

## **OVERVIEW--STRAIT OF JUAN DE FUCA** **BULL TROUT/DOLLY VARDEN STOCKS**

### **DUNGENESS/GRAY WOLF** **UPPER DUNGENESS** **LOWER ELWHA** **UPPER ELWHA**

#### **STOCK DEFINITION AND ORIGIN**

In the Strait of Juan de Fuca, four stocks of bull trout/Dolly Varden have been tentatively identified: Upper Dungeness River, Dungeness/Gray Wolf, Lower Elwha River, and Upper Elwha River. The stocks are considered separate based on the geographic distribution of their spawning populations. One 660 mm char was observed about one mile above Highway 101 in the anadromous zone in the late 1980s by a WDFW biologist during a snorkel survey to identify steelhead parr habitat (Hal Beecher, WDFW, personal communication). Two presence/absence day time snorkel surveys were conducted by WDFW biologists in the resident fish zone at RM 6.0 and above the water diversion structure at RM 7.0 in October 1996. A 100-meter section was surveyed at each location. No bull trout/Dolly Varden were observed, although rainbow trout of various sizes were seen at both locations. WDFW biologists believe that the one reported bull trout/Dolly Varden in Morse Creek was probably a stray from the Elwha or Dungeness rivers and that no distinct stock exists in Morse Creek .

Run timing and spawning timing are unknown at this time.

Using the Haas (1988) bull trout/Dolly Varden species differentiation formula, both bull trout and Dolly Varden have been identified in the Dungeness and upper Elwha rivers. See individual stock reports for more specific information.

#### **STOCK STATUS**

The status of the Dungeness/Gray Wolf, Lower Elwha and Upper Elwha stocks is Unknown. The Dungeness is tentatively considered Healthy.

Plans for the summer of 1997 are to collect more population data and samples for genetic analysis in the Dungeness River.

Information for the Lower Elwha stock includes incidental trap counts and angler reports.

**STRAIT OF JUAN DE FUCA -- DUNGENESS/GRAY WOLF**  
**BULL TROUT/DOLLY VARDEN**

**STOCK DEFINITION AND ORIGIN**

Bull trout/Dolly Varden in the Dungeness River have been identified as a distinct stock based on their geographic distribution. Anadromous, fluvial and resident life history forms may be present.

Spawn timing and locations are unknown.

Dungeness/Gray Wolf bull trout/Dolly Varden are native and are maintained by wild production.

**STOCK STATUS**

The stock status is Unknown. There is insufficient information to assign stock status with confidence.

Anecdotal angler reports and results of electrofishing sampling are available. Anglers report that historically bull trout/Dolly Varden were very common and widespread from the lower to the upper watershed. They report that they are still widespread, but greatly reduced in numbers (Mongillo 1992).

Six bull trout/Dolly Varden were captured incidental to electrofishing for steelhead in June, 1994 by WDFW biologists. Two were taken at RM 16 in the Dungeness River, and four were taken at RM 1 in the Gray Wolf River. Haas (1988) bull trout/Dolly Varden species differentiation formula measurements were made on all fish by three biologists. The two fish from RM 16 were calculated to be bull trout by one biologist and as one bull trout and one Dolly Varden by the other two biologists. All biologists agreed that the four fish from the Gray Wolf were three bull trout and one Dolly Varden.

In 1996 five char collected from the lower Dungeness River were identified as bull trout by using the linear discriminant function of Haas and McPhail (1991). The char ranged in length from 28 to 62 centimeters. They were collected by WDFW personnel at Dungeness Hatchery while spawning hatchery coho salmon in the fall of 1996 (Thom H. Johnson, WDFW, personal communication).

## **FACTORS AFFECTING PRODUCTION**

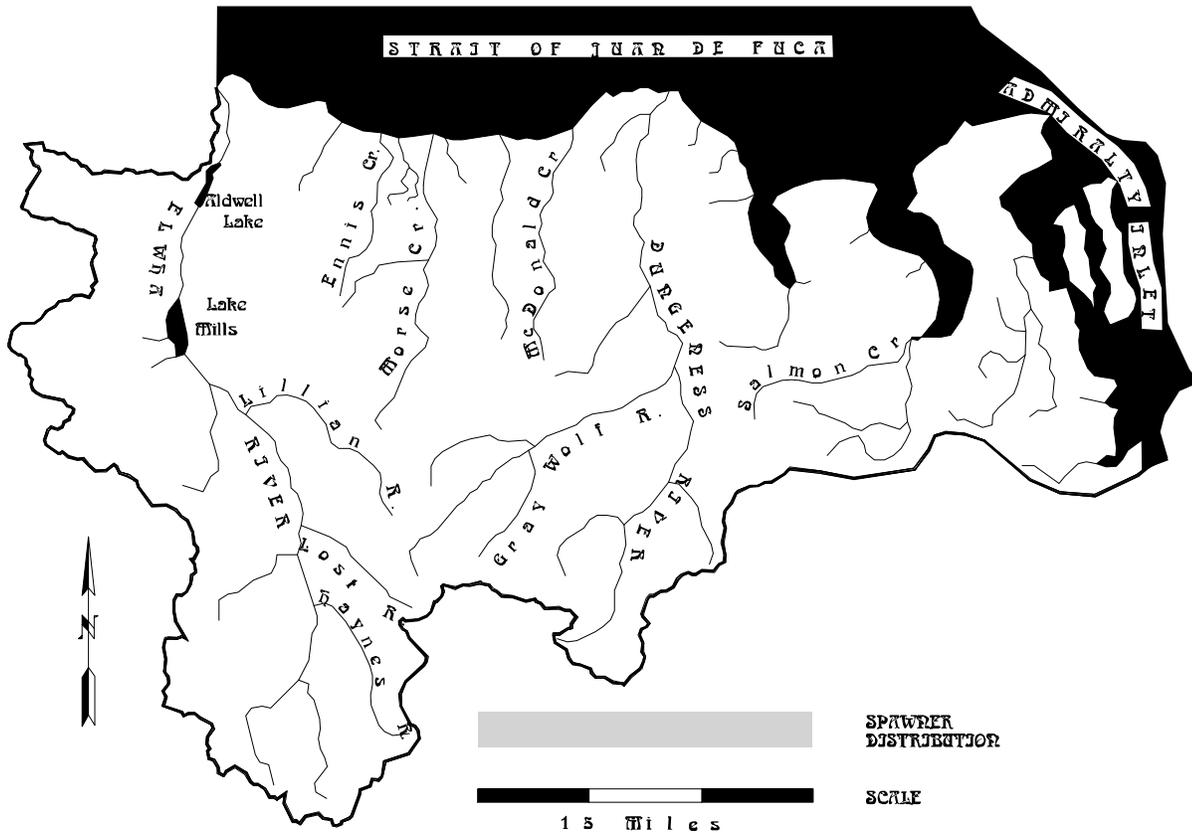
**Habitat**--The Dungeness watershed is located in a rain shadow and receives little annual precipitation (less than 20 inches per year). A significant portion of the water

# STOCK DEFINITION PROFILE for Dungeness/Gray Wolf Bull Trout/Dolly Varden

## SPAWNER DISTRIBUTION

DISTINCT? - Yes

Spawner distribution is distinct for this stock, but specific spawning locations are unknown



<u>TIMING</u>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	<u>DISTINCT?</u>
													Unknown
Spawn timing is unknown for this stock.													

## BIOLOGICAL CHARACTERISTICS

DISTINCT? - Unknown

# STOCK STATUS PROFILE for Dungeness/Gray Wolf Bull Trout/Dolly Varden

## STOCK ASSESSMENT

DATA QUALITY -----> No Data

Return Years	NO DATA			
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- 73
- 74
- 75
- 76
- 77
- 78
- 79
- 80
- 81
- 82
- 83
- 84
- 85
- 86
- 87
- 88
- 89
- 90
- 91
- 92
- 93
- 94
- 95
- 96
- 97

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## AVERAGE RUNSIZE DISTRIBUTION

Data not available.

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## STOCK SUMMARY

Stock Origin

***Native***

Production Type

***Wild***

Stock Distinction

***Distribution***

Stock Status

***Unknown***

Screening Criteria

flow in the Dungeness River is provided by melting snow and varies from year to year. As a result, the amount of water available for fish production is somewhat limited compared to neighboring watersheds.

The Dungeness River has been affected by human activities including removal of riparian vegetation for urban and agricultural development, logging in the upper watershed, flood control, water withdrawals for irrigation and pollution of the river and estuary by urban and agricultural run-off. Impacts from irrigation withdrawals occur between river miles 6.8 and 11.0 during the critical low-flow period between August and October. Erosion resulting from agriculture, urban development and forest practices has caused extensive gravel aggradation and channel braiding in the river. These factors reduce the water depth, increase water temperature and velocity, and destabilize the river bedload. Fine sediments smother eggs in spawning habitat, and low water flows create barriers to migrating adult fish. Flood control dikes confine the river during high water events, exacerbating bedload instability and subjecting rearing fish to extreme conditions.

**Harvest Management**--The Dungeness River is closed to fishing for bull trout/Dolly Varden. The Olympic National Park has catch-and-release regulations for bull trout/Dolly Varden in all park waters. Incidental hooking mortality is thought to be low.

**Hatchery**--Hatchery-origin coho are released into the Dungeness annually. Interactions between them and wild bull trout/Dolly Varden have not been examined.