



Project Report December 8, 2006

Strategic Plan Objectives:

Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.

43 projects found

13210-A-018 - [Outreach Activities for Abernathy Fish Technology Center](#)

Facility	Abernathy Fish Technology Center	<h3>Accomplishment Summary</h3> <p>Provided positive outreach activities to over 700 facility visitors and at 8 external educational events; provided tours to the public, colleges/universities, and other fishery professionals; presented technical information to partners at 10 conferences. These activities helped gain public support for the Service and Center.</p> <h3>Description</h3> <p>The importance to the Resource: By improving public knowledge of the Service's activities in support of natural resources the members of the public becomes advocates of the Service's activities to provide natural resources for the continuing benefit of the American People.</p> <p>The problem: Members of the public are often uninformed about Service activities thus leading to lack of support for Service programs and potential misunderstandings of the importance of the Service's work.</p> <p>The objective: To provide outreach activities to visitors (tribal,</p>
Expended	\$29700	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)	
Primary Benefited Population	Not specified	
Plans	Pacific Region Fisheries Outreach Action Plan	
Keyword	Outreach	
Need Number	N-002	
Partners		
Accomplishments		

<p>Number of other Fishery Management Plan tasks implemented for populations of management concern.</p>	<p>2</p>	<p>intra-Service, fishery professionals, non-governmental organizations, the general public, etc.) the Center continues to improve the visibility of the Center and Service's Pacific Region Fisheries Program.</p> <p>The method:</p> <p>Activities included career day at elementary schools, invertebrate and water quality presentations to middle schools students, local Earth Day Celebration, Cowlitz County Fair, facility tours to the general public, state and federal partners, students (elementary, high, & community college). Also presentations at numerous technical meetings.</p> <p>Further description:</p> <p>ADMINISTRATION</p>
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13210-A-095 - [Columbia River Basin Hatchery Scientific Review Group: the Waldo Process](#)

Facility	Abernathy Fish Technology Center	<p>Accomplishment Summary</p> <p>As part of the NOAA Fisheries process of implementing a plan to result in more effective management of state, federal, and tribal hatcheries in the Columbia River basin scientific reviews have been conducted of the production facilities in the Columbia Estuary (Grays, Elochoman, and Columbia Estuary) and Lower Columbia (Cowlitz, Kalama, Lewis, Washougal, and Lower Columbia) regions. Recommendations for modifications in these production programs have been developed and shared with partners.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>Hatchery reform fundamentally requires evaluating hatcheries based on how they affect the watershed in which they are located. This means a hatchery program, harvest or conservation, cannot be successful unless it serves the needs of the wild populations it is derived from and/or encounters outside the hatchery.</p> <p>The problem:</p> <p>NOAA Fisheries requests that Columbia River Basin hatcheries be reviewed and recommendations developed to comply with Mitchell Act's National Environmental Policy Act (NEPA) review. Using this information and understanding current and future goals for all natural and hatchery stocks will determine if hatchery programs are tools to these goals.</p> <p>The objective:</p> <p>To use a methodical application of science as the foundation upon which the HSRG will conduct its hatchery reviews and make</p>
Expended	\$45000	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)	
Primary Benefited Population	E.F. Lewis River fall run (tule) Chinook	
Plans	Columbia River Basin Fish and Wildlife Program (NPPC 2000)	
Keyword	Fish Technology	
Need Number	N-002	
Partners	<p>Bonneville Power Administration (\$5000)</p> <p>Columbia River Inter Tribal Fish Commission (\$3000)</p> <p>Idaho Department of Fish and Game (\$5000)</p> <p>Oregon Department of Fish and Wildlife (\$5000)</p> <p>Washington Department of Fish and Wildlife (\$10000)</p> <p>Yakima Indian Nation (\$3000)</p>	

Accomplishments

Number of other Fishery Management Plan tasks implemented for populations of management concern.
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6

recommendations on reform actions. The HSRG calls for management based on clear goals, scientifically defensible programs and informed decision-making.

The method:

The HSRG will tour facilities and programs in each region, consider population and habitat information, consider the benefits and risks to all populations that result from each hatchery program, meet with the managers to discuss the findings and then produce specific recommendations for reducing the risks and maximizing benefits from each program.

Further description:

Hatchery Reform

13310-A-103 - [Support the Pacific States Marine Fisheries Commission's Regional Mark Processing Center](#)

Facility	Columbia River Fisheries Program Office	<p>Accomplishment Summary</p> <p>The Service provided financial support for the Pacific States Marine Fisheries Commission's Regional Mark Processing Center to help maintain the west coast salmon and steelhead tagging and recovery database.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>A coast wide coded wire tag stock and fisheries database is critical to the management of west coast ocean fisheries for the protection of ESA listed stocks and setting appropriate regulations to harvest other abundant stocks.</p> <p>The problem:</p> <p>A centralized database is much more efficient and cost effective than individual state and federal regional databases. However, the centralized database requires financial support by the relevant management agencies to help fund its annual operation and maintenance.</p> <p>The objective:</p> <p>The objective is to partner with the other west coast fishery management agencies and contribute a fair share of the centralized database annual maintenance costs.</p> <p>The method:</p> <p>The Service was directed by Congress to undertake activities in 1990 to support the Pacific Salmon Treaty. Funding is provided to support and maintenance of the Pacific States Marine Fisheries Commission's Regional Mark Processing Center (Center).</p>
Expended	\$0	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)	
Primary Benefited Population	Not specified	
Plans	<p>Pacific Salmon Treaty of 1999</p> <p>Columbia River Basin Fish and Wildlife Program (NPPC 2000)</p> <p>Pacific Salmon Plan (1999), and various amendments</p>	
Keyword	Interjurisdictional	
Need Number	N-002	
Partners	<p>Idaho Department of Fish and Game</p> <p>National Marine Fisheries Service</p> <p>Oregon Department of Fish and Wildlife</p> <p>Pacific States Marine Fisheries Commission (\$250000)</p>	

Washington Department
of Fish and Wildlife

Accomplishments

Number of other Fishery Management Plan
tasks implemented for populations of
management concern.

4

Further description:

The Center has served state, federal, tribal, and non-governmental fisheries entities of the entire Pacific Coast for many years by processing and exchanging coded-wire tag (CWT) release, recovery, and associated catch/sample information. The Center serves as the single U.S. database to exchange CWT information with Canada in Pacific Salmon Commission (PSC) format on a regular basis. This is the primary information needed by the Pacific Salmon Commission to assess harvest impacts and stock status, the two primary responsibilities of the PSC. The following agencies provide additional financial support to the Center: NOAA-Fisheries, Idaho Department of Fish and Game, Washington Department of Fish and Wildlife, Oregon Department of Fish and Wildlife.

13310-A-112 - [Financially Support the Columbia Basin Fish and Wildlife Authority](#)

Facility	Columbia River Fisheries Program Office	<p>Accomplishment Summary</p> <p>The Service continued to provide financial support for the Columbia Basin Fish and Wildlife Authority (Authority) and was an active participant in Authority coordination activities.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>The Columbia Basin Fish and Wildlife Authority (Authority) is an association of seven state and federal fish and wildlife agencies and thirteen Indian tribes established to assure comprehensive and effective planning and implementation of fish and wildlife programs in the Columbia River Basin through consensus-building.</p> <p>The problem:</p> <p>Within the Columbia Basin there are a multitude of management jurisdictions with varying perspectives on how to best manage, rebuild, and recover species. A broad based forum such as the Authority is needed for the entities to express their interests and try to reach consensus on complex management issues.</p> <p>The objective:</p> <p>The Authority provides: coordination of the fish and wildlife activities of interagency and tribal concern; facilitation of interagency and tribal involvement in implementation of the NW Power & Conservation Council's Fish and Wildlife Program; and interaction with the water and land planning and management authorities of the Columbia River Basin.</p> <p>The method:</p>
Expended	\$0	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)	
Primary Benefited Population	Not specified	
Plans	Columbia River Basin Fish and Wildlife Program (NPPC 2000)	
Keyword	Interjurisdictional	
Need Number	N-002	
Partners	<p>Columbia River Inter Tribal Fish Commission</p> <p>Confederated Tribes of The Warm Springs</p> <p>Fish Passage Center</p> <p>Idaho Department of Fish and Game</p> <p>Montana Fish, Parks and Wildlife</p> <p>National Oceanic and Atmospheric Administration, Fisheries (\$750)</p> <p>Nez Perce Tribe</p> <p>Oregon Department of Fish and Wildlife</p>	

	<p>Shoshone-Bannock Tribe Umatilla Tribe Washington Department of Fish and Wildlife Yakama Indian Nation</p>	<p>The Service provided its share of the dues, \$750, to the Authority in FY-06 and staff from the Columbia River Fisheries Program Office were active participants in Columbia Basin Fish and Wildlife Authority coordination activities.</p> <p>Further description:</p> <p>The Service is a member agency of the Columbia Basin Fish and Wildlife Authority and provides annual funding and staffing support for Authority activities.</p>
<p>Accomplishments</p>		
<p>Number of other Fishery Management Plan tasks implemented for populations of management concern.</p>	<p>1</p>	

13310-A-141 - [Information and Education Activities](#)

Facility	Columbia River Fisheries Program Office	<p>Accomplishment Summary</p> <p>Promoted public stewardship of fish and wildlife resources by providing Service representation to grade schools in the local area. Prepared briefings on office activities for elected officials.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>The Information and Education Program promotes public stewardship of fish and wildlife resources and fosters support for conservation activities through outreach strategies.</p> <p>The objective:</p> <p>It is focused on providing the public; elected officials; media; other federal, State, and local agencies; Tribes; and non governmental organizations with current information on Columbia River Fisheries Program Office activities.</p> <p>The method:</p> <p>Local teachers are invited to spend a day in the field with project biologists. Presentations were given throughout the year to local schools. Service representation was given to Oregon and Wolfree's programs, the annual Watershed Festival, and recycled Arts festival. The office's web page was revised and updated.</p> <p>Further description:</p> <p>A new program allowing local teachers to spend a day in the field with the biologists proved successful. Two freshwater mussel workshops which were funded by a METRO greenspaces grant were hosted by the CRFPO</p>			
Expended	\$86844				
Objective	Provide support to States, Tribes, and other partners to identify and meet shared or complementary recreational fishing and aquatic education and outreach objectives.				
Primary Benefited Species	(0) Can Not Assign				
Primary Benefited Population	Not specified				
Plans	Pacific Region Fisheries Outreach Action Plan				
Keyword	Outreach				
Need Number	N-002				
Partners	Clark County, WA Columbia Springs Environmental Education Center Environmental Information Cooperative				
<p>Accomplishments</p> <table border="1"> <tr> <td>Number of population assessments completed</td> <td>10</td> </tr> <tr> <td>Number of other Fishery Management Plan tasks implemented for populations of management concern.</td> <td>2</td> </tr> </table>			Number of population assessments completed	10	Number of other Fishery Management Plan tasks implemented for populations of management concern.
Number of population assessments completed	10				
Number of other Fishery Management Plan tasks implemented for populations of management concern.	2				

	<p>this past year. Presentations were given throughout the year to local schools. Service representation was given to Oregon Trout's Salmon Watch and Stream Adventures programs and Wolfree's Cascade Stream Watch and Highland Ecology programs. The office's web page was revised and updated. In partnership with the Environmental Information Cooperative, CRFPO staff help in the planning and presentations at the annual Watershed Festival. Over 900 4th and 5th graders participated in this event.</p>
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13310-A-175 - [Columbia Basin Fish and Wildlife Authority and Habitat Initiative Activities](#)

Facility	Columbia River Fisheries Program Office	<p>Accomplishment Summary</p> <p>Coordinated with partners to develop proposals for funding by the Western Native Trout Initiative. Initiated development of projects to assess tidal marsh restoration at NWRs, and secured funding from the National Fish and Wildlife Foundation to assess 88-acre marsh restoration project at a NWR. Participated on teams to review habitat restoration proposals to the Community Salmon Fund in Washington. Assessed restoration potential of 180-acre parcel purchased by Columbia Land Trust.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>National Wildlife Refuges and partner's lands in watersheds provide opportunities to manage and restore fishery, habitat, and other aquatic resources. Restoration actions on refuges and partner lands may contribute to recovering listed species, reversing population declines, and protecting habitats. Monitoring is needed to assess effects.</p> <p>The problem:</p> <p>Opportunities for fish and aquatic habitat restoration, as well as appropriate monitoring and assessment of restoration actions, exist at National Wildlife Refuges and associated watersheds. The lack of information concerning specific areas and personnel to perform coordination may hinder opportunities to implement restoration actions.</p> <p>The objective:</p> <p>The objective is to provide fisheries assistance concerning restoration, coordination, and</p>
Expended	\$68903	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)	
Primary Benefited Population	Not specified	
Plans	Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper) National Fish Habitat Action Plan	
Keyword	Habitat	
Need Number	N-002	
Partners	Bandon Marsh National Wildlife Refuge Columbia Land Trust Confederated Tribes of Siletz Indians Ducks Unlimited Gee Creek Watershed Group Julia Butler Hansen National Wildlife Refuge (\$5000) Nestucca Bay National	

Wildlife Refuge
 Oregon Department of
 Fish and Wildlife
 Ridgefield National
 Wildlife Refuge
 The Nature
 Conservancy
 Washington Department
 of Fish and Wildlife

aquatic resources to a variety of partners (e.g., other Service programs, tribes, states, and other groups) that are implementing activities supportive of the National Fish Habitat Action Plan.

The method:

The CRFPO provided staff to establish working relationships with other service programs and partners involved in watershed planning and habitat restoration. These relationships allowed staff to develop proposals affecting aquatic habitat restoration, coordinate with those involved in restoration projects, and assist in watershed planning.

Accomplishments

Number of habitat assessments completed	1.0
Number of acres of wetland habitat assessed	180.0
Number of population assessments completed	35
Number of other Recovery Plan tasks implemented for T&E populations	1

Further description:

The CRFPO has performed coordination for activities of several groups and processes involved in habitat restoration that is supportive of the NWPCF Fish and Wildlife Program and National Fish Habitat Action Plan. Staff participated on teams to review habitat restoration proposals for Washington's Community Salmon Fund, coordinated with ODFW to develop proposals for the Western Native Trout Initiative, and was successful in securing funding from the Northwest Native Fish Fund, administered by the National Fish and Wildlife Foundation. The funding is to assess a tidal marsh restoration project at Nestucca Bay NWR. The CRFPO is assessing habitat restoration potential of a 180-acre parcel of property adjacent to Julia Butler Hansen NWR that was acquired by the Columbia Land Trust. Staff are coordinating with multiple partners, including refuges, tribes, and conservation organizations, to assist in and develop comprehensive approaches for evaluating a 430-acre tidal marsh restoration project that is planned for implementation during 2009 at Bandon Marsh NWR, as well as

	<p>assisting the new Gee Creek Watershed Coordinator. Staff kept partners informed of emerging developments in the National Fish Habitat Action Plan.</p>
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13310-A-198 - [Fisheries Restoration and Irrigation Mitigation Act \(FRIMA\)](#)

Facility	Columbia River Fisheries Program Office	<p>Accomplishment Summary</p> <p>Ranked projects competing for screens funding and, once selected, helped assure that all projects have completed the necessary environmental compliance procedures.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>Improperly screened or unscreened diversions may directly kill fish or indirectly kill fish through intrainment into irrigation works. In some cases, these fish are listed under the ESA, and mortality at diversions can impede recovery.</p> <p>The problem:</p> <p>Irrigation diversions throughout the Pacific Northwest may be unscreened or not screened to appropriate criteria. This may lead to direct fish mortality or indirect through intrainment into canal/irrigation works. Diversion structures may be impassable and restrict or inhibit habitat use by fish.</p> <p>The objective:</p> <p>The objective is to modify diversions to allow passage and screen diversions to prevent intrainment of adult and juvenile fish into irrigation works.</p> <p>The method:</p> <p>Projects install new screens and passage facilities at existing sites to bring them into compliance with Oregon guidelines.</p> <p>Further description:</p> <p>The Columbia River Fisheries Program Office assists FRIMA implementation by serving as</p>			
Expended	\$0				
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.				
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)				
Primary Benefited Population	Not specified				
Plans	Fisheries Restoration and Irrigation Mitigation Act of 2000 (PL 106-502)				
Keyword	Fish Passage				
Need Number	N-002				
Partners	Oregon Department of Fish and Wildlife (\$363739) Oregon Water Trust				
<p>Accomplishments</p> <table border="1"> <tr> <td>Fish passage barriers removed or bypassed</td> <td>1</td> </tr> <tr> <td>Number of other Fishery Management Plan tasks implemented for populations of management concern.</td> <td>2</td> </tr> </table>			Fish passage barriers removed or bypassed	1	Number of other Fishery Management Plan tasks implemented for populations of management concern.
Fish passage barriers removed or bypassed	1				
Number of other Fishery Management Plan tasks implemented for populations of management concern.	2				

	<p>the coordinator for projects in Oregon. This entails working with the Oregon Department of Fish and Wildlife, and other cooperators to rank projects competing for funding and, once selected, assuring that all projects have completed the necessary environmental compliance procedures. The focus of FRIMA is to provide funding to construct and install screening and passage facilities at water diversion sites.</p>
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13310-A-203 - [Cross Program Recovery](#)

Facility	Columbia River Fisheries Program Office	Accomplishment Summary CRFPO staff provided technical expertise in CPR forums, specifically relative to coastal cutthroat trout and Oregon chub
Expended	\$10000	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Oregon chub (Oregonichthys crameri)	
Primary Benefited Population	Not specified	
Plans	<p>Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper)</p> <p>Coastal Cutthroat Trout Framing Document (draft)</p> <p>MEMORANDUM OF UNDERSTANDING between OREGON FISH AND WILDLIFE OFFICE, U.S. FISH AND WILDLIFE SERVICE and OREGON DEPARTMENT OF FISH AND WILDLIFE</p> <p>Endangered and Threatened Wildlife and Plants; Withdrawal of Proposed Rule To List the Southwestern Washington/Columbia River Distinct Population Segment of the Coastal Cutthroat Trout as Threatened50 CFR Part 17</p> <p>Oregon Conservation Strategy</p>	Description
		The importance to the Resource:
		The Cross Program Recovery program initiated in Region 1 was designed to foster cooperative efforts between Fisheries, ES and NWR to implement beneficial actions for imperiled species in the Region.
		The problem:
		Previous Service efforts targeting restoration of Oregon chub and coastal cutthroat trout were attempted along programmatic lines without the full benefit of a cross program approach.
		The objective:
		The objective is to collaborate across program lines and combine the expertise within each program to solicit funding to delist Oregon chub and keep coastal cutthroat trout off the Endangered Species list.
		Further description:
		Columbia River Fisheries Program Office staff play a key role in the Cross Program Recovery efforts. Relative to fish species, to date, CPR efforts have been focused on Oregon chub and coastal cutthroat trout. CRFPO staff have provided technical expertise in these forums. In particular, an assessment of research priorities for Oregon chub was conducted. As a result of this exercise, CRFPO facilitated cooperative research on Oregon chub population genetics. Furthermore, CRFPO staff have worked with

	Recovery Plan for the Oregon Chub (<i>Oregonichthys crameri</i>)	<p>various NWR to evaluate research needs relative to coastal cutthroat trout. Working with staff from Ecological Service's the CRFPO hosted a Coastal Cutthroat Trout Symposium to update the status of the species. As an outcome of this event, the States of Washington, Oregon, Alaska, as well as British Columbia have agreed to pursue a range-wide conservation initiative.</p>
Keyword	Recovery	
Need Number	N-002	
Partners	Alaska Department of Fish and Game Oregon Department of Fish and Wildlife U.S. Geological Survey Washington Department of Fish and Wildlife	
Accomplishments		
Number of population assessments completed		2

13310-A-206 - [Restoration of Aquatic Habitat and Monitoring on Refuges](#)

Facility	Columbia River Fisheries Program Office
Expended	\$80743
Objective	Increase the quantity and improve the quality of aquatic and riparian habitat on Service lands.
Primary Benefited Species	(0) Multiple Species
Primary Benefited Population	Not specified
Plans	Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper) National Wildlife Refuge System Improvement Act of 1997
Keyword	Service Lands
Need Number	N-002
Partners	National Wildlife Refuges and friends groups

Accomplishments

Number of population assessments completed	28
Number of other Recovery Plan tasks implemented for T&E populations	1
Number of other Fishery Management Plan tasks implemented for populations of	3

Accomplishment Summary

Developed proposals to address aquatic habitat and monitoring needs at National Wildlife Refuges that were identified at the NWR-CRFPO workshop; Provided technical assistance on various planning, habitat, and monitoring issues; Conducted surveys of fish and aquatic habitats; Coordinated with partners in developing approaches to conduct and monitor habitat restoration projects at refuges, Participated in cross-program and partnership activities affecting refuges.

Description

The importance to the Resource:

National Wildlife Refuges and associated watersheds provide opportunities to manage and restore fishery, habitat, and other aquatic resources. Such opportunities may contribute to recovering listed species, reversing population declines, and protecting habitats. Monitoring effects of restoration activities is essential for informed management.

The problem:

Opportunities for fish and aquatic habitat restoration, as well as adequate monitoring and assessment of restoration actions, at National Wildlife Refuges are diminished due to lack of specific information concerning aquatic resources and access to personnel with fisheries expertise.

The objective:

The objective is to provide National Wildlife Refuges with fisheries assistance concerning aquatic resource issues such as habitat restoration projects and approaches to monitor and assess fish and aquatic habitats, which will

<p>Number of other Fishery Management Plan tasks implemented for populations of management concern.</p>	<p>3</p>	<p>contribute management decisions and refuge planning.</p> <p>The method:</p> <p>The CRFPO provided refuges with fisheries staff time and resources to assist refuge managers in a variety of ways such as attending coordination and technical work meetings, conducting fish and habitat assessments, and developing plans and proposals to implement and monitor restoration actions.</p> <p>Further description:</p> <p>The Columbia River Fisheries Program Office and National Wildlife Refuges (i.e., those within the geographic area of responsibility of the CRFPO--Columbia River basin below McNary Dam, Oregon waters excluding the Klamath River basin, small tributaries of Willapa NWR) held a workshop to discuss aquatic resource issues and needs at refuges. Several needs were identified that the CRFPO could provide assistance to refuges, including fisheries assistance concerning habitat restoration and monitoring. Examples of assistance that the CRFPO provided to refuges to address needs during FY06 include: Conducting surveys in various habitats at Steigerwald Lake NWR to determine fish species composition; Providing equipment and assistance to personnel at Tualatin NWR to conduct surveys required by a biological opinion for a wetland restoration project; Coordinating among partners to develop proposals for assessing tidal marsh restoration projects at two Oregon Coast refuges for which funding was secured for one NWR from the National Fish and Wildlife Federation, and providing comments concerning aquatic habitats and resources for developing Comprehensive Conservation Plans at three NWRs.</p>
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13310-A-211 - [National Fish Passage Program Project on Bridge Creek](#)

Facility	Columbia River Fisheries Program Office	<p>Accomplishment Summary</p> <p>The Sweet and Hashknife fish passage project was funded in FY 2005, replacing a culvert and an old diversion structure blocking fish passage on Bridge Creek, Oregon. Bridge Creek is a tributary of the John Day River, entering the lower John Day River.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>In combination the Sweet diversion passage upgrade and the Hashknife culvert replacement will open 3.8 miles of habitat to unimpeded fish passage. The habitat is utilized by the listed mid-Columbia River steelhead trout, among other native fish.</p> <p>The problem:</p> <p>The existing diversion structure is degraded impeding passage. The Hashknife culvert is undersized and perched seasonally restricting fish passage.</p> <p>The objective:</p> <p>The objective is to restore year round fish passage past the diversion structure and the culvert.</p> <p>The method:</p> <p>The diversion structure will be replaced with a series of stepped rock weirs that allow passage, and the culvert will be replaced with a bridge.</p> <p>Further description:</p> <p>The National Fish Passager Program was created in 1999 with the goal of restoring</p>			
Expended	\$20000				
Objective	Maintain diverse, self-sustaining fish and other aquatic resource populations.				
Primary Benefited Species	Rainbow trout (Oncorhynchus mykiss)				
Primary Benefited Population	John Day River Lower Mainstem Tributaries Steelhead				
Plans	Oregon Conservation Strategy				
Keyword	Fish Passage				
Need Number	N-002				
Partners	Local Landowner(s) (\$7900) Oregon Watershed Enhancement Board (\$90618) Wheeler Soil and Water Conservation District (\$3000)				
<p>Accomplishments</p> <table border="1"> <tr> <td>Number of miles re-opened to fish passage</td> <td>3.8</td> </tr> <tr> <td>Fish passage barriers removed or bypassed</td> <td>2</td> </tr> </table>			Number of miles re-opened to fish passage	3.8	Fish passage barriers removed or bypassed
Number of miles re-opened to fish passage	3.8				
Fish passage barriers removed or bypassed	2				

	<p>native fish and other aquatic species to self-sustaining levels by reconnecting habitat that has been fragmented by barriers. The program utilizes a voluntary, non regulatory approach to remove and bypass barriers. Generally projects are conducted in conjunction with local partners, including States, Tribes, other Federal agencies, and local private cooperators. The Sweet and Hashknife project restores access to 3.75 miles of stream by replacing a barrier culvert and failing diversion structure. This project is taking place on Bridge Creek, which is a tributary to the Lower John Day River, in Oregon.</p>
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13310-A-217 - [South Fork John Day/John Day Watershed Fish Passage Projects](#)

Facility	Columbia River Fisheries Program Office	<p>Accomplishment Summary</p> <p>Four projects are addressed this season, opening 23 miles of habitat to year round access and removing nine barriers</p> <p>Description</p> <p>The importance to the Resource:</p> <p>The John Day River is the 2nd longest free flowing river system in the U.S., running nearly 300 miles. Upper river projects benefit several species: bull trout, Mid_Columbia River steelhead, resident interior redband, and westslope cutthroat trout. Bull trout and steelhead are listed as threatened.</p> <p>The problem:</p> <p>Numerous small push-up dams are constructed along the river seasonally, as well as numerous fixed diversion points on the mainstem and tributaries. These may block access as well as intrain fish into irrigation systems if unscreened or improperly screened.</p> <p>The objective:</p> <p>The objective is to restore passage and prevent intrainment into irrigation systems.</p> <p>The method:</p> <p>Several methods may be applied, replacing diversions with pumps, lay-flat stanchion structures that provide passage for all life stages, and consolidating several diversion points into a single diversion with passage and screening facilities.</p> <p>Further description:</p> <p>The first stage of this project addresses Lower</p>	
Expended	\$45000		
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.		
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)		
Primary Benefited Population	John Day River upper mainstem Spring Chinook		
Plans	Oregon Conservation Strategy The Oregon Plan for Salmon and Watersheds		
Keyword	Fish Passage		
Need Number	N-002		
Partners	Grant County Soil and Water Conservation District, Oregon (\$314211) Oregon Water Trust (\$5000) Oregon Watershed Enhancement Board (\$27736)		
<p>Accomplishments</p> <table border="1"> <tr> <td>Number of miles re-opened to fish passage</td> <td>23.0</td> </tr> </table>			Number of miles re-opened to fish passage
Number of miles re-opened to fish passage	23.0		

Fish passage barriers removed or bypassed	9	South Fork John Day, Roberts Creek, Lawrence Diversion, and South Reynolds Creek.
Number of population assessments completed	3	
Number of other Fishery Management Plan tasks implemented for populations of management concern.	1	

13310-A-218 - [Elk Creek Nehalem River fish Passage Project](#)

Facility	Columbia River Fisheries Program Office
Expended	\$15000
Objective	Recover fish and other aquatic resource populations protected under the Endangered Species Act.
Primary Benefited Species	Coho salmon or silver salmon (Oncorhynchus kisutch)
Primary Benefited Population	Lower Columbia River ESU (Threatened)
Plans	Oregon Conservation Strategy
Keyword	Fish Passage
Need Number	N-002
Partners	Columbia County, Oregon (\$2500) Oregon Department of Fish and Wildlife (\$2400) Oregon Watershed Enhancement Board (\$10194)

Accomplishments

Number of miles re-opened to fish passage	3.6
Number of population assessments completed	3

Accomplishment Summary

Upon completion of this project we will eliminate fish passage barrier associated with undersized culverts on Elk Creek at two crossings. Final designs will allow removal of the culvert and replacement with an appropriately sized bridge or culvert. Correcting this barrier will restore access to 3.6 miles of stream. Initial funding in year one will be used to design the project. Subsequent funding will be used to implement the design and restore full passage conditions

Description

The importance to the Resource:

Elk Creek is a key tributary within the watershed with high intrinsic value for Coho production. Fish species verified as using this creek include coho, sea-run and residential coastal cutthroat trout, and brook lamprey. This system contains a large percentage of low gradient habitat, suggesting high potential for coho habitat use.

The problem:

Improperly sized culverts impede passage at two crossings on Elk Creek. The current condition impedes adult passage, conditional upon depth and velocity of flow, and a year round juvenile passage barrier.

The objective:

The objective of the project is to remove the undersized culverts and replace them with an appropriately sized bridge or culvert to restore full passage.

The method:

	<p>Culvert replacement with a bridge or appropriately sized culvert.</p> <p>Further description:</p> <p>This is a cross program project in conjunction with ecological services and State and local partners. Upon completion of this project we will eliminate fish passage barrier associated with undersized culverts on Elk Creek at two crossings. Final designs will allow removal of the culvert and replacement with an appropriately sized bridge or culvert. Correcting this barrier will restore access to 3.6 miles of stream. Initial funding in year one will be used to design the project. Subsequent funding will be used to implement the design and restore full passage conditions</p>
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13310-A-219 - [Toxicity of herbicides to fish from Little White Salmon National Fish Hatchery](#)

Facility	Columbia River Fisheries Program Office
Expended	\$0
Objective	Minimize range expansion and population growth of established aquatic nuisance species.
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)
Primary Benefited Population	Little White Salmon River Spring Chinook
Plans	2000 NMFS FCRPS Biological Opinion - December 21, 2000 Comprehensive Hatchery Management Plan- Little White NFH Complex ANS Task Force Strategic Plan
Keyword	Aquatic Nuisance Species
Need Number	N-002
Partners	Little White Salmon National Fish Hatchery (\$10000) Skamania County, Washington

Accomplishments

Number of other Recovery Plan tasks implemented for T&E populations	1
Number of other Fishery Management Plan tasks implemented for populations of	1

Accomplishment Summary

Monitoring and evaluation to protect important salmon and steelhead fishing and populations. Specific evaluation was a toxicity study of herbicides Diquat and 2,4D applied by Skamania County in Drano Lake, Washington for control of exotic plants, water milfoil and elodea.

Description

The importance to the Resource:

Chinook salmon provide important tribal and sport fisheries.

The problem:

Herbicides are applied in areas occupied by salmon. Exotic plants interfere with native plants, boating, and fishing.

The objective:

Determine the potential effect of herbicide application on survival and tissue residue in chinook salmon.

The method:

Live traps of chinook salmon were placed at Little White Salmon National Fish Hatchery (control) and in Drano Lake where the herbicide was applied (treatment). Sampling was conducted to monitor survival over a 96 hour period. Tissue samples were collected and sent to a lab for analysis for herbicides.

Further description:

This was a one year study working with Little White National Fish Hatchery and Skamania County.

management concern.

13310-A-220 - [Population Assessment in the White Salmon River](#)

Facility	Columbia River Fisheries Program Office	<p>Accomplishment Summary</p> <p>Provided assistance to partners and helped secure their funding to meet joint monitoring and collection goals for Service and U.S. Forest Service needs in the White Salmon River prior to removal of Condit Dam (Fall 2008). Performed abbreviated snorkel surveys and coordinated the collection of fin clips by U.S. Geological Survey. Acted as a data liaison between agencies and organized data for submission. Wrote a summary report and provided to funding source.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>Little information exists on the production and presence of juvenile Chinook salmon, coho salmon, and <i>Oncorhynchus mykiss</i> (rainbow trout/steelhead) in the White Salmon River. Returning hatchery adults may produce some juveniles but little information is known. Outmigration, size of fish, and outmigration period is also unknown.</p> <p>The problem:</p> <p>No monitoring of naturally produced salmon and steelhead occurs in the White Salmon River. Condit Dam, located 2.3 miles upstream from it's confluence with the Columbia River will be removed in fall 2008. The number, presence, and biological information of current species must gathered for future restoration after removal of the dam.</p> <p>The objective:</p> <p>The project objectives were to collect genetic clips on juvenile salmon and steelhead present in the White Salmon River during spring outmigration and to document the presence of</p>
Expended	\$0	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)	
Primary Benefited Population	White Salmon River fall run (tule Chinook)	
Plans	<p>White Salmon Subbasin Plan</p> <p>1999 NMFS Biological Opinion on Artificial Propagation in the Columbia River Basin.</p> <p>Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper)</p>	
Keyword	Monitoring and Assessment	
Need Number	N-002	
Partners	<p>U. S. Forest Service (\$2675)</p> <p>U.S. Geological Survey</p>	
Accomplishments		

Number of population assessments completed	2
Recovery Plan production tasks implemented (PART)	1
Number of other Recovery Plan tasks implemented for T&E populations	3
Number of other Fishery Management Plan tasks implemented for populations of management concern.	1

these species in the lower White Salmon River. Archival of these genetic samples allows future analysis and aids in fish restoration efforts after dam removal.

The method:

Partnering, assisting, and aiding USGS to fund a rotary screw trap in the lower White Salmon River allowed for collection of juvenile salmon and steelhead fin clips. Bi-monthly snorkel surveys were conducted trap operation in an effort to gather corresponding data for the presence, absence, and number of fish species in the lower river.

Further description:

This assessment is part of a larger group effort by Washington Department of Fish and Wildlife, the Yakama Indian Nation, Underwood Conservation District, U.S. Forest Service, and the U.S. Geological Survey to gather information on the White Salmon River before removal of Condit Dam in fall 2008. Each partner is working towards goals benefiting their interest but also assisting in the collection of information important to the restoration of the White Salmon. Although funding of the project was low, it allowed Service staff to aid in the funding request of USGS to operate a rotary screw trap, and met the goals of the funding source, the U.S. Forest Service by collecting genetic clips from outmigrating juvenile salmon and steelhead. By working with USGS as a partner, more information was gathered and better data collection occurred than the Service staff could have accomplished alone with the funding provided.

13310-A-221 - [Tryon Creek Monitoring](#)

Facility	Columbia River Fisheries Program Office	<p>Accomplishment Summary</p> <p>Conducted pre-restoration monitoring of lamprey species on Tryon Creek. Lamprey are one of several species being monitored (Coho, Steelhead, Cutthroat trout).</p> <p>Description</p> <p>The importance to the Resource:</p> <p>Steelhead (Lower Willamette River ESU-threatened), coho (Lower Columbia River ESU-threatened), resident rainbow and cutthroat trout and lamprey historically spawned and reared in Tryon Creek. Habitat is still suitable for spawning/rearing anadromous fish but the Highway 43 culvert has probably impeded passage since its construction 50 years ago.</p> <p>The problem:</p> <p>Although fish habitat appears to exist in upstream areas, a 400 foot culvert near the mouth of the creek inhibits fish passage, particularly upstream. ODOT is conducting a culvert retrofit to improve fish passage. Pre- and post-restoration monitoring of salmonid and lamprey species is necessary to assess the retrofit.</p> <p>The objective:</p> <p>CRFPO has partnered with several federal, state and local agencies to monitor salmonid and lamprey species in Tryon Creek Natural Area. Monitoring before and after the proposed culvert retrofit is necessary to assess the restoration effort.</p> <p>The method:</p> <p>Tryon Creek was electroshocked to determine presence of juvenile Pacific and juvenile and</p>
Expended	\$2000	
Objective	Recover fish and other aquatic resource populations protected under the Endangered Species Act.	
Primary Benefited Species	Pacific lamprey (Lampetra tridentata)	
Primary Benefited Population	Columbia River Pacific Lamprey	
Plans	<p>Columbia River Basin Fish and Wildlife Program (NPPC 2000)</p> <p>Lower Columbia and Columbia Estuary Bi-State Subbasin Plan - 2004</p> <p>Critical Uncertainties for Lamprey in the Columbia River Basin: Results from a strategic planning retreat of the Columbia River Lamprey Technical Workgroup 2005</p>	
Keyword	Recovery	
Need Number	N-002	
Partners	<p>City of Lake Oswego (\$20000)</p> <p>City of Portland</p> <p>Friends of Tryon Creek</p> <p>National Marine Fisheries Service</p> <p>National Oceanic and Atmospheric Administration, Fisheries</p> <p>Oregon Department of</p>	

Fish and Wildlife
 Oregon Department of
 Transportation (\$60000)
 Tryon Creek Watershed
 Council

Accomplishments

Number of Friends Groups	1
Number of miles of in-stream habitat assessed	7.0
Number of population assessments completed	4
Number of other Fishery Management Plan tasks implemented for populations of management concern.	9

adult Western brook lamprey. This was the first effort in a large scale project involving pre- and post restoration monitoring of lamprey and salmonid species.

Further description:

Tryon Creek is one of the largest, relatively protected, urban watersheds in Oregon. Pacific lamprey numbers have declined to a remnant of those for historical populations. Pacific lamprey are limited by many of the same factors and threats as salmon, particularly habitat (including passage) and ecological interactions. Preliminary survey data shows that all species of anadromous fish are underrepresented in Tryon Creek upstream of the culvert. While resident fish seem to be the primary inhabitants upstream of the culvert, habitat surveys have suggested that there is suitable habitat both downstream and upstream of the culvert for spawning and rearing of anadromous fish. The culvert in Tryon Creek has likely been impeding fish passage for more than 50 years. Overall, there is a conservation need to improve fish passage conditions in Tryon Creek. The short-term conservation need for the proposed project is to assess the current status of anadromous fish species in Tryon Creek before changing fish passage conditions. The long-term restoration needs of the proposed project are to determine if anadromous fish passage is improved by culvert modification as well as if status improves above the culvert after modification.

14220-A-008 - [Snake River Basin Adjudication Agreement \(SRBAA\)](#)

Facility	Dworshak National Fish Hatchery
Expended	\$20000
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.
Primary Benefited Species	Rainbow trout (Oncorhynchus mykiss)
Primary Benefited Population	Not specified
Plans	The Service's Native American Policy Snake River Basin Adjudication
Keyword	Tribal
Need Number	N-002
Partners	

Accomplishments

Number of other Fishery Management Plan tasks implemented for populations of management concern.	6
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	1
Number of training session to support Tribal fish & wildlife conservation.	1

Accomplishment Summary

We negotiated an approach to the joint management of Dworshak NFH with the Nez Perce Tribe.

Description

The importance to the Resource:

In July, 2004, the Department of Interior, Nez Perce Tribe, and the State of Idaho all signed the Snake River Basin Adjudication which will, when finalized, settle 1,900 water right claims the Tribe has made in the Snake River Basin. Included in this settlement was the joint management of Dworshak NFH.

The problem:

The Service was charged with working out the details of what joint management meant and what exactly would be implemented at Dworshak.

The objective:

Through numerous meetings and conference calls the Service and Tribe developed four Memorandums of Agreement (MOUs), including one for Dworshak joint management.

The method:

Through the MOUs, defining of each party's responsibilities was accomplished. Items such as daily hatchery activities along with employment goals for Dworshak and how and when Tribal employees are incorporated into hatchery staff were included. A Tribal coordinator position to act as a liaison between the Service and the Tribe was developed.

13280-A-014 - [Hatchery Evaluation Team](#)

Facility	Eagle Creek National Fish Hatchery	<p>Accomplishment Summary</p> <p>Hatchery production coordination with fishery biologists and managers from multiple federal and state agencies, tribes and private sector interests.</p> <p>Description</p> <p>Further description:</p> <p>This project entails coordinating hatchery production programs and goals with multiple cooperators including the National Marine Fishery Service, Oregon Department of Fish and Wildlife, US Bureau of Land Management, US Forest Service - Mt. Hood Forest, Portland General Electric, Yakama Indian Nation, Nez Perce Indian Tribe, Clatsop Economic Development Corporation and personnel from multiple US Fish and Wildlife offices including the Portland Regional Office, Columbia River Fisheries Program Office, Lower Columbia River Fish Health Office and Abernathy Development Center.</p> <p>The hatchery initiated a working relationship with the Grand Ronde Tribe to introduce them to potential assistance from the Service for genetics and fish health work on steelhead and other fishes native to Agency Creek on their reservation.</p>
Expended	\$1500	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Coho salmon or silver salmon (Oncorhynchus kisutch)	
Primary Benefited Population	Not specified	
Plans	<p>Eagle Creek NFH Coho Salmon Hatchery and Genetic Management Plan</p> <p>Eagle Creek NFH Winter Steelhead Hatchery and Genetic Management Plan</p> <p>The Service's Native American Policy</p>	
Keyword	Management	
Need Number	N-002	
Partners	<p>Bureau of Land Management</p> <p>Confederated Tribes of the Grand Ronde</p> <p>National Marine Fisheries Service</p> <p>Nez Perce Tribe</p> <p>Oregon Department of Fish & Wildlife</p> <p>Portland General</p>	

	<p>Electric U. S. Forest Service Yakama Indian Nation</p>	
Accomplishments		
Recovery Plan production tasks implemented (PART)	2	
Number of consultations conducted to support Tribal fish & wildlife conservation.	3	

13220-A-007 - [Spring Chinook Salmon Propagation Program](#)

Facility	Entiat National Fish Hatchery
Expended	\$0
Objective	Meet the Service's responsibilities for mitigating fisheries.
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)
Primary Benefited Population	Entiat River (UCENT) spring chinook salmon.
Plans	Entiat Hatchery Genetics Management Plan 2005-2007 Interim Management Agreement for Upriver Chinook, Sockeye, Steelhead, Coho, and White Sturgeon
Keyword	Mitigation
Need Number	N-002
Partners	Bureau of Indian Affairs Colville Tribe NOAA Fisheries U.S. Bureau of Reclamation (\$300000) Washington Department of Fish and Wildlife Yakama Nation

Accomplishments

Number of Fishery Management Plan production tasks implemented (PART)	4
Number of post stocking survival tasks met	1

Accomplishment Summary

Reared and released 326,279 brood year (BY) 2004 spring Chinook salmon (SCS) smolts to the Entiat River. Provide Colville Confederated Tribe 51,049 BY 2004 SCS fingerling for release into Okanagon River. Reared approximately 415,000 BY 2005 SCS juveniles. Collected 815 adult SCS. Provided 456 adult SCS to the Bureau of Indian Affairs. Collected and incubated approximately 500,000 BY 2006 SCS eggs from 148 females and fertilized by 149 males.

Description

The importance to the Resource:

The importance of the spring Chinook salmon propagation program at Entiat National Fish Hatchery is to maintain and improve salmonid returns to the Entiat River and the Columbia River Basin for harvest by sport and tribal anglers.

The problem:

In the 1930's the Grand Coulee Dam was constructed and blocked fish passage to a large amount of anadromous salmonid habitat. To mitigate for the expected fish declines the construction and operation of Entiat National Fish Hatchery was authorized.

The objective:

The objective of the propagation program at Entiat National Fish Hatchery is to mitigate for the loss of habitat cause by the construction of Grand Coulee Dam by propagating spring Chinook salmon for harvest by sport and tribal anglers.

The method:

as prescribed by Fishery Management Plans, for hatchery propagated depleted species (PART)		<p>The propagation program at Entiat National Fish Hatchery consist of collecting, holding, and spawning of adult spring Chinook salmon, and incubating and rearing the off-spring to meet an annual release target of 400,000 smolts which are directly released from the hatchery into the Entiat River on an annual basis.</p> <p>Further description:</p> <p>The Entiat River is a tributary to the Columbia River in Washington State. The Entiat National Fish Hatchery is located on the Entiat River. Fish released must pass eight downstream dams to reach the Pacific Ocean. The Entiat National Fish Hatchery is one of three hatcheries in the Leavenworth National Fish Hatchery Complex. The Complex was authorized by the Grand Coulee Fish Maintenance Project, April 3, 1937, and reauthorized by the Mitchell Act, May 11, 1938. Currently, the Complex is funded through a reimbursable agreement (sub activity-1932) with the Bureau of Reclamation as mitigation for Grand Coulee Dam. Other guiding authorities include by the US v. Oregon and the US Canada Treaty.</p>
number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	7	
Number of other Fishery Management Plan tasks implemented for populations of management concern.	3	
Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)	4	

13220-A-008 - [Coho Salmon Propagation Program](#)

Facility	Entiat National Fish Hatchery
Expended	\$0
Objective	Provide technical assistance to Tribes.
Primary Benefited Species	Coho salmon or silver salmon (Oncorhynchus kisutch)
Primary Benefited Population	Wenatchee River Coho
Plans	The Service's Native American Policy 2005-2007 Interim Management Agreement for Upriver Chinook, Sockeye, Steelhead, Coho, and White Sturgeon
Keyword	Tribal
Need Number	N-002
Partners	Bonneville Power Administration (\$50000) Washington Department of Fish and Wildlife Yakama Nation

Accomplishments

Number of Fishery Management Plan production tasks implemented (PART)	2
Number of other Fishery Management Plan tasks implemented for populations of management concern.	2

Accomplishment Summary

Held 1,406 adult Coho salmon in the adult holding ponds (669 females and 737 males). Pre-spawn mortality was 4.8 percent. Collected 1,821,729 brood year 2005 Coho salmon eggs from 653 females and fertilized by 666 males. Shipped 789,390 green eggs and milt to Yakama Nations for incubation at their Peshastin Incubation Facility. Shipped 875,705 eyed eggs to Willard National Fish Hatchery and Cascade Fish Hatchery (ODFW) for further incubation and rearing.

Description

The importance to the Resource:

Assisting the Yakama Nation with the reintroduction of Coho to the mid-Columbia River basin is important because it supports reintroduction of a functionally extirpated salmonid species and meets tribal trust responsibilities.

The problem:

Indigenous natural Coho salmon were decimated in the early 1900s and no longer occupy the mid-Columbia river basins. Reasons for decline include the construction and operation of mainstem Columbia River hydropower projects, habitat degradation, release locations, harvest management, and hatchery practices.

The objective:

The objective is to assist, primarily, the Yakama Nation and other partners in re-establishing naturally spawning Coho populations in mid-Columbia tributaries to biologically sustainable levels which provide significant harvest in most years.

The *method*:

Assist the Yakama Nation with the mid-Columbia Coho reintroduction feasibility project by providing facilities, resources, manpower and technical expertise. This includes providing space and water to hold adults, spawning adults, incubating eggs and shipping eyed eggs to other facilities for rearing.

Further description:

The Coho reintroduction program is led by the Yakama Nation and funded by Bonneville Power Administration. Benefits include restoration and rebuilding Coho salmon to the Wenatchee River and Methow River basins.

The Entiat River is a tributary to the Columbia River in Washington State. The Entiat National Fish Hatchery is located on the Entiat River. Fish released must pass eight downstream dams to reach the Pacific Ocean. The Entiat National Fish Hatchery is one of three hatcheries in the Leavenworth National Fish Hatchery Complex. The Complex was authorized by the Grand Coulee Fish Maintenance Project, April 3, 1937, and reauthorized by the Mitchell Act, May 11, 1938. Currently, the Complex is funded through a reimbursable agreement (sub activity-1932) with the Bureau of Reclamation as mitigation for Grand Coulee Dam. Other guiding authorities include by the US v. Oregon and the US Canada Treaty.

14226-A-110 - [Health Monitoring of Spring & Fall Chinook at Tribal Facilities and coho at Dworshak NFH](#)

Facility	Idaho Fish Health Center	<p>Accomplishment Summary</p> <p>Monitored juvenile SCS & FCS at Nez Perce Tribe hatchery and acclimation sites resulting in the release of 1.5 million healthy fish into the Snake & Clearwater rivers to re-establish naturally spawning populations.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>As part of this relatively new tribal fisheries program, the Idaho Fish Health Center insured that healthy fish were released into the Snake and Clearwater rivers to assist in reestablishing natural spawning populations of fall and spring chinook salmon.</p> <p>The problem:</p> <p>historic populations of chinook and coho salmon were exterminated from the Clearwater drainage and severely reduced in the Snake River by dams put in the early part of last century.</p> <p>The objective:</p> <p>The Nez Perce Tribe is making an effort to restore populations of chinook and coho salmon in the Snake and Clearwater drainages to a point where Tribal and sport harvests as well as natural reproduction occurs.</p> <p>The method:</p> <p>The Tribe operates FCS acclimation facilities, SCS hatchery and acclimation facilities and have a growing coho program. The Tribe is now spawning many of their own fish. The IFHC samples during spawning, rearing, and prior to release for these programs.</p>
Expended	\$27309	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)	
Primary Benefited Population	Clearwater River Lower Mainstem Tributaries	
Plans	Federal Columbia River Power System 2002 Biological Opinion U. S. vs OR Columbia River Fishery Management Plan (under renegotiation) Biological Opinion on Artificial Propagation in the Columbia River Basin.	
Keyword	Fish Health	
Need Number	N-002	
Partners	Nez Perce Tribe (\$4570)	
Accomplishments		
Number of population assessments completed	9	

Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	2	Further description:
Number of training session to support Tribal fish & wildlife conservation.	1	
		<p>The Nez Perce Tribe has contracted with the Idaho Fish Health Center to do fish health monitoring and prerelease exams at three Tribal Acclimation sites, one Washington Department of Fish and Wildlife hatchery facilities, one Tribal Hatchery complex, and one cho program. Center staff does the fish health sampling for the import permit into Idaho, weekly health monitoring at these sites, any diagnostic and treatment prescriptions necessary, and conduct prerelease examinations at all sites. Funding is under subactivity 1937 and amounted to \$31870 in 2006.</p>

14226-A-111 - [Health Monitoring Kootenai River White Sturgeon for use in Restoration](#)

Facility	Idaho Fish Health Center
Expended	\$6000
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.
Primary Benefited Species	White sturgeon (Acipenser transmontanus)
Primary Benefited Population	Not specified
Plans	2000 FWS Biological Opinion - Effects to Listed Species from Operations of the Federal Columbia River Power System Kootenai River White Sturgeon Recovery Plan The Service's Native American Policy
Keyword	Fish Health
Need Number	N-002
Partners	Kootenai Tribe of Idaho

Accomplishments

Number of population assessments completed	2
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Accomplishment Summary

The IFHC enabled the successful spawning of healthy fish and the release of healthy family groups to assist in endangered Kootenai River white sturgeon recovery efforts.

Description

The importance to the Resource:
In 2006 work conducted at the Idaho Fish Health enabled the successful spawning of healthy fish and the release of healthy family groups from brood year 2005 fish to assist in the recovery and restoration of this endangered species.

The problem:

No recruitment has occurred for several years in the Kootenai River White Sturgeon populations. Erection of numerous dams, especially Libby Dam, have prevented fish migration and release of water flows needed for spawning.

The objective:

The KTOI captures wild fish and spawns them, transferring and rearing the larvae and young fish in their hatchery. These fish are raised for a year, and then released into the wild in hopes of establishing a self-sustaining population

The method:

We performed all fish health services required for the successful rearing, release, and transfer of endangered Kootenai River White Sturgeon in cooperation with the Kootenai Tribe of Idaho. Water conditions made it imperative that two rearing sites be available, to reduce the risk of disease transmission.

	<p>Further description:</p> <p>Half of the broodstock is reared in Canada which requires numerous permits, testing regimes to verify fish health. With the drainage extending into Canada, releasing juvenile white sturgeon into the Kootenai River also requires extensive health monitoring.</p>
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14330-A-061 - [Burns Creek Fish Passage Project](#)

Facility	Idaho Fisheries Resource Office	<p>Accomplishment Summary</p> <p>Undersized perched culvert was replaced with correct sized arched culvert that simulates natural stream bottom. All work is complete.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>Burns Creek, tributary to Palisades Reservoir is a stronghold for Yellowstone cutthroat trout (USFS sensitive species, State species of concern), and its habitat quality is considered to be good. Resident cutthroat trout exist throughout the stream and adfluvial cutthroat migrate upstream to the culvert at FS Road 087.</p> <p>The problem:</p> <p>At its crossing with Burns Creek, the original culvert was placed poorly. It is perched, out of alignment with the stream, and under capacity. Fluvial Yellowstone cutthroat trout cannot pass upstream into spawning and rearing habitat.</p> <p>The objective:</p> <p>Replace this culvert to restore upstream passage for fluvial Yellowstone cutthroat trout. The restoration of fish passage at this crossing will restore the migratory run of Yellowstone cutthroat trout to Burns Creek, increasing the potential for the long term viability of the Burns Creek population.</p> <p>The method:</p> <p>Replace existing culvert with bottomless arch culvert that will pass all life stages of aquatic organisms at all flows.</p>			
Expended	\$15053				
Objective	Maintain diverse, self-sustaining fish and other aquatic resource populations.				
Primary Benefited Species	Yellowstone cutthroat trout (Oncorhynchus clarkii bouvieri)				
Primary Benefited Population	Palisades-Salt River				
Plans	2003 Revised Caribou-Targhee Forest Plan Memorandum of Agreement for Conservation and Management of Yellowstone Cutthroat Trout (<i>Oncorhynchus clarkii bouvieri</i>) among Montana, Idaho, Wyoming, Nevada, Utah, U S. Forest Service, Yellowstone National Park and Grand Teton National Park.				
Keyword	Fish Passage				
Need Number	N-002				
Partners	Caribou Targhee National Forest (\$24000) Trout Unlimited (\$24000)				
<p>Accomplishments</p> <table border="1"> <tr> <td>Number of miles re-opened to fish passage</td> <td>5.0</td> </tr> <tr> <td>Fish passage barriers removed or bypassed</td> <td>1</td> </tr> </table>			Number of miles re-opened to fish passage	5.0	Fish passage barriers removed or bypassed
Number of miles re-opened to fish passage	5.0				
Fish passage barriers removed or bypassed	1				

Number of other Fishery Management Plan tasks implemented for populations of management concern.	1	
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14330-A-064 - [Aquatic Resource Management on National Wildlife Refuges in Idaho](#)

Facility	Idaho Fisheries Resource Office	<p>Accomplishment Summary</p> <p>We increased Refuge coordination efforts by contacting all refuges in Idaho and Eastern Washington to inquire about aquatic resource needs. We then physically met with refuge staff to present our programs capabilities and potential sources for funding including FONS, FRIMA, FPP, and the NFHI. We discussed aquatic issues for each refuge and identified where we could assist them with funding or technical assistance. As a result, we prepared 5 FONS proposals for refuge related projects.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>There are 7 NWRs in Idaho that have varied needs and/or opportunities for aquatic resource enhancement, restoration, or protection of sensitive fish stocks.</p> <p>The problem:</p> <p>Existing aquatic issues at refuges include fish passage, aquatic nuisance species control/eradication, and activities associated with the recovery and conservation of ESA listed Kootenai White Sturgeon and Bull Trout.</p> <p>The objective:</p> <p>To aid in the recovery and conserve of aquatic species, the Idaho Fisheries Resource Office will work with refuge managers to assess the status of aquatic resources on Idaho Refuges, and develop and implement appropriate management actions for conservation of these aquatic resources.</p> <p>The method:</p> <p>IFRO staff will meet with refuge personnel, and</p>	
Expended	\$32000		
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.		
Primary Benefited Species	(0) Multiple Species		
Primary Benefited Population	Not specified		
Plans	DOI Executive Order #13112 (Invasive Species) U.S. Fish and Wildlife Service Refuge Manual		
Keyword	Management		
Need Number	N-002		
Partners			
<p>Accomplishments</p> <table border="1"> <tr> <td>Number of other Fishery Management Plan tasks implemented for populations of management concern.</td> <td>2</td> </tr> </table>			Number of other Fishery Management Plan tasks implemented for populations of management concern.
Number of other Fishery Management Plan tasks implemented for populations of management concern.	2		

	<p>discuss opportunities to collaborate on refuge projects. Individual projects will get developed and entered into the FONS database in order to secure funding for aquatic resource actions. Opportunities will also be explored for land acquisitions that could secure habitats for listed species.</p>
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14330-A-071 - [Development of the Annual Operating Plan for production programs in the Clearwater Basin.](#)

Facility	Idaho Fisheries Resource Office
Expended	\$45000
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.
Primary Benefited Species	Rainbow trout (Oncorhynchus mykiss)
Primary Benefited Population	North Fork Clearwater River
Plans	Columbia River Basin Fish and Wildlife Program (NPPC 2000)
Keyword	Management
Need Number	N-002
Partners	Idaho Department of Fish and Game (\$10000) Nez Perce Tribe (\$10000) U.S. Army Corps of Engineers, Walla Walla District (\$2000)

Accomplishments

Number of other Fishery Management Plan tasks implemented for populations of management concern.	4
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Accomplishment Summary

We led the preparation and completion of the 2006 Annual Operating Plan for all Service, State, and Tribal fish production programs in the Clearwater River Basin.

Description

The importance to the Resource:

An Annual Operating Plan (AOP) process that all parties participate in contributes greatly to improved communication and coordination, which helps improve fisheries management in the Clearwater Basin. When all parties are well informed of each others programs less disputes arise and more on-the-ground benefits for the resource occur.

The problem:

In recent years there has been more interconnections between programs which has created conflicts and duplication of effort between the co-managers in the Clearwater basin. This emphasizes the need for increased communication, coordination, and a better understanding of each other programs.

The objective:

The objective is to prepare a single AOP for fish production programs in the Clearwater River basin. Thereby improving coordination and communication between co-managers and providing each party with the same information, in the same format, to help minimize misunderstandings and conflicts.

The method:

We will facilitate the annual development of a

Number of consultations conducted to support Tribal fish & wildlife conservation.	1	single AOP for the Clearwater River basin, providing information on all fish production activities occurring in within the upcoming calendar year. This includes all Federal, State, and Tribal programs operating in the Clearwater Basin.
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14235-A-013 - [Snake River Basin Adjudication Agreement](#)

Facility	Kooskia National Fish Hatchery	<p>Accomplishment Summary</p> <p>We successfully negotiated an approach to the operation and management of Kooskia NFH by the Nez Perce Tribe.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>In July, 2004 the Department of the Interior, Nez Perce Tribe, and the State of Idaho all signed the Snake River Basin Adjudication which will, when finalized, settle 1,900 water right claims the Tribe has made in the Snake River basin. Included in this settlement was the Nez Perce Tribe operating and managing Kooskia NFH.</p> <p>The problem:</p> <p>The Service was charged with working out the details how the Tribe would operate and manage Kooskia and how the transition would occur; this needed to be completed by March 31, 2005.</p> <p>The objective:</p> <p>Through numerous meetings and conference calls the Service and Tribe developed four MOUs, including one for Tribal O&M of Kooskia NFH. We met the deadline for development of these MOUs and believe we have laid out a program that will work at Kooskia NFH.</p> <p>The method:</p> <p>The Kooskia MOU is very specific at defining each party's responsibilities, including funding, property, maintenance, etc. The MOU also defines employment transition for Service employees and describes when Tribal</p>
Expended	\$4918	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)	
Primary Benefited Population	Not specified	
Plans	Salmon Subbasin Summary	
Keyword	Tribal	
Need Number	N-002	
Partners		

	<p>employees are to be in place at Kooskia.</p> <p>Further description:</p>
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13225-A-035 - [Coho Salmon Propagation Program](#)

Facility	Leavenworth National Fish Hatchery
Expended	\$0
Objective	Provide technical assistance to Tribes.
Primary Benefited Species	Coho salmon or silver salmon (Oncorhynchus kisutch)
Primary Benefited Population	Wenatchee River Coho
Plans	2005-2007 Interim Management Agreement for Upriver Chinook, Sockeye, Steelhead, Coho, and White Sturgeon The Service's Native American Policy
Keyword	Tribal
Need Number	N-002
Partners	Bonneville Power Admin. (\$40000) Washington Department of Fish and Wildlife Yakama Nation

Accomplishments

Number of Fishery Management Plan production tasks implemented (PART)	2
number of marking and tagging targets met, as prescribed by Fishery management plans. (PART)	3

Accomplishment Summary

Leavenworth National Fish Hatchery allowed the Yakama Nation to trap returning adult Coho salmon in the adult holding pond and at structure 5. Also Leavenworth National Fish Hatchery provided space, water and technical expertise to assist the Yakama Nation in the acclimation and eventual release of 769,164 Coho salmon into Icicle Creek.

Description

The importance to the Resource:

Assisting the Yakama Nation with the reintroduction of Coho to the mid-Columbia River basin is important because it supports recovery of a functionally extirpated salmonid species and meets tribal trust responsibilities.

The problem:

Indigenous natural Coho salmon were decimated in the early 1900s and no longer occupy the mid-Columbia river basins. Reasons for decline include the construction and operation of mainstem Columbia River hydropower projects, habitat degradation, release locations, harvest management, and hatchery practices.

The objective:

The objective is to assist, primarily, the Yakama Nation and other partners in re-establishing naturally spawning Coho populations in mid-Columbia tributaries to biologically sustainable levels which provide significant harvest in most years.

The method:

The objective is to assist, primarily, the

<p>Number of other Fishery Management Plan tasks implemented for populations of management concern.</p>	<p>2</p>	<p>Yakama Nation and other partners in re-establishing naturally spawning Coho populations in mid-Columbia tributaries to biologically sustainable levels which provide significant harvest in most years.</p> <p>Further description:</p> <p>The Coho reintroduction program is led by the Yakama Nation and funded by Bonneville Power Administration. Benefits include restoration and rebuilding Coho salmon to the Wenatchee River and Methow River basins. The Leavenworth National Fish Hatchery is located on the Icicle Creek. The Leavenworth National Fish Hatchery is one of three hatcheries in the Leavenworth National Fish Hatchery Complex. The Complex was authorized by the Grand Coulee Fish Maintenance Project, April 3, 1937, and reauthorized by the Mitchell Act, May 11, 1938. Currently, the Complex is funded through a reimbursable agreement (sub activity-1932) with the Bureau of Reclamation as mitigation for Grand Coulee Dam. Other guiding authorities include by the US v. Oregon and the US Canada Treaty.</p>
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13231-A-007 - [National Wild Fish Health Survey](#)

Facility	Lower Columbia River Fish Health Center	<p>Accomplishment Summary</p> <p>Surveyed over 1500 wild fish from 21 watersheds in WA, OR, ID and the Columbia River to evaluate disease and to prevent spread of aquatic pathogens for improved aquatic ecosystem management.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>Initiated by Congress in 1997 because wild fish populations were being decimated by disease, the National Wild Fish Survey gathers health information for wild fish to ascertain the extent of disease problems and ways to manage disease in the wild.</p> <p>The problem:</p> <p>Disease disables and kills wild fish. A limited knowledge of disease sources and their environmental inducers inhibits better management of habitat problems for wild fish.</p> <p>The objective:</p> <p>The 9 National Fish Health Ctrs undertook this project to survey the health of wild fish and to make this information available to federal, state, and tribal fishery managers. Information is used to improve fisheries management and monitor specific populations. The national database (http://wildfishsurvey@fws.gov) is available for public use.</p> <p>The method:</p> <p>In FY06, the Lower Columbia River FHC examined over 1500 wild fish from 21 watersheds in WA, OR, ID and the Columbia River. We tested for 13 pathogens (virus, bacteria, parasites) using state-of-the-art</p>
Expended	\$64977	
Objective	Facilitate management of aquatic habitats on national and regional scales.	
Primary Benefited Species	Rainbow trout (Oncorhynchus mykiss)	
Primary Benefited Population	Wind River summer run steelhead	
Plans	<p>National Wild Fish Health Survey</p> <p>U.S. Fish and Wildlife Service National Aquatic Animal Health Policy</p> <p>Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper)</p> <p>1999 NMFS Biological Opinion on Artificial Propagation in the Columbia River Basin.</p> <p>2000 NMFS FCRPS Biological Opinion - December 21, 2000</p> <p>Yakima Subbasin Plan</p>	
Keyword	Fish Health	
Need Number	N-002	
Partners	<p>Confederated Tribes of The Warm Springs</p> <p>Oregon Department of Fish and Wildlife</p> <p>U.S. Geological Survey</p>	

(\$5000)
 Washington
 Department of Fish and
 Wildlife
 Yakama Indian Nation
 (\$900)

technology to confirm presence/absence of disease in freshwater and seagoing fish.

Further description:

The National Wild Fish Health Survey was initiated by Congress in 1997 because wild fish populations were being decimated by disease and there was little information available on the extent of the problem and ways to manage disease in the wild. The 9 National Fish Health Ctrs undertook this project to survey the health of wild fish and to make this information available to federal, state, and tribal fishery managers. This year, the Lower Columbia River Fish Health Ctr, in cooperation with the Yakama Nation, extensively sampled over 10 fish species in Drano Lake, a popular fishing lake that also serves as nursery habitat for Chinook salmon, a resting area for salmonid adults migrating up the Columbia River and the inlet/outlet for the Little White Salmon Hatchery fish. In anticipation of Condit Dam removal, fish in the White Salmon River were sampled for future health comparisons. Information from the wild fish health surveys are used by state/federal agencies for Ecosystem Diagnosis models for improving aquatic resource management and by the various cooperators for monitoring specific populations of fish. The national database, a repository of all survey information, is available for managerial and public use.

Accomplishments

Number of population assessments completed	21
Number of post-stocking survival tasks met, as prescribed by Recovery plans for hatchery propagated listed species. (PART)	1
Number of other Recovery Plan tasks implemented for T&E populations	1
Number of post stocking survival tasks met as prescribed by Fishery Management Plans, for hatchery propagated depleted species (PART)	1
Number of other Fishery Management Plan tasks implemented for populations of management concern.	1
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	3
Number of applied aquatic scientific and technologic tools shared with partners.	1
Number of techniques and culture technology tools developed.	1
Number of applied science and technology tasks implemented as prescribed by Recovery Plans. (PART)	1
Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)	2

13231-A-015 - [Wild Fish Health Information Management](#)

Facility	Lower Columbia River Fish Health Center
Expended	\$38089
Objective	Utilize appropriate scientific and technologic tools in formulating and executing fishery management plans and policies.
Primary Benefited Species	Rainbow trout (Oncorhynchus mykiss)
Primary Benefited Population	Wind River summer run steelhead
Plans	National Wild Fish Health Survey 1999 NMFS Biological Opinion on Artificial Propagation in the Columbia River Basin. Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper)
Keyword	Management
Need Number	N-002
Partners	

Accomplishments

Number of other Recovery Plan tasks implemented for T&E populations	3
Number of post stocking survival tasks met as prescribed by Fishery Management Plans, for hatchery propagated depleted species	1

Accomplishment Summary

Information on over 20 wild fish species in WA ,OR and ID has been inputted into the National Wild Fish Health Survey Database for use in fish management by states, federal, tribal and private entities. The Fish Health Ctr. helped assess the spread of Whirling Disease in the Clackamas watershed and in cooperation with researchers at Oregon State University, published a paper detailing the dissemination of the parasite. Other information is being used for management of fisheries in OR and WA.

Description

The importance to the Resource:

Data from wild fish health exams is used to provide information to help guide management decisions by the states, federal and tribal entities.

The problem:

The Lower Columbia River Fish Health Ctr. has collected over 13,500 wild/native fish for health assessment as mandated by the National Wild Fish Health Survey Initiative.

The objective:

To expedite completion of lab assays of microbial aquatic nuisance species, like the parasite causing Whirling Disease.

The method:

Using state-of-the-art technology for detection of DNA and standard lab assays, a backlog of fish samples were processed and the information entered into the National Wild Fish Health Survey database. This information is being used by state agencies and universities

(PART)		
Number of other Fishery Management Plan tasks implemented for populations of management concern.	1	
Number of applied aquatic scientific and technologic tools shared with partners.	1	
		<p>for management planning.</p> <p>Further description:</p> <p>The Lower Columbia River Fish Health Ctr. has collected over 13,500 wild/native fish for health assessment as mandated by the National Wild Fish Health Survey Initiative. Data from wild fish health exams is used to provide information to help guide management decisions by the states, federal and tribal entities. The Fish Health Ctr. was able to expedite completion of lab assays of microbial aquatic nuisance species, like the parasite causing Whirling Disease. The Fish Health Ctr. helped assess the spread of Whirling Disease in the Clackamas watershed and in cooperation with researchers at Oregon State University, published a paper detailing the dissemination of the parasite. Other information has and will be used in ecosystem diagnosis modeling to determine how to best manage fisheries in the Wind River, White Salmon and Klickitat Watersheds. This is FONS project 13231-2000-005, funded by the Columbia Basin Salmon Initiative.</p>

13231-A-027 - [Hatchery Review Team Participation by Lower Columbia River Fish Health Ctr](#)

Facility	Lower Columbia River Fish Health Center	<p>Accomplishment Summary</p> <p>Fish health expertise was contributed to the Hatchery Review Team's analysis and recommendations of Warm Springs National Fish Hatchery (NFH), the Leavenworth NFH Complex, and Eagle Creek NFH.</p> <p>Description</p> <p>The <i>importance</i> to the Resource:</p> <p>All USFWS National Fish Hatcheries in the Pacific NW are undergoing a scientific review of their effectiveness in managing fisheries, fulfilling mitigation needs, and to ensure that they meet the critical missions and enhance needs of states, tribes and federal agencies, now and into the future.</p> <p>The <i>problem</i>:</p> <p>Not all hatcheries are effectively achieving the best results needed.</p> <p>The <i>objective</i>:</p> <p>There is a need to thoroughly investigate and review the stocks being reared in NW hatcheries to ensure that they are producing the fish stocks best suited for their basins.</p> <p>The <i>method</i>:</p> <p>A team of experts from USFWS and NMFS gather information, inspect each hatchery and make recommendations for each hatchery. All information is supplied via the hatchery review team website.</p>
Expended	\$15678	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	(0) Multiple Species	
Primary Benefited Population	Not specified	
Plans	Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper)	
Keyword	Management	
Need Number	N-002	
Partners	<p>Confederated Tribes of The Warm Springs</p> <p>National Oceanic and Atmospheric Administration, Fisheries</p> <p>Oregon Department of Fish and Wildlife</p> <p>U. S. Forest Service</p> <p>Washington Department of Fish and Wildlife</p> <p>Yakama Indian Nation</p>	

Accomplishments

Number of other Recovery Plan tasks implemented for T&E populations	4
Number of applied science and technology tasks implemented as prescribed by Recovery Plans. (PART)	1

13231-A-028 - [White River Spring Chinook Salmon: Fish Health Care for Endangered Species Recovery Project](#)

Facility	Lower Columbia River Fish Health Center	<p>Accomplishment Summary</p> <p>The 2005 progeny of the endangered White River spring Chinook salmon are successfully rearing in their first year at the Little White Salmon NFH. Fish health, as measured by bi-weekly exams and special tests, show that this stock of salmon is doing well, with only minor incidence of bacterial kidney disease. A MOU with the Grant Co. Public Utility District for the care of these fish was achieved.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>The White River spring Chinook salmon are listed as endangered. A scant 14 pairs of spawning adults were noted in past years in this upper Columbia Basin river.</p> <p>The problem:</p> <p>Deteriorating habitat, warm water conditions and dams have contributed to the near demise of this population.</p> <p>The objective:</p> <p>Recover the salmon through the use of a captive broodstock program and rear fish for restoration back into the White River in the upper Wenatchee Basin.</p> <p>The method:</p> <p>Bacterial kidney disease severely limits the viability of this stock in captivity. The Lower Columbia River Fish Health Ctr. is monitoring the stock at the Little White Salmon National Fish Hatchery and providing fish health care in attempts to produce viable smolts that can survive in the White River after their release</p>
Expended	\$7619	
Objective	Recover fish and other aquatic resource populations protected under the Endangered Species Act.	
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)	
Primary Benefited Population	Wenatchee River (UCWEN) spring chinook salmon	
Plans	<p>U.S. Fish and Wildlife Service National Aquatic Animal Health Policy</p> <p>2000 NMFS FCRPS Biological Opinion - December 21, 2000</p> <p>Conservation of Columbia Basin Fish, Final Basinwide Salmon Recovery Strategy, 12/2000 (All H Paper)</p> <p>Wenatchee Subbasin Plan</p>	
Keyword	Fish Health	
Need Number	N-002	
Partners	<p>Grant County Public Utility District</p> <p>Washington Department of Fish and Wildlife</p>	

Accomplishments

Number of post-stocking survival tasks met, as prescribed by Recovery plans for hatchery propagated listed species. (PART)	1
Number of other Recovery Plan tasks implemented for T&E populations	1
Number of Fishery Management Plan production tasks implemented (PART)	1
Number of other Fishery Management Plan tasks implemented for populations of management concern.	1
Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)	1

from the hatchery.

13240-A-016 - [Outreach Activities](#)

Facility	Makah National Fish Hatchery	<p>Accomplishment Summary</p> <p>A float was entered in the Annual Makah Days parade. Sammy the Salmon costume was borrowed from the Leavenworth NFH. Sammy the Salmon gave hundreds of sunglasses and whistles to kids along the parade route. Hatchery staff presented numerous hatchery tours to groups and individuals, Randy Rickert mentored a Neah Bay high school senior with her senior project which dealt with water temperature and fish mortality rates. Also, the hatchery staff continued to upgrade the visitor center.</p> <p>Description</p> <p>Further description:</p> <p>Opportunity to discuss the Fisheries Program, the life history of salmon , show fish spawning techniques, and environmental issues concerning fish with a variety of groups. Presented talks onsite to area schools, environmental groups. Entered a ""float"" in the annual Makah Days parade. Constructed fish display in visitor center with three salmon mounts.</p>	
Expended	\$3500		
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.		
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)		
Primary Benefited Population	Not specified		
Plans	Pacific Region Fisheries Outreach Action Plan The Service's Native American Policy		
Keyword	Outreach		
Need Number	N-002		
Partners	Makah Indian Nation		
<p>Accomplishments</p> <table border="1"> <tr> <td>Number of other Fishery Management Plan tasks implemented for populations of management concern.</td> <td>4</td> </tr> </table>		Number of other Fishery Management Plan tasks implemented for populations of management concern.	4
Number of other Fishery Management Plan tasks implemented for populations of management concern.	4		

13330-A-102 - [Fish Restoration and Tribal Trust Responsibilities in the Yakima River Basin](#)

Facility	Mid-columbia River Fisheries Resource Office
Expended	\$195288
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.
Primary Benefited Species	Rainbow trout (Oncorhynchus mykiss)
Primary Benefited Population	Upper Yakima River (YRUMA-s) . This population includes the Upper Yakima and its tributaries.
Plans	Bull Trout Draft Recovery Plan, Chapter 21 Yakima Subbasin Plan
Keyword	Monitoring and Assessment
Need Number	N-002
Partners	U. S. Forest Service U.S. Bureau of Reclamation Washington Department of Ecology Washington Department of Fish and Wildlife Yakama Indian Nation

Accomplishments

Number of habitat assessments completed	1.0
Number of miles of in-stream habitat	1.2

Accomplishment Summary

Increase survival of listed salmon, steelhead and bull trout in the Yakima River Basin through active participation on multi-agency technical and advisory committees.

Description

The importance to the Resource:

The Yakima Basin is home to 3 species of Pacific salmon, ESA-listed steelhead and bull trout, and many other native fish species. The basin was once one of the most prolific salmonid spawning and rearing areas in the Columbia River Basin. The loss of the Yakima Basin to the Columbia ecosystem, in terms of salmonid production, would be devastating.

The problem:

All salmonid populations have experienced precipitous declines from historic levels. Water storage and withdrawal for irrigation have severely altered the natural flow regime and impaired ecosystem function. Habitat loss and degradation has occurred as a result of land and water development in the basin

The objective:

The objective of the MCRFRO's efforts in the basin is to recover natural ecosystem processes where possible and to protect and restore essential habitats so that healthy wild native populations of fishes are distributed throughout their historic ranges.

The method:

Work collaboratively with all stakeholders, the Yakima Nation, other agencies and the USBR to address the issues. MCRFRO staff is active

assessed	
Number of other Recovery Plan tasks implemented for T&E populations	2
Number of other Fishery Management Plan tasks implemented for populations of management concern.	3
Number of applied science and technology tasks implemented as prescribed by Recovery Plans. (PART)	1

on numerous committees and technical advisory groups. They also conduct biological evaluations and participate in array of recovery efforts for both listed (bull trout and steelhead) and unlisted fish species.

Further description:

Mid-Columbia River Fishery Resource Office (MCRFRO) was active in 2006 in the Yakima River Basin with salmon, steelhead and bull trout restoration issues and related tribal trust responsibilities. Staff participated in bull trout presence/absence surveys and conducted bull trout and steelhead redd surveys in numerous rivers and creeks. An MCRFRO staff biologist represented the USFWS on the System Operations Advisory Committee which makes recommendations to the Bureau of Reclamation (USBR) Yakima Field Office Manager to minimize impacts to anadromous and resident fish resulting from Yakima Project operations. Staff participated as member of the Technical Advisory Group (TAG) for the USBR Yakima Basin Fish Passage Assessment, the Yakima Basin Salmon Recovery Board, the Ahtanum Creek watershed assessment, and the South Naches Irrigation District conservation planning board. Staff worked directly with managers of the Yakima River Basin Water Enhancement Project on biological evaluations of BOR operations and potential fish/water enhancement projects under consideration.

13330-A-108 - [Recovery planning and technical assistance to statewide aq/fish/water and local watershed groups](#)

Facility	Mid-columbia River Fisheries Resource Office	<p>Accomplishment Summary</p> <p>Completed final draft Upper Columbia Salmon Recovery Plan and continued participation in watershed planning in the Upper Columbia River Ecoregion, Regional Technical Team and the Interior Columbia Basin Technical Review Coordination Group</p> <p>Description</p> <p>The importance to the Resource:</p> <p>MCRFRO participated in development and completion of the Draft Upper Columbia Spring Chinook, Steelhead and Bull Trout Recovery Plan and Implementation Schedule and provided technical assistance to a variety of federal, state, tribal and local aquatic resource groups including the FCRPS BiOp process, Wenatchee and Entiat Watershed Planning Units.</p> <p>The problem:</p> <p>Salmon and bull trout populations in the Pacific Northwest have declined to the point of being listed under the Endangered Species Act due to habitat degradation, over harvest, hatcheries, hydro-electric projects and introduction of non-native species.</p> <p>The objective:</p> <p>The objective is to recover spring Chinook, steelhead and bull trout through a variety of actions identified in the Upper Columbia Spring Chinook, Steelhead and Bull trout Recovery Plan and the Wenatchee and Entiat Watershed Plans.</p> <p>The method:</p>
Expended	\$155062	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Rainbow trout (Oncorhynchus mykiss)	
Primary Benefited Population	Entiat River (UCENT-s) population, part of the Upper-Columbia River steelhead ESU.	
Plans	Federal Columbia River Power System 2002 Biological Opinion 2000 NMFS FCRPS Biological Opinion - December 21, 2000	
Keyword	Habitat	
Need Number	N-002	
Partners	Arapaho Tribe National Marine Fisheries Service Shoshone Tribe Washington Department of Fish and Wildlife Washington State Salmon Recovery Board Washington Department of Ecology	

Objectives will be met through the implementation of habitat restoration projects, modified hatchery programs and modified harvest and hydro activities. Most of this work is being completed in coordination with the FCRPS process.

Further description:

The MCRFRO participated in development and completion of the Draft Upper Columbia Spring Chinook, Steelhead and Bull Trout Recovery Plan (Plan) and Implementation Schedule. We increased our ability to provide technical assistance to federal, state, tribal and local aquatic resource groups including the FCRPS BiOp process, the Wenatchee Watershed Plan and Implementation of the Entiat Watershed Plan. These efforts increased the efficacy of restoration efforts leading toward recovery of ESA listed species. The MCRFRO assisted local groups in developing and securing funding for riparian and aquatic habitat restoration proposals. These activities support recovery efforts and communication between the USFWS, NOAA Fish, NRCS, BOR, BPA, ACOE, EPA, Yakama Nation, Colville Confederated Tribes, Washington State, county governments, local conservation districts and watershed groups. In addition, we participated in the numerous technical teams and the Washington State Salmon Recovery Funding Board. Finally, this project allowed the MCRFRO to participate in the review and comments on 50 restoration proposals requesting approximately \$15M from 4 different funding sources. A total of \$3M was allocated to the Upper Columbia Region in FY2006.

13295-A-020 - [Pacific Northwest Fish Health Protection Committee](#)

Facility	Olympia Fish Health Center	<p>Accomplishment Summary</p> <p>2 meetings were coordinated and held with representatives of 6 western States, 2 Tribal organizations, National Marine Fisheries Service, Department of Fisheries and Oceans, Canada and 1 Aquaculture Association on Fish Disease Issues</p> <p>Description</p> <p>The importance to the Resource:</p> <p>Coordination and resolution of fish health issues between agencies and stakeholders of the Pacific Northwest is critical to solving long term problems with disease in this region.</p> <p>The problem:</p> <p>Various State, Tribal, Federal and Canadian agencies and entities have jurisdiction over the regulation and control of fish and diseases in the Northwest. Since anadromous fish populations respect no political boundaries, it is critical to coordinate efforts to solve mutual problems with fish diseases in this region.</p> <p>The objective:</p> <p>Resolve technical and policy issues regarding the prevention and control of important fish diseases in the Pacific Northwest.</p> <p>The method:</p> <p>Provide a forum and infrastructure to exchange information and encourage agencies and entities that rear fish in the Pacific Northwest to adopt measures to prevent and minimize the impact of disease on fish resources of the Pacific Northwest.</p>
Expended	\$10000	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	(0) Multiple Species	
Primary Benefited Population	Not specified	
Plans		
Keyword	Outreach	
Need Number	N-002	
Partners	<p>Alaska Department of Fish and Game</p> <p>California Department of Fish and Game</p> <p>Columbia River Intertribal Fish Commission</p> <p>Department of Fisheries and Oceans, Canada</p> <p>Idaho Department of Fish and Game</p> <p>Montana Department of Fish Wildlife and Parks</p> <p>Northwest Indian Fisheries Commission</p> <p>Oregon Department of Fish and Wildlife</p> <p>Washington Department of Fish and Wildlife</p>	

	<p>Further description:</p> <p>The U.S. Fish and Wildlife Service sponsors and attends this multi-agency committee to serve as a forum to discuss and resolve fish health issues that affect conservation agencies, tribes, and commercial fish producers in the Pacific Northwest. The Olympia Fish Health Center is charged with organizational and administrative support for the Pacific Northwest Fish Health Protection Committee through a signed MOU.</p>
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13245-A-005 - [Transfer excess adult salmon carcass for the Federal Prison Food Bank Program](#)

Facility	Quilcene National Fish Hatchery
Expended	\$3227
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.
Primary Benefited Species	Coho salmon or silver salmon (Oncorhynchus kisutch)
Primary Benefited Population	Puget Sound/Strait of Georgia ESU
Plans	Hood Canal Salmon Management Plan (Quilcene NFH) Puget Sound Salmon Management Plan Pacific Region Fisheries Outreach Action Plan
Keyword	Management
Need Number	N-002
Partners	Federal Bureau of Prisons (\$2200)

Accomplishments

Number of other Fishery Management Plan tasks implemented for populations of management concern.	3
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Accomplishment Summary

Provided 4449 surplus adult salmon carcasses (coho salmon) and 62 jacks for a total weight of 28,980 pounds for the Federal Prison Food Bank Program.

Description

The importance to the Resource:

Provide excess adult salmon carcasses to federal prison food bank program. This removes hatchery fish from the system and reduces the contribution of nitrogen from the decaying carcasses into Hood Canal. This is identified as a seasonal problem contributing to low oxygen levels in Hood Canal.

The problem:

Excess salmon carcasses that are not utilized decay and the nitrogen contribution to the system that has been identified as a seasonal problem that contributes to low oxygen levels in Hood Canal. The low oxygen levels in southern Hood Canal have killed bottom fish and shellfish in the past.

The objective:

After meeting the commitment to supply excess adult salmon carcasses to the tribes, provide these fish to the Federal Prison Food Bank Program. If these fish were not used, they would remain in the watershed and Hood Canal contributing to the low oxygen problem in Hood Canal.

The method:

A Memorandum of Understanding between the U.S. Fish & Wildlife Service and the U.S. Department of Justice authorizes the transfer

of excess jack and adult salmon carcasses from several Federal hatchery facilities that includes the Quilcene National Fish Hatchery (NFH), to the Federal Bureau of Prisons

Further description:

The U.S. Department of Justice , Federal Bureau of Prisons has a nutrition program for distributing various commodities to Federal Prisons nationally. The Department of Justice hires a Food Processor to pick up the salmon carcasses and provides the finished product to the Federal Prisons.

13245-A-011 - [Genetic Analyses of coho salmon populations in Hood Canal](#)

Facility	Quilcene National Fish Hatchery	<p>Accomplishment Summary</p> <p>Quilcene NFH funded the Genetic Analyses of Coho Salmon Populations in Hood Canal with the Abernathy Fish Technology Center Genetics Lab. Genetic analyses of 11 hatchery stocks and 17 natural populations are being evaluated. The genetic relationship of the Quilcene NFH stock relative to natural populations within Hood Canal will be determined. This effort provides information to help cooperators decide on objectives and broodstock sources for any new or modified coho programs in Hood Canal.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>The Hatchery Scientific Review Group (HSRG) has recommended that the current coho stock at the Quilcene NFH be replaced with a new broodstock derived from an existing natural population in Hood Canal, Big Beef Creek. These fish were chosen in part to reduce the genetic risks of straying of returning hatchery-origin adults from Port Gamble Bay.</p> <p>The problem:</p> <p>Hood Canal comanagers felt that the HSRG lacked enough scientific information to make the recommendations for coho stocks used for on station release and tribal net pens. The Service is attempting to secure data to scientifically evaluate those recommendations and then act on them.</p> <p>The objective:</p> <p>Determine the genetic relationship of the Quilcene NFH stock relative to natural populations within Hood Canal. The co-managers can use this genetic information to</p>
Expended	\$34600	
Objective	Utilize appropriate scientific and technologic tools in formulating and executing fishery management plans and policies.	
Primary Benefited Species	Coho salmon or silver salmon (Oncorhynchus kisutch)	
Primary Benefited Population	Puget Sound/Strait of Georgia ESU	
Plans	<p>Puget Sound and Coastal Washington Hatchery Reform Project</p> <p>Pacific Region Fisheries Outreach Action Plan</p>	
Keyword	Genetics	
Need Number	N-002	
Partners	<p>Jamestown S'Klallam tribe</p> <p>Lower Elwha S'Klallam tribe</p> <p>NOAA Fisheries (\$30000)</p> <p>Port Gamble S'Klallam tribe</p> <p>Skokomish Tribe</p> <p>Suquamish tribe</p> <p>Washington Department of Fish and Wildlife</p>	

Accomplishments

Number of other Fishery Management Plan tasks implemented for populations of management concern.	4
Number of applied science and technology tasks implemented as prescribed by Fishery Management Plans. (PART)	1

make a sound scientific decision on the HSRG recommendations for Quilcene NFH

The method:

The Genetics Lab at Abernathy Fish Technology Center will use DNA markers to genetically compare 11 hatchery and 17 natural populations of coho salmon in Hood Canal. Out-of-basin populations will serve as genetic "outgroups" for quantifying the genetic similarity of hatchery and natural populations within Hood Canal.

Further description:

The comanagers felt that the HSRG lacked enough scientific information to make the recommendations they did. Quilcene NFH and their partners will use genetic sampling and analyses to make a sound scientific decision on the HSRG recommendations.

The USFWS will work closely with NOAA-Fisheries Northwest Fisheries Science Center to combine the data generated in this study with an extensive coho salmon baseline.

Note that the HSRG recommendations are not a recognized management plan.

13245-A-013 - [Supplementation program and Otolith/ DNA Analysis for Summer Chum salmon](#)

Facility	Quilcene National Fish Hatchery	<p>Accomplishment Summary</p> <p>Provide funding to Washington Department of Fish & Wildlife to analyze otolith and DNA samples of summer chum salmon from Hood Canal and the Strait of Juan de Fuca. Information will be used to identify independent populations within the Hood Canal summer chum salmon ESU: migration(straying) understanding would be enhanced with better information. Provide funding for Big Beef supplementation program of summer chum salmon.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>Hood Canal summer chum salmon were listed as threatened under the Endangered Species Act in 1999. In 2000, the Summer Chum salmon conservation initiative (SCSCI) was completed along with a formalized recovery plan. Monitoring and evaluation of the supplementation programs is an important component of the SCSCI.</p> <p>The problem:</p> <p>Summer chum fry from all supplementation and reintroduction programs have been differentially marked with adipose clips for Quilcene hatchery and program unique otolith marks for all other programs. Returning adult summer chum salmon otolith, scales, and tissue samples are taken from broodstock traps and on the spawning grounds. Analysis needed</p> <p>The objective:</p> <p>Examination of otoliths or fin clip ratios from spawned adults provide a method to estimate the number of hatchery origin and natural</p>
Expended	\$19898	
Objective	Recover fish and other aquatic resource populations protected under the Endangered Species Act.	
Primary Benefited Species	Chum salmon (Oncorhynchus keta)	
Primary Benefited Population	Hood Canal Summer Chum Salmon ESU/Big and Little Quilcene Rivers Population	
Plans	<p>Summer Chum Salmon Conservation Initiative</p> <p>Puget Sound and Coastal Washington Hatchery Reform Project</p> <p>Pacific Region Fisheries Outreach Action Plan</p>	
Keyword	Recovery	
Need Number	N-002	
Partners	<p>Hood Canal Salmon Enhancement Group</p> <p>North Olympic Salmon Coalition</p> <p>Port Gamble S'Klallam tribe</p> <p>Skokomish Tribe Washington</p> <p>Department of Fish and Wildlife (\$5000)</p>	

Accomplishments

Number of other Recovery Plan tasks implemented for T&E populations	1
Number of other Fishery Management Plan tasks implemented for populations of management concern.	1

origin recruits. This analysis assists in determining the contribution of fry released and the level of straying of supplementation program origin fish to other drainages.

The method:

Provide funding to Washington Department of Fish & Wildlife to perform otolith and DNA analysis. See additional information below.

Further description:

Washington Department of Fish & Wildlife staff and other cooperators will collect, prepare and store the otolith and DNA samples and WDFW will prepare reports for and in-kind services value of \$5,000. Other partners will contribute in-kind services or funding. The amount may vary each year depending on available funding.

The first year funding will be for 2007. From 2008 on, the number of DNA samples will increase and the otolith samples will decrease. Again the amount that can be funded by the other partners is not accurately known through the projected 5 years. The best estimate is given in the funding section

Supplementation program will support the summer chum reintroduction program at Big Beef Creek by providing funds for temporary staff and partial operation of the remote hatchery facilities. Activities include (1) trapping and spawning of summer chum adults, (2) incubation of eggs, otolith marking of eyed eggs, and rearing and release of fed fry, and (3) paying for the costs of power and water associated with summer chum at the hatchery facilities

13245-A-015 - [Columbia River Basin Hatchery Review](#)

Facility	Quilcene National Fish Hatchery	<p>Accomplishment Summary</p> <p>Participated in the interagency Columbia river Hatchery Review Team, which is reviewing the performance and effectiveness of Service hatcheries in the Columbia Basin, as part of hatchery reform. The Warm Springs National Fish Hatchery Assessments and recommendations final report was completed in May. Reviews have been initiated for the Leavenworth, Entiat, Winthrop and Eagle Creek National Fish Hatcheries.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>In the past 150 years, habitat alterations, hydroelectric development, and consumptive fisheries have impacted most of the salmon and steelhead populations in the Pacific Northwest. To mitigate for these impacts, hatcheries have been used to increase the number of fish available for harvest.</p> <p>The problem:</p> <p>Generally, hatchery management objectives and infrastructure have been slow to react or change commensurate with the impacts listed above. There has also been a more recent realization that we must recognize our responsibilities to both mitigation and species protection and recovery.</p> <p>The objective:</p> <p>The goal is to ensure that our hatcheries are operated on the best scientific principles and to contribute to sustainable fisheries and the protection and restoration of naturally spawning populations of salmon. This review is expected to result in recommendations that may change fish culture programs and improve</p>			
Expended	\$25000				
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.				
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)				
Primary Benefited Population	Not specified				
Plans	<p>Columbia River Basin Fish and Wildlife Program (NPPC 2000)</p> <p>Biological Opinion on Artificial Propagation in the Columbia River Basin.</p> <p>Federal Columbia River Power System 2002 Biological Opinion</p> <p>Pacific Region Fisheries Outreach Action Plan</p>				
Keyword	Management				
Need Number	N-002				
Partners					
<p>Accomplishments</p> <table border="1"> <tr> <td>Number of other Recovery Plan tasks implemented for T&E populations</td> <td>1</td> </tr> <tr> <td>Number of other Fishery Management Plan</td> <td>2</td> </tr> </table>		Number of other Recovery Plan tasks implemented for T&E populations	1	Number of other Fishery Management Plan	2
Number of other Recovery Plan tasks implemented for T&E populations	1				
Number of other Fishery Management Plan	2				

tasks implemented for populations of management concern.

infrastructure.

The *method*:

We are re-examining the role of our hatcheries in basin-wide management and conservation strategies. This comprehensive review examines the role of the hatchery in the larger geographic perspective as it relates to mitigation and species recovery. It also examines the adequacy of the infrastructure to support the goals of the hatchery.

13250-A-020 - [Egg Isolation Unit to Produce Chinook for Agreement with the Quinault Indian Nation](#)

Facility	Quinault National Fish Hatchery
Expended	\$14635
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)
Primary Benefited Population	Not specified
Plans	Quinault NFH Cooperative Agreement
Keyword	Fish Health
Need Number	N-002
Partners	Quinault Indian Nation (\$960)

Accomplishments

Number of Fishery Management Plan production tasks implemented (PART)	1
Number of technical assistance requests fulfilled to support Tribal fish and wildlife conservation	1
Number of applied aquatic scientific and technologic tools shared with partners.	1

Accomplishment Summary

Modifications to Ultra Violet (UV) water treatment system. Funding was applied to add additional UV treatment to the water used to incubate Chinook eggs from Lake Quinault. Treatment ensures that the eggs are incubated on pathogen free water.

Description

The importance to the Resource:

The incubation of salmonid eggs from outside of the Cook Creek drainage requires special handling in order to prevent the spread of fish pathogens (diseases).

The problem:

Chinook eggs from Quinault Lake are collected but may be carrying undesirable viruses. Fish health samples are taken and tested to check for pathogens. The eggs are incubated separate from normal fish production eggs.

The objective:

Isolate eggs until Fish Health reports are generated. The isolation will stop the spread of undesirable pathogens to normal fish production eggs/fish.

The method:

Isolate eggs in Egg/Iso quarantine building until Fish Health results are obtained. Return eggs to source if eggs are determined to be unfit.

13255-A-011 - [Outreach Activities](#)

Facility	Spring Creek National Fish Hatchery	<p>Accomplishment Summary</p> <p>Personal services provided to approx. 14,000 general public and educational groups on and off-site. Non-personal contacts through displays, brochures and self-guided tours approx. 10,000/yr.</p> <p>Description</p> <p>The <i>importance</i> to the Resource:</p> <p>The Columbia Gorge I/E program disseminates current fisheries information for the Columbia Basin. Public involvement and development of stewardship ethics toward management of fishery resources is a priority. We promote stewardship of fishery resources; support the FWS mission to provide accurate and current anadromous fish data to the public.</p> <p>The <i>problem</i>:</p> <p>There is a lack of adequate education and information to the public about current salmon issues and hatchery roles in mitigating for hydroelectric projects on the Columbia River. Historically, hatcheries have not had as active a role in outreach and education, hence a need for more outreach about FWS, salmon issues and hatchery roles.</p> <p>The <i>objective</i>:</p> <p>To educate and inform the general public about current salmon issues in the Columbia Basin, the role that hatcheries play in mitigating for lost habitat due to hydroelectric projects on the Columbia River and how hatcheries programs are involve in restoration supplementation and recovery of listed and species of concern..</p> <p>The <i>method</i>:</p>
Expended	\$73500	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)	
Primary Benefited Population	Not specified	
Plans	Comprehensive Hatchery Management Plan - Spring Creek NFH Pacific Region Fisheries Outreach Action Plan	
Keyword	Outreach	
Need Number	N-002	
Partners	<p>Friends of Northwest Hatcheries</p> <p>National Marine Fisheries Service</p> <p>Oregon Department of Fish and Wildlife</p> <p>U. S. Forest Service</p> <p>U.S. Army Corps of Engineers</p> <p>U.S. Geological Survey</p> <p>Washington Department of Fish and Wildlife</p> <p>White Salmon River</p>	

Watershed Group
 Wind-surfing Association
 Yakama Indian Nation

Accomplishments

Number of Friends Groups	1
Number of other Fishery Management Plan tasks implemented for populations of management concern.	10

Outreach is accomplished through websites, displays, brochures, special events, formal programs, environmental education programs, interagency coordination for outreach initiatives, and teacher workshops. I/E staff attend training to improve outreach skills to present the latest information on natural, cultural and historical resources.

Further description:

The Columbia Gorge I/E program consists of 1 full time employee and 1 AmeriCorps Volunteer and services the Carson & Spring Creek NFH and the Lower Columbia Fish Health Center. Priorities include: providing accurate and current anadromous fish data to the public and outside support groups, promoting stewardship of fishery resources, and supporting the objectives of the FWS mission, emphasizing the Columbia Basin watershed. I/E provides FWS fishery program information and support through tours, formal programs, special events, hatchery project support, websites, temporary/permanent displays, brochures/leaflets, and interagency coordination for outreach & educational initiatives in local communities. The education program provides salmon education to nearly all Washington 4th grade classrooms in the mid-Columbia region. I/E staff provide teacher workshops, coordinate with state, Federal, and Tribal agencies to develop education and outreach programs for area students on and off site; attend relevant training/workshops annually to improve outreach skills and present the latest information on natural, cultural, and historical resources.

13290-A-003 - [Ecological Interactions between Hatchery and Wild Fish - Deschutes River, Oregon](#)

Facility	Warm Springs National Fish Hatchery
Expended	\$11070
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)
Primary Benefited Population	Wild Warm Springs River Spring Chinook
Plans	Warm Springs Hatchery and Genetic Management Plan (draft)
Keyword	Monitoring and Assessment
Need Number	N-002
Partners	Confederated Tribes of The Warm Springs

Accomplishments

Number of applied aquatic scientific and technologic tools shared with partners.	1
Number of applied science and technology tasks implemented as prescribed by Recovery Plans. (PART)	1

Accomplishment Summary

Participated in evaluating the environmental / ecological effect of the hatchery and interactions of the hatchery and wild fish

Description

The importance to the Resource:

Minimize impact of hatchery fish on wild and ESA listed fish, assist with recovery while providing sport and tribal harvest opportunity.

The problem:

Wild spring Chinook fingerlings utilize the Deschutes river for rearing. Warm Springs NFH origin fingerling spring Chinook fingerlings are released into a tributary of the Deschutes river and may interact adversely with their wild counterparts.

The objective:

The goal to minimize impact of juvenile hatchery fish on wild and ESA listed fish and assist with recovery.

The method:

A variety of methods, including mark-recapture, growth monitoring, genetic parentage analyses, and underwater observations (snorkeling and video-monitoring) was used to monitor interactions between hatchery and wild fish populations.

Further description:

We evaluated ecological interactions between hatchery fish, listed wild fish, and other native fish by conducting laboratory and instream

	<p>studies. We monitored juvenile spring Chinook salmon released in the fall and spring in the Warm Springs, Deschutes and Columbia rivers. This collaborative project includes participation by USGS Biological Resources Division, Oregon Department of Fish and Wildlife, Confederated Tribes of the Warm Springs Reservation of Oregon, and the Service's Columbia River Fisheries Program Office(CRFPO), and Lower Columbia River Fish Health Center. The results from this project help us make management decisions for our National Fish Hatcheries to minimize risk to wild fish and conserve native and threatened aquatic species.</p>
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Facility	Western Washington Fisheries Resource Office	<p>Accomplishment Summary</p> <p>We completed development of Comprehensive Hatchery Management Plans for Quilcene NFH, Quinault NFH, and Makah NFH.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>Comprehensive Hatchery Management Plans (CHMPs) are a planning tool used in Region 1 to assemble all relevant operational, legal, and management guidance on a Service hatchery into one document.</p> <p>The problem:</p> <p>Service hatcheries in Region 1 lack a single reference source for operational, legal, and management guidance for each facility. This information is scattered across a variety of databases and documents that are not readily available.</p> <p>The objective:</p> <p>Assemble all relevant operational, legal, and management guidance on a Service hatchery into one document, a CHMP.</p> <p>The method:</p> <p>Using the Regional CHMP template, we coordinated with hatchery staffs, the Olympia Fish Health Center, Abernathy Fish Technology Center, and other partners, as necessary, to develop CHMPs for Quilcene, Quinault, and Makah National Fish Hatcheries.</p> <p>Further description:</p> <p>Drafts are being submitted to the Regional Office for final review and concurrence.</p>
Expended	\$39449	
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.	
Primary Benefited Species	Coho salmon or silver salmon (<i>Oncorhynchus kisutch</i>)	
Primary Benefited Population	Not specified	
Plans	Makah NFH Cooperative Agreement Quinault NFH Cooperative Agreement Hood Canal Salmon Management Plan (Quilcene NFH)	
Keyword	Management	
Need Number	N-002	
Partners	Makah Indian Nation Point No Point Treaty Tribes Quinault Indian Nation	
Accomplishments		
Number of other Fishery Management Plan tasks implemented for populations of management concern.	3	

13320-A-045 - [Columbia River Basin Hatchery Review](#)

Facility	Western Washington Fisheries Resource Office	<p>Accomplishment Summary</p> <p>We participated in the interagency Columbia River Hatchery Review Team, which is reviewing the performance and effectiveness of Service hatcheries in the Columbia Basin, as part of hatchery reform. The Warm Springs National Fish Hatchery Assessments and Recommendations final report was completed in May. Reviews have been initiated for the Leavenworth, Entiat, Winthrop, and Eagle Creek National Fish Hatcheries.</p> <p>Description</p> <p>The importance to the Resource:</p> <p>In the past 150 years, habitat alterations, hydroelectric development, and consumptive fisheries have impacted most of the salmon and steelhead populations in the Pacific Northwest. To mitigate for these impacts, hatcheries have been used to increase the number of fish available for harvest.</p> <p>The problem:</p> <p>Generally, hatchery management objectives and infrastructure have been slow to react or change commensurate with the impacts listed above. There has also been a more recent realization that we must recognize our responsibilities to both mitigation and species protection and recovery.</p> <p>The objective:</p> <p>The goal is to ensure that our hatcheries are operated on the best scientific principles and to contribute to sustainable fisheries and the protection and restoration of naturally-spawning populations of salmon. This review is expected to result in recommendations that may change fish culture programs and improve</p>			
Expended	\$25000				
Objective	Develop and improve long-term partnerships with States, Tribes, other Federal agencies, non-governmental organizations, and other Service Programs to develop collaborative conservation strategies for aquatic resources.				
Primary Benefited Species	Chinook salmon or king salmon (Oncorhynchus tshawytscha)				
Primary Benefited Population	Not specified				
Plans	<p>Columbia River Basin Fish and Wildlife Program (NPPC 2000)</p> <p>Biological Opinion on Artificial Propagation in the Columbia River Basin.</p> <p>Federal Columbia River Power System 2002 Biological Opinion</p>				
Keyword	Management				
Need Number	N-002				
Partners					
<p>Accomplishments</p> <table border="1"> <tr> <td>Number of other Recovery Plan tasks implemented for T&E populations</td> <td>1</td> </tr> <tr> <td>Number of other Fishery Management Plan tasks implemented for populations of</td> <td>1</td> </tr> </table>			Number of other Recovery Plan tasks implemented for T&E populations	1	Number of other Fishery Management Plan tasks implemented for populations of
Number of other Recovery Plan tasks implemented for T&E populations	1				
Number of other Fishery Management Plan tasks implemented for populations of	1				

management concern.

infrastructure.

The *method*:

We are re-examining the role of our hatcheries in basin-wide management and conservation strategies. This comprehensive review examines the role of the hatchery in the larger geographic perspective as it relates to mitigation and species recovery. It also examines the adequacy of the infrastructure to support the goals of the hatchery.