

FINAL



APPENDICES TO THE SHORELINE INVENTORY AND CHARACTERIZATION REPORT

FOR
LEWIS COUNTY, AND THE CITIES OF CENTRALIA,
CHEHALIS, WINLOCK, AND MORTON

Prepared for:
Lewis County Community Development

Ecology Grant # G1200468



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FOR LEWIS COUNTY AND THE CITIES OF CENTRALIA, CHEHALIS, MORTON, AND WINLOCK

Prepared for
Lewis County Community Development
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APPENDIX A

Map Folio

Table 1. Required Shoreline Inventory Elements and Data Sources.

Inventory Element	Information Used	Data Sources	Map No.	1: 48,000	1: 9,600
Shoreline Jurisdiction			1	1A	1B
Reach Breaks			2	2A	2B
Shoreline and adjacent land use patterns	Public Lands/Ownership	Lewis County Assessor, Department of Natural Resources	3	3A	3B
	Planned Land Use	Lewis County, City of Chehalis, City of Centralia, City of Morton, City of Winlock	4	4A	4B
	Current Land Use	Lewis County Assessor	5	5A	5B
	Water Oriented Use	Lewis County Assessor, AHBL	6	6A	6B
	Sewer	Lewis County	7	7A	7B
Transportation	Roads	Washington State Department of Transportation	No Map		
Surface Water Systems	Lakes, Streams and Wetlands	Washington State Department of Natural Resources	8	8A	8B
	Floodway, Floodplains, Wetlands	FEMA	8	8A	8B
Soils	Soils	USDA NRCS SSURGO Database	9	9A	9B
Geology and Geologic Hazards	Surficial Geology	Washington Division of Geology and Earth Resources	10	10A	10B
	Mudflow Risk	USGS	11	11A	11B
	Rainier Blast Zone	USGS	11	11A	11B
	Liquefaction, Seismic Hazards	Washington State Department of Natural Resources	12	12A	12B
	Erosion Hazards	USDA NRCS SSURGO Database	13	13A	13B
	Landslide Hazards	Washington State Department of Natural Resources	14	14A	14B
	Channel Migration Zone	Lewis County	No Map		
Land Cover	Land and Vegetation Cover	USGS GAP Database	15	15A	15B
	Impervious Surfaces	CORE GIS	16	16A	16B
Critical Areas	Wetlands	National Wetland Inventory (NWI)	8	8A	8B
	Floodplain	FEMA	8	8A	8B
Habitats and Species	Fish and Wildlife Conservation Areas	WDFW PHS Database, NWI	17	17A	17B
	Species Observations (points)	WDFW PHS Database	No Map		
	Species Observations (areas)	WDFW PHS Database	No Map		
	Bald Eagle Buffers	WDFW PHS Database	17	17A	17B
	Fish Distribution	WDFW PHS Database, SalmonScape, StreamNet	18	18A	18B
Shoreline Modifications	Overwater Structures	Washington State Department of Ecology	19	19A	19B
	Dikes/Levees	Washington State Department of Ecology	19	19A	19B
	Dams	Ecology (2013) StreamNet	20	No map	No map
Water Quality	303d Listed Waters	Washington State Department of Ecology	21	21A	21B
Public Access	Public Access	Lewis County Assessor, AHBL	22	22A	22B
	Parks	Lewis County	22	22A	22B
	Golf Courses	Lewis County	22	22A	22B
Restoration Opportunities	Potential Restoration Actions		23	No map	No map
Ecology Permitted Sites	Toxic Sites (State Cleanup Sites, Active Underground Storage Tanks)	Washington State Department of Ecology	24	24A	24B
Historical and Cultural Resources	Sites and Structures on the Washington State Heritage Register	Department of Archaeology and Historic Preservation	No Map		

Figures provided as separate PDF files

APPENDIX B

Priority Habitats and Species

Habitats		** Important Note **	
Habitats	Aspen Stands	<p>These are the species and habitats identified for Lewis County. This list of species and habitats was developed using the distribution maps found in the Priority Habitat and Species (PHS) List (see http://wdfw.wa.gov/conservation/phs/). Species distribution maps depict counties where each priority species is known to occur as well as other counties where habitat primarily associated with the species exists. Two assumptions were made when developing distribution maps for each species:</p> <p>1) There is a high likelihood a species is present in a county, even if it has not been directly observed, if the habitat with which it is primarily associated exists.</p> <p>2) Over time, species can naturally change their distribution and move to new counties where usable habitat exists.</p> <p>Distribution maps in the PHS List were developed using the best information available. As new information becomes available, known distribution for some species may expand or contract. WDFW will periodically review and update the the distribution maps in PHS list.</p>	
	Biodiversity Areas & Corridors		
	Herbaceous Balds		
	Old-Growth/Mature Forest		
	Oregon White Oak Woodlands		
	West Side Prairie		
	Riparian		
	Freshwater Wetlands & Fresh Deepwater		
	Instream		
	Caves		
	Cliffs		
	Snags and Logs		
	Talus		
	Species	State Status	Federal Status
Fishes	Pacific Lamprey		Species of Concern
	River Lamprey	Candidate	Species of Concern
	White Sturgeon		
	Olympic Mudminnow	Sensitive	
	Leopard Dace	Candidate	
	Mountain Sucker	Candidate	
	Eulachon	Candidate	Threatened
	Bull Trout/ Dolly Varden	Candidate *	Threatened *
	Chinook Salmon	Candidate	Threatened (Upper Columbia Spring run is Endangered)
	Chum Salmon	Candidate	Threatened
	Coastal Res./ Searun Cutthroat		Species of Concern
	Coho		Threatened – Lower Columbia Species of Concern – Puget Sound
	Rainbow Trout/ Steelhead/ Inland Redband Trout	Candidate **	Threatened **
Amphibians	Cascade Torrent Salamander	Candidate	
	Dunn's Salamander	Candidate	
	Larch Mountain Salamander	Sensitive	Species of Concern
	Van Dyke's Salamander	Candidate	Species of Concern
	Western Toad	Candidate	Species of Concern
Reptiles	Pacific Pond Turtle (also known as Western Pond Turtle)	Endangered	Species of Concern
Birds	Marbled Murrelet	Threatened	Threatened
	Great Blue Heron		
	Cavity-nesting ducks: Wood Duck, Barrow's Goldeneye, Common Goldeneye, Bufflehead, Hooded Merganser		
	Western Washington nonbreeding concentrations of: Barrow's Goldeneye, Common Goldeneye, Bufflehead		
	Harlequin Duck		
	Waterfowl Concentrations		
	Bald Eagle	Sensitive	Species of Concern
	Golden Eagle	Candidate	
	Northern Goshawk	Candidate	Species of Concern
	Peregrine Falcon	Sensitive	Species of Concern
	Mountain Quail		
	Sooty Grouse		
	Wild Turkey		
	W WA nonbreeding concentrations of: Charadriidae, Scolopacidae, Phalaropodidae		
	Band-tailed Pigeon		
	Spotted Owl	Endangered	Threatened
	Vaux's Swift	Candidate	
	Black-backed Woodpecker	Candidate	
	Pileated Woodpecker	Candidate	
	Oregon Vesper Sparrow	Candidate	Species of Concern
	Purple Martin	Candidate	
Mammals	Roosting Concentrations of: Big-brown Bat, Myotis bats, Pallid Bat		
	Townsend's Big-eared Bat	Candidate	Species of Concern
	Western Gray Squirrel	Threatened	Species of Concern
	Western Pocket Gopher	Threatened	Candidate
	Cascade Red Fox	Candidate	
	Fisher	Endangered	Candidate
	Marten		
	Wolverine	Candidate	Candidate
	Columbian Black-tailed Deer		
	Mountain Goat		
	Elk		
Invertebrates	Blue-gray Taildropper	Candidate	
	Johnson's Hairstreak	Candidate	
	Valley Silverspot	Candidate	Species of Concern
	Taylor's Checkerspot	Endangered	Candidate

* Bull Trout only
 ** Steelhead only

APPENDIX C

Reach-scale Functional Assessment

				Hydrologic: Transport/Storage of Water and Sediment Hydrologic: Attenuation of flow/wave energy Hydrologic: Removing nutrients, toxins, sediment Hydrologic: Developing structure Vegetation: Maintaining Temperatures Vegetation: Removing nutrients, toxins, sediment Vegetation: Sediment Stabilization Vegetation: Attenuation of high debris and organic material Hyporheic: Recrutable woody storage; Water/sediment Hyporheic: base flows, nutrients... Habitat: Support vegetation conditions Habitat: Physical space and conditions													
Management Area	Reach Number	Type	Primary Water	1	2	3	4	5	6	7	8	9	10	11	12	Total Score	
Nisqually	01-01	Stream	Little Nisqually River	2	1	1	3	3	1	3	1	3	1	2	3	24	
Nisqually	01-02	Stream	East Creek	2	1	1	2	2	1	3	1	3	2	2	3	23	
Nisqually	01-03	Stream	Nisqually River	3	3	3	3	2	1	3	3	3	3	3	3	33	
Nisqually	01-04	Stream	Nisqually River	3	2	3	3	2	1	3	2	3	2	2	3	29	
Nisqually	01-05	Stream	Nisqually River	3	2	3	3	1	1	3	2	1	2	2	3	26	
Nisqually	01-06	Stream	Nisqually River	2	1	1	2	2	1	2	1	2	2	2	3	21	
Nisqually	01-08	Stream	Nisqually River	3	2	1	3	3	1	3	2	3	2	2	3	28	
Nisqually	01-09	Stream	Mineral Creek	2	3	3	3	3	1	3	3	3	3	3	2	32	
Nisqually	01-10	Stream	Roundtop Creek	2	1	3	3	3	1	3	1	3	1	2	3	26	
Nisqually	01-11	Stream	Mineral Creek	2	3	3	3	2	1	2	3	3	3	3	3	31	
Nisqually	01-12	Stream	Mineral Creek	2	1	3	3	3	1	2	1	3	1	2	3	25	
Nisqually	01-13	Stream	Mineral Creek	2	2	3	3	3	1	3	2	3	2	2	3	29	
Nisqually	01-14	Stream	Reese Creek	2	1	3	2	3	1	3	1	3	1	2	3	25	
Nisqually	01-15	Stream	Big Creek	3	1	3	3	3	1	3	1	3	1	2	3	27	
Nisqually	01-16	Stream	Catt Creek	2	1	1	3	3	1	3	1	3	1	2	3	24	
Nisqually	01-17	Stream	Berry Creek	2	1	1	3	3	1	3	1	3	1	2	3	24	
Nisqually	01-18	Stream	Paradise River	2	1	3	2	3	1	3	1	3	1	2	3	25	
Nisqually	01-19	Stream	Wetland	3	1	3	3	2	1	3	1	3	2	2	3	27	
Nisqually	01-20	Lake	Mineral Lake	2	3	2	2	1	1	2	3	2	3	1	2	24	
Nisqually	01-21	Lake	Unnamed 01	1	3	3	3	1	1	3	3	3	3	2	3	29	
Nisqually	01-22	Lake	Granite Lake	1	3	3	2	1	1	3	3	3	3	2	3	28	
Nisqually	01-23	Lake	Cora Lake	1	3	3	2	1	1	3	3	3	3	2	3	28	
Nisqually	01-24	Lake	Unnamed 02	1	3	3	2	1	1	3	3	3	3	2	3	28	
Nisqually Average																26.8	
Deschutes	02-01	Stream	Deschutes River	2	1	3	3	3	1	3	1	3	1	2	3	26	
Deschutes Average																26.0	
Upper Chehalis - Coast Range	3A-01	Stream	Chehalis River	2	1	1	3	3	1	3	1	3	1	2	3	24	
Upper Chehalis - Coast Range	3A-02	Stream	Crim Creek	2	1	3	3	2	1	3	1	2	1	2	3	24	
Upper Chehalis - Coast Range	3A-03	Stream	Stillman Creek	2	1	1	3	3	1	3	1	3	1	2	3	24	
Upper Chehalis - Coast Range	3A-04	Stream	Chehalis River, S F	2	1	3	3	2	1	3	1	3	1	2	3	25	
Upper Chehalis - Coast Range Average																24.3	
Upper Chehalis - Willapa Hills	3B-01	Stream	Garrard Creek	3	1	3	3	2	1	2	1	3	1	2	3	25	
Upper Chehalis - Willapa Hills	3B-02	Stream	Independence Creek	3	1	3	2	2	1	2	1	3	1	2	3	24	
Upper Chehalis - Willapa Hills	3B-03	Stream	Lincoln Creek	3	1	1	2	2	2	2	1	2	2	2	2	22	
Upper Chehalis - Willapa Hills	3B-04	Stream	Deep Creek	3	1	1	2	2	1	3	1	3	1	2	3	23	
Upper Chehalis - Willapa Hills	3B-05	Stream	Bunker Creek	3	1	1	2	2	1	2	1	2	1	2	2	20	

Management Area	Reach Number	Type	Primary Water	<div>Hydrologic: Transport/Storage of Water and Sediment</div> <div>Hydrologic: Attenuation of flow/wave energy</div> <div>Hydrologic: Removing nutrients, toxins, sediment</div> <div>Hydrologic: Developing structure</div> <div>Vegetation: Maintaining Temperatures</div> <div>Vegetation: Removing nutrients, toxins, sediment</div> <div>Vegetation: Sediment Stabilization</div> <div>Vegetation: Attenuation of high debris and organic material</div> <div>Hyporheic: Water/sediment storage, base flows, nutrients...</div> <div>Hyporheic: Support vegetation</div> <div>Habitat: Physical space and conditions</div>												Total Score	
				1	2	3	4	5	6	7	8	9	10	11	12		
Upper Chehalis - Willapa Hills	3B-06	Stream	Chehalis River	3	3	3	2	3	1	2	2	2	2	2	3	28	
Upper Chehalis - Willapa Hills	3B-07	Stream	Chehalis River	3	3	1	2	2	2	2	1	2	2	2	2	24	
Upper Chehalis - Willapa Hills	3B-08	Stream	Elk Creek	3	1	1	2	3	1	3	1	3	1	2	3	24	
Upper Chehalis - Willapa Hills	3B-09	Stream	Chehalis River	3	2	1	2	2	1	3	2	3	2	2	2	25	
Upper Chehalis - Willapa Hills	3B-10	Stream	Stowe Creek	3	1	3	2	2	1	2	1	2	1	2	2	22	
Upper Chehalis - Willapa Hills	3B-11	Stream	Rock Creek	3	1	3	2	2	1	2	1	2	1	2	3	23	
Upper Chehalis - Willapa Hills	3B-12	Stream	Chehalis River	3	2	3	2	2	1	3	2	3	2	2	3	28	
Upper Chehalis - Willapa Hills	3B-13	Stream	Chehalis River, S F	3	3	1	3	1	3	2	1	1	2	2	2	24	
Upper Chehalis - Willapa Hills	3B-14	Stream	Lake Creek	3	2	1	2	2	2	2	2	2	2	2	2	24	
Upper Chehalis - Willapa Hills	3B-15	Stream	Chehalis River, S F	3	3	1	2	1	3	3	1	1	1	2	2	23	
Upper Chehalis - Willapa Hills	3B-16	Stream	Lost Creek	3	1	1	2	2	1	2	1	3	1	2	2	21	
Upper Chehalis - Willapa Hills	3B-17	Stream	Stillman Creek	3	1	1	3	2	1	2	1	2	1	2	2	21	
Upper Chehalis - Willapa Hills	3B-18	Stream	Halfway Creek	3	1	1	3	2	1	3	1	3	1	2	2	23	
Upper Chehalis - Willapa Hills	3B-19	Stream	Chehalis River, S F	3	1	1	2	2	2	2	1	2	1	2	2	21	
Upper Chehalis - Willapa Hills	3B-20	Lake	Miller Swamp	3	3	3	3	2	2	3	3	3	3	3	3	34	
Upper Chehalis - Willapa Hills	3B-21	Lake	Unnamed 18	3	3	3	3	2	3	3	3	3	3	3	3	35	
Upper Chehalis - Willapa Hills	3B-22	Lake	Unnamed 18	3	3	3	3	2	3	3	3	3	3	3	3	35	
Upper Chehalis - Willapa Hills Average																25.0	
Upper Chehalis - Puget Lowlands	3C-01	Stream	Chehalis River	3	3	1	2	1	2	2	1	2	2	2	2	23	
Upper Chehalis - Puget Lowlands	3C-02	Stream	Chehalis River	3	3	1	2	1	3	2	2	2	2	2	2	25	
Upper Chehalis - Puget Lowlands	3C-03	Stream	Salzer Creek	3	3	1	2	1	3	2	1	1	2	2	2	23	
Upper Chehalis - Puget Lowlands	3C-04	Stream	Chehalis River	3	3	1	2	1	3	2	2	1	2	2	2	24	
Upper Chehalis - Puget Lowlands	3C-05	Stream	Chehalis River	3	3	1	2	1	3	2	1	1	2	2	2	23	
Upper Chehalis - Puget Lowlands	3C-06	Stream	Stearns Creek	3	3	1	2	1	3	2	1	1	1	2	2	22	
Upper Chehalis - Puget Lowlands	3C-07	Stream	Stearns Creek	3	2	1	2	1	3	2	2	1	2	2	2	23	
Upper Chehalis - Puget Lowlands	3C-08	Stream	Chehalis River	3	3	1	2	2	2	2	2	2	2	2	2	25	
Upper Chehalis - Puget Lowlands	3C-09	Stream	Newaukum River	2	3	1	2	2	2	2	2	2	2	2	2	24	
Upper Chehalis - Puget Lowlands	3C-10	Stream	Berwick Creek	3	3	1	2	1	3	2	3	1	3	3	3	28	
Upper Chehalis - Puget Lowlands	3C-11	Stream	Newaukum River	3	3	3	2	1	3	2	2	1	2	2	2	26	
Upper Chehalis - Puget Lowlands	3C-12	Stream	Newaukum River	3	2	3	2	1	3	2	2	1	2	2	2	25	
Upper Chehalis - Puget Lowlands	3C-13	Stream	Newaukum River, S F	3	2	3	2	2	1	2	2	3	2	2	2	26	
Upper Chehalis - Puget Lowlands	3C-14	Stream	Newaukum River, S F	3	1	3	2	3	1	2	1	3	1	2	3	25	
Upper Chehalis - Puget Lowlands	3C-15	Stream	Kearney Creek	3	3	3	2	2	1	3	3	3	3	3	3	32	
Upper Chehalis - Puget Lowlands	3C-16	Stream	Newaukum River, M F	3	3	1	2	2	1	3	3	3	3	3	3	30	
Upper Chehalis - Puget Lowlands	3C-17	Stream	Newaukum River, N F	3	2	3	2	2	2	2	2	2	2	2	2	26	
Upper Chehalis - Puget Lowlands	3C-18	Stream	Newaukum River, N F	3	2	3	3	2	1	3	2	3	2	2	3	29	

Management Area	Reach Number	Type	Primary Water	<div>Hydrologic: Transport/Storage of Water and Sediment</div> <div>Hydrologic: Attenuation of flow/wave energy</div> <div>Hydrologic: Removing nutrients, toxins, sediment</div> <div>Hydrologic: Developing structure</div> <div>Vegetation: Maintaining Temperatures</div> <div>Vegetation: Removing nutrients, toxins, sediment</div> <div>Vegetation: Sediment Stabilization energy</div> <div>Vegetation: Attenuation of high debris and organic material</div> <div>Hyporheic: Water/sediment storage, base flows, nutrients...</div> <div>Hyporheic: Support vegetation</div> <div>Habitat: Physical space and conditions</div>												Total Score	
				1	2	3	4	5	6	7	8	9	10	11	12		
Upper Chehalis - Puget Lowlands	3C-19	Stream	Lucas Creek	3	2	3	3	2	1	3	2	3	2	2	3	29	
Upper Chehalis - Puget Lowlands	3C-20	Lake	Unnamed 14	3	2	1	1	1	1	2	2	1	3	2	2	21	
Upper Chehalis - Puget Lowlands	3C-21	Lake	Carlisle Lake	2	3	1	2	1	1	2	3	2	3	3	3	26	
Upper Chehalis - Puget Lowlands Average																25.5	
Upper Chehalis - Western Foothills	3D-01	Stream	Fort Borst Lake	2	3	3	1	1	3	2	3	2	3	3	2	28	
Upper Chehalis - Western Foothills	3D-02	Stream	Skookumchuck River	2	3	3	1	2	2	2	1	2	2	2	2	24	
Upper Chehalis - Western Foothills	3D-03	Stream	Hanaford Creek	3	3	3	2	2	2	2	3	2	3	3	2	30	
Upper Chehalis - Western Foothills	3D-04	Stream	Hanaford Creek	3	2	3	3	3	1	3	2	3	2	2	3	30	
Upper Chehalis - Western Foothills	3D-05	Stream	Hanaford Creek	2	3	3	1	1	2	2	2	1	3	1	1	22	
Upper Chehalis - Western Foothills	3D-06	Stream	South Hanaford Creek	3	3	3	1	1	3	2	3	2	3	3	1	28	
Upper Chehalis - Western Foothills	3D-07	Stream	Salzer Creek	3	3	1	1	1	3	2	3	2	3	3	1	26	
Upper Chehalis - Western Foothills	3D-08	Stream	Newaukum River, N F	3	2	1	2	2	2	2	2	2	2	2	2	24	
Upper Chehalis - Western Foothills	3D-09	Lake	Pond Number Three	3	3	3	1	1	2	2	2	1	3	1	2	24	
Upper Chehalis - Western Foothills	3D-10	Lake	Unnamed 10	3	3	3	1	1	1	1	1	1	3	1	1	20	
Upper Chehalis - Western Foothills	3D-11	Lake	Unnamed 11	3	3	3	2	1	2	2	1	2	3	2	2	26	
Upper Chehalis - Western Foothills	3D-12	Lake	Unnamed 12	3	3	3	2	1	1	2	1	1	3	2	2	24	
Upper Chehalis - Western Foothills	3D-13	Lake	Pond Number Seven	3	3	3	2	1	1	2	2	2	3	2	2	26	
Upper Chehalis - Western Foothills	3D-14	Lake	Plummer Lake	2	3	3	2	1	2	2	3	3	3	3	2	29	
Upper Chehalis - Western Foothills Average																25.8	
Upper Chehalis - Cascade Lowlands	3E-01	Stream	Skookumchuck River	2	1	3	2	2	1	3	1	3	1	2	3	24	
Upper Chehalis - Cascade Lowlands	3E-02	Stream	Newaukum River, N F	2	1	3	2	2	1	3	1	3	1	2	3	24	
Upper Chehalis - Cascade Lowlands	3E-03	Stream	Newaukum River, S F	2	1	3	2	3	1	3	1	3	1	2	3	25	
Upper Chehalis - Cascade Lowlands	3E-04	Lake	Newaukum Lake	2	3	3	3	1	2	3	3	3	3	2	3	31	
Upper Chehalis - Cascade Lowlands Average																26.0	
Cowlitz - Willapa Hills	4A-01	Stream	Brim Creek	3	1	3	2	2	1	2	1	3	1	2	2	23	
Cowlitz - Willapa Hills	4A-02	Stream	Stillwater Creek	3	1	3	2	2	1	2	1	3	1	2	2	23	
Cowlitz - Willapa Hills	4A-03	Stream	Campbell Creek	3	1	3	2	2	1	2	1	3	1	2	2	23	
Cowlitz - Willapa Hills	4A-04	Stream	Stillwater Creek	3	1	3	2	2	1	2	1	3	1	2	2	23	
Cowlitz - Willapa Hills Average																23.0	
Cowlitz - Puget Lowlands	4B-01	Stream	Olequa Creek Wetland	3	3	3	2	2	1	3	3	3	3	3	3	32	
Cowlitz - Puget Lowlands	4B-02	Stream	Olequa Creek	3	1	3	2	3	1	3	1	3	1	2	2	25	
Cowlitz - Puget Lowlands	4B-03	Stream	King Creek	3	1	3	2	2	1	2	1	3	1	2	2	23	
Cowlitz - Puget Lowlands	4B-04	Stream	Olequa Creek	3	1	2	2	2	1	2	1	3	1	2	3	23	
Cowlitz - Puget Lowlands	4B-05	Stream	Stillwater Creek	3	1	3	2	2	1	2	1	2	1	2	2	22	
Cowlitz - Puget Lowlands	4B-06	Stream	Lacamas Creek	3	2	3	2	2	1	2	2	2	2	2	2	25	
Cowlitz - Puget Lowlands	4B-07	Stream	Lacamas Creek	3	3	3	2	2	1	2	3	3	3	3	2	30	

Management Area	Reach Number	Type	Primary Water	Hydrologic: Transport/Storage of Water and Sediment Hydrologic: Attenuation of flow/wave energy Hydrologic: Removing nutrients, toxins, sediment Hydrologic: Developing stream structure Vegetation: Maintaining Temperatures Vegetation: Removing nutrients, toxins, sediment Vegetation: Sediment Stabilization Vegetation: Attenuation of high debris and organic material Hyporheic: Recrutable woody storage, base flows, nutrients... Hyporheic: Support vegetation Habitat: Physical space and conditions												Total Score	
				1	2	3	4	5	6	7	8	9	10	11	12		
Cowlitz - Puget Lowlands	4B-08	Stream	Lacamas Creek	3	2	1	2	3	1	3	2	3	2	2	2	26	
Cowlitz - Puget Lowlands	4B-09	Stream	Cowlitz River	2	3	1	2	1	1	2	3	2	3	3	2	25	
Cowlitz - Puget Lowlands	4B-10	Stream	Cowlitz River	2	3	1	2	2	1	2	2	2	2	2	2	23	
Cowlitz - Puget Lowlands	4B-11	Stream	Cowlitz River	2	2	3	2	2	1	3	2	2	3	3	2	27	
Cowlitz - Puget Lowlands	4B-12	Stream	Cowlitz River	2	2	3	2	2	1	3	2	3	2	2	1	25	
Cowlitz - Puget Lowlands	4B-13	Stream	Cowlitz River	2	1	1	1	1	1	3	3	3	1	1	2	20	
Cowlitz - Puget Lowlands	4B-14	Stream	Salmon Creek	3	2	3	2	3	1	2	2	3	2	2	2	27	
Cowlitz - Puget Lowlands	4B-15	Stream	Mill Creek	3	1	3	2	3	1	3	1	3	2	2	3	27	
Cowlitz - Puget Lowlands	4B-16	Stream	Tilton River	2	1	3	3	2	1	3	1	3	1	2	3	25	
Cowlitz - Puget Lowlands	4B-17	Stream	Cinebar Creek	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Puget Lowlands	4B-18	Stream	Tilton River	2	1	3	3	3	1	3	1	3	2	2	3	27	
Cowlitz - Puget Lowlands	4B-19	Stream	Klickitat Creek	3	1	3	1	1	2	2	1	2	2	2	2	22	
Cowlitz - Puget Lowlands	4B-20	Lake	Unnamed 24	3	3	3	3	2	3	3	3	3	3	3	3	35	
Cowlitz - Puget Lowlands	4B-21	Lake	Unnamed 26	3	3	3	3	2	3	3	3	3	3	3	3	35	
Cowlitz - Puget Lowlands Average																26.2	
Cowlitz - Western Foothills	4C-01	Stream	Salmon Creek	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Western Foothills	4C-02	Stream	Salmon Creek	2	1	3	3	2	1	3	1	3	2	2	3	26	
Cowlitz - Western Foothills	4C-03	Stream	Cedar Creek	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Western Foothills Average																26.0	
Cowlitz - Cascade Lowlands	4D-01	Stream	Tilton River	2	1	3	3	2	1	3	1	3	1	2	3	25	
Cowlitz - Cascade Lowlands	4D-02	Stream	Tilton River	2	2	3	3	2	1	2	2	3	2	2	3	27	
Cowlitz - Cascade Lowlands	4D-03	Stream	Tilton River	2	2	3	3	3	1	2	2	3	2	2	3	28	
Cowlitz - Cascade Lowlands	4D-04	Lake	Johnson Creek	3	3	3	2	2	3	3	3	3	3	3	3	34	
Cowlitz - Cascade Lowlands	4D-05	Stream	Tilton River	3	3	3	3	3	1	3	2	3	2	2	3	31	
Cowlitz - Cascade Lowlands	4D-06	Stream	Connelly Creek	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Lowlands	4D-07	Stream	Tilton River	2	2	3	3	3	1	3	1	3	2	2	3	28	
Cowlitz - Cascade Lowlands	4D-08	Stream	Tilton River	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Lowlands	4D-09	Stream	Tilton River	2	2	3	3	3	1	3	1	3	2	2	3	28	
Cowlitz - Cascade Lowlands	4D-10	Stream	Tilton River	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Lowlands	4D-11	Stream	Tilton River	2	1	3	2	3	1	3	1	3	1	2	3	25	
Cowlitz - Cascade Lowlands	4D-12	Stream	Winston Creek	3	1	3	2	3	1	3	1	3	2	2	3	27	
Cowlitz - Cascade Lowlands	4D-13	Stream	Winston Creek	2	1	3	3	3	1	3	1	3	2	2	3	27	
Cowlitz - Cascade Lowlands	4D-14	Stream	Salmon Creek	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Lowlands	4D-15	Stream	Devils Creek	2	1	3	3	2	1	3	1	3	1	2	3	25	
Cowlitz - Cascade Lowlands	4D-16	Stream	Green River	2	1	3	2	3	1	3	1	3	2	2	3	26	
Cowlitz - Cascade Lowlands	4D-17	Stream	Green River	2	1	3	2	3	1	3	1	3	1	2	3	25	

Management Area	Reach Number	Type	Primary Water	Hydrologic: Transport/Storage of Water and Sediment Hydrologic: Attenuation of flow/wave energy Hydrologic: Removing nutrients, toxins, sediment Hydrologic: Developing structure Vegetation: Maintaining Temperatures Vegetation: Removing nutrients, toxins, sediment Vegetation: Sediment Stabilization Vegetation: Attenuation of high debris and organic material Hyporheic: Recrutable woody storage, base flows, nutrients... Hyporheic: Support vegetation Habitat: Physical space and conditions												Total Score	
				1	2	3	4	5	6	7	8	9	10	11	12		
Cowlitz - Cascade Lowlands	4D-18	Stream	Cowlitz River	2	1	3	2	2	1	2	1	3	1	2	3	23	
Cowlitz - Cascade Lowlands	4D-19	Stream	Cowlitz River	2	3	1	3	1	1	3	3	3	1	1	2	24	
Cowlitz - Cascade Lowlands	4D-20	Stream	Shelton Creek	2	1	3	2	3	1	3	1	3	1	2	1	23	
Cowlitz - Cascade Lowlands	4D-21	Stream	Landers Creek	2	1	3	2	3	1	3	1	3	1	2	3	25	
Cowlitz - Cascade Lowlands	4D-22	Stream	Rainey Creek	2	1	3	2	3	1	2	1	3	2	2	3	25	
Cowlitz - Cascade Lowlands	4D-23	Stream	Cowlitz River	2	1	3	2	2	1	3	1	3	1	2	2	23	
Cowlitz - Cascade Lowlands	4D-24	Stream	Goat Creek	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Lowlands	4D-25	Stream	Lake Scanewa	2	1	3	2	2	1	3	1	2	2	2	2	23	
Cowlitz - Cascade Lowlands	4D-26	Stream	Cowlitz River	2	3	3	2	2	1	2	2	2	2	2	3	26	
Cowlitz - Cascade Lowlands	4D-27	Stream	Siler Creek	3	3	1	2	2	3	2	3	2	3	3	3	30	
Cowlitz - Cascade Lowlands	4D-28	Stream	Cowlitz River	2	3	3	2	2	1	2	2	2	2	2	3	26	
Cowlitz - Cascade Lowlands	4D-29	Stream	Kiona Creek	2	1	2	3	3	1	3	1	3	2	2	3	26	
Cowlitz - Cascade Lowlands	4D-30	Stream	Silver Creek	2	1	1	3	3	1	3	1	3	1	2	3	24	
Cowlitz - Cascade Lowlands	4D-31	Stream	Cowlitz River	2	3	3	2	2	1	2	2	2	2	2	3	26	
Cowlitz - Cascade Lowlands	4D-32	Stream	Davis Creek	2	3	1	2	2	1	2	1	2	2	2	3	23	
Cowlitz - Cascade Lowlands	4D-33	Stream	Kilborn Creek	2	1	3	2	3	1	3	1	3	1	2	3	25	
Cowlitz - Cascade Lowlands	4D-34	Stream	Davis Creek	2	1	1	3	3	1	3	1	3	1	2	3	24	
Cowlitz - Cascade Lowlands	4D-35	Stream	Cowlitz River	3	3	3	3	2	1	3	2	3	2	2	3	30	
Cowlitz - Cascade Lowlands	4D-36	Stream	Cowlitz River	2	3	3	2	2	1	2	2	3	2	2	3	27	
Cowlitz - Cascade Lowlands	4D-37	Stream	Cowlitz River	2	3	2	3	2	1	2	2	3	2	2	3	27	
Cowlitz - Cascade Lowlands	4D-38	Stream	Unnamed 21	2	2	3	2	2	1	2	2	3	2	2	3	26	
Cowlitz - Cascade Lowlands	4D-39	Stream	Butter Creek	1	1	2	2	2	1	2	1	3	1	2	1	19	
Cowlitz - Cascade Lowlands	4D-40	Stream	Cispus River	2	2	3	2	2	1	3	2	3	2	2	3	27	
Cowlitz - Cascade Lowlands	4D-41	Stream	Quartz Creek	2	1	2	2	3	1	3	1	3	1	2	3	24	
Cowlitz - Cascade Lowlands	4D-42	Stream	Cispus River	2	2	3	3	3	1	3	2	3	2	2	3	29	
Cowlitz - Cascade Lowlands	4D-43	Stream	Woods Creek	2	1	1	2	3	1	3	1	3	1	2	3	23	
Cowlitz - Cascade Lowlands	4D-44	Stream	Cispus River	2	2	1	2	3	1	3	2	3	2	2	3	26	
Cowlitz - Cascade Lowlands	4D-45	Stream	Greenhorn Creek	2	1	1	2	3	1	3	1	3	1	2	3	23	
Cowlitz - Cascade Lowlands	4D-46	Stream	Cispus River	2	2	1	2	3	1	3	2	3	2	2	3	26	
Cowlitz - Cascade Lowlands	4D-47	Stream	Cispus River	2	2	2	3	2	1	3	2	3	2	2	3	27	
Cowlitz - Cascade Lowlands	4D-48	Stream	Yellowjacket Creek	2	1	1	3	3	1	3	1	3	2	2	3	25	
Cowlitz - Cascade Lowlands	4D-49	Stream	Cispus River	2	3	1	3	2	1	3	3	3	3	3	3	30	
Cowlitz - Cascade Lowlands	4D-50	Stream	Cispus River	2	2	1	3	3	1	3	2	3	2	2	3	27	
Cowlitz - Cascade Lowlands	4D-51	Stream	Cispus River	2	1	1	3	3	1	2	1	3	1	2	3	23	
Cowlitz - Cascade Lowlands	4D-52	Stream	Willame Creek	2	1	2	2	3	1	2	1	3	1	2	3	23	
Cowlitz - Cascade Lowlands	4D-53	Stream	Skate Creek	2	1	1	2	3	1	2	1	3	1	2	3	22	

Management Area	Reach Number	Type	Primary Water	<div>Hydrologic: Transport/Storage of Water and Sediment</div> <div>Hydrologic: Attenuation of flow/wave energy</div> <div>Hydrologic: Removing nutrients, toxins, sediment</div> <div>Hydrologic: Developing structure</div> <div>Vegetation: Maintaining Temperatures</div> <div>Vegetation: Removing nutrients, toxins, sediment</div> <div>Vegetation: Sediment Stabilization energy</div> <div>Vegetation: Attenuation of high debris and organic material</div> <div>Hyporheic: Recruitable woody storage, base flows, nutrients...</div> <div>Hyporheic: Support vegetation</div> <div>Habitat: Physical space and conditions</div>												Total Score	
				1	2	3	4	5	6	7	8	9	10	11	12		
Cowlitz - Cascade Lowlands	4D-54	Stream	Smith Creek	2	1	3	2	3	1	2	1	3	2	2	3	25	
Cowlitz - Cascade Lowlands	4D-55	Stream	Johnson Creek	1	2	3	1	2	1	2	2	3	2	2	2	23	
Cowlitz - Cascade Lowlands	4D-56	Stream	Lake Creek	2	1	3	2	3	1	2	1	3	1	2	3	24	
Cowlitz - Cascade Lowlands	4D-57	Lake	Swofford Pond	3	3	3	2	1	2	3	3	2	3	3	3	31	
Cowlitz - Cascade Lowlands	4D-58	Lake	Unnamed 25	2	3	3	2	1	1	2	3	3	3	3	3	29	
Cowlitz - Cascade Lowlands	4D-59	Lake	Bear Prairie	1	3	3	3	1	2	3	3	3	3	3	3	31	
Cowlitz - Cascade Lowlands	4D-60	Lake	Blue Lake	1	3	3	3	1	1	3	3	3	3	3	3	30	
Cowlitz - Cascade Lowlands Average																26.0	
Cowlitz - Cascade Highlands	4E-01	Stream	Butter Creek	2	1	2	3	3	1	3	1	3	1	2	3	25	
Cowlitz - Cascade Highlands	4E-02	Stream	Cowlitz River	2	1	3	3	3	1	3	1	3	2	2	3	27	
Cowlitz - Cascade Highlands	4E-03	Stream	Cowlitz River	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Highlands	4E-04	Stream	Ohanapecosh River	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Highlands	4E-05	Stream	Ohanapecosh River	2	2	2	3	3	1	3	2	3	2	2	3	28	
Cowlitz - Cascade Highlands	4E-06	Stream	Cowlitz River Clear Fork	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Highlands	4E-07	Stream	Cowlitz River	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Highlands	4E-08	Stream	Cortright Creek	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Highlands	4E-09	Stream	Summit Creek	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Highlands	4E-10	Stream	Coal Creek	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Highlands	4E-11	Stream	Lake Creek	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Highlands	4E-12	Lake	Packwood Lake	3	3	3	3	1	1	3	3	3	3	3	3	32	
Cowlitz - Cascade Highlands	4E-13	Stream	Upper Lake Creek	2	3	3	3	3	1	3	3	3	3	3	3	33	
Cowlitz - Cascade Highlands	4E-14	Stream	Johnson Creek	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Highlands	4E-15	Stream	Smith Creek	2	1	3	3	3	1	3	1	3	2	2	3	27	
Cowlitz - Cascade Highlands	4E-16	Stream	Cispus River	2	1	3	3	3	1	3	1	3	1	2	3	26	
Cowlitz - Cascade Highlands	4E-17	Stream	Cispus River	2	3	3	3	3	1	3	3	3	3	3	3	33	
Cowlitz - Cascade Highlands	4E-18	Stream	Cispus River	2	3	1	3	3	1	3	3	3	3	3	3	31	
Cowlitz - Cascade Highlands	4E-19	Lake	Walupt Lake	3	3	3	3	3	1	3	3	3	3	2	2	32	
Cowlitz - Cascade Highlands	4E-20	Stream	Walupt Creek	2	2	3	3	3	1	3	2	3	2	2	3	29	
Cowlitz - Cascade Highlands	4E-21	Stream	Nannie Creek	2	1	3	3	3	1	3	1	3	2	2	3	27	
Cowlitz - Cascade Highlands	4E-22	Lake	Frying Pan Lake	1	3	3	2	1	1	2	3	3	3	3	2	27	
Cowlitz - Cascade Highlands	4E-23	Lake	Jug Lake	1	3	3	2	1	1	2	3	3	3	3	2	27	
Cowlitz - Cascade Highlands	4E-24	Lake	Dumbbell Lake	1	3	3	2	1	1	2	3	3	3	2	2	26	
Cowlitz - Cascade Highlands	4E-25	Lake	Lily Lake	1	3	3	3	1	1	2	3	3	3	3	2	28	
Cowlitz - Cascade Highlands	4E-26	Lake	Unnamed 22	1	3	3	2	1	1	2	3	2	3	3	2	26	
Cowlitz - Cascade Highlands	4E-27	Lake	Goat Lake	1	3	3	2	1	1	1	2	2	3	2	2	23	
Cowlitz - Cascade Highlands Average																27.4	

				<div>Hydrologic: Transport/Storage of Water and Sediment</div> <div>Hydrologic: Attenuation of flow/wave energy</div> <div>Hydrologic: Removing nutrients, toxins, sediment</div> <div>Hydrologic: Developing stream structure</div> <div>Vegetation: Maintaining Temperatures</div> <div>Vegetation: Removing toxins, sediment</div> <div>Vegetation: Sediment stabilization</div> <div>Vegetation: Attenuation of high energy</div> <div>Vegetation: Recrutable woody debris and organic material</div> <div>Hyporheic: Water/sediment storage, base flows, nutrients...</div> <div>Hyporheic: Support vegetation</div> <div>Habitat: Physical space and conditions</div>													
Management Area	Reach Number	Type	Primary Water	1	2	3	4	5	6	7	8	9	10	11	12	Total Score	
Centralia	CE-01	Stream	Chehalis River	3	3	1	2	2	1	3	2	2	2	2	2	25	
Centralia	CE-02	Stream	Skookumchuck River	2	3	1	1	1	1	2	2	2	2	2	2	21	
Centralia	CE-03	Stream	Plummer Lake	1	2	1	1	1	1	1	2	1	2	2	1	16	
Centralia	CE-04	Stream	Chehalis River	2	1	1	1	1	2	1	1	2	2	2	1	17	
Centralia	CE-05	Stream	Salzer Creek	3	2	3	2	1	2	1	2	1	2	2	1	22	
Centralia	CE-06	Stream	Skookumchuck River	3	3	3	2	2	2	2	1	2	2	2	2	26	
Centralia Average																21.2	
Chehalis	CH-01	Stream	Salzer Creek	1	1	3	1	2	2	1	1	2	2	2	2	20	
Chehalis	CH-02	Stream	Chehalis River	3	3	3	2	1	1	2	1	2	2	2	2	24	
Chehalis	CH-03	Stream	Newaukum River	3	3	3	2	3	1	3	3	3	3	3	2	32	
Chehalis	CH-04	Stream	Berwick Creek	3	3	3	2	1	2	2	3	1	3	3	2	28	
Chehalis	CH-05	Stream	Berwick Creek	3	2	3	2	1	1	2	2	1	2	2	1	22	
Chehalis	CH-06	Lake	Unnamed 15	2	3	1	2	1	3	2	3	2	3	3	2	27	
Chehalis Average																25.5	
Morton	MO-01	Stream	Tilton River	3	2	3	2	3	1	3	2	3	2	2	3	29	
Morton	MO-02	Stream	Tilton River	3	2	3	2	2	1	2	2	2	2	2	3	26	
Morton	MO-03	Stream	Johnson Creek	2	2	3	1	2	1	2	2	2	3	2	3	25	
Morton Average																26.7	
Winlock	WI-01	Stream	King Creek	3	1	3	2	2	1	2	1	2	1	2	2	22	
Winlock	WI-02	Stream	Olequa Creek	3	1	3	2	3	1	3	1	3	1	2	3	26	
Winlock	WI-03	Stream	Olequa Creek	3	1	3	2	1	1	2	1	1	1	2	3	21	
Winlock Average																23.0	
All Management Areas Average																25.8	

Minimum Total Score 16
Maximum Total Score 35

APPENDIX D

Reach Data Sheets

Reach Data Sheet	
Reach Number	01-01
Location	T14N-R04E, T15N-R04E
Type	Stream
Primary Water Body	Little Nisqually River
Shorelines Jurisdiction Area (acre)	425.37
Length of Stream Shorelines (miles)	8.85
Physical Characteristics	
Geology	59.8% basaltic andesite flows 20.4% volcaniclastic deposits or rocks 19.8% andesite flows
Soils	95.5% Not Hydric 4.2% Partially Hydric 0.3% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	4%
Land Cover	85.3% Forest & Woodland 14.6% Recently Disturbed or Modified 0.1% Shrubland & Grassland
Human Use	
Land Ownership	41% Other Federal Land 38.1% Government Land 20.9% US Forest Service
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	LITTLE NISQUALLY RIVER - Temperature - 17 acres LITTLE NISQUALLY RIVER, W.F. - Temperature - 22.5 acres WILDCAT CREEK - Temperature - 0.459 acres
Critical Areas	
Erosion Hazard	45.4% Very severe 32.1% Severe 22.1% Moderate
Seismic/Liquefaction Hazard	100% N/A (bedrock) 0% N/A (water)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100% Elk 8% Waterfowl Concentrations 8% Bald Eagle
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 5.32 miles Rainbow Trout - Presence/Migration - 4.02 miles

Reach Data Sheet	
Reach Number	01-02
Location	T14N-R04E, T15N-R05E
Type	Stream
Primary Water Body	East Creek
Shorelines Jurisdiction Area (acre)	441.38
Length of Stream Shorelines (miles)	6.17
Physical Characteristics	
Geology	61.3% alpine glacial drift, pre-Fraser 6.9% basaltic andesite flows 3.9% continental sedimentary deposits or rocks 0.5% andesite flows
Soils	82.8% Partially Hydric 9.9% Not Hydric 7.3% All Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	20%
Land Cover	60.2% Forest & Woodland 12% Recently Disturbed or Modified 11% Shrubland & Grassland 10.8% Nonvascular & Sparse Vascular Rock Vegetation 4.5% Open Water 1.5% Agricultural Vegetation 0% Developed & Other Human Use
Human Use	
Land Ownership	38.6% Municipal 10.1% WA Dept. of Natural Resources 4.4% Government Land
Zoning	54.4% Forest 45.6% RDD-20
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	413
303(d) Listings (Category 5)	EAST CREEK - Temperature - 14.4 acres
Critical Areas	
Erosion Hazard	65.8% Slight 17.5% Moderate 6.4% Severe 3.1% Very severe
Seismic/Liquefaction Hazard	11.2% N/A (bedrock) 27.5% N/A (water) 61.3% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	370
Mudflow Hazard Area	40% Lahar Case 1 11% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 81.4% Mule And Black-tailed Deer 43.1% Bald Eagle 24.4% Waterfowl Concentrations 14% Wetlands 0% Harlequin Duck
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 5.42 miles Rainbow Trout - Presence/Migration - 5.9 miles

Reach Data Sheet	
Reach Number	01-03
Location	T15N-R05E
Type	Stream
Primary Water Body	Nisqually River
Shorelines Jurisdiction Area (acre)	255.04
Length of Stream Shorelines (miles)	2.52
Physical Characteristics	
Geology	62.5% alpine glacial drift, pre-Fraser
Soils	50.9% Partially Hydric 13% All Hydric 7.7% Not Hydric 9.9% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	52%
Land Cover	56.5% Forest & Woodland 18.1% Nonvascular & Sparse Vascular Rock Vegetation 9.8% Open Water 9.4% Recently Disturbed or Modified 5.2% Developed & Other Human Use 0.7% Agricultural Vegetation 0.3% Shrubland & Grassland
Human Use	
Land Ownership	7.9% Municipal
Zoning	65.9% RDD-20 31.5% Forest 2.5% RDD-5
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	48.3% Slight 7.2% Moderate 3.2% Severe
Seismic/Liquefaction Hazard	37.4% N/A (water) 62.6% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	255
Rainier Blast Zone (acres)	255
Mudflow Hazard Area	100% Lahar Case 1 98.5% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 83.6% Bald Eagle 80.9% Mule And Black-tailed Deer 42.4% Harlequin Duck 41.2% Wetlands
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 1.27 miles

Reach Data Sheet	
Reach Number	01-04
Location	T15N-R05E, T15N-R06E
Type	Stream
Primary Water Body	Nisqually River
Shorelines Jurisdiction Area (acre)	382.42
Length of Stream Shorelines (miles)	4.06
Physical Characteristics	
Geology	56% alpine glacial drift, pre-Fraser 31.4% alpine glacial drift, Fraser-age 4.5% basaltic andesite flows
Soils	60.4% Partially Hydric 7.8% All Hydric 7.3% Not Hydric 11.5% Unknown Hydric
FEMA 100-year Floodplain (area)	2%
NWI Wetland (area)	39%
Land Cover	55.7% Forest & Woodland 19.5% Open Water 19.1% Recently Disturbed or Modified 5.2% Nonvascular & Sparse Vascular Rock Vegetation 0.5% Developed & Other Human Use
Human Use	
Land Ownership	80.4% WA Dept. of Natural Resources 12.7% Municipal
Zoning	100% Forest
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	60.4% Slight 4.7% Very severe 2.4% Severe 0.2% Moderate
Seismic/Liquefaction Hazard	4.5% N/A (bedrock) 8% N/A (water) 56.1% very low 31.5% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	382
Rainier Blast Zone (acres)	382
Mudflow Hazard Area	100% Lahar Case 1 99.4% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 75.1% Mule And Black-tailed Deer 38.1% Bald Eagle 38.1% Harlequin Duck
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 3.8 miles Rainbow Trout - Presence/Migration - 3.8 miles

Reach Data Sheet	
Reach Number	01-05
Location	T15N-R06E, T15N-R07E
Type	Stream
Primary Water Body	Nisqually River
Shorelines Jurisdiction Area (acre)	447.13
Length of Stream Shorelines (miles)	3.01
Physical Characteristics	
Geology	99.9% alpine glacial drift, Fraser-age 0% continental sedimentary deposits or rocks
Soils	71.2% Partially Hydric 8.6% All Hydric 2.1% Not Hydric 6.7% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	26%
Land Cover	44.8% Recently Disturbed or Modified 27.2% Open Water 24.6% Forest & Woodland 2.4% Nonvascular & Sparse Vascular Rock Vegetation 0.8% Developed & Other Human Use 0.2% Shrubland & Grassland
Human Use	
Land Ownership	52.4% Municipal 31.9% WA Dept. of Natural Resources 5% Government Land 0.3% Lewis County
Zoning	53.4% Forest 46.6% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	71.2% Slight 1.8% Moderate 0.2% Severe
Seismic/Liquefaction Hazard	0% N/A (bedrock) 100% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	447
Rainier Blast Zone (acres)	447
Mudflow Hazard Area	100% Lahar Case 1 100% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 41.9% Mule And Black-tailed Deer 8.9% Bald Eagle 8.9% Harlequin Duck
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 3.07 miles Rainbow Trout - Presence/Migration - 3.07 miles

Reach Data Sheet	
Reach Number	01-06
Location	T14N-R07E, T15N-R07E
Type	Stream
Primary Water Body	Nisqually River
Shorelines Jurisdiction Area (acre)	680.23
Length of Stream Shorelines (miles)	2.78
Physical Characteristics	
Geology	75.8% alpine glacial drift, Fraser-age 11.7% alluvium 9.9% continental sedimentary deposits or rocks 2.5% lahars
Soils	64.1% Partially Hydric 10.2% All Hydric 5.2% Not Hydric 1.7% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	13%
Land Cover	45.7% Recently Disturbed or Modified 32.7% Forest & Woodland 17.7% Open Water 3% Developed & Other Human Use 0.5% Nonvascular & Sparse Vascular Rock Vegetation 0.4% Shrubland & Grassland
Human Use	
Land Ownership	41.1% Government Land 15.8% Municipal 5.2% Lewis County
Zoning	51.1% Forest 48.9% RDD-20
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	1,186
303(d) Listings (Category 5)	BERRY CREEK - Temperature - 0.684 acres
Critical Areas	
Erosion Hazard	64.1% Slight 3.3% Severe 1.2% Very severe 0.7% Moderate
Seismic/Liquefaction Hazard	9.9% N/A (bedrock) 75.9% very low to low 14.2% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	680
Rainier Blast Zone (acres)	680
Mudflow Hazard Area	100% Lahar Case 1 100% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 2.52 miles Rainbow Trout - Presence/Migration - 0.53 miles

Reach Data Sheet	
Reach Number	01-08
Location	T14N-R07E, T15N-R08E
Type	Stream
Primary Water Body	Nisqually River
Shorelines Jurisdiction Area (acre)	329.82
Length of Stream Shorelines (miles)	3.83
Physical Characteristics	
Geology	39% alluvium 25.9% lahars 22.1% alpine glacial drift, Fraser-age 8.3% granodiorite 3% volcaniclastic deposits or rocks 1.4% acidic intrusive rocks
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	43%
Land Cover	78.6% Forest & Woodland 16.6% Open Water 2.9% Nonvascular & Sparse Vascular Rock Vegetation 1.9% Developed & Other Human Use
Human Use	
Land Ownership	87.8% Government Land 12.2% Other Federal Land
Zoning	54.6% Forest 45.4% Wilderness
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	3
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	BERRY CREEK - Temperature - 0.701 acres
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	12.7% N/A (bedrock) 22.2% very low to low 65.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	330
Mudflow Hazard Area	100% Lahar Case 1 51.9% Lahar Case 2 39.9% Lahar Case 3
Priority Habitats and Species	
PHS Wildlife (acres)	22.4% Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 0.07 miles

Reach Data Sheet	
Reach Number	01-09
Location	T14N-R05E, T15N-R05E
Type	Stream
Primary Water Body	Mineral Creek
Shorelines Jurisdiction Area (acre)	214.79
Length of Stream Shorelines (miles)	3.31
Physical Characteristics	
Geology	95.7% alpine glacial drift, pre-Fraser 4.1% basaltic andesite flows
Soils	50% Partially Hydric 43.5% All Hydric 5.7% Not Hydric 0.5% Unknown Hydric
FEMA 100-year Floodplain (area)	46%
NWI Wetland (area)	57%
Land Cover	77.2% Forest & Woodland 11.7% Recently Disturbed or Modified 5.2% Open Water 4.1% Nonvascular & Sparse Vascular Rock Vegetation 0.9% Agricultural Vegetation 0.7% Developed & Other Human Use 0.2% Shrubland & Grassland
Human Use	
Land Ownership	12.3% WA Dept. of Natural Resources 3.8% Municipal
Zoning	48.5% Forest 34.5% FRL-LI 16.9% RDD-10
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	46.9% Slight 4.9% Moderate 2.5% Severe 1.4% Very severe
Seismic/Liquefaction Hazard	4.1% N/A (bedrock) 0.1% N/A (water) 95.7% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	215
Mudflow Hazard Area	34.8% Lahar Case 1 6.1% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 99.3% Mule And Black-tailed Deer 3.8% Bald Eagle 3.8% Harlequin Duck
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 3.3 miles Rainbow Trout - Presence/Migration - 3.3 miles

Reach Data Sheet	
Reach Number	01-10
Location	T14N-R05E
Type	Stream
Primary Water Body	Roundtop Creek
Shorelines Jurisdiction Area (acre)	265.28
Length of Stream Shorelines (miles)	5.47
Physical Characteristics	
Geology	96.7% alpine glacial drift, pre-Fraser 2.8% continental sedimentary deposits or rocks 0.5% basaltic andesite flows
Soils	95.2% Partially Hydric 4.8% Not Hydric
FEMA 100-year Floodplain (area)	7%
NWI Wetland (area)	4%
Land Cover	86.8% Forest & Woodland 11.5% Recently Disturbed or Modified 1.1% Agricultural Vegetation 0.5% Shrubland & Grassland 0% Developed & Other Human Use
Human Use	
Land Ownership	10.6% Municipal
Zoning	72.9% Forest 21.9% RDD-5 3.5% RDD-10 1.5% FRL-LI 0.2% STMU
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	106
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	89.3% Slight 5.9% Moderate 3.7% Very severe 1.1% Severe
Seismic/Liquefaction Hazard	3.3% N/A (bedrock) 96.7% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	265
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100 %Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 4.84 miles Rainbow Trout - Presence/Migration - 4.79 miles

Reach Data Sheet	
Reach Number	01-11
Location	T14N-R05E
Type	Stream
Primary Water Body	Mineral Creek
Shorelines Jurisdiction Area (acre)	88.53
Length of Stream Shorelines (miles)	0.82
Physical Characteristics	
Geology	100% alpine glacial drift, pre-Fraser
Soils	57.6% All Hydric 42.4% Partially Hydric
FEMA 100-year Floodplain (area)	98%
NWI Wetland (area)	66%
Land Cover	68.1% Forest & Woodland 18.6% Recently Disturbed or Modified 6.4% Nonvascular & Sparse Vascular Rock Vegetation 6.1% Developed & Other Human Use 0.5% Agricultural Vegetation 0.2% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	50.1% RDD-10 49.9% Forest
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	1,408
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	42.4% Slight
Seismic/Liquefaction Hazard	100% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	89
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100 %Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 0.88 miles Rainbow Trout - Presence/Migration - 0.88 miles

Reach Data Sheet	
Reach Number	01-12
Location	T13N-R05E, T14N-R06E
Type	Stream
Primary Water Body	Mineral Creek
Shorelines Jurisdiction Area (acre)	601.63
Length of Stream Shorelines (miles)	12.15
Physical Characteristics	
Geology	53.4% basaltic andesite flows 25% volcanoclastic deposits or rocks 11.4% alpine glacial drift, pre-Fraser 9.2% continental sedimentary deposits or rocks 1.1% mass-wasting deposits, mostly landslides
Soils	81.6% Not Hydric 12.2% Partially Hydric 6.2% All Hydric
FEMA 100-year Floodplain (area)	8%
NWI Wetland (area)	9%
Land Cover	80.9% Forest & Woodland 17.4% Recently Disturbed or Modified 1% Developed & Other Human Use 0.7% Nonvascular & Sparse Vascular Rock Vegetation 0% Agricultural Vegetation
Human Use	
Land Ownership	6.6% WA Dept. of Natural Resources
Zoning	87.9% Forest 12.1% Mine 0% RDD-10
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	430
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	46.2% Very severe 17.7% Moderate 17.1% Severe 12.8% Slight
Seismic/Liquefaction Hazard	87.5% N/A (bedrock) 11.4% very low 1.1% low to moderate
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	597
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 63.2% Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 10.44 miles Rainbow Trout - Presence/Migration - 8.4 miles

Reach Data Sheet	
Reach Number	01-13
Location	T13N-R06E, T14N-R06E
Type	Stream
Primary Water Body	Mineral Creek
Shorelines Jurisdiction Area (acre)	802.98
Length of Stream Shorelines (miles)	11.43
Physical Characteristics	
Geology	38.8% volcaniclastic deposits or rocks 30.1% basaltic andesite flows 23% alluvium 6.1% mass-wasting deposits, mostly landslides 1.8% alpine glacial drift, pre-Fraser
Soils	69.6% Not Hydric 25.1% All Hydric 4.9% Partially Hydric 0.5% Unknown Hydric
FEMA 100-year Floodplain (area)	2%
NWI Wetland (area)	24%
Land Cover	93.8% Forest & Woodland 5% Recently Disturbed or Modified 1.2% Shrubland & Grassland
Human Use	
Land Ownership	53.9% WA Dept. of Natural Resources
Zoning	97.5% Forest 1.4% RDD-10 1.1% Mine
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	96
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	42.7% Slight 26.2% Severe 21.2% Very severe 6.4% Moderate
Seismic/Liquefaction Hazard	69% N/A (bedrock) 1.8% very low 6.1% low to moderate 23% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	803
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 38.5% Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 7.32 miles Rainbow Trout - Presence/Migration - 7.17 miles

Reach Data Sheet	
Reach Number	01-14
Location	T15N-R06E
Type	Stream
Primary Water Body	Reese Creek
Shorelines Jurisdiction Area (acre)	31.61
Length of Stream Shorelines (miles)	0.62
Physical Characteristics	
Geology	94.1% alpine glacial drift, Fraser-age 5.9% basaltic andesite flows
Soils	82.9% Partially Hydric 17.1% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	84.1% Forest & Woodland 15.9% Recently Disturbed or Modified
Human Use	
Land Ownership	99.3% WA Dept. of Natural Resources 0.7% Municipal
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	82.9% Slight 10.9% Severe 6.2% Very severe
Seismic/Liquefaction Hazard	5.9% N/A (bedrock) 94.1% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	32
Mudflow Hazard Area	100% Lahar Case 1 0.2% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100 %Mule And Black-tailed Deer
PHS Fish	-

Reach Data Sheet	
Reach Number	01-15
Location	T14N-R06E, T15N-R07E
Type	Stream
Primary Water Body	Big Creek
Shorelines Jurisdiction Area (acre)	420.37
Length of Stream Shorelines (miles)	8.55
Physical Characteristics	
Geology	80.9% alpine glacial drift, Fraser-age 12.4% volcanoclastic deposits or rocks 3.4% andesite flows 3.3% continental sedimentary deposits or rocks
Soils	72.6% Partially Hydric 4.7% Not Hydric 0.5% Unknown Hydric
FEMA 100-year Floodplain (area)	34%
NWI Wetland (area)	4%
Land Cover	91.4% Forest & Woodland 8.3% Recently Disturbed or Modified 0.2% Shrubland & Grassland 0.1% Developed & Other Human Use
Human Use	
Land Ownership	43.2% Government Land 11.2% Municipal 10% WA Dept. of Natural Resources
Zoning	73.6% Forest 15.5% RDD-20 10.9% RRC-R2
Parks	Big Creek Campground
Number of Historic Sites	25
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	72.8% Slight 4% Moderate 0.5% Severe
Seismic/Liquefaction Hazard	19.1% N/A (bedrock) 80.9% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	420
Mudflow Hazard Area	96.6% Lahar Case 1 13.4% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 34% Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 5.68 miles Rainbow Trout - Presence/Migration - 5.67 miles

Reach Data Sheet	
Reach Number	01-16
Location	T14N-R06E, T15N-R06E
Type	Stream
Primary Water Body	Catt Creek
Shorelines Jurisdiction Area (acre)	393.17
Length of Stream Shorelines (miles)	8.10
Physical Characteristics	
Geology	61.4% volcaniclastic deposits or rocks 21.5% andesite flows 17.1% alpine glacial drift, Fraser-age
Soils	35.2% Not Hydric 19.7% Partially Hydric
FEMA 100-year Floodplain (area)	1%
NWI Wetland (area)	2%
Land Cover	96.7% Forest & Woodland 3.3% Recently Disturbed or Modified
Human Use	
Land Ownership	54.9% WA Dept. of Natural Resources 34% Government Land 10.8% Other Federal Land
Zoning	99.7% Forest 0.3% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	CATT CREEK - Temperature - 10.7 acres
Critical Areas	
Erosion Hazard	23.2% Very severe 18.9% Slight 6.1% Severe 1.6% Moderate
Seismic/Liquefaction Hazard	82.9% N/A (bedrock) 17.1% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	393
Mudflow Hazard Area	24.1% Lahar Case 1
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 43.3% Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 5.47 miles Rainbow Trout - Presence/Migration - 3.35 miles

Reach Data Sheet	
Reach Number	01-17
Location	T14N-R07E, T14N-R08E
Type	Stream
Primary Water Body	Berry Creek
Shorelines Jurisdiction Area (acre)	297.37
Length of Stream Shorelines (miles)	6.14
Physical Characteristics	
Geology	50.7% andesite flows 25.1% volcaniclastic deposits or rocks 22.1% alpine glacial drift, Fraser-age 2.1% lahars
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	1%
Land Cover	93.2% Forest & Woodland 6.8% Recently Disturbed or Modified
Human Use	
Land Ownership	70.1% Government Land 29.9% Other Federal Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	BERRY CREEK - Temperature - 11.3 acres
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	75.8% N/A (bedrock) 22.1% very low to low 2.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	297
Mudflow Hazard Area	41.7% Lahar Case 1 16.2% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	20% Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 2.15 miles

Reach Data Sheet	
Reach Number	01-18
Location	T15N-R08E
Type	Stream
Primary Water Body	Paradise River
Shorelines Jurisdiction Area (acre)	64.45
Length of Stream Shorelines (miles)	1.30
Physical Characteristics	
Geology	83.8% granodiorite 16.2% lahars
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	100% Forest & Woodland
Human Use	
Land Ownership	100% Government Land
Zoning	100% Wilderness
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	83.8% N/A (bedrock) 16.2% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	64
Mudflow Hazard Area	33.1% Lahar Case 1 13.4% Lahar Case 3
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	-

Reach Data Sheet	
Reach Number	01-19
Location	T15N-R04E
Type	Stream
Primary Water Body	Wetland
Shorelines Jurisdiction Area (acre)	24.95
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	65.3% alpine glacial drift, pre-Fraser
Soils	72% Partially Hydric 28% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	16%
Land Cover	74% Forest & Woodland 18.3% Open Water 5.3% Shrubland & Grassland 2.4% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	83.4% WA Dept. of Natural Resources 16.6% Municipal
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	65.1% Moderate 6.9% Slight
Seismic/Liquefaction Hazard	34.7% N/A (water) 65.3% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	25
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100 %Mule And Black-tailed Deer 67.4% Waterfowl Concentrations 67.4% Bald Eagle
PHS Fish	-

Reach Data Sheet	
Reach Number	01-20
Location	T14N-R05E
Type	Lake
Primary Water Body	Mineral Lake
Shorelines Jurisdiction Area (acre)	361.13
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	16.3% alpine glacial drift, pre-Fraser 13.7% basaltic andesite flows
Soils	17.8% Partially Hydric 6.6% Not Hydric 75.5% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	3%
Land Cover	71.2% Open Water 21.7% Forest & Woodland 4.2% Recently Disturbed or Modified 1.4% Developed & Other Human Use 1% Agricultural Vegetation 0.5% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	0.8% WA Dept. of Fish and Wildlife 0% Lewis County
Zoning	79.6% Forest 13.2% FRL-LI 5% STMU 1.2% STI 1.1% RDD-5
Parks	-
Number of Historic Sites	17
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	9.6% Moderate 8.3% Slight 5.2% Severe 1.4% Very severe
Seismic/Liquefaction Hazard	13.7% N/A (bedrock) 70% N/A (water) 16.3% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	361
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100 %Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 1.58 miles

Reach Data Sheet	
Reach Number	01-21
Location	T14N-R07E
Type	Lake
Primary Water Body	Unnamed 01
Shorelines Jurisdiction Area (acre)	39.25
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	55.2% volcaniclastic deposits or rocks 6.2% diorite 0.8% intrusive andesite
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	66.1% Forest & Woodland 33.9% Open Water
Human Use	
Land Ownership	93.5% Government Land 6.5% Other Federal Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	62.2% N/A (bedrock) 37.8% N/A (water)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	39
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	-

Reach Data Sheet	
Reach Number	01-22
Location	T14N-R07E
Type	Lake
Primary Water Body	Granite Lake
Shorelines Jurisdiction Area (acre)	49.57
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	32.9% volcaniclastic deposits or rocks 15.3% intrusive andesite
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	54.8% Open Water 45.2% Forest & Woodland
Human Use	
Land Ownership	100% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	48.2% N/A (bedrock) 51.8% N/A (water)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	50
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	99.4% Elk
PHS Fish	-

Reach Data Sheet	
Reach Number	01-23
Location	T14N-R07E
Type	Lake
Primary Water Body	Cora Lake
Shorelines Jurisdiction Area (acre)	50.84
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	47.6% volcaniclastic deposits or rocks
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	58.2% Forest & Woodland 41.8% Open Water
Human Use	
Land Ownership	100% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	47.6% N/A (bedrock) 52.4% N/A (water)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	51
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	-

Reach Data Sheet	
Reach Number	01-24
Location	T14N-R04E
Type	Lake
Primary Water Body	Unnamed 02
Shorelines Jurisdiction Area (acre)	32.74
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% andesite flows
Soils	53.1% Not Hydric 46.9% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	46%
Land Cover	62.1% Forest & Woodland 37.9% Open Water
Human Use	
Land Ownership	70.9% US Forest Service 29.1% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	25.3% Moderate 16.6% Severe 11.3% Very severe
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	-

Reach Data Sheet	
Reach Number	02-01
Location	T14N-R03E, T15N-R03E
Type	Stream
Primary Water Body	Deschutes River
Shorelines Jurisdiction Area (acre)	236.79
Length of Stream Shorelines (miles)	4.88
Physical Characteristics	
Geology	69.4% andesite flows 30.6% alluvium
Soils	56.4% Not Hydric 43.6% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	3%
Land Cover	91.2% Forest & Woodland 8.5% Recently Disturbed or Modified 0.2% Developed & Other Human Use 0% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	45.7% Severe 43.4% Slight 9.7% Very severe 1.2% Moderate
Seismic/Liquefaction Hazard	69.4% N/A (bedrock) 30.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 6.82 miles

Reach Data Sheet	
Reach Number	3A-01
Location	T11N-R05W, T12N-R05W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	1,583.97
Length of Stream Shorelines (miles)	32.01
Physical Characteristics	
Geology	63.8% basalt flows and flow breccias, Crescent Formation 17.5% basic intrusive rocks 15.3% tuffs and tuff breccias 3.4% marine sedimentary rocks
Soils	60.1% Not Hydric 39.7% Partially Hydric 0.3% All Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	1%
Land Cover	80.2% Forest & Woodland 19.7% Recently Disturbed or Modified 0% Developed & Other Human Use 0% Agricultural Vegetation 0% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	39.7% Slight 29.4% Very severe 15.5% Severe 14.7% Moderate
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	3.1% STEEP SLOPES > 80% 4.9% UNSTABLE PORTIONS ANCIENT LANSLIDES CRESCENT FM 2.6% UNSTABLE PORTIONS ANCIENT LANSLIDES MCINTOSH FM 25% SLOPES 40-80% 64.5% SLOPES < 40%
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk 39.8% Elk
PHS Fish	Chinook Salmon - Known Spawning - 10.33 miles Chinook Salmon - Presence/Migration - 21 miles Coast Resident Cutthroat - Presence/Migration - 14.81 miles Coho Salmon - Known Spawning - 24.01 miles Coho Salmon - Presence/Migration - 5.72 miles Steelhead Trout - Known Spawning - 26.6 miles Steelhead Trout - Presence/Migration - 0.14 miles Steelhead Trout - Presence/Migration - 1.23 miles Steelhead Trout - Presence/Migration - 0.23 miles

Reach Data Sheet	
Reach Number	3A-02
Location	T12N-R05W
Type	Stream
Primary Water Body	Crim Creek
Shorelines Jurisdiction Area (acre)	323.43
Length of Stream Shorelines (miles)	6.75
Physical Characteristics	
Geology	62.9% basalt flows and flow breccias, Crescent Formation 37.1% basic intrusive rocks
Soils	77.7% Not Hydric 22.3% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	70.7% Recently Disturbed or Modified 29.3% Forest & Woodland
Human Use	
Land Ownership	-
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	50.2% Very severe 22.3% Slight 16.1% Severe 11.4% Moderate
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	5.7% STEEP SLOPES > 80% 7.4% UNSTABLE PORTIONS ANCIENT LANDSLIDES CRESCENT FM 44.7% SLOPES 40-80% 42.3% SLOPES < 40%
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Coho Salmon - Known Spawning - 3.46 miles Coho Salmon - Presence/Migration - 1.15 miles Steelhead Trout - Known Spawning - 5.64 miles Steelhead Trout - Presence/Migration - 0.71 miles

Reach Data Sheet	
Reach Number	3A-03
Location	T11N-R04W, T12N-R04W
Type	Stream
Primary Water Body	Stillman Creek
Shorelines Jurisdiction Area (acre)	556.37
Length of Stream Shorelines (miles)	11.63
Physical Characteristics	
Geology	97.9% basic intrusive rocks 2.1% basalt flows and flow breccias, Crescent Formation 0% marine sedimentary rocks
Soils	73% Not Hydric 26.6% Partially Hydric 0.4% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	83.4% Forest & Woodland 16% Recently Disturbed or Modified 0.6% Agricultural Vegetation
Human Use	
Land Ownership	-
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	STILLMAN CREEK - Temperature - 0.134 acres
Critical Areas	
Erosion Hazard	31.2% Very severe 27.9% Slight 20.4% Moderate 19.5% Severe
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	1% ANCIENT LANDSLIDES WITH ACTIVE MARGINS 0.8% ACTIVE GROUND AT GEOLOGICALLY SENSITIVE SITES 0.8% ANCIENT LANDSLIDES - DORMANT 72.6% MODERATE SLOPING HILLS IN GABBRO/BASALT INTRUSIONS 24.8% MODERATE TO STEEPLY LOPING HILLS IN GABBRO/BASALT
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 8.12 miles Coho Salmon - Known Juvenile Rearing - 2.26 miles Coho Salmon - Known Spawning - 8.55 miles Coho Salmon - Presence/Migration - 0.91 miles Steelhead Trout - Known Spawning - 11.36 miles Steelhead Trout - Presence/Migration - 0.2 miles Steelhead Trout - Presence/Migration - 0.21 miles

Reach Data Sheet	
Reach Number	3A-04
Location	T11N-R03W, T11N-R04W
Type	Stream
Primary Water Body	Chehalis River, S F
Shorelines Jurisdiction Area (acre)	417.20
Length of Stream Shorelines (miles)	8.68
Physical Characteristics	
Geology	82.5% basic intrusive rocks 15.2% marine sedimentary rocks 1.4% mass-wasting deposits, mostly landslides 0.7% alluvium 0.3% tuffs and tuff breccias
Soils	52.1% Not Hydric 47.8% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	5%
Land Cover	73% Forest & Woodland 26.6% Recently Disturbed or Modified 0.4% Agricultural Vegetation 0% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	48.4% Slight 28.1% Moderate 14.9% Very severe 8.4% Severe
Seismic/Liquefaction Hazard	98% N/A (bedrock) 1.4% low to moderate 0.7% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Coho Salmon - Known Spawning - 8.73 miles Steelhead Trout - Known Spawning - 8.77 miles

Reach Data Sheet	
Reach Number	3B-01
Location	T15N-R05W
Type	Stream
Primary Water Body	Garrard Creek
Shorelines Jurisdiction Area (acre)	138.63
Length of Stream Shorelines (miles)	2.84
Physical Characteristics	
Geology	65.4% alluvium 26.7% nearshore sedimentary rocks 6.7% marine sedimentary rocks 1.3% mass-wasting deposits, mostly landslides
Soils	96% Partially Hydric 3.9% Not Hydric 0.1% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	8%
Land Cover	52.6% Forest & Woodland 25.9% Agricultural Vegetation 15.1% Recently Disturbed or Modified 6.3% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	58.4% Forest 41.6% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	96% Slight 2.9% Severe 0.5% Moderate 0.4% Very severe
Seismic/Liquefaction Hazard	33.3% N/A (bedrock) 1.3% low to moderate 65.4% moderate to high
Landslide Hazard Zones	0% STEEP GRADIENT HILLSLOPES > 64% 92.9% FLATS 0-10% 6.1% LOW GRADIENT HILLSLOPES 11-40% 1% MODERATE GRADIENT HILLSLOPES 41-64%
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 3.08 miles Coho Salmon - Known Spawning - 2.88 miles Coho Salmon - Presence/Migration - 0.12 miles Coho Salmon - Presence/Migration - 0.05 miles Steelhead Trout - Known Spawning - 1.68 miles Steelhead Trout - Presence/Migration - 0.55 miles

Reach Data Sheet	
Reach Number	3B-02
Location	T15N-R04W
Type	Stream
Primary Water Body	Independence Creek
Shorelines Jurisdiction Area (acre)	288.69
Length of Stream Shorelines (miles)	5.91
Physical Characteristics	
Geology	95.4% alluvium 3.5% nearshore sedimentary rocks 1% basalt flows and flow breccias, Crescent Formation 0% mass-wasting deposits, mostly landslides
Soils	95.3% Partially Hydric 3.4% Not Hydric 1.3% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	9%
Land Cover	67.9% Forest & Woodland 19.2% Agricultural Vegetation 8.9% Shrubland & Grassland 4% Recently Disturbed or Modified
Human Use	
Land Ownership	0.3% Lewis County 0% WA Dept. of Natural Resources
Zoning	50.5% ARL 49.5% RDD-20
Parks	-
Number of Historic Sites	6
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	95% Slight 1.7% Very severe 1% Severe 0.8% Moderate
Seismic/Liquefaction Hazard	4.6% N/A (bedrock) 0% low to moderate 95.4% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100% Roosevelt Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 6.07 miles Coho Salmon - Presence/Migration - 5.99 miles Coho Salmon - Presence/Migration - 0.15 miles

Reach Data Sheet	
Reach Number	3B-03
Location	T14N-R04W, T15N-R05W
Type	Stream
Primary Water Body	Lincoln Creek
Shorelines Jurisdiction Area (acre)	987.69
Length of Stream Shorelines (miles)	18.01
Physical Characteristics	
Geology	82.7% alluvium 7.6% nearshore sedimentary rocks 4.5% marine sedimentary rocks 3.3% mass-wasting deposits, mostly landslides 1.9% continental glacial outwash, Fraser-age
Soils	97.6% Partially Hydric 2% Not Hydric 0.5% Unknown Hydric
FEMA 100-year Floodplain (area)	27%
NWI Wetland (area)	12%
Land Cover	40.6% Forest & Woodland 36.6% Agricultural Vegetation 16.8% Shrubland & Grassland 5.9% Recently Disturbed or Modified 0.1% Developed & Other Human Use
Human Use	
Land Ownership	1.4% WA Dept. of Natural Resources 0% Lewis County
Zoning	69.7% ARL 23.4% RDD-20 6.9% Forest
Parks	-
Number of Historic Sites	8
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	232
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	95.1% Slight 2.8% Moderate 1.7% Severe
Seismic/Liquefaction Hazard	12.1% N/A (bedrock) 1.9% low 3.3% low to moderate 82.7% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk 22.1% Waterfowl Concentrations 9.4% Wild Turkey
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 12.73 miles Coho Salmon - Known Juvenile Rearing - 0.19 miles Coho Salmon - Known Spawning - 5.75 miles Coho Salmon - Presence/Migration - 12.04 miles Steelhead Trout - Known Juvenile Rearing - 0.04 miles Steelhead Trout - Known Spawning - 1.48 miles Steelhead Trout - Presence/Migration - 16.25 miles Steelhead Trout - Presence/Migration - 0.04 miles

Reach Data Sheet	
Reach Number	3B-04
Location	T14N-R03W, T14N-R04W
Type	Stream
Primary Water Body	Deep Creek
Shorelines Jurisdiction Area (acre)	157.64
Length of Stream Shorelines (miles)	3.20
Physical Characteristics	
Geology	34.1% alluvium 4.9% nearshore sedimentary rocks 4% mass-wasting deposits, mostly landslides 3% alpine glacial outwash, pre-Fraser 1.5% continental sedimentary deposits or rocks 1.1% marine sedimentary rocks
Soils	48% Partially Hydric 0.5% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	25.1% Forest & Woodland 13.6% Recently Disturbed or Modified 9% Agricultural Vegetation 0.5% Developed & Other Human Use 0.3% Shrubland & Grassland
Human Use	
Land Ownership	2.2% Other Federal Land 0.2% Lewis County
Zoning	41.1% RDD-20 6.2% ARL 1.3% FRL-LI
Parks	-
Number of Historic Sites	4
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	255
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	47.2% Slight 0.9% Moderate 0.5% Severe
Seismic/Liquefaction Hazard	7.5% N/A (bedrock) 3% very low 4% low to moderate 34.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	48.5% Roosevelt Elk
PHS Fish	Coho Salmon - Known Spawning - 1.71 miles Steelhead Trout - Known Spawning - 0.31 miles

Reach Data Sheet	
Reach Number	3B-05
Location	T13N-R04W, T14N-R04W
Type	Stream
Primary Water Body	Bunker Creek
Shorelines Jurisdiction Area (acre)	544.23
Length of Stream Shorelines (miles)	12.64
Physical Characteristics	
Geology	86.7% alluvium 7.3% nearshore sedimentary rocks 2.1% marine sedimentary rocks 1.6% alpine glacial outwash, pre-Fraser 1.3% continental sedimentary deposits or rocks 0.9% mass-wasting deposits, mostly landslides
Soils	97.5% Partially Hydric 2.5% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	8%
Land Cover	47.9% Forest & Woodland 28.6% Agricultural Vegetation 13.2% Shrubland & Grassland 10.1% Recently Disturbed or Modified 0.1% Developed & Other Human Use
Human Use	
Land Ownership	3.1% WA Dept. of Natural Resources 2.4% Other Federal Land
Zoning	90.2% RDD-20 5.8% Forest 2.5% ARL 1.5% FRL-LI
Parks	-
Number of Historic Sites	3
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	95.2% Slight 2.5% Moderate 2.3% Severe
Seismic/Liquefaction Hazard	10.7% N/A (bedrock) 1.6% very low 0.9% low to moderate 86.7% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100% Roosevelt Elk 6.9% Wild Turkey
PHS Fish	Coho Salmon - Known Juvenile Rearing - 7.21 miles Coho Salmon - Known Spawning - 4.43 miles Steelhead Trout - Known Juvenile Rearing - 0.39 miles Steelhead Trout - Known Spawning - 1.86 miles

Reach Data Sheet	
Reach Number	3B-06
Location	T13N-R03W, T13N-R04W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	65.14
Length of Stream Shorelines (miles)	0.87
Physical Characteristics	
Geology	52.8% alluvium 32% marine sedimentary rocks 14.6% mass-wasting deposits, mostly landslides 0.6% basalt flows (GrandeRondeBasalt, upper flows of norm.mag.pol.)
Soils	78% Partially Hydric 3.1% Not Hydric 18.8% Unknown Hydric
FEMA 100-year Floodplain (area)	81%
NWI Wetland (area)	31%
Land Cover	78.6% Forest & Woodland 18.3% Recently Disturbed or Modified 2.8% Shrubland & Grassland 0.2% Agricultural Vegetation
Human Use	
Land Ownership	13.9% WA State Parks and Recreation
Zoning	100% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	75.7% Slight 3.1% Severe 2.3% Moderate
Seismic/Liquefaction Hazard	32.6% N/A (bedrock) 14.6% low to moderate 52.8% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Known Spawning - 1.72 miles Coast Resident Cutthroat - Presence/Migration - 0.86 miles Coho Salmon - Presence/Migration - 0.86 miles Steelhead Trout - Known Juvenile Rearing - 0.86 miles

Reach Data Sheet	
Reach Number	3B-07
Location	T13N-R04W, T13N-R05W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	1,933.40
Length of Stream Shorelines (miles)	13.55
Physical Characteristics	
Geology	77.1% alluvium 12% basalt flows (GrandeRondeBasalt, upper flows of norm.mag.pol.) 9.7% marine sedimentary rocks 1.2% mass-wasting deposits, mostly landslides
Soils	93.4% Partially Hydric 1% Not Hydric 5.6% Unknown Hydric
FEMA 100-year Floodplain (area)	95%
NWI Wetland (area)	18%
Land Cover	52.2% Agricultural Vegetation 36.2% Forest & Woodland 8.7% Recently Disturbed or Modified 2.1% Shrubland & Grassland 0.7% Developed & Other Human Use
Human Use	
Land Ownership	4.4% WA State Parks and Recreation 0.4% Lewis County 0.3% Other State Land 0.1% WA Dept. of Fish and Wildlife 0% WA Dept. of Natural Resources
Zoning	71.6% ARL 17.1% RDD-10 4% RDD-20 2.3% RDD-5 2.3% Park 1.2% Mine 0.8% RAI 0.6% STMU 0.3% Forest
Parks	Rainbow Falls State Park
Number of Historic Sites	33
Number of Archaeological Sites	8
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	93.2% Slight 0.6% Moderate 0.4% Severe 0.1% Very severe
Seismic/Liquefaction Hazard	21.7% N/A (bedrock) 1.2% low to moderate 77.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk 74.5% Cavity-nesting Ducks 4.7% Wild Turkey

Reach Data Sheet	
PHS Fish	Chinook Salmon - Known Spawning - 27.83 miles Coast Resident Cutthroat - Presence/Migration - 13.92 miles Coho Salmon - Known Juvenile Rearing - 0.56 miles Coho Salmon - Known Spawning - 0.74 miles Coho Salmon - Presence/Migration - 13.84 miles Coho Salmon - Presence/Migration - 0.03 miles Steelhead Trout - Known Juvenile Rearing - 3.25 miles Steelhead Trout - Known Spawning - 11.26 miles

Reach Data Sheet	
Reach Number	3B-08
Location	T13N-R05W
Type	Stream
Primary Water Body	Elk Creek
Shorelines Jurisdiction Area (acre)	420.38
Length of Stream Shorelines (miles)	8.88
Physical Characteristics	
Geology	62.6% alluvium 29.4% marine sedimentary rocks 6.9% basalt flows (GrandeRondeBasalt, upper flows of norm.mag.pol.) 1.1% mass-wasting deposits, mostly landslides
Soils	87.7% Partially Hydric 11.8% Not Hydric 0% All Hydric
FEMA 100-year Floodplain (area)	11%
NWI Wetland (area)	3%
Land Cover	80.8% Forest & Woodland 12.8% Recently Disturbed or Modified 4.7% Agricultural Vegetation 1.3% Developed & Other Human Use 0.4% Shrubland & Grassland
Human Use	
Land Ownership	6.8% WA Dept. of Natural Resources
Zoning	52.7% Forest 33.1% RDD-10 10.3% ARL 3.8% RDD-5 0% STMU
Parks	-
Number of Historic Sites	7
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	125
303(d) Listings (Category 5)	ELK CREEK - Dissolved Oxygen - 13.7 acres
Critical Areas	
Erosion Hazard	86.7% Slight 6.2% Severe 4.7% Moderate 1.9% Very severe
Seismic/Liquefaction Hazard	36.3% N/A (bedrock) 1.1% low to moderate 62.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk 6% Wild Turkey
PHS Fish	Chinook Salmon - Known Spawning - 3.78 miles Coast Resident Cutthroat - Presence/Migration - 6.11 miles Coho Salmon - Presence/Migration - 0.36 miles Coho Salmon - Known Spawning - 2.02 miles Coho Salmon - Presence/Migration - 0.07 miles Coho Salmon - Known Spawning - 5.93 miles Coho Salmon - Presence/Migration - 0.04 miles Steelhead Trout - Known Spawning - 1.88 miles Steelhead Trout - Known Spawning - 7.08 miles

Reach Data Sheet	
Reach Number	3B-09
Location	T13N-R05W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	381.26
Length of Stream Shorelines (miles)	6.77
Physical Characteristics	
Geology	47.6% alluvium 41.8% marine sedimentary rocks 8.6% nearshore sedimentary rocks 2% basalt flows (GrandeRondeBasalt, upper flows of norm.mag.pol.)
Soils	91% Partially Hydric 6.5% Not Hydric 2.5% All Hydric
FEMA 100-year Floodplain (area)	18%
NWI Wetland (area)	33%
Land Cover	58.9% Forest & Woodland 29.9% Agricultural Vegetation 8.1% Recently Disturbed or Modified 2.1% Shrubland & Grassland 0.7% Nonvascular & Sparse Vascular Rock Vegetation 0.2% Developed & Other Human Use
Human Use	
Land Ownership	2.7% WA State Parks and Recreation 2.5% WA Dept. of Natural Resources
Zoning	85.1% ARL 9.1% RDD-5 4.7% Forest 0.7% RDD-20 0.4% STMU 0% City
Parks	-
Number of Historic Sites	6
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	88.2% Slight 3.5% Very severe 3.1% Moderate 2.7% Severe
Seismic/Liquefaction Hazard	52.4% N/A (bedrock) 47.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk 21.1% Wild Turkey
PHS Fish	Chinook Salmon - Known Spawning - 13.33 miles Coast Resident Cutthroat - Presence/Migration - 6.67 miles Coho Salmon - Known Spawning - 0.1 miles Coho Salmon - Presence/Migration - 6.61 miles Steelhead Trout - Known Spawning - 6.67 miles

Reach Data Sheet	
Reach Number	3B-10
Location	T12N-R05W, T13N-R05W
Type	Stream
Primary Water Body	Stowe Creek
Shorelines Jurisdiction Area (acre)	39.95
Length of Stream Shorelines (miles)	0.78
Physical Characteristics	
Geology	79.1% alluvium 20.7% tuffs and tuff breccias 0.2% marine sedimentary rocks
Soils	86% Partially Hydric 14% Not Hydric
FEMA 100-year Floodplain (area)	2%
NWI Wetland (area)	6%
Land Cover	47.1% Agricultural Vegetation 42.5% Forest & Woodland 8.6% Recently Disturbed or Modified 1.8% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	84.1% RDD-5 7.1% RDD-10 5.5% Forest 3.3% UGA 0% City
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	81.9% Slight 15.4% Moderate 2.7% Severe
Seismic/Liquefaction Hazard	20.9% N/A (bedrock) 79.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	-

Reach Data Sheet	
Reach Number	3B-11
Location	T12N-R05W, T13N-R05W
Type	Stream
Primary Water Body	Rock Creek
Shorelines Jurisdiction Area (acre)	191.83
Length of Stream Shorelines (miles)	4.01
Physical Characteristics	
Geology	46.4% marine sedimentary rocks 45.4% alluvium 4.9% basalt flows and flow breccias, Crescent Formation 3.3% tuffs and tuff breccias
Soils	85.9% Partially Hydric 14.1% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	2%
Land Cover	49.8% Forest & Woodland 29.7% Recently Disturbed or Modified 19.7% Agricultural Vegetation 0.7% Developed & Other Human Use
Human Use	
Land Ownership	17.1% WA State Parks and Recreation 5.3% WA Dept. of Natural Resources 1.4% Other State Land
Zoning	73.3% RDD-10 14.7% Forest 12% RDD-5
Parks	-
Number of Historic Sites	6
Number of Archaeological Sites	5
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	647
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	84.2% Slight 10.4% Severe 4% Moderate 1% Very severe
Seismic/Liquefaction Hazard	54.6% N/A (bedrock) 45.4% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Coho Salmon - Known Juvenile Rearing - 0.04 miles Coho Salmon - Known Spawning - 1.6 miles Coho Salmon - Presence/Migration - 0.04 miles Coho Salmon - Presence/Migration - 0.14 miles Steelhead Trout - Known Spawning - 4.21 miles Steelhead Trout - Presence/Migration - 0.04 miles

Reach Data Sheet	
Reach Number	3B-12
Location	T12N-R05W, T13N-R05W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	91.81
Length of Stream Shorelines (miles)	1.78
Physical Characteristics	
Geology	48.1% alluvium 42% basic intrusive rocks 6.7% tuffs and tuff breccias 3.2% marine sedimentary rocks
Soils	84.4% Partially Hydric 13.3% Not Hydric 2.3% All Hydric
FEMA 100-year Floodplain (area)	6%
NWI Wetland (area)	23%
Land Cover	73.3% Forest & Woodland 11.6% Agricultural Vegetation 10.6% Recently Disturbed or Modified 2.6% Shrubland & Grassland 2% Developed & Other Human Use
Human Use	
Land Ownership	1.3% WA State Parks and Recreation
Zoning	55.1% Forest 25.3% RDD-5 19.6% RDD-10
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	82.8% Slight 10.7% Very severe 3.9% Moderate 0.3% Severe
Seismic/Liquefaction Hazard	51.9% N/A (bedrock) 48.1% moderate to high
Landslide Hazard Zones	51.1% SLOPES 40-80% 43.7% SLOPES < 40%
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Known Spawning - 3.48 miles Coast Resident Cutthroat - Presence/Migration - 1.74 miles Coho Salmon - Known Spawning - 1.79 miles Steelhead Trout - Known Spawning - 1.79 miles

Reach Data Sheet	
Reach Number	3B-13
Location	T13N-R03W, T13N-R04W
Type	Stream
Primary Water Body	Chehalis River, S F
Shorelines Jurisdiction Area (acre)	238.80
Length of Stream Shorelines (miles)	1.30
Physical Characteristics	
Geology	94.7% alluvium 5.3% marine sedimentary rocks
Soils	93.6% Partially Hydric 6.4% Unknown Hydric
FEMA 100-year Floodplain (area)	100%
NWI Wetland (area)	13%
Land Cover	77.1% Agricultural Vegetation 18.1% Forest & Woodland 3% Shrubland & Grassland 1.3% Developed & Other Human Use 0.5% Recently Disturbed or Modified
Human Use	
Land Ownership	-
Zoning	75.2% ARL 22.5% RAI 1.7% RDD-20 0.6% RDD-5
Parks	-
Number of Historic Sites	4
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	93.2% Slight 0.4% Moderate
Seismic/Liquefaction Hazard	5.3% N/A (bedrock) 94.7% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Known Spawning - 3.09 miles Coast Resident Cutthroat - Presence/Migration - 1.54 miles Coho Salmon - Presence/Migration - 1.54 miles Steelhead Trout - Known Juvenile Rearing - 1.54 miles

Reach Data Sheet	
Reach Number	3B-14
Location	T12N-R03W, T13N-R03W
Type	Stream
Primary Water Body	Lake Creek
Shorelines Jurisdiction Area (acre)	622.31
Length of Stream Shorelines (miles)	10.13
Physical Characteristics	
Geology	52.3% nearshore sedimentary rocks 46.7% alluvium 1% marine sedimentary rocks
Soils	99.2% Partially Hydric 0.8% Not Hydric
FEMA 100-year Floodplain (area)	16%
NWI Wetland (area)	34%
Land Cover	43.5% Forest & Woodland 36.6% Shrubland & Grassland 13.8% Agricultural Vegetation 5.9% Recently Disturbed or Modified 0.2% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	33.7% Forest 29.3% RDD-5 25.1% RDD-20 11.8% ARL
Parks	-
Number of Historic Sites	4
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	97.4% Slight 1.8% Moderate 0.8% Severe
Seismic/Liquefaction Hazard	53.3% N/A (bedrock) 46.7% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Known Spawning - 0.01 miles Coast Resident Cutthroat - Presence/Migration - 0.01 miles Coho Salmon - Known Spawning - 0.11 miles Coho Salmon - Presence/Migration - 10.15 miles Coho Salmon - Presence/Migration - 0.12 miles Steelhead Trout - Known Juvenile Rearing - 0.01 miles

Reach Data Sheet	
Reach Number	3B-15
Location	T12N-R04W, T13N-R04W
Type	Stream
Primary Water Body	Chehalis River, S F
Shorelines Jurisdiction Area (acre)	646.51
Length of Stream Shorelines (miles)	5.50
Physical Characteristics	
Geology	98.7% alluvium 1.3% marine sedimentary rocks
Soils	94.5% Partially Hydric 5.5% Unknown Hydric
FEMA 100-year Floodplain (area)	98%
NWI Wetland (area)	3%
Land Cover	81.3% Agricultural Vegetation 11.9% Forest & Woodland 2.7% Shrubland & Grassland 2.4% Recently Disturbed or Modified 1.7% Developed & Other Human Use
Human Use	
Land Ownership	0% Lewis County
Zoning	96.3% ARL 1.7% RDD-20 1.6% RDD-5 0.5% CC
Parks	-
Number of Historic Sites	19
Number of Archaeological Sites	8
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	STILLMAN CREEK - Temperature - 0.029 acres
Critical Areas	
Erosion Hazard	94.5% Slight
Seismic/Liquefaction Hazard	1.3% N/A (bedrock) 98.7% moderate to high
Landslide Hazard Zones	0.1% HOLOCENE ALLUVIAL CHANNELS AND FLOODPLAINS 1.9% MODERATELY SLOPING HILLS IN SANDSTONE/SILTSTONE
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Known Spawning - 9.61 miles Chinook Salmon - Presence/Migration - 0.2 miles Coast Resident Cutthroat - Presence/Migration - 4.81 miles Coho Salmon - Presence/Migration - 5.54 miles Steelhead Trout - Known Juvenile Rearing - 3.45 miles Steelhead Trout - Known Spawning - 1.35 miles Steelhead Trout - Presence/Migration - 0 miles Steelhead Trout - Presence/Migration - 0.13 miles

Reach Data Sheet	
Reach Number	3B-16
Location	T12N-R04W
Type	Stream
Primary Water Body	Lost Creek
Shorelines Jurisdiction Area (acre)	94.47
Length of Stream Shorelines (miles)	2.12
Physical Characteristics	
Geology	56.2% marine sedimentary rocks 43.8% alluvium
Soils	91.9% Partially Hydric 8.1% Not Hydric
FEMA 100-year Floodplain (area)	3%
NWI Wetland (area)	8%
Land Cover	54.9% Forest & Woodland 40.6% Agricultural Vegetation 4% Recently Disturbed or Modified 0.4% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	67.6% RDD-20 32.4% ARL 0% Forest
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	STILLMAN CREEK - Temperature - 1.7 acres
Critical Areas	
Erosion Hazard	90.7% Slight 8.1% Severe 1.2% Moderate
Seismic/Liquefaction Hazard	56.2% N/A (bedrock) 43.8% moderate to high
Landslide Hazard Zones	84% HOLOCENE ALLUVIAL CHANNELS AND FLOODPLAINS 16% MODERATELY SLOPING HILLS IN SANDSTONE/SILTSTONE
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Known Spawning - 0.3 miles Coast Resident Cutthroat - Presence/Migration - 0.15 miles Coho Salmon - Presence/Migration - 2.12 miles Steelhead Trout - Known Juvenile Rearing - 0.01 miles Steelhead Trout - Known Spawning - 0.14 miles Steelhead Trout - Presence/Migration - 1.93 miles

Reach Data Sheet	
Reach Number	3B-17
Location	T12N-R04W
Type	Stream
Primary Water Body	Stillman Creek
Shorelines Jurisdiction Area (acre)	127.70
Length of Stream Shorelines (miles)	2.69
Physical Characteristics	
Geology	50.2% marine sedimentary rocks 49.8% alluvium
Soils	100% Partially Hydric
FEMA 100-year Floodplain (area)	8%
NWI Wetland (area)	9%
Land Cover	46.2% Agricultural Vegetation 45% Forest & Woodland 6.8% Recently Disturbed or Modified 1.9% Shrubland & Grassland 0.1% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	85.1% ARL 14.9% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	322
303(d) Listings (Category 5)	STILLMAN CREEK - Temperature - 12.7 acres
Critical Areas	
Erosion Hazard	99.8% Slight 0.2% Moderate
Seismic/Liquefaction Hazard	50.2% N/A (bedrock) 49.8% moderate to high
Landslide Hazard Zones	86% HOLOCENE ALLUVIAL CHANNELS AND FLOODPLAINS 1.6% MODERATE SLOPING HILLS IN GABBRO/BASALT INTRUSIONS 12.2% MODERATELY SLOPING HILLS IN SANDSTONE/SILTSTONE
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Known Spawning - 5.23 miles Coast Resident Cutthroat - Presence/Migration - 2.61 miles Coho Salmon - Known Spawning - 2.37 miles Coho Salmon - Presence/Migration - 0.28 miles Steelhead Trout - Known Spawning - 2.61 miles Steelhead Trout - Presence/Migration - 0.04 miles

Reach Data Sheet	
Reach Number	3B-18
Location	T12N-R04W
Type	Stream
Primary Water Body	Halfway Creek
Shorelines Jurisdiction Area (acre)	287.51
Length of Stream Shorelines (miles)	6.08
Physical Characteristics	
Geology	51.3% marine sedimentary rocks 45.3% alluvium 3.3% basic intrusive rocks 0.1% basalt flows and flow breccias, Crescent Formation
Soils	95.4% Partially Hydric 4.6% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	7%
Land Cover	64.7% Forest & Woodland 19.7% Recently Disturbed or Modified 15.5% Agricultural Vegetation 0% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	47.4% Forest 42.5% ARL 10.1% RDD-20
Parks	Bositfort Lions Club Park
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	STILLMAN CREEK - Temperature - 28.9 acres
Critical Areas	
Erosion Hazard	95.3% Slight 1.9% Moderate 1.9% Severe 1% Very severe
Seismic/Liquefaction Hazard	54.7% N/A (bedrock) 45.3% moderate to high
Landslide Hazard Zones	71.5% HOLOCENE ALLUVIAL CHANNELS AND FLOODPLAINS 3.9% MODERATE SLOPING HILLS IN GABBRO/BASALT INTRUSIONS 24.3% MODERATELY SLOPING HILLS IN SANDSTONE/SILTSTONE 0.4% MODERATE TO STEEPLY LOPING HILLS IN GABBRO/BASALT
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk 29.8% Wild Turkey
PHS Fish	Chinook Salmon - Known Spawning - 3.8 miles Coast Resident Cutthroat - Presence/Migration - 2.39 miles Coho Salmon - Known Spawning - 6.19 miles Steelhead Trout - Known Spawning - 6.15 miles

Reach Data Sheet	
Reach Number	3B-19
Location	T11N-R03W, T12N-R04W
Type	Stream
Primary Water Body	Chehalis River, S F
Shorelines Jurisdiction Area (acre)	865.98
Length of Stream Shorelines (miles)	16.54
Physical Characteristics	
Geology	87.5% alluvium 12.1% marine sedimentary rocks 0.3% nearshore sedimentary rocks
Soils	98.2% Partially Hydric 1.4% All Hydric 0.4% Not Hydric
FEMA 100-year Floodplain (area)	4%
NWI Wetland (area)	5%
Land Cover	43.4% Forest & Woodland 41.9% Agricultural Vegetation 9.5% Shrubland & Grassland 4.8% Recently Disturbed or Modified 0.4% Developed & Other Human Use
Human Use	
Land Ownership	0% Lewis County
Zoning	92.7% ARL 6.9% Forest 0.4% CC
Parks	-
Number of Historic Sites	7
Number of Archaeological Sites	7
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	696
303(d) Listings (Category 5)	STILLMAN CREEK - Temperature - 0.028 acres
Critical Areas	
Erosion Hazard	97.4% Slight 1% Moderate 0.2% Severe
Seismic/Liquefaction Hazard	12.5% N/A (bedrock) 87.5% moderate to high
Landslide Hazard Zones	0% HOLOCENE ALLUVIAL CHANNELS AND FLOODPLAINS 0.1% MODERATELY SLOPING HILLS IN SANDSTONE/SILTSTONE
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk 0.1% Oak Woodland
PHS Fish	Chinook Salmon - Known Spawning - 26.25 miles Chinook Salmon - Presence/Migration - 1.98 miles Coast Resident Cutthroat - Presence/Migration - 12.14 miles Coho Salmon - Known Spawning - 7.84 miles Coho Salmon - Presence/Migration - 9.97 miles Steelhead Trout - Known Juvenile Rearing - 0.1 miles Steelhead Trout - Known Spawning - 7.11 miles Steelhead Trout - Presence/Migration - 10.45 miles

Reach Data Sheet	
Reach Number	3B-20
Location	T13N-R04W
Type	Lake
Primary Water Body	Miller Swamp
Shorelines Jurisdiction Area (acre)	103.95
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	99.6% alluvium 0.4% marine sedimentary rocks
Soils	100% Partially Hydric
FEMA 100-year Floodplain (area)	1%
NWI Wetland (area)	75%
Land Cover	88.8% Forest & Woodland 11.2% Shrubland & Grassland 0.1% Recently Disturbed or Modified
Human Use	
Land Ownership	0.3% Lewis County
Zoning	100% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	100% Slight
Seismic/Liquefaction Hazard	0.4% N/A (bedrock) 99.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk 100 %Cavity-nesting Ducks
PHS Fish	-

Reach Data Sheet	
Reach Number	3B-21
Location	T12N-R03W
Type	Lake
Primary Water Body	Unnamed 18
Shorelines Jurisdiction Area (acre)	117.38
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% nearshore sedimentary rocks
Soils	93.2% Partially Hydric 6.8% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	30%
Land Cover	93.9% Forest & Woodland 3.6% Agricultural Vegetation 1.9% Recently Disturbed or Modified 0.6% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	90.2% Slight 6.8% Severe 3% Moderate
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Coho Salmon - Presence/Migration - 0.83 miles

Reach Data Sheet	
Reach Number	3B-22
Location	T12N-R03W
Type	Lake
Primary Water Body	Unnamed 18
Shorelines Jurisdiction Area (acre)	60.38
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% nearshore sedimentary rocks
Soils	92.2% Partially Hydric 7.8% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	48%
Land Cover	83% Forest & Woodland 17% Recently Disturbed or Modified
Human Use	
Land Ownership	-
Zoning	99.8% Forest 0.2% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	68.8% Slight 23.4% Moderate 7.8% Severe
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	-

Reach Data Sheet	
Reach Number	3C-01
Location	T14N-R03W, T15N-R03W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	958.45
Length of Stream Shorelines (miles)	3.93
Physical Characteristics	
Geology	96.9% alluvium 1.7% continental glacial outwash, Fraser-age 1% alpine glacial outwash, pre-Fraser 0.4% marine sedimentary rocks
Soils	85.6% Partially Hydric 3.3% All Hydric 3% Not Hydric 8.1% Unknown Hydric
FEMA 100-year Floodplain (area)	97%
NWI Wetland (area)	20%
Land Cover	63.9% Agricultural Vegetation 18.8% Forest & Woodland 7.4% Shrubland & Grassland 6.3% Recently Disturbed or Modified 2.4% Developed & Other Human Use 0.8% Open Water 0.4% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	26.4% Municipal
Zoning	46.8% RDD-20 43.4% RDD-10 9.6% RDD-5 0.1% City 0% CC 0% UGA
Parks	-
Number of Historic Sites	20
Number of Archaeological Sites	4
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	291
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	85.6% Slight 3% Severe
Seismic/Liquefaction Hazard	0.4% N/A (bedrock) 1% very low 1.7% low 97% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	85.5% Roosevelt Elk 1% Oak Woodland
PHS Fish	Chinook Salmon - Known Spawning - 7.32 miles Coast Resident Cutthroat - Presence/Migration - 4.18 miles Coho Salmon - Presence/Migration - 3.93 miles Largemouth Bass - Presence/Migration - 3.66 miles Steelhead Trout - Known Juvenile Rearing - 3.66 miles Steelhead Trout - Presence/Migration - 0.27 miles

Reach Data Sheet	
Reach Number	3C-02
Location	T14N-R02W, T14N-R03W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	633.11
Length of Stream Shorelines (miles)	2.49
Physical Characteristics	
Geology	98.8% alluvium 0.6% nearshore sedimentary rocks 0.5% alpine glacial outwash, pre-Fraser 0% marine sedimentary rocks
Soils	87.3% Partially Hydric 0.1% Not Hydric 12.6% Unknown Hydric
FEMA 100-year Floodplain (area)	99%
NWI Wetland (area)	24%
Land Cover	69.3% Agricultural Vegetation 17.7% Shrubland & Grassland 7.5% Forest & Woodland 2.6% Developed & Other Human Use 2.4% Recently Disturbed or Modified 0.5% Open Water
Human Use	
Land Ownership	12.8% Other State Land 0% Lewis County 0% Municipal
Zoning	85.8% RDD-20 14.1% RDD-5 0% UGA 0% City
Parks	-
Number of Historic Sites	7
Number of Archaeological Sites	17
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	72
303(d) Listings (Category 5)	CHEHALIS RIVER - PCB - 3.8 acres
Critical Areas	
Erosion Hazard	87.1% Slight 0.2% Moderate 0.1% Very severe
Seismic/Liquefaction Hazard	0.6% N/A (bedrock) 0.5% very low 98.8% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	87.6% Waterfowl Concentrations 14.5% Cavity-nesting Ducks 11% Roosevelt Elk
PHS Fish	Chinook Salmon - Presence/Migration - 4.69 miles Coast Resident Cutthroat - Presence/Migration - 2.35 miles Coho Salmon - Presence/Migration - 2.49 miles Steelhead Trout - Presence/Migration - 2.35 miles

Reach Data Sheet	
Reach Number	3C-03
Location	T13N-R03W, T14N-R03W
Type	Stream
Primary Water Body	Salzer Creek
Shorelines Jurisdiction Area (acre)	1,550.37
Length of Stream Shorelines (miles)	5.30
Physical Characteristics	
Geology	98.3% alluvium 1.5% marine sedimentary rocks 0.3% nearshore sedimentary rocks
Soils	92.8% Partially Hydric 0.1% Not Hydric 7% Unknown Hydric
FEMA 100-year Floodplain (area)	100%
NWI Wetland (area)	15%
Land Cover	80.4% Agricultural Vegetation 7.2% Forest & Woodland 6.1% Recently Disturbed or Modified 5% Shrubland & Grassland 1.1% Developed & Other Human Use 0.2% Open Water
Human Use	
Land Ownership	15.2% Municipal 0% Lewis County
Zoning	71.2% ARL 16.4% RDD-20 12.3% RDD-5 0% City 0% UGA
Parks	-
Number of Historic Sites	10
Number of Archaeological Sites	20
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	449
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	92.3% Slight 0.6% Moderate 0.1% Severe
Seismic/Liquefaction Hazard	1.7% N/A (bedrock) 98.3% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	1140 STATE HWY 603 CHEHALIS, WA 98532 - Removed
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	75.7% Roosevelt Elk 22.4% Waterfowl Concentrations 19.3% Cavity-nesting Ducks 0.1% Oak Woodland
PHS Fish	Chinook Salmon - Presence/Migration - 10.28 miles Coast Resident Cutthroat - Presence/Migration - 5.15 miles Coho Salmon - Presence/Migration - 5.31 miles Coho Salmon - Presence/Migration - 0.44 miles Steelhead Trout - Presence/Migration - 5.14 miles

Reach Data Sheet	
Reach Number	3C-04
Location	T13N-R02W, T14N-R03W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	1,022.34
Length of Stream Shorelines (miles)	2.89
Physical Characteristics	
Geology	91.1% alluvium 4.7% alpine glacial outwash, pre-Fraser 3.9% basalt flows (GrandeRondeBasalt, upper flows of norm.mag.pol.) 0.2% marine sedimentary rocks 0.1% basalt flows (Grande Ronde Basalt, undivided [CRB])
Soils	93.9% Partially Hydric 0% Not Hydric 6.1% Unknown Hydric
FEMA 100-year Floodplain (area)	100%
NWI Wetland (area)	25%
Land Cover	74.9% Agricultural Vegetation 12.5% Shrubland & Grassland 10.1% Forest & Woodland 1.5% Recently Disturbed or Modified 1% Developed & Other Human Use
Human Use	
Land Ownership	5.9% Municipal 1.9% WA State Parks and Recreation 0.6% Lewis County
Zoning	97.4% ARL 2.6% RDD-5 0% RRC-R1 0% UGA
Parks	-
Number of Historic Sites	16
Number of Archaeological Sites	5
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	CHEHALIS RIVER - Turbidity - 5.4 acres
Critical Areas	
Erosion Hazard	93.7% Slight 0.2% Moderate 0% Very sever
Seismic/Liquefaction Hazard	4.2% N/A (bedrock) 4.7% very low 91.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	1133 HWY 6 CHEHALIS, WA 98532 - Operational
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	86.2% Roosevelt Elk 14.5% Waterfowl Concentrations 0.6% Cavity-nesting Ducks 0.6% Wetlands
PHS Fish	Chinook Salmon - Known Spawning - 5.73 miles Chinook Salmon - Presence/Migration - 0 miles Coast Resident Cutthroat - Presence/Migration - 2.87 miles Coho Salmon - Known Juvenile Rearing - 0.23 miles Coho Salmon - Presence/Migration - 2.84 miles Steelhead Trout - Known Juvenile Rearing - 0.03 miles Steelhead Trout - Presence/Migration - 2.84 miles

Reach Data Sheet	
Reach Number	3C-05
Location	T13N-R03W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	2,560.81
Length of Stream Shorelines (miles)	9.74
Physical Characteristics	
Geology	97.7% alluvium 1.9% alpine glacial outwash, pre-Fraser 0.4% basalt flows (GrandeRondeBasalt, upper flows of norm.mag.pol.)
Soils	96.1% Partially Hydric 0.6% All Hydric 3.3% Unknown Hydric
FEMA 100-year Floodplain (area)	96%
NWI Wetland (area)	11%
Land Cover	82.7% Agricultural Vegetation 8.8% Forest & Woodland 4.7% Shrubland & Grassland 2.7% Recently Disturbed or Modified 1.2% Developed & Other Human Use
Human Use	
Land Ownership	1.1% WA State Parks and Recreation 0.1% Lewis County 0% Other Federal Land
Zoning	90.5% ARL 7.6% RDD-5 1.8% STMU 0.1% Park
Parks	Back Memorial Park
Number of Historic Sites	46
Number of Archaeological Sites	5
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	CHEHALIS RIVER - Turbidity - 5.8 acres MILL CREEK - Temperature - 2.1 acres
Critical Areas	
Erosion Hazard	95.7% Slight 0.4% Moderate
Seismic/Liquefaction Hazard	0.4% N/A (bedrock) 1.9% very low 97.7% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk 14.5% Waterfowl Concentrations
PHS Fish	Chinook Salmon - Known Spawning - 14.83 miles Coast Resident Cutthroat - Presence/Migration - 7.42 miles Coho Salmon - Known Juvenile Rearing - 0.19 miles Coho Salmon - Presence/Migration - 9.28 miles Coho Salmon - Presence/Migration - 0.71 miles Steelhead Trout - Presence/Migration - 9.28 miles

Reach Data Sheet	
Reach Number	3C-06
Location	T13N-R03W
Type	Stream
Primary Water Body	Stearns Creek
Shorelines Jurisdiction Area (acre)	510.47
Length of Stream Shorelines (miles)	2.65
Physical Characteristics	
Geology	89.8% alluvium 9.2% alpine glacial outwash, pre-Fraser 1% basalt flows (GrandeRondeBasalt, upper flows of norm.mag.pol.)
Soils	98.5% Partially Hydric 1.4% Not Hydric 0.1% Unknown Hydric
FEMA 100-year Floodplain (area)	100%
NWI Wetland (area)	1%
Land Cover	89.3% Agricultural Vegetation 4% Recently Disturbed or Modified 3.5% Forest & Woodland 3.2% Shrubland & Grassland
Human Use	
Land Ownership	0.6% WA State Parks and Recreation
Zoning	98.6% ARL 1.4% RDD-5 0% RDD-20
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	CHEHALIS RIVER - Turbidity - 0.527 acres
Critical Areas	
Erosion Hazard	96.2% Slight 2.3% Moderate 1.4% Severe
Seismic/Liquefaction Hazard	1% N/A (bedrock) 9.2% very low 89.8% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk 52.5% Waterfowl Concentrations
PHS Fish	Chinook Salmon - Known Spawning - 0.06 miles Coast Resident Cutthroat - Presence/Migration - 0.03 miles Coho Salmon - Presence/Migration - 0.82 miles Steelhead Trout - Presence/Migration - 0.82 miles

Reach Data Sheet	
Reach Number	3C-07
Location	T13N-R02W, T13N-R03W
Type	Stream
Primary Water Body	Stearns Creek
Shorelines Jurisdiction Area (acre)	315.70
Length of Stream Shorelines (miles)	4.43
Physical Characteristics	
Geology	86.1% alluvium 5.9% marine sedimentary rocks 5.1% alpine glacial outwash, pre-Fraser 2.4% basalt flows (GrandeRondeBasalt, upper flows of norm.mag.pol.) 0.5% basalt flows (Grande Ronde Basalt, undivided [CRB])
Soils	100% Partially Hydric 0% Not Hydric
FEMA 100-year Floodplain (area)	49%
NWI Wetland (area)	26%
Land Cover	77.3% Agricultural Vegetation 18.6% Forest & Woodland 3.1% Recently Disturbed or Modified 0.9% Shrubland & Grassland 0.1% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	58.9% RDD-20 41.1% ARL 0% RDD-5
Parks	-
Number of Historic Sites	3
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	87
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	96.5% Slight 3.5% Moderate 0% Sever
Seismic/Liquefaction Hazard	8.8% N/A (bedrock) 5.1% very low 86.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk 24.1% Waterfowl Concentrations
PHS Fish	Coho Salmon - Known Spawning - 2.44 miles Coho Salmon - Presence/Migration - 2.57 miles Coho Salmon - Presence/Migration - 0.04 miles Steelhead Trout - Known Juvenile Rearing - 3.03 miles Steelhead Trout - Presence/Migration - 1.98 miles

Reach Data Sheet	
Reach Number	3C-08
Location	T13N-R03W, T13N-R04W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	501.20
Length of Stream Shorelines (miles)	3.55
Physical Characteristics	
Geology	97.5% alluvium 1.6% marine sedimentary rocks 0.9% basalt flows (GrandeRondeBasalt, upper flows of norm.mag.pol.) 0% continental sedimentary deposits or rocks
Soils	88.6% Partially Hydric 2.8% All Hydric 1.1% Not Hydric 7.4% Unknown Hydric
FEMA 100-year Floodplain (area)	91%
NWI Wetland (area)	20%
Land Cover	62.8% Agricultural Vegetation 30.2% Forest & Woodland 4.4% Recently Disturbed or Modified 2.2% Shrubland & Grassland 0.3% Open Water 0.2% Developed & Other Human Use
Human Use	
Land Ownership	1.1% WA State Parks and Recreation 0% Lewis County
Zoning	88.5% ARL 8.8% RDD-20 2.7% RDD-5 0% Mine
Parks	-
Number of Historic Sites	5
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	87.5% Slight 1.1% Moderate 1.1% Very severe
Seismic/Liquefaction Hazard	2.5% N/A (bedrock) 97.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Known Spawning - 4.92 miles Coast Resident Cutthroat - Presence/Migration - 2.46 miles Coho Salmon - Known Juvenile Rearing - 0.21 miles Coho Salmon - Known Spawning - 0.69 miles Coho Salmon - Presence/Migration - 2.74 miles Coho Salmon - Presence/Migration - 0.65 miles Steelhead Trout - Known Juvenile Rearing - 0.37 miles Steelhead Trout - Known Spawning - 0.8 miles Steelhead Trout - Presence/Migration - 2.47 miles

Reach Data Sheet	
Reach Number	3C-09
Location	T13N-R02W, T14N-R02W
Type	Stream
Primary Water Body	Newaukum River
Shorelines Jurisdiction Area (acre)	720.18
Length of Stream Shorelines (miles)	6.61
Physical Characteristics	
Geology	98.3% alluvium 1.4% alpine glacial outwash, pre-Fraser 0.3% mass-wasting deposits, mostly landslides
Soils	83% Partially Hydric 0.5% All Hydric 0.2% Not Hydric 16.3% Unknown Hydric
FEMA 100-year Floodplain (area)	92%
NWI Wetland (area)	45%
Land Cover	62.3% Agricultural Vegetation 26.2% Forest & Woodland 8.5% Shrubland & Grassland 1.2% Recently Disturbed or Modified 1.1% Developed & Other Human Use 0.7% Open Water
Human Use	
Land Ownership	0.9% WA State Parks and Recreation 0.4% Municipal 0.1% Lewis County 0% Other State Land 0% WA Dept. of Natural Resources
Zoning	53.9% ARL 23.8% RDD-5 21.9% RDD-20 0.3% RRC-R1 0.1% City 0% UGA
Parks	Stan Hedwall Park
Number of Historic Sites	14
Number of Archaeological Sites	4
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	5,407
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	82.9% Slight 0.1% Moderate
Seismic/Liquefaction Hazard	1.4% very low 0.3% low to moderate 98.3% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	4% Waterfowl Concentrations 4% Cavity-nesting Ducks
PHS Fish	Chinook Salmon - Known Spawning - 13.81 miles Chinook Salmon - Presence/Migration - 0.09 miles Coast Resident Cutthroat - Presence/Migration - 6.95 miles Coho Salmon - Known Juvenile Rearing - 6.9 miles Coho Salmon - Presence/Migration - 0.15 miles Steelhead Trout - Known Juvenile Rearing - 0.37 miles Steelhead Trout - Known Spawning - 6.53 miles Steelhead Trout - Presence/Migration - 0.15 miles

Reach Data Sheet	
Reach Number	3C-10
Location	T13N-R02W
Type	Stream
Primary Water Body	Berwick Creek
Shorelines Jurisdiction Area (acre)	165.32
Length of Stream Shorelines (miles)	0.65
Physical Characteristics	
Geology	100% alluvium
Soils	99.5% Partially Hydric 0.5% Unknown Hydric
FEMA 100-year Floodplain (area)	91%
NWI Wetland (area)	84%
Land Cover	89.9% Agricultural Vegetation 7.1% Shrubland & Grassland 1.7% Recently Disturbed or Modified 0.8% Developed & Other Human Use 0.5% Forest & Woodland
Human Use	
Land Ownership	-
Zoning	99.8% RDD-20 0.1% UGA 0.1% City
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	5
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	99.5% Slight
Seismic/Liquefaction Hazard	100% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	2.1% Oak Woodland 1.5% Cavity-nesting Ducks
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 1.6 miles Coho Salmon - Known Juvenile Rearing - 0.16 miles Coho Salmon - Known Spawning - 0.82 miles Coho Salmon - Presence/Migration - 0.62 miles

Reach Data Sheet	
Reach Number	3C-11
Location	T13N-R01W, T13N-R02W
Type	Stream
Primary Water Body	Newaukum River
Shorelines Jurisdiction Area (acre)	422.14
Length of Stream Shorelines (miles)	3.75
Physical Characteristics	
Geology	96.5% alluvium 3.5% alpine glacial outwash, pre-Fraser 0% mass-wasting deposits, mostly landslides
Soils	84.9% Partially Hydric 2.1% Not Hydric 0.2% All Hydric 12.8% Unknown Hydric
FEMA 100-year Floodplain (area)	95%
NWI Wetland (area)	31%
Land Cover	74.8% Agricultural Vegetation 19.3% Forest & Woodland 4.2% Shrubland & Grassland 1.4% Developed & Other Human Use 0.3% Recently Disturbed or Modified
Human Use	
Land Ownership	3.3% Lewis County
Zoning	53.8% ARL 45.9% RDD-5 0.3% UGA 0% City
Parks	-
Number of Historic Sites	7
Number of Archaeological Sites	5
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	101
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	83.6% Slight 1.3% Moderate
Seismic/Liquefaction Hazard	3.5% very low 0% low to moderate 96.5% moderate to high
Landslide Hazard Zones	0.5% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Known Spawning - 7.87 miles Coast Resident Cutthroat - Presence/Migration - 3.94 miles Coho Salmon - Known Juvenile Rearing - 3.88 miles Coho Salmon - Known Spawning - 0.05 miles Coho Salmon - Presence/Migration - 0.28 miles Steelhead Trout - Known Spawning - 3.94 miles Steelhead Trout - Presence/Migration - 0.28 miles

Reach Data Sheet	
Reach Number	3C-12
Location	T13N-R01W
Type	Stream
Primary Water Body	Newaukum River
Shorelines Jurisdiction Area (acre)	95.33
Length of Stream Shorelines (miles)	1.33
Physical Characteristics	
Geology	88.1% alluvium 11.6% alpine glacial outwash, pre-Fraser 0.2% mass-wasting deposits, mostly landslides
Soils	99.1% Partially Hydric 0.9% Unknown Hydric
FEMA 100-year Floodplain (area)	76%
NWI Wetland (area)	43%
Land Cover	74.3% Agricultural Vegetation 22.4% Forest & Woodland 2.5% Shrubland & Grassland 0.9% Developed & Other Human Use
Human Use	
Land Ownership	35.3% Other State Land
Zoning	71.9% RDD-5 18.6% ARL 9.5% RDD-10
Parks	-
Number of Historic Sites	3
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	241
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	99.1% Slight
Seismic/Liquefaction Hazard	11.6% very low 0.2% low to moderate 88.1% moderate to high
Landslide Hazard Zones	57% (blank) 0.2% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Known Spawning - 2.93 miles Coast Resident Cutthroat - Presence/Migration - 1.46 miles Coho Salmon - Known Spawning - 1.46 miles Steelhead Trout - Known Spawning - 1.46 miles

Reach Data Sheet	
Reach Number	3C-13
Location	T13N-R01E, T13N-R01W
Type	Stream
Primary Water Body	Newaukum River, S F
Shorelines Jurisdiction Area (acre)	1,056.98
Length of Stream Shorelines (miles)	18.43
Physical Characteristics	
Geology	89.8% alluvium 10% alpine glacial outwash, pre-Fraser 0.2% continental sedimentary deposits or rocks
Soils	98.2% Partially Hydric 1.5% Not Hydric 0.2% All Hydric 0.1% Unknown Hydric
FEMA 100-year Floodplain (area)	41%
NWI Wetland (area)	41%
Land Cover	61.2% Forest & Woodland 31% Agricultural Vegetation 4.6% Recently Disturbed or Modified 2.8% Shrubland & Grassland 0.5% Developed & Other Human Use 0.1% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	0.1% Other State Land 0.1% WA Dept. of Natural Resources
Zoning	39.2% RDD-10 34.6% ARL 17.5% RDD-20 8.6% RDD-5 0.1% STMU 0% CC
Parks	-
Number of Historic Sites	21
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	2,549
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	98% Slight 1.4% Very severe 0.2% Moderate
Seismic/Liquefaction Hazard	0.2% N/A (bedrock) 10% very low 89.8% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	1735 HWY 508 ONALASKA, WA 98570 - Operational
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	81.1% Elk
PHS Fish	Chinook Salmon - Known Spawning - 38.54 miles Coast Resident Cutthroat - Presence/Migration - 19.27 miles Coho Salmon - Known Juvenile Rearing - 0.04 miles Coho Salmon - Known Spawning - 19.37 miles Coho Salmon - Presence/Migration - 0.48 miles Steelhead Trout - Known Spawning - 19.31 miles Steelhead Trout - Presence/Migration - 0.54 miles

Reach Data Sheet	
Reach Number	3C-14
Location	T13N-R01E
Type	Stream
Primary Water Body	Newaukum River, S F
Shorelines Jurisdiction Area (acre)	86.21
Length of Stream Shorelines (miles)	1.83
Physical Characteristics	
Geology	72.5% alluvium 26.7% alpine glacial outwash, pre-Fraser 0.8% andesite flows
Soils	90.5% Partially Hydric 9.5% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	10%
Land Cover	81.9% Forest & Woodland 10.3% Agricultural Vegetation 7.4% Recently Disturbed or Modified 0.3% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	88.6% RDD-10 11.4% Forest
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	540
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	90.5% Slight 5% Very severe 4.5% Severe
Seismic/Liquefaction Hazard	0.8% N/A (bedrock) 26.7% very low 72.5% moderate to high
Landslide Hazard Zones	7.1% (blank) 56.3% (blank) 1.9% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	16.6% Elk
PHS Fish	Chinook Salmon - Known Spawning - 3.73 miles Coast Resident Cutthroat - Presence/Migration - 1.91 miles Coho Salmon - Known Spawning - 1.94 miles Steelhead Trout - Known Spawning - 1.94 miles

Reach Data Sheet	
Reach Number	3C-15
Location	T13N-R01E, T13N-R02E
Type	Stream
Primary Water Body	Kearney Creek
Shorelines Jurisdiction Area (acre)	108.09
Length of Stream Shorelines (miles)	1.51
Physical Characteristics	
Geology	90.4% alpine glacial outwash, pre-Fraser 9.6% alluvium
Soils	96.1% Partially Hydric 3.9% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	51%
Land Cover	52.3% Forest & Woodland 26.8% Agricultural Vegetation 20.5% Shrubland & Grassland 0.3% Recently Disturbed or Modified 0.2% Developed & Other Human Use
Human Use	
Land Ownership	0.2% Lewis County
Zoning	49.9% RDD-10 26.3% FRL-LI 23.8% ARL
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	94.7% Slight 3.9% Very severe 1.4% Moderate
Seismic/Liquefaction Hazard	90.4% very low 9.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Coho Salmon - Known Spawning - 1.76 miles Steelhead Trout - Known Spawning - 1.72 miles Steelhead Trout - Presence/Migration - 0.04 miles

Reach Data Sheet	
Reach Number	3C-16
Location	T13N-R01W
Type	Stream
Primary Water Body	Newaukum River, M F
Shorelines Jurisdiction Area (acre)	241.69
Length of Stream Shorelines (miles)	2.90
Physical Characteristics	
Geology	55% alpine glacial outwash, pre-Fraser 45% alluvium
Soils	100% Partially Hydric
FEMA 100-year Floodplain (area)	13%
NWI Wetland (area)	72%
Land Cover	71.5% Forest & Woodland 13.5% Recently Disturbed or Modified 12.9% Agricultural Vegetation 2.2% Shrubland & Grassland
Human Use	
Land Ownership	21.7% Other State Land
Zoning	100% RDD-10 0% RDD-5
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	NEWAUKUM RIVER, M.F. - Dissolved Oxygen - 13.7 acres
Critical Areas	
Erosion Hazard	100% Slight
Seismic/Liquefaction Hazard	55% very low 45% moderate to high
Landslide Hazard Zones	2% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Known Spawning - 0.22 miles Coast Resident Cutthroat - Presence/Migration - 3.23 miles Coho Salmon - Known Spawning - 3.23 miles Coho Salmon - Presence/Migration - 0.16 miles Steelhead Trout - Known Spawning - 1.23 miles

Reach Data Sheet	
Reach Number	3C-17
Location	T13N-R01W
Type	Stream
Primary Water Body	Newaukum River, N F
Shorelines Jurisdiction Area (acre)	290.09
Length of Stream Shorelines (miles)	4.67
Physical Characteristics	
Geology	98.5% alluvium 1.5% continental sedimentary deposits or rocks
Soils	100% Partially Hydric
FEMA 100-year Floodplain (area)	47%
NWI Wetland (area)	41%
Land Cover	63.4% Agricultural Vegetation 33.3% Forest & Woodland 2.1% Recently Disturbed or Modified 1% Shrubland & Grassland 0.2% Developed & Other Human Use
Human Use	
Land Ownership	17.4% Other State Land 0.3% Lewis County
Zoning	51.8% RDD-10 32.2% ARL 16.1% RDD-5
Parks	-
Number of Historic Sites	8
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	100% Slight
Seismic/Liquefaction Hazard	1.5% N/A (bedrock) 98.5% moderate to high
Landslide Hazard Zones	99.8% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Known Spawning - 9.1 miles Coast Resident Cutthroat - Presence/Migration - 4.55 miles Coho Salmon - Known Spawning - 4.55 miles Steelhead Trout - Known Spawning - 4.55 miles

Reach Data Sheet	
Reach Number	3C-18
Location	T13N-R01W, T14N-R01W
Type	Stream
Primary Water Body	Newaukum River, N F
Shorelines Jurisdiction Area (acre)	141.70
Length of Stream Shorelines (miles)	2.57
Physical Characteristics	
Geology	58.3% alluvium 25% mass-wasting deposits, mostly landslides 16.7% continental sedimentary deposits or rocks
Soils	100% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	39%
Land Cover	51.3% Forest & Woodland 42.4% Agricultural Vegetation 4.8% Recently Disturbed or Modified 1.5% Shrubland & Grassland 0.1% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	99.9% RDD-10 0.1% ARL
Parks	-
Number of Historic Sites	3
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	505
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	87.2% Slight 12.8% Moderate
Seismic/Liquefaction Hazard	16.7% N/A (bedrock) 25% low to moderate 58.3% moderate to high
Landslide Hazard Zones	42.8% (blank) 53.2% (blank) 3.9% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Known Spawning - 5.18 miles Coast Resident Cutthroat - Presence/Migration - 2.64 miles Coho Salmon - Known Spawning - 2.64 miles Coho Salmon - Presence/Migration - 0.04 miles Steelhead Trout - Known Spawning - 2.59 miles Steelhead Trout - Presence/Migration - 0.09 miles

Reach Data Sheet	
Reach Number	3C-19
Location	T13N-R01E, T14N-R01W
Type	Stream
Primary Water Body	Lucas Creek
Shorelines Jurisdiction Area (acre)	233.61
Length of Stream Shorelines (miles)	4.23
Physical Characteristics	
Geology	57.2% alluvium 15.6% mass-wasting deposits, mostly landslides 14.3% continental sedimentary deposits or rocks 8.2% nearshore sedimentary rocks 3.1% marine sedimentary rocks 1.2% basic intrusive rocks 0.3% alpine glacial outwash, pre-Fraser
Soils	98.7% Partially Hydric 1.3% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	21%
Land Cover	50.8% Forest & Woodland 35.6% Agricultural Vegetation 13.3% Recently Disturbed or Modified 0.3% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	72.5% RDD-10 23.7% ARL 3.8% Forest
Parks	-
Number of Historic Sites	3
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	514
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	95.1% Slight 3.6% Moderate 1.3% Severe
Seismic/Liquefaction Hazard	26.9% N/A (bedrock) 0.3% very low 15.6% low to moderate 57.2% moderate to high
Landslide Hazard Zones	0.3% (blank) 92.5% (blank) 7.2% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Known Spawning - 2.96 miles Chinook Salmon - Presence/Migration - 1.47 miles Coast Resident Cutthroat - Presence/Migration - 4.47 miles Coho Salmon - Known Spawning - 2.96 miles Coho Salmon - Presence/Migration - 1.55 miles Coho Salmon - Presence/Migration - 0.13 miles Steelhead Trout - Known Spawning - 4.47 miles Steelhead Trout - Presence/Migration - 0.04 miles

Reach Data Sheet	
Reach Number	3C-20
Location	T14N-R02W
Type	Lake
Primary Water Body	Unnamed 14
Shorelines Jurisdiction Area (acre)	2.52
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% alluvium
Soils	100% Partially Hydric
FEMA 100-year Floodplain (area)	52%
NWI Wetland (area)	31%
Land Cover	40.4% Developed & Other Human Use 28.7% Agricultural Vegetation 18.9% Shrubland & Grassland 10.4% Recently Disturbed or Modified 1.6% Forest & Woodland
Human Use	
Land Ownership	-
Zoning	99.7% RDD-5 0.3% City
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	DILLENBAUGH CREEK - Dioxin - 0.08 acres
Critical Areas	
Erosion Hazard	100% Slight
Seismic/Liquefaction Hazard	100% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	64.6% Waterfowl Concentrations
PHS Fish	-

Reach Data Sheet	
Reach Number	3C-21
Location	T13N-R01E
Type	Lake
Primary Water Body	Carlisle Lake
Shorelines Jurisdiction Area (acre)	57.92
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	80.6% alluvium 19.4% alpine glacial outwash, pre-Fraser
Soils	50.5% Partially Hydric 49.5% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	73%
Land Cover	46.3% Forest & Woodland 30.8% Open Water 10.3% Recently Disturbed or Modified 9.3% Shrubland & Grassland 1.6% Agricultural Vegetation 1% Nonvascular & Sparse Vascular Rock Vegetation 0.8% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	99.8% RDD-5 0.2% STMU
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	CARLISLE LAKE - Fecal Coliform - 22.2 acres CARLISLE LAKE - Total Phosphorus - 22.2 acres
Critical Areas	
Erosion Hazard	39.5% Slight 11% Moderate
Seismic/Liquefaction Hazard	19.4% very low 80.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	74.3% Bald Eagle
PHS Fish	Steelhead Trout - Presence/Migration - 0.04 miles

Reach Data Sheet	
Reach Number	3D-01
Location	T15N-R02W
Type	Lake
Primary Water Body	Fort Borst Lake
Shorelines Jurisdiction Area (acre)	40.26
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	99.6% alluvium 0.4% nearshore sedimentary rocks
Soils	92.7% All Hydric 5.1% Partially Hydric 2.2% Not Hydric
FEMA 100-year Floodplain (area)	100%
NWI Wetland (area)	91%
Land Cover	57.6% Agricultural Vegetation 29.1% Shrubland & Grassland 10.3% Forest & Woodland 3% Recently Disturbed or Modified 0% Developed & Other Human Use
Human Use	
Land Ownership	0.1% Lewis County
Zoning	70.4% RDD-20 29.5% RDD-5 0.1% UGA
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	99.5% Slight 0.5% Severe
Seismic/Liquefaction Hazard	0.4% N/A (bedrock) 99.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 0.69 miles Coho Salmon - Presence/Migration - 0.56 miles Steelhead Trout - Presence/Migration - 0.56 miles

Reach Data Sheet	
Reach Number	3D-02
Location	T15N-R02W
Type	Stream
Primary Water Body	Skookumchuck River
Shorelines Jurisdiction Area (acre)	213.22
Length of Stream Shorelines (miles)	1.40
Physical Characteristics	
Geology	67.7% alluvium 29.4% continental glacial outwash, gravel, Fraser-age 2.8% mass-wasting deposits, mostly landslides
Soils	88.7% Partially Hydric 2.8% Not Hydric 8.1% Unknown Hydric
FEMA 100-year Floodplain (area)	96%
NWI Wetland (area)	20%
Land Cover	53.5% Agricultural Vegetation 28% Forest & Woodland 10.9% Recently Disturbed or Modified 4.3% Shrubland & Grassland 2% Developed & Other Human Use 1.4% Open Water
Human Use	
Land Ownership	7.3% Lewis County 0.7% Municipal
Zoning	53.2% RDD-20 39.4% Mine 7.3% Park 0% City 0% UGA
Parks	Schaefer Park
Number of Historic Sites	6
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	996
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	89.1% Slight 2.2% Severe 0.1% Moderate
Seismic/Liquefaction Hazard	29.4% very low 2.8% low to moderate 67.7% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	38.8% Harlequin Duck 18.7% Waterfowl Concentrations
PHS Fish	Chinook Salmon - Known Spawning - 3.1 miles Coast Resident Cutthroat - Presence/Migration - 1.55 miles Coho Salmon - Known Spawning - 1.55 miles Coho Salmon - Presence/Migration - 0 miles Steelhead Trout - Known Spawning - 1.55 miles Steelhead Trout - Presence/Migration - 0 miles

Reach Data Sheet	
Reach Number	3D-03
Location	T15N-R02W
Type	Stream
Primary Water Body	Hanaford Creek
Shorelines Jurisdiction Area (acre)	438.23
Length of Stream Shorelines (miles)	2.54
Physical Characteristics	
Geology	89% alluvium 8.3% continental glacial outwash, gravel, Fraser-age 2.5% nearshore sedimentary rocks 0.3% mass-wasting deposits, mostly landslides
Soils	86.7% Partially Hydric 8.1% All Hydric 3.8% Not Hydric 1.5% Unknown Hydric
FEMA 100-year Floodplain (area)	94%
NWI Wetland (area)	66%
Land Cover	39.3% Agricultural Vegetation 32.6% Forest & Woodland 21.2% Shrubland & Grassland 5.7% Recently Disturbed or Modified 1.3% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	50% RDD-20 44.1% ARL 5.9% RDD-5
Parks	-
Number of Historic Sites	13
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	95% Slight 3.2% Severe 0.2% Moderate
Seismic/Liquefaction Hazard	2.5% N/A (bedrock) 8.3% very low 0.3% low to moderate 89% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	2% Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 3.59 miles Coho Salmon - Presence/Migration - 3.59 miles Steelhead Trout - Presence/Migration - 3.08 miles Steelhead Trout - Presence/Migration - 0.51 miles

Reach Data Sheet	
Reach Number	3D-04
Location	T14N-R01E, T15N-R01W
Type	Stream
Primary Water Body	Hanaford Creek
Shorelines Jurisdiction Area (acre)	258.89
Length of Stream Shorelines (miles)	4.79
Physical Characteristics	
Geology	48.2% nearshore sedimentary rocks 33.3% alluvium 18.5% andesite flows
Soils	91.7% Partially Hydric 8.3% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	36%
Land Cover	68.6% Forest & Woodland 19.5% Recently Disturbed or Modified 8.6% Agricultural Vegetation 3.3% Shrubland & Grassland 0.1% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	69.7% Forest 18.9% UGA - County 11.3% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	91% Slight 6.9% Severe 2.2% Moderate
Seismic/Liquefaction Hazard	66.7% N/A (bedrock) 33.3% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 5.09 miles Coho Salmon - Presence/Migration - 5.54 miles Steelhead Trout - Known Juvenile Rearing - 0.15 miles Steelhead Trout - Known Spawning - 4.81 miles Steelhead Trout - Presence/Migration - 0.05 miles

Reach Data Sheet	
Reach Number	3D-05
Location	T15N-R01W, T15N-R02W
Type	Stream
Primary Water Body	Hanaford Creek
Shorelines Jurisdiction Area (acre)	1,485.21
Length of Stream Shorelines (miles)	7.37
Physical Characteristics	
Geology	90.9% alluvium 8% nearshore sedimentary rocks 0.9% mass-wasting deposits, mostly landslides 0.2% alpine glacial outwash, pre-Fraser
Soils	66.4% Partially Hydric 18.9% All Hydric 13.1% Not Hydric 1.3% Unknown Hydric
FEMA 100-year Floodplain (area)	47%
NWI Wetland (area)	86%
Land Cover	32.1% Agricultural Vegetation 30% Shrubland & Grassland 20.7% Forest & Woodland 11.8% Recently Disturbed or Modified 4.3% Open Water 0.7% Developed & Other Human Use 0.4% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	-
Zoning	44.4% RDD-20 28.4% Mine 14.8% UGA - County 7.1% RAI 5.2% Forest 0% RDD-5
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	4
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	96.1% Slight 1.5% Severe 0.9% Moderate
Seismic/Liquefaction Hazard	8% N/A (bedrock) 0.2% very low 0.9% low to moderate 90.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	91.4% Elk 77.3% Waterfowl Concentrations
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 10.52 miles Coho Salmon - Presence/Migration - 8.33 miles Coho Salmon - Presence/Migration - 2.18 miles Steelhead Trout - Presence/Migration - 7.11 miles Steelhead Trout - Presence/Migration - 2.38 miles

Reach Data Sheet	
Reach Number	3D-06
Location	T14N-R01W, T15N-R02W
Type	Stream
Primary Water Body	South Hanaford Creek
Shorelines Jurisdiction Area (acre)	820.57
Length of Stream Shorelines (miles)	4.73
Physical Characteristics	
Geology	78.3% alluvium 17.1% nearshore sedimentary rocks 3.5% mass-wasting deposits, mostly landslides 1.1% alpine glacial outwash, pre-Fraser 0% marine sedimentary rocks
Soils	99.1% Partially Hydric 0.9% Not Hydric
FEMA 100-year Floodplain (area)	16%
NWI Wetland (area)	99%
Land Cover	42.2% Agricultural Vegetation 39.6% Shrubland & Grassland 15.4% Forest & Woodland 2.6% Recently Disturbed or Modified 0.2% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	54.7% RDD-20 40.7% ARL 4.6% Forest
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	97.7% Slight 1.4% Moderate 0.9% Severe
Seismic/Liquefaction Hazard	17.1% N/A (bedrock) 1.1% very low 3.5% low to moderate 78.3% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	94.8% Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 5.24 miles Coho Salmon - Presence/Migration - 5.64 miles Steelhead Trout - Presence/Migration - 5.64 miles

Reach Data Sheet	
Reach Number	3D-07
Location	T14N-R01W, T14N-R02W
Type	Stream
Primary Water Body	Salzer Creek
Shorelines Jurisdiction Area (acre)	837.74
Length of Stream Shorelines (miles)	2.76
Physical Characteristics	
Geology	87% alluvium 6.7% mass-wasting deposits, mostly landslides 5.1% nearshore sedimentary rocks 1.2% marine sedimentary rocks
Soils	99.5% Partially Hydric 0.5% Not Hydric
FEMA 100-year Floodplain (area)	93%
NWI Wetland (area)	81%
Land Cover	57.4% Agricultural Vegetation 18.2% Shrubland & Grassland 15% Forest & Woodland 6.3% Recently Disturbed or Modified 3.1% Developed & Other Human Use
Human Use	
Land Ownership	3.1% Municipal 0.1% Lewis County
Zoning	76% RDD-20 15.6% RDD-10 6.7% RDD-5 1.8% ARL 0% City 0% UGA
Parks	-
Number of Historic Sites	17
Number of Archaeological Sites	6
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	93
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	99.3% Slight 0.5% Severe 0.2% Moderate
Seismic/Liquefaction Hazard	6.3% N/A (bedrock) 6.7% low to moderate 87% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	2.8% Waterfowl Concentrations
PHS Fish	Coho Salmon - Known Spawning - 2.39 miles Coho Salmon - Presence/Migration - 6.28 miles Coho Salmon - Presence/Migration - 0.08 miles

Reach Data Sheet	
Reach Number	3D-08
Location	T14N-R01W
Type	Stream
Primary Water Body	Newaukum River, N F
Shorelines Jurisdiction Area (acre)	256.73
Length of Stream Shorelines (miles)	3.16
Physical Characteristics	
Geology	78.1% alluvium 15.8% nearshore sedimentary rocks 6.1% mass-wasting deposits, mostly landslides
Soils	97.5% Partially Hydric 2.5% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	50%
Land Cover	56.9% Agricultural Vegetation 26.6% Forest & Woodland 13.5% Shrubland & Grassland 2.8% Recently Disturbed or Modified 0.2% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	59.4% RDD-10 37.5% ARL 3.1% Forest
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	95.9% Slight 2.5% Severe 1.6% Moderate
Seismic/Liquefaction Hazard	15.8% N/A (bedrock) 6.1% low to moderate 78.1% moderate to high
Landslide Hazard Zones	1.5% (blank) 91.6% (blank) 6.9% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Known Spawning - 6.41 miles Coast Resident Cutthroat - Presence/Migration - 3.25 miles Coho Salmon - Known Spawning - 3.25 miles Steelhead Trout - Known Spawning - 3.25 miles

Reach Data Sheet	
Reach Number	3D-09
Location	T15N-R01W
Type	Lake
Primary Water Body	Pond Number Three
Shorelines Jurisdiction Area (acre)	56.42
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	84.1% nearshore sedimentary rocks 15.9% alluvium
Soils	99.8% Not Hydric 0.2% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	43%
Land Cover	48.4% Open Water 34.5% Recently Disturbed or Modified 10.7% Forest & Woodland 5.2% Shrubland & Grassland 1.2% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	68.4% RAI 31.6% UGA - County
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	99.8% Slight 0.2% Moderate
Seismic/Liquefaction Hazard	84.1% N/A (bedrock) 15.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	-

Reach Data Sheet	
Reach Number	3D-10
Location	T15N-R01W
Type	Lake
Primary Water Body	Unnamed 10
Shorelines Jurisdiction Area (acre)	141.16
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% nearshore sedimentary rocks
Soils	74.6% Not Hydric 25.4% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	59.1% Open Water 39.2% Recently Disturbed or Modified 1.1% Developed & Other Human Use 0.6% Forest & Woodland
Human Use	
Land Ownership	-
Zoning	100% UGA - County
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	74.6% Slight 25.4% Moderate
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	-

Reach Data Sheet	
Reach Number	3D-11
Location	T14N-R01W, T15N-R01W
Type	Lake
Primary Water Body	Unnamed 11
Shorelines Jurisdiction Area (acre)	153.34
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% nearshore sedimentary rocks
Soils	60.4% Not Hydric 39.6% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	30.9% Recently Disturbed or Modified 26.5% Open Water 20.8% Shrubland & Grassland 19.7% Forest & Woodland 2.1% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	84.8% RAI 15.2% UGA - County 0% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	45.9% Slight 39.6% Moderate 14.5% Severe
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	-

Reach Data Sheet	
Reach Number	3D-12
Location	T14N-R01W
Type	Lake
Primary Water Body	Unnamed 12
Shorelines Jurisdiction Area (acre)	98.44
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% nearshore sedimentary rocks
Soils	68.8% Partially Hydric 31.2% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	96.5% Open Water 3.5% Recently Disturbed or Modified
Human Use	
Land Ownership	-
Zoning	72.9% Forest 27.1% UGA - County
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	50.8% Slight 39.2% Moderate 10% Severe
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 0.03 miles

Reach Data Sheet	
Reach Number	3D-13
Location	T14N-R01W
Type	Lake
Primary Water Body	Pond Number Seven
Shorelines Jurisdiction Area (acre)	76.87
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	58.6% nearshore sedimentary rocks 41.4% alluvium
Soils	68.3% Partially Hydric 31.7% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	50%
Land Cover	61.2% Recently Disturbed or Modified 17.6% Forest & Woodland 10.7% Open Water 8.9% Shrubland & Grassland 0.9% Agricultural Vegetation 0.8% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	62.5% Mine 37.5% Forest
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	64.9% Slight 31.7% Severe 3.4% Moderate
Seismic/Liquefaction Hazard	58.6% N/A (bedrock) 41.4% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	6.4% Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 0.81 miles Coho Salmon - Presence/Migration - 0.81 miles Steelhead Trout - Presence/Migration - 0.81 miles

Reach Data Sheet	
Reach Number	3D-14
Location	T14N-R02W
Type	Lake
Primary Water Body	China Creek
Shorelines Jurisdiction Area (acre)	91.89
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	92.1% alluvium 6.9% marine sedimentary rocks 0.9% alpine glacial outwash, pre-Fraser
Soils	99.4% Partially Hydric 0.6% Not Hydric
FEMA 100-year Floodplain (area)	42%
NWI Wetland (area)	92%
Land Cover	54.5% Forest & Woodland 18.1% Shrubland & Grassland 16.2% Agricultural Vegetation 10.8% Recently Disturbed or Modified 0.4% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	71.8% RDD-10 26% RDD-5 2.1% RDD-20 0% City
Parks	-
Number of Historic Sites	4
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	98.9% Slight 0.6% Severe 0.5% Moderate
Seismic/Liquefaction Hazard	6.9% N/A (bedrock) 0.9% very low 92.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Coho Salmon - Presence/Migration - 0.97 miles

Reach Data Sheet	
Reach Number	3E-01
Location	T14N-R02E, T15N-R02E
Type	Stream
Primary Water Body	Skookumchuck River
Shorelines Jurisdiction Area (acre)	436.21
Length of Stream Shorelines (miles)	9.01
Physical Characteristics	
Geology	51.9% andesite flows 28.1% volcanoclastic deposits or rocks 20.1% continental sedimentary deposits or rocks 1.2% mass-wasting deposits, mostly landslides
Soils	66.5% Not Hydric 10.6% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	58.1% Forest & Woodland 41.4% Recently Disturbed or Modified 0.4% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	79.5% Slight 20.5% Severe 20.5% Severe
Seismic/Liquefaction Hazard	98.7% N/A (bedrock) 1.3% low to moderate
Landslide Hazard Zones	11.1% QUATERNARY LANDSLIDE BENCH RISERS 0.3% SLOPES > 65% IN HEADWATER AREA 6.8% SLOPES BELOW BENCHES IN ROCKS OF PUGET GROUP 2.2% STEEP STREAM ADJACENT SLOPES 77.3% LOW MASS WASTING POTENTIAL AREAS 2.2% QUATERNARY LANDSLIDE DEPOSITS
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	12.5% Harlequin Duck
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 9.66 miles Coho Salmon - Presence/Migration - 4 miles Rainbow Trout - Presence/Migration - 9.38 miles Steelhead Trout - Known Spawning - 8.74 miles Steelhead Trout - Presence/Migration - 0.88 miles

Reach Data Sheet	
Reach Number	3E-02
Location	T14N-R01E
Type	Stream
Primary Water Body	Newaukum River, N F
Shorelines Jurisdiction Area (acre)	369.44
Length of Stream Shorelines (miles)	7.67
Physical Characteristics	
Geology	91.5% andesite flows 7% alluvium 1.5% nearshore sedimentary rocks
Soils	76.2% Not Hydric 23.8% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	75.3% Forest & Woodland 24.1% Recently Disturbed or Modified 0.4% Agricultural Vegetation 0.3% Shrubland & Grassland
Human Use	
Land Ownership	3.4% Municipal
Zoning	100% Forest
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	64.7% Severe 64.7% Severe 22.8% Slight 12.5% Moderate
Seismic/Liquefaction Hazard	93% N/A (bedrock) 7% moderate to high
Landslide Hazard Zones	64.7% (blank) 22.8% (blank) 12.5% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Known Spawning - 2.68 miles Coast Resident Cutthroat - Presence/Migration - 2.9 miles Coho Salmon - Known Spawning - 7.93 miles Coho Salmon - Presence/Migration - 0.31 miles Steelhead Trout - Known Spawning - 8.24 miles Steelhead Trout - Presence/Migration - 0.04 miles

Reach Data Sheet	
Reach Number	3E-03
Location	T13N-R01E, T14N-R02E
Type	Stream
Primary Water Body	Newaukum River, S F
Shorelines Jurisdiction Area (acre)	330.40
Length of Stream Shorelines (miles)	6.81
Physical Characteristics	
Geology	83.4% alluvium 8.5% continental sedimentary deposits or rocks 6.3% andesite flows 1.8% mass-wasting deposits, mostly landslides
Soils	58.3% Partially Hydric 41.7% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	73.2% Forest & Woodland 25.6% Recently Disturbed or Modified 0.6% Shrubland & Grassland 0.4% Nonvascular & Sparse Vascular Rock Vegetation 0.2% Agricultural Vegetation
Human Use	
Land Ownership	-
Zoning	-
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	41.9% Slight 39.4% Severe 39.4% Severe 18.7% Moderate
Seismic/Liquefaction Hazard	14.8% N/A (bedrock) 1.8% low to moderate 83.4% moderate to high
Landslide Hazard Zones	39.4% (blank) 41.9% (blank) 18.7% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Known Spawning - 4.56 miles Chinook Salmon - Presence/Migration - 0.68 miles Coast Resident Cutthroat - Presence/Migration - 4.76 miles Coho Salmon - Known Spawning - 2.86 miles Coho Salmon - Presence/Migration - 1.17 miles Steelhead Trout - Known Spawning - 6.46 miles

Reach Data Sheet	
Reach Number	3E-04
Location	T14N-R03E
Type	Lake
Primary Water Body	Newaukum Lake
Shorelines Jurisdiction Area (acre)	40.12
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% andesite flows
Soils	31.3% All Hydric 14.3% Not Hydric 54.4% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	64%
Land Cover	58.3% Forest & Woodland 37.3% Open Water 4.3% Recently Disturbed or Modified
Human Use	
Land Ownership	100% Government Land
Zoning	572.5% Forest 251.1% RDD-10
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	100% Slight
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	100% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	-

Reach Data Sheet	
Reach Number	4A-01
Location	T11N-R03W
Type	Stream
Primary Water Body	Brim Creek
Shorelines Jurisdiction Area (acre)	66.23
Length of Stream Shorelines (miles)	1.35
Physical Characteristics	
Geology	57.7% alluvium 42% nearshore sedimentary rocks 0.3% mass-wasting deposits, mostly landslides
Soils	96.2% Partially Hydric 3.8% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	64.9% Forest & Woodland 18% Agricultural Vegetation 13% Recently Disturbed or Modified 3.9% Developed & Other Human Use 0.1% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	99.6% RDD-5 0.4% Forest
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	92.9% Slight 3.8% Severe 3.2% Moderate
Seismic/Liquefaction Hazard	42% N/A (bedrock) 0.3% low to moderate 57.7% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Presence/Migration - 1.47 miles Coast Resident Cutthroat - Presence/Migration - 0.02 miles Coho Salmon - Presence/Migration - 0.02 miles Coho Salmon - Presence/Migration - 1.51 miles Steelhead Trout - Known Juvenile Rearing - 0.02 miles Steelhead Trout - Presence/Migration - 1.51 miles

Reach Data Sheet	
Reach Number	4A-02
Location	T11N-R03W
Type	Stream
Primary Water Body	Stillwater Creek
Shorelines Jurisdiction Area (acre)	232.41
Length of Stream Shorelines (miles)	4.88
Physical Characteristics	
Geology	37.9% alluvium 32% nearshore sedimentary rocks 30% marine sedimentary rocks
Soils	100% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	1%
Land Cover	55.6% Forest & Woodland 39.5% Agricultural Vegetation 2.2% Recently Disturbed or Modified 2.1% Shrubland & Grassland 0.5% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	59.1% RDD-20 25.3% RDD-5 15.6% Forest
Parks	-
Number of Historic Sites	11
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	97.7% Slight 2.2% Moderate
Seismic/Liquefaction Hazard	62.1% N/A (bedrock) 37.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Presence/Migration - 5.27 miles Coast Resident Cutthroat - Presence/Migration - 5.27 miles Coho Salmon - Known Spawning - 3.98 miles Coho Salmon - Presence/Migration - 1.33 miles Coho Salmon - Presence/Migration - 0.04 miles Steelhead Trout - Known Juvenile Rearing - 4.09 miles Steelhead Trout - Known Spawning - 1.18 miles Steelhead Trout - Presence/Migration - 0 miles Steelhead Trout - Presence/Migration - 0.11 miles

Reach Data Sheet	
Reach Number	4A-03
Location	T11N-R03W
Type	Stream
Primary Water Body	Campbell Creek
Shorelines Jurisdiction Area (acre)	2.74
Length of Stream Shorelines (miles)	0.04
Physical Characteristics	
Geology	97.5% alluvium 2.5% marine sedimentary rocks
Soils	98.8% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	67.1% Forest & Woodland 32.9% Agricultural Vegetation
Human Use	
Land Ownership	-
Zoning	99.3% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	98.8% Slight
Seismic/Liquefaction Hazard	2.4% N/A (bedrock) 97.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Presence/Migration - 0.05 miles Coast Resident Cutthroat - Presence/Migration - 0.05 miles Coho Salmon - Known Spawning - 0.05 miles Steelhead Trout - Known Spawning - 0.05 miles

Reach Data Sheet	
Reach Number	4A-04
Location	T11N-R03W
Type	Stream
Primary Water Body	Stillwater Creek
Shorelines Jurisdiction Area (acre)	6.56
Length of Stream Shorelines (miles)	0.12
Physical Characteristics	
Geology	100% marine sedimentary rocks
Soils	100% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	99.7% Forest & Woodland 0.3% Agricultural Vegetation
Human Use	
Land Ownership	-
Zoning	99.3% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	93.2% Slight 6.8% Moderate
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Presence/Migration - 0.13 miles Coast Resident Cutthroat - Presence/Migration - 0.13 miles Coho Salmon - Known Spawning - 0.13 miles Coho Salmon - Presence/Migration - 0.02 miles Steelhead Trout - Presence/Migration - 0.13 miles

Reach Data Sheet	
Reach Number	4B-01
Location	T12N-R02W
Type	Stream
Primary Water Body	Olequa Creek Wetland
Shorelines Jurisdiction Area (acre)	30.32
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	74.9% alpine glacial outwash, pre-Fraser 25.1% alluvium
Soils	88.4% Partially Hydric 11.6% Not Hydric
FEMA 100-year Floodplain (area)	99%
NWI Wetland (area)	62%
Land Cover	70.4% Forest & Woodland 19.2% Agricultural Vegetation 7.5% Recently Disturbed or Modified 3% Shrubland & Grassland
Human Use	
Land Ownership	0% Municipal
Zoning	46.3% RDD-5 29.1% RDD-10 24.6% ARL 0% City
Parks	Winolequa Park
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	88.4% Slight 11.3% Very severe 0% Moderat
Seismic/Liquefaction Hazard	74.9% very low 25.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Presence/Migration - 0.87 miles Coast Resident Cutthroat - Presence/Migration - 1.18 miles Coho Salmon - Known Spawning - 1.18 miles Coho Salmon - Presence/Migration - 0.39 miles Steelhead Trout - Presence/Migration - 1.59 miles

Reach Data Sheet	
Reach Number	4B-02
Location	T12N-R02W
Type	Stream
Primary Water Body	Olequa Creek
Shorelines Jurisdiction Area (acre)	31.14
Length of Stream Shorelines (miles)	0.60
Physical Characteristics	
Geology	94.9% alluvium 5.1% alpine glacial outwash, pre-Fraser
Soils	98% Partially Hydric 2% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	88% Forest & Woodland 10.7% Recently Disturbed or Modified 1.1% Agricultural Vegetation 0.2% Developed & Other Human Use
Human Use	
Land Ownership	0% Municipal
Zoning	99.9% RDD-5 0.1% City 0% UGA
Parks	Winolequa Park
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	95.8% Slight 2.2% Moderate 2% Very severe
Seismic/Liquefaction Hazard	5.1% very low 94.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Presence/Migration - 0.64 miles Coho Salmon - Known Spawning - 0.64 miles Steelhead Trout - Known Spawning - 0.34 miles Steelhead Trout - Presence/Migration - 0.3 miles

Reach Data Sheet	
Reach Number	4B-03
Location	T12N-R02W
Type	Stream
Primary Water Body	King Creek
Shorelines Jurisdiction Area (acre)	8.52
Length of Stream Shorelines (miles)	0.23
Physical Characteristics	
Geology	100% alluvium
Soils	51.9% Not Hydric 48.1% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	51.5% Forest & Woodland 48.5% Agricultural Vegetation
Human Use	
Land Ownership	-
Zoning	99.4% RDD-5 0.6% UGA
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	51.9% Very severe 48.1% Slight
Seismic/Liquefaction Hazard	100% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Roosevelt Elk
PHS Fish	Chinook Salmon - Presence/Migration - 0.36 miles Coho Salmon - Known Spawning - 0.36 miles Steelhead Trout - Known Spawning - 0.32 miles Steelhead Trout - Presence/Migration - 0.04 miles

Reach Data Sheet	
Reach Number	4B-04
Location	T11N-R02W, T12N-R02W
Type	Stream
Primary Water Body	Olequa Creek
Shorelines Jurisdiction Area (acre)	376.00
Length of Stream Shorelines (miles)	8.19
Physical Characteristics	
Geology	70.4% nearshore sedimentary rocks 20.9% alluvium 8.6% marine sedimentary rocks
Soils	96.2% Partially Hydric 3.8% Not Hydric 0% Unknown Hydric
FEMA 100-year Floodplain (area)	9%
NWI Wetland (area)	6%
Land Cover	64.9% Forest & Woodland 27.7% Agricultural Vegetation 5.2% Recently Disturbed or Modified 1.4% Developed & Other Human Use 0.9% Shrubland & Grassland
Human Use	
Land Ownership	1.9% Municipal 0.7% Lewis County
Zoning	66.9% RDD-20 14.2% UGA 9.2% ARL 8.5% RDD-5 1.2% RDD-10 0.1% City
Parks	-
Number of Historic Sites	14
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	94.6% Slight 3.7% Severe 1.6% Moderate 0.1% Very severe
Seismic/Liquefaction Hazard	79.1% N/A (bedrock) 20.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	0.5% Roosevelt Elk
PHS Fish	Chinook Salmon - Presence/Migration - 9.4 miles Chinook Salmon - Presence/Migration - 0.04 miles Chum Salmon - Presence/Migration - 2.86 miles Coast Resident Cutthroat - Presence/Migration - 9.44 miles Coho Salmon - Known Spawning - 3.87 miles Coho Salmon - Presence/Migration - 5.56 miles Coho Salmon - Presence/Migration - 0.12 miles Steelhead Trout - Known Juvenile Rearing - 9.44 miles Steelhead Trout - Presence/Migration - 0.24 miles

Reach Data Sheet	
Reach Number	4B-05
Location	T11N-R02W, T11N-R03W
Type	Stream
Primary Water Body	Stillwater Creek
Shorelines Jurisdiction Area (acre)	194.32
Length of Stream Shorelines (miles)	3.78
Physical Characteristics	
Geology	61.4% alluvium 34% nearshore sedimentary rocks 4.5% basalt flows
Soils	77.8% Partially Hydric 22.2% Not Hydric
FEMA 100-year Floodplain (area)	12%
NWI Wetland (area)	4%
Land Cover	44.7% Agricultural Vegetation 42.9% Forest & Woodland 10.3% Recently Disturbed or Modified 1.5% Shrubland & Grassland 0.5% Developed & Other Human Use
Human Use	
Land Ownership	1.8% Lewis County
Zoning	60.2% RDD-20 29.8% RDD-5 10% UGA 0% City
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	75.7% Slight 21.9% Severe 2% Moderate 0.4% Very severe
Seismic/Liquefaction Hazard	38.6% N/A (bedrock) 61.4% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	82.3% Roosevelt Elk
PHS Fish	Chinook Salmon - Presence/Migration - 0.86 miles Chinook Salmon - Presence/Migration - 3.15 miles Chum Salmon - Presence/Migration - 0.86 miles Coast Resident Cutthroat - Presence/Migration - 4.01 miles Coho Salmon - Known Spawning - 0.52 miles Coho Salmon - Presence/Migration - 3.5 miles Coho Salmon - Presence/Migration - 0.04 miles Steelhead Trout - Known Juvenile Rearing - 4.01 miles Steelhead Trout - Presence/Migration - 0.04 miles

Reach Data Sheet	
Reach Number	4B-06
Location	T12N-R01E, T12N-R01W
Type	Stream
Primary Water Body	Lacamas Creek
Shorelines Jurisdiction Area (acre)	81.49
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% alpine glacial outwash, pre-Fraser
Soils	100% Partially Hydric
FEMA 100-year Floodplain (area)	99%
NWI Wetland (area)	46%
Land Cover	50% Forest & Woodland 40.7% Agricultural Vegetation 5% Shrubland & Grassland 2.3% Recently Disturbed or Modified 2% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	59.1% ARL 30.9% RDD-20 9.9% RDD-5 0.1% CC
Parks	-
Number of Historic Sites	3
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	100% Slight
Seismic/Liquefaction Hazard	100% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Chum Salmon - Presence/Migration - 1.34 miles Chum Salmon - Presence/Migration - 1.97 miles Coho Salmon - Presence/Migration - 1.1 miles Coho Salmon - Presence/Migration - 2.21 miles

Reach Data Sheet	
Reach Number	4B-07
Location	T12N-R01W, T12N-R02W
Type	Stream
Primary Water Body	Lacamas Creek
Shorelines Jurisdiction Area (acre)	672.19
Length of Stream Shorelines (miles)	5.65
Physical Characteristics	
Geology	100% alpine glacial outwash, pre-Fraser
Soils	99.8% Partially Hydric 0.2% Unknown Hydric
FEMA 100-year Floodplain (area)	83%
NWI Wetland (area)	63%
Land Cover	68.6% Forest & Woodland 19.5% Shrubland & Grassland 9.6% Agricultural Vegetation 1.7% Recently Disturbed or Modified 0.5% Open Water 0.1% Developed & Other Human Use
Human Use	
Land Ownership	0.7% WA State Parks and Recreation 0% Lewis County
Zoning	85.7% RDD-20 13.6% ARL 0.7% Park
Parks	Lewis and Clark State Park
Number of Historic Sites	2
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	208
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	99.8% Slight
Seismic/Liquefaction Hazard	100% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	93.2% Elk 4.1% Oak Woodland
PHS Fish	Chinook Salmon - Presence/Migration - 3.4 miles Chinook Salmon - Presence/Migration - 0.48 miles Chum Salmon - Presence/Migration - 6.83 miles Chum Salmon - Presence/Migration - 0.37 miles Coast Resident Cutthroat - Presence/Migration - 0.81 miles Coho Salmon - Known Spawning - 6.63 miles Coho Salmon - Presence/Migration - 0.38 miles Coho Salmon - Presence/Migration - 0.23 miles Steelhead Trout - Presence/Migration - 5.67 miles

Reach Data Sheet	
Reach Number	4B-08
Location	T11N-R02W, T12N-R02W
Type	Stream
Primary Water Body	Lacamas Creek
Shorelines Jurisdiction Area (acre)	357.45
Length of Stream Shorelines (miles)	6.99
Physical Characteristics	
Geology	32.6% nearshore sedimentary rocks 32.1% marine sedimentary rocks 29.1% alpine glacial outwash, pre-Fraser 3.6% alluvium
Soils	76% Partially Hydric 23.8% Not Hydric 0.3% Unknown Hydric
FEMA 100-year Floodplain (area)	18%
NWI Wetland (area)	22%
Land Cover	91% Forest & Woodland 3.5% Recently Disturbed or Modified 2.8% Agricultural Vegetation 1.1% Open Water 1% Shrubland & Grassland 0.6% Developed & Other Human Use 0.1% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	-
Zoning	87.2% RDD-20 9.8% ARL 3% RDD-5
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	COWLITZ RIVER - 4,4'-DDE - 0.387 acres COWLITZ RIVER - PCB - 0.387 acres
Critical Areas	
Erosion Hazard	70.3% Slight 23.8% Very severe 5.7% Moderate
Seismic/Liquefaction Hazard	64.6% N/A (bedrock) 2.7% N/A (water) 29.1% very low 3.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	8.3% Waterfowl Concentrations 1.2% Oak Woodland
PHS Fish	Chinook Salmon - Presence/Migration - 7.31 miles Chinook Salmon - Presence/Migration - 0.11 miles Chum Salmon - Presence/Migration - 7.31 miles Chum Salmon - Presence/Migration - 0.17 miles Coast Resident Cutthroat - Presence/Migration - 7.31 miles Coho Salmon - Known Spawning - 4 miles Coho Salmon - Presence/Migration - 3.38 miles Coho Salmon - Presence/Migration - 0.15 miles Steelhead Trout - Known Spawning - 0.18 miles Steelhead Trout - Presence/Migration - 7.38 miles

Reach Data Sheet	
Reach Number	4B-09
Location	T11N-R01W, water
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	796.71
Length of Stream Shorelines (miles)	6.43
Physical Characteristics	
Geology	67% alluvium 2.7% nearshore sedimentary rocks 1.1% alpine glacial outwash, pre-Fraser
Soils	56.1% Partially Hydric 6.8% All Hydric 6.3% Not Hydric 30.8% Unknown Hydric
FEMA 100-year Floodplain (area)	60%
NWI Wetland (area)	56%
Land Cover	31% Agricultural Vegetation 24.1% Open Water 23.7% Forest & Woodland 15.1% Shrubland & Grassland 3.6% Developed & Other Human Use 1.7% Nonvascular & Sparse Vascular Rock Vegetation 0.8% Recently Disturbed or Modified
Human Use	
Land Ownership	1.6% WA Dept. of Natural Resources 0.5% WA Dept. of Fish and Wildlife
Zoning	41.1% ARL 31.1% RDD-10 13.5% Mine 11.1% RDD-5 2.6% RDD-20 0.6% FC
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	3
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	4,710
303(d) Listings (Category 5)	COWLITZ RIVER - 2,3,7,8-TCDD - 0.004 acres COWLITZ RIVER - 4,4'-DDE - 7.7 acres COWLITZ RIVER - Mercury - 0.004 acres COWLITZ RIVER - PCB - 7.7 acres
Critical Areas	
Erosion Hazard	55.3% Slight 2.6% Very severe 1.7% Severe 0.8% Moderate
Seismic/Liquefaction Hazard	2.7% N/A (bedrock) 29.2% N/A (water) 1.1% very low 67% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	51.6% Waterfowl Concentrations
PHS Fish	Chinook Salmon - Known Spawning - 17.1 miles Chinook Salmon - Presence/Migration - 0.05 miles Chinook Salmon - Presence/Migration - 0.08 miles Chum Salmon - Presence/Migration - 8.26 miles Chum Salmon - Presence/Migration - 0.07 miles Coast Resident Cutthroat - Presence/Migration - 8.26 miles Coho Salmon - Presence/Migration - 8.6 miles Coho Salmon - Presence/Migration - 0.28 miles Rainbow Trout - Presence/Migration - 8.55 miles Steelhead Trout - Known Spawning - 8.6 miles Steelhead Trout - Presence/Migration - 7.66 miles Steelhead Trout - Presence/Migration - 0.28 miles

Reach Data Sheet	
Reach Number	4B-10
Location	T11N-R01E, water
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	1,384.20
Length of Stream Shorelines (miles)	9.13
Physical Characteristics	
Geology	65.5% alluvium 3.5% alpine glacial outwash, pre-Fraser 1.5% alpine glacial outwash, Fraser-age 0.6% mass-wasting deposits, mostly landslides 0% nearshore sedimentary rocks
Soils	48.7% Partially Hydric 16.3% All Hydric 7.1% Not Hydric 27.9% Unknown Hydric
FEMA 100-year Floodplain (area)	43%
NWI Wetland (area)	64%
Land Cover	55.1% Forest & Woodland 22.6% Open Water 7.9% Shrubland & Grassland 6.7% Agricultural Vegetation 4.7% Nonvascular & Sparse Vascular Rock Vegetation 1.1% Recently Disturbed or Modified 0.9% Developed & Other Human Use 0.8% Semi-Desert
Human Use	
Land Ownership	10% Municipal 2.2% WA Dept. of Fish and Wildlife 1.7% Lewis County 0.8% WA Dept. of Natural Resources 0% Other State Land
Zoning	84.8% RDD-10 6.8% ARL 6.7% Mine 1% Park 0.6% RDD-5 0.1% UGA 0.1% RDD-20 0% City
Parks	South Lewis County Regional Park
Number of Historic Sites	3
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	13,014
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	48.7% Slight 5.3% Very severe
Seismic/Liquefaction Hazard	0% N/A (bedrock) 28.8% N/A (water) 5% very low 0.6% low to moderate 65.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-

Reach Data Sheet	
Priority Habitats and Species	
PHS Wildlife (acres)	76.6% Elk 23.2% Bald Eagle
PHS Fish	Chinook Salmon - Known Spawning - 26.67 miles Chinook Salmon - Presence/Migration - 0.05 miles Chum Salmon - Presence/Migration - 13.29 miles Chum Salmon - Presence/Migration - 0.05 miles Coast Resident Cutthroat - Presence/Migration - 10.99 miles Coho Salmon - Presence/Migration - 12.93 miles Coho Salmon - Presence/Migration - 0.07 miles Rainbow Trout - Presence/Migration - 10.99 miles Steelhead Trout - Known Spawning - 12.95 miles Steelhead Trout - Presence/Migration - 13.39 miles Steelhead Trout - Presence/Migration - 0.15 miles

Reach Data Sheet	
Reach Number	4B-11
Location	T12N-R01E, T12N-R01W
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	773.44
Length of Stream Shorelines (miles)	8.99
Physical Characteristics	
Geology	62.3% alluvium 10.5% alpine glacial outwash, Fraser-age 4.8% alpine glacial outwash, pre-Fraser
Soils	38.3% Partially Hydric 11.9% Not Hydric 5.7% All Hydric 44% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	52%
Land Cover	70% Forest & Woodland 17.9% Open Water 5.6% Nonvascular & Sparse Vascular Rock Vegetation 3.7% Shrubland & Grassland 1.3% Agricultural Vegetation 1.2% Recently Disturbed or Modified 0.2% Developed & Other Human Use
Human Use	
Land Ownership	4.9% Municipal 2.6% WA Dept. of Natural Resources 1% Other Federal Land
Zoning	59.7% RDD-10 19.3% Forest 18.5% ARL 2.5% RDD-20 0% RDD-5
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	5,428
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	38.3% Slight 11.9% Very severe
Seismic/Liquefaction Hazard	22.4% N/A (water) 15.3% very low 62.3% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 32.1% Bald Eagle 0.2% Wild Turkey 0.2% Wetlands 0.1% Cavity-nesting Ducks
PHS Fish	Chinook Salmon - Known Spawning - 11.12 miles Chinook Salmon - Presence/Migration - 8.82 miles Chinook Salmon - Presence/Migration - 0.27 miles Chum Salmon - Presence/Migration - 10.09 miles Chum Salmon - Presence/Migration - 0.14 miles Coast Resident Cutthroat - Presence/Migration - 9.97 miles Coho Salmon - Presence/Migration - 10.29 miles Coho Salmon - Presence/Migration - 0.3 miles Rainbow Trout - Presence/Migration - 9.91 miles Steelhead Trout - Known Juvenile Rearing - 0.15 miles Steelhead Trout - Known Spawning - 10.15 miles Steelhead Trout - Presence/Migration - 9.95 miles Steelhead Trout - Presence/Migration - 0.23 miles

Reach Data Sheet	
Reach Number	4B-12
Location	T12N-R01E, T12N-R02E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	196.36
Length of Stream Shorelines (miles)	2.37
Physical Characteristics	
Geology	61.6% basaltic andesite flows 38.4% alluvium
Soils	45.3% Not Hydric 11.7% Partially Hydric 0.1% All Hydric 42.8% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	27%
Land Cover	74.7% Forest & Woodland 16.9% Open Water 2.8% Shrubland & Grassland 2.5% Developed & Other Human Use 1.9% Nonvascular & Sparse Vascular Rock Vegetation 0.7% Recently Disturbed or Modified 0.5% Agricultural Vegetation
Human Use	
Land Ownership	34.8% Municipal 17% WA Dept. of Natural Resources
Zoning	54.3% RDD-5 28.7% RDD-20 17% Forest
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	45.3% Very severe 11.5% Slight 0.2% Moderate
Seismic/Liquefaction Hazard	61.6% N/A (bedrock) 38.4% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 3.7% Bald Eagle
PHS Fish	Chinook Salmon - Known Spawning - 1.21 miles Chinook Salmon - Presence/Migration - 3.6 miles Chum Salmon - Presence/Migration - 2.41 miles Coast Resident Cutthroat - Presence/Migration - 2.41 miles Coho Salmon - Presence/Migration - 2.41 miles Rainbow Trout - Presence/Migration - 2.41 miles Steelhead Trout - Known Juvenile Rearing - 0.23 miles Steelhead Trout - Presence/Migration - 2.18 miles

Reach Data Sheet	
Reach Number	4B-13
Location	T12N-R02E, T13N-R02E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	2,270.44
Length of Stream Shorelines (miles)	8.82
Physical Characteristics	
Geology	8.9% alpine glacial outwash, pre-Fraser 5.2% alpine glacial outwash, Fraser-age 3.6% alpine glacial till, pre-Fraser 2.9% basaltic andesite flows
Soils	10.2% Not Hydric 8.4% Partially Hydric 81.4% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	1%
Land Cover	75% Open Water 21.1% Forest & Woodland 2% Agricultural Vegetation 0.8% Developed & Other Human Use 0.6% Nonvascular & Sparse Vascular Rock Vegetation 0.3% Shrubland & Grassland 0.2% Recently Disturbed or Modified
Human Use	
Land Ownership	95.4% Municipal 1% WA Dept. of Natural Resources 0.1% WA State Parks and Recreation
Zoning	72.6% Lake 18.6% RDD-5 3.7% RDD-20 2.9% Park 1% RRC-R.5 0.6% RRC-R10000 0.4% RRC-R1 0.1% ARL 0% Mine
Parks	Ike Kinswa State Park, Mayfield Lake Park (C.R.P.)
Number of Historic Sites	18
Number of Archaeological Sites	13
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	MAYFIELD LAKE - PCB - 208.6 acres
Critical Areas	
Erosion Hazard	9.8% Very severe 7.8% Slight 0.7% Moderate
Seismic/Liquefaction Hazard	2.9% N/A (bedrock) 79.4% N/A (water) 17.7% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-

Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 9.7% Bald Eagle
PHS Fish	Chinook Salmon - Presence/Migration - 0.67 miles Chinook Salmon - Presence/Migration - 1.31 miles Chinook Salmon - Presence/Migration - 14.07 miles Chum Salmon - Presence/Migration - 0.35 miles Chum Salmon - Presence/Migration - 6.36 miles Coast Resident Cutthroat - Presence/Migration - 0.34 miles Coho Salmon - Presence/Migration - 0.35 miles Coho Salmon - Presence/Migration - 0 miles Coho Salmon - Presence/Migration - 8.53 miles Rainbow Trout - Presence/Migration - 1.67 miles Steelhead Trout - Presence/Migration - 0.02 miles Steelhead Trout - Presence/Migration - 8.86 miles

Reach Data Sheet	
Reach Number	4B-14
Location	T11N-R01W, water
Type	Stream
Primary Water Body	Salmon Creek
Shorelines Jurisdiction Area (acre)	259.02
Length of Stream Shorelines (miles)	4.63
Physical Characteristics	
Geology	62.1% alluvium 19.7% alpine glacial outwash, pre-Fraser 6.8% continental sedimentary deposits or rocks 2.4% nearshore sedimentary rocks
Soils	83.2% Partially Hydric 5.5% Not Hydric 3.1% All Hydric 8.1% Unknown Hydric
FEMA 100-year Floodplain (area)	40%
NWI Wetland (area)	34%
Land Cover	80.7% Forest & Woodland 9.1% Agricultural Vegetation 7.8% Shrubland & Grassland 1.5% Recently Disturbed or Modified 0.7% Open Water 0.2% Developed & Other Human Use
Human Use	
Land Ownership	1.2% WA Dept. of Natural Resources
Zoning	42.3% RDD-20 41.1% ARL 15.5% RDD-10 1.1% Mine
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	2,793
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	83.2% Slight 5.5% Very severe
Seismic/Liquefaction Hazard	9.2% N/A (bedrock) 9% N/A (water) 19.7% very low 62.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	41.7% Elk 1.4% Bald Eagle
PHS Fish	Chinook Salmon - Known Spawning - 0.15 miles Chinook Salmon - Presence/Migration - 1.78 miles Chum Salmon - Presence/Migration - 0.07 miles Chum Salmon - Presence/Migration - 4.3 miles Coast Resident Cutthroat - Presence/Migration - 4.52 miles Coho Salmon - Presence/Migration - 4.57 miles Coho Salmon - Presence/Migration - 0.37 miles Rainbow Trout - Presence/Migration - 0.07 miles Steelhead Trout - Known Spawning - 4.52 miles Steelhead Trout - Presence/Migration - 4.52 miles Steelhead Trout - Presence/Migration - 0.37 miles

Reach Data Sheet	
Reach Number	4B-15
Location	T12N-R01E, T13N-R02E
Type	Stream
Primary Water Body	Mill Creek
Shorelines Jurisdiction Area (acre)	484.51
Length of Stream Shorelines (miles)	9.23
Physical Characteristics	
Geology	80.6% alpine glacial outwash, pre-Fraser 9.1% alpine glacial till, pre-Fraser 7.5% alluvium 2.8% alpine glacial outwash, Fraser-age
Soils	86.6% Partially Hydric 13.3% Not Hydric 0% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	14%
Land Cover	77.5% Forest & Woodland 14.3% Agricultural Vegetation 3.9% Recently Disturbed or Modified 2.6% Shrubland & Grassland 0.9% Developed & Other Human Use 0.7% Nonvascular & Sparse Vascular Rock Vegetation 0.1% Open Water
Human Use	
Land Ownership	5.5% Municipal
Zoning	56.5% RDD-5 24.7% ARL 18% RDD-10 0.8% STMU
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	170
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	84.8% Slight 11.6% Very severe 1.8% Moderate 1.7% Severe
Seismic/Liquefaction Hazard	92.5% very low 7.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Chinook Salmon - Presence/Migration - 0.98 miles Chinook Salmon - Presence/Migration - 8.76 miles Chinook Salmon - Presence/Migration - 0.23 miles Coho Salmon - Presence/Migration - 1.2 miles Coho Salmon - Presence/Migration - 9.57 miles Steelhead Trout - Known Spawning - 1.17 miles Steelhead Trout - Presence/Migration - 1.2 miles Steelhead Trout - Presence/Migration - 9.64 miles

Reach Data Sheet	
Reach Number	4B-16
Location	T13N-R02E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	192.23
Length of Stream Shorelines (miles)	1.91
Physical Characteristics	
Geology	18.7% alpine glacial outwash, Fraser-age 16.1% alpine glacial till, pre-Fraser 2.7% basaltic andesite flows
Soils	28.6% Not Hydric 22.8% Partially Hydric 48.6% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	2%
Land Cover	72.5% Forest & Woodland 16.5% Open Water 4.4% Nonvascular & Sparse Vascular Rock Vegetation 3.7% Recently Disturbed or Modified 2.8% Shrubland & Grassland 0% Agricultural Vegetation
Human Use	
Land Ownership	77.7% Municipal
Zoning	40.4% RDD-5 29.7% RDD-10 29.5% RDD-20 0.4% ARL
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	28.6% Very severe 21% Slight 1.8% Moderate
Seismic/Liquefaction Hazard	2.7% N/A (bedrock) 62.4% N/A (water) 34.9% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 31.4% Bald Eagle 6.7% Harlequin Duck
PHS Fish	Chinook Salmon - Presence/Migration - 2.18 miles Chinook Salmon - Presence/Migration - 1.78 miles Chinook Salmon - Presence/Migration - 0.42 miles Coho Salmon - Presence/Migration - 2.18 miles Coho Salmon - Presence/Migration - 0.01 miles Steelhead Trout - Presence/Migration - 1.82 miles Steelhead Trout - Presence/Migration - 0.01 miles

Reach Data Sheet	
Reach Number	4B-17
Location	T13N-R02E, T13N-R03E
Type	Stream
Primary Water Body	Cinebar Creek
Shorelines Jurisdiction Area (acre)	187.65
Length of Stream Shorelines (miles)	3.85
Physical Characteristics	
Geology	28.7% basaltic andesite flows 22.7% alpine glacial till, pre-Fraser 16% alpine glacial outwash, pre-Fraser 13.7% mass-wasting deposits, mostly landslides 12.6% continental sedimentary deposits or rocks 3.2% andesite flows 3.1% volcanoclastic deposits or rocks
Soils	60.1% Not Hydric 39.9% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	95.3% Forest & Woodland 3.7% Recently Disturbed or Modified 1% Agricultural Vegetation
Human Use	
Land Ownership	0% Municipal
Zoning	52.7% RDD-10 33.6% Forest 13.7% ARL
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	48.1% Very severe 39% Slight 12% Severe 1% Moderate
Seismic/Liquefaction Hazard	47.7% N/A (bedrock) 38.7% very low 13.7% low to moderate
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 0.3% Bald Eagle
PHS Fish	-

Reach Data Sheet	
Reach Number	4B-18
Location	T13N-R02E, T13N-R03E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	282.71
Length of Stream Shorelines (miles)	4.79
Physical Characteristics	
Geology	47.9% alpine glacial till, pre-Fraser 42.1% basaltic andesite flows 8.4% alluvium 1% alpine glacial outwash, Fraser-age
Soils	62.9% Not Hydric 34.4% Partially Hydric 0.8% All Hydric 2% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	13%
Land Cover	93.3% Forest & Woodland 4.1% Recently Disturbed or Modified 1% Open Water 0.5% Agricultural Vegetation 0.5% Developed & Other Human Use 0.3% Nonvascular & Sparse Vascular Rock Vegetation 0.2% Shrubland & Grassland
Human Use	
Land Ownership	29.9% WA Dept. of Natural Resources 7.4% Municipal
Zoning	68.7% Forest 25.4% RDD-10 5.1% RDD-20 0.8% ARL
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	62.9% Very severe 24.7% Slight 9.8% Moderate
Seismic/Liquefaction Hazard	42.1% N/A (bedrock) 0.6% N/A (water) 48.9% very low 8.4% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 30.9% Mule And Black-tailed Deer 6.3% Bald Eagle 3% Harlequin Duck
PHS Fish	Chinook Salmon - Presence/Migration - 4.89 miles Chinook Salmon - Presence/Migration - 4.89 miles Coast Resident Cutthroat - Presence/Migration - 4.8 miles Coho Salmon - Presence/Migration - 4.89 miles Rainbow Trout - Presence/Migration - 4.82 miles Steelhead Trout - Presence/Migration - 4.89 miles

Reach Data Sheet	
Reach Number	4B-19
Location	T12N-R02E
Type	Stream
Primary Water Body	Klickitat Creek
Shorelines Jurisdiction Area (acre)	117.59
Length of Stream Shorelines (miles)	2.12
Physical Characteristics	
Geology	83.9% alpine glacial outwash, pre-Fraser 9.6% alpine glacial till, pre-Fraser 6.6% basaltic andesite flows
Soils	96.4% Partially Hydric 3.6% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	20%
Land Cover	70.1% Agricultural Vegetation 29% Forest & Woodland 0.4% Developed & Other Human Use 0.2% Recently Disturbed or Modified 0.2% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	80.1% ARL 16.2% RDD-5 2.4% Mine 1.3% RDD-20
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	89.6% Slight 6.8% Moderate 3.3% Very severe
Seismic/Liquefaction Hazard	6.6% N/A (bedrock) 93.4% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	-

Reach Data Sheet	
Reach Number	4B-20
Location	T12N-R01W, T12N-R02W
Type	Lake
Primary Water Body	Unnamed 24
Shorelines Jurisdiction Area (acre)	103.18
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% alpine glacial outwash, pre-Fraser
Soils	100% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	87%
Land Cover	60.8% Forest & Woodland 31.5% Recently Disturbed or Modified 5.8% Shrubland & Grassland 1.9% Agricultural Vegetation
Human Use	
Land Ownership	-
Zoning	65.3% ARL 34.7% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	100% Slight
Seismic/Liquefaction Hazard	100% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	54.8% Elk
PHS Fish	Coho Salmon - Presence/Migration - 0.49 miles Steelhead Trout - Presence/Migration - 0.46 miles

Reach Data Sheet	
Reach Number	4B-21
Location	T12N-R01E
Type	Lake
Primary Water Body	Unnamed 26
Shorelines Jurisdiction Area (acre)	200.17
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	90.7% alluvium 9.3% alpine glacial outwash, pre-Fraser
Soils	98.1% Partially Hydric 1.9% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	83%
Land Cover	60% Forest & Woodland 36.7% Shrubland & Grassland 3.1% Recently Disturbed or Modified 0.3% Agricultural Vegetation
Human Use	
Land Ownership	61.3% Municipal
Zoning	100% RDD-10
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	98.1% Slight 1.9% Very severe
Seismic/Liquefaction Hazard	9.3% very low 90.7% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 24.2% Wild Turkey 2.9% Cavity-nesting Ducks
PHS Fish	-

Reach Data Sheet	
Reach Number	4C-01
Location	T11N-R01W
Type	Stream
Primary Water Body	Salmon Creek
Shorelines Jurisdiction Area (acre)	359.17
Length of Stream Shorelines (miles)	11.20
Physical Characteristics	
Geology	96.5% continental sedimentary deposits or rocks 3.5% alluvium
Soils	59.4% Partially Hydric 35.4% Not Hydric 5.1% All Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	1%
Land Cover	83.4% Forest & Woodland 15.7% Recently Disturbed or Modified 0.9% Shrubland & Grassland 0% Agricultural Vegetation
Human Use	
Land Ownership	-
Zoning	91.3% Forest 8.7% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	193
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	53.5% Slight 33.4% Very severe 11.1% Moderate 2% Severe
Seismic/Liquefaction Hazard	96.5% N/A (bedrock) 3.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 7.69 miles Coho Salmon - Presence/Migration - 7.69 miles Coho Salmon - Presence/Migration - 0.16 miles Steelhead Trout - Known Spawning - 7.69 miles Steelhead Trout - Presence/Migration - 7.69 miles Steelhead Trout - Presence/Migration - 0.18 miles

Reach Data Sheet	
Reach Number	4C-02
Location	T11N-R01E, T11N-R01W
Type	Stream
Primary Water Body	Salmon Creek
Shorelines Jurisdiction Area (acre)	398.58
Length of Stream Shorelines (miles)	14.51
Physical Characteristics	
Geology	73% continental sedimentary deposits or rocks 11.6% alluvium 8.6% nearshore sedimentary rocks 4.8% andesite flows 2.1% volcanoclastic deposits or rocks
Soils	71% Partially Hydric 26.9% Not Hydric 2% All Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	17%
Land Cover	72.1% Forest & Woodland 26.8% Recently Disturbed or Modified 0.5% Shrubland & Grassland 0.5% Agricultural Vegetation
Human Use	
Land Ownership	-
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	72.8% Slight 15.8% Very severe 8.8% Moderate 2.6% Severe
Seismic/Liquefaction Hazard	86.3% N/A (bedrock) 2.1% low to moderate 11.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 7.85 miles Coho Salmon - Known Spawning - 2.32 miles Coho Salmon - Presence/Migration - 5.54 miles Coho Salmon - Presence/Migration - 0.27 miles Steelhead Trout - Known Spawning - 0.04 miles Steelhead Trout - Presence/Migration - 0.04 miles Steelhead Trout - Presence/Migration - 8.1 miles

Reach Data Sheet	
Reach Number	4C-03
Location	T11N-R01E, T11N-R01W
Type	Stream
Primary Water Body	Cedar Creek
Shorelines Jurisdiction Area (acre)	439.70
Length of Stream Shorelines (miles)	8.83
Physical Characteristics	
Geology	65.5% alluvium 13.9% continental sedimentary deposits or rocks 7.6% andesite flows 7.4% nearshore sedimentary rocks 5.5% mass-wasting deposits, mostly landslides
Soils	84.7% Partially Hydric 15.3% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	7%
Land Cover	78.1% Forest & Woodland 9.5% Agricultural Vegetation 6.1% Recently Disturbed or Modified 6.1% Shrubland & Grassland 0.2% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	96.1% Forest 3.9% Mine
Parks	-
Number of Historic Sites	3
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	263
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	80.5% Slight 8.8% Severe 5.4% Moderate 5.3% Very severe
Seismic/Liquefaction Hazard	28.9% N/A (bedrock) 5.5% low to moderate 65.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 8.23 miles Coho Salmon - Known Spawning - 2.37 miles Coho Salmon - Presence/Migration - 0.07 miles Coho Salmon - Presence/Migration - 0.04 miles Steelhead Trout - Known Spawning - 1.41 miles Steelhead Trout - Presence/Migration - 1.41 miles Steelhead Trout - Presence/Migration - 0.04 miles

Reach Data Sheet	
Reach Number	4D-01
Location	T13N-R03E, T14N-R03E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	541.52
Length of Stream Shorelines (miles)	10.62
Physical Characteristics	
Geology	84.2% andesite flows 9.8% alluvium 6% alpine glacial till, pre-Fraser
Soils	70.7% Not Hydric 29.3% Partially Hydric
FEMA 100-year Floodplain (area)	2%
NWI Wetland (area)	8%
Land Cover	55.3% Forest & Woodland 42.8% Recently Disturbed or Modified 1.8% Open Water 0.1% Shrubland & Grassland
Human Use	
Land Ownership	37.7% Government Land 8.1% US Forest Service
Zoning	99.7% Forest 0.3% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	48.6% Very severe 28.4% Slight 15.3% Severe 4.7% Moderate
Seismic/Liquefaction Hazard	84.2% N/A (bedrock) 6% very low 9.8% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 13% Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 0.95 miles Coho Salmon - Presence/Migration - 9.37 miles Rainbow Trout - Presence/Migration - 7.11 miles Steelhead Trout - Presence/Migration - 9.3 miles Steelhead Trout - Presence/Migration - 0.04 miles

Reach Data Sheet	
Reach Number	4D-02
Location	T13N-R03E, T13N-R04E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	498.94
Length of Stream Shorelines (miles)	5.97
Physical Characteristics	
Geology	89% alluvium 9% andesite flows 1.8% basaltic andesite flows 0.2% alpine glacial till, pre-Fraser
Soils	72.5% Partially Hydric 17.5% All Hydric 10% Not Hydric
FEMA 100-year Floodplain (area)	55%
NWI Wetland (area)	43%
Land Cover	67.2% Forest & Woodland 18.6% Recently Disturbed or Modified 11.3% Open Water 1.2% Nonvascular & Sparse Vascular Rock Vegetation 1.2% Developed & Other Human Use 0.4% Shrubland & Grassland 0.2% Agricultural Vegetation
Human Use	
Land Ownership	3.6% WA Dept. of Natural Resources 3.3% WA State Parks and Recreation 1.2% Other State Land
Zoning	96.7% Forest 3.3% Park 0% RDD-20
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	3,303
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	71.2% Slight 9% Very severe 1.4% Moderate 0.9% Severe
Seismic/Liquefaction Hazard	10.8% N/A (bedrock) 0.2% very low 89% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100 %Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Presence/Migration - 6.61 miles Chinook Salmon - Presence/Migration - 6.62 miles Coast Resident Cutthroat - Presence/Migration - 6.61 miles Coho Salmon - Presence/Migration - 6.63 miles Rainbow Trout - Presence/Migration - 6.7 miles Steelhead Trout - Presence/Migration - 6.7 miles

Reach Data Sheet	
Reach Number	4D-03
Location	T12N-R04E, T13N-R04E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	289.89
Length of Stream Shorelines (miles)	3.94
Physical Characteristics	
Geology	77.7% alluvium 21% basaltic andesite flows 1.2% andesite flows 0.1% alpine glacial till, pre-Fraser
Soils	74.4% Partially Hydric 13.9% All Hydric 11.7% Not Hydric
FEMA 100-year Floodplain (area)	81%
NWI Wetland (area)	28%
Land Cover	81.6% Forest & Woodland 12.3% Recently Disturbed or Modified 3% Agricultural Vegetation 2.1% Developed & Other Human Use 0.7% Nonvascular & Sparse Vascular Rock Vegetation 0.3% Shrubland & Grassland
Human Use	
Land Ownership	14.1% WA Dept. of Natural Resources
Zoning	47.7% RDD-5 31.9% RDD-20 19.7% Forest 0.5% RDD-10 0.1% UGA
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	3,093
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	69.2% Slight 11.4% Very severe 5.2% Moderate 0.2% Severe
Seismic/Liquefaction Hazard	22.2% N/A (bedrock) 0.1% very low 77.7% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 98.6% Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Presence/Migration - 4.42 miles Chinook Salmon - Presence/Migration - 4.24 miles Coho Salmon - Presence/Migration - 4.42 miles Rainbow Trout - Presence/Migration - 4.47 miles Steelhead Trout - Presence/Migration - 4.24 miles

Reach Data Sheet	
Reach Number	4D-04
Location	T12N-R04E, T12N-R05E
Type	Lake
Primary Water Body	Johnson Creek
Shorelines Jurisdiction Area (acre)	538.35
Length of Stream Shorelines (miles)	2.22
Physical Characteristics	
Geology	94.1% alluvium 4.2% mass-wasting deposits, mostly landslides 1.3% basaltic andesite flows 0.5% continental sedimentary deposits or rocks
Soils	95.2% Partially Hydric 2.5% Not Hydric 2.2% Unknown Hydric
FEMA 100-year Floodplain (area)	4%
NWI Wetland (area)	92%
Land Cover	60.6% Forest & Woodland 29.8% Agricultural Vegetation 6.5% Shrubland & Grassland 1.9% Recently Disturbed or Modified 1.2% Developed & Other Human Use
Human Use	
Land Ownership	50.1% Municipal 0% Lewis County
Zoning	99.9% RDD-20 0.1% RAI 0% City 0% ARL 0% UGA
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	93.4% Slight 2.1% Severe 1.8% Moderate 0.5% Very severe
Seismic/Liquefaction Hazard	1.7% N/A (bedrock) 4.2% low to moderate 94.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 31.4% Cavity-nesting Ducks 0% Mule And Black-tailed Deer
PHS Fish	Coho Salmon - Presence/Migration - 3.2 miles Rainbow Trout - Presence/Migration - 1.57 miles Steelhead Trout - Presence/Migration - 3.2 miles

Reach Data Sheet	
Reach Number	4D-05
Location	T12N-R04E, T13N-R04E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	31.04
Length of Stream Shorelines (miles)	0.76
Physical Characteristics	
Geology	61.8% alpine glacial till, pre-Fraser 38.2% alluvium
Soils	70.2% Partially Hydric 22.7% Not Hydric 7.2% All Hydric
FEMA 100-year Floodplain (area)	79%
NWI Wetland (area)	24%
Land Cover	81.8% Forest & Woodland 7.3% Nonvascular & Sparse Vascular Rock Vegetation 7.2% Agricultural Vegetation 2% Developed & Other Human Use 1.7% Recently Disturbed or Modified
Human Use	
Land Ownership	0.1% Municipal
Zoning	99.7% RDD-5 0.2% UGA 0.1% City
Parks	Gust Backstrom Park
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	50% Slight 22.7% Very severe 20.2% Moderate
Seismic/Liquefaction Hazard	61.8% very low 38.2% moderate to high
Landslide Hazard Zones	51% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Mule And Black-tailed Deer 100 %Elk
PHS Fish	Chinook Salmon - Presence/Migration - 0.31 miles Chinook Salmon - Presence/Migration - 0.31 miles Coho Salmon - Presence/Migration - 0.32 miles Rainbow Trout - Presence/Migration - 0.32 miles Steelhead Trout - Presence/Migration - 0.31 miles Steelhead Trout - Presence/Migration - 0.01 miles

Reach Data Sheet	
Reach Number	4D-06
Location	T13N-R04E
Type	Stream
Primary Water Body	Connelly Creek
Shorelines Jurisdiction Area (acre)	109.04
Length of Stream Shorelines (miles)	2.18
Physical Characteristics	
Geology	60.8% continental sedimentary deposits or rocks 39.2% alpine glacial till, pre-Fraser
Soils	74.8% Partially Hydric 25.2% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	4%
Land Cover	76.8% Forest & Woodland 23% Recently Disturbed or Modified 0.1% Agricultural Vegetation
Human Use	
Land Ownership	-
Zoning	60.9% Forest 39.1% RDD-5
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	44.8% Slight 31.7% Moderate 18.4% Very severe 5.1% Severe
Seismic/Liquefaction Hazard	60.8% N/A (bedrock) 39.2% very low
Landslide Hazard Zones	14.7% (blank) 83.2% (blank) 2.1% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Mule And Black-tailed Deer 100 %Elk
PHS Fish	Coho Salmon - Presence/Migration - 2.22 miles Rainbow Trout - Presence/Migration - 2.22 miles Steelhead Trout - Presence/Migration - 2.26 miles

Reach Data Sheet	
Reach Number	4D-07
Location	T13N-R04E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	189.56
Length of Stream Shorelines (miles)	6.50
Physical Characteristics	
Geology	46% alluvium 19.5% continental sedimentary deposits or rocks 15.7% alpine glacial till, pre-Fraser 14.1% basaltic andesite flows
Soils	71.8% Partially Hydric 18.2% All Hydric 5.3% Not Hydric
FEMA 100-year Floodplain (area)	43%
NWI Wetland (area)	12%
Land Cover	72.9% Forest & Woodland 17.9% Recently Disturbed or Modified 3.3% Agricultural Vegetation 1.3% Developed & Other Human Use
Human Use	
Land Ownership	7.1% WA Dept. of Natural Resources 0.3% Municipal
Zoning	55.2% Forest 29.5% RDD-10 10.6% RDD-5
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	41.4% Moderate 32.3% Slight 3% Very severe 0.5% Severe
Seismic/Liquefaction Hazard	33.6% N/A (bedrock) 15.7% very low 46% moderate to high
Landslide Hazard Zones	13.7% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	95.3% Mule And Black-tailed Deer 95.3% Elk
PHS Fish	Chinook Salmon - Presence/Migration - 1.25 miles Chinook Salmon - Presence/Migration - 1.25 miles Coho Salmon - Presence/Migration - 3.96 miles Rainbow Trout - Presence/Migration - 3.96 miles Steelhead Trout - Presence/Migration - 3.85 miles Steelhead Trout - Presence/Migration - 0.11 miles

Reach Data Sheet	
Reach Number	4D-08
Location	T13N-R04E, T13N-R06E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	522.05
Length of Stream Shorelines (miles)	13.07
Physical Characteristics	
Geology	49% basaltic andesite flows 28.8% alluvium 11.6% continental sedimentary deposits or rocks 6.8% volcanoclastic deposits or rocks 4.4% mass-wasting deposits, mostly landslides 1.1% alpine glacial till, pre-Fraser 0% diorite
Soils	54.5% Not Hydric 44.4% Partially Hydric 2.8% All Hydric
FEMA 100-year Floodplain (area)	22%
NWI Wetland (area)	7%
Land Cover	82.2% Forest & Woodland 15.5% Recently Disturbed or Modified 3% Agricultural Vegetation 0.9% Developed & Other Human Use 0% Shrubland & Grassland
Human Use	
Land Ownership	1.7% Municipal 1.2% WA Dept. of Natural Resources
Zoning	82.2% Forest 15.2% RDD-10 4.3% RDD-5 0% UGA
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	28.9% Moderate 26.8% Very severe 26.3% Slight 16.8% Severe
Seismic/Liquefaction Hazard	67.4% N/A (bedrock) 1.1% very low 4.4% low to moderate 28.8% moderate to high
Landslide Hazard Zones	0.1% (blank)
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 91.1% Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Presence/Migration - 1.47 miles Chinook Salmon - Presence/Migration - 1.47 miles Coho Salmon - Presence/Migration - 6.56 miles Rainbow Trout - Presence/Migration - 9.09 miles Steelhead Trout - Presence/Migration - 6.54 miles

Reach Data Sheet	
Reach Number	4D-09
Location	T13N-R04E, T13N-R05E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	52.94
Length of Stream Shorelines (miles)	1.06
Physical Characteristics	
Geology	93% alluvium 3.8% alpine glacial drift, pre-Fraser 3.3% continental sedimentary deposits or rocks
Soils	98.4% Partially Hydric 1.6% Not Hydric
FEMA 100-year Floodplain (area)	69%
NWI Wetland (area)	13%
Land Cover	97.3% Forest & Woodland 2.2% Agricultural Vegetation 0.3% Recently Disturbed or Modified 0.3% Developed & Other Human Use
Human Use	
Land Ownership	18.5% WA Dept. of Natural Resources 0.8% Other State Land
Zoning	80% RDD-10 20% Forest
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	98.4% Slight 1.6% Very severe
Seismic/Liquefaction Hazard	3.3% N/A (bedrock) 3.8% very low 93% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100 %Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Presence/Migration - 0.92 miles Chinook Salmon - Presence/Migration - 1.01 miles Coho Salmon - Presence/Migration - 1.13 miles Rainbow Trout - Presence/Migration - 1.13 miles Steelhead Trout - Presence/Migration - 1.13 miles

Reach Data Sheet	
Reach Number	4D-10
Location	T13N-R05E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	206.47
Length of Stream Shorelines (miles)	4.31
Physical Characteristics	
Geology	49.9% alluvium 49.1% alpine glacial drift, pre-Fraser 1.1% diorite
Soils	92.4% Partially Hydric 7.6% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	6%
Land Cover	87.8% Forest & Woodland 10% Recently Disturbed or Modified 1.4% Agricultural Vegetation 0.8% Developed & Other Human Use
Human Use	
Land Ownership	4.9% Municipal 0.9% Other State Land
Zoning	100% Forest 0% RDD-10
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	68.2% Slight 24.2% Moderate 7.2% Severe 0.4% Very severe
Seismic/Liquefaction Hazard	1.1% N/A (bedrock) 49.1% very low 49.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Mule And Black-tailed Deer 100 %Elk
PHS Fish	Chinook Salmon - Presence/Migration - 2.51 miles Coho Salmon - Presence/Migration - 2.41 miles Rainbow Trout - Presence/Migration - 4.35 miles Steelhead Trout - Presence/Migration - 2.49 miles

Reach Data Sheet	
Reach Number	4D-11
Location	T13N-R04E, T14N-R04E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	320.00
Length of Stream Shorelines (miles)	6.67
Physical Characteristics	
Geology	47.4% continental sedimentary deposits or rocks 41.4% mass-wasting deposits, mostly landslides 11.2% alluvium
Soils	66.3% Not Hydric 33.7% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	2%
Land Cover	98.1% Forest & Woodland 1.7% Recently Disturbed or Modified 0.1% Agricultural Vegetation 0.1% Developed & Other Human Use
Human Use	
Land Ownership	13.3% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	37.3% Very severe 33.3% Slight 15% Severe 14.5% Moderate
Seismic/Liquefaction Hazard	47.4% N/A (bedrock) 41.4% low to moderate 11.2% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 16.6% Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Presence/Migration - 2.01 miles Coho Salmon - Presence/Migration - 6.83 miles Rainbow Trout - Presence/Migration - 5.77 miles Steelhead Trout - Presence/Migration - 6.84 miles

Reach Data Sheet	
Reach Number	4D-12
Location	T12N-R02E
Type	Stream
Primary Water Body	Winston Creek
Shorelines Jurisdiction Area (acre)	171.06
Length of Stream Shorelines (miles)	2.80
Physical Characteristics	
Geology	40.1% alpine glacial outwash, pre-Fraser 19.6% alluvium 17.3% alpine glacial till, pre-Fraser 12.2% mass-wasting deposits, mostly landslides 2.8% basaltic andesite flows 0% volcanoclastic deposits or rocks
Soils	59.1% Partially Hydric 31.9% Not Hydric 9.1% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	15%
Land Cover	95% Forest & Woodland 2.4% Open Water 1.4% Nonvascular & Sparse Vascular Rock Vegetation 0.7% Shrubland & Grassland 0.3% Agricultural Vegetation 0.1% Recently Disturbed or Modified 0.1% Developed & Other Human Use
Human Use	
Land Ownership	21.7% Municipal 15% WA Dept. of Natural Resources
Zoning	66.8% RDD-10 11.1% Forest 9.3% RRC-R.5 8.6% Lake 4.2% RRC-R10000
Parks	-
Number of Historic Sites	3
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	57.3% Slight 31.5% Very severe 1.8% Moderate 0% Sever
Seismic/Liquefaction Hazard	2.8% N/A (bedrock) 8% N/A (water) 57.5% very low 12.2% low to moderate 19.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 24.2% Bald Eagle
PHS Fish	Coho Salmon - Presence/Migration - 2.93 miles Rainbow Trout - Presence/Migration - 2.97 miles Steelhead Trout - Presence/Migration - 2.54 miles Steelhead Trout - Presence/Migration - 0.39 miles

Reach Data Sheet	
Reach Number	4D-13
Location	T11N-R02E, T12N-R03E
Type	Stream
Primary Water Body	Winston Creek
Shorelines Jurisdiction Area (acre)	679.97
Length of Stream Shorelines (miles)	13.54
Physical Characteristics	
Geology	45.5% alpine glacial till, pre-Fraser 44.8% andesite flows 5.1% volcanoclastic deposits or rocks 4% alluvium 0.3% mass-wasting deposits, mostly landslides 0.2% alpine glacial drift, pre-Fraser 0.1% alpine glacial outwash, pre-Fraser
Soils	52.1% Not Hydric 46.6% Partially Hydric 1.4% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	10%
Land Cover	98.4% Forest & Woodland 0.7% Open Water 0.7% Recently Disturbed or Modified 0.1% Developed & Other Human Use
Human Use	
Land Ownership	8.7% WA Dept. of Natural Resources
Zoning	94.7% Forest 4.7% Park 0.7% RDD-10
Parks	Winston Creek Campground
Number of Historic Sites	2
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	184
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	44.8% Very severe 43% Slight 9.1% Moderate 1.7% Severe
Seismic/Liquefaction Hazard	49.9% N/A (bedrock) 45.8% very low 0.3% low to moderate 4% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 4% Mule And Black-tailed Deer
PHS Fish	Coho Salmon - Presence/Migration - 8.44 miles Rainbow Trout - Presence/Migration - 1.78 miles Steelhead Trout - Presence/Migration - 8.44 miles

Reach Data Sheet	
Reach Number	4D-14
Location	T11N-R01E, T11N-R02E
Type	Stream
Primary Water Body	Salmon Creek
Shorelines Jurisdiction Area (acre)	431.29
Length of Stream Shorelines (miles)	18.05
Physical Characteristics	
Geology	57.8% andesite flows 19.9% continental sedimentary deposits or rocks 19.3% alpine glacial drift, pre-Fraser 3% volcaniclastic deposits or rocks
Soils	64.8% Partially Hydric 35.2% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	8%
Land Cover	98.1% Forest & Woodland 1.9% Recently Disturbed or Modified
Human Use	
Land Ownership	-
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	62.3% Slight 15.3% Very severe 12% Severe 10.1% Moderate
Seismic/Liquefaction Hazard	80.3% N/A (bedrock) 19.3% very low 0.3% low to moderate
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 7.57 miles Coho Salmon - Presence/Migration - 9.54 miles Coho Salmon - Presence/Migration - 0.18 miles Steelhead Trout - Presence/Migration - 9.72 miles

Reach Data Sheet	
Reach Number	4D-15
Location	T11N-R02E, T11N-R03E
Type	Stream
Primary Water Body	Devils Creek
Shorelines Jurisdiction Area (acre)	176.57
Length of Stream Shorelines (miles)	3.65
Physical Characteristics	
Geology	59% continental sedimentary deposits or rocks 41% andesite flows
Soils	66.5% Not Hydric 33.5% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	72.5% Forest & Woodland 26.5% Recently Disturbed or Modified 0.9% Agricultural Vegetation 0.2% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	38.8% Slight 35.3% Moderate 25.9% Severe
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 3.86 miles Coho Salmon - Known Juvenile Rearing - 3.93 miles Coho Salmon - Presence/Migration - 0.07 miles Steelhead Trout - Known Spawning - 3.88 miles Steelhead Trout - Presence/Migration - 3.41 miles Steelhead Trout - Presence/Migration - 0.12 miles

Reach Data Sheet	
Reach Number	4D-16
Location	T11N-R04E
Type	Stream
Primary Water Body	Green River
Shorelines Jurisdiction Area (acre)	328.90
Length of Stream Shorelines (miles)	6.49
Physical Characteristics	
Geology	53% andesite flows 24.3% alluvium 19.4% volcanoclastic deposits or rocks 3.3% alpine glacial till, pre-Fraser
Soils	57.4% Not Hydric 24.8% All Hydric 17.8% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	16%
Land Cover	96.9% Forest & Woodland 2% Recently Disturbed or Modified 0.6% Developed & Other Human Use 0.3% Nonvascular & Sparse Vascular Rock Vegetation 0.1% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	42.6% Slight 28% Severe 16.9% Very severe 12.5% Moderate
Seismic/Liquefaction Hazard	72.4% N/A (bedrock) 3.3% very low 24.3% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 75.1% Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Known Spawning - 2.23 miles Chinook Salmon - Presence/Migration - 2.9 miles Coast Resident Cutthroat - Presence/Migration - 6.29 miles Coho Salmon - Known Juvenile Rearing - 4.52 miles Coho Salmon - Known Spawning - 2.23 miles Coho Salmon - Presence/Migration - 0.06 miles Steelhead Trout - Known Spawning - 6.29 miles Steelhead Trout - Presence/Migration - 2.23 miles Steelhead Trout - Presence/Migration - 0.1 miles

Reach Data Sheet	
Reach Number	4D-17
Location	T10N-R05E, T11N-R05E
Type	Stream
Primary Water Body	Green River
Shorelines Jurisdiction Area (acre)	166.00
Length of Stream Shorelines (miles)	3.47
Physical Characteristics	
Geology	86.4% alluvium 5.9% alpine glacial till, pre-Fraser 4% basalt flows 3.8% alpine glacial drift, Fraser-age
Soils	99.9% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	98% Forest & Woodland 1.8% Recently Disturbed or Modified 0.1% Agricultural Vegetation 0.1% Nonvascular & Sparse Vascular Rock Vegetation 0% Shrubland & Grassland
Human Use	
Land Ownership	63% Government Land 26.2% US Forest Service
Zoning	62% Wilderness 38% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	92.7% Moderate 6.8% Severe 0.3% Very severe
Seismic/Liquefaction Hazard	4% N/A (bedrock) 5.9% very low 3.8% very low to low 86.4% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 78.7% Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Known Spawning - 2.91 miles Chinook Salmon - Presence/Migration - 2.02 miles Coast Resident Cutthroat - Presence/Migration - 2.91 miles Coho Salmon - Known Juvenile Rearing - 0.57 miles Coho Salmon - Known Spawning - 1.51 miles Steelhead Trout - Known Juvenile Rearing - 0.54 miles Steelhead Trout - Known Spawning - 2.91 miles Steelhead Trout - Presence/Migration - 2.94 miles

Reach Data Sheet	
Reach Number	4D-18
Location	T12N-R02E, T12N-R03E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	507.60
Length of Stream Shorelines (miles)	5.36
Physical Characteristics	
Geology	25.7% alpine glacial outwash, pre-Fraser 20.9% basaltic andesite flows 6.6% alpine glacial outwash, Fraser-age
Soils	37.6% Not Hydric 16.5% Partially Hydric 45.9% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	2%
Land Cover	65.3% Forest & Woodland 26% Open Water 6.5% Agricultural Vegetation 1.8% Recently Disturbed or Modified 0.3% Developed & Other Human Use 0.1% Shrubland & Grassland
Human Use	
Land Ownership	96.9% Municipal
Zoning	43.2% RDD-5 40.4% RDD-10 15.2% RDD-20 0.8% RRC-R2 0.4% ARL
Parks	-
Number of Historic Sites	3
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	36.6% Very severe 13.2% Slight 3.7% Moderate
Seismic/Liquefaction Hazard	20.9% N/A (bedrock) 46.7% N/A (water) 32.4% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 6.8% Harlequin Duck
PHS Fish	Chinook Salmon - Presence/Migration - 10.87 miles Chum Salmon - Presence/Migration - 5.43 miles Coast Resident Cutthroat - Presence/Migration - 2.75 miles Coho Salmon - Presence/Migration - 5.43 miles Rainbow Trout - Presence/Migration - 2.77 miles Steelhead Trout - Presence/Migration - 5.43 miles

Reach Data Sheet	
Reach Number	4D-19
Location	T11N-R04E, T12N-R05E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	12,940.58
Length of Stream Shorelines (miles)	22.60
Physical Characteristics	
Geology	8% alpine glacial outwash, pre-Fraser 3.2% volcanoclastic deposits or rocks 2.4% basaltic andesite flows 1.7% alpine glacial till, pre-Fraser 1.1% alpine glacial outwash, Fraser-age 1% andesite flows 0.9% mass-wasting deposits, mostly landslides 0.4% basalt flows 0% alluvium 0% dacite flows
Soils	5.7% Partially Hydric 5.5% Not Hydric 88.8% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	4%
Land Cover	77.4% Open Water 10.9% Forest & Woodland 5.7% Nonvascular & Sparse Vascular Rock Vegetation 2.6% Agricultural Vegetation 2.4% Shrubland & Grassland 0.9% Recently Disturbed or Modified 0.1% Developed & Other Human Use
Human Use	
Land Ownership	99% Municipal 0% Government Land
Zoning	87.4% Lake 8.6% RDD-20 1.7% PTSA 1.3% Park 0.7% RDD-10 0.2% Forest 0.1% RDD-5
Parks	Mossyrock Dam Fishing Access, Mossyrock Park (C.R.P.), Taidnapam Park (C.R.P.)
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	4.7% Slight 2.4% Moderate 2.2% Severe 2% Very severe
Seismic/Liquefaction Hazard	7% N/A (bedrock) 81.3% N/A (water) 10.7% very low 0.9% low to moderate 0% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	3.4% Lahar Case 1 0.4% Lahar Case 2

Reach Data Sheet	
Priority Habitats and Species	
PHS Wildlife (acres)	12.4% Elk 11.3% Mule And Black-tailed Deer 4.9% Bald Eagle 0.6% Wood Duck 0.4% Cavity-nesting Ducks 0% Western Toad
PHS Fish	Chinook Salmon - Presence/Migration - 31.7 miles Chum Salmon - Presence/Migration - 6.26 miles Coast Resident Cutthroat - Presence/Migration - 0.2 miles Coho Salmon - Presence/Migration - 21.44 miles Rainbow Trout - Presence/Migration - 0.63 miles Steelhead Trout - Presence/Migration - 15.85 miles

Reach Data Sheet	
Reach Number	4D-20
Location	T12N-R04E
Type	Stream
Primary Water Body	Shelton Creek
Shorelines Jurisdiction Area (acre)	55.85
Length of Stream Shorelines (miles)	0.88
Physical Characteristics	
Geology	79.9% andesite flows 5.7% basaltic andesite flows
Soils	75.1% Not Hydric 4.1% Partially Hydric 20.8% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	87.3% Forest & Woodland 12.7% Open Water
Human Use	
Land Ownership	52.7% Municipal
Zoning	81% RDD-20 19% Lake
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	68.8% Very severe 6.2% Severe 3.5% Slight 0.6% Moderate
Seismic/Liquefaction Hazard	85.7% N/A (bedrock) 14.3% N/A (water)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	74.7% Mule And Black-tailed Deer 74.7% Elk
PHS Fish	-

Reach Data Sheet	
Reach Number	4D-21
Location	T11N-R05E
Type	Stream
Primary Water Body	Landers Creek
Shorelines Jurisdiction Area (acre)	124.40
Length of Stream Shorelines (miles)	2.54
Physical Characteristics	
Geology	88.6% volcaniclastic deposits or rocks 8.6% basalt flows 2.8% mass-wasting deposits, mostly landslides
Soils	100% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	99.3% Forest & Woodland 0.7% Recently Disturbed or Modified
Human Use	
Land Ownership	0% Municipal
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	47.3% Severe 32% Very severe 0.2% Moderate
Seismic/Liquefaction Hazard	97.2% N/A (bedrock) 2.8% low to moderate
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 95.6% Mule And Black-tailed Deer
PHS Fish	Coho Salmon - Presence/Migration - 2.46 miles Rainbow Trout - Presence/Migration - 0.84 miles

Reach Data Sheet	
Reach Number	4D-22
Location	T12N-R05E, T12N-R06E
Type	Stream
Primary Water Body	Rainey Creek
Shorelines Jurisdiction Area (acre)	270.37
Length of Stream Shorelines (miles)	5.26
Physical Characteristics	
Geology	78.2% alpine glacial outwash, pre-Fraser 13.6% alpine glacial till, pre-Fraser 8.3% basalt flows
Soils	51.4% Partially Hydric 48.6% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	20%
Land Cover	77.3% Forest & Woodland 20.9% Agricultural Vegetation 1.4% Recently Disturbed or Modified 0.2% Developed & Other Human Use 0.2% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	66.4% RDD-5 22.2% STMU 10.1% RDD-10 1.2% RDD-20
Parks	-
Number of Historic Sites	5
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	231
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	77.7% Slight 21% Very severe 1.1% Severe 0.2% Moderate
Seismic/Liquefaction Hazard	8.3% N/A (bedrock) 91.7% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Mule And Black-tailed Deer 100 %Elk
PHS Fish	Coho Salmon - Presence/Migration - 5.41 miles

Reach Data Sheet	
Reach Number	4D-23
Location	T11N-R05E, T11N-R06E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	201.50
Length of Stream Shorelines (miles)	2.57
Physical Characteristics	
Geology	56.9% alpine glacial outwash, Fraser-age 5.9% basalt flows 2.1% mass-wasting deposits, mostly landslides 2% diorite 0.6% alluvium 0% alpine glacial outwash, pre-Fraser
Soils	47.2% Not Hydric 52.8% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	4%
Land Cover	63% Forest & Woodland 30.6% Open Water 3.4% Recently Disturbed or Modified 2.7% Nonvascular & Sparse Vascular Rock Vegetation 0.2% Shrubland & Grassland
Human Use	
Land Ownership	56.4% Municipal 0.2% Government Land
Zoning	99.7% RDD-20 0.3% RDD-10 0% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	3
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	23.8% Very severe 21.8% Slight 1.6% Moderate
Seismic/Liquefaction Hazard	7.9% N/A (bedrock) 32.5% N/A (water) 56.9% very low 2.1% low to moderate 0.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	100% Lahar Case 1 90.2% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 27.8% Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Known Spawning - 2.54 miles Chinook Salmon - Presence/Migration - 0.01 miles Chinook Salmon - Presence/Migration - 2.45 miles Coho Salmon - Presence/Migration - 0.01 miles Coho Salmon - Presence/Migration - 2.54 miles Rainbow Trout - Presence/Migration - 2.55 miles Steelhead Trout - Presence/Migration - 0.02 miles Steelhead Trout - Presence/Migration - 2.43 miles

Reach Data Sheet	
Reach Number	4D-24
Location	T11N-R05E
Type	Stream
Primary Water Body	Goat Creek
Shorelines Jurisdiction Area (acre)	197.30
Length of Stream Shorelines (miles)	4.06
Physical Characteristics	
Geology	66.1% basalt flows 18.3% volcaniclastic deposits or rocks 8.2% andesite flows 4.5% quartz monzonite 2.8% alpine glacial outwash, Fraser-age
Soils	99.8% Not Hydric 0.1% Partially Hydric 0.1% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	100% Forest & Woodland
Human Use	
Land Ownership	60.1% Government Land 13% US Forest Service 2.9% Other Federal Land 2.1% Municipal
Zoning	61.6% Wilderness 36.3% Forest 2.1% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	55.6% Severe 39.2% Very severe 3.7% Slight 1.3% Moderate
Seismic/Liquefaction Hazard	97.2% N/A (bedrock) 2.8% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	5.8% Lahar Case 1 1.8% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Chinook Salmon - Known Spawning - 0.19 miles Coho Salmon - Presence/Migration - 0.2 miles Rainbow Trout - Presence/Migration - 1.93 miles

Reach Data Sheet	
Reach Number	4D-25
Location	T11N-R06E, T12N-R06E
Type	Stream
Primary Water Body	Lake Scanewa
Shorelines Jurisdiction Area (acre)	586.72
Length of Stream Shorelines (miles)	4.40
Physical Characteristics	
Geology	66.9% alpine glacial till, Fraser-age 6.6% basalt flows 3.8% alpine glacial outwash, Fraser-age 0.7% alpine glacial outwash, pre-Fraser 0.4% volcanoclastic deposits or rocks
Soils	44.9% Not Hydric 33.5% Partially Hydric 1% All Hydric 20.6% Unknown Hydric
FEMA 100-year Floodplain (area)	6%
NWI Wetland (area)	20%
Land Cover	58.8% Open Water 38.6% Forest & Woodland 1.4% Nonvascular & Sparse Vascular Rock Vegetation 0.9% Recently Disturbed or Modified 0.2% Shrubland & Grassland 0.2% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	95.5% RDD-20 3.8% ARL 0.7% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	3
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	54.9% Slight 22.7% Very severe
Seismic/Liquefaction Hazard	7% N/A (bedrock) 21.6% N/A (water) 71.4% very low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	100% Lahar Case 1 95.7% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100% Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Known Spawning - 4.37 miles Chinook Salmon - Presence/Migration - 4.37 miles Coho Salmon - Presence/Migration - 4.46 miles Rainbow Trout - Presence/Migration - 2.55 miles Steelhead Trout - Presence/Migration - 4.37 miles

Reach Data Sheet	
Reach Number	4D-26
Location	T12N-R06E, T12N-R07E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	1,761.42
Length of Stream Shorelines (miles)	8.11
Physical Characteristics	
Geology	47.3% alpine glacial drift, Fraser-age 44% alpine glacial till, Fraser-age 0% dacite flows 0% mass-wasting deposits, mostly landslides
Soils	79.3% Partially Hydric 9.8% Not Hydric 10.9% Unknown Hydric
FEMA 100-year Floodplain (area)	92%
NWI Wetland (area)	36%
Land Cover	40.6% Agricultural Vegetation 38.3% Forest & Woodland 12.1% Open Water 7.7% Recently Disturbed or Modified 1.1% Shrubland & Grassland 0.2% Nonvascular & Sparse Vascular Rock Vegetation 0% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	50.1% ARL 39.3% RDD-20 9.9% Forest 0.5% Park 0.2% Mine
Parks	Cowlitz Falls Bud Allen Park
Number of Historic Sites	8
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	86.2% Slight 2.7% Very severe 0.1% Moderate
Seismic/Liquefaction Hazard	0% N/A (bedrock) 8.6% N/A (water) 44% very low 47.3% very low to low 0% low to moderate
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	652
Rainier Blast Zone (acres)	1,341
Mudflow Hazard Area	100% Lahar Case 1 100% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100% Mule And Black-tailed Deer 55.8% Bald Eagle
PHS Fish	Chinook Salmon - Known Spawning - 8.47 miles Chinook Salmon - Presence/Migration - 8.47 miles Coho Salmon - Presence/Migration - 8.55 miles Coho Salmon - Presence/Migration - 0.59 miles Rainbow Trout - Presence/Migration - 8.47 miles Steelhead Trout - Presence/Migration - 8.55 miles

Reach Data Sheet	
Reach Number	4D-27
Location	T12N-R07E
Type	Stream
Primary Water Body	Siler Creek
Shorelines Jurisdiction Area (acre)	826.98
Length of Stream Shorelines (miles)	4.74
Physical Characteristics	
Geology	91.7% alpine glacial drift, Fraser-age 0.9% tuffs and tuff breccias 0.8% basaltic andesite flows 0% volcaniclastic deposits or rocks
Soils	84.6% Partially Hydric 4.5% Not Hydric 0.6% All Hydric 7.2% Unknown Hydric
FEMA 100-year Floodplain (area)	88%
NWI Wetland (area)	61%
Land Cover	45.8% Agricultural Vegetation 28.3% Forest & Woodland 15% Recently Disturbed or Modified 7.1% Shrubland & Grassland 3.3% Open Water 0.5% Developed & Other Human Use
Human Use	
Land Ownership	43% Municipal 2.3% Other Federal Land 0% Lewis County
Zoning	45.5% RDD-20 34.7% ARL 16.7% RDD-10 3.1% Forest
Parks	-
Number of Historic Sites	8
Number of Archaeological Sites	3
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	SILER CREEK - Temperature - 13 acres
Critical Areas	
Erosion Hazard	87.7% Slight 1% Moderate 0.3% Severe
Seismic/Liquefaction Hazard	1.7% N/A (bedrock) 6.6% N/A (water) 91.7% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	161
Rainier Blast Zone (acres)	827
Mudflow Hazard Area	82.1% Lahar Case 1 72.4% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 83% Bald Eagle 48.3% Mule And Black-tailed Deer 10.2% Cavity-nesting Ducks
PHS Fish	Chinook Salmon - Known Spawning - 0.88 miles Chinook Salmon - Presence/Migration - 0.88 miles Coast Resident Cutthroat - Presence/Migration - 3.61 miles Coho Salmon - Presence/Migration - 4.54 miles Rainbow Trout - Presence/Migration - 0.88 miles Steelhead Trout - Known Spawning - 0 miles Steelhead Trout - Presence/Migration - 4.53 miles

Reach Data Sheet	
Reach Number	4D-28
Location	T12N-R06E, T12N-R07E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	1,785.35
Length of Stream Shorelines (miles)	8.64
Physical Characteristics	
Geology	85.8% alpine glacial drift, Fraser-age 3.8% alpine glacial till, Fraser-age 1.8% volcanoclastic deposits or rocks 0.6% intrusive andesite
Soils	89.6% Partially Hydric 2% Not Hydric 0.5% All Hydric 7.9% Unknown Hydric
FEMA 100-year Floodplain (area)	83%
NWI Wetland (area)	44%
Land Cover	41.7% Forest & Woodland 36.5% Agricultural Vegetation 10.1% Recently Disturbed or Modified 8.7% Open Water 1.3% Developed & Other Human Use 1.3% Shrubland & Grassland 0.5% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	10.6% Municipal 2% WA Dept. of Natural Resources 0.7% Other State Land 0.3% Lewis County
Zoning	55.4% ARL 42.7% RDD-20 1.6% STMU 0.2% RDD-10 0% STI
Parks	-
Number of Historic Sites	21
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	688
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	89.6% Slight 1.2% Severe 0.8% Moderate
Seismic/Liquefaction Hazard	2.4% N/A (bedrock) 8% N/A (water) 3.8% very low 85.8% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	1,131
Rainier Blast Zone (acres)	1,785
Mudflow Hazard Area	99.3% Lahar Case 1 91.3% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 81.3% Mule And Black-tailed Deer 39% Bald Eagle 18.7% Cavity-nesting Ducks

Reach Data Sheet	
PHS Fish	Chinook Salmon - Known Spawning - 5.3 miles Chinook Salmon - Presence/Migration - 6.09 miles Coast Resident Cutthroat - Presence/Migration - 0.93 miles Coho Salmon - Presence/Migration - 9.94 miles Coho Salmon - Presence/Migration - 0.75 miles Rainbow Trout - Presence/Migration - 7.2 miles Steelhead Trout - Known Spawning - 3.27 miles Steelhead Trout - Presence/Migration - 5.92 miles Steelhead Trout - Presence/Migration - 0.56 miles

Reach Data Sheet	
Reach Number	4D-29
Location	T12N-R06E, T13N-R06E
Type	Stream
Primary Water Body	Kiona Creek
Shorelines Jurisdiction Area (acre)	216.69
Length of Stream Shorelines (miles)	4.05
Physical Characteristics	
Geology	68.4% alpine glacial outwash, Fraser-age 22.7% andesite flows 7.7% alpine glacial drift, pre-Fraser 1.2% basalt flows
Soils	66.6% Partially Hydric 33.4% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	17%
Land Cover	86.7% Forest & Woodland 8% Recently Disturbed or Modified 3.4% Developed & Other Human Use 1.2% Nonvascular & Sparse Vascular Rock Vegetation 0.7% Agricultural Vegetation 0% Shrubland & Grassland
Human Use	
Land Ownership	6.3% Lewis County 1.4% WA Dept. of Natural Resources
Zoning	32.8% RDD-5 24% Forest 18.5% RDD-20 9.1% STMU 8.9% RDD-10 6% Mine 0.7% ARL
Parks	-
Number of Historic Sites	9
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	1,781
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	103.7% Slight 20.3% Very severe 5.3% Severe 2.8% Moderate
Seismic/Liquefaction Hazard	23.9% N/A (bedrock) 76.1% very low 32.4% very low to low 0.9% low to moderate
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	6
Rainier Blast Zone (acres)	275
Mudflow Hazard Area	55.2% Lahar Case 1 33.6% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 82.6% Mule And Black-tailed Deer
PHS Fish	Coho Salmon - Presence/Migration - 4.64 miles Steelhead Trout - Known Spawning - 2.58 miles Steelhead Trout - Presence/Migration - 2.06 miles

Reach Data Sheet	
Reach Number	4D-30
Location	T12N-R07E, T14N-R07E
Type	Stream
Primary Water Body	Silver Creek
Shorelines Jurisdiction Area (acre)	893.55
Length of Stream Shorelines (miles)	18.35
Physical Characteristics	
Geology	52.3% volcaniclastic deposits or rocks 38% andesite flows 8.1% alpine glacial drift, Fraser-age 1.5% intrusive andesite 0.2% mass-wasting deposits, mostly landslides
Soils	74.7% Not Hydric 13.3% Partially Hydric
FEMA 100-year Floodplain (area)	5%
NWI Wetland (area)	1%
Land Cover	84.5% Forest & Woodland 11.1% Recently Disturbed or Modified 4.1% Developed & Other Human Use 0.2% Agricultural Vegetation 0% Shrubland & Grassland
Human Use	
Land Ownership	33.5% Government Land 20.2% US Forest Service 9% Other Federal Land 0.3% Lewis County
Zoning	92.9% Forest 4% STMU 1.9% STI 1.2% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	8,687
303(d) Listings (Category 5)	LAKE CREEK - Temperature - 1.7 acres LYNX CREEK - Temperature - 17.1 acres SILVER CREEK - Temperature - 25.8 acres
Critical Areas	
Erosion Hazard	37% Very severe 18.1% Moderate 8.4% Severe 5% Slight
Seismic/Liquefaction Hazard	91.7% N/A (bedrock) 0.2% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	821
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	62.3% Elk 7.2% Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Presence/Migration - 4.6 miles Coast Resident Cutthroat - Presence/Migration - 10.98 miles Coho Salmon - Presence/Migration - 2.27 miles Rainbow Trout - Presence/Migration - 11.1 miles Steelhead Trout - Known Spawning - 5.14 miles

Reach Data Sheet	
Reach Number	4D-31
Location	T12N-R07E, T12N-R08E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	2,216.68
Length of Stream Shorelines (miles)	6.35
Physical Characteristics	
Geology	86.5% alpine glacial drift, Fraser-age 0.3% volcanoclastic deposits or rocks 0.3% intrusive andesite 0.1% andesite flows 0% granodiorite
Soils	78.3% Partially Hydric 6.2% All Hydric 1.3% Not Hydric 14.3% Unknown Hydric
FEMA 100-year Floodplain (area)	99%
NWI Wetland (area)	42%
Land Cover	46.6% Forest & Woodland 34.1% Agricultural Vegetation 10.3% Open Water 3.5% Recently Disturbed or Modified 3.1% Nonvascular & Sparse Vascular Rock Vegetation 2.1% Shrubland & Grassland 0.3% Developed & Other Human Use
Human Use	
Land Ownership	0.4% Other Federal Land 0% Lewis County
Zoning	61.3% RDD-20 37.3% ARL 0.9% STI 0.3% Forest 0.2% RDD-5 0% STMU 0% RDD-10
Parks	-
Number of Historic Sites	6
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	5,744
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	78.9% Slight 0.4% Moderate 0.3% Severe
Seismic/Liquefaction Hazard	0.7% N/A (bedrock) 12.8% N/A (water) 86.5% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	1,768
Rainier Blast Zone (acres)	2,217
Mudflow Hazard Area	99.9% Lahar Case 1 95.3% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 97.3% Mule And Black-tailed Deer 9.6% Cavity-nesting Ducks

Reach Data Sheet	
PHS Fish	Chinook Salmon - Known Spawning - 6.2 miles Chinook Salmon - Presence/Migration - 6.63 miles Coho Salmon - Presence/Migration - 9.22 miles Coho Salmon - Presence/Migration - 1.35 miles Rainbow Trout - Presence/Migration - 6.26 miles Steelhead Trout - Known Spawning - 0 miles Steelhead Trout - Presence/Migration - 6.28 miles

Reach Data Sheet	
Reach Number	4D-32
Location	T12N-R08E
Type	Stream
Primary Water Body	Davis Creek
Shorelines Jurisdiction Area (acre)	881.67
Length of Stream Shorelines (miles)	5.67
Physical Characteristics	
Geology	50.6% alpine glacial drift, Fraser-age 33.7% alluvium 1.8% mass-wasting deposits, mostly landslides 0.2% andesite flows
Soils	80% Partially Hydric 3.7% Not Hydric 2% All Hydric 13.5% Unknown Hydric
FEMA 100-year Floodplain (area)	93%
NWI Wetland (area)	20%
Land Cover	43.7% Forest & Woodland 35.2% Agricultural Vegetation 12.8% Open Water 4% Nonvascular & Sparse Vascular Rock Vegetation 3.6% Recently Disturbed or Modified 0.5% Shrubland & Grassland 0.3% Developed & Other Human Use
Human Use	
Land Ownership	0.9% Other Federal Land 0.3% WA Dept. of Natural Resources
Zoning	87.3% RDD-20 10.4% ARL 1.2% RDD-5 0.9% Forest 0.1% RDD-10
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	131
303(d) Listings (Category 5)	DAVIS CREEK - Temperature - 5.1 acres
Critical Areas	
Erosion Hazard	81.6% Slight 0.7% Very severe 0.7% Moderate 0.7% Severe
Seismic/Liquefaction Hazard	0.2% N/A (bedrock) 13.6% N/A (water) 50.6% very low to low 1.8% low to moderate 33.7% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	820
Rainier Blast Zone (acres)	882
Mudflow Hazard Area	98.1% Lahar Case 1 94.7% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 92.7% Mule And Black-tailed Deer 6.8% Cavity-nesting Ducks

Reach Data Sheet	
PHS Fish	Chinook Salmon - Presence/Migration - 6.17 miles Coast Resident Cutthroat - Presence/Migration - 2.42 miles Coho Salmon - Presence/Migration - 5.45 miles Rainbow Trout - Presence/Migration - 3.08 miles Steelhead Trout - Presence/Migration - 5.41 miles Steelhead Trout - Presence/Migration - 0.05 miles

Reach Data Sheet	
Reach Number	4D-33
Location	T12N-R08E
Type	Stream
Primary Water Body	Kilborn Creek
Shorelines Jurisdiction Area (acre)	40.57
Length of Stream Shorelines (miles)	0.81
Physical Characteristics	
Geology	52.8% alpine glacial drift, Fraser-age 45% andesite flows 2.1% volcaniclastic deposits or rocks
Soils	29.1% Not Hydric 0.9% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	100% Forest & Woodland
Human Use	
Land Ownership	65.4% Other Federal Land 5.4% Government Land
Zoning	70.8% Forest 22.3% RDD-10 6.9% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	114
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	30% Slight
Seismic/Liquefaction Hazard	47.2% N/A (bedrock) 52.8% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	9
Rainier Blast Zone (acres)	27
Mudflow Hazard Area	68.4% Lahar Case 1 3.7% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 31% Mule And Black-tailed Deer
PHS Fish	Coho Salmon - Presence/Migration - 0.58 miles Coho Salmon - Presence/Migration - 0.27 miles Steelhead Trout - Presence/Migration - 0.85 miles

Reach Data Sheet	
Reach Number	4D-34
Location	T12N-R08E, T13N-R08E
Type	Stream
Primary Water Body	Davis Creek
Shorelines Jurisdiction Area (acre)	96.23
Length of Stream Shorelines (miles)	1.97
Physical Characteristics	
Geology	87.6% andesite flows 12.4% mass-wasting deposits, mostly landslides
Soils	1.6% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	99.7% Forest & Woodland 0.3% Recently Disturbed or Modified
Human Use	
Land Ownership	59.8% US Forest Service 38.7% Other Federal Land 1.5% Government Land
Zoning	100% Forest 0% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	DAVIS CREEK - Temperature - 9.3 acres
Critical Areas	
Erosion Hazard	1.6% Severe
Seismic/Liquefaction Hazard	87.6% N/A (bedrock) 12.4% low to moderate
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	96
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 2.1% Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 0.79 miles

Reach Data Sheet	
Reach Number	4D-35
Location	T12N-R08E, T13N-R09E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	1,155.54
Length of Stream Shorelines (miles)	5.71
Physical Characteristics	
Geology	45.8% alluvium 36.2% alpine glacial drift, Fraser-age 1.2% andesite flows 1% volcaniclastic deposits or rocks 0.5% mass-wasting deposits, mostly landslides
Soils	66.6% Partially Hydric 7.1% All Hydric 1.8% Not Hydric 19.6% Unknown Hydric
FEMA 100-year Floodplain (area)	97%
NWI Wetland (area)	34%
Land Cover	57.2% Forest & Woodland 17.8% Open Water 10.4% Recently Disturbed or Modified 7.1% Agricultural Vegetation 7% Nonvascular & Sparse Vascular Rock Vegetation 0.3% Shrubland & Grassland 0.3% Developed & Other Human Use
Human Use	
Land Ownership	2.8% Other Federal Land 2.3% Lewis County 0% Other State Land
Zoning	94.4% RDD-20 5.6% Forest
Parks	-
Number of Historic Sites	4
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	1,305
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	68% Slight 0.4% Severe 0.1% Very severe
Seismic/Liquefaction Hazard	2.2% N/A (bedrock) 15.2% N/A (water) 36.2% very low to low 0.5% low to moderate 45.8% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	1,111
Rainier Blast Zone (acres)	1,156
Mudflow Hazard Area	100% Lahar Case 1 95.2% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 94% Mule And Black-tailed Deer 0.3% Cavity-nesting Ducks
PHS Fish	Chinook Salmon - Presence/Migration - 11.82 miles Coast Resident Cutthroat - Presence/Migration - 0.02 miles Coho Salmon - Presence/Migration - 6.6 miles Coho Salmon - Presence/Migration - 0.07 miles Rainbow Trout - Presence/Migration - 5.51 miles Steelhead Trout - Presence/Migration - 6.42 miles

Reach Data Sheet	
Reach Number	4D-36
Location	T13N-R09E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	40.32
Length of Stream Shorelines (miles)	0.93
Physical Characteristics	
Geology	77.6% alluvium 0.2% volcaniclastic deposits or rocks 0.2% andesite flows
Soils	46.3% Partially Hydric 5.6% Not Hydric 19.6% Unknown Hydric
FEMA 100-year Floodplain (area)	81%
NWI Wetland (area)	28%
Land Cover	64.5% Forest & Woodland 22.7% Open Water 8.3% Recently Disturbed or Modified 2.8% Nonvascular & Sparse Vascular Rock Vegetation 1.7% Shrubland & Grassland
Human Use	
Land Ownership	18.4% Other Federal Land
Zoning	81.6% RDD-20 18.4% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	46.3% Slight 5.6% Very severe
Seismic/Liquefaction Hazard	0.4% N/A (bedrock) 22% N/A (water) 77.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	24
Rainier Blast Zone (acres)	40
Mudflow Hazard Area	100% Lahar Case 1 100% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 80.3% Mule And Black-tailed Deer 0.7% Cavity-nesting Ducks
PHS Fish	Chinook Salmon - Presence/Migration - 0.97 miles Coast Resident Cutthroat - Presence/Migration - 0.13 miles Coho Salmon - Presence/Migration - 0.6 miles Rainbow Trout - Presence/Migration - 0.59 miles Steelhead Trout - Presence/Migration - 0.6 miles

Reach Data Sheet	
Reach Number	4D-37
Location	T13N-R09E, T14N-R10E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	1,971.84
Length of Stream Shorelines (miles)	12.06
Physical Characteristics	
Geology	53.3% alluvium 24.2% alpine glacial drift, Fraser-age 4.2% tuffs and tuff breccias 2.1% continental sedimentary deposits or rocks 0.2% andesite flows
Soils	41.2% Partially Hydric 17.2% All Hydric 3.6% Not Hydric 20% Unknown Hydric
FEMA 100-year Floodplain (area)	84%
NWI Wetland (area)	46%
Land Cover	52.4% Forest & Woodland 22.6% Open Water 15.7% Nonvascular & Sparse Vascular Rock Vegetation 4.3% Recently Disturbed or Modified 3% Agricultural Vegetation 1.4% Developed & Other Human Use 0.6% Shrubland & Grassland 0.1% Aquatic Vegetation
Human Use	
Land Ownership	18.2% Government Land 4.8% Other Federal Land 3.1% WA Dept. of Natural Resources 0.5% WA State Parks and Recreation 0.4% Other State Land 0% Lewis County
Zoning	33.8% RDD-20 17.9% Forest 15.5% RDD-10 11.2% RRC-R1 11.1% RDD-5 9.5% Mine 0.5% STR-4 0.4% STMU
Parks	-
Number of Historic Sites	47
Number of Archaeological Sites	4
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	12,285
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	41.6% Slight 1.1% Very severe 1% Moderate 0.6% Severe
Seismic/Liquefaction Hazard	6.5% N/A (bedrock) 16% N/A (water) 24.2% very low to low 53.3% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	13053 HWY 12 PACKWOOD, WA 98361 - Operational
Channel Migration Zone (acres)	1,943
Rainier Blast Zone (acres)	1,972
Mudflow Hazard Area	100% Lahar Case 1 99% Lahar Case 2

Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 81% Mule And Black-tailed Deer 28.6% Harlequin Duck 1.1% Cavity-nesting Ducks
PHS Fish	Chinook Salmon - Known Spawning - 9.31 miles Chinook Salmon - Presence/Migration - 16.04 miles Coast Resident Cutthroat - Presence/Migration - 1.85 miles Coho Salmon - Presence/Migration - 15.39 miles Rainbow Trout - Presence/Migration - 12.4 miles Steelhead Trout - Presence/Migration - 14.88 miles

Reach Data Sheet	
Reach Number	4D-38
Location	T13N-R09E
Type	Stream
Primary Water Body	Unnamed 21
Shorelines Jurisdiction Area (acre)	355.68
Length of Stream Shorelines (miles)	4.07
Physical Characteristics	
Geology	70.3% alpine glacial drift, Fraser-age 19.3% continental sedimentary deposits or rocks 9.2% alluvium
Soils	69.4% Partially Hydric 9.4% All Hydric 7.7% Not Hydric 0.8% Unknown Hydric
FEMA 100-year Floodplain (area)	73%
NWI Wetland (area)	45%
Land Cover	64.3% Forest & Woodland 23.2% Agricultural Vegetation 9% Recently Disturbed or Modified 2.7% Open Water 0.4% Shrubland & Grassland 0.3% Nonvascular & Sparse Vascular Rock Vegetation 0.2% Developed & Other Human Use
Human Use	
Land Ownership	7.6% Government Land 4.8% Other State Land 2.8% Other Federal Land 2.7% WA Dept. of Natural Resources
Zoning	52.4% RDD-20 13.9% RDD-5 10.7% Forest 8.9% RDD-10 8.7% STMU 5.2% STI 0.1% STR-4
Parks	-
Number of Historic Sites	18
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	2,966
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	75.5% Slight 1% Severe 0.5% Moderate
Seismic/Liquefaction Hazard	19.3% N/A (bedrock) 1.2% N/A (water) 70.3% very low to low 9.2% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	85
Rainier Blast Zone (acres)	356
Mudflow Hazard Area	97.2% Lahar Case 1 73.6% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 80.8% Mule And Black-tailed Deer 7.5% Cavity-nesting Ducks

Reach Data Sheet	
PHS Fish	Chinook Salmon - Presence/Migration - 1.21 miles Coast Resident Cutthroat - Presence/Migration - 4.27 miles Coho Salmon - Presence/Migration - 4.35 miles Rainbow Trout - Presence/Migration - 0.28 miles Steelhead Trout - Presence/Migration - 3.91 miles

Reach Data Sheet	
Reach Number	4D-39
Location	T13N-R09E
Type	Stream
Primary Water Body	Butter Creek
Shorelines Jurisdiction Area (acre)	49.60
Length of Stream Shorelines (miles)	1.03
Physical Characteristics	
Geology	99.1% alpine glacial drift, Fraser-age 0.9% continental sedimentary deposits or rocks
Soils	47.2% Partially Hydric 39.5% All Hydric 13.1% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	6%
Land Cover	51.6% Forest & Woodland 30.9% Developed & Other Human Use 7.9% Recently Disturbed or Modified 6.9% Nonvascular & Sparse Vascular Rock Vegetation 2.6% Shrubland & Grassland 0.1% Agricultural Vegetation
Human Use	
Land Ownership	-
Zoning	52.8% RRC-R1 47.2% RDD-5
Parks	-
Number of Historic Sites	9
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	7,628
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	47.2% Slight 13.1% Severe
Seismic/Liquefaction Hazard	0.9% N/A (bedrock) 99.1% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	5
Rainier Blast Zone (acres)	50
Mudflow Hazard Area	100% Lahar Case 1 21.1% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100% Mule And Black-tailed Deer 0.6% Harlequin Duck
PHS Fish	Coho Salmon - Presence/Migration - 1.03 miles Rainbow Trout - Presence/Migration - 1.03 miles Steelhead Trout - Presence/Migration - 1.03 miles

Reach Data Sheet	
Reach Number	4D-40
Location	T11N-R06E
Type	Stream
Primary Water Body	Cispus River
Shorelines Jurisdiction Area (acre)	194.97
Length of Stream Shorelines (miles)	2.82
Physical Characteristics	
Geology	66.8% alpine glacial till, Fraser-age 1.5% andesite flows 0.8% volcanoclastic deposits or rocks 0% alluvium
Soils	39.2% Not Hydric 36.4% Partially Hydric 24.4% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	28%
Land Cover	71.7% Forest & Woodland 20.5% Open Water 5% Nonvascular & Sparse Vascular Rock Vegetation 2.3% Recently Disturbed or Modified 0.4% Developed & Other Human Use 0.1% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	65.7% Forest 34.3% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	65.6% Slight 8.8% Very severe 1.2% Severe
Seismic/Liquefaction Hazard	2.2% N/A (bedrock) 30.9% N/A (water) 66.8% very low 0% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	99.9% Lahar Case 1 63.7% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100 %Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Known Spawning - 2.77 miles Chinook Salmon - Presence/Migration - 2.77 miles Coho Salmon - Presence/Migration - 2.82 miles Rainbow Trout - Presence/Migration - 0.03 miles Steelhead Trout - Known Spawning - 0.05 miles Steelhead Trout - Presence/Migration - 2.77 miles

Reach Data Sheet	
Reach Number	4D-41
Location	T10N-R06E, T11N-R06E
Type	Stream
Primary Water Body	Quartz Creek
Shorelines Jurisdiction Area (acre)	278.55
Length of Stream Shorelines (miles)	5.61
Physical Characteristics	
Geology	33.1% volcaniclastic deposits or rocks 29.3% quartz monzonite 16% granodiorite 11.5% alluvium 4% dacite flows 3.1% alpine glacial drift, Fraser-age 2.8% quartz diorite 0.2% andesite flows
Soils	86.5% Not Hydric 13.4% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	6%
Land Cover	94.9% Forest & Woodland 5.1% Recently Disturbed or Modified
Human Use	
Land Ownership	83.1% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	36.5% Very severe 33.6% Slight 28.9% Severe 0% Moderat
Seismic/Liquefaction Hazard	85.4% N/A (bedrock) 3.1% very low to low 11.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	0.9% Lahar Case 1
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 17.1% Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 5.47 miles Coho Salmon - Presence/Migration - 2.09 miles Rainbow Trout - Presence/Migration - 5.68 miles Steelhead Trout - Known Spawning - 2.17 miles Steelhead Trout - Presence/Migration - 0.66 miles

Reach Data Sheet	
Reach Number	4D-42
Location	T11N-R06E
Type	Stream
Primary Water Body	Cispus River
Shorelines Jurisdiction Area (acre)	93.58
Length of Stream Shorelines (miles)	1.74
Physical Characteristics	
Geology	67.5% alpine glacial till, Fraser-age 2.4% volcanoclastic deposits or rocks 1.5% granodiorite 0.9% alluvium
Soils	74.4% Not Hydric 1.8% Partially Hydric 23.8% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	28%
Land Cover	95.3% Forest & Woodland 2.6% Open Water 1.7% Recently Disturbed or Modified 0.3% Developed & Other Human Use 0.2% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	-
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	71% Slight 3.7% Severe 1.5% Moderate
Seismic/Liquefaction Hazard	3.9% N/A (bedrock) 27.7% N/A (water) 67.5% very low 0.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	10.7% Lahar Case 1
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100 %Mule And Black-tailed Deer 36.9% Harlequin Duck
PHS Fish	Chinook Salmon - Known Spawning - 1.39 miles Chinook Salmon - Presence/Migration - 1.39 miles Coast Resident Cutthroat - Presence/Migration - 0.35 miles Coho Salmon - Presence/Migration - 1.5 miles Rainbow Trout - Presence/Migration - 0.77 miles Steelhead Trout - Known Spawning - 0.06 miles Steelhead Trout - Presence/Migration - 1.44 miles

Reach Data Sheet	
Reach Number	4D-43
Location	T11N-R06E, T11N-R07E
Type	Stream
Primary Water Body	Woods Creek
Shorelines Jurisdiction Area (acre)	155.34
Length of Stream Shorelines (miles)	2.95
Physical Characteristics	
Geology	80.4% alpine glacial drift, Fraser-age 19.6% alpine glacial till, Fraser-age
Soils	37.3% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	9%
Land Cover	99.2% Forest & Woodland 0.6% Recently Disturbed or Modified 0.2% Agricultural Vegetation 0.1% Shrubland & Grassland
Human Use	
Land Ownership	62.8% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	WOODS CREEK - Temperature - 14.4 acres
Critical Areas	
Erosion Hazard	37% Slight 0.3% Moderate
Seismic/Liquefaction Hazard	19.6% very low 80.4% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 36.9% Mule And Black-tailed Deer
PHS Fish	Coho Salmon - Presence/Migration - 3.1 miles Steelhead Trout - Presence/Migration - 3.06 miles

Reach Data Sheet	
Reach Number	4D-44
Location	T11N-R06E, T11N-R07E
Type	Stream
Primary Water Body	Cispus River
Shorelines Jurisdiction Area (acre)	415.63
Length of Stream Shorelines (miles)	6.76
Physical Characteristics	
Geology	64.6% alluvium 10.2% alpine glacial till, Fraser-age 7.7% volcanoclastic deposits or rocks 4.7% tuffs and tuff breccias 1.2% mass-wasting deposits, mostly landslides 0.1% basaltic andesite flows
Soils	25.7% Not Hydric 7.5% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	25%
Land Cover	89.1% Forest & Woodland 8.5% Open Water 1.1% Nonvascular & Sparse Vascular Rock Vegetation 0.8% Recently Disturbed or Modified 0.3% Developed & Other Human Use 0.2% Shrubland & Grassland 0.1% Agricultural Vegetation
Human Use	
Land Ownership	66.8% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	CISPUS RIVER - Temperature - 38.2 acres IRON CREEK - Temperature - 0.762 acres
Critical Areas	
Erosion Hazard	21.9% Slight 2.4% Severe 1.4% Moderate
Seismic/Liquefaction Hazard	12.5% N/A (bedrock) 11.5% N/A (water) 10.2% very low 1.2% low to moderate 64.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 49.8% Harlequin Duck 32.9% Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Known Spawning - 6.6 miles Chinook Salmon - Presence/Migration - 6.6 miles Coast Resident Cutthroat - Presence/Migration - 6.65 miles Coho Salmon - Presence/Migration - 6.69 miles Rainbow Trout - Presence/Migration - 6.65 miles Steelhead Trout - Presence/Migration - 6.69 miles

Reach Data Sheet	
Reach Number	4D-45
Location	T11N-R07E
Type	Stream
Primary Water Body	Greenhorn Creek
Shorelines Jurisdiction Area (acre)	211.81
Length of Stream Shorelines (miles)	4.38
Physical Characteristics	
Geology	65.3% tuffs and tuff breccias 19.2% andesite flows 15.5% alluvium
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	99.2% Forest & Woodland 0.5% Shrubland & Grassland 0.3% Recently Disturbed or Modified
Human Use	
Land Ownership	100% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	1918 CREEK - Temperature - 0.489 acres GREENHORN CREEK - Temperature - 26.6 acres
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	84.5% N/A (bedrock) 15.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	48.3% Elk
PHS Fish	Coho Salmon - Presence/Migration - 1.65 miles Steelhead Trout - Presence/Migration - 1.66 miles

Reach Data Sheet	
Reach Number	4D-46
Location	T11N-R07E
Type	Stream
Primary Water Body	Cispus River
Shorelines Jurisdiction Area (acre)	105.18
Length of Stream Shorelines (miles)	1.64
Physical Characteristics	
Geology	56.9% alluvium 42.3% tuffs and tuff breccias 0.7% alpine glacial drift, Fraser-age
Soils	-
FEMA 100-year Floodplain (area)	33%
NWI Wetland (area)	24%
Land Cover	92.6% Forest & Woodland 4% Open Water 2.6% Nonvascular & Sparse Vascular Rock Vegetation 0.7% Recently Disturbed or Modified
Human Use	
Land Ownership	89.4% Government Land
Zoning	100% Forest 0% STMU
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	73
303(d) Listings (Category 5)	CISPUS RIVER - Temperature - 7.5 acres GREENHORN CREEK - Temperature - 1 acres
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	42.3% N/A (bedrock) 0.7% very low to low 56.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	33
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100% Elk 0.9% Harlequin Duck
PHS Fish	Chinook Salmon - Known Spawning - 1.52 miles Chinook Salmon - Presence/Migration - 1.52 miles Coast Resident Cutthroat - Presence/Migration - 1.52 miles Coho Salmon - Presence/Migration - 1.61 miles Rainbow Trout - Presence/Migration - 1.52 miles Steelhead Trout - Presence/Migration - 1.61 miles

Reach Data Sheet	
Reach Number	4D-47
Location	T11N-R07E, T11N-R08E
Type	Stream
Primary Water Body	Cispus River
Shorelines Jurisdiction Area (acre)	360.78
Length of Stream Shorelines (miles)	3.42
Physical Characteristics	
Geology	95.5% alluvium 4.2% alpine glacial drift, Fraser-age 0.2% dacite flows 0% tuffs and tuff breccias
Soils	-
FEMA 100-year Floodplain (area)	91%
NWI Wetland (area)	40%
Land Cover	68.1% Forest & Woodland 22.3% Nonvascular & Sparse Vascular Rock Vegetation 4.6% Open Water 2.5% Agricultural Vegetation 1.7% Recently Disturbed or Modified 0.6% Developed & Other Human Use 0.2% Shrubland & Grassland
Human Use	
Land Ownership	27.2% Government Land 10.7% Other Federal Land
Zoning	42.4% Forest 37.3% RDD-10 11.1% STMU 9.2% RDD-5
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	5
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	1,879
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	0.3% N/A (bedrock) 4.2% very low to low 95.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	240
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Chinook Salmon - Known Spawning - 3.04 miles Chinook Salmon - Presence/Migration - 3.24 miles Coast Resident Cutthroat - Presence/Migration - 3.14 miles Coho Salmon - Presence/Migration - 3.54 miles Rainbow Trout - Presence/Migration - 3.14 miles Steelhead Trout - Known Spawning - 0.1 miles Steelhead Trout - Presence/Migration - 3.04 miles Steelhead Trout - Presence/Migration - 0.19 miles

Reach Data Sheet	
Reach Number	4D-48
Location	T11N-R08E
Type	Stream
Primary Water Body	Yellowjacket Creek
Shorelines Jurisdiction Area (acre)	307.75
Length of Stream Shorelines (miles)	6.26
Physical Characteristics	
Geology	65.9% volcaniclastic deposits or rocks 16.8% alluvium 8.5% basaltic andesite flows 6.1% quartz diorite 2.6% alpine glacial drift, Fraser-age 0.2% mass-wasting deposits, mostly landslides
Soils	-
FEMA 100-year Floodplain (area)	3%
NWI Wetland (area)	19%
Land Cover	97.4% Forest & Woodland 1.4% Agricultural Vegetation 0.8% Nonvascular & Sparse Vascular Rock Vegetation 0.2% Recently Disturbed or Modified 0.1% Developed & Other Human Use 0% Shrubland & Grassland
Human Use	
Land Ownership	99.8% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	3
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	YELLOWJACKET CREEK - Temperature - 16.5 acres
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	80.4% N/A (bedrock) 2.6% very low to low 0.2% low to moderate 16.8% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	12.1% Elk
PHS Fish	Chinook Salmon - Presence/Migration - 12.55 miles Coast Resident Cutthroat - Presence/Migration - 6.5 miles Coho Salmon - Presence/Migration - 6.53 miles Rainbow Trout - Presence/Migration - 6.19 miles Steelhead Trout - Known Spawning - 6.09 miles Steelhead Trout - Presence/Migration - 0.44 miles

Reach Data Sheet	
Reach Number	4D-49
Location	T11N-R08E
Type	Stream
Primary Water Body	Cispus River
Shorelines Jurisdiction Area (acre)	288.18
Length of Stream Shorelines (miles)	2.77
Physical Characteristics	
Geology	88% alluvium 6.4% alpine glacial drift, Fraser-age 5% dacite flows 0.6% mass-wasting deposits, mostly landslides
Soils	-
FEMA 100-year Floodplain (area)	7%
NWI Wetland (area)	58%
Land Cover	75% Forest & Woodland 12.7% Nonvascular & Sparse Vascular Rock Vegetation 6.4% Open Water 3.3% Agricultural Vegetation 1.8% Recently Disturbed or Modified 0.4% Shrubland & Grassland 0.4% Developed & Other Human Use
Human Use	
Land Ownership	99.8% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	CISPUS RIVER - Temperature - 7.4 acres
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	5% N/A (bedrock) 6.4% very low to low 0.6% low to moderate 88% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	41
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Chinook Salmon - Known Spawning - 2.65 miles Chinook Salmon - Presence/Migration - 2.69 miles Coast Resident Cutthroat - Presence/Migration - 2.67 miles Coho Salmon - Presence/Migration - 2.75 miles Rainbow Trout - Presence/Migration - 2.67 miles Steelhead Trout - Known Spawning - 0.02 miles Steelhead Trout - Presence/Migration - 2.73 miles

Reach Data Sheet	
Reach Number	4D-50
Location	T10N-R09E, T11N-R09E
Type	Stream
Primary Water Body	Cispus River
Shorelines Jurisdiction Area (acre)	483.28
Length of Stream Shorelines (miles)	6.85
Physical Characteristics	
Geology	78.4% alluvium 14.2% volcanoclastic deposits or rocks 5.7% basalt flows 1.7% intrusive andesite
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	34%
Land Cover	89.3% Forest & Woodland 6.9% Nonvascular & Sparse Vascular Rock Vegetation 1.7% Agricultural Vegetation 1.1% Open Water 0.3% Shrubland & Grassland 0.3% Recently Disturbed or Modified 0.2% Aquatic Vegetation 0.1% Developed & Other Human Use
Human Use	
Land Ownership	96.2% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	CISPUS RIVER - Temperature - 6.8 acres
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	21.6% N/A (bedrock) 78.4% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	49.1% Elk
PHS Fish	Chinook Salmon - Known Spawning - 6.77 miles Chinook Salmon - Presence/Migration - 6.77 miles Coho Salmon - Presence/Migration - 6.77 miles Rainbow Trout - Presence/Migration - 6.77 miles Steelhead Trout - Presence/Migration - 6.77 miles

Reach Data Sheet	
Reach Number	4D-51
Location	T11N-R08E, T11N-R09E
Type	Stream
Primary Water Body	Cispus River
Shorelines Jurisdiction Area (acre)	576.03
Length of Stream Shorelines (miles)	11.78
Physical Characteristics	
Geology	68.8% alluvium 16.5% volcanoclastic deposits or rocks 8.8% basaltic andesite flows 3.7% basalt flows 1.9% alpine glacial drift, Fraser-age 0.4% diorite
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	6%
Land Cover	95.8% Forest & Woodland 3.6% Recently Disturbed or Modified 0.5% Open Water 0.1% Agricultural Vegetation 0% Developed & Other Human Use 0% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	100% Government Land
Zoning	100% Forest
Parks	North Fork Campground
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	CISPUS RIVER - Temperature - 1.2 acres CISPUS RIVER, N.F. - Temperature - 7.5 acres
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	29.3% N/A (bedrock) 1.9% very low to low 68.8% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	10.4% Elk
PHS Fish	Chinook Salmon - Known Spawning - 0.12 miles Chinook Salmon - Presence/Migration - 17.2 miles Coast Resident Cutthroat - Presence/Migration - 11.37 miles Coho Salmon - Presence/Migration - 8.73 miles Rainbow Trout - Presence/Migration - 10.53 miles Steelhead Trout - Presence/Migration - 9.17 miles Steelhead Trout - Presence/Migration - 0.33 miles

Reach Data Sheet	
Reach Number	4D-52
Location	T12N-R09E, T13N-R09E
Type	Stream
Primary Water Body	Willame Creek
Shorelines Jurisdiction Area (acre)	368.05
Length of Stream Shorelines (miles)	7.63
Physical Characteristics	
Geology	76.5% volcaniclastic deposits or rocks 13.6% andesite flows 7.8% continental sedimentary deposits or rocks 2.2% alluvium
Soils	3.2% Partially Hydric 0.2% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	2%
Land Cover	92.8% Forest & Woodland 7.1% Recently Disturbed or Modified 0.1% Open Water 0% Agricultural Vegetation
Human Use	
Land Ownership	63.8% Government Land 32.7% Other Federal Land
Zoning	96.5% Forest 3.5% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	3.2% Slight 0.2% Very severe
Seismic/Liquefaction Hazard	97.8% N/A (bedrock) 2.2% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	3
Rainier Blast Zone (acres)	368
Mudflow Hazard Area	7.5% Lahar Case 1 2.3% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	60.8% Elk 3.4% Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 6.09 miles Coho Salmon - Presence/Migration - 1.14 miles Rainbow Trout - Presence/Migration - 6.3 miles Steelhead Trout - Presence/Migration - 1.13 miles

Reach Data Sheet	
Reach Number	4D-53
Location	T13N-R09E, T14N-R09E
Type	Stream
Primary Water Body	Skate Creek
Shorelines Jurisdiction Area (acre)	647.94
Length of Stream Shorelines (miles)	13.41
Physical Characteristics	
Geology	35.3% andesite flows 24.4% volcaniclastic deposits or rocks 11.6% alpine glacial drift, Fraser-age 10.3% tuffs and tuff breccias 5.7% intrusive andesite 5.2% continental sedimentary deposits or rocks 4% mass-wasting deposits, mostly landslides 3.6% alluvium
Soils	5.3% Partially Hydric 4.7% All Hydric 2.3% Not Hydric
FEMA 100-year Floodplain (area)	1%
NWI Wetland (area)	4%
Land Cover	95.9% Forest & Woodland 2.6% Recently Disturbed or Modified 1.1% Agricultural Vegetation 0.2% Nonvascular & Sparse Vascular Rock Vegetation 0.1% Shrubland & Grassland 0.1% Developed & Other Human Use 0% Open Water
Human Use	
Land Ownership	87.7% Government Land 6.3% WA State Parks and Recreation
Zoning	87.8% Forest 9.4% RDD-10 2.9% RDD-5
Parks	-
Number of Historic Sites	2
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	SKATE CREEK - Temperature - 14.6 acres
Critical Areas	
Erosion Hazard	5.9% Slight 1.2% Very severe 0.4% Severe
Seismic/Liquefaction Hazard	80.9% N/A (bedrock) 11.6% very low to low 4% low to moderate 3.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	5
Rainier Blast Zone (acres)	648
Mudflow Hazard Area	13.7% Lahar Case 1 7.3% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	30.9% Elk 12.2% Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Presence/Migration - 9.81 miles Coast Resident Cutthroat - Presence/Migration - 8.94 miles Coho Salmon - Presence/Migration - 9.78 miles Coho Salmon - Presence/Migration - 0.08 miles Rainbow Trout - Presence/Migration - 9.22 miles Steelhead Trout - Presence/Migration - 9.79 miles Steelhead Trout - Presence/Migration - 0.08 miles

Reach Data Sheet	
Reach Number	4D-54
Location	T12N-R09E, T13N-R09E
Type	Stream
Primary Water Body	Smith Creek
Shorelines Jurisdiction Area (acre)	34.94
Length of Stream Shorelines (miles)	0.73
Physical Characteristics	
Geology	99.1% alpine glacial drift, Fraser-age 0.9% alluvium
Soils	94.3% Partially Hydric 5.7% Not Hydric
FEMA 100-year Floodplain (area)	2%
NWI Wetland (area)	15%
Land Cover	99% Forest & Woodland 0.7% Recently Disturbed or Modified 0.3% Developed & Other Human Use
Human Use	
Land Ownership	-
Zoning	66.3% RDD-10 33.7% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	94.3% Slight 5.7% Very severe
Seismic/Liquefaction Hazard	99.1% very low to low 0.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	35
Mudflow Hazard Area	100% Lahar Case 1 60.1% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100 %Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 0.73 miles Coho Salmon - Presence/Migration - 0.73 miles Rainbow Trout - Presence/Migration - 0.73 miles Steelhead Trout - Presence/Migration - 0.73 miles

Reach Data Sheet	
Reach Number	4D-55
Location	T13N-R09E
Type	Stream
Primary Water Body	Johnson Creek
Shorelines Jurisdiction Area (acre)	40.09
Length of Stream Shorelines (miles)	0.75
Physical Characteristics	
Geology	56.4% alpine glacial drift, Fraser-age 33.1% alluvium 10.5% volcanoclastic deposits or rocks
Soils	67.3% Partially Hydric 9.6% Not Hydric 0.3% Unknown Hydric
FEMA 100-year Floodplain (area)	11%
NWI Wetland (area)	37%
Land Cover	58.6% Forest & Woodland 14.5% Open Water 11.4% Recently Disturbed or Modified 9.9% Agricultural Vegetation 3.9% Developed & Other Human Use 1.1% Shrubland & Grassland 0.6% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	22% Other Federal Land
Zoning	55% RDD-20 23% RDD-10 22% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	3,342
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	74.8% Slight
Seismic/Liquefaction Hazard	10.5% N/A (bedrock) 56.4% very low to low 33.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	6
Rainier Blast Zone (acres)	40
Mudflow Hazard Area	100% Lahar Case 1 62.1% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 76.7% Mule And Black-tailed Deer 1.4% Cavity-nesting Ducks
PHS Fish	Chinook Salmon - Presence/Migration - 0.74 miles Coast Resident Cutthroat - Presence/Migration - 0.74 miles Coho Salmon - Presence/Migration - 0.74 miles Rainbow Trout - Presence/Migration - 0.74 miles Steelhead Trout - Presence/Migration - 0.74 miles

Reach Data Sheet	
Reach Number	4D-56
Location	T13N-R09E
Type	Stream
Primary Water Body	Lake Creek
Shorelines Jurisdiction Area (acre)	34.88
Length of Stream Shorelines (miles)	0.72
Physical Characteristics	
Geology	56.8% continental sedimentary deposits or rocks 40.4% intrusive andesite 2.9% alpine glacial drift, Fraser-age
Soils	35.4% Partially Hydric 32.1% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	100% Forest & Woodland
Human Use	
Land Ownership	32.8% Other Federal Land
Zoning	67.2% RDD-10 32.8% Forest
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	35.4% Slight 23.9% Severe 8.2% Moderate
Seismic/Liquefaction Hazard	97.1% N/A (bedrock) 2.9% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	35
Mudflow Hazard Area	100% Lahar Case 1
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 68.3% Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 0.72 miles Coho Salmon - Presence/Migration - 0.72 miles Rainbow Trout - Presence/Migration - 0.72 miles Steelhead Trout - Presence/Migration - 0.72 miles

Reach Data Sheet	
Reach Number	4D-57
Location	T12N-R03E
Type	Lake
Primary Water Body	Swofford Pond
Shorelines Jurisdiction Area (acre)	314.79
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	18.2% alluvium 14.8% alpine glacial till, pre-Fraser 1.1% volcanoclastic deposits or rocks 0.9% mass-wasting deposits, mostly landslides
Soils	30% Partially Hydric 70% Unknown Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	22%
Land Cover	47.6% Open Water 28% Forest & Woodland 13.8% Nonvascular & Sparse Vascular Rock Vegetation 5% Agricultural Vegetation 4% Recently Disturbed or Modified 1.2% Shrubland & Grassland 0.4% Developed & Other Human Use
Human Use	
Land Ownership	96.5% Municipal
Zoning	69.3% Lake 25.2% RDD-10 5.3% RDD-20 0.2% Park
Parks	Mossyrock Park (C.R.P.)
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	19% Slight 11% Moderate
Seismic/Liquefaction Hazard	1.1% N/A (bedrock) 65% N/A (water) 14.8% very low 0.9% low to moderate 18.2% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	72% Waterfowl Concentrations 41.1% Mule And Black-tailed Deer 41.1% Elk 38.8% Cavity-nesting Ducks 38.8% Bald Eagle 8.6% Pileated Woodpecker
PHS Fish	-

Reach Data Sheet	
Reach Number	4D-58
Location	T12N-R08E
Type	Lake
Primary Water Body	Unnamed 25
Shorelines Jurisdiction Area (acre)	62.87
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% alpine glacial drift, Fraser-age
Soils	88.9% Partially Hydric 11.1% Not Hydric
FEMA 100-year Floodplain (area)	80%
NWI Wetland (area)	81%
Land Cover	65.6% Forest & Woodland 19.6% Recently Disturbed or Modified 8.6% Agricultural Vegetation 6.3% Shrubland & Grassland
Human Use	
Land Ownership	0.4% WA Dept. of Natural Resources
Zoning	100% RDD-20
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	88.9% Slight 11.1% Severe
Seismic/Liquefaction Hazard	100% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	63
Mudflow Hazard Area	100% Lahar Case 1
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 100 %Mule And Black-tailed Deer 86.1% Cavity-nesting Ducks
PHS Fish	-

Reach Data Sheet	
Reach Number	4D-59
Location	T14N-R08E
Type	Lake
Primary Water Body	Bear Prairie
Shorelines Jurisdiction Area (acre)	93.50
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	88.2% alpine glacial drift, Fraser-age 11.8% tuffs and tuff breccias
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	66%
Land Cover	54.4% Forest & Woodland 29.4% Shrubland & Grassland 16.2% Recently Disturbed or Modified
Human Use	
Land Ownership	100% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	11.8% N/A (bedrock) 88.2% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	94
Mudflow Hazard Area	91.4% Lahar Case 1
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	-

Reach Data Sheet	
Reach Number	4D-60
Location	T11N-R09E
Type	Lake
Primary Water Body	Blue Lake
Shorelines Jurisdiction Area (acre)	172.40
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	15.8% volcaniclastic deposits or rocks 12.7% basalt flows
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	2%
Land Cover	64.4% Open Water 35.6% Forest & Woodland
Human Use	
Land Ownership	100% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	28.4% N/A (bedrock) 71.6% N/A (water)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	-

Reach Data Sheet	
Reach Number	4E-01
Location	T13N-R09E, T14N-R09E
Type	Stream
Primary Water Body	Butter Creek
Shorelines Jurisdiction Area (acre)	371.69
Length of Stream Shorelines (miles)	7.71
Physical Characteristics	
Geology	51% andesite flows 26.8% volcaniclastic deposits or rocks 13.3% alpine glacial drift, Fraser-age 8.9% continental sedimentary deposits or rocks
Soils	0% Not Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	1%
Land Cover	82.8% Forest & Woodland 15.9% Recently Disturbed or Modified 1.4% Shrubland & Grassland
Human Use	
Land Ownership	100% Government Land
Zoning	90.1% Forest 9.9% Wilderness 0% RDD-5
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	86.7% N/A (bedrock) 13.3% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	372
Mudflow Hazard Area	2.1% Lahar Case 1
Priority Habitats and Species	
PHS Wildlife (acres)	7.5% Elk 0.1% Mule And Black-tailed Deer
PHS Fish	Coho Salmon - Presence/Migration - 0.5 miles Rainbow Trout - Presence/Migration - 7.54 miles Steelhead Trout - Presence/Migration - 0.41 miles

Reach Data Sheet	
Reach Number	4E-02
Location	T14N-R09E, T15N-R09E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	730.77
Length of Stream Shorelines (miles)	14.81
Physical Characteristics	
Geology	23% tuffs and tuff breccias 20.7% gabbro 15.4% alluvium 12.8% volcanoclastic deposits or rocks 9.4% intrusive andesite 6.8% andesite flows 6% lahars 3.6% quartz monzonite 1.5% alpine glacial drift, Fraser-age 0.7% acidic intrusive rocks 0% continental sedimentary deposits or rocks
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	11%
Land Cover	84.4% Forest & Woodland 8.8% Open Water 5.1% Shrubland & Grassland 1.8% Nonvascular & Sparse Vascular Rock Vegetation 0% Developed & Other Human Use
Human Use	
Land Ownership	100% Government Land
Zoning	99.1% Wilderness 0.9% Forest
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	3
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	77.1% N/A (bedrock) 1.5% very low to low 21.4% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	4
Rainier Blast Zone (acres)	731
Mudflow Hazard Area	95.2% Lahar Case 1 32.7% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	4.7% Elk
PHS Fish	Chinook Salmon - Presence/Migration - 4.84 miles Coho Salmon - Presence/Migration - 2.43 miles Steelhead Trout - Presence/Migration - 2.44 miles

Reach Data Sheet	
Reach Number	4E-03
Location	T14N-R10E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	85.28
Length of Stream Shorelines (miles)	1.62
Physical Characteristics	
Geology	87.2% tuffs and tuff breccias 12.8% volcanoclastic deposits or rocks
Soils	-
FEMA 100-year Floodplain (area)	19%
NWI Wetland (area)	0%
Land Cover	94.9% Forest & Woodland 3.9% Open Water 0.9% Nonvascular & Sparse Vascular Rock Vegetation 0.4% Developed & Other Human Use
Human Use	
Land Ownership	80.5% Government Land
Zoning	100% Forest
Parks	La Wis Wis Campground
Number of Historic Sites	0
Number of Archaeological Sites	4
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	36
Rainier Blast Zone (acres)	85
Mudflow Hazard Area	100% Lahar Case 1 90.7% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Chinook Salmon - Known Spawning - 1.54 miles Chinook Salmon - Presence/Migration - 1.54 miles Coast Resident Cutthroat - Presence/Migration - 0.44 miles Coho Salmon - Presence/Migration - 1.8 miles Rainbow Trout - Presence/Migration - 1.54 miles Steelhead Trout - Known Spawning - 0.01 miles Steelhead Trout - Presence/Migration - 1.62 miles

Reach Data Sheet	
Reach Number	4E-04
Location	T14N-R10E
Type	Stream
Primary Water Body	Ohanapecosh River
Shorelines Jurisdiction Area (acre)	54.94
Length of Stream Shorelines (miles)	1.20
Physical Characteristics	
Geology	100% volcanoclastic deposits or rocks
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	99.7% Forest & Woodland 0.3% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	75.8% Government Land
Zoning	100% Forest
Parks	La Wis Wis Campground
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	55
Mudflow Hazard Area	100% Lahar Case 1 84.8% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Chinook Salmon - Known Spawning - 0.84 miles Chinook Salmon - Presence/Migration - 0.83 miles Coast Resident Cutthroat - Presence/Migration - 1.12 miles Coho Salmon - Presence/Migration - 0.87 miles Rainbow Trout - Presence/Migration - 1.12 miles Steelhead Trout - Presence/Migration - 0.9 miles

Reach Data Sheet	
Reach Number	4E-05
Location	T14N-R10E, T15N-R10E
Type	Stream
Primary Water Body	Ohanapecosh River
Shorelines Jurisdiction Area (acre)	437.12
Length of Stream Shorelines (miles)	7.87
Physical Characteristics	
Geology	79.4% volcaniclastic deposits or rocks 20.6% lahars
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	24%
Land Cover	99.8% Forest & Woodland 0.1% Developed & Other Human Use 0% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	95.2% Government Land
Zoning	78.6% Wilderness 21.4% Forest
Parks	Ohanapecosh Campground
Number of Historic Sites	6
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	79.4% N/A (bedrock) 20.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	437
Mudflow Hazard Area	3.6% Lahar Case 1 85.7% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	18.3% Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 4.4 miles Rainbow Trout - Presence/Migration - 4.41 miles

Reach Data Sheet	
Reach Number	4E-06
Location	T14N-R10E
Type	Stream
Primary Water Body	Cowlitz River Clear Fork
Shorelines Jurisdiction Area (acre)	76.26
Length of Stream Shorelines (miles)	1.62
Physical Characteristics	
Geology	100% volcaniclastic deposits or rocks
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	83.3% Forest & Woodland 14.8% Recently Disturbed or Modified 1.9% Developed & Other Human Use
Human Use	
Land Ownership	90.6% Government Land
Zoning	100% Forest
Parks	La Wis Wis Campground
Number of Historic Sites	0
Number of Archaeological Sites	5
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	76
Mudflow Hazard Area	85.8% Lahar Case 1 5.4% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Chinook Salmon - Known Spawning - 1.25 miles Chinook Salmon - Presence/Migration - 1.23 miles Coast Resident Cutthroat - Presence/Migration - 1.61 miles Coho Salmon - Presence/Migration - 1.28 miles Rainbow Trout - Presence/Migration - 1.61 miles Steelhead Trout - Known Spawning - 1.24 miles

Reach Data Sheet	
Reach Number	4E-07
Location	T13N-R11E, T14N-R11E
Type	Stream
Primary Water Body	Cowlitz River
Shorelines Jurisdiction Area (acre)	736.39
Length of Stream Shorelines (miles)	15.34
Physical Characteristics	
Geology	36.5% alluvium 17.2% marine sedimentary rocks 17% dacite flows 14.3% volcaniclastic deposits or rocks 10.7% mass-wasting deposits, mostly landslides 3.9% basalt flows 0% continental sedimentary deposits or rocks
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	3%
Land Cover	97.9% Forest & Woodland 1.8% Developed & Other Human Use 0.1% Recently Disturbed or Modified 0.1% Shrubland & Grassland
Human Use	
Land Ownership	99.1% Government Land
Zoning	50.2% Wilderness 49.8% Forest
Parks	Knuppenberg Lake Picnic Area
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	52.5% N/A (bedrock) 0.3% N/A (water) 10.7% low to moderate 36.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	339
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	18.3% Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 14.94 miles Rainbow Trout - Presence/Migration - 12.44 miles

Reach Data Sheet	
Reach Number	4E-08
Location	T14N-R10E, T14N-R11E
Type	Stream
Primary Water Body	Cortright Creek
Shorelines Jurisdiction Area (acre)	310.42
Length of Stream Shorelines (miles)	6.44
Physical Characteristics	
Geology	46.4% volcaniclastic deposits or rocks 31.9% alluvium 19.7% basalt flows 2% marine sedimentary rocks 0% continental sedimentary deposits or rocks
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	97.2% Forest & Woodland 2.1% Recently Disturbed or Modified 0.6% Developed & Other Human Use
Human Use	
Land Ownership	83% Government Land 16.7% WA Dept. of Natural Resources
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	68.1% N/A (bedrock) 31.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	310
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	46.7% Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 6.45 miles Rainbow Trout - Presence/Migration - 6.45 miles

Reach Data Sheet	
Reach Number	4E-09
Location	T14N-R10E, T15N-R11E
Type	Stream
Primary Water Body	Summit Creek
Shorelines Jurisdiction Area (acre)	820.53
Length of Stream Shorelines (miles)	16.73
Physical Characteristics	
Geology	44.9% alluvium 22% volcanoclastic deposits or rocks 13.9% basalt flows 9.4% basaltic andesite flows 5.3% marine sedimentary rocks 2.3% andesite flows 2.1% continental sedimentary deposits or rocks 0.1% quartz diorite 0.1% mass-wasting deposits, mostly landslides
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	3%
Land Cover	95.1% Forest & Woodland 4.6% Recently Disturbed or Modified 0.3% Shrubland & Grassland 0% Developed & Other Human Use
Human Use	
Land Ownership	93.1% Government Land 5% Other Federal Land
Zoning	62.8% Forest 37.2% Wilderness
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	6
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	55% N/A (bedrock) 0.1% low to moderate 44.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	821
Mudflow Hazard Area	1.2% Lahar Case 1 0.5% Lahar Case 2
Priority Habitats and Species	
PHS Wildlife (acres)	49.5% Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 11.42 miles Rainbow Trout - Presence/Migration - 11.43 miles

Reach Data Sheet	
Reach Number	4E-10
Location	T13N-R09E, T13N-R10E
Type	Stream
Primary Water Body	Coal Creek
Shorelines Jurisdiction Area (acre)	171.58
Length of Stream Shorelines (miles)	3.55
Physical Characteristics	
Geology	67.3% tuffs and tuff breccias 20.7% volcanoclastic deposits or rocks 11.6% continental sedimentary deposits or rocks 0.4% intrusive andesite
Soils	0.8% Not Hydric 0.4% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	95.8% Forest & Woodland 4.2% Recently Disturbed or Modified
Human Use	
Land Ownership	99.7% Government Land
Zoning	99.9% Forest 0.1% RRC-R1
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	1.2% Slight
Seismic/Liquefaction Hazard	100% N/A (bedrock)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	172
Mudflow Hazard Area	21.6% Lahar Case 1
Priority Habitats and Species	
PHS Wildlife (acres)	59% Elk 2.3% Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 2.97 miles Coho Salmon - Presence/Migration - 0.36 miles Rainbow Trout - Presence/Migration - 3 miles Steelhead Trout - Presence/Migration - 0.35 miles

Reach Data Sheet	
Reach Number	4E-11
Location	T13N-R09E, T13N-R10E
Type	Stream
Primary Water Body	Lake Creek
Shorelines Jurisdiction Area (acre)	206.20
Length of Stream Shorelines (miles)	4.28
Physical Characteristics	
Geology	52.4% mass-wasting deposits, mostly landslides 42.9% continental sedimentary deposits or rocks 3.8% intrusive andesite 0.9% tuffs and tuff breccias
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	98.3% Forest & Woodland 1.7% Recently Disturbed or Modified
Human Use	
Land Ownership	47.5% Government Land 13.1% Other Federal Land 8.4% US Forest Service
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	5
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	47.6% N/A (bedrock) 52.4% low to moderate
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	206
Mudflow Hazard Area	1.4% Lahar Case 1
Priority Habitats and Species	
PHS Wildlife (acres)	38.3% Elk
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 4.21 miles Coho Salmon - Presence/Migration - 1.07 miles Rainbow Trout - Presence/Migration - 4.21 miles Steelhead Trout - Presence/Migration - 1.07 miles

Reach Data Sheet	
Reach Number	4E-12
Location	T13N-R10E
Type	Stream
Primary Water Body	Packwood Lake
Shorelines Jurisdiction Area (acre)	546.21
Length of Stream Shorelines (miles)	1.85
Physical Characteristics	
Geology	8.7% volcanoclastic deposits or rocks 7.3% intrusive andesite 4.9% mass-wasting deposits, mostly landslides 0.9% alluvium 0.9% andesite flows
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	1%
Land Cover	78.8% Open Water 21.1% Forest & Woodland 0.1% Recently Disturbed or Modified
Human Use	
Land Ownership	100% Government Land
Zoning	87.7% Forest 12.3% Wilderness
Parks	-
Number of Historic Sites	1
Number of Archaeological Sites	4
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	16.8% N/A (bedrock) 77.3% N/A (water) 4.9% low to moderate 0.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	95
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 2.84 miles Rainbow Trout - Presence/Migration - 2.84 miles

Reach Data Sheet	
Reach Number	4E-13
Location	T12N-R10E, T13N-R10E
Type	Stream
Primary Water Body	Upper Lake Creek
Shorelines Jurisdiction Area (acre)	350.95
Length of Stream Shorelines (miles)	4.39
Physical Characteristics	
Geology	59.3% alluvium 39.5% volcaniclastic deposits or rocks 1.2% andesite flows
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	56%
Land Cover	94% Forest & Woodland 6% Shrubland & Grassland
Human Use	
Land Ownership	100% Government Land
Zoning	100% Wilderness
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	40.7% N/A (bedrock) 59.3% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 4.03 miles Rainbow Trout - Presence/Migration - 4.1 miles

Reach Data Sheet	
Reach Number	4E-14
Location	T12N-R09E, T13N-R09E
Type	Stream
Primary Water Body	Johnson Creek
Shorelines Jurisdiction Area (acre)	1,036.69
Length of Stream Shorelines (miles)	20.89
Physical Characteristics	
Geology	83.5% volcaniclastic deposits or rocks 7.9% continental sedimentary deposits or rocks 5.6% mass-wasting deposits, mostly landslides 0% talus deposits
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	93.7% Forest & Woodland 2.7% Recently Disturbed or Modified 2.6% Open Water 0.9% Shrubland & Grassland 0.1% Developed & Other Human Use
Human Use	
Land Ownership	96% Government Land 4% Other Federal Land
Zoning	66.9% Forest 33.1% Wilderness
Parks	Forest Service Road 21 Sno-Park
Number of Historic Sites	0
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	91.4% N/A (bedrock) 3% N/A (water) 5.6% low to moderate
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	173
Mudflow Hazard Area	2.7% Lahar Case 1
Priority Habitats and Species	
PHS Wildlife (acres)	11.3% Elk
PHS Fish	Chinook Salmon - Presence/Migration - 0.08 miles Coast Resident Cutthroat - Presence/Migration - 14.16 miles Coho Salmon - Presence/Migration - 3.01 miles Rainbow Trout - Presence/Migration - 14.21 miles Steelhead Trout - Presence/Migration - 3.09 miles

Reach Data Sheet	
Reach Number	4E-15
Location	T12N-R09E
Type	Stream
Primary Water Body	Smith Creek
Shorelines Jurisdiction Area (acre)	336.06
Length of Stream Shorelines (miles)	6.40
Physical Characteristics	
Geology	75.8% volcaniclastic deposits or rocks 23.6% intrusive andesite 0.6% alpine glacial drift, Fraser-age
Soils	2.4% Not Hydric 0.4% Partially Hydric
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	18%
Land Cover	96.5% Forest & Woodland 3.5% Recently Disturbed or Modified
Human Use	
Land Ownership	96.7% Government Land 0.9% Other Federal Land
Zoning	97.6% Forest 2.4% RDD-10
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	2.4% Very severe 0.4% Slight
Seismic/Liquefaction Hazard	99.4% N/A (bedrock) 0.6% very low to low
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	119
Mudflow Hazard Area	2.6% Lahar Case 1
Priority Habitats and Species	
PHS Wildlife (acres)	22.2% Elk 3.5% Mule And Black-tailed Deer
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 3.89 miles Coho Salmon - Presence/Migration - 0.4 miles Rainbow Trout - Presence/Migration - 4.09 miles Steelhead Trout - Presence/Migration - 0.42 miles

Reach Data Sheet	
Reach Number	4E-16
Location	T11N-R09E, T11N-R10E
Type	Stream
Primary Water Body	Cispus River
Shorelines Jurisdiction Area (acre)	101.58
Length of Stream Shorelines (miles)	2.09
Physical Characteristics	
Geology	92.8% alluvium 7.2% volcanoclastic deposits or rocks
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	0%
Land Cover	99.6% Forest & Woodland 0.4% Recently Disturbed or Modified
Human Use	
Land Ownership	100% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	7.2% N/A (bedrock) 92.8% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 1.78 miles Rainbow Trout - Presence/Migration - 1.83 miles

Reach Data Sheet	
Reach Number	4E-17
Location	T11N-R10E
Type	Stream
Primary Water Body	Cispus River
Shorelines Jurisdiction Area (acre)	142.21
Length of Stream Shorelines (miles)	0.84
Physical Characteristics	
Geology	100% alluvium
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	100%
Land Cover	100% Forest & Woodland
Human Use	
Land Ownership	100% Government Land
Zoning	100% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	100% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Rainbow Trout - Presence/Migration - 0.83 miles

Reach Data Sheet	
Reach Number	4E-18
Location	T11N-R10E, T11N-R11E
Type	Stream
Primary Water Body	Cispus River
Shorelines Jurisdiction Area (acre)	552.54
Length of Stream Shorelines (miles)	7.54
Physical Characteristics	
Geology	91% alluvium 4.7% andesite flows 2.2% continental sedimentary deposits or rocks 2.1% alpine glacial drift, Fraser-age
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	56%
Land Cover	98.1% Forest & Woodland 1.8% Recently Disturbed or Modified 0.1% Developed & Other Human Use
Human Use	
Land Ownership	100% Government Land
Zoning	74% Forest 26% Wilderness
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	WALUPT CREEK - Temperature - 2.3 acres
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	6.9% N/A (bedrock) 2.1% very low to low 91% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 3.58 miles Rainbow Trout - Presence/Migration - 4.6 miles

Reach Data Sheet	
Reach Number	4E-19
Location	T11N-R11E
Type	Stream
Primary Water Body	Walupt Lake
Shorelines Jurisdiction Area (acre)	469.83
Length of Stream Shorelines (miles)	1.44
Physical Characteristics	
Geology	8.6% basaltic andesite flows 5.8% volcanic rocks 5% alluvium 0.5% basalt flows 0.1% andesite flows
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	1%
Land Cover	77.4% Open Water 22.6% Forest & Woodland
Human Use	
Land Ownership	100% Government Land
Zoning	50.9% Wilderness 49.1% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	WALUPT CREEK - Temperature - 5.2 acres
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	15% N/A (bedrock) 80% N/A (water) 5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 1.44 miles Rainbow Trout - Presence/Migration - 1.44 miles

Reach Data Sheet	
Reach Number	4E-20
Location	T11N-R11E
Type	Stream
Primary Water Body	Walupt Creek
Shorelines Jurisdiction Area (acre)	86.79
Length of Stream Shorelines (miles)	1.26
Physical Characteristics	
Geology	92.9% alluvium 7.1% volcanic rocks 0% basalt flows
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	27%
Land Cover	100% Forest & Woodland
Human Use	
Land Ownership	100% Government Land
Zoning	100% Wilderness
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	7.1% N/A (bedrock) 92.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 1.24 miles Rainbow Trout - Presence/Migration - 1.24 miles

Reach Data Sheet	
Reach Number	4E-21
Location	T11N-R10E, T12N-R11E
Type	Stream
Primary Water Body	Nannie Creek
Shorelines Jurisdiction Area (acre)	514.61
Length of Stream Shorelines (miles)	8.75
Physical Characteristics	
Geology	45.2% alluvium 41.6% andesite flows 7.3% intrusive andesite 6% volcanic rocks
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	17%
Land Cover	98.6% Forest & Woodland 0.8% Shrubland & Grassland 0.5% Recently Disturbed or Modified 0% Developed & Other Human Use 0% Nonvascular & Sparse Vascular Rock Vegetation
Human Use	
Land Ownership	100% Government Land
Zoning	93.9% Wilderness 6.1% Forest
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	54.8% N/A (bedrock) 45.2% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 3.66 miles

Reach Data Sheet	
Reach Number	4E-22
Location	T14N-R11E
Type	Lake
Primary Water Body	Frying Pan Lake
Shorelines Jurisdiction Area (acre)	65.90
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	40.6% marine sedimentary rocks 29.7% basalt flows
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	37%
Land Cover	57.1% Forest & Woodland 27.6% Open Water 15.4% Shrubland & Grassland
Human Use	
Land Ownership	100% Government Land
Zoning	100% Wilderness
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	70.3% N/A (bedrock) 29.7% N/A (water)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	66
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	-

Reach Data Sheet	
Reach Number	4E-23
Location	T14N-R11E
Type	Lake
Primary Water Body	Jug Lake
Shorelines Jurisdiction Area (acre)	93.34
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	73.5% alluvium 1% marine sedimentary rocks
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	58%
Land Cover	62.3% Forest & Woodland 25.4% Open Water 12.3% Shrubland & Grassland
Human Use	
Land Ownership	100% Government Land
Zoning	100% Wilderness
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	1% N/A (bedrock) 25.5% N/A (water) 73.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	93
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	-

Reach Data Sheet	
Reach Number	4E-24
Location	T14N-R11E
Type	Lake
Primary Water Body	Dumbbell Lake
Shorelines Jurisdiction Area (acre)	81.18
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	34.9% basalt flows 22.6% marine sedimentary rocks
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	3%
Land Cover	57.5% Forest & Woodland 42.5% Open Water
Human Use	
Land Ownership	100% Government Land
Zoning	100% Wilderness
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	57.5% N/A (bedrock) 42.5% N/A (water)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	-

Reach Data Sheet	
Reach Number	4E-25
Location	T13N-R11E
Type	Lake
Primary Water Body	Lily Lake
Shorelines Jurisdiction Area (acre)	50.25
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	51% alluvium 7.3% dacite flows
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	60%
Land Cover	78.3% Forest & Woodland 21.1% Open Water 0.6% Shrubland & Grassland
Human Use	
Land Ownership	100% Government Land
Zoning	100% Wilderness
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	7.3% N/A (bedrock) 41.7% N/A (water) 51% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	11
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	-

Reach Data Sheet	
Reach Number	4E-26
Location	T13N-R10E
Type	Lake
Primary Water Body	Unnamed 22
Shorelines Jurisdiction Area (acre)	35.32
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	38.1% volcaniclastic deposits or rocks 4.4% intrusive andesite
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	58%
Land Cover	51.5% Open Water 48.5% Forest & Woodland
Human Use	
Land Ownership	100% Government Land
Zoning	100% Wilderness
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	42.5% N/A (bedrock) 57.5% N/A (water)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	-

Reach Data Sheet	
Reach Number	4E-27
Location	T12N-R11E
Type	Lake
Primary Water Body	Goat Lake
Shorelines Jurisdiction Area (acre)	38.24
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	66.5% andesite flows
Soils	-
FEMA 100-year Floodplain (area)	0%
NWI Wetland (area)	48%
Land Cover	71.4% Nonvascular & Sparse Vascular Rock Vegetation 28.6% Forest & Woodland
Human Use	
Land Ownership	100% Government Land
Zoning	100% Wilderness
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	-
Seismic/Liquefaction Hazard	66.5% N/A (bedrock) 33.5% N/A (water)
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Mountain Goat
PHS Fish	-

Reach Data Sheet	
Reach Number	CE-01
Location	T14N-R02W, T15N-R03W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	877.80
Length of Stream Shorelines (miles)	3.49
Physical Characteristics	
Geology	92.5% alluvium 4.6% marine sedimentary rocks 1.9% alpine glacial outwash, pre-Fraser 0.6% continental glacial outwash, Fraser-age 0.1% terraced deposits 0.3% continental glacial outwash, gravel, Fraser-age 0.2% mass-wasting deposits, mostly landslides
Soils	87.7% Partially Hydric 2.4% Not Hydric 9.9% Unknown Hydric
FEMA 100-year Floodplain (area)	98.19%
NWI Wetland (area)	22%
Land Cover	40.6% Agricultural Vegetation 33.2% Forest & Woodland 14.7% Recently Disturbed or Modified 6.1% Developed & Other Human Use 4.4% Shrubland & Grassland 4.4% Open Water 0.8% Aquatic Vegetation
Human Use	
Land Ownership	23.2% WA Dept. of Fish and Wildlife 2.9% Municipal 0% Other State Land
Zoning	48.07% City 51.93% UGA
Parks	Fort Borst Park
Number of Historic Sites	35
Number of Archaeological Sites	12
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	160
303(d) Listings (Category 5)	CHEHALIS RIVER - Dioxin - 12.9 acres CHEHALIS RIVER - PCB - 11.3 acres
Critical Areas	
Erosion Hazard	87.6% Slight 2.3% Severe 0.0% Moderate 0.1% Very severe 9.9% Not Rated
Seismic/Liquefaction Hazard	4.6% N/A (bedrock) 2.2% very low 0.6% low 0.1% low to moderate 92.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	71.6% Roosevelt Elk 40.5% Waterfowl Concentrations 0.8% Oak Woodland
PHS Fish	Chinook Salmon - Known Spawning - 5.43 miles Chinook Salmon - Presence/Migration - 1.38 miles Coast Resident Cutthroat - Presence/Migration - 3.41 miles Coho Salmon - Presence/Migration - 3.41 miles Largemouth Bass - Presence/Migration - 2.65 miles Steelhead Trout - Known Juvenile Rearing - 2.71 miles Steelhead Trout - Presence/Migration - 0.69 miles

Reach Data Sheet	
Reach Number	CE-02
Location	T14N-R02W, T15N-R02W
Type	Stream
Primary Water Body	Skookumchuck River
Shorelines Jurisdiction Area (acre)	654.70
Length of Stream Shorelines (miles)	3.75
Physical Characteristics	
Geology	70.9% alluvium 26.0% continental glacial outwash, gravel, Fraser-age 0.3% nearshore sedimentary rocks 0.1% marine sedimentary rocks 0% alpine glacial outwash, pre-Fraser
Soils	79.7% Partially Hydric 5.3% Not Hydric 1.3% All Hydric 13.8% Unknown Hydric
FEMA 100-year Floodplain (area)	95.20%
NWI Wetland (area)	27.90%
Land Cover	29.5% Agricultural Vegetation 25.2% Developed & Other Human Use 22.5% Forest & Woodland 14.9% Recently Disturbed or Modified 5.1% Shrubland & Grassland 2.4% Open Water 0.3% Aquatic Vegetation
Human Use	
Land Ownership	12.8% Municipal 3.9% WA Dept. of Fish and Wildlife 1.9% Other State Land 0.3% Other Federal Land 0% Lewis County
Zoning	64.9% City 35.1% UGA
Parks	Ed S. Mayes Park, Fort Borst Park, Riverside Park, Wilbur Parkins Park
Number of Historic Sites	115
Number of Archaeological Sites	23
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	3,883
303(d) Listings (Category 5)	CHEHALIS RIVER - PCB - 0.31 acres
Critical Areas	
Erosion Hazard	85% Slight 0.1% Moderate 0% Sever 14% Not Rated
Seismic/Liquefaction Hazard	0.4% N/A (bedrock) 26.0% very low 73.6% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	609 HARRISON AVE CENTRALIA, WA 98531 - Operational
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	0.5% Oak Woodland 0.2% Waterfowl Concentrations
PHS Fish	Chinook Salmon - Known Spawning - 7.43 miles Coast Resident Cutthroat - Presence/Migration - 4.78 miles Coho Salmon - Known Spawning - 3.64 miles Coho Salmon - Presence/Migration - 1.06 miles Steelhead Trout - Known Juvenile Rearing - 0.09 miles Steelhead Trout - Known Spawning - 3.62 miles Steelhead Trout - Presence/Migration - 0.98 miles

Reach Data Sheet	
Reach Number	CE-03
Location	T14N-R02W
Type	Stream
Primary Water Body	Plummer Lake
Shorelines Jurisdiction Area (acre)	111.10
Length of Stream Shorelines (miles)	0.77
Physical Characteristics	
Geology	100.0% alluvium
Soils	52.5% Partially Hydric 13.9% Not Hydric 33.5% Unknown Hydric
FEMA 100-year Floodplain (area)	55.40%
NWI Wetland (area)	49.20%
Land Cover	33.6% Developed & Other Human Use 31.0% Forest & Woodland 19.0% Open Water 0.0% Agricultural Vegetation 2.5% Recently Disturbed or Modified 2.3% Shrubland & Grassland
Human Use	
Land Ownership	22.5% Municipal 5.0% WA Dept. of Fish and Wildlife 0.1% Other State Land
Zoning	96% City 4% UGA
Parks	Cedar Street Park, Walter (Brick) Wagner Park
Number of Historic Sites	29
Number of Archaeological Sites	5
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	CHEHALIS RIVER - PCB - 4.5 acres
Critical Areas	
Erosion Hazard	63.5% Slight 0.0% Moderate 0.0% Severe 36.5% Not Rated
Seismic/Liquefaction Hazard	0.0% N/A (bedrock) 100.0% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	515 W MAIN CENTRALIA, WA 98531 - Closed in Place
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	5.2% Waterfowl Concentrations
PHS Fish	Chinook Salmon - Known Spawning - 0.06 miles Chinook Salmon - Presence/Migration - 0.24 miles Coast Resident Cutthroat - Presence/Migration - 0.15 miles Coho Salmon - Presence/Migration - 2.04 miles Steelhead Trout - Known Juvenile Rearing - 0.03 miles Steelhead Trout - Presence/Migration - 0.12 miles

Reach Data Sheet	
Reach Number	CE-04
Location	T14N-R02W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	64.10
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% alluvium
Soils	94.9% Partially Hydric 5.1% Not Hydric 0% Unknown Hydric
FEMA 100-year Floodplain (area)	80.40%
NWI Wetland (area)	91.90%
Land Cover	42.0% Shrubland & Grassland 33.1% Agricultural Vegetation 14.9% Developed & Other Human Use 7.8% Forest & Woodland 2.2% Recently Disturbed or Modified 0% Open Water
Human Use	
Land Ownership	49.3% Municipal 23.8% Lewis County
Zoning	69.7% UGA 30.3% City 0% RDD-20
Parks	-
Number of Historic Sites	3
Number of Archaeological Sites	4
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	1,463
303(d) Listings (Category 5)	CHEHALIS RIVER - PCB - 0.0000055 acres
Critical Areas	
Erosion Hazard	100% Slight
Seismic/Liquefaction Hazard	100% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	0.4% Waterfowl Concentrations
PHS Fish	-

Reach Data Sheet	
Reach Number	CE-05
Location	T14N-R02W
Type	Stream
Primary Water Body	Salzer Creek
Shorelines Jurisdiction Area (acre)	147.20
Length of Stream Shorelines (miles)	0.51
Physical Characteristics	
Geology	95.5% alluvium 4.3% marine sedimentary rocks 0.2% mass-wasting deposits, mostly landslides
Soils	94.9% Partially Hydric 5.1% Not Hydric
FEMA 100-year Floodplain (area)	90.9%
NWI Wetland (area)	52.6%
Land Cover	34.8% Agricultural Vegetation 25.8% Developed & Other Human Use 14.2% Recently Disturbed or Modified 12.9% Forest & Woodland 12.4% Shrubland & Grassland
Human Use	
Land Ownership	28.9% Municipal 20.8% Lewis County
Zoning	72.1% City 27.9% UGA
Parks	-
Number of Historic Sites	7
Number of Archaeological Sites	7
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	98.9% Slight 1.1% Moderate
Seismic/Liquefaction Hazard	4.3% N/A (bedrock) 0.2% low to moderate 95.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Coho Salmon - Presence/Migration - 0.51 miles

Reach Data Sheet	
Reach Number	CE-06
Location	T15N-R02W
Type	Stream
Primary Water Body	Skookumchuck River
Shorelines Jurisdiction Area (acre)	50.20
Length of Stream Shorelines (miles)	0.60
Physical Characteristics	
Geology	52.8% alluvium 31.1% continental glacial outwash, gravel, Fraser-age 7.9% mass-wasting deposits, mostly landslides 8.2% nearshore sedimentary rocks
Soils	70.6% Partially Hydric 16.7% Not Hydric 12.7% Unknown Hydric
FEMA 100-year Floodplain (area)	84.60%
NWI Wetland (area)	50.20%
Land Cover	58.6% Agricultural Vegetation 33.5% Forest & Woodland 7.0% Developed & Other Human Use 0.9% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	91.7% UGA 8.3% City
Parks	-
Number of Historic Sites	3
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	70.6% Slight 16.7% Severe 12.7% Not Rated
Seismic/Liquefaction Hazard	8.2% N/A (bedrock) 31.1% very low 7.9% low to moderate 52.8% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	72.3% Waterfowl Concentrations 52.2% Harlequin Duck
PHS Fish	Chinook Salmon - Known Spawning - 1.21 miles Coast Resident Cutthroat - Presence/Migration - 0.60 miles Coho Salmon - Known Spawning - 0.60 miles Steelhead Trout - Known Spawning - 0.60 miles

Reach Data Sheet	
Reach Number	CH-01
Location	T14N-R02W
Type	Stream
Primary Water Body	Salzer Creek
Shorelines Jurisdiction Area (acre)	262.08
Length of Stream Shorelines (miles)	0.95
Physical Characteristics	
Geology	99.7% alluvium 0.3% nearshore sedimentary rocks
Soils	92.5% Partially Hydric 6.4% Not Hydric 1.1% Unknown Hydric
FEMA 100-year Floodplain (area)	99%
NWI Wetland (area)	78%
Land Cover	33.8% Shrubland & Grassland 28.3% Forest & Woodland 17% Agricultural Vegetation 14.6% Developed & Other Human Use 6.2% Recently Disturbed or Modified
Human Use	
Land Ownership	31.4% Municipal 8.9% Lewis County
Zoning	99.1% City 0.9% UGA 0% RDD-5
Parks	-
Number of Historic Sites	4
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	3,261
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	98.6% Slight 0.3% Moderate
Seismic/Liquefaction Hazard	0.3% N/A (bedrock) 99.7% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	12.1% Waterfowl Concentrations 0.1% Oak Woodland
PHS Fish	Coho Salmon - Known Spawning - 1.28 miles Coho Salmon - Presence/Migration - 1.01 miles

Reach Data Sheet	
Reach Number	CH-02
Location	T14N-R02W, T14N-R03W
Type	Stream
Primary Water Body	Chehalis River
Shorelines Jurisdiction Area (acre)	336.60
Length of Stream Shorelines (miles)	0.56
Physical Characteristics	
Geology	100% alluvium
Soils	93.2% Partially Hydric 6.8% Unknown Hydric
FEMA 100-year Floodplain (area)	100%
NWI Wetland (area)	19%
Land Cover	37.2% Agricultural Vegetation 24.3% Recently Disturbed or Modified 18.9% Forest & Woodland 11.1% Developed & Other Human Use 8.5% Shrubland & Grassland
Human Use	
Land Ownership	9.8% Municipal
Zoning	95.5% City 4.5% UGA 0% ARL 0% RDD-5 0% RDD-20
Parks	-
Number of Historic Sites	47
Number of Archaeological Sites	7
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	93.2% Slight
Seismic/Liquefaction Hazard	100% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	48.9% Waterfowl Concentrations 29.5% Cavity-nesting Ducks 26.2% Roosevelt Elk
PHS Fish	Chinook Salmon - Presence/Migration - 1.13 miles Coast Resident Cutthroat - Presence/Migration - 0.94 miles Coho Salmon - Presence/Migration - 0.94 miles Steelhead Trout - Presence/Migration - 0.56 miles

Reach Data Sheet	
Reach Number	CH-03
Location	T13N-R02W
Type	Stream
Primary Water Body	Newaukum River
Shorelines Jurisdiction Area (acre)	67.52
Length of Stream Shorelines (miles)	0.61
Physical Characteristics	
Geology	100% alluvium
Soils	40% Partially Hydric 38.9% Not Hydric 21.1% Unknown Hydric
FEMA 100-year Floodplain (area)	100%
NWI Wetland (area)	79%
Land Cover	78.3% Forest & Woodland 9.1% Developed & Other Human Use 7.1% Agricultural Vegetation 3.6% Recently Disturbed or Modified 1.9% Shrubland & Grassland
Human Use	
Land Ownership	53.9% WA Dept. of Natural Resources 42.3% Other State Land 3.8% Municipal
Zoning	99.9% City 0.1% RDD-20 0% RDD-5
Parks	Stan Hedwall Park
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	40% Slight
Seismic/Liquefaction Hazard	100% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Known Spawning - 1.22 miles Coast Resident Cutthroat - Presence/Migration - 0.61 miles Coho Salmon - Known Juvenile Rearing - 0.61 miles Steelhead Trout - Known Spawning - 0.61 miles

Reach Data Sheet	
Reach Number	CH-04
Location	T13N-R02W
Type	Stream
Primary Water Body	Berwick Creek
Shorelines Jurisdiction Area (acre)	3.74
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	100% alluvium
Soils	97.7% Partially Hydric 2.3% Unknown Hydric
FEMA 100-year Floodplain (area)	100%
NWI Wetland (area)	100%
Land Cover	93.6% Agricultural Vegetation 6.4% Shrubland & Grassland
Human Use	
Land Ownership	-
Zoning	99.8% UGA 0.2% RDD-20
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	97.7% Slight
Seismic/Liquefaction Hazard	100% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	9.5% Cavity-nesting Ducks
PHS Fish	-

Reach Data Sheet	
Reach Number	CH-05
Location	T13N-R02W
Type	Stream
Primary Water Body	Berwick Creek
Shorelines Jurisdiction Area (acre)	190.37
Length of Stream Shorelines (miles)	1.20
Physical Characteristics	
Geology	57.9% alluvium 41.7% alpine glacial outwash, pre-Fraser 0.5% mass-wasting deposits, mostly landslides
Soils	96% Partially Hydric 4% Not Hydric
FEMA 100-year Floodplain (area)	20%
NWI Wetland (area)	49%
Land Cover	63.8% Agricultural Vegetation 24.4% Developed & Other Human Use 8.9% Forest & Woodland 1.9% Recently Disturbed or Modified 1% Shrubland & Grassland
Human Use	
Land Ownership	1.6% WA Dept. of Natural Resources
Zoning	100% UGA 0% RDD-20
Parks	-
Number of Historic Sites	8
Number of Archaeological Sites	9
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	95.5% Slight 0.5% Moderate
Seismic/Liquefaction Hazard	41.7% very low 0.5% low to moderate 57.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	0.8% Oak Woodland
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 2.77 miles Coho Salmon - Known Juvenile Rearing - 0.6 miles Coho Salmon - Known Spawning - 2.17 miles

Reach Data Sheet	
Reach Number	CH-06
Location	T13N-R02W, T14N-R02W
Type	Lake
Primary Water Body	Unnamed 15
Shorelines Jurisdiction Area (acre)	166.93
Length of Stream Shorelines (miles)	-
Physical Characteristics	
Geology	87.5% alluvium 12.5% alpine glacial outwash, pre-Fraser
Soils	92.8% Partially Hydric 7.2% Not Hydric
FEMA 100-year Floodplain (area)	93%
NWI Wetland (area)	75%
Land Cover	42.4% Forest & Woodland 30.7% Shrubland & Grassland 16.6% Developed & Other Human Use 8.3% Agricultural Vegetation 2.1% Recently Disturbed or Modified
Human Use	
Land Ownership	26.9% WA Dept. of Natural Resources 9.6% Municipal
Zoning	100% City 0% RDD-5
Parks	Millet Field
Number of Historic Sites	25
Number of Archaeological Sites	2
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	DILLENBAUGH CREEK - Dioxin - 0.669 acres
Critical Areas	
Erosion Hazard	100% Slight
Seismic/Liquefaction Hazard	12.5% very low 87.5% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	72.7% Waterfowl Concentrations
PHS Fish	Coast Resident Cutthroat - Presence/Migration - 0.85 miles Coho Salmon - Presence/Migration - 0.85 miles

Reach Data Sheet	
Reach Number	MO-01
Location	T12N-R04E, T13N-R04E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	57.78
Length of Stream Shorelines (miles)	0.77
Physical Characteristics	
Geology	79% alluvium 21% alpine glacial till, pre-Fraser
Soils	81.6% Partially Hydric 18.4% Not Hydric
FEMA 100-year Floodplain (area)	45%
NWI Wetland (area)	44%
Land Cover	80% Forest & Woodland 10.2% Developed & Other Human Use 7.9% Agricultural Vegetation 1.1% Open Water 0.8% Shrubland & Grassland
Human Use	
Land Ownership	2.8% WA Dept. of Fish and Wildlife
Zoning	100% UGA
Parks	-
Number of Historic Sites	0
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	81.6% Slight 12.9% Very severe
Seismic/Liquefaction Hazard	21% very low 79% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 7.2% Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Presence/Migration - 0.76 miles Chinook Salmon - Presence/Migration - 0.76 miles Coho Salmon - Presence/Migration - 0.76 miles Rainbow Trout - Presence/Migration - 0.82 miles Steelhead Trout - Presence/Migration - 0.76 miles

Reach Data Sheet	
Reach Number	MO-02
Location	T12N-R04E, T13N-R04E
Type	Stream
Primary Water Body	Tilton River
Shorelines Jurisdiction Area (acre)	111.50
Length of Stream Shorelines (miles)	1.71
Physical Characteristics	
Geology	92.5% alluvium 7.5% alpine glacial till, pre-Fraser
Soils	77.0% Partially Hydric 17.3% Not Hydric 4.7% All Hydric 1.1% Unknown Hydric
FEMA 100-year Floodplain (area)	84%
NWI Wetland (area)	45%
Land Cover	5.4% Agricultural Vegetation 46.7% Forest & Woodland 26.5% Developed & Other Human Use 19.6% Recently Disturbed or Modified 1.6% Nonvascular & Sparse Vascular Rock Vegetation 0.0% Shrubland & Grassland
Human Use	
Land Ownership	16% Municipal 0.2% Other State Land
Zoning	42.0% UGA 56.7% City 1.4% RDD-5
Parks	Gust Backstrom Park
Number of Historic Sites	4
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	-
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	76.8% Slight 0.1% Very severe 0.5% Moderate
Seismic/Liquefaction Hazard	0.0% N/A (bedrock) 7.5% very low 92.5% moderate to high
Landslide Hazard Zones	0.3% (blank)
Active Underground Storage Tanks	SR 508 MP 31.29. CHAPMAN RD MORTON, WA 98356 - Removed
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk 20.8% Mule And Black-tailed Deer
PHS Fish	Chinook Salmon - Presence/Migration - 1.45 miles Coho Salmon - Presence/Migration - 1.44 miles Rainbow Trout - Presence/Migration - 1.44 miles Steelhead Trout - Presence/Migration - 1.44 miles

Reach Data Sheet	
Reach Number	MO-03
Location	T12N-R04E, T13N-R04E
Type	Stream
Primary Water Body	Johnson Creek
Shorelines Jurisdiction Area (acre)	104.90
Length of Stream Shorelines (miles)	0.74
Physical Characteristics	
Geology	97.8% alluvium 1.7% alpine glacial till, pre-Fraser 0.5% basaltic andesite flows
Soils	82.5% Partially Hydric 17.5% Not Hydric 0.0% All Hydric
FEMA 100-year Floodplain (area)	43%
NWI Wetland (area)	76%
Land Cover	73.4% Agricultural Vegetation 13.9% Forest & Woodland 9.7% Developed & Other Human Use 2.4% Recently Disturbed or Modified 0.0% Nonvascular & Sparse Vascular Rock Vegetation 0.6% Shrubland & Grassland
Human Use	
Land Ownership	9.4% Municipal 0.0% Other State Land
Zoning	80.9% UGA 18.9% City 0.2% RDD-20
Parks	-
Number of Historic Sites	4
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	171
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	95.9% Slight 3.3% Very severe 0.5% Moderate
Seismic/Liquefaction Hazard	0.5% N/A (bedrock) 1.7% very low 97.8% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	100 %Elk
PHS Fish	Chinook Salmon - Presence/Migration - 0.01 miles Coho Salmon - Presence/Migration - 0.74 miles Rainbow Trout - Presence/Migration - 0.74 miles Steelhead Trout - Presence/Migration - 0.74 miles

Reach Data Sheet	
Reach Number	WI-01
Location	T12N-R02W
Type	Stream
Primary Water Body	King Creek
Shorelines Jurisdiction Area (acre)	31.06
Length of Stream Shorelines (miles)	0.56
Physical Characteristics	
Geology	59.6% marine sedimentary rocks 36.1% alluvium 4.2% alpine glacial drift, pre-Fraser
Soils	97.2% Partially Hydric 2.8% Not Hydric
FEMA 100-year Floodplain (area)	4%
NWI Wetland (area)	0%
Land Cover	45.9% Agricultural Vegetation 41.5% Forest & Woodland 12.5% Developed & Other Human Use
Human Use	
Land Ownership	4.9% Municipal
Zoning	52% UGA 48% City
Parks	-
Number of Historic Sites	8
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	97.2% Slight 2.8% Very severe
Seismic/Liquefaction Hazard	59.6% N/A (bedrock) 4.2% very low 36.1% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	46.2% Roosevelt Elk
PHS Fish	Chinook Salmon - Presence/Migration - 0.83 miles Coho Salmon - Known Spawning - 0.83 miles Steelhead Trout - Known Spawning - 0.83 miles

Reach Data Sheet	
Reach Number	WI-02
Location	T12N-R02W
Type	Stream
Primary Water Body	Olequa Creek
Shorelines Jurisdiction Area (acre)	44.89
Length of Stream Shorelines (miles)	0.92
Physical Characteristics	
Geology	77.9% alluvium 11.8% alpine glacial drift, pre-Fraser 8.3% marine sedimentary rocks 1.9% alpine glacial outwash, pre-Fraser
Soils	61.1% Partially Hydric 38.9% Not Hydric
FEMA 100-year Floodplain (area)	19%
NWI Wetland (area)	4%
Land Cover	81.3% Forest & Woodland 14.4% Developed & Other Human Use 2.7% Recently Disturbed or Modified 1.5% Agricultural Vegetation
Human Use	
Land Ownership	17.5% Municipal
Zoning	80.4% City 19.6% UGA 0% RDD-5
Parks	Winolequa Park
Number of Historic Sites	3
Number of Archaeological Sites	0
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	61.1% Slight 38.9% Very severe
Seismic/Liquefaction Hazard	8.3% N/A (bedrock) 13.8% very low 77.9% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	-
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Presence/Migration - 0.84 miles Chinook Salmon - Presence/Migration - 0.13 miles Coast Resident Cutthroat - Presence/Migration - 0.84 miles Coho Salmon - Known Spawning - 0.98 miles Steelhead Trout - Known Spawning - 0.13 miles Steelhead Trout - Presence/Migration - 0.79 miles Steelhead Trout - Presence/Migration - 0.06 miles

Reach Data Sheet	
Reach Number	WI-03
Location	T12N-R02W
Type	Stream
Primary Water Body	Olequa Creek
Shorelines Jurisdiction Area (acre)	46.69
Length of Stream Shorelines (miles)	0.79
Physical Characteristics	
Geology	64.1% marine sedimentary rocks 35.8% alluvium 0.1% alpine glacial drift, pre-Fraser
Soils	99.4% Partially Hydric 0.6% Not Hydric
FEMA 100-year Floodplain (area)	26%
NWI Wetland (area)	0%
Land Cover	65.8% Developed & Other Human Use 20.1% Forest & Woodland 11.2% Agricultural Vegetation 2.9% Recently Disturbed or Modified
Human Use	
Land Ownership	7.1% Municipal 1.6% Lewis County
Zoning	99.9% City 0.1% RDD-5 0% RDD-20
Parks	Winlock Tennis Courts
Number of Historic Sites	30
Number of Archaeological Sites	1
Shorelines Modifications and Water Quality Impairments	
Length of Dikes (feet)	0
303(d) Listings (Category 5)	-
Critical Areas	
Erosion Hazard	96.8% Slight 2.6% Moderate 0.6% Very severe
Seismic/Liquefaction Hazard	64.1% N/A (bedrock) 0.1% very low 35.8% moderate to high
Landslide Hazard Zones	-
Active Underground Storage Tanks	503 KERRON ST WINLOCK, WA98596 - Operational
Channel Migration Zone (acres)	0
Rainier Blast Zone (acres)	0
Mudflow Hazard Area	-
Priority Habitats and Species	
PHS Wildlife (acres)	-
PHS Fish	Chinook Salmon - Presence/Migration - 0.76 miles Chinook Salmon - Presence/Migration - 0.02 miles Coast Resident Cutthroat - Presence/Migration - 0.76 miles Coho Salmon - Known Spawning - 0.79 miles Steelhead Trout - Known Juvenile Rearing - 0.73 miles Steelhead Trout - Known Spawning - 0.02 miles Steelhead Trout - Presence/Migration - 0.03 miles Steelhead Trout - Presence/Migration - 0.04 miles

