



R & E Grant Application 07-09 Biennium

Project #:
07-032

2007- 2008 North Coast Spring Chinook Assessment

Project Information

R&E Project Request: \$82,273.00
Match Funding: \$56,498.00
Total Project: \$138,771.00
Start Date: 7/1/2007
End Date: 12/31/2008
Project Email: kelly.moore@oregonstate.edu
Project Biennium: 07-09 Biennium
Organization: ODFW - Corvallis Research Lab

Applicant Information

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Past Recommended or Completed Projects

This applicant has no previous projects that match criteria.

Project Summary

This project is NOT part of ODFW's 25 Year Angling Plan.

Activity Type: Monitoring

Summary: This project will evaluate adult distribution, spawner abundance, hatchery/wild composition, and key population parameters of spring chinook salmon in the Wilson, Trask and Nestucca River basins in 2007 and 2008. Information collected from this project will be used to maximize fishery and conservation benefits consistent with the Native Fish Conservation Policy (NFCP) and will contribute critical information necessary to develop a spring chinook conservation plan. This project will also improve management of existing spring chinook hatchery and STEP programs in these basins. This project continues work conducted for a 2005 R&E Grant: N Coast Spring Chinook Stock Assessment.

Objectives:

1. Provide information needed to manage hatchery production and harvest of North Coast Spring Chinook.
2. Document the abundance and spatial distribution of naturally spawning spring Chinook from both hatchery and native origins.

3. Develop key information needed to conserve native spring Chinook populations while continuing to support popular and economically important fisheries.
4. Determine sex ratio and age composition.
5. Determine the distribution and abundance of adult spring chinook recycled from the trap at Cedar Creek Hatchery.

Fishery Benefits:

North Coast Spring Chinook provide a high value recreational fisheries that contribute to local economies and unique fishing opportunities for high quality salmon from April through July. Information from this project will contribute directly to the management of this fishery and will provide critical information needed to balance fishery and conservation objectives. Tillamook and Nestucca Basin spring chinook have historically provided significant economic and societal benefits to commercial and recreational fisheries. Estimates by ODFW in 1999 show that based on hatchery production alone, Trask and Cedar Creek hatchery spring chinook contribute up to \$400,000 annually to personal income in the State of Oregon. Recreational catch in the Tillamook and Nestucca watersheds has historically exceeded several thousand fish during periods of strong returns, but has declined to several hundred fish in recent years. Both commercial and recreational harvest have been on a steady decline over the past 20 years.

Watershed Benefits:

Because this project will help conservation planning for spring Chinook - with the desired outcome of viable native populations - the watershed as a whole will benefit. Actions taken to address limiting factors that may impact native of spring Chinook (water quality and quantity, passage, habitat complexity) will also provide benefits to other salmon species and the watershed. Spring Chinook carcasses provide important nutrients, at a unique time of year, that help support watershed functions and processes.

Current Situation:

Wilson, Trask, and Nestucca River spring chinook salmon have been an important resource for recreational and commercial fisheries since at least the beginning of hatchery operations in the early 1900's. Declining trends in spring chinook abundance over the past twenty years, coupled with recent changes in management policies (i.e. Native Fish Conservation Policy), requires a broader evaluation of stock status trends and management practices than the District can accommodate with available resources. District staff has annually conducted snorkel surveys to enumerate spring chinook in resting holes on the Wilson, Trask, and Nestucca rivers. While this information is suitable for determining long-term trends of spring chinook relative abundance, it does not provide the precision necessary to adequately evaluate population characteristics such as annual wild spawner abundance, stock productivity, and reproductive independence. These key population attributes are necessary for ODFW to evaluate the status of wild spring chinook populations and meet the requirements of the interim criteria of the Native Fish Conservation Policy.

(NFCP). The Oregon Native Fish Status Report (ODFW 2004) identified coastal spring chinook as being "At Risk". The report concluded that the North Coast populations failed abundance, productivity, and reproductive independence criteria - but noted that the reliability of the assessment was compromised by insufficient data. Sufficient data were not available to allow for an empirically-based evaluation of their status. As a result, the designation is conservative assessment aimed at providing greater protection for the conservation and genetic value of the stock until such time that population information could be obtained.

Collecting the information needed for development of a spring chinook conservation plan is critical to all aspects of spring chinook management within the District. Trask and Cedar Creek hatcheries currently have annual releases up to 245,000 and 110,000 smolts respectively. The STEP program operated by the Tillamook Anglers at Whiskey Creek Hatchery releases up to 100,000 spring chinook annually in the Wilson and Trask. In 2002, concerns over low numbers of wild-origin spring chinook in the Tillamook and Nestucca watersheds led ODFW to restrict the spring chinook fishery to retention of adipose fin-clipped fish only. This was the first time in the history of the fishery that wild fish could no longer be retained. Any opportunities for adaptive management within spring chinook programs in these basins will depend upon an accurate assessment of their status.

In 2005, funding from the R&E Board allowed the development and implementation of a new monitoring program designed to collect the type of key information lacking in the 2004 assessment.

Alternatives:

The resting hole counts and work at Cedar Creek Hatchery follow well established procedures.

The goal of the spawning ground surveys will be a complete census of spring Chinook carcasses in each river system.

Initially, we considered using a probabilistic sampling design (similar to the random EMAP methods used for coho populations) but we have learned that spring Chinook life history and spawning distribution require a more intensive approach. Field crews need to be able to mobilize, cover a lot of stream miles, and complete work during the short intervals when carcasses begin to show up.

Designer:

Tillamook District staff and personnel from ODFW's Corvallis Research Lab worked closely to develop an effective monitoring plan for 2005 and 2006. Continued monitoring and an enhanced survey design are part of this proposal for work in 2007-2008.

Methods:

District staff has worked closely with staff from ODFW's Corvallis Research Lab to develop an effective monitoring plan for spring chinook. Some funding was available in 2004 to hire two seasonal employees who were tasked with conducting limited spawning surveys in the Wilson and Trask Rivers. Data from those surveys is currently being evaluated. Funds used

in 2004 are no longer available. R and E funds requested in this application will be used primarily to hire four seasonal employees to conduct spawning surveys in 2005 and 2006

Inspector: Quality control for field work will be provided by the NRS 1 Crew Chief and District Staff. Data analysis and reporting will be reviewed by the Research Program Manager and District Biologist.

Funding Elements: R&E funds will be used for field equipment and local transportation to survey locations.
ODFW staff supported by R&E Funds include:
Four EBA positions (1 FTE each) for 4 month seasons each year. They will set up and conduct surveys during the spring Chinook spawning season.
One NRS-1 Crew Chief position (0.5 FTE) for 4.5 months each year. Position will plan surveys and be responsible for field crew activities.
One NRS-3 Research Analyst (0.33 FTE) for 3.5 months each year. Develop sampling design, coordinate hiring and training of field crews, conduct statistical and GIS analysis, and be responsible for report preparation and completion.

Partners: Yes

Existing Plan: Volunteers will work with the District to conduct the resting hole counts.
No

Affected Contacted: Yes

Affected Supportive: Yes

Affected Comments: District Staff continue to coordinate with volunteer fishing organizations, the Tillamook Bay Partnership, and the Tillamook Watershed Council

Project Schedule/Participants/Funding

This project has no Schedule/Participants/Funding.

Affected Species: Chinook Salmon

Project Permits

This project has no permits.

Project Monitoring

This project has no monitoring.

Project Maintenance

This project has no maintenance plans.

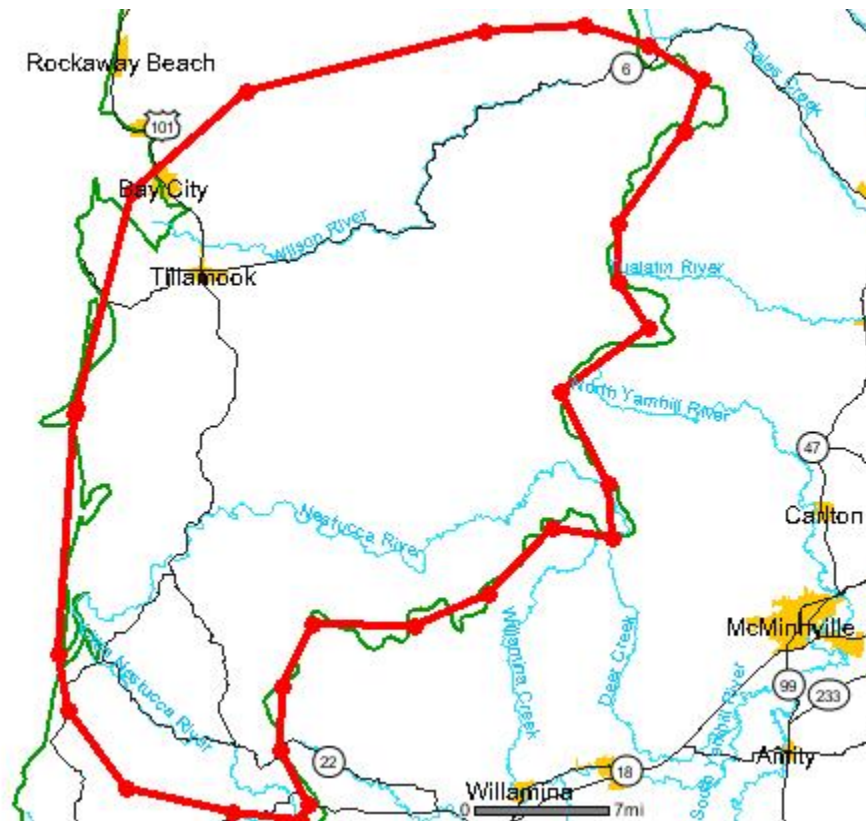
Project Match Funding

Funding Source	Cash	In-Kind	Other	Description	Total	Secured?	Conditions?	Comments
R&E Request	\$82,273.00	\$0.00	\$0.00		\$82,273.00	No	No	
ODFW	\$0.00	\$53,498.00	\$0.00		\$53,498.00	Yes	No	
Tillamook Bay Volunteers	\$0.00	\$3,000.00	\$0.00		\$3,000.00	Yes	No	
				Total Match Funding:	\$138,771.00			

Project Budget

Item	Item Type	Units	Unit Cost	R&E Funds	Match Funds	Total
Office Space/Utilities	Administration	6	\$145.00	\$0.00	\$870.00	\$870.00
Crew supplies (waders, boots, uniform, etc.)	Equipment	2	\$2,400.00	\$1,400.00	\$3,400.00	\$4,800.00
Raft and Pontoon Boats	Equipment	8	\$300.00	\$0.00	\$2,400.00	\$2,400.00
EBA seasonal positions	Personnel	16	\$3,676.00	\$58,816.00	\$0.00	\$58,816.00
ODFW Asst. Proj Leader NRS-1	Personnel	9	\$2,132.00	\$0.00	\$19,188.00	\$19,188.00
ODFW District Biologist (Braun)	Personnel	10	\$1,432.00	\$0.00	\$14,320.00	\$14,320.00
ODFW Research Analyst	Personnel	7	\$2,151.00	\$15,057.00	\$0.00	\$15,057.00
ODFW Research Project Leader (Lewis)	Personnel	10	\$1,432.00	\$0.00	\$14,320.00	\$14,320.00
vehicle and milage charges	Travel	12	\$750.00	\$7,000.00	\$2,000.00	\$9,000.00
					Total Budget:	\$138,771.00

Project Map



Additional Files

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