



## COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

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Project Number: 23087

Project Title: Collaborative Center for Applied Fish Science

Sponsor: CRITFC/U. of Idaho

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The CCAFS proposal has received a High Priority "B" ranking from CBFWA, meaning that *it does not fit solicitation criteria but is needed for emergency or long term actions*. It was assigned the letter "P" score, indicating that this proposal was *a high priority for timeliness, and needed to be done this year*. The ISRP did not rank the proposal, as it, in their opinion did not meet the criteria.

The CRITFC agrees in essence with the conclusions of the CBFWA and ISRP that this proposal does not fit some the criteria as written. Namely, the proposal failed to demonstrate *"that the anticipated benefits to the target species will be secured with the initial funding"* (Giese memo, 20 Dec 2000). However, project funding must be obtained in the present fiscal year in order to have the desired impact on ongoing technical activities related to ESA listing and to dovetail into University of Idaho construction schedules. Failure to do so will prevent or delay construction or increase significantly the costs of expansion of the Hagerman Fish Experimental Culture Station to accommodate increased technical activities planned in the present year. Dovetailing into the University's construction schedule should result in savings of about \$1 million dollars. Further, this proposal will provide the critical technical support necessary for successful implementation of already-funded NWPPC programs.

The Columbia River Inter-Tribal Fish Commission (CRITFC) represents the fisheries management and conservation interests of the Columbia River treaty tribes. Within the CRITFC, the Fish Science Department is mandated to provide technical support for tribal recovery efforts. Emphasis in recent years has been on genetics and life history research and monitoring (see attached). Future endeavors will include pathology, nutrition, habitat use and ecological interactions of hatchery and wild fish. Science staff are co-principal investigators on a number of BPA-funded projects on chinook and steelhead salmon population structure. Further, the tribes wish to significantly improve their education program for tribal members, with emphasis on advanced degrees in biological research.


The Hagerman Fish Culture Experimental Station (HFCES), part of the Aquaculture Research Institute (ARI) of the University of Idaho, has provided DNA assessment and interpretation services to the CRITFC regarding salmonid, sturgeon and lamprey population genetics for a number of years. In July 2001, the CRITFC and the University have joined in a partnership through a Memorandum of Agreement (MOA) that will assemble key research and technical staff at the HFCES to form the Collaborative Center for Applied Fish Science (CCAFS).

Under the MOA, the CCAFS will become a first class, applied regional center in fish genetics and other areas of artificial propagation. To achieve this goal, the CRITFC hopes to contribute to renovation and enhancement of the facilities, share operating expenses, and provide up to 5 research staff and substantial equipment. This is of utmost interest to the tribes, who wish to advance the science of recovery significantly and independently of political matters. It is also of interest to the University, which plans to devote their substantial resources for resolving scientific uncertainties pertaining to fish conservation issues.

Also of major significance is the educational opportunities that this partnership will offer to tribal members. The increasing lead role that the tribes are taking in fish production and research and the MOA link to tribal production centers and programs is the building block for an education program that would be unlike any other, regionally or nationally.

The CRITFC asks for your support of this program in its efforts to secure funding for structural expansion of the Hagerman facilities, to provide for funding for a core of scientists and technicians working in support of tribal and regional restoration efforts, and to provide seed money for our education program.

Sincerely,



André Talbot

Senior Scientist and coordinator, Collaborative Center for Applied Fish Science

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Listing of **ESA-related projects** directly related to the **Collaborative Center for Applied Fish Science** Proposal and an abbreviated statement of the nature of support given.

Project Title	Project Number	Funding Source	Project Support from CCAFS
Idaho Salmon Supplementation Study	8909802	NWPPC / BPA	Analysis of samples for baseline genetic profiles. Representative tissue samples (about 2000) were collected from all treatment and control spawning populations. Goal is to determine effects of supplementation on naturally-spawning populations.
Johnson Creek Artificial Propagation and Enhancement Project	9604300	NWPPC / BPA	Strategies for broodstock acquisition and spawning protocols, monitoring (genetic) and evaluation, and pathology. Development of a likelihood function for the determination of effective population size in metapopulations. Determination of stock structure of South Fork Salmon River summer Chinook.
Grande Ronde River Supplementation Project – Lostine River	9800702	NWPPC / BPA	Evaluation of the potential impacts of supplementation using genetic and life history data. Determination of outplanting strategies for optimal conservation of genetic variance and population distinctness.
Nez Perce Tribal Hatchery Monitoring and Evaluation Project	8335000	NWPPC / BPA	Evaluation of the potential impacts of supplementation using genetic and life history data. Effects of NPTH on populations structure. Measures of straying and population expansion. Evolution of novel life history types.
Lower Snake River Compensation Plan hatchery evaluations project	FWS agreement 141101J005	US Fish and Wildlife Service	Evaluation of the potential impacts of supplementation using genetic and life history data. Representative tissue samples (about 2000) were collected from all spawning populations. Goal is to determine population management plans based on need to conserve naturally-spawning populations.
Captive Broodstock Program Project	9801006	NWPPC / BPA	Genetic monitoring and evaluation, and pathology. Maintenance of effective population sizes. Impact of captive brood on naturally-spawning population. BKD genetics.
Northeast Oregon Hatchery Monitoring and Evaluation Project	8805301	NWPPC / BPA	Genetic monitoring and evaluation, and pathology. Genetic microstructure and habitat use.
Listed Stock Gamete Preservation Project	9703800	NWPPC / BPA	Determine genetic profiles of cryopreserved germplasma. Determine optimal sampling design to capture maximum of genetic variance in naturally-spawning populations.

Hood River Supplementation	8805303	NWPPC / BPA	Review and re-write where necessary the Benefit / Risk Analysis & HGMP. Develop Population management Plans in collaboration with WS and ODFW.
Walla Walla steelhead supplementation		NWPPC / BPA	Baseline survey of steelhead and rainbow trout in Walla Walla subbasin, and determination of supplementation strategy. Development of Population Management Plan.
Methow River Evaluation		NWPPC / BPA	Genetic analysis and population structure of naturally spawning salmon to assist in settlement of the management dispute and arrive at a science-based solution.
Pacific Salmon Treaty Implementation		PSC	Stock identification, production, and assessment research. Specifically, a project hopes to determine stock composition of fish in the Zone 6 fisheries, in order to provide information for determination of target-population impacts.
Steelhead Kelt Reconditioning		NWPPC / BPA	Benefit / Risk Analysis, genetic profiles and stock structure. Determination of methods for reconditioning kelts on a large scale. Determination of population dynamics.

List of additional important NWPPC-funded projects underway.

Coho Restoration Mid-Columbia River Tributaries	9604000	NWPPC / BPA	Develop a M&E plan including a genetics monitoring program for coho reintroductions into the Yakima, Wenatchee, and Methow rivers.
Yakima River Coho Restoration	9603302	NWPPC / BPA	Genetic monitoring and evaluation. Development of locally-adapted broodstock and broodstock management plan.
Umatilla Basin Natural Production M&E	9000501	NWPPC / BPA	Evaluate genetic effects of supplementation on natural fish. Baseline survey

### **Some Past and on-going Projects**

#### Fall Chinook ESU determination

- Determination of Deschutes River/Snake River fall chinook ESU. Required genetic (electrophoresis and mtDNA) collection and analysis, life history analysis, coded-wire tag analysis and ocean distribution.

#### NEOH conceptual monitoring and evaluation plan

- Lays out monitoring and evaluation methods for supplementation projects

#### Imnaha Steelhead genetics

- Determination of metapopulation structure in the Imnaha and other Snake River tributaries.

#### Lamprey genetics

- Determination of stock structure and homing fidelity of pacific lampreys. Development of a DNA-based species key.

#### Nez Perce Tribal Hatchery Benefit/Risk Analysis

- Benefit/Risk Analysis, broodstock management plan, and HGMP for fall chinook.

#### Johnson Creek Artificial Production and enhancement Program

- Benefit/Risk Analysis, broodstock management plan, HGMP and Population Management Plan for summer chinook.

#### Hatchery Uses

- Tracking of use of hatchery fishes throughout Columbia Basin.

#### Toolbox development

- Development of methods for monitoring impact of supplementation of naturally-spawning populations, development of management protocols and guidelines. (PSC-funded activity).