**INTRODUCTION**

The Washington Fish and Wildlife Office (WFWO) and the Olympia Fish Health Center (OFHC) assist the three National Fish Hatcheries (NFH) on the Olympic Peninsula -- Makah, Quilcene, and Quinault (see locale map below). The WFWO, OFHC, and NFHs work together to restore salmon for domestic and international fisheries in compliance with Trust responsibilities to tribes, court orders, agreements with states, and international treaties. WFWO works with cooperators to program and evaluate hatchery production to assure obligations are met with minimal impact on wild fish. OFHC provides fish health diagnostic and treatment services to assure optimum post-release survival of hatchery fish.

This annual report provides basic information on Makah NFH to inform Service employees, visitors, and our cooperators of their hatchery programs.

Makah NFH, located within the Makah Indian Reservation on the Olympic Peninsula, began operating in 1981. General goals include rebuilding salmon and steelhead runs along the coast of Washington and contributing to current and future fisheries. Specific objectives to meet these goals vary by species and are described on the following pages.

Please direct questions, comments, and suggestions to:

Washington Fish and Wildlife Office
510 Desmond Drive SE, Suite 102
Lacey, WA 98503-1273
(360) 753-9440

Makah National Fish Hatchery
P.O. Box 739
Neah Bay, WA 98357
(360) 645-2521

**QUICK REFERENCE DATA**

<table>
<thead>
<tr>
<th>LEGEND:</th>
<th>AVG = Average (mean)</th>
<th>BY = Brood Year</th>
<th>FL = Fork Length</th>
<th>COS = Coho Salmon</th>
<th>FCS = Fall Chinook Salmon</th>
<th>WST = Winter Steelhead</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCS</td>
<td>2-6 yrs.</td>
<td>3.1</td>
<td>3.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COS</td>
<td>2-3 yrs.</td>
<td>2.8</td>
<td>2.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WST</td>
<td>2-6 yrs.</td>
<td>3.4</td>
<td>3.3</td>
<td></td>
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<td></td>
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</tbody>
</table>

**ADULT AGES AT RETURN**

<table>
<thead>
<tr>
<th>FL RANGE</th>
<th>FL MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCS</td>
<td>350-945mm (14-37&quot;)</td>
</tr>
<tr>
<td>COS</td>
<td>250-840mm (10-33&quot;)</td>
</tr>
<tr>
<td>WST</td>
<td>330-1008mm (13-40&quot;)</td>
</tr>
</tbody>
</table>

**ADULT ENTRY DATES TO HATCHERY**

<table>
<thead>
<tr>
<th>1988-2007 RANGE</th>
<th>MEAN ENTRY DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCS Sep - Nov</td>
<td>October 13</td>
</tr>
<tr>
<td>COS Sep - Jan</td>
<td>November 3</td>
</tr>
<tr>
<td>WST Sep - Feb</td>
<td>December 16</td>
</tr>
</tbody>
</table>

**NUMBER AND DATES OF ADULTS SPAWNED**

<table>
<thead>
<tr>
<th>2007 Date Range</th>
<th>2007 # Spawned</th>
<th>1986-2007 Avg # Spawned</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCS 10/02-11/05</td>
<td>136 131 267</td>
<td>938</td>
</tr>
<tr>
<td>COS 10/22-12/08</td>
<td>334 271 605</td>
<td>502</td>
</tr>
<tr>
<td>WST 10/22-01/15</td>
<td>193 205 398</td>
<td>438</td>
</tr>
</tbody>
</table>
FALL CHINOOK SALMON

GOAL: Rebuild Sooes River fall Chinook (FCS) run to approximately 8,000 returning adults. Contribute to local fisheries near Cape Flattery, as well as tribal fisheries in the Sooes and Waatch Rivers.

RELEASES: The current program goal is the release of 2.2 million 3.5-inch fish (subyearlings) at the hatchery. An average of 507 adults are passed upstream each year to seed the watershed; our goal is 473. When available, 100,000 fish are transferred to the Makah Tribe’s Educket Creek facility on the Waatch River for rearing and release.

CATCH: Commercial fisheries account for 76% of all fish captures. Of the FCS produced by Makah NFH, 49% are caught in Canadian waters, 40% in Alaska, 11% in Washington waters. The portion caught in Washington will increase as the run builds and directed fisheries in the Sooes River occur.

### FCS RETURNS TO HATCHERY RACK AND RIVER BY RETURN YEAR

<table>
<thead>
<tr>
<th>Brood Year</th>
<th>Age at Return</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>1999</td>
<td>168</td>
</tr>
<tr>
<td>2000</td>
<td>301</td>
</tr>
<tr>
<td>2001</td>
<td>604</td>
</tr>
<tr>
<td>2002</td>
<td>712</td>
</tr>
<tr>
<td>2003</td>
<td>359</td>
</tr>
<tr>
<td>2004</td>
<td>210</td>
</tr>
<tr>
<td>2005</td>
<td>41</td>
</tr>
<tr>
<td>2006</td>
<td>15</td>
</tr>
<tr>
<td>2007</td>
<td>227</td>
</tr>
</tbody>
</table>

### FCS ADULTS PASSED UPSTREAM BY RETURN YEAR

<table>
<thead>
<tr>
<th>Return Year</th>
<th>Adults Passed Upstream</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>24</td>
</tr>
<tr>
<td>2000</td>
<td>112</td>
</tr>
<tr>
<td>2001</td>
<td>2,837</td>
</tr>
<tr>
<td>2002</td>
<td>2,800</td>
</tr>
<tr>
<td>2003</td>
<td>1,061</td>
</tr>
<tr>
<td>2004</td>
<td>1,461</td>
</tr>
<tr>
<td>2005</td>
<td>1,025</td>
</tr>
<tr>
<td>2006</td>
<td>22</td>
</tr>
<tr>
<td>2007</td>
<td>5</td>
</tr>
</tbody>
</table>

Beginning in 1997, tribal fisheries have been conducted in the Sooes River. 100 percent Chinook mass-marking was initiated in 2005.
GOAL: Build coho runs in Cape Flattery area. Contribute to local fisheries near Cape Flattery, as well as tribal fisheries in the Sooes and Waatch Rivers.

RELEASES: Approximately 233,000 coho yearlings are released annually into the Sooes River. An additional 40,000 pre-smolts are provided to the Makah Tribe’s facility on Educket Creek. Our goal is to pass 1,610 adults upstream annually to seed the watershed; we average 2,434 each year.

CATCH: An average of 6,000 fish (from hatchery programs) are caught in U.S. and Canadian waters each year.

<table>
<thead>
<tr>
<th>Return Year</th>
<th>Age at Return</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>446 2,969</td>
<td>3,415</td>
</tr>
<tr>
<td>1999</td>
<td>492 7,842</td>
<td>8,334</td>
</tr>
<tr>
<td>2000</td>
<td>504 4,401</td>
<td>4,905</td>
</tr>
<tr>
<td>2001</td>
<td>438 6,388</td>
<td>6,826</td>
</tr>
<tr>
<td>2002</td>
<td>485 5,972</td>
<td>6,457</td>
</tr>
<tr>
<td>2003</td>
<td>372 3,781</td>
<td>4,153</td>
</tr>
<tr>
<td>2004</td>
<td>768 3,613</td>
<td>4,381</td>
</tr>
<tr>
<td>2005</td>
<td>107 4,982</td>
<td>5,089</td>
</tr>
<tr>
<td>2006</td>
<td>64 917</td>
<td>981</td>
</tr>
<tr>
<td>2007</td>
<td>130 705</td>
<td>835</td>
</tr>
</tbody>
</table>

The current coho program contributes to various fisheries and is very successful. Average survival is 4 percent. A coho mass-marking program was initiated in the fall/winter of 1997-98 to support selective fisheries.
**OBJECTIVE:** Increase commercial and sport fishing opportunities and harvest in the Sooes and Waatch Rivers.

**RELEASES:** The current production goal is the release of 158,000 yearlings into the Sooes River and transfer of 22,000 yearlings to the Waatch River.

**CATCH:** Winter steelhead are caught in commercial and sport fisheries in the Sooes and Waatch Rivers. Few are caught in the ocean.

### WST RETURNS TO HATCHERY RACK BY RETURN YEAR

<table>
<thead>
<tr>
<th>Return Year</th>
<th>Age at Return</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1998-99</td>
<td>5</td>
<td>2,261</td>
</tr>
<tr>
<td>1999-00</td>
<td>6</td>
<td>510</td>
</tr>
<tr>
<td>2000-01</td>
<td>0</td>
<td>299</td>
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<tr>
<td>2001-02</td>
<td>19</td>
<td>1,213</td>
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<tr>
<td>2002-03</td>
<td>6</td>
<td>441</td>
</tr>
<tr>
<td>2003-04</td>
<td>163</td>
<td>169</td>
</tr>
<tr>
<td>2004-05</td>
<td>1</td>
<td>818</td>
</tr>
<tr>
<td>2005-06</td>
<td>22</td>
<td>499</td>
</tr>
<tr>
<td>2006-07</td>
<td>73</td>
<td>481</td>
</tr>
<tr>
<td>2007-08</td>
<td>0</td>
<td>388</td>
</tr>
</tbody>
</table>

Steelhead are managed as two populations - a hatchery population, entering from October to February, and a wild population, entering from March to May. The wild population is allowed to move upstream past the hatchery to spawn naturally. Broods 2004, 2005 and 2006 hatchery steelhead were mass marked.
PROGRAM OVERVIEW: The Lake Ozette sockeye program is an integrated hatchery program intended to assist in the recovery of sockeye in the Lake Ozette system.

Lake Ozette sockeye were listed as threatened under the ESA in 1999. The current supplementation program was initiated in 2000. An evaluation of the program is scheduled to occur 12 years (3 full generations) post implementation. The evaluation will determine if it is necessary to continue or to terminate the tributary supplementation project.

Beginning in 2000, eggs were collected from returns to tributaries of Lake Ozette, primarily Umbrella Creek. At the request of the Makah Nation, Makah NFH became involved in the Lake Ozette sockeye program in 2003. The Makah NFH isolation/quarantine facility was modified at that time to be used for initial incubation to reduce the risk of egg loss that could occur at the Umbrella and Stony Creek remote sites. Unfertilized gametes are taken to Makah NFH, fertilized and incubated to the eyed stage. The egg take goal is 305,000 for incubation and otolith marking. The eyed eggs are taken back to Umbrella Creek (122,000) and the Stony Creek Hatchery (183,000). Planting goals are 122,000 at 450 fish per pound into Umbrella Creek, plus 91,500 at 900 fish per pound and 91,500 at 450 fish per pound into Stony Creek.