

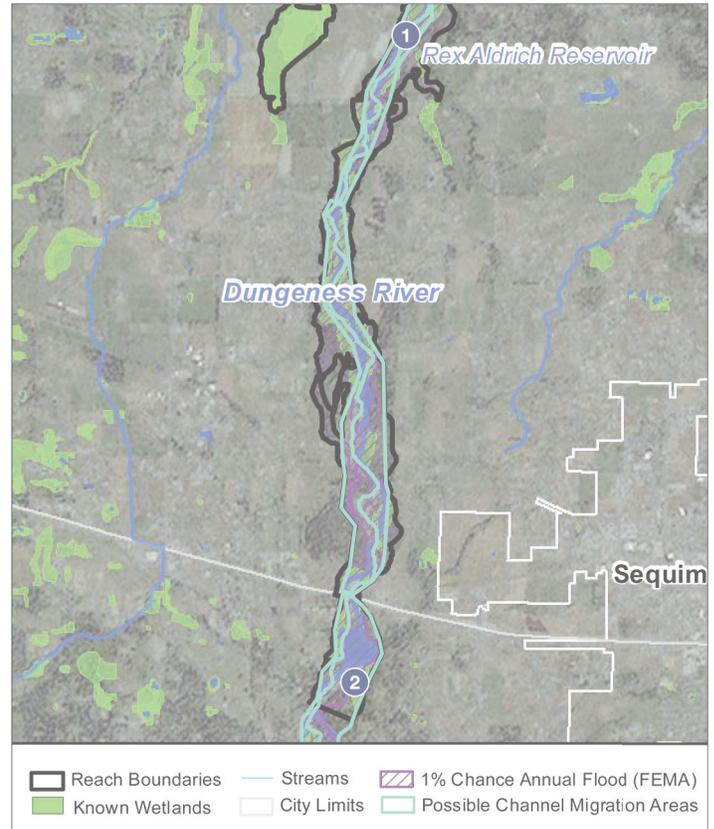


# Reach Sheet Data Descriptions and Sources

## Freshwater Reach Sheet Explainer

### REACH MAP

The reach maps show each “reach” or inventory segment—there are 63 freshwater reaches (encompassing 39 streams and 1 lake), which excludes incorporated areas and the Makah Reservation. Channel migration and flood hazard areas are also shown on the maps. Shoreline oblique photos taken by Ecology are provided (where available) to help orient the reader to key localities. The aerial photography is from 2009.



### PHYSICAL

#### Channel Configuration

Configuration of the stream channel is described based upon information available in WRIA Plans (various sources). If channel data was not available, configuration was described based upon air photo interpretation.

#### Hazard Areas

This dataset contains information about geologic and river hazards, which include: areas of slope instability, landslide hazard areas, tsunami hazard areas, frequently flooded areas, channel migration zones, and erosion hazard areas (Data sources: Clallam County; Ecology; FEMA; Jamestown S’Klallam Tribe; NRCS; and WDNR). In general, these data show where hazards are likely to occur or where they are known to have occurred. Some data are missing in undeveloped areas (such as commercial forest-zoned lands) and/or the upper reaches of streams, particularly within Olympic National Forest. Hazards may still be present in areas where none are mapped.



Shoreline Oblique Photos (2006)

### ECOLOGY

#### Riparian Vegetation

This information describes the vegetation cover classification of uplands and shorelands within 300 feet of the ordinary high water line. The Point-No-Point Treaty Council (PNPTC) (2011) identified areas of closed canopy forest, other natural vegetation, non-forest (areas with human influence such as roads, agriculture, houses lawns, etc...), freshwater, and areas known to be off-shore. This analysis was performed using aerial photography, repeatability analyses, and some field surveys. The consultants further annotated the PNPTC data into more detailed categories, such as agriculture, lawn/landscaping, and natural herbaceous habitat, through air photo interpretation.

#### Habitats and Species

This describes the location of state-designated priority habitats and species in upland and aquatic areas, as reported by the Washington Department of Fish and Wildlife (WDFW) Priority Habitats and Species Program and the Washington Department of Natural Resources (WDNR) Natural Heritage Program database. Priority habitat data are course-scale and based upon field biologist observations.

Information on the approximate location and extent of known wetlands and streams is based on data from the US Fish and Wildlife Service (USFWS) and Clallam County wetland inventories and the WDNR and Clallam County stream inventories. Wetland data are somewhat course-scale, and often do not depict small wetlands, slope wetlands or wetlands in dense forest stands. A field wetland determination would be required to accurately determine the presence or absence of wetland habitat in a particular area.

### ECOLOGY (CONTINUED)

#### Water Quality

This dataset comes from the State of Washington's Water Quality Assessment (WQA) and list of impaired waterbodies. The State's WQA categories water quality into five categories, ranging from a Category 1 waterbodies which meets federal clean water standards to Category 5 waterbodies that are polluted and put on the EPA's impaired waterbodies (303(d)) list. Only Category 5 waterbodies are shown in the reach sheets. Data from Clallam County Streamkeepers monitoring (2010) is also reported. The Streamkeepers measured water quality using two different water quality indices: WQI and B-IBI.

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

This data describes the use and ownership (i.e., public, private, etc.) of lands immediately adjacent to freshwater shorelines. Ownership information includes reservation lands, areas within Olympic National Park, protected lands, National Wildlife Refuges, and aquatic parcels. Data sources: Clallam County, 2009-2010; WSDOT, 2009; WDNR, 2011; PSNERP, 2009; NPS, 2007; USFWS, 2009.

---

#### Zoning and Parcel Data

These data depict Clallam County zoning categories and development potential of land parcels within the reach. Data source: Clallam County, 2009-2010. Based upon this data, a qualitative estimate (i.e. high, moderate, and low) of development potential within the reach is provided.

---

#### Public Access

These data identify the existing public access sites on freshwater shorelines. The data includes the location of the existing Olympic Discovery Trail (data sources: Ecology (2010) and Clallam County). Some locally-known, unpublished public access areas may be absent. Public lands that are outside the jurisdiction of the shoreline master program are not included.

---

#### Impervious Surfaces

This dataset depicts estimated percentages of impervious surfaces (e.g., pavement, buildings, etc.) covering the land surface. Estimates are based on digital images (data source: NLCD, 2001). Smaller areas of impervious surface, particularly in areas with adjacent forest cover, may not be included in the data set.

---

#### Shoreline Modifications

This dataset identifies locations of modifications to the shoreline environment including: bulkheads, levees, docks, piers, marinas, buildings, tidal barriers, dams, bridges, stream crossings, and fish passage barriers. Data are from a variety of sources including: WDNR, 2001 and 2009; PSNERP, 2009; Battelle, 2008; and Clallam County, 2009.

---

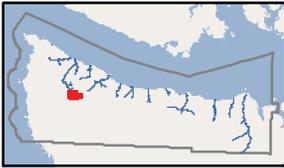
#### Contaminated Sites

This dataset contains the locations of regulated hazardous materials facilities, spill sites, and cleanup projects. The list of regulated facilities as well as past and on-going cleanup projects is maintained and updated by the Washington Department of Ecology. Environmental compliance and cleanup status is also listed. Data source: Ecology, 2009.

---

#### Cultural Resources

This dataset contains recorded historic and prehistoric cultural and archaeological sites (Source: Washington State Department of Archaeology and Historic Preservation, 2010). Due to federal and state laws which preclude the release of site location information, only the number and type of cultural resources sites recorded within a reach are shown on the reach sheets.



# Bear Creek

**SHORELINE LENGTH**  
2.8 Miles

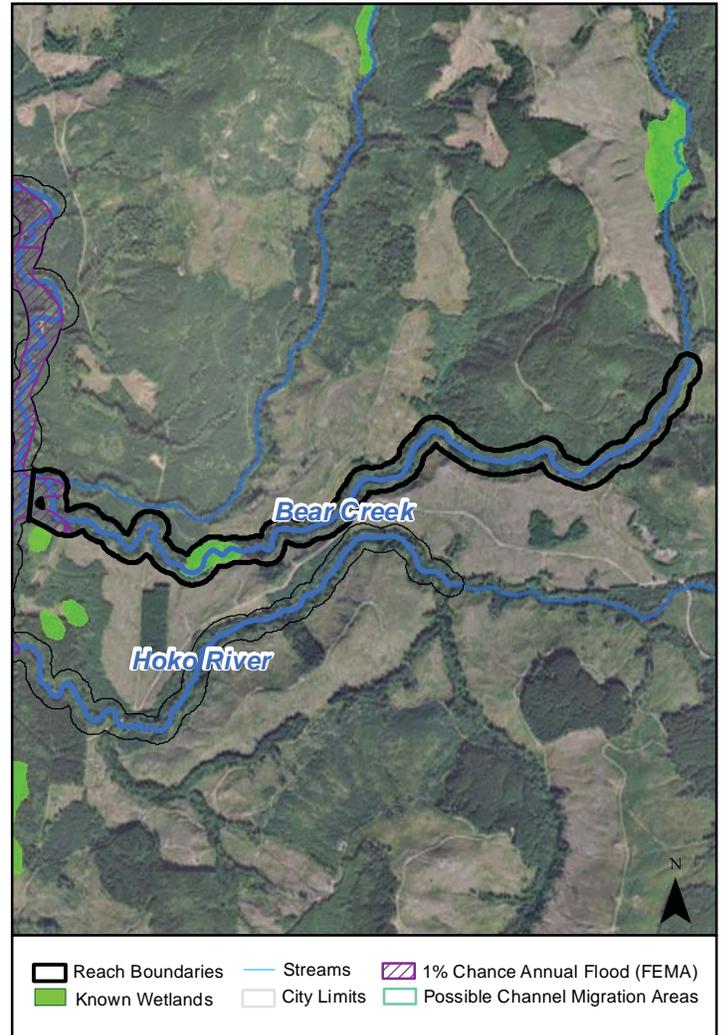
**REACH AREA**  
140.09 Acres

## REACH SUMMARY

The reach extends from the Hoko River confluence upstream approximately 2.8 miles. The reach meanders through moderately steep terrain, trending generally westward. Vegetative cover through the reach is primarily forest habitat, which provides shading and habitat for fish and wildlife. Bear Creek provides habitat for Chinook, chum, and coho salmon, and steelhead trout.

The reach consists of privately owned commercial timber lands. Erosion and landslides are prevalent throughout the middle and upper reach. The lower portion of the reach, near the Hoko River confluence, is within the FEMA 100-year floodplain.

All of the land within the reach is zoned for commercial timber. Under current zoning regulations, most of the parcels are subdividable and could be developed with residences, but at a density of no more than 1 dwelling per 80 acres. Developable lands are located within the FEMA 100-year floodplain and geologic hazard areas.



## PHYSICAL

### Channel Configuration

No data

### Hazard Areas

Several stream banks and surrounding areas are unstable (37%) with potential for slides mapped in the northeast and central portions of the reach. Potential erosion areas are mapped in the northeast area of the reach as well as the central portion along the stream bank (25%). Most of the Bear Creek/Hoko River confluence areas lies within the FEMA 100-year floodplain (6%).

## ECOLOGY

### Riparian Vegetation

72% of the reach areas contains forest habitat, while contains natural herb and shrub habitat.

### Habitats and Species

5% of the reach is mapped as wetland habitat. There are no priority wildlife habitats mapped within the reach.

This reach provides spawning habitat for steelhead trout (100% of reach total), and Chinook (87%) and coho salmon (100%). The presence of chum salmon is also identified in the reach.

### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers water quality data available for Bear Creek.

## Bear Creek

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach, the lands are privately owned.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Boundary Creek

## SHORELINE LENGTH

1.1 Miles

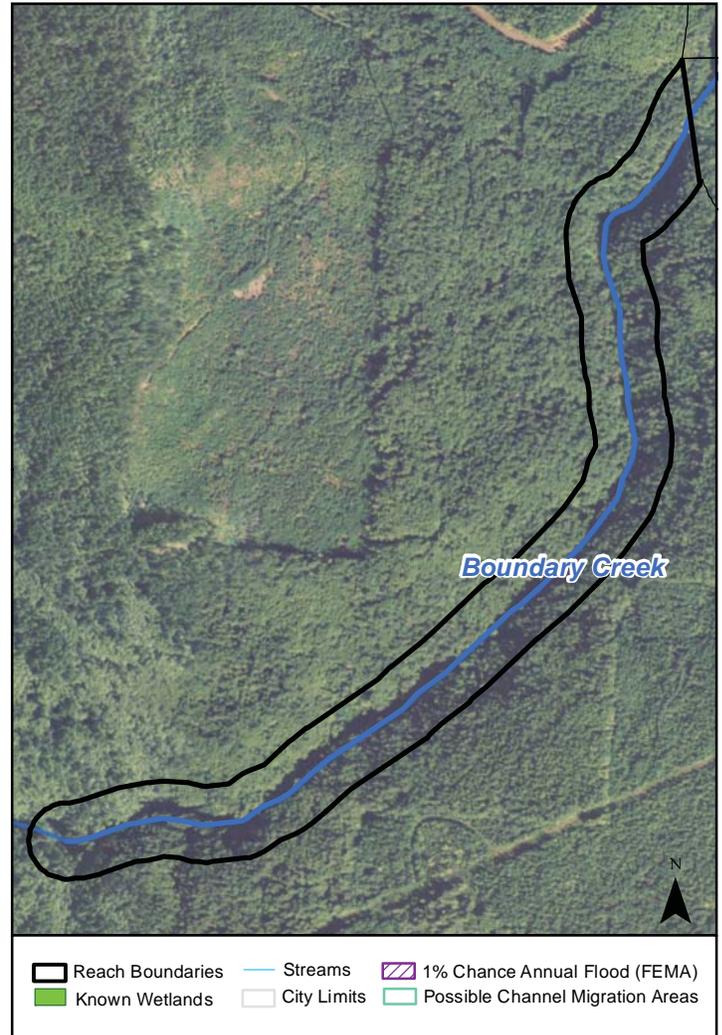
## REACH AREA

54.42 Acres

### REACH SUMMARY

The reach extends from the Lyre River confluence to approximately 1.2 miles upstream. The stream profile through the reach is generally straight, flowing east and northeast through steep mountain terrain and valleys. The channel is bordered by a narrow floodplain. Dense forest cover is present within the reach, providing significant shading and habitat for fish and wildlife. Boundary Creek provides habitat for resident cutthroat and rainbow trout populations.

The reach contains public timber lands managed by DNR. The majority of the reach is located in a geologic hazard area, susceptible to erosion.



### PHYSICAL

#### Channel Configuration

The channel is relatively confined, and follows a mostly straight course bordered by a narrow floodplain.

#### Hazard Areas

Areas for potential erosion are mapped throughout the entire reach (95%) leading up to the confluence with Lyre River.

### ECOLOGY

#### Riparian Vegetation

100% of the reach area contains continuous forest habitat.

#### Habitats and Species

There are no priority wildlife habitats mapped within the reach.

This reach provides habitat for resident cutthroat and rainbow trout.

#### Water Quality

The upstream portion of Boundary Creek within the reach has a State impaired water quality listing for temperature. There are no Streamkeepers data available for Boundary Creek.

# Boundary Creek

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership is 100% public.

---

### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

### Public Access

100% of the shoreline in this reach is publically owned; however, there are no available public access areas.

---

### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources

There are no inventoried sites within the reach.



# Brownes Creek

## SHORELINE LENGTH

0.2 Miles

## REACH AREA

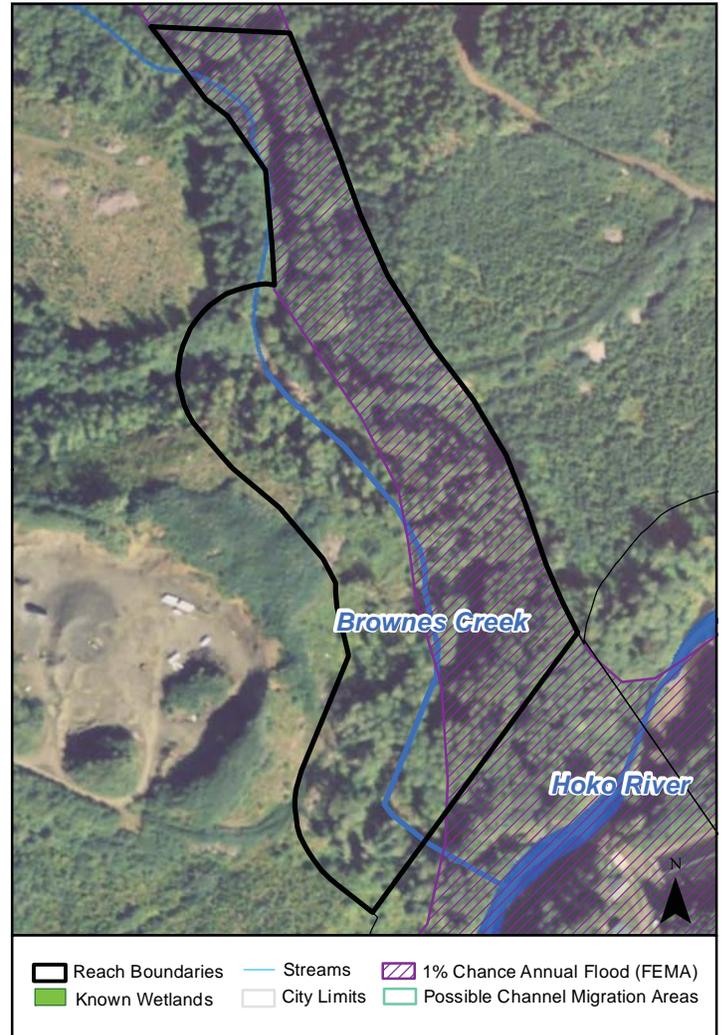
18.01 Acres

### REACH SUMMARY

The reach is relatively short and extends from the Hoko River confluence to approximately 0.5 miles upstream. Forest habitat borders the riparian corridor and extends outward through much of the reach, providing shade and habitat for fish and wildlife. The reach provides spawning and rearing habitat for Chinook, chum, and coho salmon, and steelhead trout. Resident cutthroat and rainbow trout are also present in the reach.

Commercial forestry and timber lands are located throughout the reach. Much of the eastern portion of the reach lies within the FEMA 100-year floodplain. The middle and upper portions of the reach are located in geologic hazard areas, and are susceptible to erosion and landslides. The lands within the reach are largely undeveloped.

Half of the reach area consists of a large subdividable commercial forestry parcel and under current zoning regulations, it could be developed with residences, but at a density no more than 1 dwelling per 80 acres. Most of the developable land is located with the FEMA 100-year floodplain and identified geologic hazard areas.



### PHYSICAL

#### Channel Configuration

No data

### ECOLOGY

#### Riparian Vegetation

63% of the reach contains forest habitat while 21% contains natural herb and shrub habitat.

#### Hazard Areas

Several stream banks and surrounding areas are unstable (37%) with potential for slides mapped in the northeast and central portions of the reach. Potential erosion areas are mapped in the southeast portion of the reach (29%). Most of the Brownes Creek/Hoko River confluence area is in the FEMA 100-year floodplain (6%).

#### Habitats and Species

There are no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for steelhead trout (93%) and Chinook (100%) and coho salmon (100%). The presence of chum salmon is also identified in the reach.

#### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers data available for Brownes Creek.

## Brownes Creek

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (82%) and commercial (18%). The commercial land is generally concentrated in the southeast portion of the reach. Land ownership in the reach is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach, the lands are privately owned.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Bullman Creek

## SHORELINE LENGTH

0.4 Miles

## REACH AREA

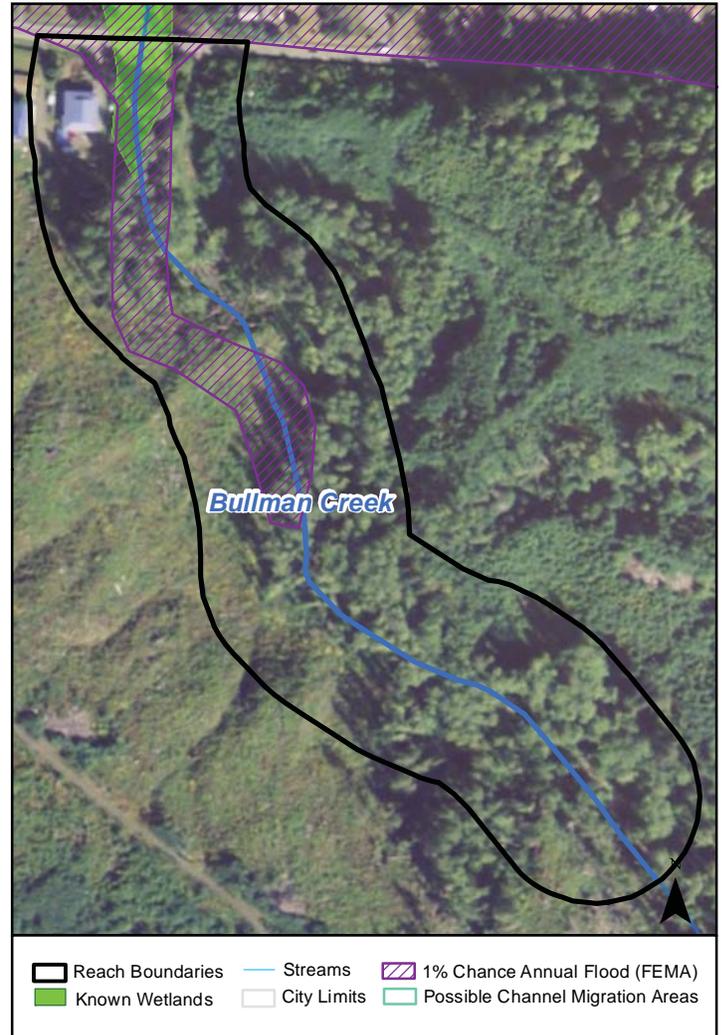
18.27 Acres

### REACH SUMMARY

The reach is relatively short and extends from Highway 112 upstream approximately 0.4 miles. The stream channel within the reach flows in a relatively straight, well-defined course. Vegetative cover in the reach is a combination of forest and herb and shrub habitat. Bullman Creek provides habitat for Chinook, chum, and coho salmon, and steelhead trout. Breeding populations of bald eagle are also located within the reach.

Moderate- to low-density residential development is located in the lower portion of the reach along Highway 112. Timber and commercial forest lands are located in the middle and upper portion of the reach. The lower portion of the reach lies within the tsunami hazard zone and FEMA 100-year floodplain, and the majority of the reach is located in a geologic hazard area for erosion. Residential developments in the lower reach are located within the tsunami hazard zone, FEMA 100-year floodplain, and/or geologic hazard areas.

There is minimal potential for increased development within the reach. Most of the developable parcels are zoned for commercial timber, and under current zoning regulations, could be developed with residences but at a density no more than 1 dwelling per 80 acres. The residential-zoned land within the reach is generally fully developed.



### PHYSICAL

#### Channel Configuration

The stream channel within the reach flows in a relatively straight, well-defined course.

#### Hazard Areas

Areas for potential erosion are mapped through the central and southern portions of the reach (77%). Surrounding areas to the east of Bullman Creek have potential for slides (6%). Most of the northern portion of the reach is in a tsunami hazard zone (28%) and the FEMA 100-year floodplain (16%).

### ECOLOGY

#### Riparian Vegetation

63% of the reach zone is characterized by forest habitat while 29% of the reach contains herb and shrub habitat. An additional 8% of the reach consists of lawn/landscaping and developed areas.

#### Habitats and Species

2% of the reach is mapped as wetland habitat, primarily along the northern boundary of the reach, near the Highway 112. Designated priority habitat mapped within the reach is bald eagle (13%).

This reach provides spawning habitat for steelhead trout (100%) and Coho salmon (90%). The presence of Chinook and chum salmon are also mapped within the reach.

#### Water Quality

The reach has no State impaired water quality listings. Bullman Creek water quality is listed by Streamkeepers as "compromised" for WQI.

# Bullman Creek

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is timber (89%), residential (8%), and roads (3%). The residential land is located at the northern end of the reach. Land ownership is 100% private.

---

### Zoning and Parcel Data

The reach is zoned for rural residential (11%) and commercial forestry (89%).

Under current zoning regulations there is low potential for significant new development within the reach. Most of the reach is zoned for commercial forestry.

---

### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

### Impervious Surfaces

Approximately 5% of the reach is covered by impervious surfaces.

---

### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources

There are no inventoried sites within the reach.



# Canyon Creek

## SHORELINE LENGTH

1.7 Miles

## REACH AREA

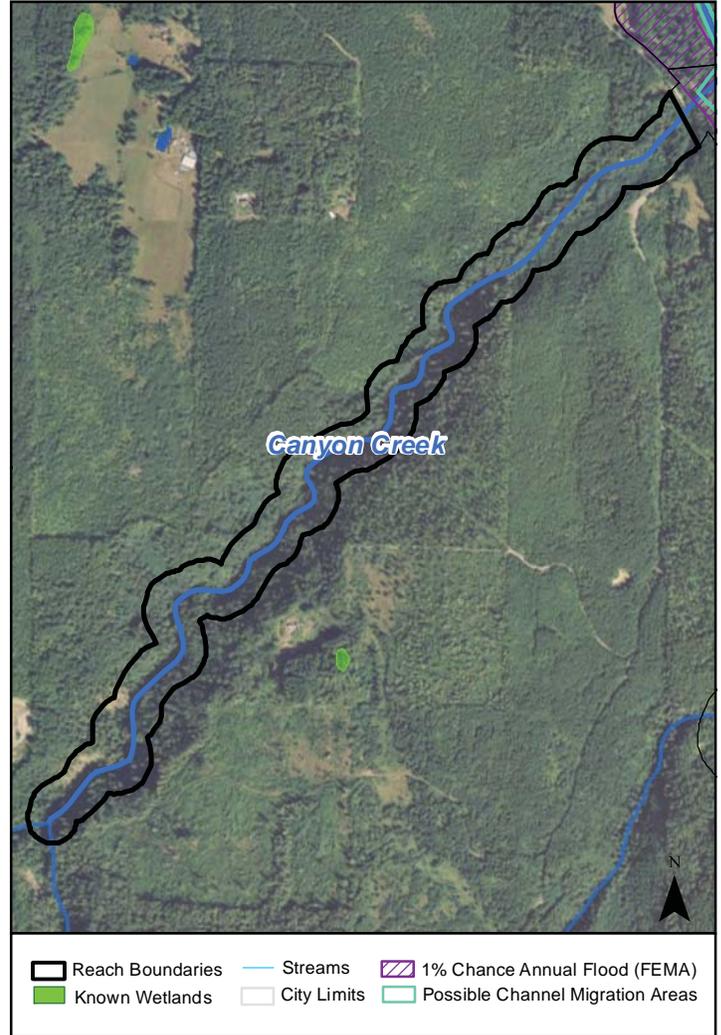
84.68 Acres

### REACH SUMMARY

The reach extends from the Dungeness River confluence upstream to the confluence with Pals Creek. The stream meanders northeastward in a relatively straight path toward its confluence with the Dungeness River. Vegetative cover in the reach is primarily dense forest cover that extends from the surrounding foothills into the riparian corridor, providing stream shading and habitat for fish and wildlife. The reach provides habitat for resident cutthroat and rainbow trout. The reach supports breeding populations of elk and harlequin duck. A hatchery water intake dam located at RM 0.08 is a complete barrier to upstream fish passage.

The majority of the reach consists of public, DNR-managed forest lands. Some commercial forestry parcels are located in the lower and middle portions of the reach. The majority of the reach lies in a geologic hazard area for slides. Public access to trails in the reach is available from Forest Service Road 2870.

Under current zoning regulations, the reach is primarily public forest lands that cannot be subdivided. Actual development potential in the reach is low.



### PHYSICAL

#### Channel Configuration

The stream meanders northeastward in a relatively straight path toward its confluence with the Dungeness River. The channel is fairly confined.

#### Hazard Areas

Most stream banks and surrounding areas are unstable (93%) with potential for slides mapped from the southwest to the northeast reach area, stopping just before the Dungeness Rive confluence. Potential erosion areas are mapped in the northeast area of the reach (1%).

### ECOLOGY

#### Riparian Vegetation

97% of the reach area contains continuous forest habitat while 3% contains natural herb and shrub habitat.

#### Habitats and Species

Designated priority habitats mapped within the reach include elk (89%) and harlequin duck (6%).

The presence of resident cutthroat and rainbow trout is mapped within the reach.

#### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers data available for Canyon Creek.

# Canyon Creek

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is timber (94%), commercial (4%), residential (2%), and roads (trace). The commercial and residential land is located at the northeast end of the reach. Land ownership in the reach is 29% private and 71% public.

---

### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

### Public Access

The reach can be accessed via trails from Forest Service Road 2870.

---

### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surfaced.

---

### Shoreline Modifications

A hatchery water intake dam located at RM 0.08 is a complete barrier to upstream fish passage.

---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources

There are no inventoried sites within the reach.



# Charley Creek

**SHORELINE LENGTH**  
0.9 Miles

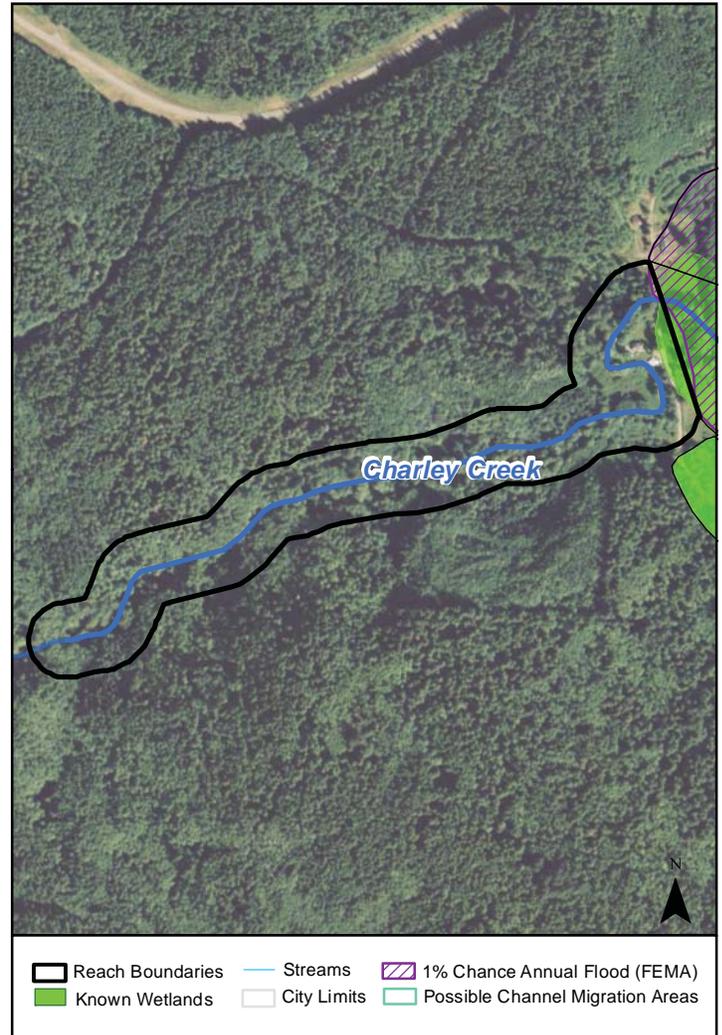
**REACH AREA**  
41.82 Acres

## REACH SUMMARY

The reach extends from the Charley Creek Rd crossing, upstream approximately 0.89 miles. The stream profile in the reach is typically straight with a few broad meanders in the lower portion of the reach. Forest cover is prevalent throughout the reach, extending from the surrounding hillside into the riparian corridor. Herb and shrub habitat is located in portions of the lower reach. Wetland habitat is located in the floodplain of the lower portion of the reach, adjacent to Charley Creek Rd. The reach provides spawning and rearing habitat for coho and chum salmon, in addition to steelhead and resident cutthroat trout.

Low-density rural residential development is located in the lower portion of the reach. Most of the reach area is DNR-managed public forest land. The upper and middle portions of the reach are located in a geologic hazard area for erosion. Slides areas are located in the upper portion of the reach along the southern reach boundary.

Under current zoning regulations, the majority of the reach area is not eligible for additional development.



## PHYSICAL

### Channel Configuration

The stream channel flow relatively straight, and is relatively confined.

### Hazard Areas

Areas for potential erosion are mapped through the southwest to central portions of the reach (51%), and some surrounding areas have potential for slides (9%). The eastern end of the reach is located within a channel migration zone (19%).

## ECOLOGY

### Riparian Vegetation

89% of the reach zone contains continuous forest habitat, while 8% of the reach contains natural herb and shrub habitat. An additional 5% of the reach contains lawn/landscaping and developed areas.

### Habitats and Species

3% of the reach is mapped as wetland habitat, located near the Clallam River confluence. There are no priority wildlife habitats mapped within the reach.

This reach provides spawning habitat for steelhead trout (100%) and coho salmon (100%). The presence of chum salmon and resident cutthroat are also mapped within the reach.

### Water Quality

The reach has no State impaired water quality listings. Charley Creek water quality is listed by Streamkeepers as "compromised" for WQI.

# Charley Creek

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is timber (80%), vacant (10%), residential (9%), and roads (1%). The vacant and residential land is located at the east end of the reach. Land ownership in the reach is 20% private and 80% public.

---

### Zoning and Parcel Data

The reach is zoned for rural residential (20%) and commercial forestry (80%).

Under current zoning regulations there is low potential for significant new development within the reach. Most of the reach is zoned for commercial forestry.

---

### Public Access

Most of the lands within the reach are publically owned. However, no formal public access is available for this reach.

---

### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surfaces.

---

### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources

Remnants of a timber RR trestle at upstream end of reach is inventoried for historic significance, but not listed.



# Clallam River: Reach 1

**SHORELINE LENGTH**  
2.3 Miles

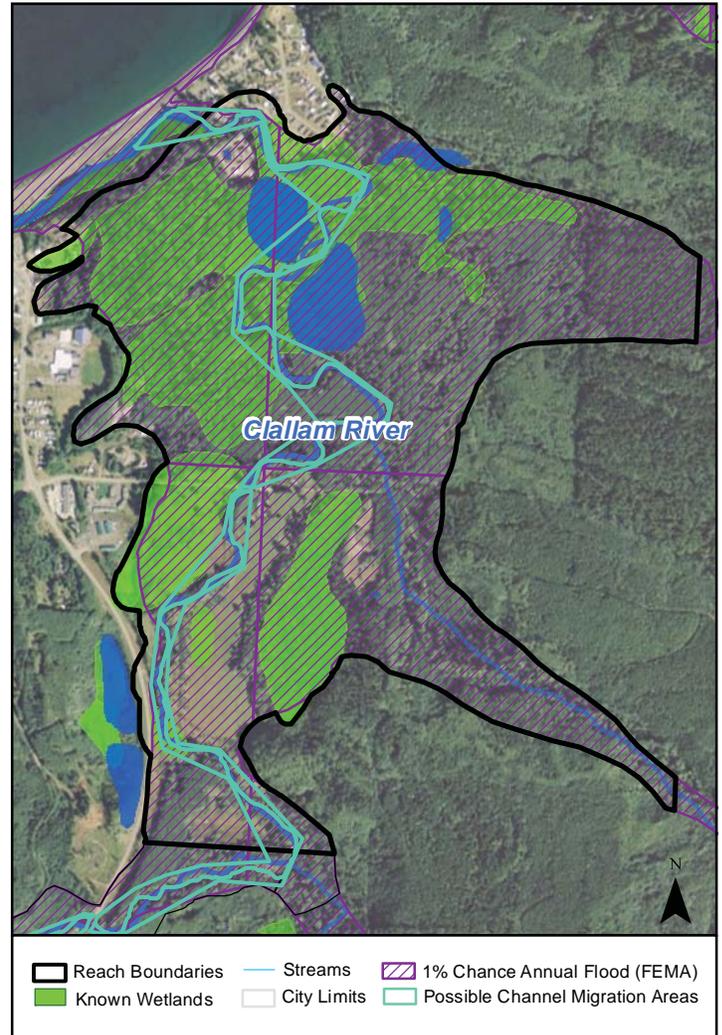
**REACH AREA**  
462.48 Acres

## REACH SUMMARY

Reach 1 of the Clallam River extends from near Frontier Street upstream approximately 1.85 miles, and encompasses the large, flat alluvial fan complex of the river. The channel profile through this reach is highly sinuous supporting several large meander bends that move laterally across the broad low-gradient floodplain. Tributary streams braid and join the river in the lower portion of the reach. Patches of herb and shrub habitat, as well as forest habitat, are located in portions of the reach that have not been cleared for agriculture. Wetland habitat extends across the floodplain in several locations. The reach provides habitat for coho and chum salmon, as well as steelhead and resident cutthroat trout. The reach supports breeding populations of bald eagle.

The majority of the reach contains moderate- to-low density residential development and agriculture. Approximately a third of the reach is zoned for commercial forestry. The majority of the reach lies within the tsunami hazard zone, the FEMA 100-year floodplain, and/or channel migration area. The upper portion of the reach lies in a geologic hazard area for erosion.

Under current zoning regulations, approximately two-thirds of the reach has the potential for new residential development. Parcel boundaries vary in size and shape, but many have the potential to be subdivided into 5 acre residential lots. Most of this developable land is located within the tsunami, flood, and/or channel migration area. The significant presence of wetland habitat within the reach may preclude development on some undeveloped parcels.



Reach Boundaries    
  Streams    
  1% Chance Annual Flood (FEMA)  
 Known Wetlands    
 City Limits    
 Possible Channel Migration Areas

## PHYSICAL

### Channel Configuration

The lower reach of the Clallam River is defined by a frequent series of meanders that move laterally across a broad low-gradient floodplain.

### Hazard Areas

Identified hazard areas within the reach include a channel migration zone (69%), tsunami hazard zone (22%), and the FEMA 100-year floodplain (76%). Potential erosion areas are mapped in the southeast area of the reach (1%).

## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 19% of the reach zone contains forest habitat, 7% contains herb and shrub habitat, and 7% of the reach is agricultural crops. Outlying the stream corridor vegetation is mostly comprised of forest habitat intermixed with herb and shrub habitat.

### Habitats and Species

37% of the reach is identified as wetland habitat, primarily adjacent to the Clallam River. The designated priority habitat within the reach is bald eagle (9%).

This reach provides spawning habitat for steelhead trout (64%) and coho salmon (28%) and juvenile habitat for coho salmon (72%). The presence of resident cutthroat and chum salmon are also mapped within the reach.

### Water Quality

The portion of the Clallam River within the reach has a State impaired water quality listing for temperature. River water quality within the reach is listed by Streamkeepers as "compromised" for WQI and B-IBI.

## Clallam River: Reach 1

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within this reach is timber (58%), vacant (30%), agriculture (4%), residential (2%), roads (2%), open space (2%), utilities (1%), commercial (trace), and unknown (trace). The timber land is located throughout the east half of the reach. Land ownership in the reach is 99% private and 1% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (40%), urban residential (9%), commercial forestry (50%), and parks / public land (1%).

Under current zoning regulations there is moderate potential for new residential development within the reach. Most of the reach is undeveloped, but wetland habitat may limit development potential.

---

#### Public Access

The northern end of the reach is accessible from Clallam Bay Spit Community Beach County Park.

---

#### Impervious Surfaces

Approximately 3% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

This reach contains three identified shoreline modifications. River road crossings are present at Frontier Street and Weel Road. Additionally, a dam is located on a tributary to the river, in the southwestern portion of the reach.

---

#### Contaminated Sites

A hazardous waste enforcement action was issued to the Clallam Bay Sewage Treatment Plant (located in the northern portion of the reach) in January 2011.

---

#### Cultural Resources

There are no inventoried sites within the reach.



## Clallam River: Reach 2

### SHORELINE LENGTH

0.6 Miles

### REACH AREA

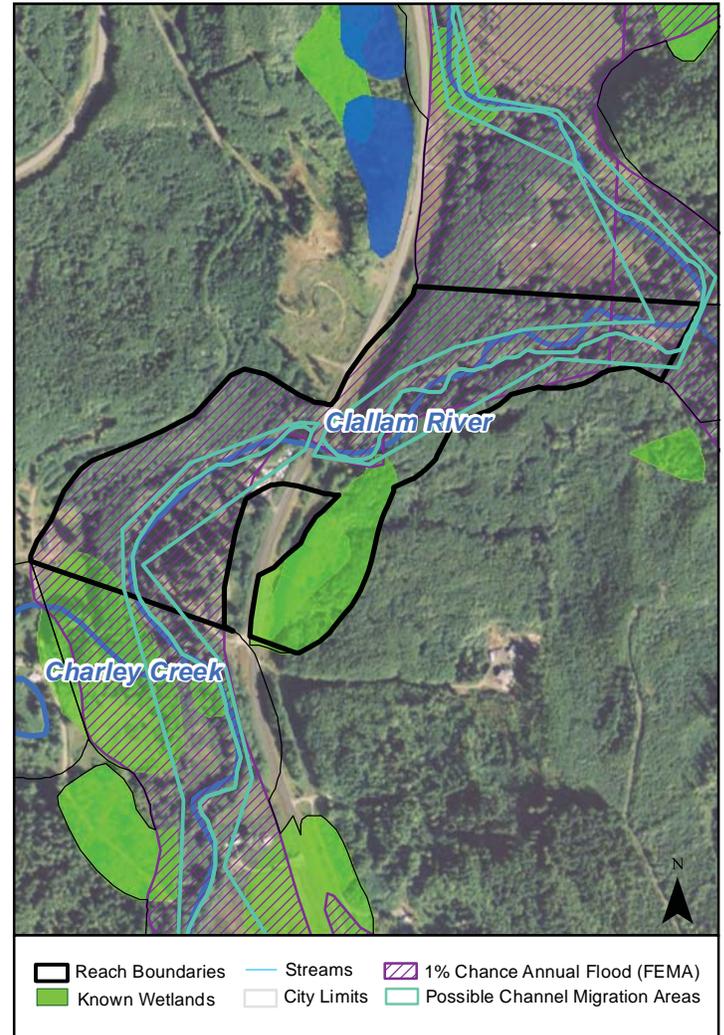
45.42 Acres

### REACH SUMMARY

Reach 2 of the Clallam River extends from the Last Creek confluence to approximately 0.6 miles upstream, just below the Charley Creek confluence. The river profile in this reach is characterized by stretches of relatively straight channel segments followed by gentle sweeping meanders. Vegetation adjacent to the stream corridor is a mixture of dense forest cover and natural shrub and herb habitat. Highway 112 corridor runs perpendicular to the stream course through the central portion of the reach, potentially limiting access to floodplain and side-channel habitat. Wetland habitat extends through the southeastern portion of the reach. The reach provides spawning and rearing habitat for coho and chum salmon, steelhead, and cutthroat trout.

The reach contains low-density commercial and residential development. The majority of the reach lies in the FEMA 100-year floodplain and/or in the channel migration zone. A geologic hazard area for erosion is present in the southeast portion of the reach. Some residences are located within the flooding and/or channel migration areas.

Under current zoning regulations, two-thirds of the reach has potential for new, rural residential development (1 dwelling per 5 acres). Much of the developable land is located in the flood and/or channel migration area. Wetland habitat in portions of the reach may limit development on some parcels.



### PHYSICAL

#### Channel Configuration

The channel within the reach is defined predominantly by a series of long stretches of relatively straight channel segments followed by gentle meanders.

#### Hazard Areas

Potential erosion areas are mapped in the northwest and southeast portions of the reach (10%). Most of the reach is located within a channel migration zone (90%) and in FEMA 100-year floodplain (76%).

### ECOLOGY

#### Riparian Vegetation

Within 300 feet of the stream, 49% of the reach zone contains forest habitat, 24% contains herb and shrub habitat, and 9% is lawn/landscaping. Outlying the stream corridor vegetation is mostly comprised of forest habitat intermixed by herb and shrub habitat.

#### Habitats and Species

16% of the reach is identified as wetland habitat, primarily located in the southeast portion of the reach. There are no priority wildlife habitats mapped within the reach.

This reach provides spawning habitat for steelhead trout (100%) and coho salmon (100%). The presence of resident cutthroat and chum salmon are also mapped within the reach.

#### Water Quality

The portion of the Clallam River within the reach has a State impaired water quality listing for temperature. River water quality within the reach is listed by Streamkeepers as "compromised" for WQI.

## Clallam River: Reach 2

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within this reach is vacant (49%), residential (35%), timber (11%), and roads (4%). The residential land is located in the southeast portion of the reach. Land ownership in the reach is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (86%), urban residential (5%), and commercial forestry (9%).

Under current zoning regulations there is moderate potential for significant new residential development within the reach. Most of the reach is undeveloped, but wetland habitat may limit development potential.

---

#### Public Access

No public access is available to shorelines within this reach. The land adjacent to the shoreline is privately owned.

---

#### Impervious Surfaces

Approximately 5% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Highway 112 crosses the river near the center of the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There is 1 inventoried pre-contact site in the reach.



# Clallam River: Reach 3

**SHORELINE LENGTH**  
1.8 Miles

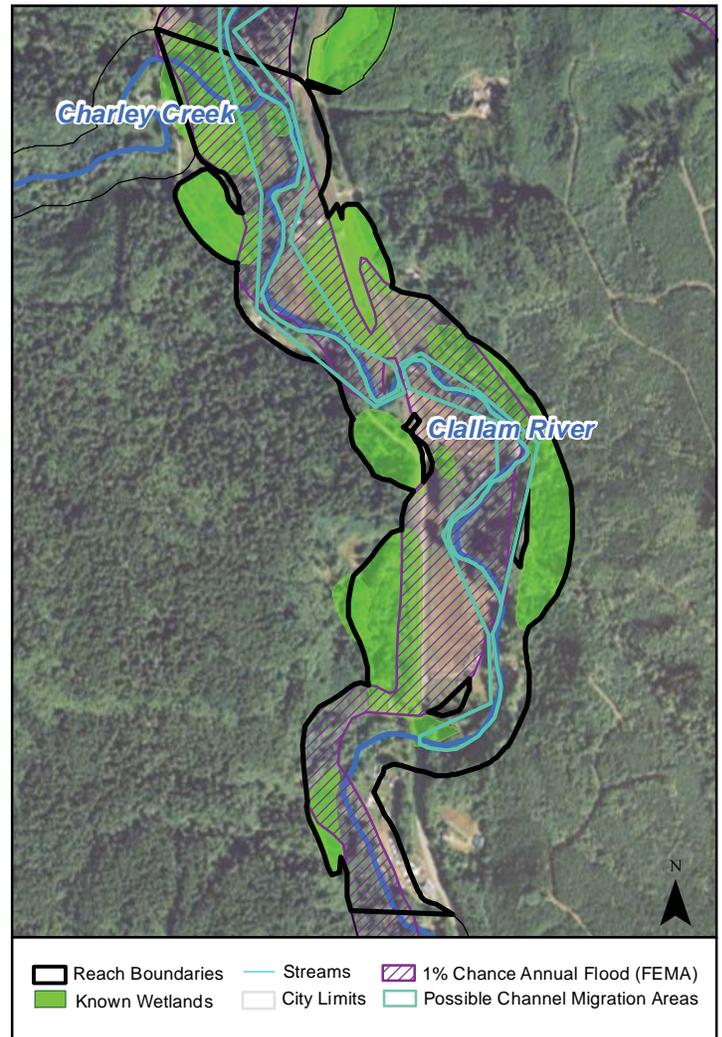
**REACH AREA**  
140.06 Acres

## REACH SUMMARY

Reach 3 of the Clallam River extends from the Charley Creek confluence upstream approximately 1.6 miles. The reach is characterized by a sinuous river channel containing several meanders throughout a broad and relatively flat floodplain. Highway 112 parallels the river through much of the reach, and which constitutes a lateral barrier between the river and portions of its natural floodplain. Two bridge crossings are located in the middle and upper portion of the reach. Much of the reach contains forest habitat, although a significant portion of the reach has been cleared for agriculture and/or rural residential development. Wetland habitat is present throughout the reach. The reach provides spawning and rearing habitat for coho and chum salmon, in addition to steelhead and resident cutthroat trout. The reach also supports breeding populations of bald eagle.

Low-density residential development and agriculture is prevalent in the reach. The majority of the reach lies in the FEMA 100-year floodplain and/or in channel migration area. Geologic hazard areas for slides and erosion are located in the east and west, respectively. Several existing residences are located within flood and/or channel migration hazard areas.

Under current zoning regulations, approximately two-thirds of the reach has the potential for new development. Existing parcel boundaries in the reach vary in size and shape, but many have the potential to be subdivided into 2 or 5 acre homesites. Much of the developable land is located in the 100-year floodplain and/or channel migration zone. Wetland habitat may preclude development in portions of the reach.



## PHYSICAL

### Channel Configuration

Channel configuration through this reach is defined predominantly by a series of long stretches of relatively straight channel segments followed by gentle meanders. The stream gradient is relatively low.

### Hazard Areas

Several stream banks and surrounding areas are unstable (9%) with potential for slides mapped in the eastern portion of the reach. Potential erosion areas are mapped along the western portion of the reach (13%). Most of the reach is located within a channel migration zone (79%) and in the FEMA 100-year floodplain (60%).

## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 39% of the reach zone contains forest habitat, 16% contains herb and shrub habitat, while 20% is lawn/landscaping and developed areas. Outlying the stream corridor vegetation is comprised mostly of forest habitat intermixed with herb and shrub habitat and lawn/landscaping.

### Habitats and Species

40% of the reach is mapped as wetland habitat. The designated priority habitat within the reach is bald eagle (18%).

This reach provides spawning habitat for steelhead trout (100%), and coho (100%) and chum salmon (55%). The presence of resident cutthroat are also mapped within the reach.

### Water Quality

The downstream portion of the Clallam River within the reach has a State impaired water quality listing for temperature. River water quality within the reach is listed by Streamkeepers as "compromised" for WQI.

## Clallam River: Reach 3

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is residential (49%), timber (24%), roads (14%), vacant (10%), and commercial (2%). The residential land is located throughout the northern half of the reach. Land ownership in the reach is 96% private and 4% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (71%), rural commercial (2%), and commercial forestry (17%).

Under current zoning regulations there is moderate potential for significant new residential development within the reach. Most of the reach is undeveloped, but wetland habitat may limit development potential.

---

#### Public Access

No public access is available to shorelines within this reach. The land adjacent to the shoreline is privately owned.

---

#### Impervious Surfaces

Approximately 15% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Highway 112 runs parallel to the stream corridor before crossing in two locations in the central and south central portions of this reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Clallam River: Reach 4

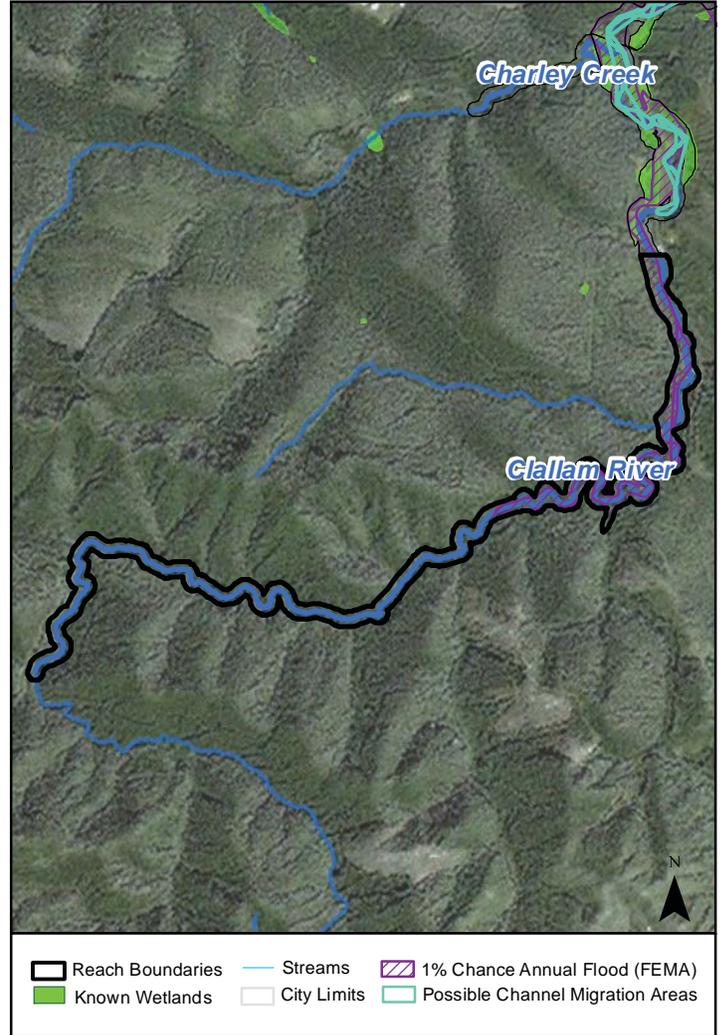
**SHORELINE LENGTH**  
6.7 Miles

**REACH AREA**  
341.44 Acres

## REACH SUMMARY

Reach 4 of the Clallam River extends from the upper end of Reach 3 to approximately 6.7 miles upstream. The channel is throughout the reach is confined within a narrow floodplain. Dense, contiguous forest habitat covers the majority of the reach, which provides shade and habitat for fish and wildlife. The reach provides spawning and rearing habitat for coho and chum salmon, in addition to steelhead and resident cutthroat trout.

The majority of the reach contains public forest lands managed by DNR. The Clallam River Campground, a popular recreation area, is located in the lower portion of the reach. Undeveloped/informal public access to shorelines is available from Highway 112 throughout the reach. Approximately one half of the reach lies within the FEMA 100-year floodplain. Geologic hazard areas for slides and erosion are located throughout the reach. The majority of the floodplain supports dense forest cover and natural vegetation.



## PHYSICAL

### Channel Configuration

The channel profile of the upper Clallam River is confined to a narrow floodplain through most of the reach.

### Hazard Areas

Many stream banks and surrounding areas are unstable (75%) with potential for slides mapped from the southwestern to eastern portions of the reach. Potential erosion areas are mapped in the eastern portion of the reach (9%). Most the northwestern portion of the reach is in the FEMA 100-year floodplain (29%) and a channel migration zone (20%).

## ECOLOGY

### Riparian Vegetation

95% of the reach zone contains forest habitat, while 3% of the reach contains herb and shrub habitat.

### Habitats and Species

There are no priority wildlife habitats mapped within the reach.

This reach provides spawning habitat for steelhead trout (99%) and coho (99%) and chum salmon (4%). The presence of resident cutthroat is also mapped within the reach.

### Water Quality

The downstream portion of the Clallam River within the reach has a State impaired water quality listing for temperature. River water quality within the reach is listed by Streamkeepers as "compromised" for B-IBI.

## Clallam River: Reach 4

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (97%), commercial (1%), and roads (1%). Timber is located through the entire length of the reach. Land ownership is 96% public and 4% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Public shoreline can be accessed directly from the Clallam River Campground. Undeveloped and informal access to the shoreline is also available along Highway 112.

---

#### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

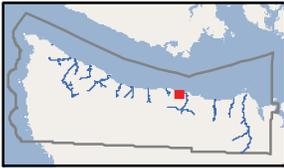
#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

Remnants of a logging railroad within the reach is inventoried for historic significance but not listed.



# Coville Creek

**SHORELINE LENGTH**  
0.3 Miles

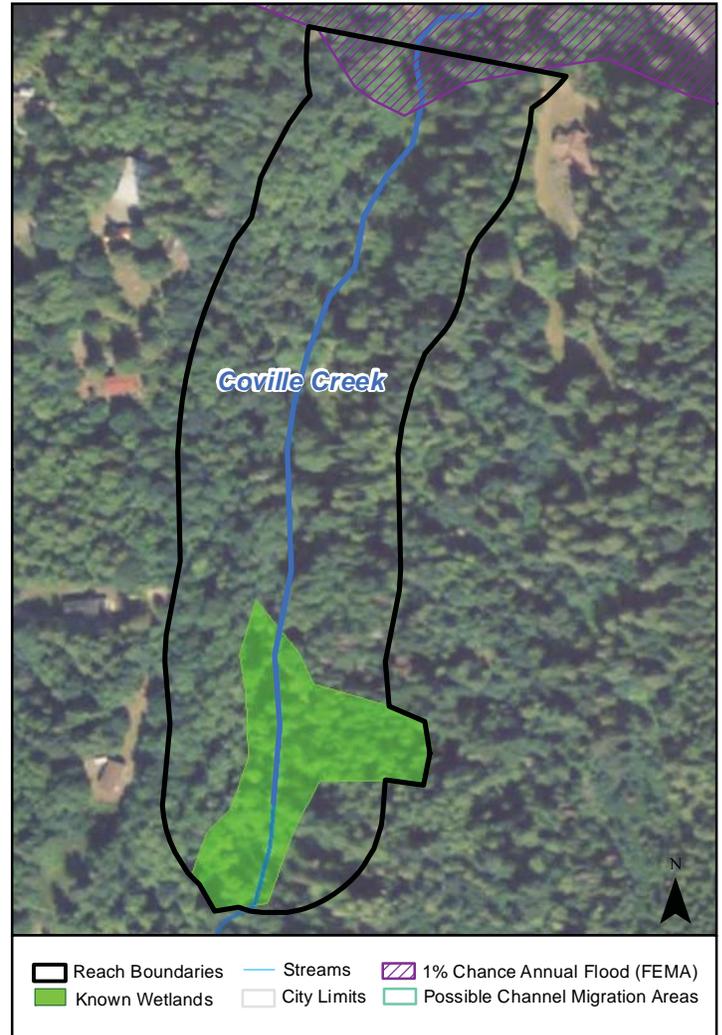
**REACH AREA**  
14.88 Acres

## REACH SUMMARY

The reach is relatively short, extending from near the stream mouth to approximately 0.3 mile upstream. The portion of Coville Creek within the reach trends generally northwest, along a straight channel length that flows across a wide terrace. The reach contains dense forest cover. The stream provides habitat for coho and chum salmon, and resident cutthroat trout. The reach provides habitat for breeding populations of bald eagle.

The majority of the reach contains low density residential and forest lands. Existing homes are generally located 200 feet from the stream channel. The lower half of the reach lies within a tsunami hazard area and the FEMA 100-year floodplain. The entire reach lies within a geologic hazard area for slides.

Under current zoning regulations, the majority of the parcels within the reach cannot be subdivided. Development potential in the reach is low.



## PHYSICAL

### Channel Configuration

The stream channel within the reach is relatively straight, and flows across a wide terrace.

### Hazard Areas

Many stream banks and surrounding areas are unstable (100%) with potential for slides mapped from the southern to northern extent eastern of the reach. Most of the northern portion of the reach is in the tsunami hazard zone (28%) and the FEMA 100-year floodplain (4%).

## ECOLOGY

### Riparian Vegetation

100% of the reach zone contains continuous forest habitat.

### Habitats and Species

15% of the reach is mapped as wetland habitat, located in the upstream portion. The designated priority habitat mapped within the reach is bald eagle (62%).

This reach provides spawning habitat for coho (100%) salmon. The presence of resident cutthroat, steelhead trout, and chum salmon is also mapped within the reach.

### Water Quality

The reach has no State impaired water quality listings. Coville Creek water quality is listed by Streamkeepers as "healthy" for WQI.

## Coville Creek

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is residential (53%), timber (30%), and vacant (17%). Residential and vacant lands are located in the eastern half of the reach, while timber lands are located through the western half. Land ownership is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for rural mixed use (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available to shorelines within this reach. The land adjacent to the shoreline is privately owned.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Deep Creek

**SHORELINE LENGTH**  
5.8 Miles

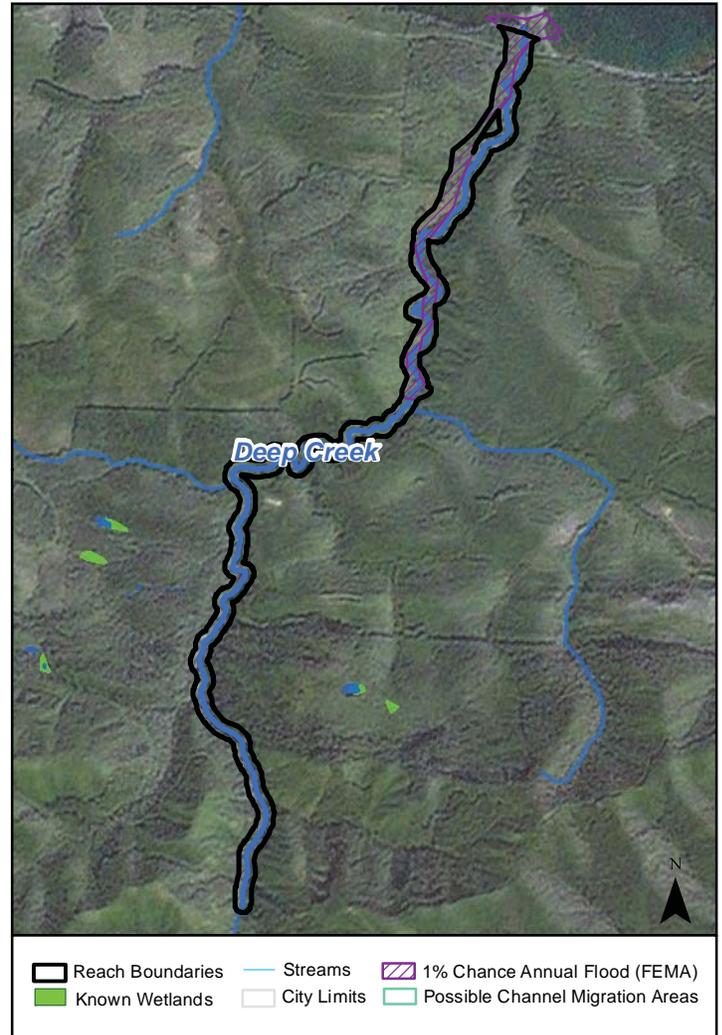
**REACH AREA**  
317.36 Acres

## REACH SUMMARY

The reach extends from near the mouth (adjacent to Highway 112) to approximately 5.8 miles upstream. The reach is characterized by steep terrain. The channel profile through the reach is fairly sinuous as it meanders through low to moderate gradient stream segments. A bridge structure for State Highway 112 crosses the channel in the lower reach, potentially impacting stream morphology. The reach contains dense forest cover, intermixed with herb and shrub communities. The reach provides spawning and rearing habitat for coho and chum salmon, and also provides habitat for steelhead trout and resident cutthroat trout. The lower portion of the reach supports breeding populations of bald eagle.

Public (DNR-managed) and private timber lands are located throughout the reach. The lower portion of the reach is located within a tsunami hazard area and the FEMA 100-year floodplain. Geologic hazard areas for slides and erosion are located in the upper and middle portions of the reach. Some existing residences in the lower portion of the reach are located within flood and tsunami hazard areas.

Under current zoning regulations, approximately one-third of the reach area has potential for new residential development. However, much of this land is zoned for commercial forestry and cannot be developed at a density greater than 1 residence per 80 acres. Actual development potential in the reach is low.



## PHYSICAL

### Channel Configuration

The Deep Creek reach is characterized by a sinuous, meandering stream corridor bordered by steep hillsides and a narrow floodplain.

### Hazard Areas

Several stream banks and surrounding areas are unstable (32%) with potential for slides mapped in the central portion of the reach. Areas for potential erosion are mapped through the southwest to central portions of the reach (16%). Most of the northern portion of the reach is in the tsunami hazard zone (7%), the channel migration zone (26%), and the FEMA 100-year floodplain (26%).

## ECOLOGY

### Riparian Vegetation

84% of the reach area contains forest habitat while 9% natural contains herb and shrub vegetation.

### Habitats and Species

The designated priority habitat mapped within the reach is bald eagle (2%).

This reach provides spawning habitat for steelhead trout (87%), and coho (93%) and chum salmon (96%). The presence of resident cutthroat is also mapped within the reach.

### Water Quality

The portion of Deep Creek within the reach has State impaired water quality listings for dissolved oxygen, fine sediment, and temperature. In addition, Gibson Creek (tributary to Deep Creek) is listed for temperature. Deep Creek water quality is listed b

# Deep Creek

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is timber (94%), vacant (5%), and roads (1%). Timber lands are located through the entire length of the reach. Land ownership in the reach is 68% private and 32% public.

---

### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

### Public Access

There is no available public access to the publically owned lands bordering the reach.

---

### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surfaces.

---

### Shoreline Modifications

Highway 112 crosses Deep Creek at the north end of the reach, and the stream channel was historically denuded of large woody debris.

---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources

The SR 112 bridge over Deep Creek is inventoried for historic significance but not listed.



# Dungeness River: Reach 1

**SHORELINE LENGTH**  
0.9 Miles

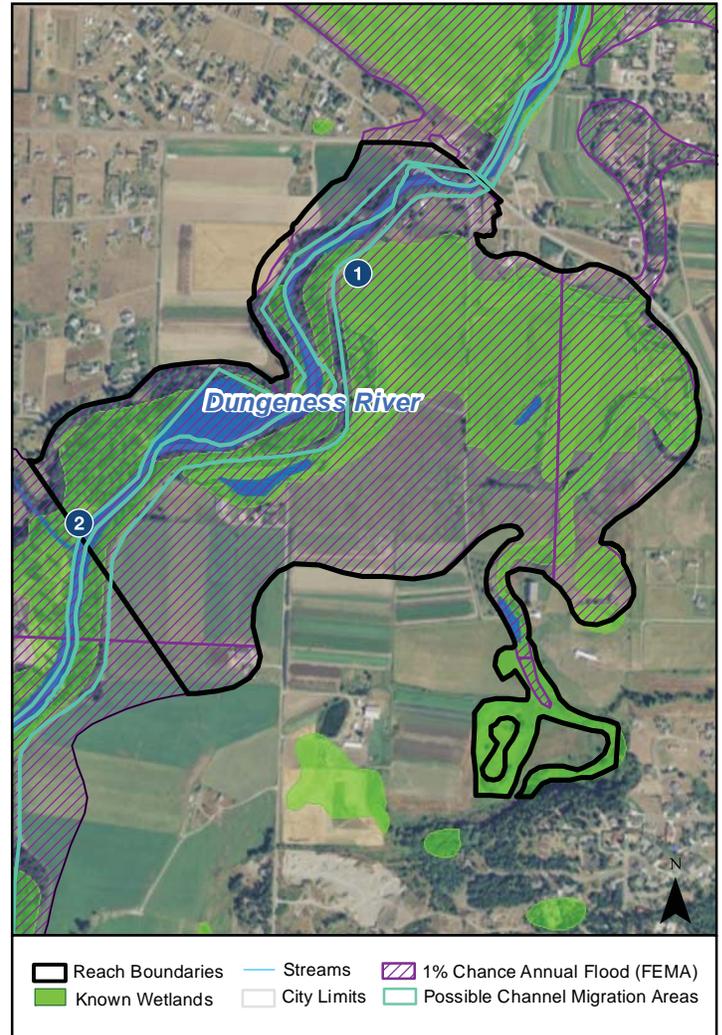
**REACH AREA**  
280.27 Acres

## REACH SUMMARY

Reach 1 of the Dungeness River extends from Schoolhouse Bridge to the confluence of Matriotti Creek. The reach consists of the broad alluvial floodplain of the lower Dungeness. Within the reach, the river channel is constrained by levees along its entire east bank and a portion of the west bank. The river channel within the reach has a relatively narrow forested riparian corridor; the surrounding floodplain is utilized for agriculture. Wetland habitat is located throughout the reach, adjacent to the stream course. The reach provides habitat for Chinook, chum, coho, and pink salmon, in addition to steelhead, bull, and resident cutthroat trout. The reach also provides priority habitat for bald eagle, harlequin duck, peregrine falcon, and waterfowl.

The majority of the reach contains rural low-density residential and agricultural lands. The lower portion of the reach lies within a tsunami hazard zone, as well as the FEMA 100-year floodplain and channel migration zone. Geologic hazard areas for slides is located in the northwestern portion of the reach. Existing residential and agricultural development is located within the tsunami, flood and/or channel migration areas.

Under current zoning regulations, the majority of the reach has been zoned for agricultural production. Existing parcel boundaries vary in size and shape, but many are located in or adjacent to the stream shoreline. Most of the land in the reach is designated for agricultural conservation; therefore, actual development potential in the reach is low. Properties behind the ACOE levee on the east bank have been purchased for a potential levee setback project.



## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 14% of the reach contains forest habitat, 4% is natural herb and shrub habitat, and 9% is agriculture. Outlying the stream corridor vegetation is mostly comprised of agricultural crops.

### Habitats and Species

49% of the reach is identified as wetland habitat, extending southwest to northeast along the Dungeness River. Designated priority habitats mapped within the reach include bald eagle (43%), harlequin duck (55%), peregrine falcon (42%), and waterfowl conc

This reach provides spawning habitat for steelhead trout (22% of reach total) and Chinook (100%), chum (100%), coho (45%), and pink salmon (82%), and juvenile rearing habitat for pink (17%) and coho salmon (5%). The presence of bull trout and resident cu

### Water Quality

The portion of the Dungeness River within the reach has State impaired water quality listings for temperature and fecal coliform. In addition, two tributaries to the Dungeness within the reach are listed for fecal coliform. Dungeness River water quality

## PHYSICAL

### Channel Configuration

The stream channel has low relief, and flows through a broad floodplain. The channel is largely constrained by dikes within the reach.

### Hazard Areas

Several slides are mapped within the northwestern portion of the reach (3%). Most of the central portion of the reach lies within the active channel migration area (16%). The eastern portion of the reach is in the tsunami hazard zone (25%), and the majority of the reach is within the FEMA 100-year floodplain (95%).



Shoreline Oblique Photos (2006)

# Dungeness River: Reach 1

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is residential (27%), timber (25%), agriculture (21%), vacant (20%), open space (5%), roads (1%), and commercial (trace). Agricultural lands are located in the southern portion of the reach while residential land is located in the northeast. The timber and vacant lands are located in the western half of the reach. Land ownership in the reach is 100% private.

---

### Zoning and Parcel Data

The reach is zoned for rural residential (11%) and agriculture (89%).

Under current zoning regulations there is low potential for significant new development in the reach. Most of the land is designated for agricultural protection.

---

### Public Access

No public access is available to shorelines within this reach. The land adjacent to the shoreline is privately owned.

---

### Impervious Surfaces

Approximately 3% of the reach is covered by impervious surfaces.

---

### Shoreline Modifications

This reach contains several shoreline modifications. The Dungeness River is constrained by levees along its entire east bank and a portion of the west bank, which have disconnected the river from its floodplain. Two culverts are present under East Ander

---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources

There are 5 inventoried historic sites and 3 inventoried pre-contact sites / isolates within the reach.

---



# Dungeness River: Reach 2

**SHORELINE LENGTH**  
5.4 Miles

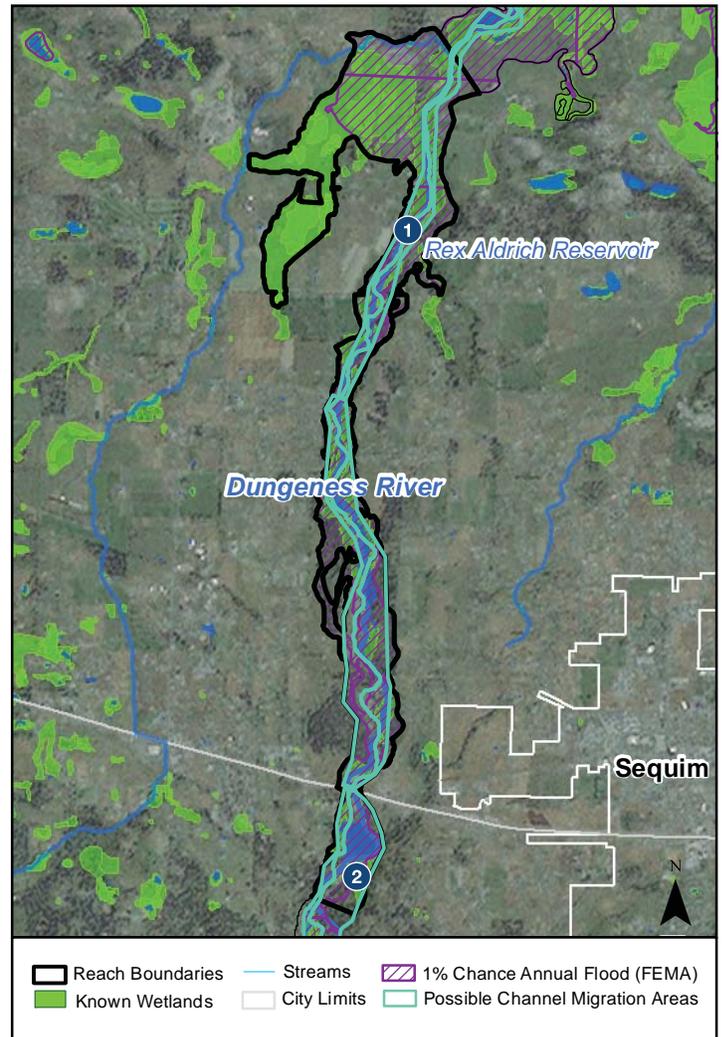
**REACH AREA**  
1053.37

## REACH SUMMARY

Reach 2 of the Dungeness River extends from the confluence of Matriotti Creek upstream approximately 5.6 miles (from RM 2 to RM 7). The channel profile through the reach is dynamic, supporting a high degree of sinuosity and braiding. The reach contains four road crossings in the upper, middle, and lower portion of the reach. The Hurd Creek Fish Hatchery is located in the western portion of the reach. The reach contains some forest and herb and shrub habitat, but much of the area has been converted to agriculture. A significant portion of the reach contains wetland habitat. The reach provides spawning and rearing habitat for Chinook, chum, coho, and pink salmon, in addition to steelhead, bull, and resident cutthroat trout. Sockeye salmon have also been documented in the reach. The reach also provides habitat for bald eagle, harlequin duck, peregrine falcon, and waterfowl concentrations.

The reach contains moderate- to low-density residential development and agricultural lands. The Mary Lukes Wheeler County Park provides public access to shorelines in this reach. Additionally, the Olympic Discovery Trail crosses in the northern portion of the reach. Most of the reach, including developed areas, are located in the FEMA 100-year floodplain and/or the channel migration zone.

Under current zoning regulations, approximately 20% of the reach has the potential for new rural residential development. Existing parcel boundaries vary in size and shape, but many are located directly adjacent to the river in flood and/or channel migration hazard areas. The significant presence of wetland habitat throughout the reach may preclude development in some areas.



## PHYSICAL

### Channel Configuration

The channel profile through the reach is dynamic, supporting a high degree of sinuosity and braiding.

### Hazard Areas

Much of the reach is located within the channel migration zone (57%), and the FEMA 100-year floodplain (74%).



Shoreline Oblique Photos (2006)

## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 27% of the reach zone is forest habitat, 11% is herb and shrub habitat, and 5% is agricultural crops. Outlying the stream corridor vegetation is comprised mostly of agricultural lands intermixed with patches of forest and herb and shrub habitat.

### Habitats and Species

49% of the reach is mapped as wetland habitat. Designated priority habitats mapped within the reach include bald eagle (6%), harlequin duck (91%), peregrine falcon (83%), and waterfowl concentrations (10%).

This reach provides spawning habitat for steelhead trout (40% of reach total) and Chinook (97%), chum (70%), coho (65%), and pink salmon (79%). The presence of bull trout and resident cutthroat are also mapped within the reach.

### Water Quality

The portion of the Dungeness River within the reach has a State impaired water quality listing for fecal coliform. In addition, Hurd Creek (tributary to the Dungeness River) is listed for fecal coliform. Dungeness water quality within the reach is listed

## Dungeness River: Reach 2

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is residential (38%), open space (30%), vacant (15%), agriculture (8%), tribe (4%), timber (3%), commercial (2%), roads (trace), and unknown (trace). Residential lands are located in the north and in central portions of the reach. Open space is located in isolated pockets throughout the reach. Land ownership is 95% private, 4% tribe, and 1% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (54%), parks / public land (trace), and agriculture (46%).

Under current zoning regulations there is moderate potential for significant new residential development within the reach. The presence of wetland habitat may limit development in some areas.

---

#### Public Access

Public shoreline access is available at Mary Lukes Wheeler County Park, located on Ward Road, north of Woodcock Road. In addition, the Olympic Discovery Trail crosses the river within this reach.

---

#### Impervious Surfaces

Approximately 3% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Four road crossings are located within the reach. The Hurd Creek Fish Hatchery is located in the western portion of the reach. South of Woodcock Road, most of the east side of the river is constrained by levees.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.

---



# Dungeness River: Reach 3

**SHORELINE LENGTH**  
3.6 Miles

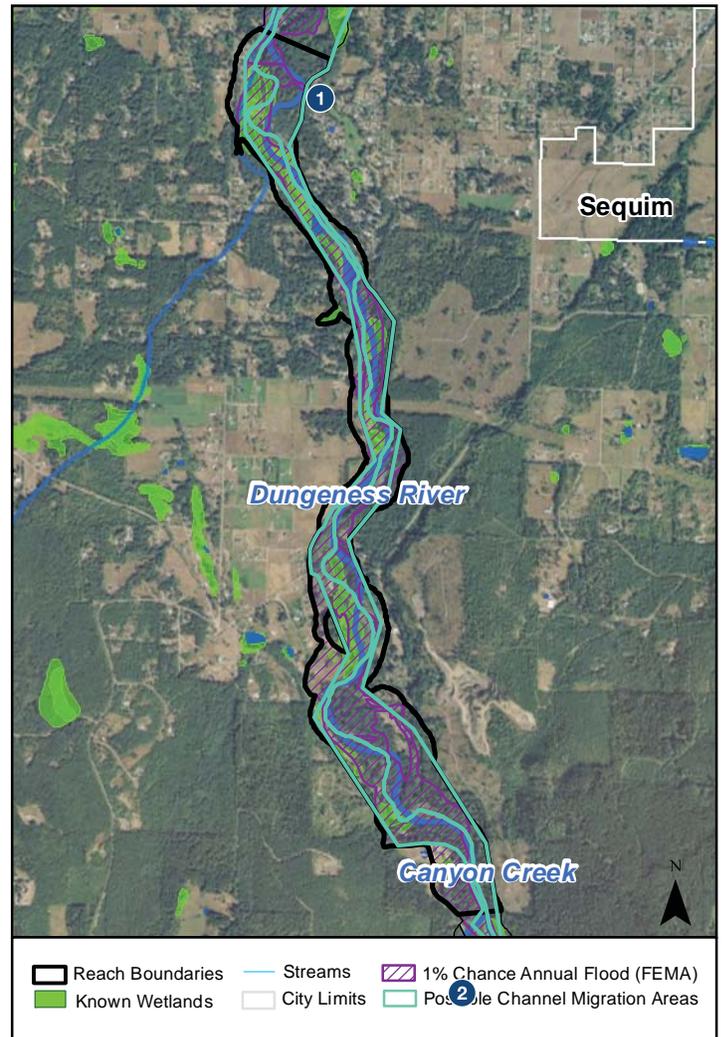
**REACH AREA**  
366.52 Acres

## REACH SUMMARY

Reach 3 of the Dungeness River extends from the Bear Creek confluence upstream to the Canyon Creek confluence (RM 7 to RM 11). The stream profile through the reach is sinuous, meandering and braiding across its floodplain. The reach contains two shoreline modifications; the Sequim Fish Hatchery in the southeast and the Morse Creek Acclimation Ponds in the southwest. Vegetative cover in the reach is a mixture of forest cover and herb and shrub habitat. Portions of the stream corridor and floodplain have been cleared for agricultural uses and residential development. The reach provides spawning and rearing habitat for Chinook, chum, coho, and pink salmon, in addition to steelhead, bull, and cutthroat trout. Sockeye salmon have also been observed within the reach. Additionally, the reach provides habitat for bald eagle harlequin duck.

The reach contains moderate- to low-density residential development and agricultural lands. Undeveloped/informal public access is available through several publically owned side roads that allow access to shorelines within the reach. Additionally, the river can be accessed at the fish hatchery near the Canyon Creek confluence. Most of the reach lies within channel migration and FEMA 100-year floodplain hazard areas. Geologic hazard areas for erosion are located in the southern portion of the reach. Many existing residences are located within flood and/or channel migration hazard areas.

Under current zoning regulations, approximately 20% of the reach has the potential for new rural residential development. Existing parcels (particularly in the lower reach) vary in size and shape, but many of the lots have narrow water frontages, which could lead to dense shoreline development in these areas. Much of the developable land is located within flood and/or channel migration hazard areas.



## PHYSICAL

### Channel Configuration

The stream profile through the reach is sinuous, meandering and braiding across its floodplain.

### Hazard Areas

Potential erosion areas are mapped in the southeast and southwest portions of the reach (3%). Most of the reach lies within a channel migration zone (90%) and the FEMA 100-year floodplain (64%).



Shoreline Oblique Photos (2006)

## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 46% of the reach zone contains forest habitat, 17% contains herb and shrub habitat, and 15% is lawn/landscaping or agriculture. Outlying the stream corridor vegetation is comprised mostly of forest habitat intermixed with herb and shrub habitat.

### Habitats and Species

14% of the reach is identified as wetland habitat. Designated priority habitats mapped within the reach include bald eagle (4%) and harlequin duck (145%).

This reach provides spawning habitat for steelhead trout (48% of reach total) and Chinook (100%), chum (100%), coho (90%), and pink salmon (100%), and juvenile rearing habitat for bull trout (3%). The presence of bull trout and resident cutthroat are also

### Water Quality

The reach has no State impaired water quality listings. Dungeness water quality within the reach is listed by Streamkeepers as "compromised" for B-IBI.

## Dungeness River: Reach 3

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is residential (39%), open space (18%), vacant (18%), timber (16%), commercial (5%), agriculture (3%), roads (2%), and utilities (trace). Residential land is located throughout the reach, while timber lands and open space are located in isolated pockets in the north and southern portions of the reach. Land ownership is 89% private and 11% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (83%), commercial forestry (15%), and parks/public land (2%).

Under current zoning regulations there is moderate potential for significant new residential development within the reach.

---

#### Public Access

River Road provides access to several side roads that are publically owned and provide access to the Dungeness River. The river can also be accessed at the fish hatchery just downstream from the Canyon Creek confluence.

---

#### Impervious Surfaces

Approximately 6% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Several levee sections are located within the reach. In addition, the Sequim Fish Hatchery is located in south eastern portion of the reach, and the Morse Creek Acclimation ponds are located in the southwest.

---

#### Contaminated Sites

A voluntary hazardous waste cleanup site is located in the northern portion of this reach, west of Ward Road.

---

#### Cultural Resources

There are no inventoried sites within the reach.

---



# Dungeness River: Reach 4

**SHORELINE LENGTH**  
5.1 Miles

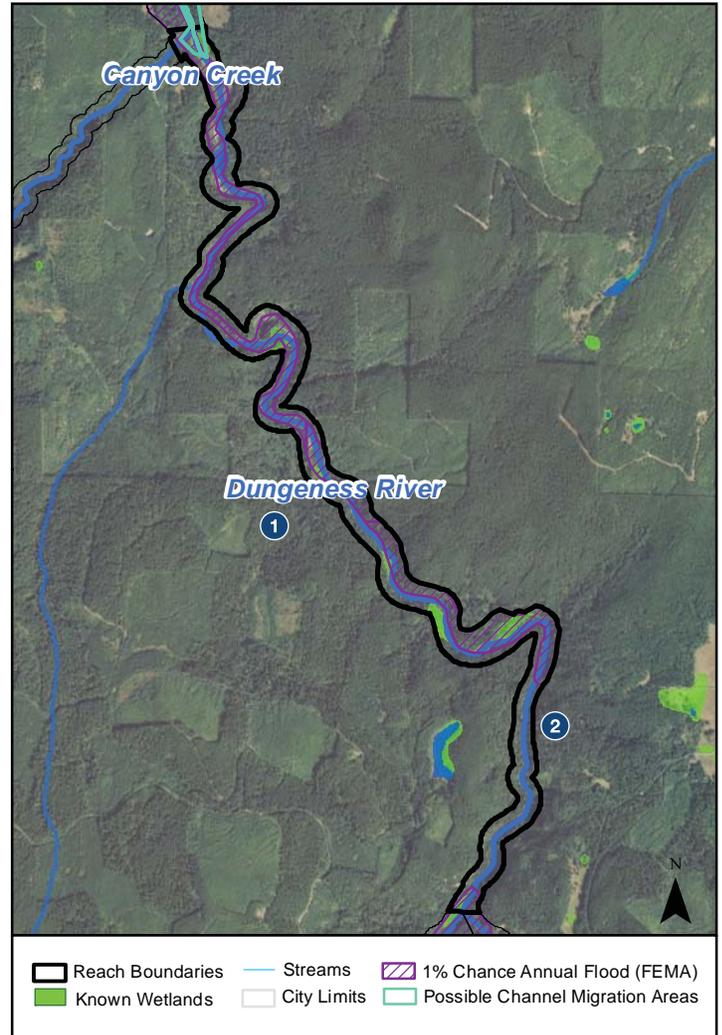
**REACH AREA**  
339.05 Acres

## REACH SUMMARY

Reach 4 of the Dungeness River extends from the Canyon Creek confluence to the Gray Wolf River confluence. The stream channel within the reach is relatively confined and meandering. Vegetative cover in the reach is consists primarily of forest habitat. The reach provides spawning and rearing habitat for Chinook, coho, chum, and pink salmon, in addition to steelhead, bull, and cutthroat trout. Additionally, the reach provides habitat for elk and harlequin duck populations.

The reach is primarily public forest land (DNR and Olympic National Forest). Much of the reach lies within flood hazard areas, and the central portion of the reach lies in a geologic hazard area for slides. Portions of the lower reach lie in a geologic hazard area for erosion.

The lands within the reach are primarily public timber land; overall development potential within the reach is low.



## PHYSICAL

### Channel Configuration

The stream channel within the reach is relatively confined and meandering.

## ECOLOGY

### Riparian Vegetation

78% of the reach zone is consists of forest habitat while 10% of the reach contains herb and shrub habitat.

### Hazard Areas

Several stream banks and surrounding areas have potential for slides (20%). Areas for potential erosion are mapped within the northern portion of the reach (10%). 40% of the reach lies within the FEMA 100-year floodplain (40%).



Shoreline Oblique Photos (2006)

### Habitats and Species

5% of the reach is mapped as wetland habitat. Designated priority habitats mapped within the reach include elk (94%) and harlequin duck (41%).

This reach provides spawning habitat for steelhead trout (49% of reach total) and Chinook (100%), chum (100%), coho (98%), and pink salmon (98%), and juvenile rearing habitat for bull trout (98%). The presence of bull trout and resident cutthroat are also

### Water Quality

The reach has no State impaired water quality listings. Dungeness water quality within the reach is listed by Streamkeepers as "compromised" for B-IBI but "healthy" for WQI.

## Dungeness River: Reach 4

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (94%), commercial (6%), roads (trace), and utilities (trace). Land ownership in the reach is 89% public and 11% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

The upstream portion of the reach can be accessed via trail from Forest Service Road 2870

---

#### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

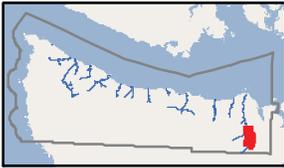
#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Dungeness River: Reach 5

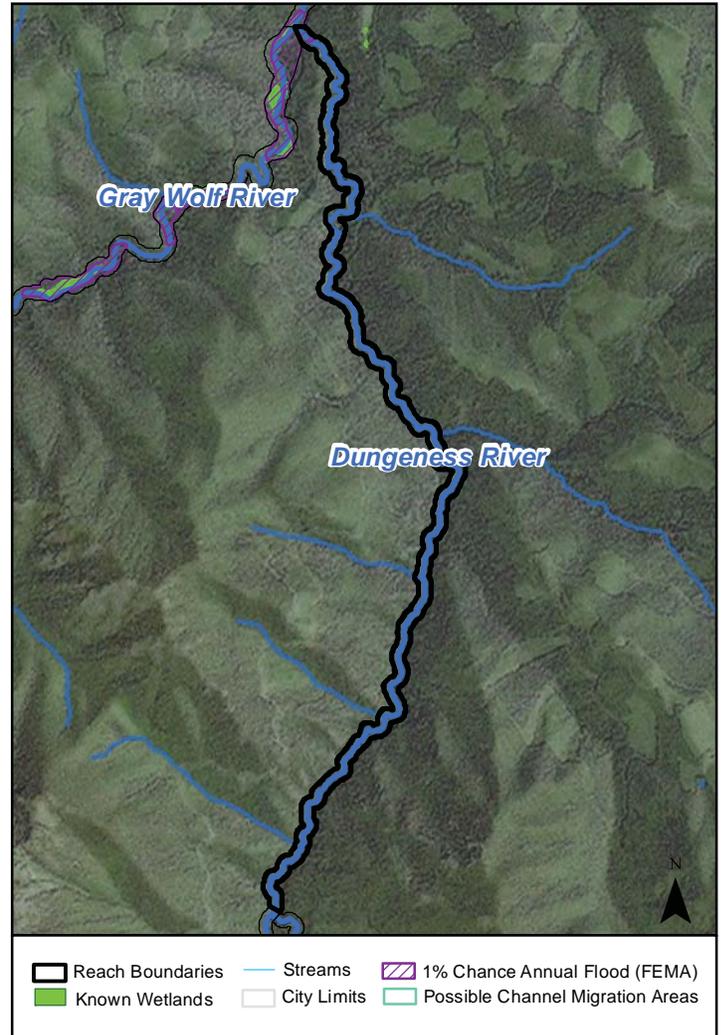
**SHORELINE LENGTH**  
7.1 Miles

**REACH AREA**  
339.31 Acres

## REACH SUMMARY

Reach 5 of the Dungeness River extends from the confluence of the Gray Wolf River, upstream to the Silver Creek confluence (RM 16 to RM 22). The channel profile through the reach is fairly sinuous, confined, and contains several meanders along its generally north trending route. Vegetative cover in the reach consists primarily of forest habitat. The reach supports spawning and rearing habitat for Chinook, coho, chum and pink salmon, in addition to steelhead, bull, cutthroat, and rainbow trout.

The reach is located in the Olympic National Forest. Public access to the reach is accessible through Forest Service Road 2870.



## PHYSICAL

### Channel Configuration

The channel profile through the reach is fairly sinuous, confined, and contains several meanders along its generally north trending route.

### Hazard Areas

Potential erosion areas are mapped in the northeastern portion of the reach (3%). A marginal portion of the reach is located within the FEMA 100-year floodplain (1%). No potential slide areas or channel migration zones are mapped within the reach.

## ECOLOGY

### Riparian Vegetation

86% of the reach zone contains forest habitat, while 13% of contains herb and shrub habitat.

### Habitats and Species

The designated priority habitat mapped within the reach is harlequin duck (7%).

This reach provides spawning habitat for steelhead trout (28% of reach total) and Chinook (100%), chum (100%), coho (93%), and pink salmon (93%), and juvenile rearing habitat for bull trout. The presence of bull trout and resident cutthroat are also mapped.

### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers data available for this reach.

## Dungeness River: Reach 5

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (98%) and vacant (2%). Timber lands are located through the entirety of the reach. Land ownership is 99% public and 1% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

The river can be accessed via trail from Forest Service Road 2870

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

Two structures, including the Dungeness Forks Shelter (built in the 1930s), are inventoried for historic significance but not listed.



# Dungeness River: Reach 6

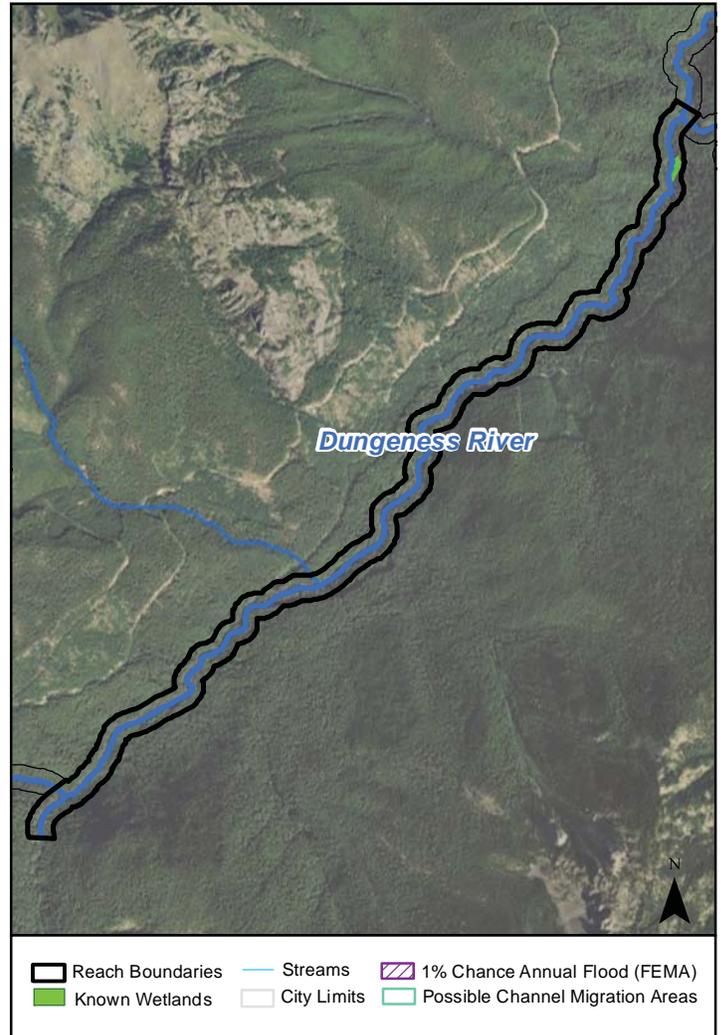
**SHORELINE LENGTH**  
3.5 Miles

**REACH AREA**  
163.27 Acres

## REACH SUMMARY

Reach 6 of the Dungeness River extends from the Silver Creek confluence to the Jefferson County limits (RM 22 to approximately RM 25). The channel profile through the reach contains small meanders that are constrained to a relatively narrow floodplain. Vegetative cover in the reach consists predominantly of dense stands of forest cover. The reach provides habitat for bull, cutthroat, and rainbow trout.

The reach is located in Olympic National Forest. Public access to the reach is available from the Upper Dungeness River Trail and off of Forest Service Road 2870.



## PHYSICAL

### Channel Configuration

The channel profile through the reach contains small meanders that are constrained to a relatively narrow floodplain.

### Hazard Areas

No potential erosion or slide areas are mapped within the reach.

## ECOLOGY

### Riparian Vegetation

82% of the reach zone contains forest habitat, while 15% of the reach contains herb and shrub habitat.

### Habitats and Species

1% of the reach is identified as wetland habitat. There are no priority specie habitats mapped within the reach.

This reach provides habitat for bull trout, resident cutthroat, and rainbow trout.

### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers data available for this reach.

## Dungeness River: Reach 6

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (85%) and unknown (15%). Land ownership in the reach is 100% public.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

The Upper Dungeness River Trail borders this reach. The reach can also be accessed from Forest Service Road 2870

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are 2 inventoried historic sites within the reach.



# East Twin River

**SHORELINE LENGTH**  
4.4 Miles

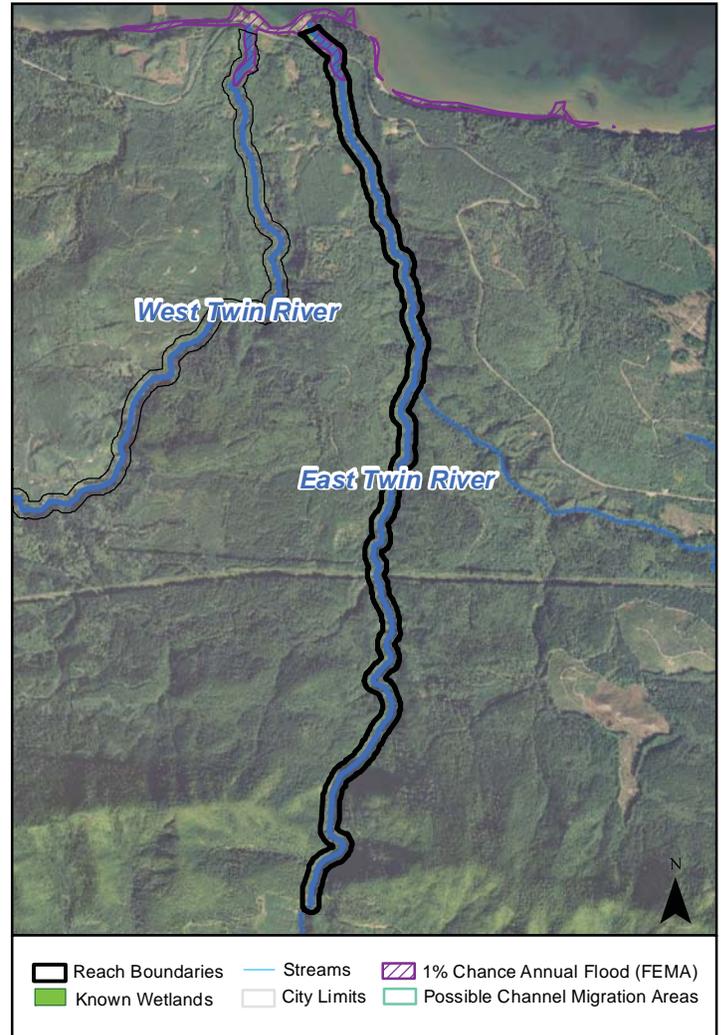
**REACH AREA**  
215.64 Acres

## REACH SUMMARY

The reach extends from near the river mouth to approximately 4.5 miles upstream. The river channel trends generally straight, accentuated by a few, tight meanders as the river flows through a steep valley. Vegetation within the reach is predominantly contiguous forest cover. The reach provides spawning and rearing habitat for chum and coho salmon, as well as steelhead trout. Natural cascades and waterfalls located at RM 3.6 block upstream passage. Populations of bald eagle are supported in the lower portion of the reach.

Private timber lands are located in the lower third of the reach while public forest lands (DNR and Olympic National Forest) are located throughout the upper portion of the reach.

Under current zoning regulations, approximately one-third of the reach contains privately owned timber parcels which are not eligible for new development. Overall development potential within the reach is low.



## PHYSICAL

### Channel Configuration

The East Twin River meanders northward through steep valleys and hillcrests, before exiting directly into the Strait of Juan de Fuca. The channel profile of the East Twin River is generally narrow and confined.

### Hazard Areas

Several river banks and surrounding areas are unstable (47%) with potential for slides mapped in the central portion of the reach. Areas for potential erosion are also mapped within the reach (27%). The northern end of the reach lies within a tsunami hazard zone (4%), the FEMA 100-year floodplain (4%), and a channel migration zone (9%).

## ECOLOGY

### Riparian Vegetation

96% of the reach zone contains forest habitat, while 2% contains natural herb and shrub habitat.

### Habitats and Species

The designated priority habitat mapped within the reach is bald eagle (5%).

This reach provides spawning habitat for steelhead trout (34% of reach total), and chum (97%) and coho salmon (100%).

### Water Quality

The upstream portion of the East Twin River within the reach has a State impaired water quality listing for temperature. Water quality is listed by Streamkeepers as "compromised" for B-IBI but "healthy" for WQI.

## East Twin River

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (75%), residential (16%), open space (5%), vacant (4%), and roads (1%). Timber lands are located through the majority of the reach while residential lands are isolated in the north. Land ownership is 68% public and 32% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Informal access to the north portion of the reach is available from East Twin River Road.

---

#### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Portions of the lower river channel have been constrained by the construction of dikes composed of river sediments, and the channel was historically denuded of large woody debris.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

Two historic sites related to early Anglo-American settlement are inventoried but not listed.



# Ellis Creek

## SHORELINE LENGTH

1.0 Miles

## REACH AREA

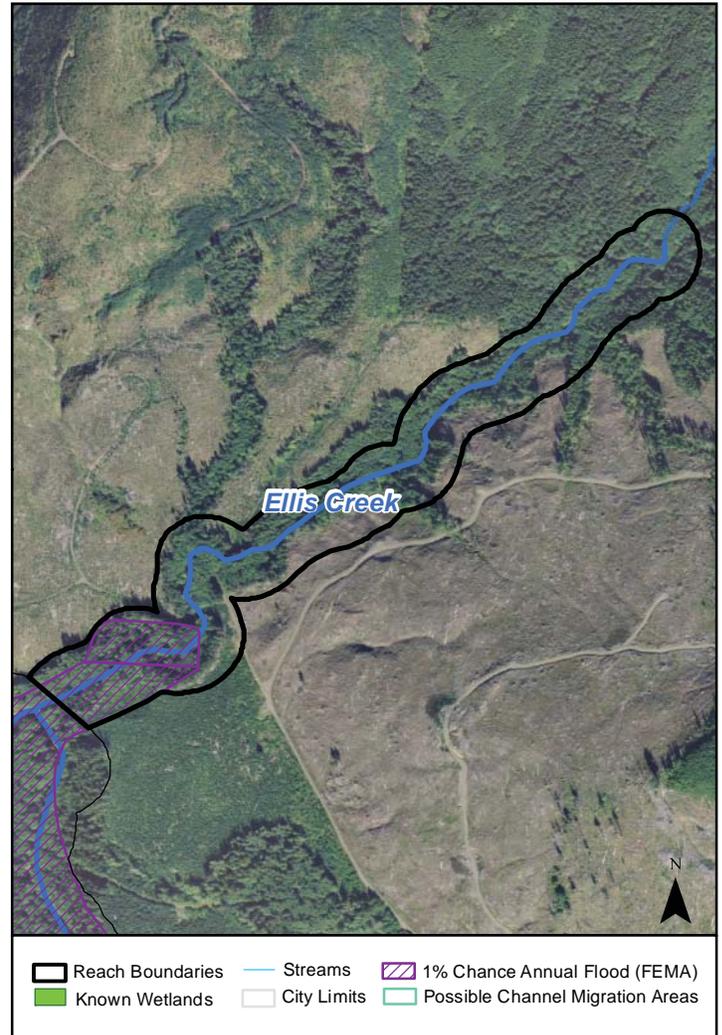
50.00 Acres

### REACH SUMMARY

The reach extends from the Hoko River confluence to approximately 1 mile upstream. The reach is covered primarily by dense forest. The reach provides spawning and rearing habitat for Chinook and coho salmon, in addition to steelhead and cutthroat trout.

The majority of the reach contains commercial forest lands. The lower portion of the reach is located within the FEMA 100-year floodplain. Geologic hazard areas for erosion and slides are located throughout the reach.

Under current zoning regulations, most of the reach is eligible for new residential development. However, most of the land is zoned for commercial timber, and cannot be developed at a density greater than 1 residence per 80 acres. Actual development potential within the reach is low.



### PHYSICAL

#### Channel Configuration

The Ellis Creek reach displays a low level of sinuosity as it trends in a generally straight southwestward pattern toward its confluence with the Hoko River. The channel profile is narrow and bordered by moderately steep foothills.

#### Hazard Areas

Several stream banks and surrounding areas are unstable (58%) with potential for slides mapped in the northwestern portion of the reach. Potential erosion areas are mapped along the northwest and northeast portions of the reach (13%). Most of the Hoko River confluence area lies within the FEMA 100-year floodplain (76%) and a channel migration zone (3%).

### ECOLOGY

#### Riparian Vegetation

71% of the reach contains forest habitat while 29% of the reach contains natural herb and shrub habitat.

#### Habitats and Species

There is no priority wildlife habitats mapped within the reach.

This reach provides spawning habitat for steelhead trout (100% of reach total) and Chinook (96%) and coho salmon (96%). The presence of resident cutthroat and chum salmon are also mapped within the reach.

#### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers data available for Ellis Creek.

## Ellis Creek

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership is 83% private and 17% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Public lands are located within the reach, but no public access areas are available.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Elwha River: Reach 1

**SHORELINE LENGTH**  
4.4 Miles

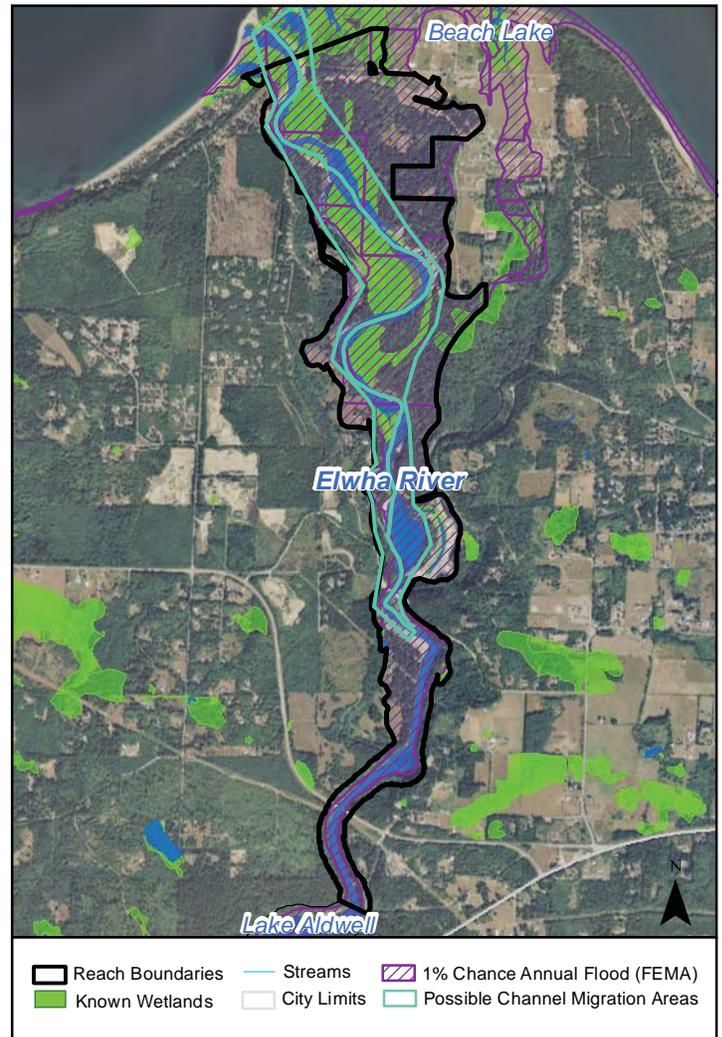
**REACH AREA**  
786.25 Acres

## REACH SUMMARY

Reach 1 of the Elwha River extends from near the river mouth to just downstream of the Elwha River Dam. The stream channel within the upper portion of the reach is constrained by the steep bedrock walls of the Elwha Canyon, while the channel floodway widens in the lower portion of the reach and supports significant wetland habitat. In the lower reach, levees are present along the eastern border of the reach. The reach consists primarily of forest habitat, although forest cover has been removed in some areas. Within the reach, the river provides habitat for bull trout, resident cutthroat, and steelhead trout, and Chinook, chum, pink, and coho salmon. The reach also provides habitat for bald eagle.

Reach 1 of the Elwha is largely undeveloped, with the exception of the City of Port Angeles water facility. The northern portion of the reach lies within mapped channel migration, tsunami, and flood hazard zones.

There is minimal potential for increased development within the reach; most of the land is publically owned. However, there is some potential for increased rural residential development near Highway 101 and Highway 112. The upcoming removal of the Elwha dams will substantially alter habitat conditions and the physical condition of the stream channel in the lower river.



## PHYSICAL

### Channel Configuration

The stream channel within the upper portion of the reach is constrained by the steep bedrock walls of the Elwha Canyon, while the channel floodway widens and the river meanders in the lower portion of the reach.

### Hazard Areas

Several river banks and surrounding areas are unstable (7%) with potential for slides mapped in western portions of the reach. Potential erosion areas are mapped in the southern portion of the reach (3%). The northern portion of the reach is located within a channel migration zone (45%), tsunami hazard zone (14%), and the FEMA 100-year floodplain (89%).

## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 29% of the reach contains forest habitat, 17% contains herb and shrub habitat, and 3% is lawn/landscaping and developed areas. Outlying the stream corridor vegetation is comprised mostly of forest habitat intermixed with herb and shrub habitat.

### Habitats and Species

22% of the reach is identified as wetland habitat, primarily concentrated in the northern portion of the reach. The designated priority habitat mapped within the reach is bald eagle (31%).

The reach provides spawning habitat for bull trout (41%), steelhead trout (43%), and Chinook (43%), chum (50%), coho (77%), and pink (82%) salmon, and rearing habitat for Chinook (5%) and coho (1%) salmon. The presence of residential cutthroat and rainbow trout is also noted.

### Water Quality

The portion of the Elwha River within the reach has State impaired water quality listings for temperature and PCB. Temperature impairments are located within the lower portion of this reach while PCB impairments are located in upstream segments. Elwha Riv

# Elwha River: Reach 1

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is tribe (33%), timber (20%), open space (20%), utilities (9%), vacant (9%), residential (7%), unknown (2%), commercial (trace), and roads (trace). Tribe lands are located in the north east portion of the reach while open space and timber is located in the northwest. Residential lands are located in the south. Land ownership in the reach is 92% public, 7% tribe, and 2% private.

---

### Zoning and Parcel Data

The reach is zoned for rural residential (65%), commercial forestry (3%), and tribes (32%).

Under current zoning regulations there is moderate potential for significant new residential development in the reach, particularly near Highway 101.

---

### Public Access

The river mouth can be accessed directly from the north end of Elwha Dike Road. In addition, the Olympic Discovery Trail is adjacent to the Elwha throughout the reach.

---

### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surfaces.

---

### Shoreline Modifications

Elwha River Road and Granite Road cross the stream corridor in the central and south central portions of the reach, respectively. Levee sections are present throughout the lower portion of the reach, and a levee is present along the entire east side of the reach.

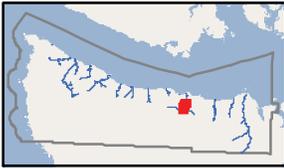
---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources



# Elwha River: Reach 2

**SHORELINE LENGTH**  
3.0 Miles

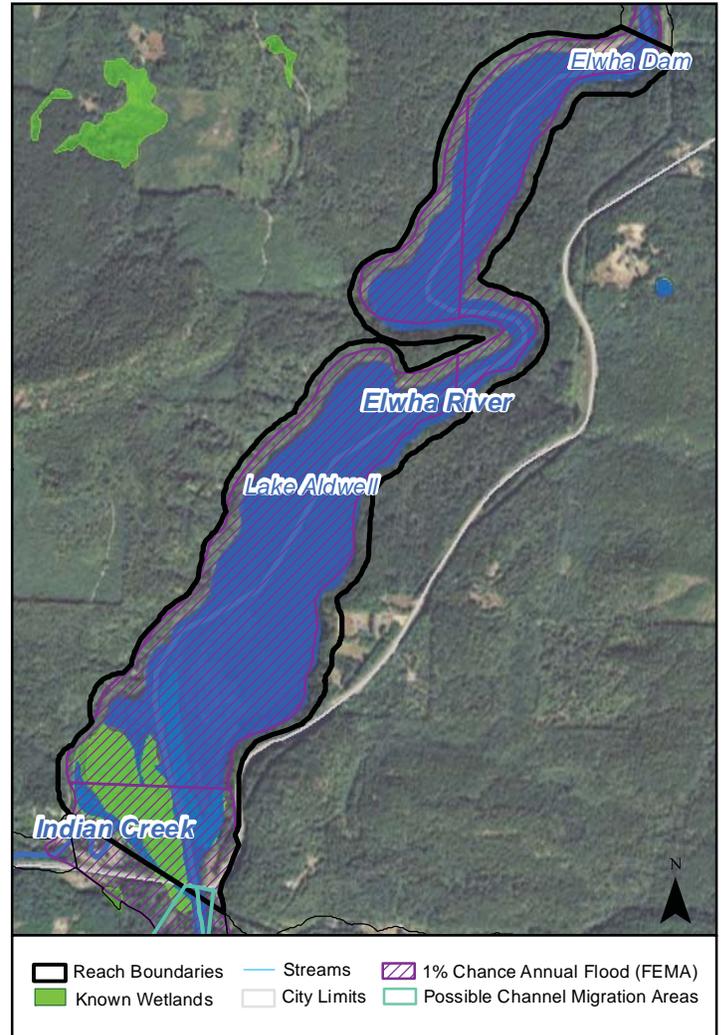
**REACH AREA**  
489.89 Acres

## REACH SUMMARY

Reach 2 of the Elwha River consists of Lake Aldwell, from the Elwha River Dam to the Highway 101 bridge. The reach area consists primarily of forest habitat. Lake Aldwell provides habitat for rainbow trout, resident cutthroat trout, and bull trout; the Elwha River Dam blocks anadromous fish access to the reach. Bald eagle and trumpeter swan habitat is mapped throughout the reach.

The upper portion of the reach lies within Olympic National Forest. The remainder of the reach area consists of forest land, both publically (DNR managed) and privately owned.

Most of the reach consists of public forest land; therefore, the potential for new residential development within the reach is low. The upcoming removal of the Elwha River Dam will drain the Lake Aldwell reservoir. The restoration of the Elwha River will substantially alter habitat conditions and the physical condition of the reach.



## PHYSICAL

### Channel Configuration

Not applicable

### Hazard Areas

Some lake shore areas are unstable (14%) with potential for slides mapped primarily in western and southeastern portions along Lake Aldwell. Potential erosion areas are mapped in the north and east portions of the reach (15%). The Indian Creek confluence area lies within the FEMA 100-year floodplain (89%).

## ECOLOGY

### Riparian Vegetation

84% of the reach zone contains forest habitat while 5% of the reach contains non-forest land. An additional 3% of the reach contains herb and shrub habitat.

### Habitats and Species

22% of the reach is identified as wetland habitat, primarily concentrated in the southeast near the confluence of Indian Creek with the Elwha River. Designated priority habitats mapped within the reach include bald eagle (76%) and trumpeter swan (42%).

This reach provides habitat for bull trout, resident cutthroat, and rainbow trout.

### Water Quality

The portion of the Elwha River within the reach has a State impaired water quality listing for temperature. There are no Streamkeepers data available for this reach.

## Elwha River: Reach 2

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (93%), roads (4%), lodging (2%), and vacant (trace). Timber land is located throughout the reach. Land ownership in the reach is 100% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (3%), rural commercial (1%), and commercial forestry (96%).

Under current zoning regulations there is low potential for significant new development within the reach. Most of the reach is zoned for commercial forestry.

---

#### Public Access

Public access to the reach is available off of Highway 101.

---

#### Impervious Surfaces

Approximately 4% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

The Elwha River Dam is located at the downstream end of the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

Bordering Elwha River reaches 2 and 3, the Lower Elwha River Hydroelectric Facility (built 1912 - 1914) is listed on the state and national historic registries; the dam and facility is currently being demolished. Two other historic sites, including a hist



# Elwha River: Reach 3

**SHORELINE LENGTH**  
2.1 Miles

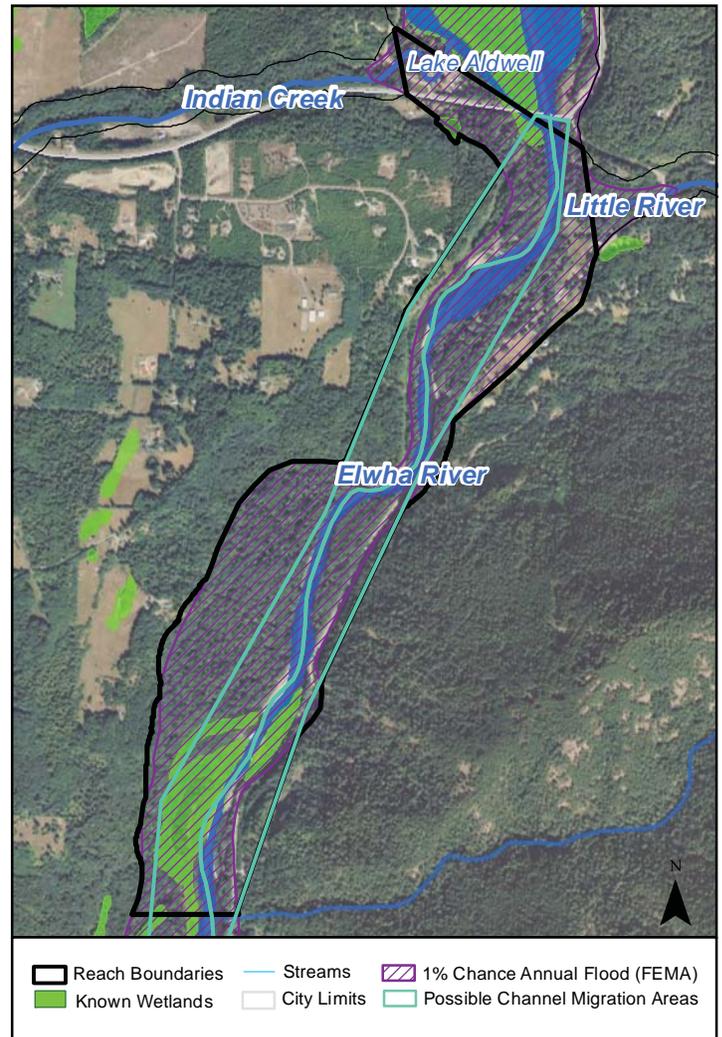
**REACH AREA**  
298.86 Acres

## REACH SUMMARY

Reach 3 of the Elwha River extends from the Highway 101 bridge to the Olympic National Park boundary. The stream channel is relatively confined throughout the reach, and consists of a relatively straight single channel. Most of the reach contains dense forest cover. However, Olympic Hot Spring Road borders the river within the reach, which has permanently removed some forest habitat. The reach provides habitat for rainbow trout, resident cutthroat trout, and bull trout; the Elwha River Dam blocks anadromous fish access to the reach.

The reach contains a mix of commercial forest land and low-density residential development. The majority of the reach lies within mapped channel migration and flood hazard zones.

Under current zoning regulations, approximately one-quarter of the reach has potential for new low-density residential development. The upcoming removal of the Glines Canyon Dam (located in Olympic National Park) will likely substantially alter habitat conditions and the physical condition of the reach.



## PHYSICAL

### Channel Configuration

The river is relatively sinuous throughout the reach, and contains multiple channels in some locations.

### Hazard Areas

Several river banks and surrounding areas are unstable (7%) with potential for slides mapped in the southeast portion of the reach. Potential erosion areas are mapped in the northwest portion of the reach (10%). Much of the reach lies within an identified channel migration zone (61%) and the FEMA 100-year floodplain (85%).

## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 54% of the reach zone contains forest habitat, 10% is herb and shrub habitat, and 4% is lawn/landscaping. Outlying the stream corridor vegetation is primarily forest habitat with some sparse patches of herb and shrub habitat.

### Habitats and Species

9% of the reach is identified as wetland habitat. There are no priority wildlife habitats mapped within the reach.

This reach provides habitat for bull trout, resident cutthroat, and rainbow trout.

### Water Quality

The upstream and downstream portions of the Elwha River within the reach have State impaired water quality listings for temperature. Elwha River water quality within the reach is listed by Streamkeepers as "healthy" for WQI.

## Elwha River: Reach 3

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (60%), residential (19%), roads (8%), open space (6%), vacant (6%), and lodging (2%). Timber lands and open space are located in through the southeast and northwest portion of the reach. Residential land is located in the north east. Land ownership in the reach is 100% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (45%), rural commercial, (2%), commercial forestry (50%), and parks/public land (3%).

Under current zoning regulations there is moderate potential for significant new residential development in the reach.

---

#### Public Access

Public access to this reach is available off of Olympic Hot Springs Road.

---

#### Impervious Surfaces

Approximately 8% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Olympic Hot Springs Road generally runs parallel to the Elwha within the reach, which blocks access to portions of its natural floodplain.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

Three historic sites associated with early Anglo-American settlement are inventoried but not listed.

---



# Gray Wolf River

**SHORELINE LENGTH**  
8.3 Miles

**REACH AREA**  
444.91 Acres

## REACH SUMMARY

The reach extends from the Dungeness River confluence to approximately 8.0 miles upstream. Forest cover is present throughout most of the reach. The Gray Wolf River provides habitat for Chinook, coho, chum, sockeye, and pink salmon, in addition to steelhead, bull, and resident cutthroat trout. The reach also supports populations of elk and harlequin duck.

The Gray Wolf River is located within Olympic National Forest, portions of which are designated wilderness areas. The Lower Gray Wolf Trail is located within the reach, which is a popular hiking and camping area. Forest Service Road 2870 also provides public access to the reach.



## PHYSICAL

### Channel Configuration

No data

### Hazard Areas

Many of the stream banks and surrounding areas are located within the FEMA 100-year floodplain (28%).

## ECOLOGY

### Riparian Vegetation

77% of the reach contains continuous forest habitat, while 13% contains herb and shrub habitat.

### Habitats and Species

7% of the reach is mapped as wetland habitat. Designated priority habitats mapped within the reach include elk (24%) and harlequin duck (5%).

This reach provides spawning habitat for steelhead trout (35% of reach total) and bull trout (11%), as well as Chinook (25%), chum (100%), coho (99%), pink (100%), and sockeye salmon (25%), and juvenile rearing habitat for bull trout (10%). The presence of

### Water Quality

The reach has no State impaired water quality listings. Gray Wolf River water quality is listed by Streamkeepers as "healthy" for B-IBI.

# Gray Wolf River

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is timber (99%) and open space (1%).  
Land ownership is 99% public and 1% private.

---

### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

### Public Access

The Lower Gray Wolf Trail, accessed from Forest Service Road 2870, provides public access to the reach.

---

### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources

The Three Forks Shelter, located just upstream of shoreline jurisdiction, is listed on the national and state registries (trail shelter built around 1930).



# Green Creek

**SHORELINE LENGTH**  
0.7 Miles

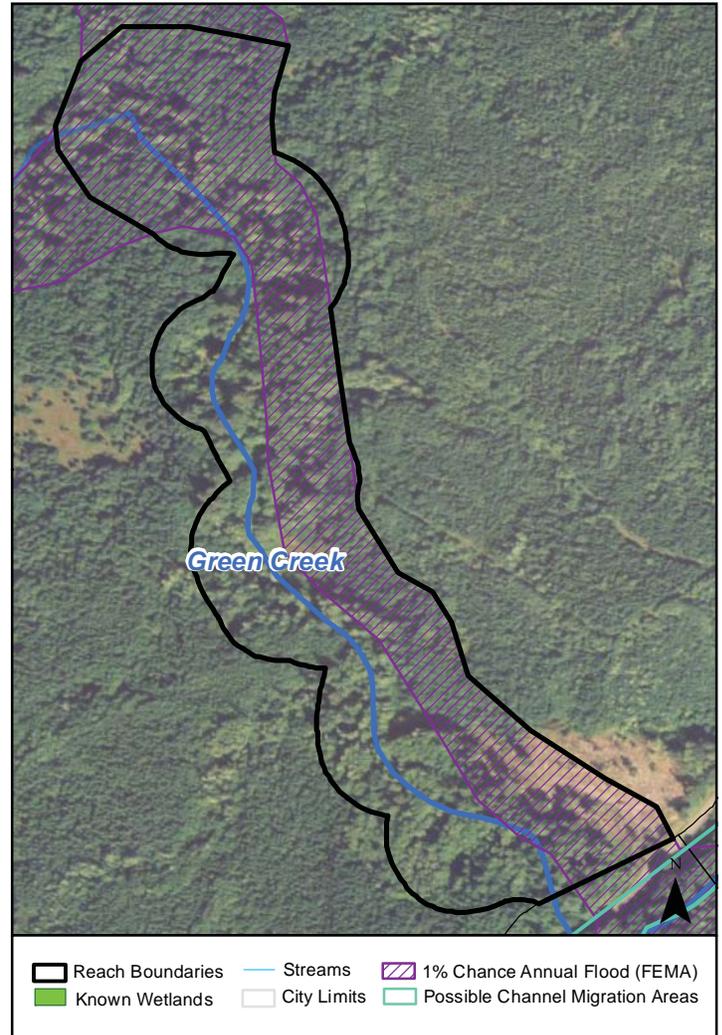
**REACH AREA**  
52.23 Acres

## REACH SUMMARY

The reach extends from the Pysht River confluence to approximately 0.7 miles upstream. The reach is covered primarily by dense forest habitat. This reach provides spawning habitat for chum and coho salmon, and juvenile rearing habitat for steelhead trout. The presence of resident cutthroat is also mapped within the reach.

The reach contains privately owned commercial forest lands. The majority of the reach is situated within the FEMA 100-year floodplain. Geologic hazard areas for erosion and slides are located in the eastern half of the reach.

Under current zoning regulations, the reach is zoned for commercial forestry and cannot be subdivided.



## PHYSICAL

### Channel Configuration

No data

### Hazard Areas

Potential erosion areas are mapped in the northeast and southeast portions of the reach (19%). Most of the southeast portion of the reach has potential for slides (14%). Much of the reach banks and surrounding areas are within the FEMA 100-year floodplain (58%).

## ECOLOGY

### Riparian Vegetation

88% of the reach contains continuous forest habitat, while 8% contains herb and shrub habitat.

### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for chum (69%) and coho salmon (100%), and juvenile rearing habitat for steelhead trout (93%). The presence of resident cutthroat are also mapped within the reach.

### Water Quality

The portion of the Green Creek within the reach has a State impaired water quality listing for temperature. Green Creek water quality is listed by Streamkeepers as "healthy" for WQI.

## Green Creek

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (25%) and commercial forestry (75%).

Under current zoning regulations there is low potential for significant new development within the reach. Most of the reach is zoned for commercial forestry.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Herman Creek: Reach 1

**SHORELINE LENGTH**  
1.9 Miles

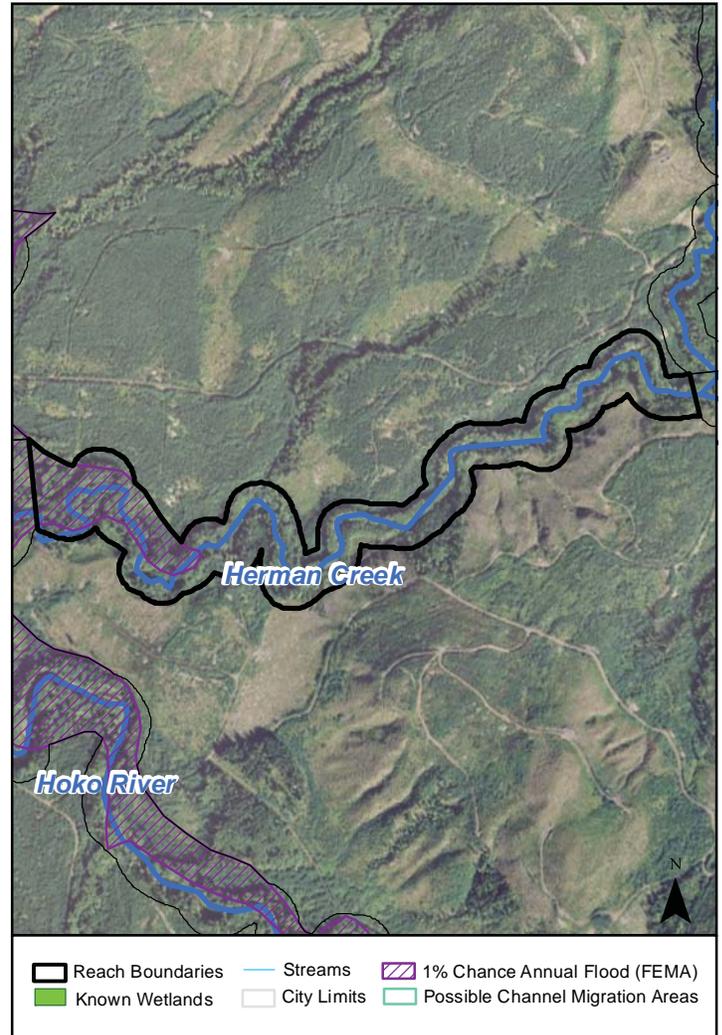
**REACH AREA**  
95.22 Acres

## REACH SUMMARY

Reach 1 of Herman Creek extends from the Hoko River confluence to the North Branch Herman Creek confluence. Dense forest cover extends throughout much of the reach. The reach provides spawning and rearing habitat for steelhead and chinook and coho salmon, in addition to resident cutthroat.

The reach contains commercial forest lands. The lower portion of the reach is situated in the FEMA 100-year floodplain. Geologic hazard areas for erosion and land slide are located in the middle and upper portions of the reach.

Under current zoning regulations, approximately three-quarters of the reach area has the potential for residential development. However, much of this land is zoned for commercial forestry and cannot be developed at a density greater than 1 dwelling per 80 acres. Actual development potential in the reach is low.



## PHYSICAL

### Channel Configuration

Channel configuration through the reach is defined by a series of meanders and straight stretches. The channel course flows through a series of moderately steep foothills that confine the channel to a narrow floodplain.

### Hazard Areas

Several stream banks and surrounding areas are unstable (22%) with potential for slides mapped in the south to northeast portions of the reach. Potential erosion areas are mapped in the northeast portion of the reach (15%). Most of the Hoko River confluence area lies within the FEMA 100-year floodplain (19%) and channel migration zone (83%).

## ECOLOGY

### Riparian Vegetation

79% of the reach zone contains forest habitat, while 21% of contains herb and shrub habitat.

### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for steelhead trout (100% of reach total) and Chinook (70%), and coho salmon (100%), and juvenile rearing habitat for Chinook salmon (30%). The presence of resident cutthroat are also mapped within the reach.

### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers water quality data available for Herman Creek.

## Herman Creek: Reach 1

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



## Herman Creek: Reach 2

### SHORELINE LENGTH

1.2 Miles

### REACH AREA

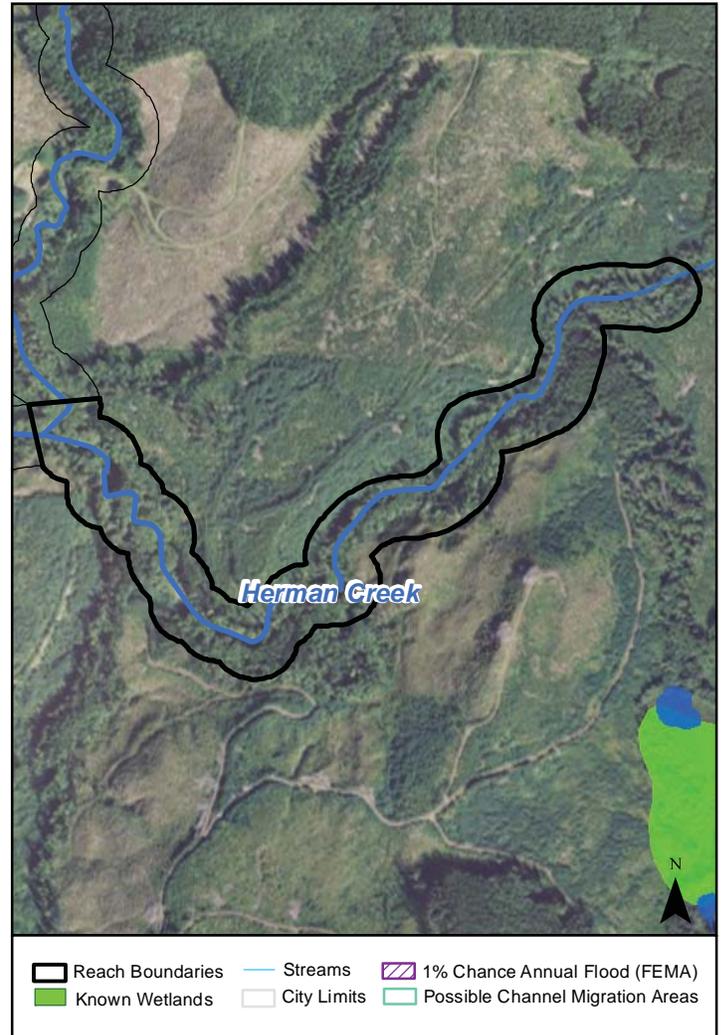
61.84 Acres

### REACH SUMMARY

Reach 2 of Herman Creek extends from the North Branch Herman Creek confluence to the East Branch Herman Creek confluence. Dense forest cover is present throughout most of the reach. The reach provides spawning and rearing habitat for coho salmon and steelhead trout. Resident cutthroat trout are also present within the reach.

The reach contains commercial forest lands. Geologic hazard areas for erosion and land slides are present throughout the entire reach.

Under current zoning regulations, approximately one-half of the reach area has the potential for new residential development. However, much of this land is zoned for commercial forestry and cannot be developed at a density greater than 1 dwelling per 80 acres. Actual development potential in the reach is low.



### PHYSICAL

#### Channel Configuration

Channel configuration through the reach is defined by a series of meanders and straight stretches. The channel course flows through a series of moderately steep foothills that confine the channel to a narrow floodplain.

#### Hazard Areas

Several stream banks and surrounding areas are unstable (23%) with potential for slides mapped in the northeast portion of the reach. Potential erosion areas (93%) and a channel migration zone (46%) are mapped throughout most of the reach.

### ECOLOGY

#### Riparian Vegetation

85% of the reach zone contains continuous forest habitat, while 15% is herb and shrub habitat.

#### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for steelhead trout (97% of reach total) and coho salmon (100%). The presence of resident cutthroat are also mapped within the reach.

#### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers water quality data available for Herman Creek.

## Herman Creek: Reach 2

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Hoko River: Reach 1

**SHORELINE LENGTH**  
0.9 Miles

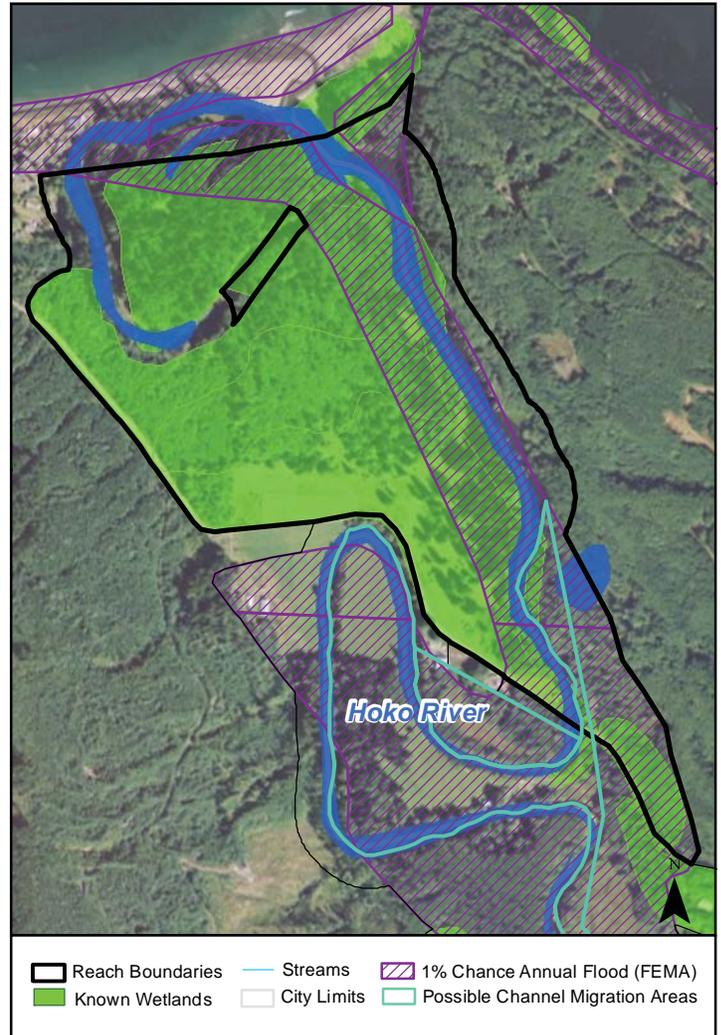
**REACH AREA**  
210.26 Acres

## REACH SUMMARY

Reach 1 of the Hoko River extends from near the river's mouth to approximately 1 mile upstream, near the Highway 112 bridge crossing. The reach encompasses a large and flat alluvial floodplain. Dense forest cover extends throughout much of the reach. Wetland and estuarine habitat also extends through the majority of the reach. This reach provides spawning habitat for Chinook, chum, and coho salmon, and the presence of resident cutthroat and steelhead trout is also mapped within the reach. The reach supports breeding populations of bald eagle.

Much of the lower portion of the reach is undeveloped park land (Hoko River State Park). Agricultural lands are located in the upper portion of the reach. Most of the reach lies within a tsunami hazard area, the FEMA 100-year floodplain and/or a channel migration areas. Geologic hazard areas for erosion and slides are located in the northeastern portion of the reach.

Under current zoning regulations, most of the reach area is not eligible for additional development.



## PHYSICAL

### Channel Configuration

The lower Hoko River is characterized by large channel that flows northward across a broad low-gradient alluvial fan. The estuarine zone extends over a mile upstream from the mouth.

### Hazard Areas

Several river banks and surrounding areas are unstable (1%) with potential for slides mapped in the northeastern portions of the reach. Potential erosion areas are mapped in the western portion of the reach (3%). The reach lies within a channel migration zone (94%), tsunami hazard zone (80%), and the FEMA 100-year floodplain (41%).

## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 37% of the reach zone contains forest habitat, 6% contains herb and shrub habitat, and an additional 3% of the reach contains lawn/landscaping. Outlying the stream corridor vegetation is primarily comprised of forest habitat intermixed with herb and shrub habitat and lawn/landscaping.

### Habitats and Species

76% of the reach is mapped as wetland habitat. The designated priority habitats mapped within the reach are bald eagle (36%) and estuarine habitat (2%).

This reach provides spawning habitat for Chinook (58%), chum (60%) and coho salmon (60%). The presence of resident cutthroat and steelhead trout are also mapped within the reach.

### Water Quality

The upstream portion of the Hoko River within the reach has a State impaired water quality listing for temperature. River water quality within the reach is listed by Streamkeepers as "compromised" for B-IBI but "healthy" for WQL.

## Hoko River: Reach 1

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is open space (46%), timber (26%), agriculture (22%), roads (2%), residential (2%), and vacant (2%). Open space and timber is located through the northern and eastern portion of the reach, while agriculture is located in the south. Land ownership in the reach is 99.6% private and 0.4% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (93%) and parks / public land (7%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Informal public access to the reach is available at the undeveloped Hoko River State Park.

---

#### Impervious Surfaces

Approximately 2% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Highway 112 crosses the stream corridor at the upstream end of the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within the reach.

---

#### Cultural Resources

There are 3 historic sites (dating to the late 1800s) and 2 pre-contact sites that are inventoried, but not listed.



# Hoko River: Reach 2

**SHORELINE LENGTH**  
2.4 Miles

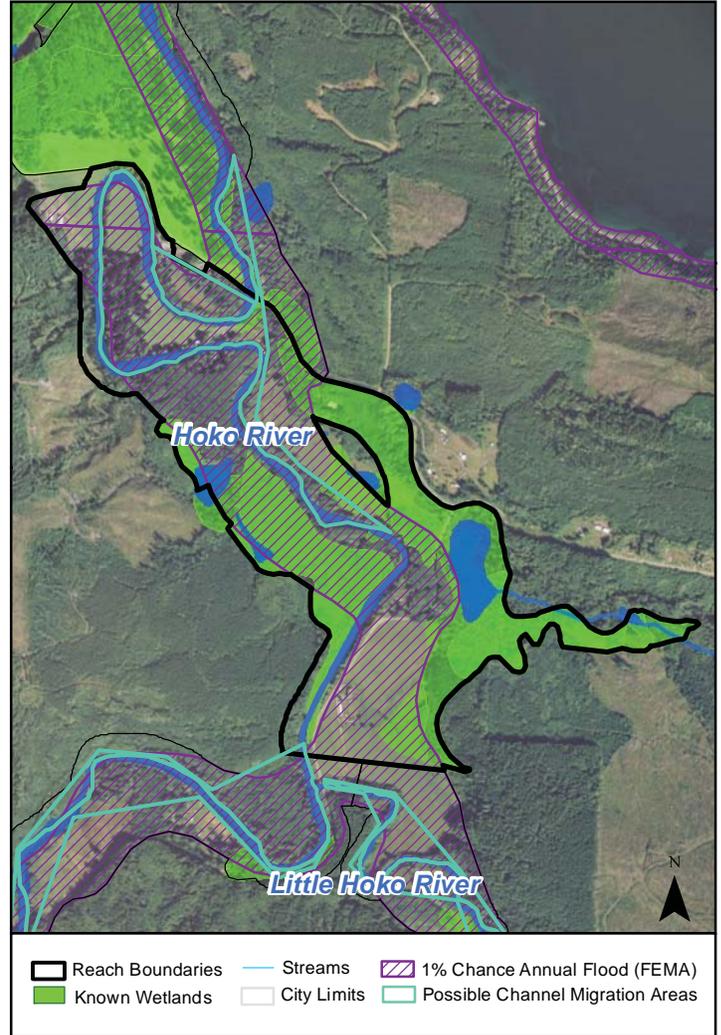
**REACH AREA**  
336.74 Acres

## REACH SUMMARY

Reach 2 of the Hoko River extends from the Highway 112 bridge to just below the Little Hoko River confluence. The river channel within the reach contains a series of well defined braids and meanders, moving laterally across a broad floodplain. The Hoko-Ozette Road runs parallel to the river through much of the reach, acting as a lateral barrier between the river and its natural floodplain. The majority of the reach has been cleared for agriculture and rural residential development, leaving sparse residual forest cover and herb and shrub habitat along the stream. Wetland habitat is located in the floodplain of the river throughout much of the reach. The reach supports spawning and rearing habitat for Chinook, coho, and chum salmon, in addition to steelhead and cutthroat trout.

Approximately one-third of the reach contains low-density residential development. The other two-thirds of the reach area is commercial timberland. The majority of the reach lies within mapped flooding and/or channel migration hazard areas. The northern portion of the reach lies within the undeveloped Hoko River State Park, and the Hoko-Ozette Road provides additional informal public access to shorelines in the reach.

Under current zoning regulations, approximately one-third of the reach area has the potential for low-density residential development. Developable lands are located within flood hazard areas. The presence of wetlands may preclude development in portions of the reach.



## PHYSICAL

### Channel Configuration

The channel consists of a series of large sweeping meanders that move laterally across a broad alluvial floodplain.

### Hazard Areas

Several river banks and surrounding areas are unstable (1%) with potential for slides mapped in the north and southwestern portions of the reach. Potential erosion areas are mapped in the west and southeastern portions of the reach (2%). Most of the reach lies within a channel migration zone (92%), tsunami hazard zone (57%), and the FEMA 100-year floodplain (68%).

## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 28% of the reach zone consists of forest habitat, 14% of the reach contains lawn/landscaping, and 4% of the reach contains herb and shrub habitat. Outlying the stream corridor vegetation is primarily forest habitat intermixed with herb and shrub habitat and some lawn/landscaping.

### Habitats and Species

43% of the reach is identified as wetland habitat. There are no priority wildlife habitats mapped within the reach.

This reach provides spawning habitat for steelhead trout (41%), and Chinook (93%), chum (93%) and coho salmon (93%). The presence of resident cutthroat are also mapped within the reach.

### Water Quality

The portion of the Hoko River within the reach has a State impaired water quality listing for temperature. River water quality within the reach is listed by Streamkeepers as "compromised" for B-IBI but "healthy" for WQI.

## Hoko River: Reach 2

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (46%), residential (20%), open space (20%), vacant (12%), and roads (1%). Timber and open space lands are located within the southern half of the reach. Residential lands are located west and north. Land ownership is 84% private and 16% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (61%), commercial forestry (23%), and parks/public land (6%).

Under current zoning regulations there is moderate potential for new residential development within the reach. Wetland habitat may limit development potential in some areas.

---

#### Public Access

Public lands are located in the southern portion of this reach. Informal access to public shorelines along the Hoko River are available from Hoko-Ozette Road.

---

#### Impervious Surfaces

Approximately 2% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Highway 112 crosses the stream corridor at the downstream end of the reach.

---

#### Contaminated Sites

A state cleanup site, Car Crushing, is located along the Hoko River in the northeastern portion of the reach. The Hoko Logging Camp, located in the southeastern portion of the reach, is a voluntary cleanup site.

---

#### Cultural Resources

The George Lamb Barn (built in 1900 on the Cowan Ranch) is listed on the State Registry of Heritage Barns.



# Hoko River: Reach 3

**SHORELINE LENGTH**  
6.6 Miles

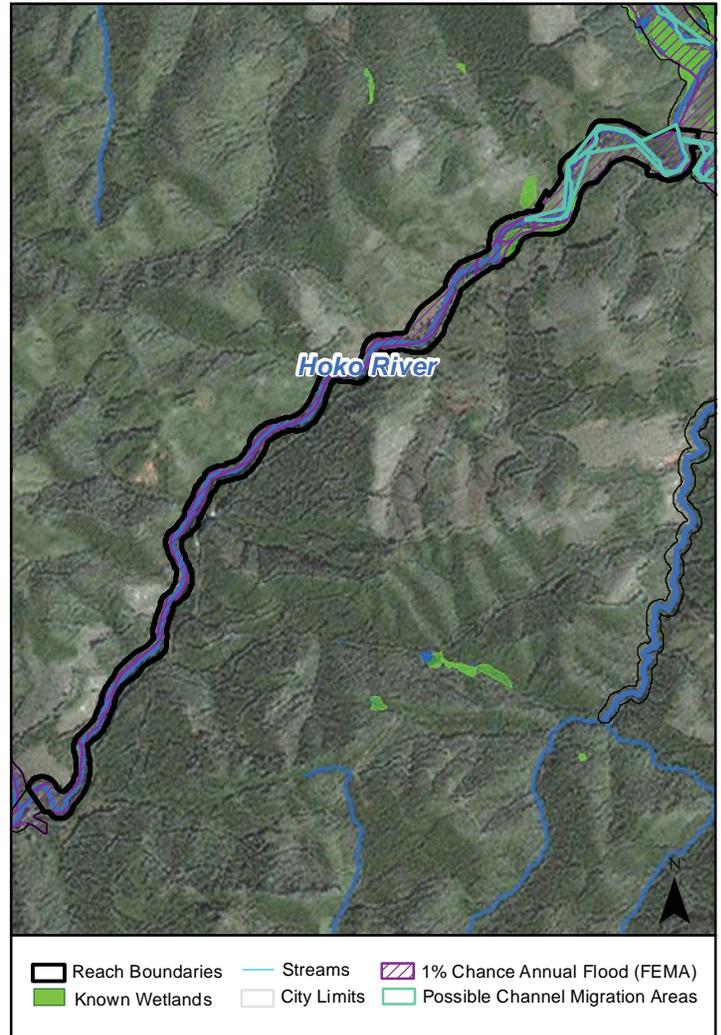
**REACH AREA**  
457.93 Acres

## REACH SUMMARY

Reach 3 of the Hoko River extends from the Little Hoko River confluence to the Browns Creek confluence. Channel configuration through the reach is a series of relatively straight stream segments followed by several tight meanders. The Hoko-Ozette Road runs parallel to the river through much of the reach, acting as a lateral barrier between the river and its natural floodplain. Forest cover borders the stream throughout much of the reach area. The reach supports spawning and rearing habitat for Chinook, coho, and chum salmon, in addition to steelhead and cutthroat trout. Bald eagle and harlequin duck populations are also present within the reach.

Approximately two-thirds of the reach contains commercial forest lands. Low-density residential development is limited to the lower portion of the reach. Much of the reach area is located within FEMA 100-year floodplain and/or channel migration areas. Additionally, geologic hazard areas for erosion and land slide extend through much of the reach. The Hoko-Ozette Road provides informal public access to shorelines in the reach.

Under current zoning regulations, approximately one-quarter of the reach area has the potential for low-density residential development. Developable lands are located within the flood and/or geologic hazard areas. The remaining three-quarters of the watershed are zoned for commercial forestry and are not eligible for subdivision.



## PHYSICAL

### Channel Configuration

Channel configuration through this reach is characterized by a narrow stream profile that is confined by several moderately steep foothills. Portions of the reach are deeply incised.

### Hazard Areas

Several river banks and surrounding areas are unstable (53%) with potential for slides mapped in the southwestern and central portions of the reach. Areas for potential erosion are mapped in the northeast portion of the reach (3%). Most of the reach lies within a channel migration zone (87%) and the FEMA 100-year floodplain (64%).

## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 69% of the reach zone contains forest habitat, 8% is herb and shrub habitat, and 5% of the reach is lawn/landscaping. Outlying the stream corridor vegetation is comprised mostly of forest habitat with some herb and shrub habitat.

### Habitats and Species

6% of the reach is identified as wetland habitat, located primarily in the northeast portion of the reach. Designated priority habitats mapped within the reach include bald eagle (14%) and harlequin duck (6%).

This reach provides spawning habitat for steelhead trout (98%), and Chinook (99%), chum (99%) and coho salmon (99%). The presence of resident cutthroat is also mapped within the reach.

### Water Quality

The upstream and downstream portions of the Hoko River within the reach has State impaired water quality listings for temperature. River water quality within the reach is listed by Streamkeepers as "compromised" for B-IBI.

## Hoko River: Reach 3

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (58%), open space (25%), vacant (6%), residential (5%), commercial (4%), utilities (2%), and roads (trace). Timber lands are located in the west end of the reach while open space is located in the east. Land ownership in the reach is 77% private and 23% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (12%), commercial forestry (67%), and parks/public land (21%).

Under current zoning regulations there is low potential for significant new development within the reach. Most of the reach is zoned for commercial forestry.

---

#### Public Access

The northern portion of the reach lies within the undeveloped Hoko River State Park. In addition, informal access to the Hoko River is available along Hoko-Ozette Road.

---

#### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.

---



# Hoko River: Reach 4

**SHORELINE LENGTH**  
2.1 Miles

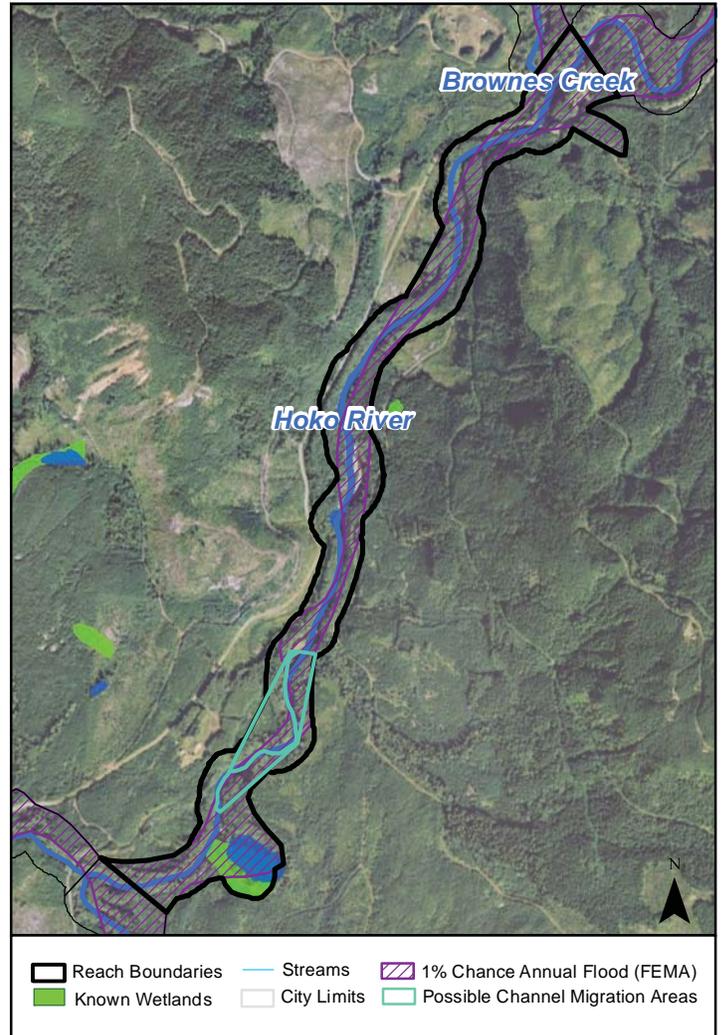
**REACH AREA**  
132.20 Acres

## REACH SUMMARY

Reach 4 of the Hoko River extends from the Browns Creek confluence to the Old Royal Creek confluence. The Hoko-Ozette Road crosses the stream in the lower reach. The majority of the reach areas contains dense forest cover. The reach supports spawning and rearing habitat for Chinook, coho, and chum salmon, in addition to steelhead and cutthroat trout. Harlequin duck populations also utilize the reach.

The majority of the reach contains private commercial forest lands. Much of the reach is situated in the FEMA 100-year floodplain and/or channel migration area. Geologic hazard areas for erosion and land slides are prevalent through the upper and middle portion of the reach.

Under current zoning regulations, approximately two-thirds of the reach area is commercial timber land that has the potential for new residential development, but at a density no greater than 1 dwelling per 80 acres. Actual development potential in the reach is low.



## PHYSICAL

### Channel Configuration

The channel is moderately confined, and flows fairly straight

### Hazard Areas

Several river banks and surrounding areas are unstable (45%) with potential for slides mapped in the southwestern and central portions of the reach. Areas for potential erosion are mapped in the northeast portion of the reach (21%). Most of the reach lies within the FEMA 100-year floodplain (62%) and a channel migration zone (74%).

## ECOLOGY

### Riparian Vegetation

66% of the reach area contains forest habitat, while 15% contains herb and shrub habitat.

### Habitats and Species

5% of the reach is mapped as wetland habitat, primarily concentrated in the southeast portion of the reach. The designated priority habitat mapped within the reach is harlequin duck (18%).

This reach provides spawning habitat for steelhead trout (100%) and Chinook (100%), chum (3%) and coho salmon (100%). The presence of resident cutthroat are also mapped within the reach.

### Water Quality

The downstream portion of the Hoko River within the reach has a State impaired water quality listing for temperature. River water quality within the reach is listed by Streamkeepers as "compromised" for B-IBI.

## Hoko River: Reach 4

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (86%), commercial (13%), and roads (1%). Timber lands are located throughout the reach while commercial lands are located in the northeast portion. Land ownership within the reach is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (14%) and commercial forestry (86%).

Under current zoning regulations there is low potential for significant new development within the reach. Most of the reach is zoned for commercial forestry.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the river are privately owned.

---

#### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



## Hoko River: Reach 5

**SHORELINE LENGTH**  
3.8 Miles

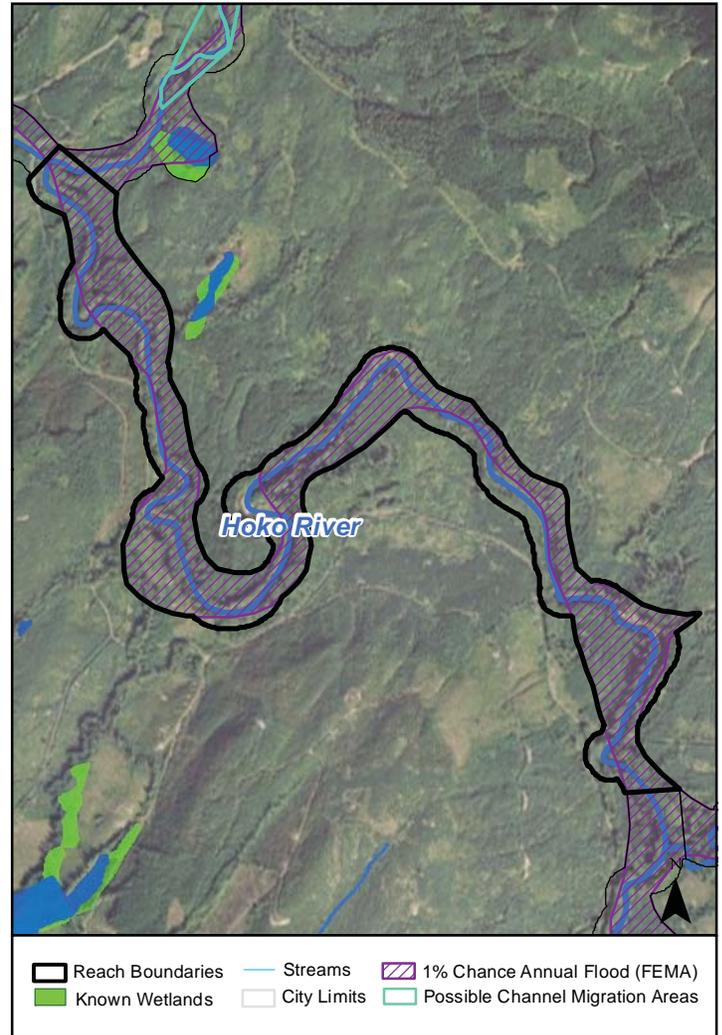
**REACH AREA**  
246.40 Acres

### REACH SUMMARY

Reach 5 of the Hoko River is located between the Old Royal Creek confluence and the Herman Creek confluence. The channel is fairly sinuous through the reach and contains several meanders and segments of braided channel. The reach contains dense forest cover. The reach supports spawning and rearing habitat for Chinook, coho, and chum salmon, in addition to steelhead and cutthroat trout.

The majority of the reach contains commercial forest lands. Geologic hazard areas for land slides are located in the lower one-third of the reach.

Under current zoning regulations, approximately one-third of the reach area has the potential for new development. However, much of this land is currently zoned for commercial forestry, which limits new residential development to 1 home per 80 acres. Actual development potential in the reach is low.



### PHYSICAL

#### Channel Configuration

The channel is fairly sinuous through the reach, and contains multiple channels within an active floodplain.

#### Hazard Areas

Several river banks and surrounding areas are unstable (25%) with potential for slides mapped near the Old Royal Creek confluence and the central portion of the reach. Most of the reach lies within the FEMA 100-year floodplain (78%) and a channel migration zone (79%).

### ECOLOGY

#### Riparian Vegetation

75% of the reach area contains forest habitat, while 7% contains herb and shrub habitat.

#### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

The reach provides spawning habitat for steelhead trout (100%), and Chinook (100%) and coho salmon (100%). The presence of resident cutthroat and chum salmon are also mapped within the reach.

#### Water Quality

The upstream and downstream portions of the Hoko River within the reach has State impaired water quality listings for temperature. River water quality within the reach is listed by Streamkeepers as "compromised" for B-IBI.

## Hoko River: Reach 5

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



## Hoko River: Reach 6

### SHORELINE LENGTH

3.2 Miles

### REACH AREA

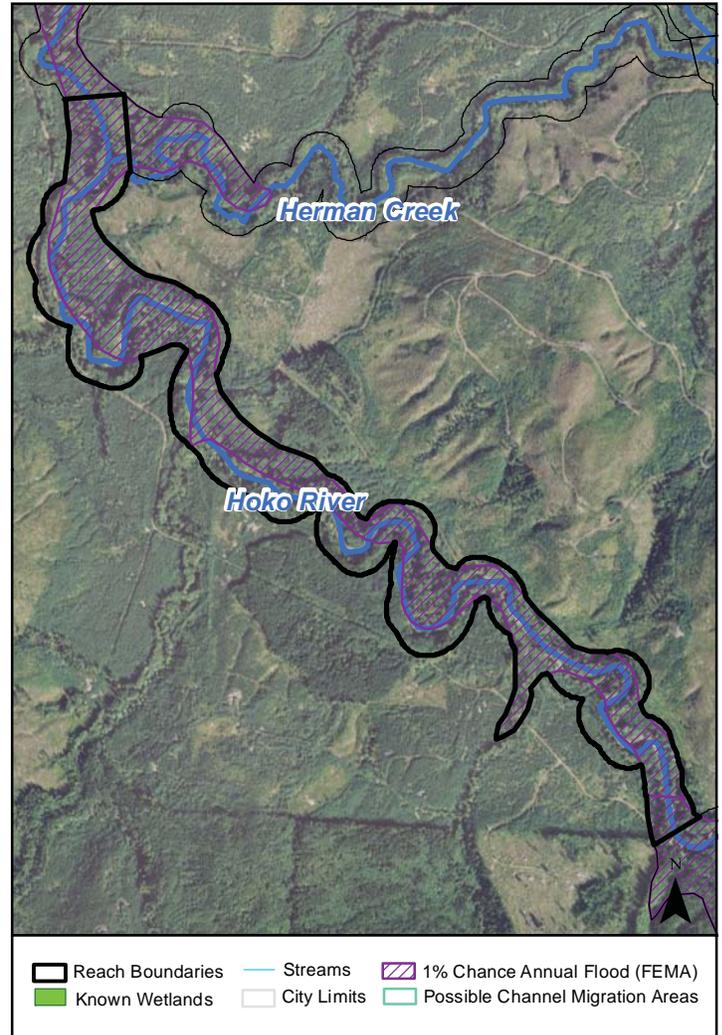
195.34 Acres

### REACH SUMMARY

Reach 6 of the Hoko River extends from the Herman Creek confluence upstream to the Ellis Creek confluence. The stream channel is mostly unconfined throughout the reach. Vegetative cover in the reach is primarily forest cover. The reach provides spawning and rearing habitat for Chinook, coho, and chum salmon, in addition to steelhead and cutthroat trout.

The reach contains commercial forest lands. The majority of the reach is located in the FEMA 100-year floodplain and/or channel migration area. Geologic hazard areas for slides are also located in portions of the reach.

Under current zoning regulations, approximately one-third of the reach area has the potential for new development. However, much of this land is currently zoned for commercial forestry, which limits new residential development to 1 home per 80 acres. Actual development potential in the reach is low.



### PHYSICAL

#### Channel Configuration

The stream channel is mostly unconfined and flows through moderately steep foothills. Portions of the reach have been deeply incised, resulting in several cascades.

#### Hazard Areas

Several river banks and surrounding areas are unstable (8%) with potential for slides mapped at the confluence between Hoko River and Herman Creek. Areas for potential erosion are primarily mapped in the northwest portion of the reach (4%). Most of the reach lies within the FEMA 100-year floodplain (67%) and a channel migration zone (90%).

### ECOLOGY

#### Riparian Vegetation

67% of the reach zone consists of forest habitat while 13% of the reach contains herb and shrub habitat.

#### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for steelhead trout (100%) and Chinook (100%), and coho salmon (100%). The presence of resident cutthroat and chum salmon are also mapped within the reach.

#### Water Quality

The portion of the Hoko River within the reach has a State impaired water quality listing for temperature. Additionally, an unnamed creek (tributary to the Hoko River) is listed for temperature. Hoko River water quality within the reach is listed by Stre

## Hoko River: Reach 6

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership is 99.9% private and 0.1 public.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

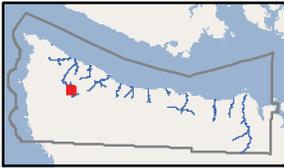
#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Hoko River: Reach 7

**SHORELINE LENGTH**  
2.5 Miles

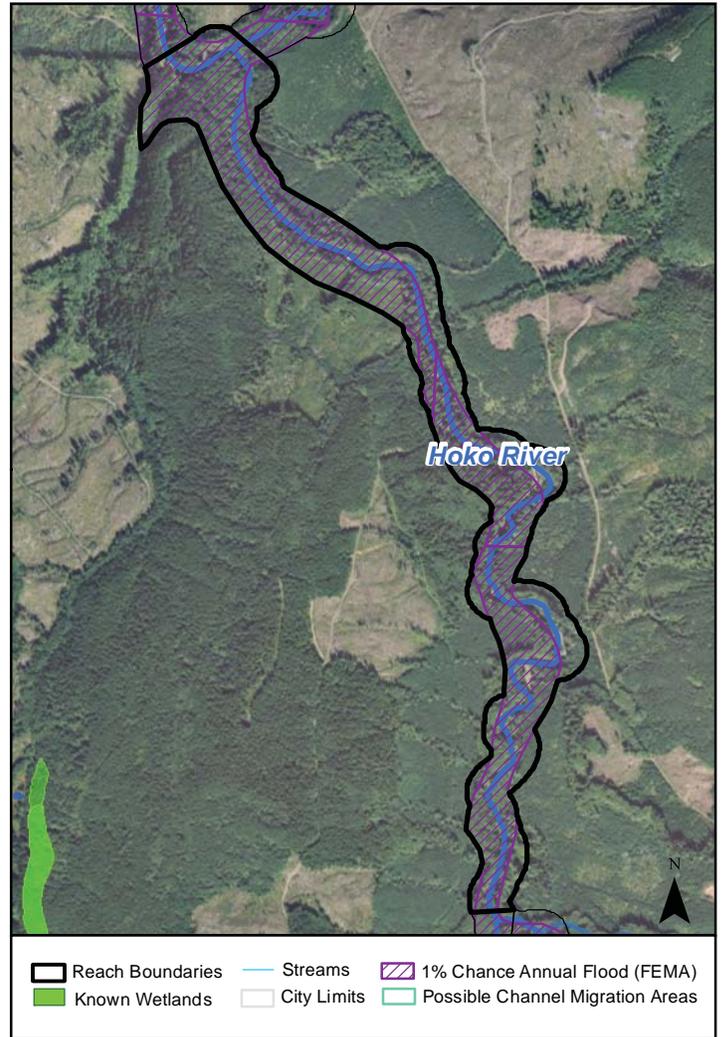
**REACH AREA**  
145.86 Acres

## REACH SUMMARY

Reach 7 of the Hoko River extends from the confluence of Ellis Creek, upstream to the confluence of Cub Creek. Dense forest cover is present within the reach. The reach provides spawning and rearing habitat for Chinook, coho, and chum salmon, in addition to steelhead and cutthroat trout is located in the reach.

The majority of the reach consists of private timber land, although some public timber parcels are present. The majority of the reach is located within the FEMA 100-year floodplain and/or channel migration area. Geologic hazards for land slides are present within the reach.

Under current zoning regulations, over three-quarters of the reach has potential for new development. However, this land is currently zoned for commercial forestry, which limits new residential development to 1 home per 80 acres. Actual development potential in the reach is low.



## PHYSICAL

### Channel Configuration

The stream channel within the reach is confined by moderately steep foothills. Portions of the reach have been deeply incised resulting in several cascades.

### Hazard Areas

Several river banks and surrounding areas are unstable (12%) with potential for slides mapped in the northwestern portion of the reach. Areas for potential erosion are mapped in the southern northern segments of the reach (2%). Most of the reach lies within the FEMA 100-year floodplain (76%) and a channel migration zone (79%).

## ECOLOGY

### Riparian Vegetation

79% of the reach zone consists of continuous forest habitat, while 16% of the reach contains herb and shrub habitat.

### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for steelhead trout (100%) and Chinook (100%), and coho salmon (100%). The presence of resident cutthroat and chum salmon are also mapped within the reach.

### Water Quality

The reach has no State impaired water quality listings. River water quality within the reach is listed by Streamkeepers as "compromised" for B-IBI.

## Hoko River: Reach 7

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership is 79% private and 21% public.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Public lands are located within the reach, but no public access areas are available.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

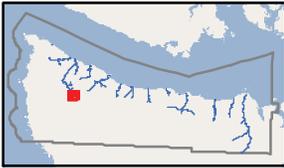
#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Hoko River: Reach 8

**SHORELINE LENGTH**  
2.6 Miles

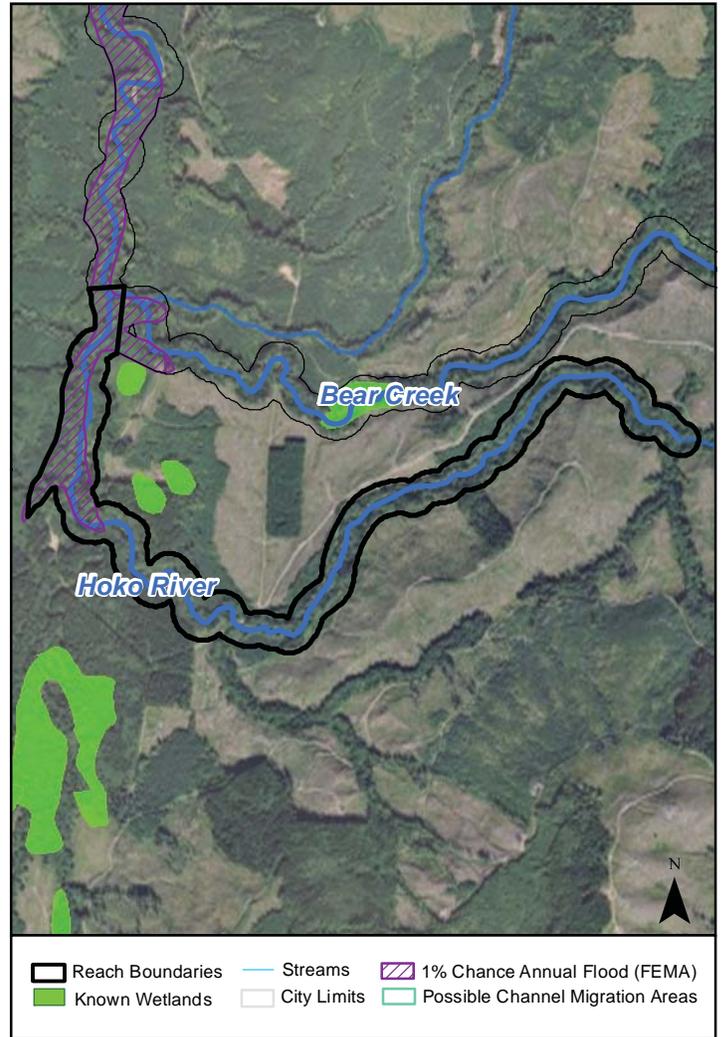
**REACH AREA**  
135.83 Acres

## REACH SUMMARY

Reach 8 of the Hoko River extends from the confluence of Cub Creek to approximately 2.6 miles upstream. Dense contiguous forest cover extends throughout the reach. The reach supports spawning and rearing habitat for Chinook, coho, and chum salmon, in addition to steelhead and cutthroat trout.

The majority of the reach consists of private timber land, although some public timber parcels are present. The lower portion of the reach is located within FEMA 100-year floodplain and/or channel migration areas. Geologic hazards for land slides are present within the upper reach.

Under current zoning regulations, approximately three-quarters of the reach has potential for new development. However, this land is currently zoned for commercial forestry, which limits new residential development to 1 home per 80 acres. Actual development potential in the reach is low.



## PHYSICAL

### Channel Configuration

The stream channel within the reach is confined by moderately steep foothills. Portions of the reach have been deeply incised resulting in several cascades.

### Hazard Areas

Several river banks and surrounding areas are unstable (27%) with potential for slides mapped in the central and northeast portions of the reach. Potential erosion areas are mapped in the northeast portion of the reach (11%). Most of the northwestern reach area leading up to the confluence between Bear Creek and Hoko River is in the FEMA 100-year floodplain (18%).

## ECOLOGY

### Riparian Vegetation

82% of the reach zone contains continuous forest habitat, while 11% of the reach contains herb and shrub habitat.

### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for steelhead trout (97%) and Chinook (100%), and coho salmon (100%). The presence of resident cutthroat and chum salmon are also mapped within the reach.

### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers water quality data available for this reach.

## Hoko River: Reach 8

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership is 78% private and 22% public.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Public lands are located within the reach, but no public access areas are available.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Indian Creek

## SHORELINE LENGTH

5.5 Miles

## REACH AREA

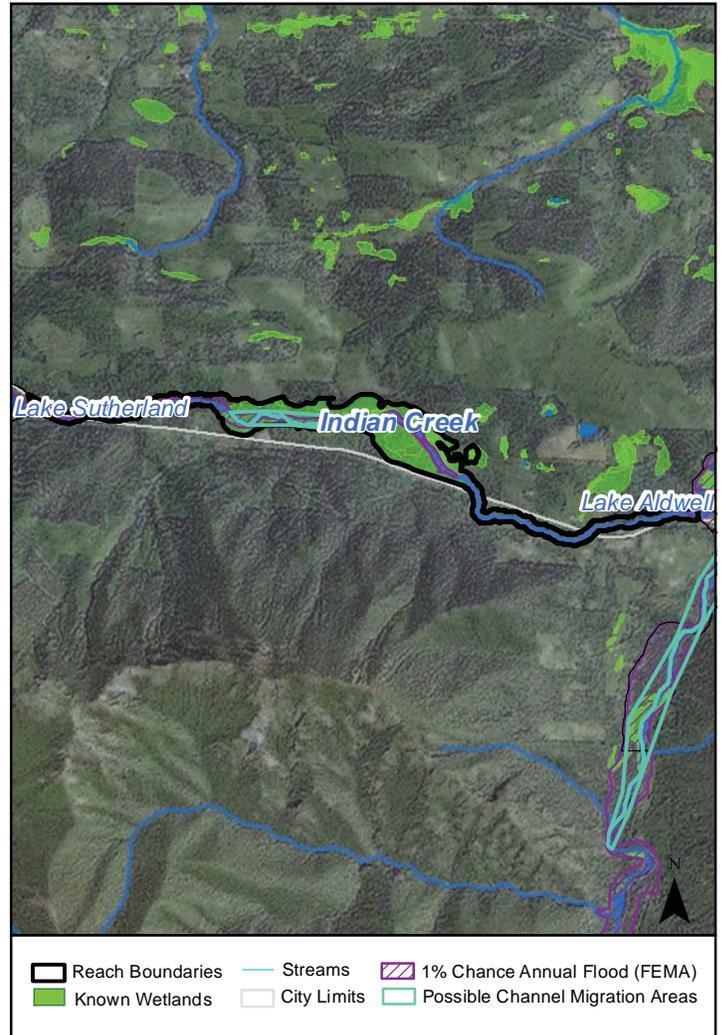
459.72 Acres

### REACH SUMMARY

The reach extends from the outlet of Lake Sutherland to the creek's confluence with the Elwha River. The valley floor within the reach is generally broad and flat from the Lake Sutherland outlet until the stream is within a mile of a half of the Elwha, where the stream falls into a narrow, ravine-like valley. The majority of the reach area contains dense forest cover. The creek provides habitat for resident cutthroat and rainbow trout. With the upcoming Elwha dam removals, anadromous fish stocks will likely return and/or be reintroduced to the creek.

The predominant land use in the reach is timber, much of which is public land managed by DNR. However, some low-density residential development is located within the reach. Flood hazard areas are located within the eastern portion of the reach. The existing residences along the creek are generally set back from the flood hazard areas. Highway 101 borders the stream throughout much of the reach, and crosses the stream in 3 locations.

Under current zoning regulations, approximately 15% of the reach has potential for new, low-density residential development. Some of the undeveloped parcels lie within identified flood hazard areas.



### PHYSICAL

#### Channel Configuration

The valley floor of the creek is generally broad and flat from the Lake Sutherland outlet and flows through a large, associated wetland complex. The stream falls into a narrow, ravine-like valley upstream of its confluence with the Elwha River.

#### Hazard Areas

Several stream banks and surrounding areas are unstable (9%) with potential for slides in the southeastern portion of the reach. Potential erosion areas are mapped in the northwestern portions of the reach (15%). Most of the central portion of the reach lies within a channel migration zone (10%) and the FEMA 100-year floodplain (21%).

### ECOLOGY

#### Riparian Vegetation

53% of the reach zone contains forest habitat, while 10% of the reach contains herb and shrub habitat. An additional 8% of the reach is lawn/landscaping.

#### Habitats and Species

62% of the reach is identified as wetland habitat, primarily concentrated in the central portion of the reach. There are no priority wildlife habitats mapped within the reach.

The presence of resident cutthroat and rainbow trout is mapped within the reach.

#### Water Quality

The reach has no State impaired water quality listings. Indian Creek water quality is listed by Streamkeepers as "healthy" for both WQI and B-IBI.

## Indian Creek

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (65%), residential (19%), vacant (9%), roads (5%), agriculture (1%), open space (1%), and lodging (trace). Timber land is located through the reach, while residential land is located in the east. Land ownership in the reach is approximately 50% private and 50% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (42%) and commercial forestry (58%).

Under current zoning regulations there is moderate potential for significant new residential development within the reach.

---

#### Public Access

Public lands are located throughout the reach. Public access to shorelines is available through undeveloped, informal access points along Highway 101.

---

#### Impervious Surfaces

Approximately 6% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Highway 101 crosses the creek in 3 locations within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within the reach.

---

#### Cultural Resources

There is 1 historic site that is registered, but not listed.

---



# Lake Sutherland

**SHORELINE LENGTH**  
0.04 Miles

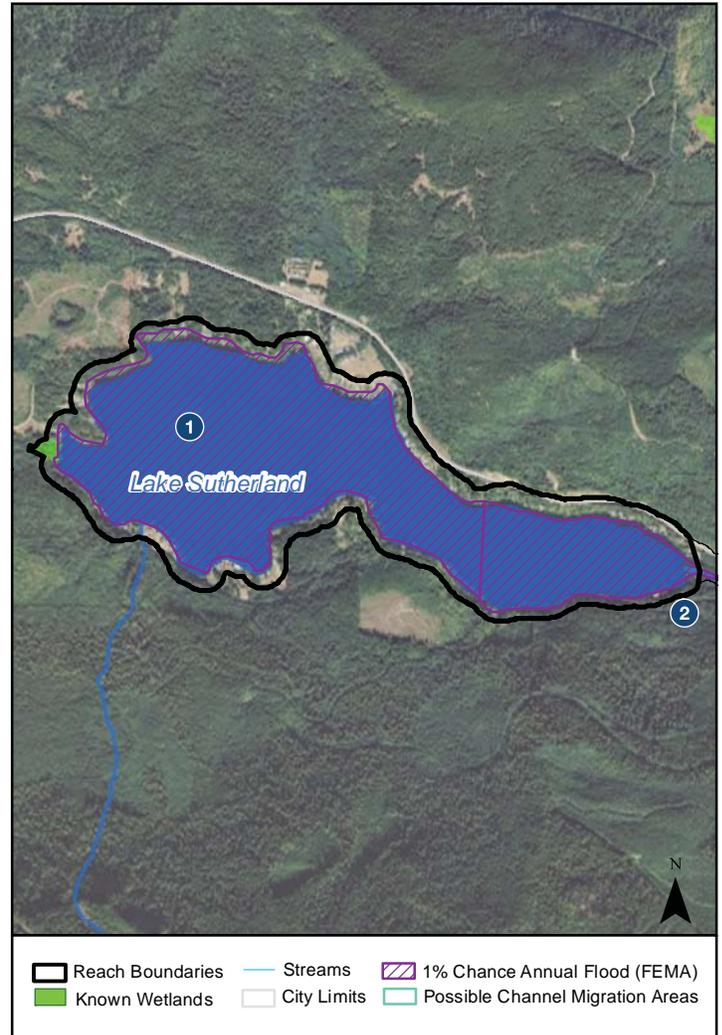
**REACH AREA**  
485.54 Acres

## REACH SUMMARY

Lake Sutherland is approximately 500 acres in area, and drains to Indian Creek. While natural vegetation within the reach has been completely cleared in some areas, over half of the shoreland area contains dense forest cover. The lake provides habitat for shore-spawning kokanee salmon, and resident cutthroat and rainbow trout. With the upcoming Elwha dam removals, anadromous fish stocks will likely return and/or be reintroduced to the lake.

Most of the shoreline along Lake Sutherland contains moderate- to high-density residential development, and many docks are present along the shoreline. Portions of the developed lakeshore lie within mapped flood hazard areas. A small outlet structure at the lake outlet serves to retain fish stock and control water levels in the lake. Flooding events along the lake shore have occurred recently, which Lake Sutherland residents attribute to accumulating sediments and large woody debris at the outlet.

Under current zoning regulations, approximately 15% of the reach has potential for new (infill) development. Most of the undeveloped land consists of 1-acre lots, which cannot be further subdivided. Some of the undeveloped parcels are located within mapped flood hazard areas.



## PHYSICAL

### Channel Configuration

Not applicable

## ECOLOGY

### Riparian Vegetation

53% of the reach contains forest habitat while 34% of the reach contains lawn/landscaping and developed areas.

### Hazard Areas

Several areas within the reach are unstable (13%) with potential for erosion mapped from the southwest to southeast and along the northeast portions of the reach. Potential slide areas are mapped in the eastern and southwestern portions (3%). Portions of the shoreline lie within the FEMA 100-year floodplain (16%).



Shoreline Oblique Photos (2006)

### Habitats and Species

2% of the reach is identified as wetland habitat, located at the west shore of the lake. There are no priority wildlife habitats mapped within the reach.

The presence of kokanee salmon, resident cutthroat, and rainbow trout is mapped within the reach.

### Water Quality

The reach has no State impaired water quality listings. Water quality at the lake outlet is listed by Streamkeepers as "impaired" for B-IBI and "compromised" for WQI.

# Lake Sutherland

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is residential (61%), roads (15%), vacant (15%), open space (3%), and commercial (trace). Residential and vacant lands border the entire water body. Land ownership in the reach is approximately 95% private and 5% public.

---

### Zoning and Parcel Data

The reach is zoned for rural residential (94%), commercial forestry (3%), and parks/public land (3%).

Under current zoning regulations there is moderate potential for significant new residential development within the reach.

---

### Public Access

Public access to the lake is available through developed boat launch facilities located along the South Shore Rd.

---

### Impervious Surfaces

Approximately 18% of the reach is covered by impervious surfaces.

---

### Shoreline Modifications

Most of the Lake Sutherland shoreline has been modified with bulkheads and docks.

---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources

There are no inventoried sites within the reach.



# Last Creek

**SHORELINE LENGTH**  
0.02 Miles

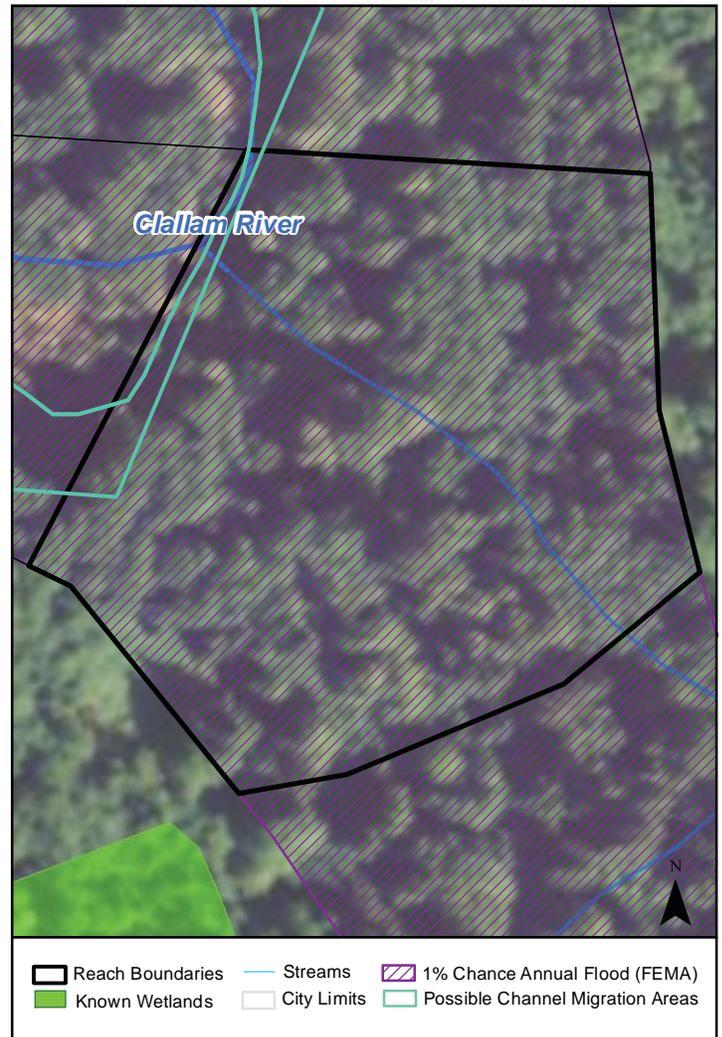
**REACH AREA**  
5.09 Acres

## REACH SUMMARY

The reach extends from the Clallam River confluence to approximately 0.1 miles upstream. The reach contains dense forest cover. The reach supports spawning and rearing habitat for coho salmon, in addition to steelhead and resident cutthroat trout.

The reach contains commercial forest lands. The reach is situated entirely within the FEMA 100-year floodplain. A geologic hazard area for erosion is located in the north eastern portion of the reach.

Under current zoning regulations, the reach is currently zoned for commercial forestry and cannot be subdivided for new development.



## PHYSICAL

### Channel Configuration

The stream trends generally straight as it flows westward toward its confluence with the Clallam River.

### Hazard Areas

Potential erosion areas are mapped in the northeast portion of the reach (1%). Most of the northwestern portion of the reach, near the confluence with the Clallam River, lies within a channel migration zone (4%). All of the reach is located within the FEMA 100-year floodplain (100%) and a channel migration zone (100%).

## ECOLOGY

### Riparian Vegetation

90% of the reach area contains forest habitat, while 6% of the reach contains herb and shrub habitat.

### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for steelhead trout (16%) and coho salmon (85%), and juvenile rearing habitat for coho salmon (15%). The presence of resident cutthroat and chum salmon are also mapped within the reach.

### Water Quality

The downstream portion of Last Creek within the reach has a State impaired water quality listing for temperature. There are no Streamkeepers water quality data available for Last Creek.

## Last Creek

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

#### Impervious Surfaces

No impervious surface are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

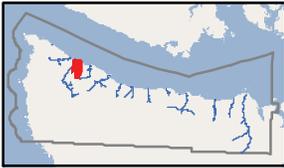
#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Little Hoko River

**SHORELINE LENGTH**  
4.6 Miles

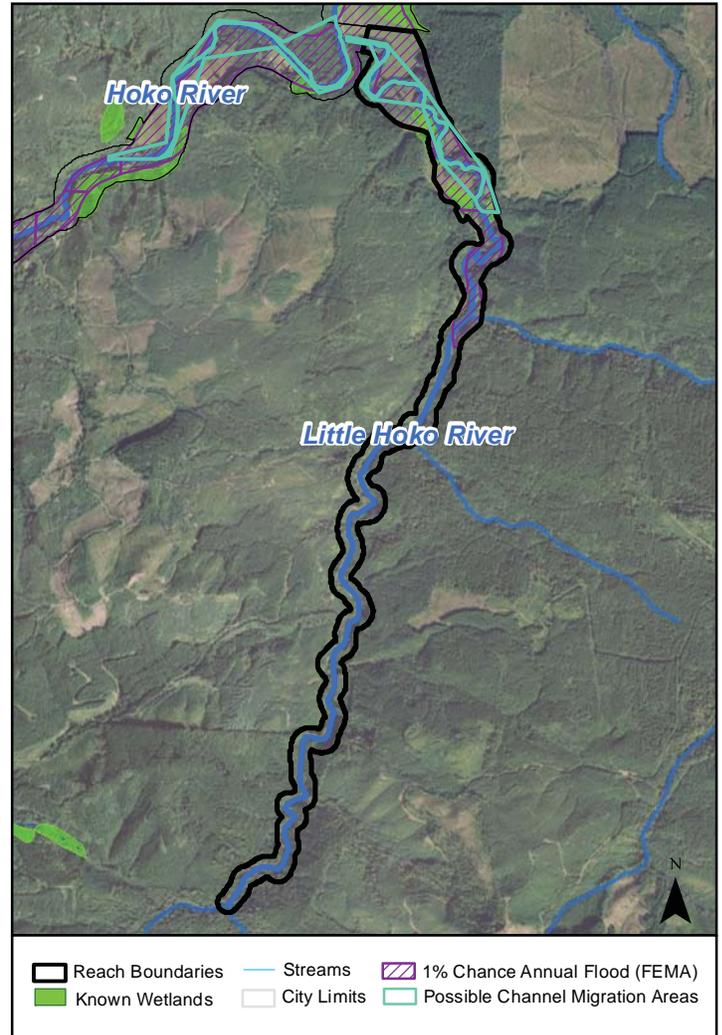
**REACH AREA**  
268.03 Acres

## REACH SUMMARY

The reach extends from the Hoko River confluence to the Lamb Creek confluence. Continuous forest cover is present throughout most of the reach. The reach supports spawning and rearing habitat for Chinook, chum, and coho salmon, in addition to steelhead and cutthroat trout.

The reach contains public and private timber land, and over half the reach area consists of park land (the undeveloped Hoko River State Park). The lower portion of the reach is located in the FEMA 100-year floodplain and/or channel migration hazard area. Geologic hazard areas for erosion and land slide are located in the upper reach.

Under current zoning regulations, there is minimal opportunity for new development within the reach.



## PHYSICAL

### Channel Configuration

The Little Hoko River reach meanders northwestward through moderately steep terrain before converging with the Hoko River in a low-gradient valley. The stream is generally confined to a narrow floodplain.

### Hazard Areas

Several river banks and surrounding areas are unstable (36%) with potential for slides mapped in the southern and northeastern portions of the reach. Areas for potential erosion are mapped in the central portion of the reach (11%). Most of the confluence between Hoko River and Little Hoko River is part of a channel migration area (42%) and the FEMA 100-year floodplain (38%).

## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 74% of the reach zone contains forest habitat while 15% contains herb and shrub habitat. Outlying the stream corridor vegetation is comprised primarily of herb and shrub habitat and agriculture land.

### Habitats and Species

5% of the reach is identified as wetland habitat, near the mainstem confluence. There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for steelhead trout (99%) and Chinook (100%), chum (100%), and coho salmon (99%). The presence of resident cutthroat are also mapped within the reach.

### Water Quality

The downstream portion of the Little Hoko River within the reach has a State impaired water quality listing for temperature. River water quality is listed by Streamkeepers as "compromised" for WQI.

# Little Hoko River

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is open space (58%) and timber (42%). Open space is located in the north half of the reach, while timber land is located in the south. Land ownership in the reach is 78% public and 22% private.

---

### Zoning and Parcel Data

The reach is zoned for commercial forestry (66%) and parks/public land (34%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

### Public Access

The reach can be accessed near the confluence with the mainstem Hoko, at the undeveloped Hoko River State Park.

---

### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

### Shoreline Modifications

The downstream end of the Little Hoko River is channelized, through the Hoko-Ozette road bridge.

---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources

There are no inventoried sites within the reach.



# Little Quilcene River

## SHORELINE LENGTH

1.3 Miles

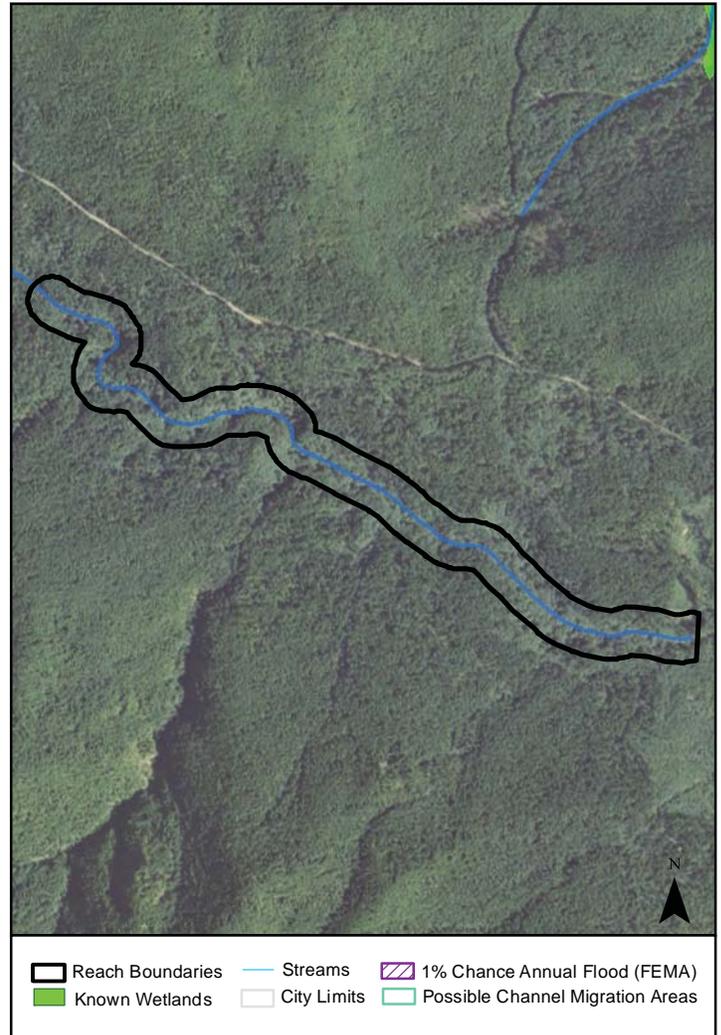
## REACH AREA

64.46 Acres

### REACH SUMMARY

The reach extends approximately 1 mile upstream from the Jefferson County limits. The reach contains dense forest cover. The Little Quilcene River within the reach provides habitat for resident cutthroat trout; anadromous fish passage to the reach is blocked by a natural falls at RM 7.0, in Jefferson County.

The majority of the reach area lies within Olympic National Forest, with a small portion on private timber land. Under current zoning regulations, there is no potential for subdivision or residential development within the reach.



### PHYSICAL

#### Channel Configuration

No data

### ECOLOGY

#### Riparian Vegetation

99% of the reach consists of forest land

#### Hazard Areas

No potential erosion or slide areas are mapped within this reach.

#### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides habitat for resident cutthroat.

#### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers water quality data available for the Little Quilcene River.

## Little Quilcene River

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership in the reach is 94% public and 6% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Most of the reach is publically owned, but there is no known public access.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

There are no shoreline modifications mapped within the reach.

---

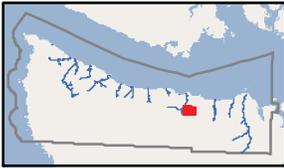
#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Little River

**SHORELINE LENGTH**  
2.8 Miles

**REACH AREA**  
143.98 Acres

## REACH SUMMARY

The reach extends from the Elwha River confluence to the South Branch Little River confluence. Most of the reach area is forested, but forest cover has been altered in some areas by low-density residential development and Little River Road. Erosion and slide hazard areas are mapped in portions of the reach. The Little River provides habitat for bull trout, resident cutthroat, and rainbow trout. The Elwha River Dam blocks anadromous fish access to the reach; anadromous fish are likely to return to the river after the dam is removed.

Land use within the reach is primarily commercial timber, with some rural residential development located at the east end of the reach.

Under current zoning regulations, development potential within the reach is limited. Most of the land within the reach cannot be further subdivided.



## PHYSICAL

### Channel Configuration

The reach has a moderate-to-steep gradient, and is tightly confined within the river valley.

### Hazard Areas

Many river banks and surrounding areas are unstable (69%) with potential for slides mapped in the central and eastern reach areas. Potential erosion areas are mapped in the northwest portion of the reach (14%). Most of the area surrounding the Elwha River confluence is located within the FEMA 100-year floodplain (5%).

## ECOLOGY

### Riparian Vegetation

92% of the reach area consists of forest habitat while 7% of the reach consists of lawn/landscaping.

### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides habitat for bull trout and resident cutthroat.

### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers water quality data available for the Little River.

# Little River

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is timber (75%), residential (16%), vacant (8%), roads (1%), and open space (trace). Timber land is located throughout the majority of the reach. Residential and vacant lands are located in the east. Land ownership in the reach is approximately 90% private and 10% public.

---

### Zoning and Parcel Data

The reach is zoned for rural residential (19%), commercial forest / residential mixed use (25%), and commercial forestry (56%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

### Public Access

Public lands are located throughout the reach. Developed public access is available throughout the reach along the Little River Trail. Recreational sites are also located at the confluence of the Elwha and Little Rivers.

---

### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surface.

---

### Shoreline Modifications

Olympic Hot Springs Road crosses the Little River near its confluence with the Elwha.

---

### Contaminated Sites

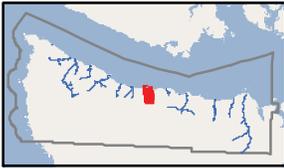
No identified contaminated sites are located within this reach.

---

### Cultural Resources

There is 1 inventoried pre-contact site within the reach.

---



# Lyre River: Reach 1

**SHORELINE LENGTH**  
4.0 Miles

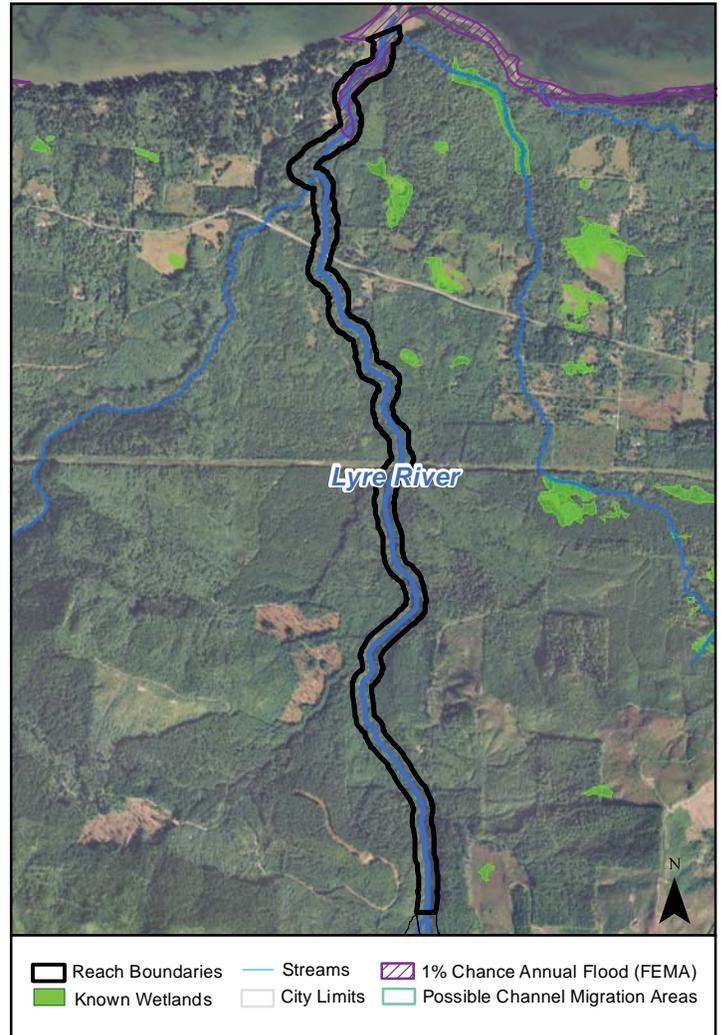
**REACH AREA**  
205.55 Acres

## REACH SUMMARY

Reach 1 of the Lyre River extends from near the mouth to the confluence with Boundary Creek. The reach has a fairly steep gradient and flows within a relatively confined channel. Vegetative cover throughout the reach is primarily forest habitat. The reach provides spawning and rearing habitat for chum salmon and steelhead trout. Chinook and coho salmon have also been observed within the reach along with resident cutthroat trout. Breeding populations of bald eagle and band-tailed pigeon also utilize portions of the reach. Bank armoring and channelization have adversely affected habitat in the lower 1 mile of the reach.

The upper two thirds of the reach are public forest lands (managed by DNR). Low density residential development is located in the lower portion of the reach, near Highway 112. The lower 0.4 miles of the reach located within a tsunami hazard zone. Geologic hazard areas including slides and erosion areas are located throughout the reach. Portions of the stream are also within the FEMA 100-year floodplain. Developed public access is available at the Lyre River campground, while informal/undeveloped public access to the shoreline is available along Lyre River Rd.

Under current zoning regulations, approximately one-third of the reach has potential for new residential development. Parcel boundaries vary in size and shape, but many have the potential to be subdivided into smaller lots (approximately 2 to 5 houses per acre). Most of the developable lands are located within geologic, tsunami, and/or flood hazard areas.



## PHYSICAL

### Channel Configuration

The reach has a fairly steep gradient and flows within a relatively confined channel.

### Hazard Areas

Potential erosion areas are mapped within the northwestern and eastern portions of the reach (40%). Many stream banks and surrounding areas extending north to south through the reach are subject to slides (50%). The northern portion of the reach lies within a tsunami hazard zone (6%), the FEMA 100-year floodplain (7%), and a channel migration zone (29%).

## ECOLOGY

### Riparian Vegetation

88% of the reach area contains dense forest habitat, while 8% of the reach contains herb and shrub habitat. An additional 5% of the reach is lawn/landscaping and developed areas.

### Habitats and Species

Designated priority specie habitats mapped within the reach include bald eagle (2%) and band-tailed pigeon (52%).

This reach provides spawning habitat for steelhead trout (48%) and chum salmon (89%), and juvenile rearing habitat for steelhead (1%). The presence of resident cutthroat and coho salmon are also mapped within the reach.

### Water Quality

The portion of the Lyre River within the reach has a State impaired water quality listing for temperature. River water quality within the reach is listed by Streamkeepers as "impaired" for B-IBI but "healthy" for WQI.

## Lyre River: Reach 1

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (58%), residential (18%), open space (9%), vacant (7%), unknown (5%), lodging (2%), and roads (1%). Timber land is located in the middle and southern sections of the reach. Residential, open space, and vacant lands are located in the north. Land ownership in the reach is 57% public and 43% private.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (31%), commercial forest / residential mixed use (8%), and commercial forestry (61%).

Under current zoning regulations there is moderate potential for significant new residential development within the reach, particularly at the downstream end of the reach.

---

#### Public Access

Public access to this reach is available at the Lyre River Campground, and along Lyre River Road.

---

#### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Highway 112 crosses the river within the reach. The lower portion of the reach is channelized through a private campground.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.

---



## Lyre River: Reach 2

### SHORELINE LENGTH

1.3 Miles

### REACH AREA

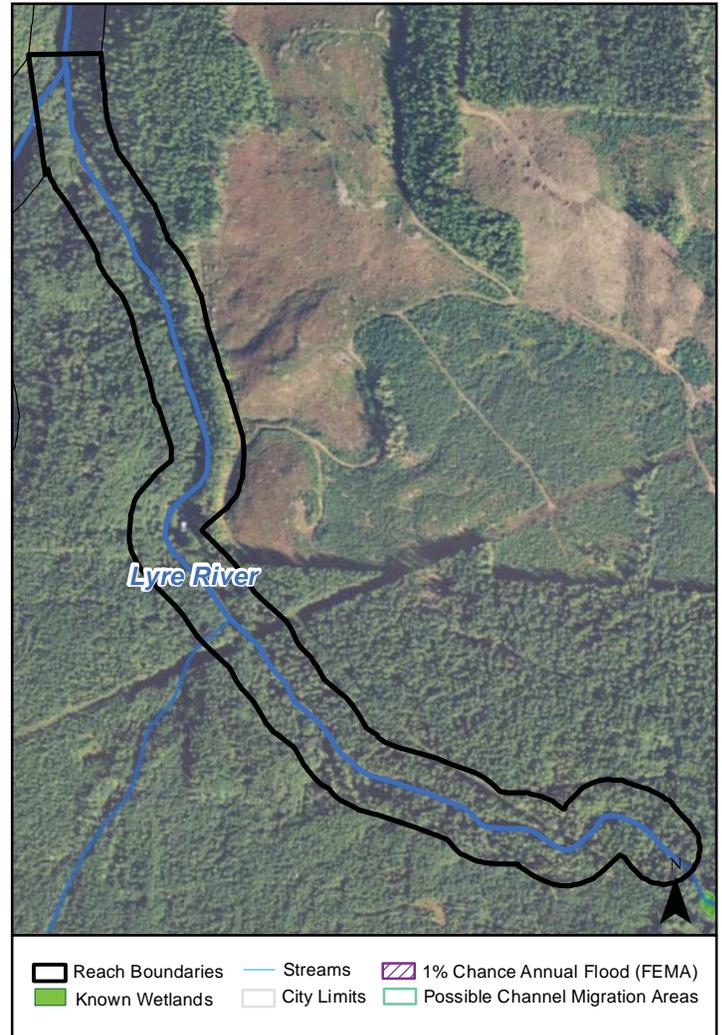
61.74 Acres

### REACH SUMMARY

Reach 2 of the Lyre River extends from the Boundary Creek confluence to just below Lake Crescent. The reach area is almost entirely covered by continuous forest habitat. The reach provides habitat for cutthroat and rainbow trout. A series of cascades and falls located at RM 2.7 prevent upstream migration and spawning of salmon and steelhead in this reach.

The majority of the reach is located on public forest land (DNR and Olympic National Forest). Some private timber parcels are located near the confluence of June Creek and in the southeastern portion of the reach. The lower half of the reach lies in a geologically unstable zone, and is susceptible to erosion.

Under current zoning regulations, the majority of the reach is publically owned and cannot be subdivided. Privately owned timber lands in the reach are not eligible for subdivision.



### PHYSICAL

#### Channel Configuration

The upper Lyre River originates from Lake Crescent before flowing north and west along a mostly straight and narrow stream corridor, surrounded by steep mountain slopes.

#### Hazard Areas

Potential erosion areas are mapped in the north half of the reach (53%).

### ECOLOGY

#### Riparian Vegetation

91% of the reach zone contains dense forest habitat while 7% of the reach contains herb and shrub habitat.

#### Habitats and Species

There is no priority wildlife habitat mapped within the reach

This reach provides habitat for resident cutthroat and rainbow trout, and spawning habitat for Beardslee trout.

#### Water Quality

The downstream portion of the Lyre River within the reach has a State impaired water quality listing for temperature. River water quality within the reach is listed by Streamkeepers as "compromised" for B-IBI and WQI.

## Lyre River: Reach 2

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (98%) and open space (2%).  
Land ownership in the reach is 80% public and 20% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (98%) and parks/public land (2%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Public lands are located throughout the reach, but there are no formal public access areas available.

---

#### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

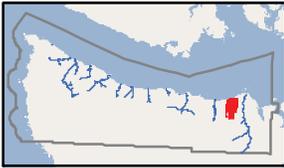
#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

One structure, a historic railroad corridor for logging, is inventoried for historic significance but determined to be not eligible for listing.



# McDonald Creek

**SHORELINE LENGTH**  
7.6 Miles

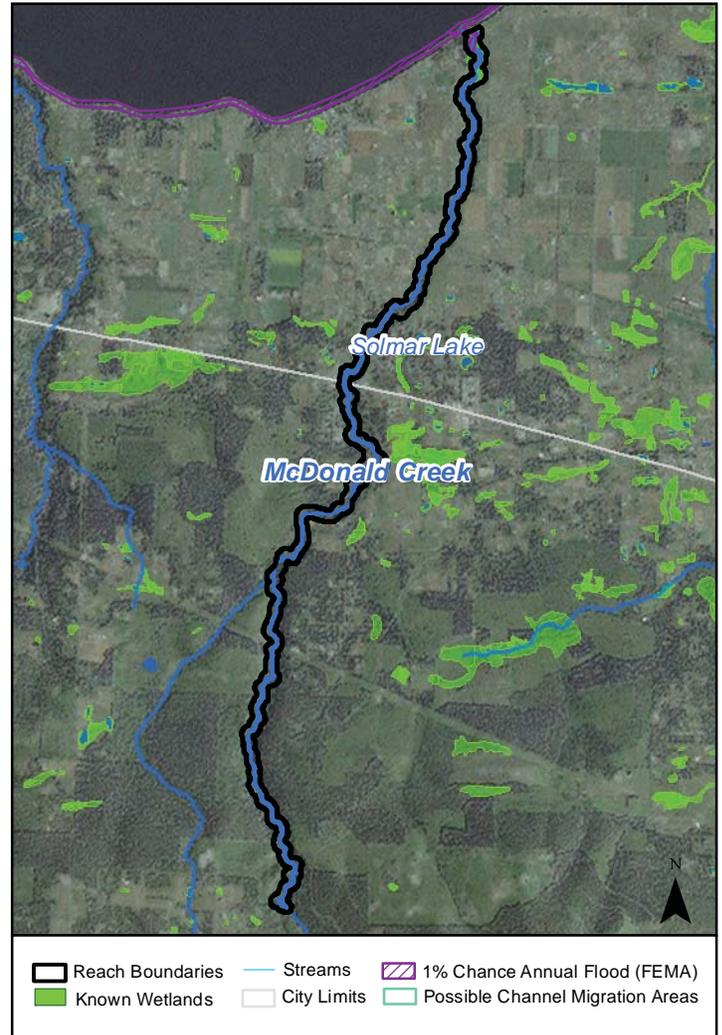
**REACH AREA**  
415.31 Acres

## REACH SUMMARY

The reach extends from near the mouth upstream to Gellor Road. McDonald Creek flows fairly straight, and is located within a deep ravine. The lands within the reach are predominantly forested. McDonald Creek is utilized as a conveyance for a portion of the Dungeness irrigation system; Dungeness River water is put into the creek at RM 5, and withdrawn downstream at RM 2. The Creek provides spawning habitat for steelhead and coho salmon, and the reach provides habitat for bald eagle, peregrine falcon, and wood duck.

The upper portion of the reach consists primarily of publically owned timber land managed by DNR. Low- to moderate-density development surrounds the lower portion of the reach, but forest cover within the riparian corridor is largely intact. Erosion and landslide areas are mapped along the stream channel for most of its extent. However, these hazard areas are generally confined to the creek's forested riparian corridor on undeveloped land.

Under current zoning regulations, approximately 20% of the reach has potential for new residential development (1 to 5 acre lots). However, the presence of the steep canyon likely precludes development within the reach area.



## PHYSICAL

### Channel Configuration

McDonald Creek flows fairly straight, and is located within a deep ravine.

### Hazard Areas

Several stream banks and surrounding areas are unstable with potential for erosion (16%) and slides (75%). Areas for potential erosion are mapped in isolated areas in the east and west. Slide hazard areas are mapped throughout the reach length. Most of the northern portion of the reach is located in the tsunami hazard zone (1%) and the FEMA 100-year floodplain (1%).

## ECOLOGY

### Riparian Vegetation

87% of the reach zone contains forest habitat while 4% of the reach supports herb and shrub habitat. An additional 8% of the reach is lawn/landscaping.

### Habitats and Species

4% of the reach is identified as wetland habitat, primarily located in the northern portion of the reach. Designated priority habitats mapped within the reach include bald eagle (8%), peregrine falcon (21%), and wood duck (10%).

This reach provides spawning habitat for steelhead trout (52%) and coho salmon (70%).

### Water Quality

The reach has no State impaired water quality listings. Water quality of the creek is listed by Streamkeepers as "compromised" for B-IBI but "healthy" for WQI.

# McDonald Creek

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is residential (44%), timber (35%), vacant (10%), open space (8%), roads (2%), unknown (1), and agriculture (trace). Residential land is located in the north half of the reach, while timber is located in the south. Land ownership in the reach is 74% private and 26% public.

---

### Zoning and Parcel Data

The reach is zoned for rural residential (79%) and commercial forestry (21%).

Under current zoning regulations there is moderate potential for significant new residential development within the reach.

---

### Public Access

Undeveloped, informal public access to the creek is available along Sherburne Rd. The Olympic Discovery Trail crosses the creek between Highway 101 and Old Olympic Highway.

---

### Impervious Surfaces

Approximately 3% of the reach is covered by impervious surfaces.

---

### Shoreline Modifications

There are two road crossings over the stream (Old Olympic Highway and Highway 101).

---

### Contaminated Sites

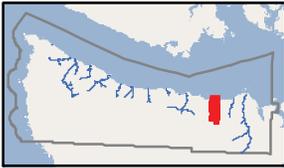
No identified contaminated sites are located within the reach. Underground storage tanks are being monitored at the McDonald Creek Store located in the central portion of the reach along U.S. Highway 101.

---

### Cultural Resources

The Gene Pogue Farm (barn structure built in 1939) is listed on the State Registry of Heritage Barns.

---



# Morse Creek

## SHORELINE LENGTH

9.2 Miles

## REACH AREA

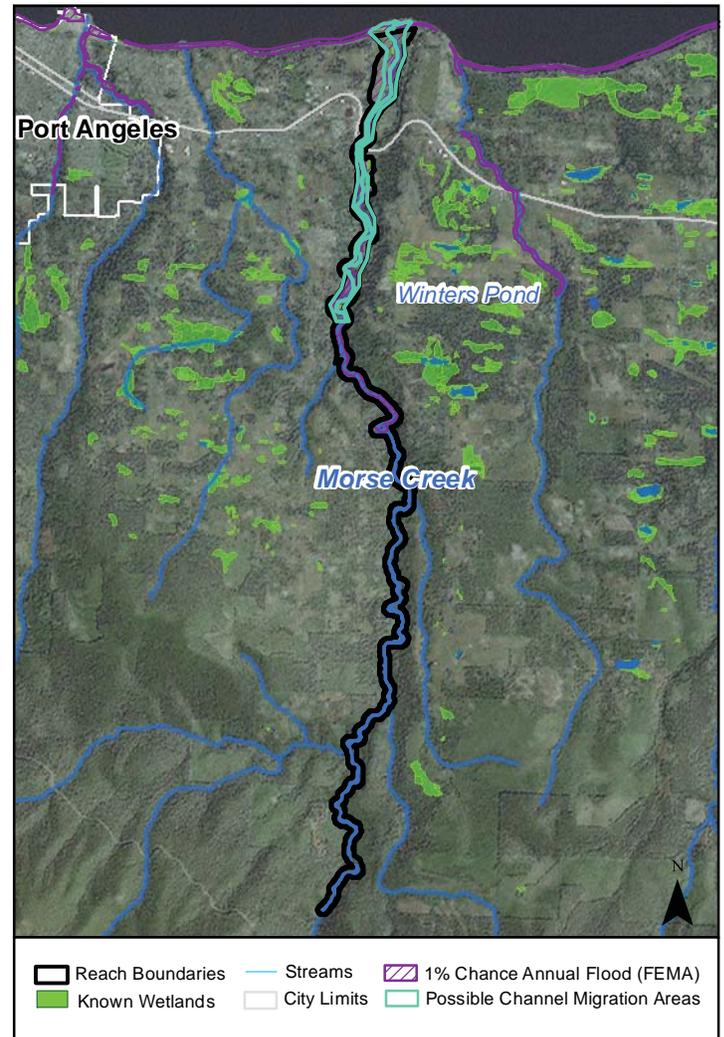
551.53 Acres

### REACH SUMMARY

The reach extends from near the creek mouth to the boundary of Olympic National Park. Below the park, the creek is generally confined in a ravine-like canyon, but below approximately RM 1.7 the valley broadens into a relatively wide, low-gradient floodplain. The upper portion of the reach is largely forested, but forest cover decreases downstream in the developed areas. Morse Creek provides spawning habitat for steelhead, and Chinook, chum, coho, and pink salmon. In addition, the presence of bull trout, residential cutthroat, and rainbow trout are identified in the creek. The reach also provides habitat for wood duck and harlequin duck.

Land use in the upper portion of the reach is primarily low- to moderate- density residential, with some commercial timber parcels. Higher density residential development is present in the reach downstream from approximately RM 3.0. Much of the upper portion of the reach lies within erosion and landslide hazard areas. Channel migration zones and mapped flood hazard areas are present in the lower portion of the reach. Many homes are present within these hazard areas.

Under current zoning regulations, almost half of the reach area has potential for new residential development. The undeveloped land is distributed throughout the reach. The undeveloped parcels vary in size, but most could be subdivided into 2 or 5 acre residential lots. Many of the undeveloped lots lie within identified geologic, flooding, and/or channel migration hazard areas.



### PHYSICAL

#### Channel Configuration

Within the reach, the creek is generally confined in a ravine-like canyon, but below approximately RM 1.7 the valley broadens into a relatively wide, low-gradient floodplain, but the channel was historically channelized.

#### Hazard Areas

Potential erosion areas are mapped along the central portion of the reach (26%) with slide areas mapped throughout the southern extent of the reach (41%). The northern portion of the reach lies within a tsunami hazard zone (8%) and within the channel migration zone (41%). Portions of the reach lie within the FEMA 100-year floodplain (33%).

### ECOLOGY

#### Riparian Vegetation

72% of the reach areas is contains forest habitat while 12% of the reach contains herb and shrub habitat. An additional 9% of the reach is lawn/landscaping.

#### Habitats and Species

4% of the reach is identified as wetland habitat, primarily located in the northern portion of the reach. Designated priority habitats within the reach include harlequin duck (21%) and wood duck (1%).

This reach provides spawning habitat for steelhead trout (47%) and Chinook (41%), chum (59%), coho (98%), and pink salmon (96%). The presence of bull trout, resident cutthroat and rainbow trout are also mapped within the reach.

#### Water Quality

The reach has no State impaired water quality listings. Water quality of the creek is listed by Streamkeepers as "compromised" for B-IBI but "healthy" for WQI.

## Morse Creek

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is residential (28%), open space (25%), timber (19%), utilities (18%), vacant (6%), and roads (5%). Open space is located in the northern portion of the reach while residential is located through the middle portion of the reach. Utilities are located in the south. Land ownership in the reach is 80% private and 17% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (79%) and commercial forestry (21%).

Under current zoning regulations there is high potential for significant new residential development within the reach, particularly in the lower third of the reach.

---

#### Public Access

Just upstream from Highway 101 is a publically owned and accessible WDFW-managed parcel of land. The mouth of the creek can be accessed via the Olympic Discovery Trail.

---

#### Impervious Surfaces

Approximately 10% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Several levee sections border the stream channel near the mouth, and the lower 1.2 miles of the creek was historically channelized. Highway 101 crosses the stream near the mouth.

---

#### Contaminated Sites

No identified contaminated sites are located within the reach.

---

#### Cultural Resources

One structure, the abutments for the Old Morse Creek Bridge (built 1931), is inventoried for historic significance but not listed.



# North Branch Herman Creek

## SHORELINE LENGTH

1.1 Miles

## REACH AREA

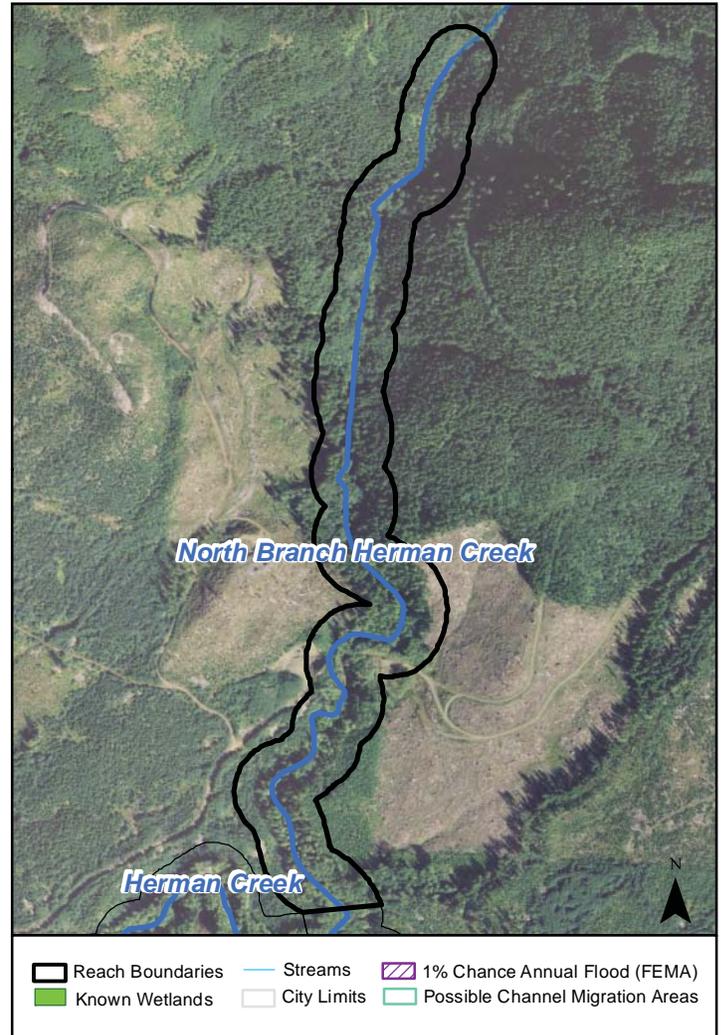
56.94 Acres

### REACH SUMMARY

The reach extends from the Herman Creek confluence to approximately 1.8 miles upstream. The stream profile in the upper portion of the reach is relatively straight and trends generally south. The channel becomes more sinuous by middle reach and by the lower reach the stream contains several meanders. Vegetative cover in the reach consists primarily of dense forest cover, with some herb and shrub habitat located in the lower portion of the reach. The reach provides habitat for coho salmon and steelhead trout.

The reach contains timber lands, both publically and privately owned. Many of the stream banks and surrounding areas are unstable. Geologic hazard areas for erosion and slides extend through the upper and lower portions of the reach, respectively.

All of the land within the reach is zoned for commercial timber. Under current zoning regulations, approximately one-quarter of the reach has potential for residential development, but at a density no greater than 1 dwelling per 80 acres. Actual development potential is low.



### PHYSICAL

#### Channel Configuration

The stream profile in the upper portion of the reach is relatively straight and trends generally south. The channel becomes more sinuous by middle reach and by the lower reach the stream contains several meanders.

#### Hazard Areas

Many stream banks and surrounding areas are unstable (76%) with potential for slides mapped in the central and northern reach areas. Potential erosion areas are mapped at the Herman Creek confluence (14%).

### ECOLOGY

#### Riparian Vegetation

91% of the reach area contains forest habitat, while 9% of the reach contains herb and shrub habitat.

#### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

The presence of steelhead trout and coho salmon is mapped within the reach.

#### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers water quality data available for North Branch Herman Creek.

## North Branch Herman Creek

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership in the reach is 52% and 48% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Public lands are located in the northern portion of the reach, but no public access is available.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

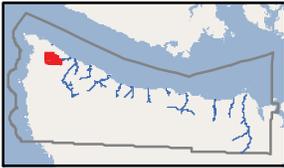
#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# North Fork Sekiu River

## SHORELINE LENGTH

5.2 Miles

## REACH AREA

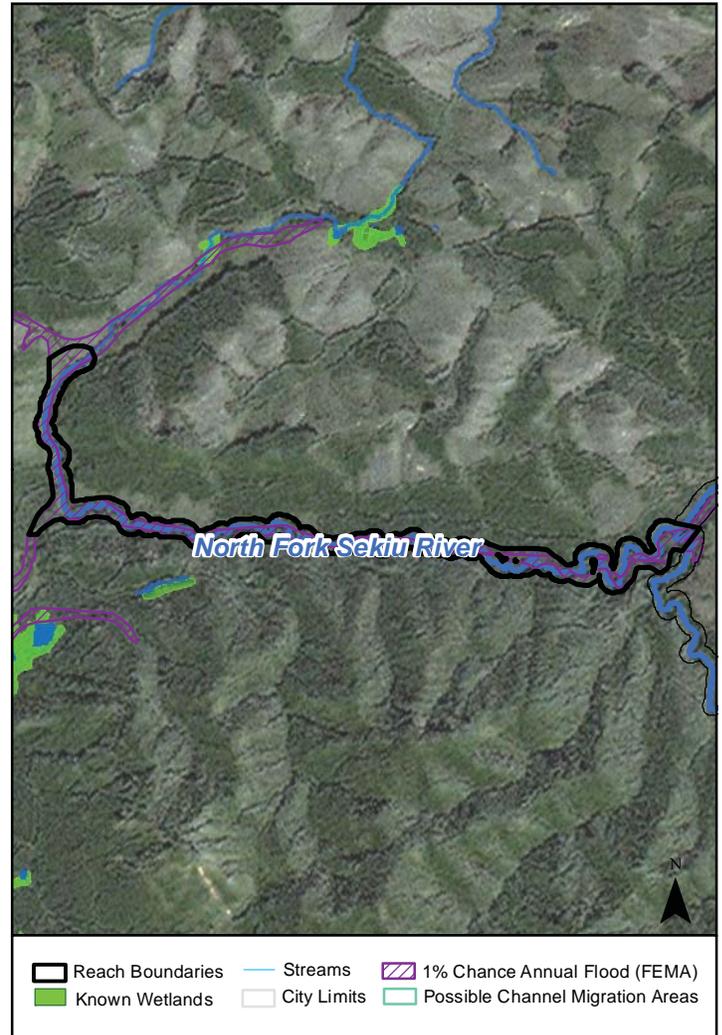
282.02 Acres

### REACH SUMMARY

The reach extends from the confluence with the Sekiu River to approximately 4.6 miles upstream. In the upper portion of the reach, the river is characterized by a relatively straight channel. The channel becomes increasingly sinuous and meandering downstream before its confluence with the mainstem Sekiu. The majority of the reach contains dense forest habitat. The reach supports spawning and rearing habitat for Chinook, coho, and chum salmon, as well as steelhead trout.

The upper and lower portions of the reach are primarily privately owned commercial timber lands. The middle reach contains public forest lands managed DNR. Much of the reach is located within the FEMA 100-year floodplain. Geologic hazard areas for erosion and land slides are located throughout the reach, but are concentrated in the upper and lower portions of the reach.

Under current zoning regulations, approximately two-thirds of the reach area has the potential for new residential development, but at a density no more than 1 dwelling per 80 acres. Developable lands are located in flood and/or geologic hazard areas. Actual development potential within the reach is low.



### PHYSICAL

#### Channel Configuration

In the upper portion of the reach, the river is characterized by a relatively straight channel. The channel becomes increasingly sinuous and meandering downstream before its confluence with the mainstem Sekiu.

#### Hazard Areas

Potential erosion areas are mapped in isolated pockets extending east to west within the reach (10%). Slide areas are mapped through the east and extending southeast to southwest through the reach (44%). Most of the reach is located within the FEMA 100-year floodplain (56%) and a channel migration zone (49%)

### ECOLOGY

#### Riparian Vegetation

77% of the reach zone contains forest habitat, while 16% of the reach contains herb and shrub habitat.

#### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for steelhead trout (93%) and Chinook (100%), chum (1%), and coho salmon (100%). The presence of resident cutthroat is also mapped within the reach.

#### Water Quality

The portion of the North Fork Sekiu River within the reach has a State impaired water quality listing for temperature. River water quality is listed by Streamkeepers as "compromised" for B-IBI.

## North Fork Sekiu River

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership in the reach is 80% private and 20% public.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Public lands are located in the central portion of this reach.

Undeveloped informal public access is available from Sekiu River Road.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Old Royal Creek

**SHORELINE LENGTH**  
0.4 Miles

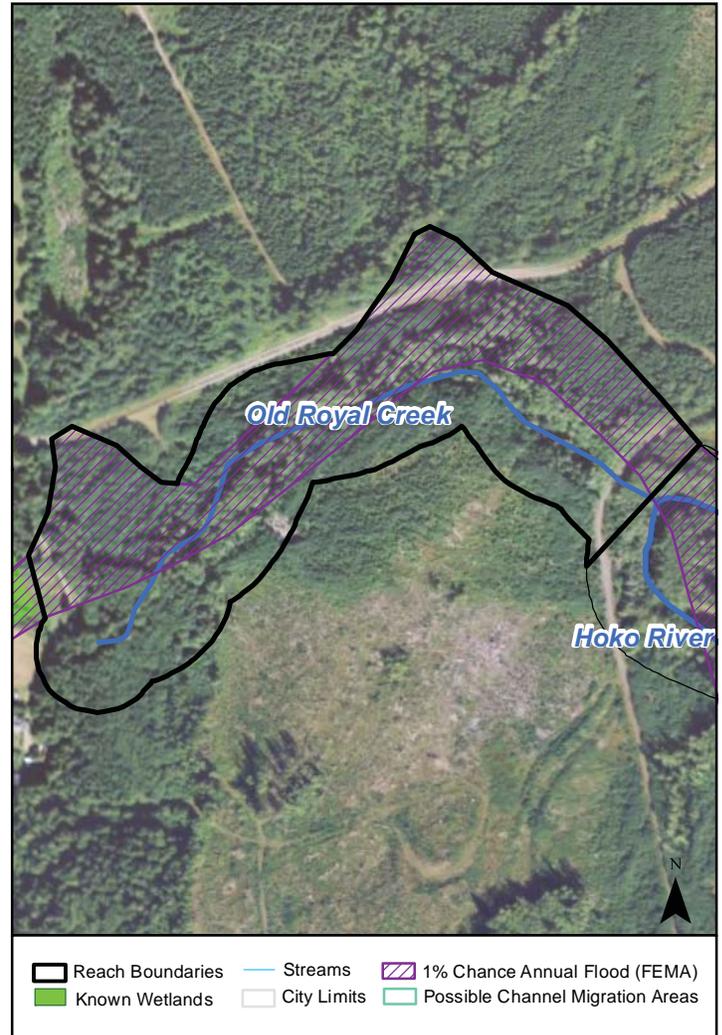
**REACH AREA**  
30.32 Acres

## REACH SUMMARY

The reach extends from the Hoko River confluence to approximately 0.4 miles upstream. The majority of the reach area is located within the FEMA 100-year floodplain. The reach is covered by contiguous forest cover. Old Royal Creek provides habitat for coho salmon and steelhead trout.

Low-density residential development is located in the upper portion of the reach, but most structures are located outside the reach boundary. The middle and lower portions of the reach contain commercial timber lands.

Under current zoning regulations, approximately one-third of the reach has the potential for moderate- to low-density residential development. Two-thirds of the reach are zoned for commercial timber land and are currently not eligible for subdivision. Developable lands are located within the mapped flood hazard area.



## PHYSICAL

### Channel Configuration

No data

### Hazard Areas

Several stream banks and surrounding areas are unstable (13%) with potential for slides mapped at the confluence between Old Royal Creek and Hoko River. Most of the Old Royal Creek and Hoko River confluence is part of the FEMA 100-year floodplain (55%).

## ECOLOGY

### Riparian Vegetation

80% of the reach area contains continuous forest habitat, while 5% of the reach contains herb and shrub habitat. An additional 7% of the reach consists of lawn/landscaping.

### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

The presence of steelhead trout and coho salmon is mapped within the reach.

### Water Quality

The portion of Old Royal Creek within the reach has a State impaired water quality listing for temperature. There are no Streamkeepers water quality data available for the creek.

## Old Royal Creek

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (83%) and residential (16%). Timber land is located in the eastern portion of the reach while residential lands are located in the south west.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (35%) and commercial forestry (65%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are private.

---

#### Impervious Surfaces

No impervious surface is mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Pysht River: Reach 1

**SHORELINE LENGTH**  
1.9 Miles

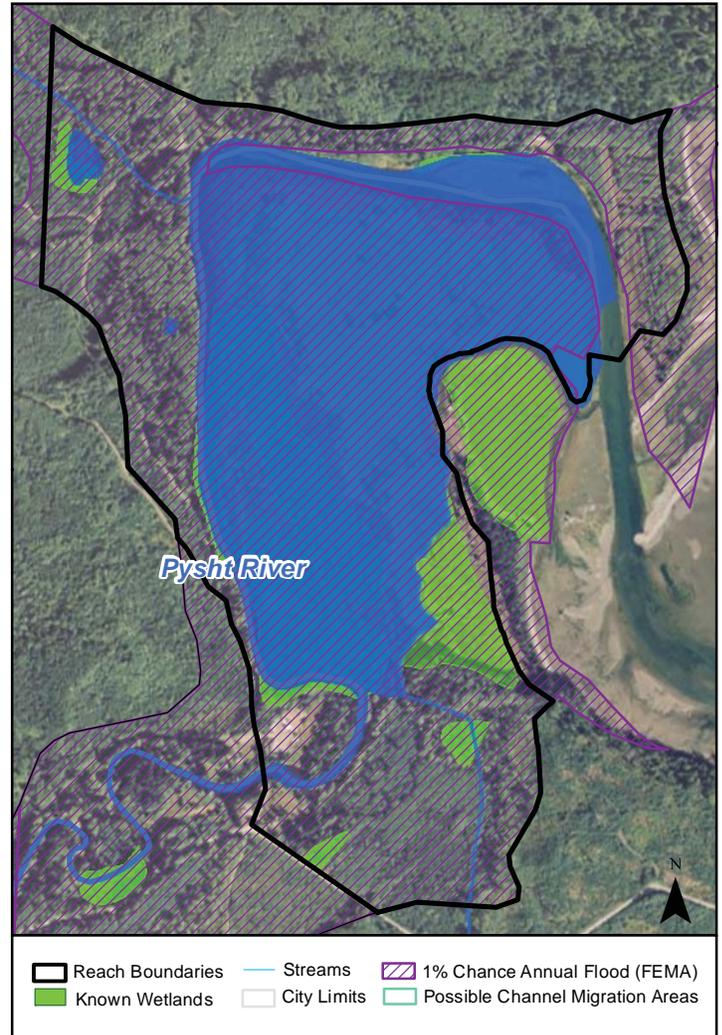
**REACH AREA**  
426.86 Acres

## REACH SUMMARY

Reach 1 of the Pysht River extends from near the river mouth upstream approximately 2 miles, and encompasses the large, flat alluvial floodplain complex. The channel profile through the reach is sinuous, and contains a series of wide meanders and several side channels that braid and join the mainstem near its mouth. Most of the river channel within the reach is constrained by levees. The stream corridor is bordered by a thin, but dense stand of forest cover, and patches of herb and shrub habitat. The reach provides habitat for Chinook, chum, and coho salmon, in addition to steelhead and resident cutthroat trout. In addition, the reach supports breeding populations of bald eagle and waterfowl concentrations. Tidal and estuarine influence extends upstream through the reach.

The majority of the reach contains commercial forest lands. The northern portion of the reach contains limited rural residential development. The reach is situated within a tsunami hazard zone and the FEMA 100-year floodplain. Geologic hazard areas for erosion and slides are located in the eastern portion of the reach.

The majority of the Pysht River estuary is protected in a conservation easement. A lesser portion of the reach area has the potential to be subdivided for new residential development. However, much of this land is zoned for commercial forestry, which only allows 1 residence per 80 acres. Most of the developable land is located in tsunami and/or flood hazard areas. The significant presence of wetland habitat within the reach may preclude development in many areas.



## PHYSICAL

### Channel Configuration

The lower Pysht River is characterized by long sweeping meanders that flow across a broad alluvial floodplain.

### Hazard Areas

Potential erosion areas are mapped in the west (7%) along with slide areas (3%). Most of the reach lies within a tsunami hazard zone (64%), the FEMA 100-year floodplain (100%), and a channel migration zone (84%).

## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 25% of the reach contains forest habitat while 13% contains herb and shrub habitat. Outlying the stream corridor vegetation is comprised mostly of forest habitat intermixed with patches of herb and shrub habitat.

### Habitats and Species

42% of the reach is identified as wetland habitat, concentrated throughout the central portion of the reach and along the Pysht River. Designated priority habitats mapped within the reach include bald eagle (68%), waterfowl concentration (52%), and estua

This reach provides spawning habitat for steelhead trout (50%) and coho salmon (8%), and juvenile rearing habitat for Chinook (5%) and coho salmon (92%). The presence of resident cutthroat and chum salmon are also mapped within the reach.

### Water Quality

The reach has no State impaired water quality listings. Pysht River water quality within the reach is listed by Streamkeepers as "compromised" for both B-IBI and WQI.

# Pysht River: Reach 1

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is timber (73%), residential (14%), vacant (13%), and roads (trace). Timber lands are located in the western half of the reach while residential and vacant lands are located in the northeast and southeast portion of the reach, respectively. Land ownership in the reach is 100% private.

---

### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

### Impervious Surfaces

Approximately 1% of the reach is covered by impervious surfaces.

---

### Shoreline Modifications

The river channel is constrained by levees throughout most of the reach, and was historically hydromodified to accommodate log transport.

---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources

There are 7 inventoried pre-contact sites, as well as 1 inventoried historic site – the Pysht River log camp of Merrill and Ring (historic logging use from 1916 to 1944). There are no registered sites.



## Pysht River: Reach 2

**SHORELINE LENGTH**  
5.5 Miles

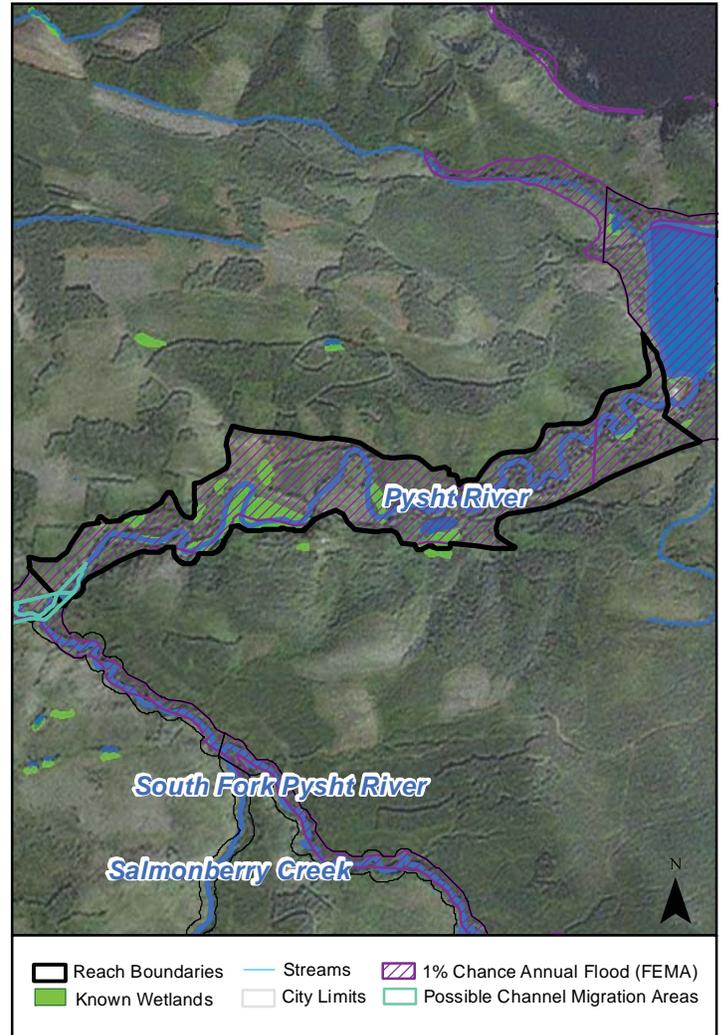
**REACH AREA**  
775.65 Acres

### REACH SUMMARY

Reach 2 of the Pysht River extends from the Pysht River Road Bridge to the South Fork Pysht River confluence. The river channel within the reach is highly sinuous and meandering. The river is bounded by State Highway 112 that runs parallel to the stream through much of the reach, and functions as a lateral barrier between the river and its natural floodplain. Vegetation through the reach is a mixture of dense forest cover and herb and shrub habitat. A number of anadromous fish including Chinook, chum, and coho salmon, as well as steelhead trout utilize the reach for spawning and rearing. The reach supports breeding populations of bald eagles.

Low-density residential development and commercial forest lands are located in the majority of the reach. Portions of the lower reach are located in the tsunami hazard area. The majority of the reach is located in the FEMA 100-year floodplain, while geologic hazard areas for erosion and slides are located in the upper portion of the reach. Several residential developments are currently located in flood, geologic, and/or tsunami hazard areas.

Under current zoning regulations, approximately a third of the reach area has the potential to be subdivided for moderate- to low-density residential development. Most of the developable land is located in flood, geologic, and/or the tsunami hazard areas.



### PHYSICAL

#### Channel Configuration

This reach of the Pysht River is characterized by several large, well defined, sweeping meanders that flow across a broad, low gradient floodplain.

#### Hazard Areas

Potential erosion areas are mapped in the southern portion of the reach (5%), along with slide areas (4%). The western portion of the reach is located in a tsunami hazard zone (4%). Most of the reach is located within the FEMA 100-year floodplain (97%) and a channel migration zone (58%).

### ECOLOGY

#### Riparian Vegetation

Within 300 feet of the stream, 37% of the reach zone contains forest habitat while 12% contains herb and shrub habitat. Outlying the stream corridor vegetation is comprised mostly of a mix of forest and herb and shrub habitat.

#### Habitats and Species

10% of the reach is identified as wetland habitat, located in patches throughout the reach. The designated priority habitat mapped within the reach is bald eagle (11%).

This reach provides spawning habitat for steelhead trout (100%) and Chinook (93%), and chum salmon (82%), and juvenile rearing habitat for Chinook (7%) and coho salmon (100%). The presence of resident cutthroat are also mapped within the reach.

#### Water Quality

The upstream and middle portions of the Pysht River within the reach has State impaired water quality listings for temperature. River water quality within the reach is listed by Streamkeepers as "compromised" for both B-IBI and WQI.

## Pysht River: Reach 2

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (59%), vacant (30%), residential (7%), roads (4%), and agriculture (trace). Timber land is located in the east while vacant and residential lands are located in the northwest portion of the reach. Land ownership in the reach is 98% private and 2% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (12%) and commercial forestry (88%).

Under current zoning regulations there is moderate potential for significant new residential development within the reach.

---

#### Public Access

No developed public access is available within this reach. A small portion of public shorelines can be informally accessed from Highway 112.

---

#### Impervious Surfaces

Approximately 4% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Highway 112 runs parallel to the Pysht River within the reach, which blocks access to its floodplain.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.

---



## Pysht River: Reach 3

**SHORELINE LENGTH**  
1.5 Miles

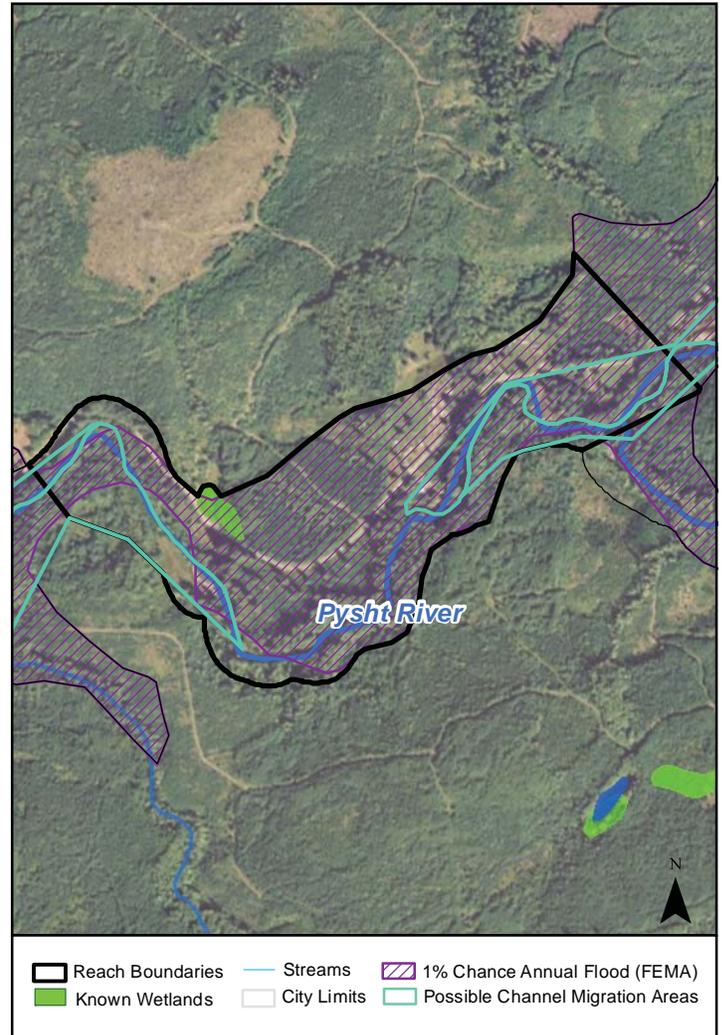
**REACH AREA**  
134.15 Acres

### REACH SUMMARY

Reach 3 of the Pysht River extends from the South Fork Pysht River confluence to approximately 1.5 miles upstream. The river is bordered by Highway 112 to the north, which acts as a barrier between the river and its natural floodplain. Vegetation in the riparian corridor is primarily dense forest cover, intermixed by patches herb and shrub habitat. The reach provides spawning and rearing habitat for Chinook, chum, and coho salmon, in addition to steelhead and cutthroat trout.

Low-density residential development is located in the lower half of the reach, and the upper half contains commercial forest lands. The majority of the reach is situated within the FEMA 100-year floodplain and/or the active channel migration area. Geologic hazard areas for erosion and landslides are located in the southeast and southwest, respectively. Existing residences within the reach are located in the flood and/or channel migration hazard areas.

Under current zoning regulations, approximately one-third of the reach has the potential for new rural residential development. Many of the developable parcels are located in the river's floodplain.



### PHYSICAL

#### Channel Configuration

Channel configuration through this reach consists of large meander bends followed by several long, relatively straight channel segments.

#### Hazard Areas

Several stream banks and surrounding areas are unstable with potential for erosion in the southeast and southwest (5%) and for slides in the south central portion of the reach (7%). Most of the reach lies within a channel migration zone (60%) and in the FEMA 100-year floodplain (84%).

### ECOLOGY

#### Riparian Vegetation

Within 300 feet of the stream, 40% of the reach zone contains forest habitat, 16% contains herb and shrub habitat, and 10% is lawn/landscaping. Outlying the stream corridor, vegetation is comprised mostly of forest habitat intermixed with shrub and herb habitat and lawn/landscaping.

#### Habitats and Species

1% of the reach is identified as wetland habitat, located in the northeastern portion of the reach. There are no priority wildlife habitats mapped within the reach.

This reach provides spawning habitat for steelhead trout (100%) and Chinook (93%), chum (99%), and coho (85%), and juvenile rearing habitat for coho salmon (15%). The presence of resident cutthroat are also mapped within the reach.

#### Water Quality

The downstream portion of the Pysht River within the reach has a State impaired water quality listing for temperature. Additionally, the South Fork Pysht River (confluence) is listed for temperature. Pysht River water quality within the reach is listed a

## Pysht River: Reach 3

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is vacant (47%), timber (34%), residential (14%), and roads (6%). Vacant and residential lands are located in the northern portion of the reach while timber lands are located in the southern and western portions of the reach. Land ownership in the reach is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (57%) and commercial forestry (43%).

Under current zoning regulations there is moderate potential for significant new residential development within the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

#### Impervious Surfaces

Approximately 6% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Highway 112 runs parallel to the Pysht River within the reach, which acts as a barrier between the river and its natural floodplain.

---

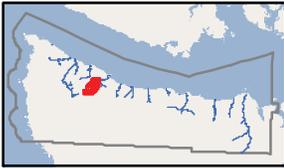
#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Pysht River: Reach 4

**SHORELINE LENGTH**  
5.4 Miles

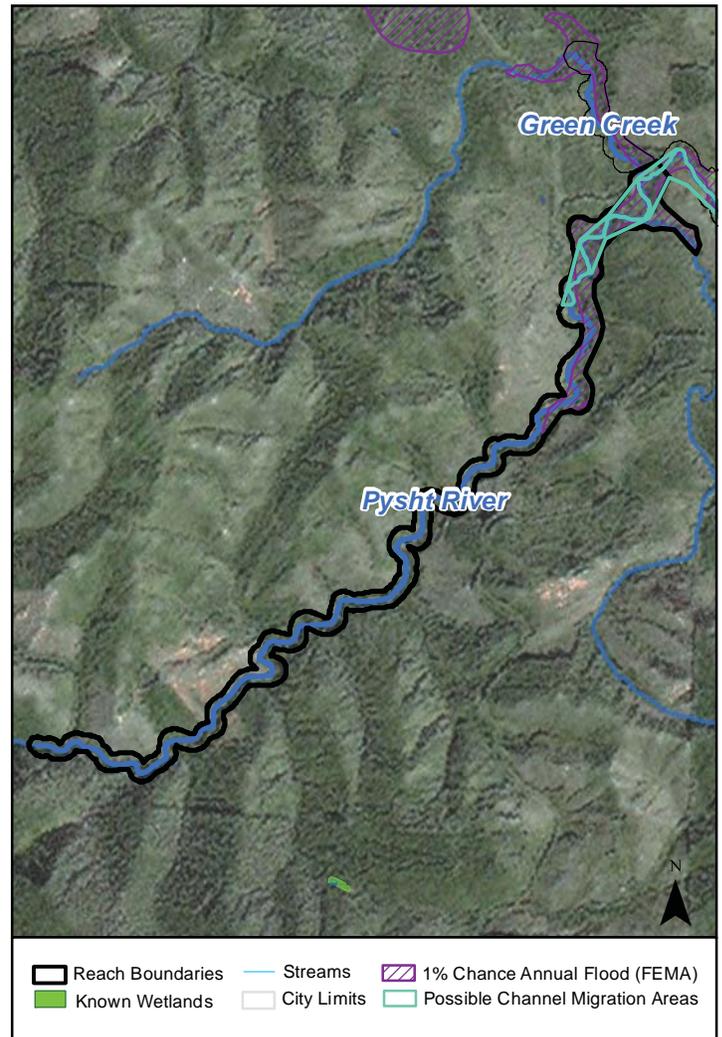
**REACH AREA**  
327.20 Acres

## REACH SUMMARY

Reach 4 of the Pysht River extends from near the Green Creek confluence to approximately 5.4 miles upstream. The river channel within the reach is confined to a narrow floodplain. Contiguous forest cover extends throughout much of the reach. The reach provides spawning and rearing habitat for Chinook, coho, and chum salmon, as well as steelhead and resident cutthroat trout. The reach supports breeding populations of bald eagle.

The majority of the reach consists of commercial forest lands. The lower third of the reach is situated in the FEMA 100-year floodplain and/or channel migration zone. Geologic hazard areas for erosion and landslides are located throughout the upper two-thirds of the reach.

Under current zoning regulations, approximately one-third of the reach has the potential to be subdivided for new residential development. However, much of this land is zoned for commercial forestry, and residential density is limited to 1 dwelling per 80 acres. Developable lands are located within flood, channel migration and/or geologic hazard areas.



## PHYSICAL

### Channel Configuration

The river channel within the reach is confined to a narrow floodplain.

### Hazard Areas

Potential erosion areas are mapped in the east and northeast portions of the reach (39%) along with slide areas in the east and southeast (23%). Much of the eastern portion of the reach is located in a channel migration zone (49%) and in the FEMA 100-year floodplain (31%).

## ECOLOGY

### Riparian Vegetation

86% of the reach zone contains forest habitat, 8% contains herb and shrub habitat.

### Habitats and Species

The designated priority habitat mapped within the reach is bald eagle (8%).

This reach provides spawning habitat for steelhead trout (93%) and Chinook (100%), chum (43%), and coho (100%) salmon, and juvenile rearing habitat for steelhead trout (1%). The presence of resident cutthroat are also mapped within the reach.

### Water Quality

The upstream portion of the Pysht River within the reach has a State impaired water quality listing for temperature. Additionally, Needham Creek (tributary to the Pysht River) is listed for temperature. There are no Streamkeepers water quality data avail

## Pysht River: Reach 4

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (90%), vacant (5%), residential (2%), and roads (2%). Timber lands are located in the western portion of the reach while vacant and residential lands are located in the northeast. Land ownership in the reach is 97% private and 3% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (19%) and commercial forestry (81%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Public lands are located in the southern portion of the reach, but no public access areas are available.

---

#### Impervious Surfaces

Approximately 2% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

Highway 112 crosses the river in the lower portion of the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Royal Creek

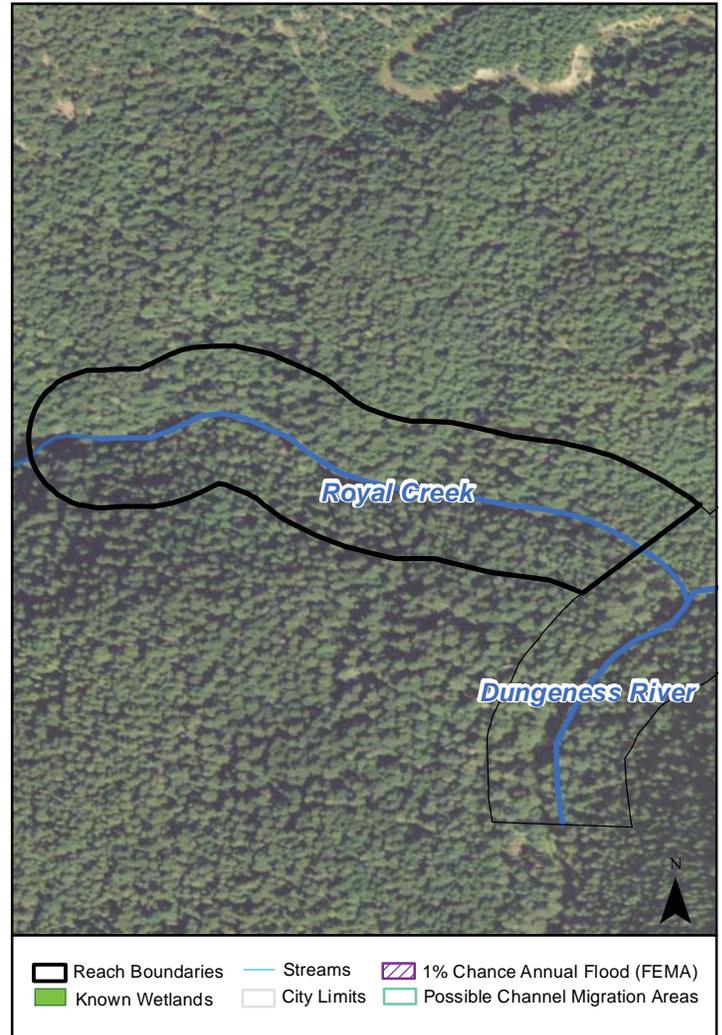
**SHORELINE LENGTH**  
0.3 Miles

**REACH AREA**  
16.85 Acres

## REACH SUMMARY

The reach extends from the Dungeness River confluence to approximately 0.4 miles upstream. Within the reach, the stream channel is relatively confined straight. Vegetation throughout the reach consists of dense forest cover. The reach provides habitat for resident cutthroat and rainbow trout.

The reach is located in Olympia National Forest. It can be accessed via trail, from Forest Service Road 2870.



## PHYSICAL

### Channel Configuration

Within the reach, the stream channel is relatively confined and straight.

### Hazard Areas

No potential erosion or slide areas were mapped within this reach.

## ECOLOGY

### Riparian Vegetation

100% of the reach contains continuous forest habitat.

### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

The presence of resident cutthroat and rainbow trout are mapped within the reach.

### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers water quality data available for the creek.

# Royal Creek

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land ownership in the reach is 100% public (Olympic National Forest).

---

### Zoning and Parcel Data

The reach is zoned for commercial forestry (91 %) and parks / public land (9%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

### Public Access

The reach can be accessed via trail from Forest Service Road 2870

---

### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources

There are no inventoried sites within the reach.



# Salmonberry Creek

## SHORELINE LENGTH

1.1 Miles

## REACH AREA

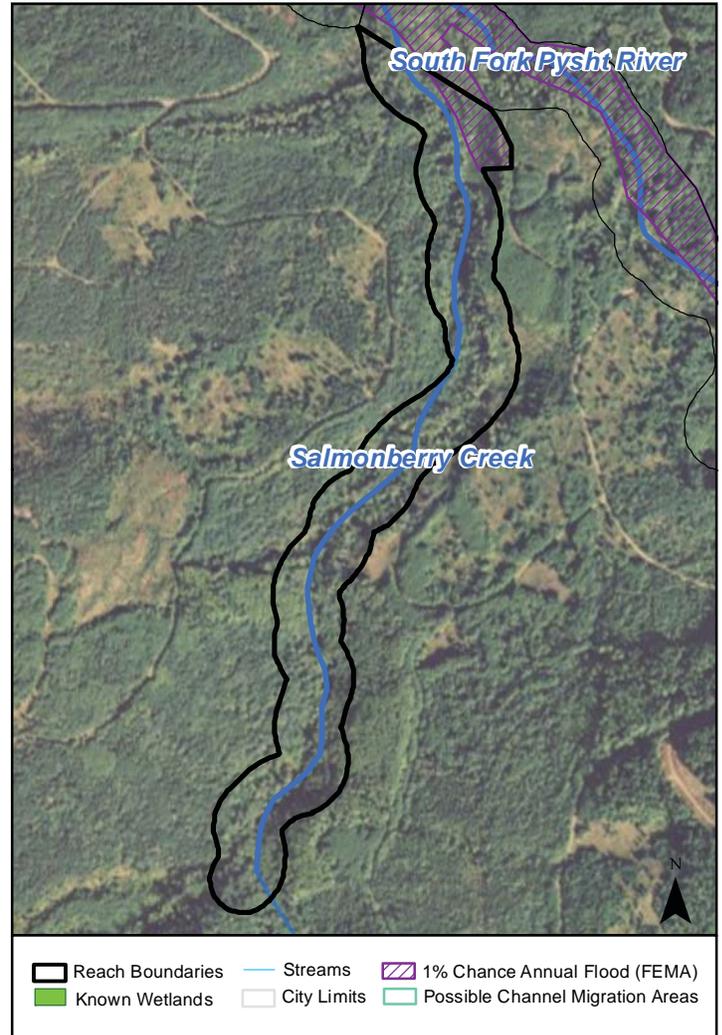
56.42 Acres

### REACH SUMMARY

The reach extends from the South Fork Pysht River confluence to approximately 1.1 miles upstream. Within the reach, the channel is relatively narrow and confined. Vegetation along the stream corridor is primarily forest cover, with patches of herb and shrub habitat. The reach provides spawning and rearing habitat for coho salmon, in addition to steelhead and resident cutthroat trout.

The reach consists entirely of commercial forest lands. The lower portion of the reach lies within the FEMA 100-year floodplain. Geologic hazard areas for erosion and slides are located through the lower and upper portions of the reach, respectively.

All of the land within the reach is zoned for commercial timber. Under current zoning regulations, most of the parcels are subdividable and could be developed with residences, but at a density no greater than 1 dwelling per 80 acres. Developable areas within the reach lie within flood and/or geologic hazard areas. Actual development potential in the reach is low.



### PHYSICAL

#### Channel Configuration

Within the reach, the channel is relatively narrow and confined.

#### Hazard Areas

Several stream banks and surrounding areas are unstable within the reach. Potential erosion areas are mapped in the northern portion of the reach (61%) while slide areas were mapped in the southern portion (38%). Portions of the reach are located within the FEMA 100-year floodplain (5%).

### ECOLOGY

#### Riparian Vegetation

82% of the reach zone contains dense forest habitat, while 18% of the contains herb and shrub vegetation communities.

#### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for coho salmon (100%). The presence of resident cutthroat and steelhead trout are also mapped within the reach.

#### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers water quality data available for the creek.

## Salmonberry Creek

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership in the reach is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the creek are privately owned.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# Salt Creek: Reach 1

**SHORELINE LENGTH**  
0.8 Miles

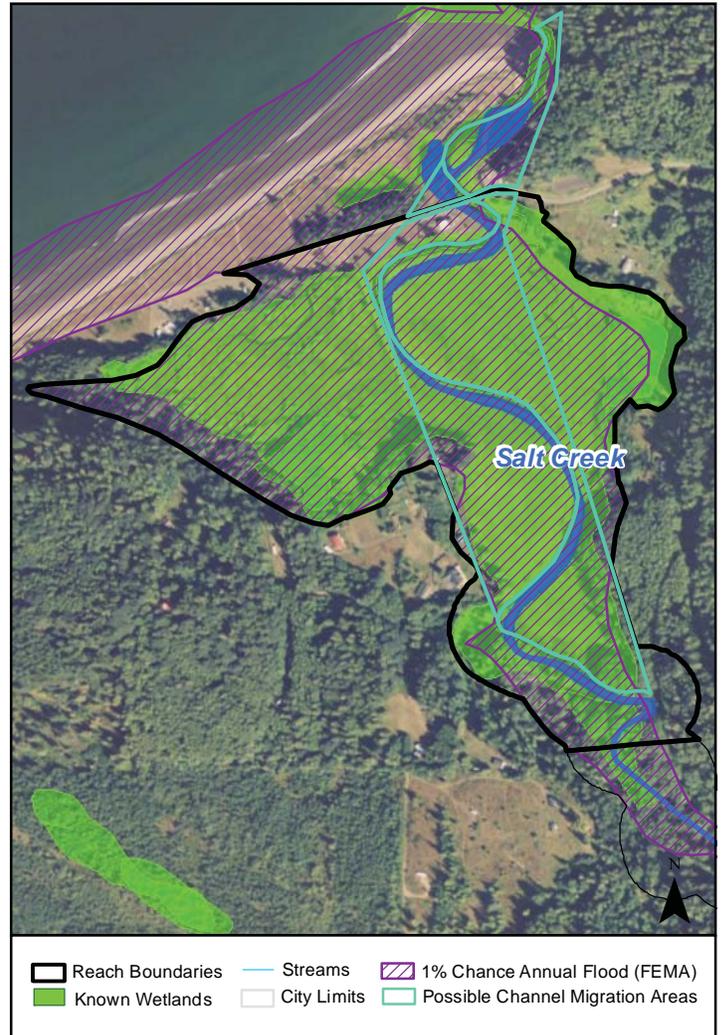
**REACH AREA**  
87.14 Acres

## REACH SUMMARY

Reach 1 of Salt Creek extends from near the mouth to approximately 0.65 miles upstream. The channel profile through the reach is highly sinuous, with several side channels joining the mainstem near the mouth. Vegetative cover throughout the reach is mostly herb and shrub habitat, bordered in places by riparian forest. Wetland (salt marsh) habitat extends across the floodplain. The reach provides habitat for coho, chum and Chinook salmon, as well as steelhead, cutthroat, and rainbow trout. The reach supports breeding populations of bald eagle. Several adjacent tributaries have culvert structures, which reduces access to side-channel habitat within the reach.

The majority of the reach area contains rural residential development. Approximately one-third of the land is zoned for commercial forestry and cannot be subdivided. The majority of the reach lies within a tsunami hazard zone, the FEMA 100-year floodplain, and/or identified channel migration areas.

Under current zoning regulations, approximately two-thirds of the reach has the potential for new residential development. Parcel boundaries vary in size and shape, but many have the potential to be subdivided into smaller 2 acre lots. However, the significant presence of wetland habitat within the reach may preclude development in many areas. Most of the subdividable land is located within tsunami, flood, and/or channel migration zone hazard areas.



## PHYSICAL

### Channel Configuration

Reach 1 of Salt Creek meanders northwestward along a narrow valley at the base of Striped Peak before emerging into a large emergent tidal wetland located on a broad alluvial fan at the mouth of Crescent Bay.

### Hazard Areas

Potential erosion areas are mapped in the northwest and southwest portions of the reach (5%) along with slide areas (1%). Most of the reach lies within a tsunami hazard zone (93%) and the FEMA 100-year floodplain (88%). Active channel migration areas are mapped in the eastern portions of the reach (39%),

## ECOLOGY

### Riparian Vegetation

Within 300 feet of the stream, 13% of the reach zone is forest habitat, while 49% of herb and shrub habitat. Outlying the stream corridor, vegetation is comprised mostly of herb and shrub habitat intermixed with some forest habitat.

### Habitats and Species

80% of the reach is identified as wetland habitat. The designated priority habitat mapped within the reach is bald eagle (82%).

This reach provides spawning habitat for steelhead trout (100%) and provides juvenile rearing habitat for coho salmon (100%). The presence of chum salmon and resident cutthroat are also mapped within the reach.

### Water Quality

The reach has no State impaired water quality listings. Creek water quality within the reach is listed by Streamkeepers as "compromised" for both B-IBI WQI.

# Salt Creek: Reach 1

---

## HUMAN ENVIRONMENT AND LAND USE

### Existing Land Use and Ownership

Land usage within the reach is residential (59%), vacant (21%), open space (13%), lodging (5%), and roads (2%). Residential lands are located in the east while vacant lands are located in the west. Open space is located in the southeast. Land ownership in the reach is 100% private.

---

### Zoning and Parcel Data

The reach is zoned for rural residential (80%), rural commercial (4%), commercial forestry / residential mixed use (2%), and parks/public land (14%).

Under current zoning regulations there is low potential for significant new development within the reach. Wetland habitat limits development potential within the reach.

---

### Public Access

All of the land within the reach is privately owned. However, a portion of the reach can be accessed by patrons of an adjacent private campground.

---

### Impervious Surfaces

Approximately 2% of the reach is covered by impervious surfaces.

---

### Shoreline Modifications

A private road bisects the salt marsh, which disconnects the creek from the western portion of its natural estuary. In addition, several culverts are located on tributaries to Salt Creek within the reach boundary.

---

### Contaminated Sites

No identified contaminated sites are located within this reach.

---

### Cultural Resources

There are no inventoried sites within the reach.



## Salt Creek: Reach 2

### SHORELINE LENGTH

4.0 Miles

### REACH AREA

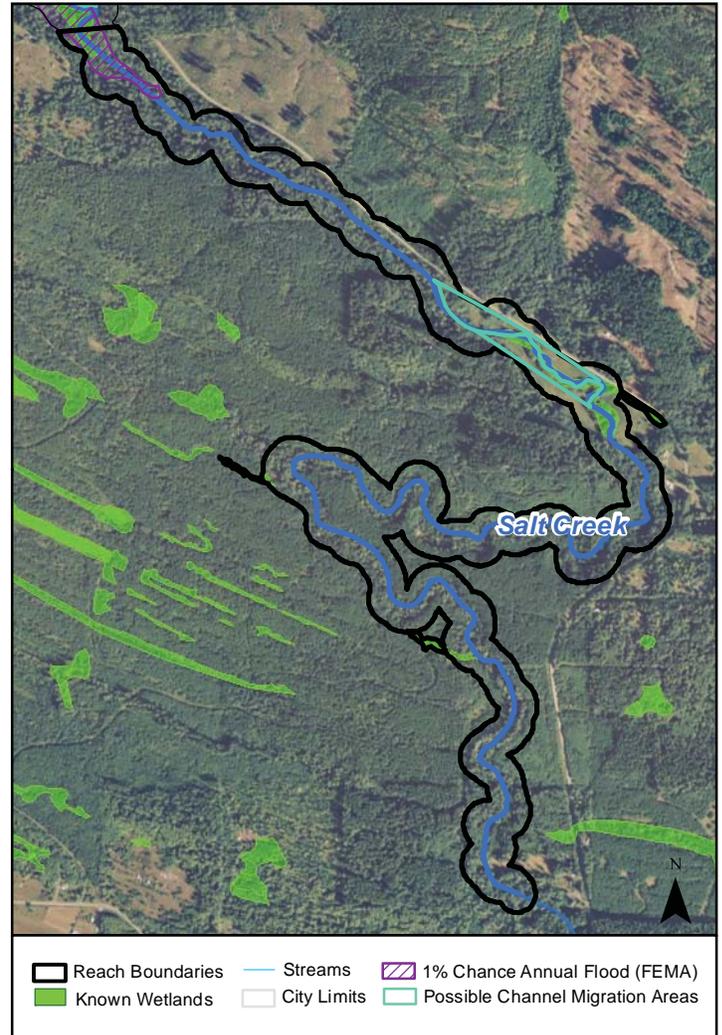
217.89 Acres

### REACH SUMMARY

Reach 2 of Salt Creek extends from the upper portion of its alluvial fan to approximately 0.5 mile downstream of Highway 112. The stream channel within the reach is highly sinuous, and has a low gradient. The reach contains dense forest habitat sparsely intermixed by herb and shrub habitat. Wetlands are located in the lower third of the reach. The reach provides spawning and rearing habitat for coho salmon and steelhead trout, as well as resident cutthroat trout. The reach also provides priority habitat for breeding populations of band-tailed pigeon. A semi-passable dam is located at RM 6.5 which limits upstream fish migration.

The lower third of the reach consists of public forest lands (managed by DNR). The upper two-thirds of the reach are zoned for commercial forestry. The northern portion of the reach is within a tsunami hazard zone, while geologic hazard and slide areas are located in the south. Portions of the reach are located within the FEMA 100-year floodplain and the active channel migration area.

Under current zoning regulations, the commercial forest land in the upper portion of the reach could be subdivided for new residential development, but at a density no greater than 1 dwelling per 80 acres. Actual development potential within the reach is low.



### PHYSICAL

#### Channel Configuration

The upper reach of Salt Creek meanders northwestward throughout a narrow valley.

#### Hazard Areas

Potential erosion areas are mapped in the south (22%) along with slide areas (34%). The northern portion of the reach is located within a tsunami hazard area (11%) and the active channel migration area (6%). Portions of the reach are located in the FEMA 100-year floodplain (23%).

### ECOLOGY

#### Riparian Vegetation

90% of the reach zone is contains forest habitat, while 5% of contains herb and shrub habitat.

#### Habitats and Species

4% of the reach is identified as wetland habitat, primarily located in the northern and central portions of the reach. The designated priority habitat mapped within the reach is band-tailed pigeon (61%).

This reach provides spawning habitat for steelhead trout (100%) and coho salmon (89%), and juvenile rearing habitat for coho salmon (10%). The presence of resident cutthroat is also mapped within the reach.

#### Water Quality

The upstream portion of Salt Creek within the reach has a State impaired water quality listing for temperature, and the downstream portion is listed for dissolved oxygen. Water quality is listed by Streamkeepers as "compromised" for B-IBI but "healthy" f

## Salt Creek: Reach 2

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (52%), roads (23%), residential (11%), open space (8%), and vacant (6%). Timber lands are located in the southern portion of the reach while roads and residential lands are located in the north. Land ownership in the reach is 96% private and 4% public.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (12%), rural mixed use (15%), commercial forest / residential mixed use (32%), commercial forestry (29%), and parks/public land (12%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

#### Impervious Surfaces

Approximately 2% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

A semi- fish-passable dam is located at RM 6.5 which limits upstream fish migration.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.

---



# Sekiu River

## SHORELINE LENGTH

5.7 Miles

## REACH AREA

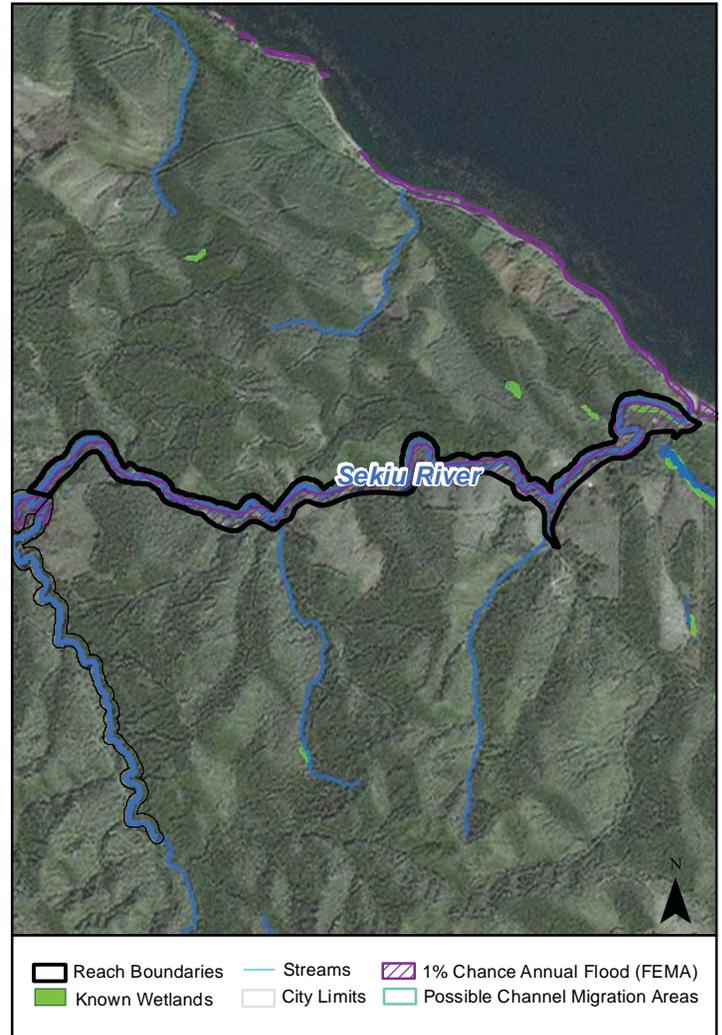
402.9 Acres

### REACH SUMMARY

The reach extends from the confluence of the North and South Forks of the Sekiu River downstream to the Highway 112 bridge crossing (near the river's mouth). The stream channel in the upper portion of the reach is characterized by relatively straight channel segments followed by long sweeping meanders. The river becomes increasingly sinuous in the middle of the reach, and the channel in the lower section contains several meanders across a flat and wide floodplain. The Sekiu River Road borders much of the river, which separates the river from much of its natural floodplain. The majority of the reach is covered by dense forest habitat. The reach provides habitat for Chinook, coho, and chum salmon, in addition to steelhead and resident cutthroat trout. The reach also provides habitat for breeding populations of bald eagle.

Moderate- to low-density rural development is located in the lower portion of the reach. The middle and upper portions of the reach contain commercial forest land. The lower portion of the reach is located within a tsunami hazard area and the FEMA 100-year floodplain. Geologic hazard areas for erosion and landslides are located in the middle and upper portions of the reach, respectively.

Under current zoning regulations the majority of the reach has the potential for new residential development. The lower third of the reach contains several undeveloped parcels of various sizes and shapes, and is zoned for moderate- to low-density residential development. The upper two-thirds of the reach contains commercial timber land that could be subdivided for new residential development, but at a density of no more than 1 dwelling per 80 acres. Most of the developable lands are located in tsunami, flood, and/or geologic hazard areas.



### PHYSICAL

#### Channel Configuration

The stream channel in the upper portion of the reach is characterized by relatively straight channel segments followed by long sweeping meanders. The river becomes increasingly sinuous in the middle of the reach, and the channel in the lower section contains several meanders across a flat and wide floodplain.

#### Hazard Areas

Potential erosion areas are mapped in the western half of the reach (11%) along with slide areas (26%). The eastern portion of the reach is located in a tsunami hazard area (38%) and within the FEMA 100-year floodplain (62%).

### ECOLOGY

#### Riparian Vegetation

65% of the reach zone contains forest habitat, while 14% contains natural herb and shrub habitat. An additional 7% of the reach consists of lawn/landscaping and developed areas.

#### Habitats and Species

3% of the reach is identified as wetland habitat, primarily located near the mouth. The designated priority habitat mapped within the reach is bald eagle (6%).

This reach provides spawning habitat for steelhead trout (64%) and Chinook (100%), chum (100%) and coho salmon (81%), and juvenile rearing habitat for Chinook (trace) and coho salmon (19%). The presence of resident cutthroat is also mapped within the reach.

#### Water Quality

The downstream portion of the Sekiu River within the reach has a State impaired water quality listing for temperature. River water quality is listed by Streamkeepers as "compromised" for B-IBI but "healthy" for WQI.

## Sekiu River

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (87%), residential (6%), commercial (4%), vacant (2%), lodging (trace), and roads (trace). Land ownership in the reach is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (12%), rural mixed use (15%), commercial forest/residential mixed use (32%), commercial forestry (29%), and parks/public land (12%).

Under current zoning regulations there is moderate potential for significant new residential development within the reach, particularly in the downstream third of the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

#### Impervious Surfaces

Approximately 8% of the reach is covered by impervious surfaces.

---

#### Shoreline Modifications

The Sekiu River Road borders much of the river, which separates the river from much of its natural floodplain.

---

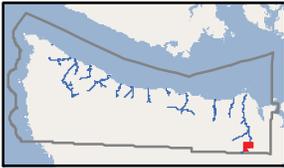
#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There is 1 inventoried pre-contact site within the reach.



# Silver Creek

## SHORELINE LENGTH

0.7 Miles

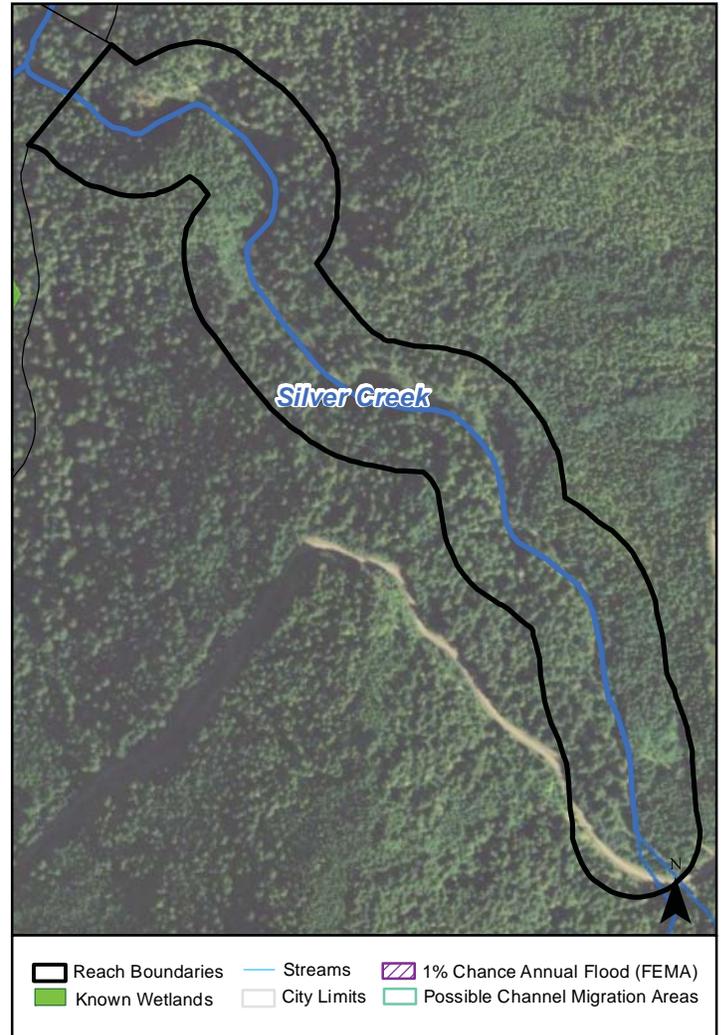
## REACH AREA

33.73 Acres

### REACH SUMMARY

The reach extends from the Dungeness confluence to approximately 1 mile upstream. The reach is covered by dense forest cover. Silver Creek provides habitat for resident cutthroat and rainbow trout.

The reach is located entirely within the Olympic National Forest, and can be accessed from Forest Service Road 2870.



### PHYSICAL

#### Channel Configuration

No data

### ECOLOGY

#### Riparian Vegetation

85% of the reach zone contains forest habitat, while 13% of the reach contains herb and shrub habitat.

#### Hazard Areas

No potential erosion or slide areas were mapped within this reach.

#### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

The presence of resident cutthroat and rainbow trout is mapped within the reach.

#### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers water quality available for the creek.

## Silver Creek

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership in the reach is 100% public.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

The reach can be accessed via trail from Forest Service Road 2870

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# South Branch Little River

## SHORELINE LENGTH

1.6 Miles

## REACH AREA

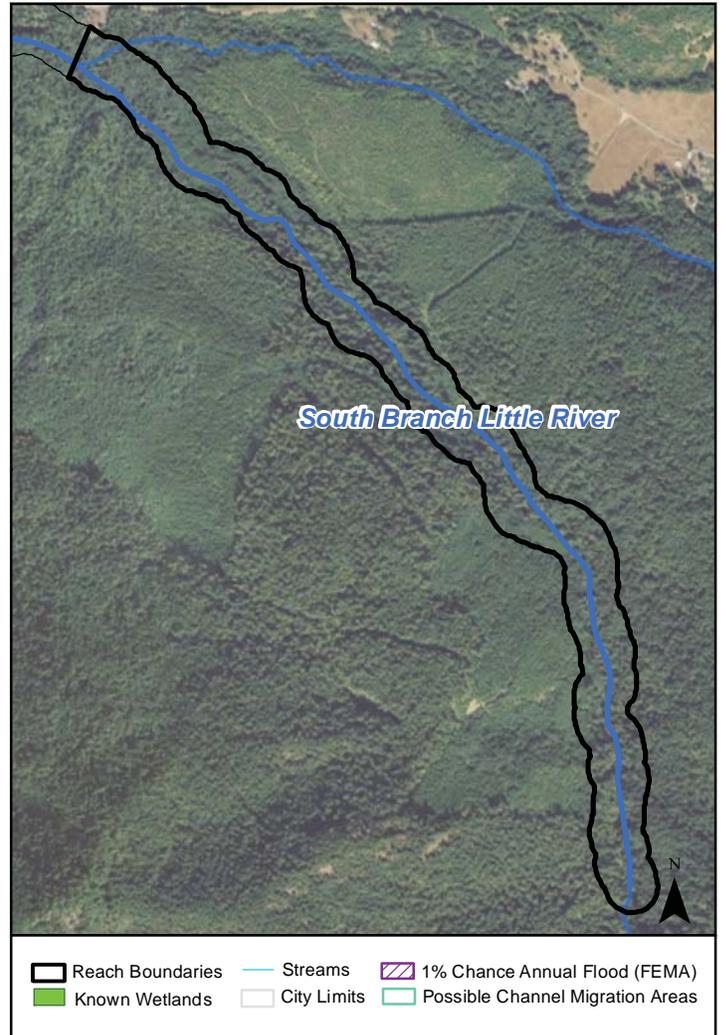
82.69 Acres

### REACH SUMMARY

The reach extends from the Little River confluence to approximately 1.6 miles upstream. Dense, contiguous forest cover extends throughout the reach. This reach provides habitat for bull trout, resident cutthroat, and rainbow trout. The Elwha River Dam blocks anadromous fish access to the reach.

Land use within the reach is primarily forestry. The upper two-thirds of the reach are located in the Olympic National Forest, while the lower portion of the reach is privately owned. Geologic hazard areas for landslides are located throughout the reach.

Under current zoning regulations, approximately one-third of the reach area has potential for new residential development. However, much of this land is zoned for commercial forestry, and residential density is limited to 1 dwelling per 80 acres. Much of the developable land is located within geologic hazard areas for landslides.



### PHYSICAL

#### Channel Configuration

No data

### ECOLOGY

#### Riparian Vegetation

100% of the reach area contains forest habitat.

#### Hazard Areas

Potential slide areas are located throughout the reach (98%).

#### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides habitat for bull trout, resident cutthroat, and rainbow trout.

#### Water Quality

The reach has no State impaired water quality listings. There are no Streamkeepers water quality data available for the river.

## South Branch Little River

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (98%) and open space (2%).  
Land ownership in the reach is approximately 20% and 80% public.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forest/residential mixed use (1%), commercial forestry (97%), and parks/public land (2%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Public access to the reach is available via the Little River Trail.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# South Fork Pysht River: Reach 1

**SHORELINE LENGTH**  
1.4 Miles

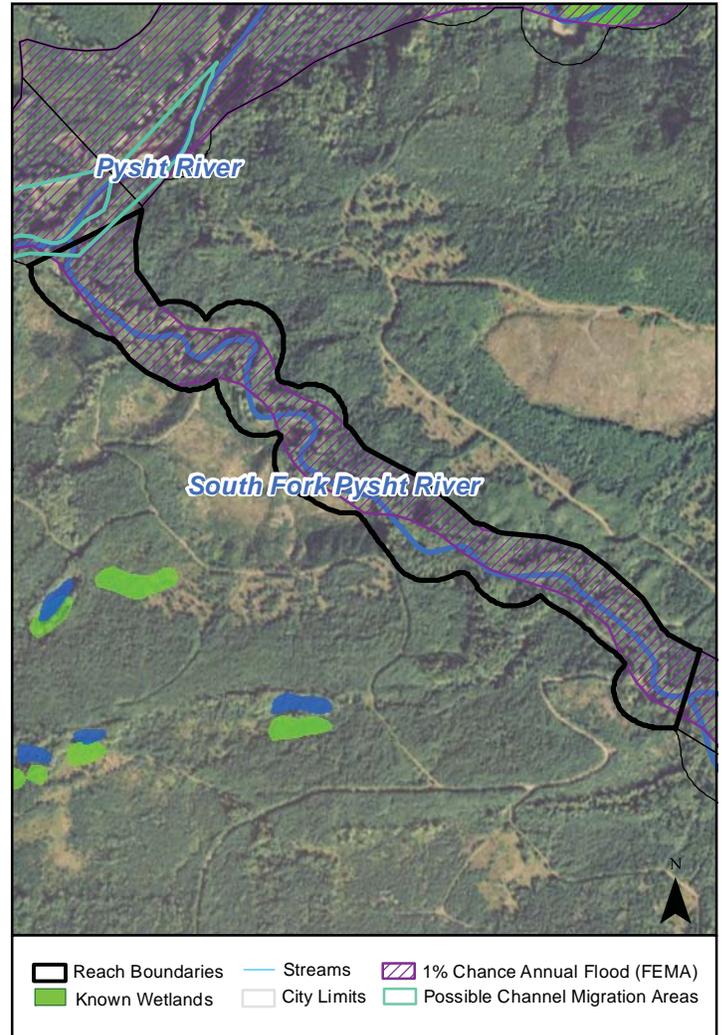
**REACH AREA**  
83.91 Acres

## REACH SUMMARY

Reach 1 of the South Fork Pysht River extends from the Pysht River confluence to the Salmon Creek confluence. The reach segment is relatively short and contains a fairly sinuous, meandering channel. Vegetative cover through the reach is mainly contiguous forest cover intermixed with sparse patches of herb and shrub habitat. The reach provides spawning and rearing habitat for Chinook and coho salmon, in addition to steelhead trout. The reach also provides habitat for resident cutthroat and chum salmon.

The majority of the reach is commercial forest land. The northern portion of the reach lies in the active channel migration area and the FEMA 100-year floodplain. Areas in the southwest and northeast portion of the reach are susceptible to geologic hazards (primarily erosion).

Under current zoning regulations, approximately two-thirds of the reach has potential for new residential development, but at a density no greater than 1 dwelling per 80 acres. Actual development potential is low. Developable parcels are located within the FEMA 100-year floodplain and geologic hazard areas.



## PHYSICAL

### Channel Configuration

The South Fork Pysht River is characterized by a narrow meandering stream channel, that flows through a series of steep mountainsides.

### Hazard Areas

Potential erosion areas are mapped in the northeast and southwest portions of the reach (30%), along with geologic slide areas (15%). Most of the reach is within the FEMA 100-year floodplain (67%) and a channel migration zone (51%).

## ECOLOGY

### Riparian Vegetation

80% of the reach zone is consists of forest habitat, while 15% contains herb and shrub habitat.

### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for steelhead trout (100%) and Chinook (100%), and coho salmon (95%), and juvenile rearing habitat for coho salmon (4%). The presence of resident cutthroat and chum salmon are also mapped within the reach.

### Water Quality

The downstream portion of the South Fork Pysht River within the reach has a State impaired water quality listing for temperature. Additionally, Pysht River (confluence) is listed for temperature. There are no Streamkeepers water quality data available fo

## South Fork Pysht River: Reach 1

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (97%) and vacant (3%). Land ownership in the reach is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for rural residential (3%) and commercial forestry (97%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



## South Fork Pysht River: Reach 2

### SHORELINE LENGTH

3.1 Miles

### REACH AREA

178.48 Acres

### REACH SUMMARY

Reach 2 of the South Fork Pysht River extends from the Salmon Creek confluence to just upstream of the Middle Creek confluence. The river channel is moderately sinuous in this reach. Vegetative cover is primarily a mixture of dense forest habitat intermixed by patches of herb and shrub habitat. The reach provides spawning habitat for steelhead, and Chinook and coho salmon. The presence of resident cutthroat and chum salmon are also mapped within the reach.

Land use within the reach is primarily commercial forestry. Most of the reach lies in the FEMA 100-year floodplain and in areas subject to geologic hazards. Three quarters of the reach is susceptible to erosion. Additionally, slide areas are located in the middle portion of the reach, along the north bank.

Under current regulations, the majority of the reach is zoned for commercial forestry. Most of the parcels are subdividable and could be developed with residences, but at a density no greater than 1 dwelling per 80 acres.



### PHYSICAL

#### Channel Configuration

The South Fork Pysht River is characterized by a narrow meandering stream corridor, that flows through a series of steep mountainsides.

#### Hazard Areas

Potential erosion areas are located throughout the reach extending from the north to the south (65%) along with slide areas located in the east (10%). Portions of the reach lie within the FEMA 100-year floodplain (70%).

### ECOLOGY

#### Riparian Vegetation

84% of the reach contains dense forest cover while 12% contains herb and shrub habitat.

#### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for steelhead trout (97%) and Chinook (100%), and coho salmon (95%). The presence of resident cutthroat and chum salmon are also mapped within the reach.

#### Water Quality

The upstream and middle portions of the South Fork Pysht River within the reach has State impaired water quality listings for temperature. There are no Streamkeepers water quality data available for the South Fork Pysht River.

## South Fork Pysht River: Reach 2

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership in the reach is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

There are no shoreline modifications mapped within the reach.

---

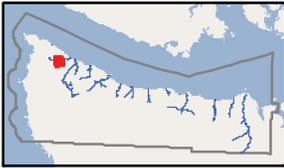
#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# South Fork Sekiu River

**SHORELINE LENGTH**  
2.9 Miles

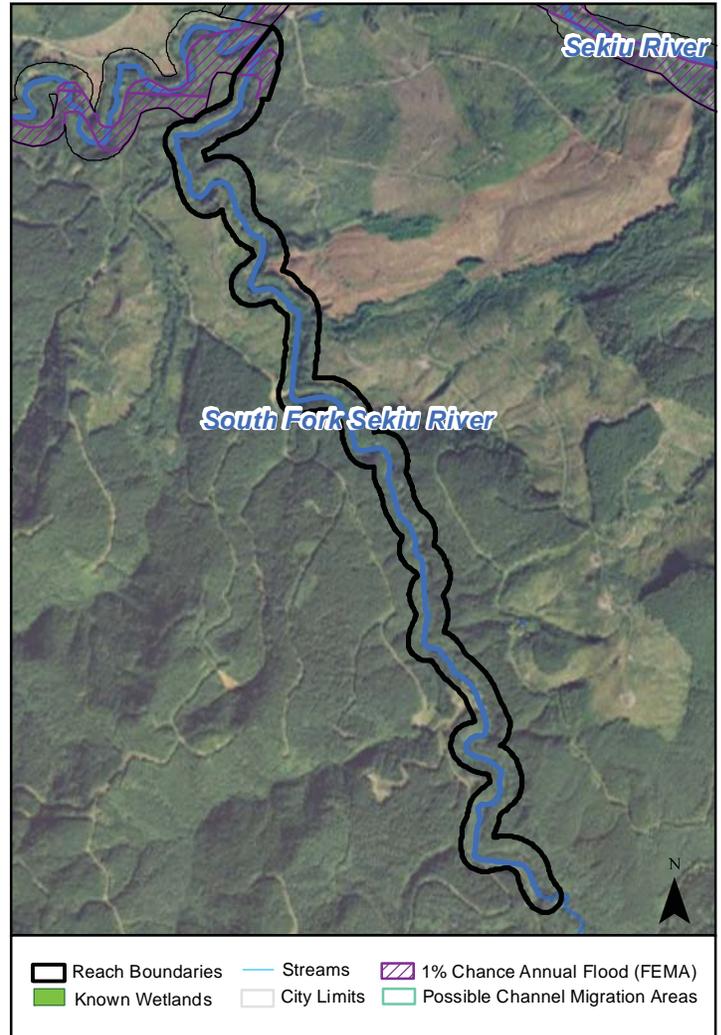
**REACH AREA**  
145.87 Acres

## REACH SUMMARY

The reach extends from the mainstem confluence to approximately 3 miles upstream. The reach is covered by dense forest cover. The South Fork Sekiu River contains spawning habitat for coho salmon and steelhead trout, and also provides habitat for resident cutthroat trout.

Land use within the reach is primarily commercial forestry. The lower portion of the reach is located within the FEMA 100-year floodplain. Geologic hazard areas for slides and erosion are located throughout the reach.

All of the land within the reach is zoned for commercial timber. Under current zoning regulations, most of the parcels are subdividable and could be developed with residences, but at a density no more than 1 dwelling per 80 acres. Actual development potential within the reach is low.



## PHYSICAL

### Channel Configuration

No data

### Hazard Areas

Potential erosion areas are mapped in the east (2%) along with slide areas extending north to south through the reach (93%). Portions of the reach are located within an active channel migration area (1%) and in the FEMA 100-year floodplain (3%).

## ECOLOGY

### Riparian Vegetation

87% of the reach area contains forest habitat, while 12% contains herb and shrub habitat.

### Habitats and Species

There is no priority wildlife habitat mapped within the reach.

This reach provides spawning habitat for steelhead trout (3%) and coho salmon (100%). The presence of resident cutthroat is also mapped within the reach.

### Water Quality

The upstream and downstream portions of the South Fork Sekiu River within the reach has State impaired water quality listings for temperature. There are no Streamkeepers water quality data available for the River.

## South Fork Sekiu River

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (100%). Land ownership in the reach is 100% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

No public access is available in this reach. Lands adjacent to the reach are privately owned.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

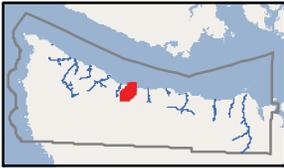
#### Contaminated Sites

No identified contaminated sites are located within this reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.



# West Twin River

**SHORELINE LENGTH**  
5.3 Miles

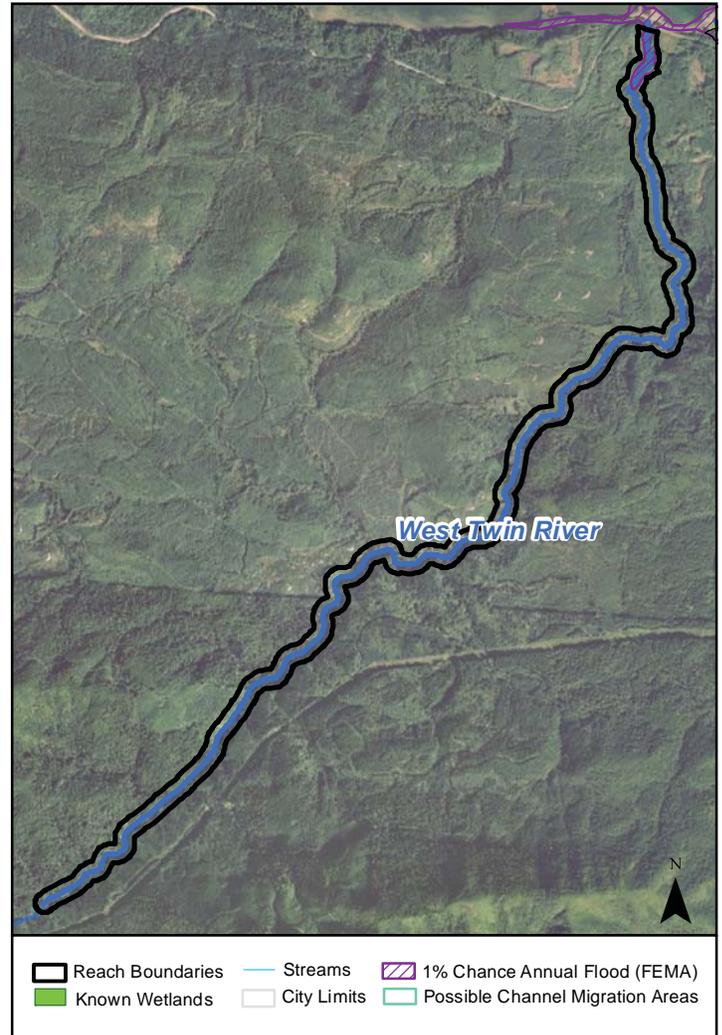
**REACH AREA**  
256.52 Acres

## REACH SUMMARY

The reach extends from State Highway 112 (near the mouth) upstream approximately 5 miles. The river flows northeast from steep mountain slopes onto lower gradient hills. The river then reenters a narrow valley between hillcrests to the east and west, emerging onto a low-gradient terrace and delta. Vegetative cover in the riparian corridor and surrounding watershed is comprised predominantly of dense forest habitat, intermixed with pockets of herb and shrub habitat. The reach provides spawning habitat for coho salmon and steelhead and rearing habitat for coho salmon. Resident cutthroat is also mapped within the reach. The reach supports breeding populations of bald eagle.

Approximately half of the reach contains private timber lands, while the other half of the reach is public timber/forest lands (managed by DNR). Private lands are located in the middle and lower half of the reach, along the west bank of the West Twin River. Public lands are located along the east bank of the West Twin River and in the upper portion of the reach. The lower portion of the reach is located within a tsunami hazard zone, FEMA 100-year floodplain, and geologic hazard areas.

Under current zoning regulations, the lower portion of the reach is primarily zoned for commercial timber production, and cannot be further subdivided. The upper reach is public forest lands.



## PHYSICAL

### Channel Configuration

The West Twin River flows northeast from steep mountain slopes onto lower gradient hills. The river then reenters a narrow valley between hillcrests to the east and west, emerging onto a low-gradient terrace.

### Hazard Areas

Many stream banks and surrounding areas are unstable (4%) with potential for slides mapped in the central portion of the reach. Areas for potential erosion are mapped through the northwestern and central portions of the reach (10%). Most of the northern portion of the reach is in the tsunami hazard zone (8%), FEMA 100-year floodplain (3%), and a channel migration zone (15%).

## ECOLOGY

### Riparian Vegetation

93% of the reach contains forest habitat, while 7% contains herb and shrub habitat.

### Habitats and Species

The designated priority habitat mapped within the reach is bald eagle (6%).

This reach provides spawning habitat for steelhead trout (38%) and coho salmon (79%), and juvenile rearing habitat for coho salmon (11%). The presence of resident cutthroat and chum salmon are also mapped within the reach.

### Water Quality

The reach has no State impaired water quality listings. West Twin River water quality is listed by Streamkeepers as "healthy" for both B-IBI and WQI.

## West Twin River

---

### HUMAN ENVIRONMENT AND LAND USE

#### Existing Land Use and Ownership

Land usage within the reach is timber (80%), vacant (17%), and residential (3%). Timber is located through much of the reach while vacant and residential lands are located in the north. Land ownership in the reach is 60% public and 40% private.

---

#### Zoning and Parcel Data

The reach is zoned for commercial forestry (100%).

Under current zoning regulations there is low potential for significant new development within the reach.

---

#### Public Access

Public lands are located throughout the reach. Undeveloped, informal public access to shorelines within this reach can be accessed through the West Twin River Rd.

---

#### Impervious Surfaces

No impervious surfaces are mapped within the reach.

---

#### Shoreline Modifications

No shoreline modifications are mapped within the reach.

---

#### Contaminated Sites

No identified contaminated sites are located within the reach.

---

#### Cultural Resources

There are no inventoried sites within the reach.