

# QUILLAYUTE – QUILLAYUTE/BOGACHIEL WINTER STEELHEAD

## STOCK STATUS

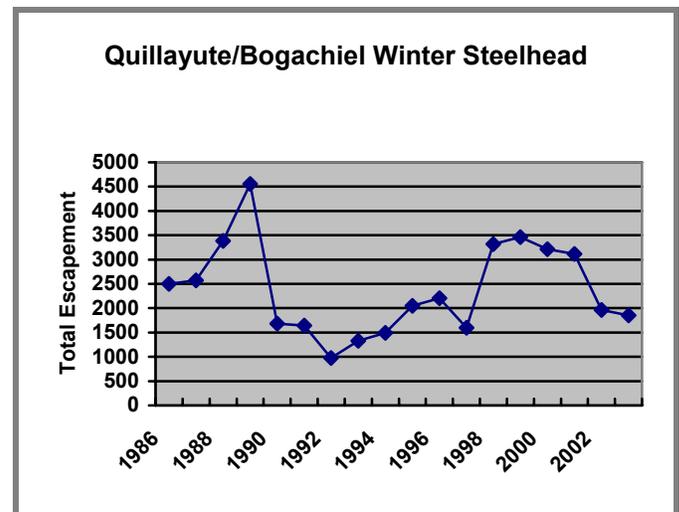
<b>1992 STATUS</b> Healthy	<b>2002 STATUS</b> Healthy
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Winter steelhead spawner escapement has been monitored for the Quillayute River system, which includes the Sol Duc, Quillayute/Bogachiel, Calawah and Dickey steelhead stocks, since 1978. In 1985, WDFW and the Quileute Tribe agreed to a wild steelhead spawner escapement goal of 5,900 for the entire Quillayute River system.

## STOCK STATUS RATING DATA

**USEFULNESS FOR RATING STOCK STATUS :** Excellent

YEAR	TOTAL ESCAPEMENT
1986	2,501
1987	2,569
1988	3,381
1989	4,553
1990	1,680
1991	1,642
1992	973
1993	1,329
1994	1,491
1995	2,050
1996	2,208
1997	1,596
1998	3,320
1999	3,465
2000	3,214
2001	3,112
2002	1,964
2003	1,854



Data are total escapement estimates based upon redds counts in index reaches and supplemental survey observations. Index areas surveyed include the mainstem Bogachiel River (RM 5.0 to 8.5, RM 8.5 to 15.7 and RM 19.2 to 20.2) as well as Murphy, Mill, Bear and Morganroth creeks. Supplemental surveys are conducted in Bear and Coon creeks and in the mainstem Bogachiel River (RM 21.2 to 31.0). Due to the large area of the Quillayute system used by spawning winter steelhead, only a limited portion can be surveyed on a weekly or bi-weekly schedule. To account for redd production in the mainstem reach used by winter steelhead, four to six helicopter surveys are conducted to count visible redds during the season.

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The entire escapement for the Quillayute system since 1978 has averaged 10,205, of which 22% spawned in the Quillayute/Bogachiel watershed. Since 1992, winter steelhead escapements in the Quillayute/Bogachiel River have ranged from 973 to 3,465 and averaged 2,276. During the past five seasons the Quillayute/Bogachiel River and Quillayute system escapements have averaged 2,941 and 14,251, respectively. Stock status is again rated **Healthy** in 2002.

## STOCK DEFINITION

Quillayute/Bogachiel winter steelhead were identified as a stock based on their distinct spawning distribution.

**SPAWNING DISTRIBUTION:** Spawning takes place in the mainstem Quillayute and mainstem Bogachiel rivers (RM 0.0 to 33.8). Spawning also takes place in tributaries such as Murphy, Mayfield, Mill, Bear, Coon, Dowans and Morganroth creeks.

**SPAWNING TIMING:** Spawning generally occurs from mid-March to June.

**GENETIC ANALYSIS:** Allozyme analysis has shown this stock to be relatively similar to other northern coastal steelhead stocks examined (Reisenbichler and Phelps 1989). Phelps et al. (1997) found that Bogachiel juvenile steelhead sampled in 1994 had close genetic relationships with other Quillayute Basin stocks. Quillayute stocks are genetically distinct compared to those in Queets, Hoh, Quinault (other North Coast basins), based on the cluster analyses (Fig. 1-A for example) shown in Phelps et al. 1997.

## STOCK ORIGIN

This is a **native** stock with **wild** production. Chambers Creek hatchery steelhead smolts have been stocked in the Quillayute and Bogachiel rivers and nearby streams but these releases have been thought to have no significant impact on the native stock.