure is proposed on a site where adjacent properties have shoreline stabilization structures, the new structure may tie in with the existing structures on the adjoining properties. The new structure shall minimize, to the maximum extent feasible, the portion of the new structure that is waterward of the OHWM to connect to the existing structures.*
- k. *Shoreline stabilization structures shall be designed to remain stable during storm events, flood events on rivers, and wave conditions on lakes.*
- l. *Shoreline stabilization shall be designed to not significantly interfere with normal surface or subsurface drainage into the adjacent waterbody.*
- m. *All shoreline stabilization shall be designed to avoid hazards to navigation.*
- n. *Shoreline stabilization shall be designed to not restrict appropriate public access to the shoreline. Where a shoreline stabilization structure is required at a public access site, provisions for safe access to the water shall be incorporated into the design.*
- o. *Publicly financed or subsidized shoreline erosion control measures shall allow appropriate public access to the shoreline except where such access is determined to be infeasible because of incompatible uses, safety, security, or its potential to harm to ecological functions or the rights of adjacent landowners. In cases where the property has been taken by eminent domain,*

the condemning agency shall not allow public access unless it informs the court and property owner(s) that the land is being taken for the purpose, potentially among others, of providing public access to the shoreline.

- p. Stairs or other water access measures may be incorporated into shoreline stabilization design, provided that they do not extend waterward of the OHWM.*

F. Submittal Requirements

In addition to submitting an application for the appropriate shoreline permit, the applicant shall submit a geotechnical analysis prepared by an engineer licensed by the State as part of a request to construct a new, enlarged, or replacement shoreline stabilization structure. This analysis must include:

- 1. Adequate provisions to address the standards for geotechnical reports in WAC 173-26-231(3)(a)(iii)(D).*
- 2. Detailed construction plans for all shoreline stabilization structures, including, but not limited to, the following:*
 - a. Plan and cross-section views of the existing and proposed shoreline configuration, showing OHWM and accurate existing and proposed topography;*
 - b. A detailed construction sequence and specifications for all materials; and*
 - c. A mitigation and monitoring plan to ensure no net loss of shoreline functions.*

The proposed bridge scour repair project includes both “hard” and “soft” shoreline stabilization measures. Hard shoreline stabilization measures include the installation of Class B riprap for erosion and scour protection under the Senn Road MP 0.89 bridge. Soft shoreline stabilization measures include the installation of anchored large wood material log jams upstream and downstream of the crossing. The project is not anticipated to impact sediment transport in Lucas Creek. The project will result in the replacement and enlargement of the existing area of shoreline stabilization. Shoreline stabilization measures have been designed to be the minimum size necessary to ensure the continued use of the Senn Road MP 0.89 bridge. The project will restore any adverse impacts to the shoreline environment following installation of scour countermeasures. Section 3 of this report describes mitigation sequencing, unavoidable minimized impacts, restoration measures, and monitoring plan. The project shoreline stabilization measures will not result in a net loss of shoreline ecological functions.

4.4.7. [SMP 6.08] Structural Flood Hazard Reduction Measures

This section applies to structural flood hazard reduction measures as specified in SMP Section 4.05.

Policies

- A. Establish standards for structural flood hazard reduction measures to minimize environmental impacts and ensure no net loss of shoreline ecological functions.*
- B. Require new publicly funded dike or levee projects to dedicate and improve public access, except when subject to the exceptions in SMP Section 4.06.*

Regulations

- A. Where a project is specially intended to reduce flood hazards, structural flood hazard reduction measures shall only be allowed when a scientific and engineering analysis demonstrates:*
 - 1. That the structure is necessary to protect existing development;*
 - 2. That nonstructural measures are not feasible;*
 - 3. That impacts on ecological functions and priority species and habitats can be successfully mitigated so as to assure no net loss; and*
 - 4. That appropriate vegetation conservation actions are undertaken consistent with SMP Chapter 4.04.*
- B. New flood hazard reduction structures shall be placed landward of associated wetlands and designated vegetation conservation areas, except when the measure would increase ecological functions, such as when included as part of a wetland restoration. Provided that, such flood hazard reduction structures may be authorized if it is determined that no other alternative to reduce the flood hazard to existing development is feasible. The need for, and analysis of feasible alternatives to, structural improvements shall be documented through a geotechnical analysis.*
- C. New publicly funded structural flood hazard management measures, including dikes and levees, shall dedicate and improve public access except in those instances as listed in SMP Section 4.06.02(B).*

The project does not include the implementation of any structural flood hazard reduction measures.