

Management, Data and Habitat

Project # 1988-120-25

Contract # 27813

Final Report

May 1, 2006 – April 30, 2007

The Confederated Tribes and Bands of

The Yakama Nation

Prepared For:

BPA

Bonneville Power Administration

Portland, Oregon

Submitted on behalf of all Project Personnel

By:

Melvin R. Sampson

Project Analyst/Project Coordinator

Yakama Nation

P.O. Box 151

Toppenish, WA 98948

INTRODUCTION	3
YAKIMA/KLICKITAT FISHERIES PROJECT MANAGEMENT AND OVERSIGHT.....	4
GENERAL SCOPE.....	4
GENERAL RESPONSIBILITIES OF YKFP ESSENTIAL PERSONNEL.....	4
OBJECTIVE 1. YAKIMA/KLICKITAT PROJECT MANAGEMENT AND OVERSIGHT WORK ELEMENTS	
PROJECT MANAGEMENT & OVERSIGHT	5
OBJECTIVE 2. POLICY AND PLANNING	5
OBJECTIVE 3. PROVIDE PROJECT FINANCIAL AND ADMINISTRATIVE SUPPORT	6
Summary of Yakima/Klickitat Fisheries Project Management and Oversight	7
OBJECTIVE 4. DATA PROCESSING AND INFORMATION.....	8
Summary of Data Management Major Accomplishments for May 1, 2006 through April 30, 2007.....	8
Consultation, Coordination, and Data Sharing	8
Planning and Reporting	9
Database Development, Maintenance, and Analysis.....	10
Equipment and Web Site Maintenance.....	11
GIS Mapping	11
OBJECTIVE 5. PROJECT ANNUAL REVIEW (PAR)/QUARTERLY AND ANNUAL REPORTS	12
OBJECTIVE 6. SCIENTIFIC OVERSIGHT BY SCIENCE TECHNICAL ADVISORY COMMITTEE (STAC)....	12
Summary of Senior Research Scientist Major Accomplishments	13
Consultation and Coordination.....	13
Planning and Reporting	13
OBJECTIVE 7. HABITAT, WATER AND PASSAGE	14
Summary of Yakima/Klickitat Fisheries Project Habitat.....	14
OBJECTIVE 8. SUB-CONTRACTS FOR NEEDED SERVICES	15
Legal/Policy Analyst Contract Activities	16
Technical Writer – Judith Woodward.....	20
YKFP ORGANIZATIONAL CHART	21
POLICY GROUP DECISION DOCUMENTS.....	24

INTRODUCTION

The Yakima/Klickitat Fisheries Project (YKFP or Project) continues to be an all stock initiative that is responding to the need for scientific and applied knowledge for rebuilding and maintaining naturally spawning anadromous fish stocks in both sub basins.

The Yakama Nation, as the Lead Agency, in coordination with the co-managers, Washington Department of Fish and Wildlife and in cooperation with the Bonneville Power Administration, the funding agency, is pursuing this. We are testing the principles of supplementation as a means to rebuild fish populations through the use of locally adapted broodstock in an artificial production program. Also, the goal is to increase the numbers of naturally spawning fish, while maintaining the long term genetic fitness of the fish population being supplemented. This concept continues to be utilized on the Spring Chinook within the Yakima River Basin. Also, experiments are on going through this performance period to initially determine if there are any genetic concerns relative to domestication.

The coho and fall chinook programs were approved and implemented in the Yakima Basin. The coho programs principle objective is to determine if naturally spawning coho populations can be reintroduced throughout their biological range in the basin.

The objective of the fall chinook program is to determine if supplementation is a viable strategy to increase fall chinook populations in the Yakima subbasin. The coho and fall chinook programs are under the three step process that was established by the Northwest Power Planning Council and have gone through the provincial review process.

This report is formulated in the format of the contract. The respective Objectives will be addressed with the understanding that achievements were realized through the implementation of Work Elements, as referenced in the Pisces Report. There are three principal categories included: Management, Data and Habitat. With attachments that includes Sub-Contracts and YKFP Policy Group Decision Documents. Also, Table 1, which references the respective Work Elements. All other pertinent contract information has or will be submitted through the Pisces procedure.

TABLE 1. List of Work Elements – Management, Data & Habitat Management, Data, and Habitat activities for Contract #27813 for the period of May 1, 2006 through April 30, 2007

Yakima/Klickitat Fisheries Project Management and Oversight

General Scope

The YN as the YKFP's Lead Agency, is responsible for Project planning and design; the construction, operation and maintenance of YKFP facilities; and the monitoring and evaluation of Project research activities. The Lead Agency is also responsible to ensure adequate funding for all Project activities.

General Responsibilities of YKFP Essential Personnel

The Lead Agency is responsible for the management and implementation of all YKFP facilities. The Facilities include:

1. The Cle Elum Supplementation and Research Facilities
2. The spring chinook acclimation sites at Clark Flat, Easton and Jack Creek
3. The Marion Drain Hatchery.
4. The Prosser Hatchery
5. The coho acclimation sites in the Yakima and Naches subbasins.
6. The Chandler Juvenile Facility.
7. The Roza Broodstock Collection Facility.
8. The Roza Juvenile Outmigration Trap
9. The Nelson Springs Office Complex(s).
10. The Toppenish Office Support Complex.
11. Klickitat Office Complex (Covered under Klickitat Contract)

YKFP Management is also responsible for the efficient performance of all Project research and monitoring activities, including:

1. Monitoring spring and fall chinook, coho and steelhead natural production.
2. Monitoring adult returns and survival for spring and fall chinook, coho, and steelhead;
3. Monitoring spring and fall chinook, coho and steelhead natural production.
4. Spring chinook supplementation experiments (OCT/SNT comparison, reproductive ecology, genetics);
5. Monitoring species interaction (predation, competition, etc.)
6. Coho reintroduction feasibility experiments.
7. Coho and fall chinook broodstock developments.
8. Steelhead kelt reconditioning, experiments (in cooperation with Columbia River Inter Tribal Fish Commission (CRITFC);
9. Habitat assessments and acquisition
10. Domestication research

The YKFP management is also responsible for Project Data/Information compilation and distribution along with coordinating all planning activities.

Objective 1. Yakima/Klickitat Project Management and Oversight Work Elements Project Management & Oversight

Within the Scope of Work (SOW) for this contract period, reference is made to the respective key personnel that possess the immediate responsibility for implementation and oversight.

The technical merit of each category remains their immediate responsibility including Coordination with Project personnel.

The Project's Policy Analyst/Project Coordinator (PAPC) has the over all responsibility for the management and oversight of all activities of the YKFP. The following activities were addressed and/or completed within the contract performance period:

- Coordinated with Program Coordinator (PC) in maintaining an updated YKFP Organizational Chart which was also provided to YN Administration.
- Continued to coordinate with PC on maintaining Project financial/contract matters and addressed personnel issues when appropriate including evaluations. To assure proper accountability, all Project reporting criteria is channeled through PC. This allows immediate access to status and content of reports, including financial/invoicing.
- The Senior Research Scientist (SRS) has the immediate responsibility for over sight on all YKFP research and technical matters. He is also the YN's representative on the YKFP Science Technical Advisory Committee (STAC). On a daily basis, (SRS) coordinates with Project Biologist and Technical personnel of maintaining the proper implementation schedule and producing the designed data. This pertains to all the respective species YKFP is involved in..The SRS coordinates on a routine basis with the PAPC.
- Habitat and the related factors with it is vital to the YKFP. The Habitat Coordinator (HC) has done assessments of various areas of the Sub-basin and recommended parcel purchases as well as developing habit developmenet projects. He has been very effective in coordinating with local and other habitat related entities.
- The YKFP with it's research activities has generated vital information/data that has and will continue to utilized in the restoration of all salmon species. The Data Base Manager (DBM) has developed a web site and recording procedure for the data that has been developed. He coordinated effectively with the SRS and all other personnel within the Project, including the Washington State Fish & Wildlife Department, the co-managers of the YKFP. Produces status updates at the monthly Policy Group meetings.

Objective 2. Policy and Planning

General Scope

The YN fulfilled its policy and planning responsibilities this contract period. This

was achieved through the implementation of the YKFP's adaptive management policy and by maintaining and keeping current all Project planning and operations documents. The PAPC will coordinate these functions with the co-managers, Washington Department of Fish and Wildlife, STAC and other agencies, as necessary.

Purpose

- The YN continued its' presence in all YKFP policy and planning activities. Through this contract, the YN, as the Lead Agency, can fulfill its participation responsibilities through coordination with the Washington Department of Fish and Wildlife, the co-managers: We completed the following:
- On a monthly basis, PAPC formulated/distributed the Policy Group Agenda, set up the Policy Group meetings and arranged for the recordings of the minutes. Also conducted the meetings.
- Represented the YN in YKFP meetings and/or designated a representative to represent the YN or YKFP in formal meetings with outside entities.
- PAPC maintained the coordination with agencies and co manager that the YN's Lead Agency role was fulfilled on a continued basis.
- PAPC implemented/coordinated with Program Coordinator the development and submittal of all the funding BPA proposals.
- PAPC maintained constant communication with key Project personnel in assuring the fulfillment of the goals and objectives as contained in Project contracts.
- In coordination with Program Coordinator, all reports were submitted through the Pisces process to BPA.
- PAPC coordinated with Project key personnel in assuring proper NEPA coverage. In most regards, they coordinated directly with BPA's Environmental department.
- PAPC, in conjunction with Program Coordinator, completed all the active sub-contracts for the services they provide.
- The PAPC, in coordination with the Senior Research Scientist and other key Project personnel, the Internal Project Annual Review is held to develop and finalize respective plans and tasks for the forth coming contracts.

Objective 3. Provide Project Financial and Administrative Support

General Scope

The YKFP operates under several contracts to meet its research and production objectives as well as the data and habitat aspects of the Project. The administrative support requirements that are required to maintain compliance, both for the funding agency and the Yakama Nation are immense. The Project Coordinator (PC) is responsible for all financial/personnel contract compliance requirements in coordination with the PAPC.

Purpose

The current financial status of all the YKFP contracts is essential for effective and efficient implementation of all the contracts. Adequate support staff and structure are

essential in maintaining this responsibility.

Summary of Yakima/Klickitat Fisheries Project Management and Oversight

The Policy Analyst/Project Coordinator, (PAPC) maintains the responsibility for Overall Project oversight/implementation and coordination of the YKFP. This is achieved on a continued basis with operational support from the Project Coordinator and an appropriate cadre of bookkeepers and support staff. They also represent the ability to maintain an updated status on the vast procedural changes from the key funding agency.

Summary of key activities:

1. Maintained the level of coordination and completion of quarterly status and final reports under the Pisces procedure for all of Bonneville Power Administration contracts.
2. Maintained, on a timely basis, the invoicing for each respective contract.
3. Coordinate the maintenance of cash position of all funds to assure reconciliation with Yakama Nation and funding agency.
4. Coordinate and submit September Accruals to BPA.
5. As the Lead Agency, coordinated the activities pursuant to each operational facility within the YKFP.
6. Assigned personnel effectively organized/coordinated the Yakima Basin Aquatic Science and Management Conference held at Central Washington University, Ellensburg, Washington.
7. Scheduled and coordinated the monthly YKFP Policy Group meetings as reflected in the included minutes of each meeting.
8. Coordinate and compile an update status with the Tribal Department of Natural Resources and Tribal Council F&W Committee.
9. Assisted and coordinated Project emergency activities on a daily basis.
10. Initiated /finalized sub-contracts for certain services.
11. Took the lead on coordinating the development of proposals/budgets for all of the YKFP contracts.
12. During the contract(s) renewal process, maintained an equipment inventory list which is updated annually and submitted to BPA with budget proposal and end of year close out.
13. Maintained and updated organizational chart for the YKFP.
14. Effectively coordinated with co-managers, (Washington Department of Fish and Wildlife).
15. Maintained an open door policy when/where other entities were involved, including the Federal Agencies, such as U.S. Fish and Wildlife Service.
16. Maintained, on a priority basis, total compliance with each respective funding agency, including BPA.

Since the YKFP is an all stock initiative which is testing the proposed concepts of supplementation, we are experiencing new and unforeseen challenges. Up to this point of the operation, the Science Technical Advisory Committee (STAC) has been effective in thorough review and recommendations. As proposed considerations are recommended

for a certain species, STAC is instrumental in formulating the scientific review. The NEPA requirements are coordinated with BPA, or the funding agency for this specific activity. A majority of the challenges that are considered are addressed through the utilization of adaptive management.

In conclusion, it's fair to say that some very challenging results have been generated up to this point. We appreciate the diversity that is evident within the YKFP.

Objective 4. Data Processing and Information (Work Elements C174, D160, E159, and F161)

General Scope

Develop an overall structure for the collection and management of YKFP data, ultimately locating it in an accessible location. The system will be consistent with YKFP and regional data management guidelines and objectives. The Data team responsible for achieving this is lead by the Programmer/Database Manager.

Purpose

The goal of this objective is to standardize, consolidate, centralize and make accessible all data and information generated by the YKFP on a timely basis.

Compile, Standardize and Consolidate and Maintain Project Data and Information System

Summary of Data Management Major Accomplishments for May 1, 2006 through April 30, 2007.

Consultation, Coordination, and Data Sharing

1. Provided Yakima Basin data to, and participated in, the Collaborative Systemwide Monitoring and Evaluation Project (CSMEP).
2. Presented summary of YKFP projects and FY07-09 proposals to the Yakima Subbasin Planning and Recovery Board as part of the local review of these proposals.
3. Attended Pacific Northwest Aquatic Monitoring Project (PNAMP) / Northwest Environmental Data (NED) network workshop to discuss actions to improve regional data management for all disciplines.
4. Attended State of Salmon / PNAMP "experts" workshop to assist in developing a database and map of Pacific coast-wide salmon status as well as assessing the status of data quality.
5. Participated in the Hydrosystem Biological Opinion Remand process including internal policy, technical, and legal coordination meetings and continued development of a 'white paper' on 'crediting' supplementation projects. Continued GIS analysis and support for this process. Provided consultation regarding the development of a kelt reconditioning program for the Upper Columbia.

6. Conducted database retrieval and analyses to assist in answering queries from MIPT/STAC and various outside agencies. Examples included: juvenile-adult and adult-adult survival data; run size and size-at-age data to contractors and WDFW personnel for independent assessments and Washington status of the resource report updates; Roza steelhead passage data for BOR and University of Idaho researchers; providing Cle Elum project water use data to state Dept. of Ecology; providing Cle Elum area river temperature data to BOR and Ch2M-Hill; providing growth profile, release, and other data for Project Annual Review presentations; etc.
7. As part of public outreach, gave a presentation summarizing Yakima Basin YKFP activities to about 20 attorneys from the local BAR association.

Planning and Reporting

8. Tracked Yakima and Klickitat project proposals through the FY2007-2009 NPCC and BPA budget and review cycle. Assisted with development of responses to ISRP, NPCC, and BPA queries and review of these proposals including responses to ISRP programmatic comments.
9. Assisted with posting of quarterly status reports to BPA's PISCES system for YKFP activities. Completed review and development of 2005 YKFP annual reports for data, management, and habitat and monitoring and evaluation. Edited and developed 2006 YKFP M&E annual report. Ensured that all YN-sponsored BPA annual reports were properly posted to BPA web site.
10. Participated in the Project Annual Review (2006 internal and public review).
11. Attended monthly YKFP policy group meetings.
12. Participated in meetings to review status of steelhead kelt work and evaluation of reproductive success. Presented summary of 2001-2005 results from Yakima Basin kelt reconditioning at the Project Annual Review.
13. Assisted with modifications / changes in the Klickitat Master Plan.
14. Coordinated re-write, internal review, analysis, and finalization of CESRF OCT / SNT juvenile and adult survival paper incorporating existing literature, reports and all available mark data for the first five-year brood cycle based on peer review comments from June 2006 submittal. This paper will be re-submitted to a technical journal in June or early July of 2007.
15. Developed a manuscript summarizing 2001-2005 steelhead kelt reconditioning work including necessary data analyses. Coordinated internal review. The manuscript has been submitted for publication and is in peer review.
16. Reviewed project manuscripts on morphological differences in wild and first-generation hatchery spring Chinook, PIT tag retention, and reproductive success studies from recent years' work in the spawning channel.
17. Assisted in the development and review of project decision documents including: adaptive management based on survival of high and low growth treatment fish from brood years 2002-04; testing a saltwater transition diet for brood year 2005 spring Chinook from CESRF; and a proposal to begin DNA sampling all spring Chinook passing above Roza Dam beginning in 2007 to help assess the effect of supplementation on long-term reproductive success.
18. Continued development and updating of the "Executive Summary" report summarizing all Yakima Basin spring chinook monitoring and evaluation work.

19. Presented Yakima Basin steelhead reconditioning summary at Northwest Fish Culture Conference in Dec of 2006 and at Oregon chapter AFS in March of 2007.
20. Updated and maintained information system management plans for Yakima and Klickitat data management activities.

Database Development, Maintenance, and Analysis

21. Maintained a database of Yakima Basin dam counts (Prosser and Roza). Worked with Univ. of Washington Data Access in Real Time (DART) staff to maintain an ODBC database link for loading current calendar year and maintaining historical data. Worked with YN video counting and DART staff to maintain the accuracy and currency of data in these databases.
22. Maintained spring chinook databases and software (2006 Prosser dam count, 2006 Roza Dam brood/recapture, 2006 harvest, 2006 Cle Elum spawning, BY2006 ponding and rearing, BY2005 final rearing, spawner survey, and Cle Elum water usage reporting) including data capture, quality control, incorporation of data from other agencies (e.g. USFWS fish health data, NMFS precocial and spawner survey data, etc.) to ensure data are comprehensive, consistent, accurate, and up-to-date.
23. Modified spring Chinook databases and associated data sets to accommodate the hatchery control line as well as DNA sampling of all fish passing above Roza Dam.
24. Maintained Prosser steelhead kelt database and software; maintained database of kelt PIT recaptures; reviewed and summarized Prosser steelhead kelt data to date for 2006 season; analyzed and prepared summaries of 2001-2006 release and recapture data; and setup of data capture database for 2007 activities.
25. Maintained databases of Chandler juvenile sampling activities and all PIT-tagged releases in the Yakima River Basin. Posted regular in-season updates of estimated juvenile passage and timing at Prosser Dam to the ykfp.org web site.
26. Submitted mark (CWT or PIT) data for all Yakima River releases and recaptures to regional databases (RMIS and PTAGIS) in a consistent and timely manner.
27. Modified PTAGIS queries to run from their new web portal application as they are phasing out the existing telnet interface to these data.
28. Developed database for tracking YN releases of coded-wire tagged (CWT) fish and submitting relevant data to the regional RMIS database.
29. Established the YN as an 'official' CWT mark reporting and release agency and assumed the position and responsibilities of coordinating and validating all YN CWT and non-CWT marked releases to RMIS (CRITFC formerly performed these duties for YN).
30. Prepared and maintained data capture systems for 2006 fall chinook and coho operations including: Prosser Denil hardware/software setup; incorporation of age data from scale sample analysis; and radio telemetry tracking system.
31. Prepared data capture systems for 2006 Cle Elum spring chinook spawning, participated in weekly spawning activities, with main responsibility for data entry, quality control review of data, processing and archiving of photographs, and sending out weekly summaries of spawning activities.
32. Compiled and summarized all 2006 adult spring chinook return and spawning data for the Yakima Basin. Prepared and delivered 2007 adult spring chinook forecast. Developed 2007 brood need and collection schedule.

33. Analyzed data capture database for 2006 Cle Elum spring chinook spawning to produce summary reports for the season and assist in pairing the 2006 brood fish for placement in incubation trays and rearing ponds. Ensured accurate entry of BY2006 egg enumeration data and produced egg enumeration summary reports.
34. Continued work with fall chinook biologist to develop databases to better organize and summarize all related data.
35. Continued development of database to allow easy search and retrieval of YKFP technical reports and publications.
36. Worked with Klickitat field office staff to update run reconstruction and harvest data for all species. Developed Klickitat spring Chinook run forecast for 2007.
37. Assisted avian predation biologist with development, review, and updates of spreadsheets and documents relating to ongoing avian predation work in the Yakima Basin. Assisted with downloading and analysis of PIT recaptures from known avian nesting sites.

Equipment and Web Site Maintenance

38. Performed routine equipment and anti-virus software maintenance (troubleshooting, hardware/software installation and maintenance) at all sites (Nelson, Cle Elum, Roza, Prosser, and GIS server system in Toppenish).
39. Developed procedures to ensure regular and complete off-site backups of all PCs hosted at the Nelson Spring site including installation of two 1.25 terabyte RAID storage systems.
40. Performed routine maintenance of the YKFP web site including assisting users with their accounts, and adding and fixing links to YKFP technical reports and publications.
41. Self-trained on PHP scripting and used this knowledge to enhance ykfp.org web site features including interfacing with Bureau of Reclamation online data to include flow and temperature data on Roza and Prosser adult count graphs and for use in juvenile passage estimation.
42. Organized and posted abstracts and presentations from the annual Science and Management Conference to the ykfp.org web site.

GIS Mapping

43. Worked with the Klickitat Data Manager to set up and load a spatial database engine at the Klickitat field office. This allows central management of shared geospatial data for map production and landscape modeling.
44. Produced maps and analysis in support of Klickitat “Eastern Tributary” habitat proposals and of Gorge area hatchery release numbers in support of White Salmon production proposals.
45. Completed online training classes to enhance knowledge and stay current with ESRI’s ArcGIS and other mapping and geo-database products. These courses were offered through grants to tribal organizations.

Note: The majority of Klickitat basin-specific data management activities are covered in a separate report pursuant to Klickitat contract(s).

Objective 5. Project Annual Review (PAR)/Quarterly and Annual Reports

General Scope

The Project Annual Review (PAR) is a vital part of the annual review and planning cycle that contributes to the research consideration for the YKFP. The original PAR has been expanded to include other activities conducted outside of the YKFP. The original intent of the PAR was to evaluate the ongoing science activities of the program. This component is now conducted in an 'Internal PAR' that was held on January 10 and 11. The original Project Annual Review has been expanded and renamed 'the Yakima Basin Aquatic Science and Management Conference' (YBS&MC) to include a broader range of science and management activities that impact the salmon and wildlife in the Yakima Basin. The conference is conducted over two days at the Science Building at Central Washington University. The PAR consists of a series of presentations documenting the production, monitoring and evaluation objectives and results of the previous years' research projects in the YKFP. The PAR affords an opportunity for formal peer review and interaction with scientists who have a viable interest in supplementation and the resource.

Purpose

The Project Annual Review has been expanded and renamed 'the Yakima Basin Aquatic Science and Management Conference' to include a broader range of science and management activities that impact the salmon and wildlife in the Yakima Basin. It is the responsibility of the Senior Research Scientist to schedule and conduct both the original annual PAR as well as the Yakima Basin Aquatic Science and Management Conference, which includes presentations from each of the task specific participants within the YKFP and now includes invitations to other scientists and managers that are interested in the YKFP or the health of the fish and wildlife resources in the Yakima Basin. The Internal PAR assists the Scientific Team and the Policy Group in project planning and management activities and will be made available to regional scientists through the PDM

Objective 6. Scientific Oversight by Science Technical Advisory Committee (STAC)

General Scope

The Science/Technical Advisory Committee (STAC) is composed of representatives from the Yakama Nation (YN) and the Washington Department of Fish and Wildlife (WDFW). STAC is responsible for the immediate oversight of all scientific aspects of the YKFP. The Senior Research Scientist of the Yakama Nation is the Chairman of the STAC.

Purpose

STAC will develop and review all pertinent scientific and technical information, develop a Decision Document, and present the information to the Policy Group for action. STAC is

also responsible for the planning, review and development of recommendations from the information/data that is presented at the annual PAR.

Summary of Senior Research Scientist Major Accomplishments

Consultation and Coordination

Coordinated all of the ongoing Monitoring and Research Activities of the YKFP.

Coordinated the development of YKFP projects and FY07-09 proposals for the NPCC and BPA three year program.

Coordinated the presentation of YKFP projects and FY07-09 proposals to the Yakima Subbasin Planning and Recovery Board as part of the local review of these proposals.

Represented the Yakama Nation on the Hatchery Scientific Reform Group (HSRG) in their evaluation and reform recommendation of all hatchery programs in the Columbia Basin.

Participated in NOAA/Critfc sponsored Supplementation Workshops to develop monitoring and Evaluation programs for hatchery research in the Columbia Basin.

Continued coordination of the development of a kelt reconditioning program for the Upper Columbia. Developing a Reproductive Success evaluation of the program.

Continued working with BOR and other agencies on the Yakima Dams Fish Passage Study. Gave presentation on results of research from this project at YBSMC.

Gave presentations summarizing Yakima Basin YKFP activities at the Western Division American Fisheries Society Conference in May '06, the Northwest Hydropower Conference in February '07, the Northwest Steelhead Conference Jan '07.

Participated in the Collaborative Systemwide Monitoring and Evaluation Project (CSMEP).

Planning and Reporting

Coordinated the Yakima and Klickitat project proposals through the FY2007-2009 NPCC and BPA budget and review cycle. Coordinated responses to ISRP, NPCC, and BPA queries and review of these proposals including responses to ISRP programmatic comments.

Planned the internal Project Annual Review (PAR, Jan 07) and the Yakima Basin Aquatic Science and Management Conference (YBS&MC, June 07).

Attended monthly YKFP policy group meetings and reported activities for STAC. Developed and presented Decision Documents to Policy Team for Adaptive Management revisions to ongoing activities within the YKFP.

Participated in meetings to review status of steelhead kelt work and evaluation of reproductive success. Presented summary of 2001-2005 results from Yakima Basin kelt reconditioning at the Northwest Steelhead Conference and to the Yakima Basin Fish and Wildlife Recovery Board.

Assisted with modifications / changes in the Klickitat Master Plan with emphasis on expected review and recommendation from the Hatchery Scientific Reform Group.

Assisted and reviewed the re-write, internal review, analysis, and finalization of CESRF OCT / SNT juvenile and adult survival paper. This paper will be re-submitted to a technical journal in June or early July of 2007.

Assisted with re-write and review of a manuscript summarizing 2001-2005 steelhead kelt reconditioning research. The manuscript has been submitted for publication and is in peer review.

Assisted with the review of manuscripts on reproductive success, comparisons of morphology between wild and hatchery salmon, and homing performance of hatchery salmon to acclimation sites. These papers are published in scientific journals.

Objective 7. Habitat, Water and Passage

General Scope

The YKFP will improve and protect habitat deemed necessary to further Project objectives. The Habitat Coordinator (HC) will coordinate with the respective agencies, committees and groups on matters pertaining to habitat, water resources and fish passage matters within the Yakima subbasin.

Purpose

The YKFP's Ecosystem Diagnostic and Treatment (EDT) analysis will provide information related to habitat projects that will improve salmonid production in the Yakima subbasin.

Summary of Yakima/Klickitat Fisheries Project Habitat.

The Habitat Coordinator and staff are responsible for:

- providing input to the regional salmon recovery board;

- prioritizing and implementing passage, screening, restoration, protection and assessment projects;
- providing technical input to governmental entities on salmonid habitat management; and,
- developing and implementing management plans for protected habitat parcels.

During this time period primary activities and accomplishments include the following:

1. Securing restoration funding and continuing these activities at the Holmes habitat parcel.
2. Environmental education activities via field trips to the Holmes habitat parcel, involving eight primary grade classrooms.
3. Participation in a variety of governmental natural resource regulatory forums, including: the City of Ellensburg Critical Areas Committee; the Kittitas County Resource Lands Advisory Committee; the Yakima County Mining Advisory Group; and, the Union Gap floodplain restoration planning group.
4. Participation in voluntary natural resource planning and restoration groups, including the Yakima Tributary Access and Habitat Program and the Yakima Fish and Wildlife Recovery Board.
5. Coordination with Washington Department of Fish and Wildlife and the Kittitas Conservation Trust (a local non-profit Land Trust) on watershed restoration projects, including lower Reecer Creek, Swauk Creek and Taneum Creek passage and instream flow improvement and a Cle Elum River Engineered Log Jam design/construction proposal.
6. Participation in grant writing, landowner interaction and associated activities for protection of a strategic habitat parcel of 400+ acres in the Easton/Cle Elum Reach of the mainstem Yakima River.
7. Promoting passage improvements in the Taneum, Swauk, Reecer and Manastash tributaries, through involvement in planning groups and data collection.
8. Oversight of restoration activities at the Harris habitat parcel (owned and managed by the Yakama Nation – YKFP).

Objective 8. Sub-Contracts for Needed Services.

General Scope

The YKFP is a diverse Project and requires services that are best served through a contractual arrangement. It has proven to be very beneficial to employ the services of personnel who not only have a specialized area of expertise but are also distinctly familiar with the YKFP.

The YN will contract with qualified personnel, agencies or firms that possess the abilities to meet specific service requirements of the YKFP. The YN will negotiate and execute a personal services contract and/or agreement and monitor the services, once implemented.

Legal/Policy Analyst Contract Activities

The Legal/Policy Analyst (L/PA) responsibilities are to advise management on the benefits and risks associated with actions considered by the decision-makers. Through this contract performance period, the L/PA maintained a close working relationship by attending/participating in meetings that pertain to the Project, reviewing and reporting on legislation, laws, administrative actions and regulations that affect the YKFP and participating in the planning/development process for the Project.

In summary, during the FY2006/2007 contract period, the L/PA provided the following services to the YKFP:

1. Assisted the PAPC and the YKFP Policy Group in project administration and management.
2. Analyzed applicable laws, rules and regulations pertaining to Project funding, water rights, NEPA, SEPA, ESA, and other environmental compliance requirements.
3. Advised PAPC and Policy Group as to the matters identified above.
4. Assisted in the preparation of NEPA and SEPA and regulatory compliance documents.
5. Assisted in the development of regulatory permit applications.
6. Supported the development and maintenance of intergovernmental relationships between the Yakama Nation, BPA, WDFW, NPPC, and local governments.
7. Reviewed, negotiated and prepared project contracts and agreements.
8. Attended Policy Group meetings and other key YKFP meetings, as requested, and advised PAPC and Policy Group regarding issues discussed.
9. Attended regional meetings wherein the topics discussed could affect YKFP activities.
10. Advised and assisted the PAPC with regard to issues of concern related to YKFP.

Specifically, the L/PA performed tasks in the following major areas:

1. Water Rights Issues

Cle Elum Supplementation and Research Facility (CESRF). Water right permits issued in 1997 for the CESRF are temporary during the pendency of the Yakima River Basin Water Right Adjudication, in part because of uncertainty regarding the productive capacity of the aquifer providing groundwater for fish propagation activities. The temporary authorizations were scheduled to expire on April 4, 2007. The L/PA worked with Washington Department of Ecology, BPA, YKFP staff and the project hydrogeological consultant to finalize long duration well field testing, wetland impact mitigation plans,

and groundwater use reduction contingency plans for the CESRF. The L/PA worked with Ecology to obtain changes in schedules to complete the delivery of necessary information to support project water use authorizations. The L/PA participated in the review and drafting of modifications to proposed orders developed in the adjudication to assure they did not interrupt CESRF water use for non-consumptive fish propagation.

CESRF operations are tied to acclimation site operations. The L/PA, the Hatchery Manager and WDFW coordinated the development of efforts to provide flow and impact monitoring at the Jack Creek Acclimation Site to fulfill reporting requirements under the Jack Creek temporary water use authorization.

Water Use at the Chandler Juvenile Enumeration Facility and the Prosser Hatchery. During the adjudication process, major claimants presented their cases for perfected water right uses and quantities. The L/PA coordinated the potential inclusion of YKFP fish propagation uses with the YN water attorney and the Bureau of Reclamation, and worked with Bureau to maintain use of screen bypass water for Chandler facility and Prosser Hatchery operations.

2. Water Quality Issues

Several segments of the Yakima River and its tributaries are included on the State of Washington's list of impaired water bodies prepared in accordance with Section 303(d) of the federal clean water act. Watershed cleanup plans (TMDLs) are being prepared or are in the scoping stages due to temperature and nutrient loading in the river. The pending TMDLs have the potential to impact the cost and feasibility of present and future supplementation and stock restoration activities in the Yakima Basin. The L/PA conducted research on the regulatory framework arising from TMDLs, informed the Policy Group of the broad scope of issues the TMDLs present, and worked with YKFP staff, WDOE and other project sponsors to address water quality constraints on new elements of the artificial propagation facilities in the basin.

3. FY 2007-2009 Funding Proposal and Review

During the contract performance period, the Northwest Power and Conservation Council solicited proposals for funding by BPA during the FY 2007-2009 period. Through the solicitation process, the YKFP sought increases in funding for ongoing projects to address expense escalation and expanded project monitoring and evaluation activities. The NPCC recommended flat line budget extensions for most YKFP work, and reduced funding recommendations in others. Subsequently, BPA issued a set of funding decisions in response to the NPCC recommendations. The L/PA participated in the development of YKFP proposals, the evaluation of ISRP comments on the proposals, the presentation of YKFP proposals to the local subbasin planning entity, review and comment on the NPCC recommendations, and the development of the YKFP response to BPA's decision on the recommendations.

4. Long Term YKFP Funding

At the same time that the NPCC was developing funding recommendations for the FY 2007-2009 budget period, BPA was negotiating with tribal governments in the region regarding long term funding of fish and wildlife mitigation activities in the context of

litigation over the adequacy of endangered species protections for anadromous fish. The L/PA participated in the development of YKFP positions on long term funding approaches, associated government to government interactions with BPA managers and the development of interim funding approaches for YKFP projects affected by NPCC budget recommendations.

5. Bonneville Facilities at Nelson Springs.

As part of the FY 2007-2009 solicitation process, the YKFP developed a proposal for the replacement of dilapidated monitoring and evaluation facilities used by the YKFP at BPA's Nelson Springs property. The NPCC had earlier approved the development of design and pricing information for a facility but then deferred action on the proposal. In consultation with YKFP staff, the L/PA addressed strategies for development of modular facilities to provide M&E replacement space and new laboratory facilities. When the NPCC did not recommend funding for the replacement facilities again in 2006, the L/PA assisted the YKFP in developing within year project budget modifications based the alternatively proposed facility replacement on site or the leasing of other suitable space for M&E activities. The L/PA also participated in the Budget Oversight Group review of the within-year modifications.

6. Fall Chinook Master Plan Development

The L/PA participated in initial meetings on the development of a Master Plan for Yakima Basin Fall Chinook. He assisted YKFP staff in the review of criteria for development of master plans under the NPCC three step review process, and prepared and initial outline of the fall Chinook plan.

7. Coho Reintroduction Activities.

The YKFP is studying the feasibility of reintroducing coho in the Yakima River Basin and has completed initial studies. The L/PA assisted the YKFP in developing permitting strategies for in-basin coho rearing and education facilities. In addition, the L/PA conducted appropriate legal research and advised the YKFP regarding NEPA and ESA reviews of tributary-focused additional feasibility studies. The L/PA also advised the YKFP regarding irrigation district concerns about the impact of reintroduction on river operations.

8. Prosser Hatchery Activities.

Hatchery access depends on the use of a bridge across the Chandler Canal. The L/PA worked with the Benton County Engineer and the Bureau of Reclamation to address evolving responsibilities for bridge maintenance and operation and the development of alternative means of access to the hatchery property.

9. Columbia River Basin Legislation, Regulation and Litigation Activities.

The YKFP operates in a context of federal, state and tribal decision-making at both the legislative and regulatory levels. The YKFP is obliged to monitor legislative, regulatory and litigation activities in order to anticipate changes in project environments and to allow effective participation in future funding and policy decisions. The L/PA monitored such activities and made appropriate reports to YKFP managers in order to allow such effective participation.

10. Procurement Contract Reviews.

The Yakama Nation enters numerous subcontracts in implementing its intergovernmental contracts with BPA. The L/PA worked with Yakama Nation administrative staff to update standardized subcontract terms in order to assure the implementation of the IGCs and protection of Yakama Nation interests in the contracting process.

ATTACHMENT B

Technical Writer – Judith Woodward
Judith Woodward, Crossing Borders
May 1, 2006 to April 30, 2007

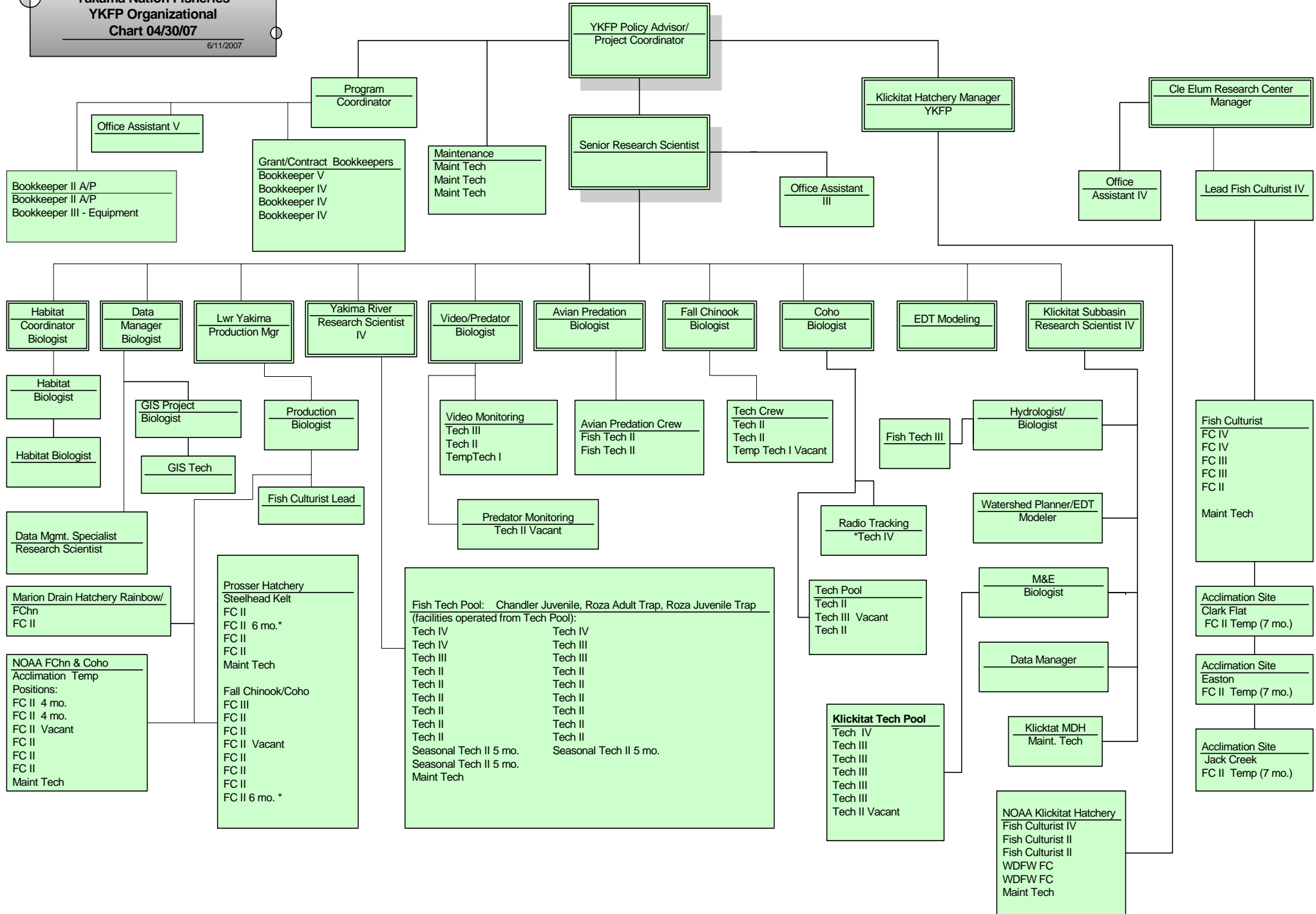
No Activity to Report

Attachment C

YKFP Organizational Chart

May 1, 2006 – April 30, 2007

**Yakama Nation Fisheries
YKFP Organizational
Chart 04/30/07**
6/11/2007



**POLICY GROUP DECISION DOCUMENTS
MAY 1, 2006 – APRIL 30, 2007**

Yakima Klickitat Fisheries Project Policy Group Decision 2007 - 01

Short Description of Subject: Short and long-term survival of hatchery-reared salmonid smolts may be related to their ability to successfully transition from a freshwater to a saltwater environment. The BioOregon BioTransfer diet is specifically formulated to help prepare juvenile salmon for the transition from fresh to saltwater environments. It is proposed that brood year 2005 spring Chinook at each of the acclimation sites be divided into treatment and control groups. The treatment group would receive the BioTransfer diet and the control group would continue to receive BioVita Fry pellets. This feed experiment is proposed for just the acclimation period (Feb. 2007 – May 2007) for brood year 2005 smolts. Tentative plans are to begin this feed experiment on February 10, 2007. Survival comparisons would be based on comparison of PIT-tagged juveniles to McNary Dam and adult returns to Roza Dam.

MIPT/STAC Recommendation: MIPT discussed this proposal at the internal PAR in January and generally agreed to the proposal. Ray Brunson noted that due to annual variations in feed composition, comparisons across years may not be valid. Therefore, further information is required before a decision regarding continuing this experiment for additional years can be made.

Proposed Action: Authorize CERSF personnel to implement a control/treatment study at the acclimation sites using the BioTransfer diet for brood year 2005 fish.

Final Action: Approved

Signed on 2 / 26 / 07 at WDPW R3 HQ (Yakima) and YN Fisheries HQ (Toppenish)

 - Policy Representative, Yakama Nation

 - Policy Representative, Wash. Dept. of Fish and Wildlife

Attachments:

BioTransfer Feed 'Fact Sheet'

Brief summary of how BioTransfer diets can improve factors related to survival



BioTransfer

Best Possible Preparation for a Life in Seawater

BioTransfer is specifically formulated to help prepare juvenile salmon for the transition from fresh to saltwater environments. Elevated levels of dietary salt encourages the development of osmoregulatory ability while added betaine acts as an osmoprotectant, relieving gastrointestinal stress. BioTransfer contains not only immune stimulating and supporting ingredients (Macroguard® purified Beta-1,3/1,6-glucan, high vitamin C dose and organic selenium) but also extra nucleotides. In situations where fish have a substantial needs to create new cells (e.g. smoltification), an extra supply of nucleotides can make the cell building process faster, saving valuable energy. BioTransfer is also designed to give maximum growth as high growth rates are known to correlate with improved seawater tolerance. BioTransfer should be fed continuously for 4 to 6 weeks in freshwater prior to seawater transfer. For more information on how BioTransfer can prepare your fish for seawater, please contact your local Bio-Oregon representative.

- Palatability enhancers ensure active feeding
- Added dietary salt stimulates seawater osmoregulation
- Betaine aids osmoregulatory development and reduces mortality
- Beta-glucans and enhanced vitamin levels counteract stress
- Extra nucleotides provide building blocks for rapid growth

Composition

Feed Size (mm)	Protein Min.	Oil Min.	Moisture Max.	Fiber Max.	Ash Max.	DE MJ/kg	Fish size Grams	Fish size #/lb
1.5	50%	20%	8.5%	1.0%	12%	18.9	5.0-8.0	90-60
2.0	50%	20%	8.5%	1.0%	12%	18.9	8.0-20	60-25
2.5	50%	20%	8.5%	1.0%	12%	18.9	20-40	25-11
3.0	50%	20%	8.5%	1.0%	12%	18.9	40-75	11-6

Feeding Guidelines - Percent to feed: kg (lbs) feed per 100kg (lbs) fish per day

Fish Size		Feed	F	35.6	39.2	42.8	46.4	50.0	53.6	57.2	60.8
Weight (g)	Fish/lb	Size	C	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
5.0-8.0	90-60	1.5	0.5	1.1	1.5	2.2	2.6	2.9	3.5	4.0	
8.0-18	60-25	2.0	0.4	0.9	1.4	1.8	2.2	2.6	3.1	3.5	
18-40	25-11	2.5	0.2	0.6	1.2	1.4	1.8	2.1	2.4	2.8	
40-75	11-6	3.0	0.1	0.4	0.8	1.0	1.3	1.6	1.8	2.2	

Individual results from the use of Bio-Oregon feed products may vary due to management, environmental, genetic, health and sanitation differences. Therefore, Bio-Oregon does not warrant or guarantee individual results.



Yakima Klickitat Fisheries Project Policy Group Decision 2007 - 02

Short Description of Subject: Due to stewardship concerns and the need for preseason planning, Yakima/Klickitat Fisheries Project (YKFP) scientists propose to set the minimum number of Naches Basin spring Chinook salmon for which collection of wild control broodstock will occur. Collection of fish on the spawning grounds will not be attempted if the escapement estimate is less than 500 adults.

Additional Detail: The YKFP attempts to collect and spawn ten pairs of the Naches population of spring Chinook salmon on the spawning grounds each year to investigate the domesticating effects of supplementation. The "Naches population" (i.e. Naches River, Bumping River, and Little Naches River spawners) serves as the wild control for the supplementation and hatchery control lines in the upper Yakima Basin. Specific traits that are monitored from these fish include fecundity, egg size, emergence timing, condition at emergence, developmental abnormalities, behavioral aggression and dominance, and vulnerability to predation. The data from the different lines are compared to assess hatchery-domesticating effects.

It is important to maintain a healthy Naches population for conservation and long-term research purposes. Our YKFP-NTT risk containment objectives indicate an allowable impact of 10% for the Naches population. Due to a low projected return of Naches fish in 2006, broodstock were not collected because of concerns of exceeding a 10% impact on this stock. This decision was not made until the last minute after several visits to the spawning grounds and much time and effort by field personnel.


Beginning with the 2007 spawning season, the YKFP proposes to base our decision to collect fish on an in-season adult escapement estimate. Adult counts at Prosser Dam minus adult counts at Roza Dam through August 15 correlate well with redd counts for the Naches population (see attached) and can therefore be used as an estimate of redd counts before spawning commences. If we collected ten females that had not yet spawned any eggs, then we would exceed a 10% impact if the number of Naches population redds was projected to be less than 100. To calculate the minimum number of Naches Basin adults (combination of Naches and American river populations), we multiply 100 redds by the average number of fish per redd (3.4) and divide that by the average proportion of Naches population redds to American River population redds (0.68), which equals 500 adults. If it is necessary to collect mature pre-spawned fish, then eggs in excess of experimental needs will be fertilized and deposited in artificial redds in typical spawning areas.

If the Naches Basin escapement estimate is 500 or more adults on August 15 (i.e. ≥ 340 Naches population adults), we will make every effort to collect ten pairs of adults from the Naches population. If the estimate is less than 500 adults, then we will not collect fish and will shift our efforts to collect more data on carcasses.

Proposed Action: Do not collect Naches population wild control broodstock unless Naches Basin estimated escapement is 500 or more adults.

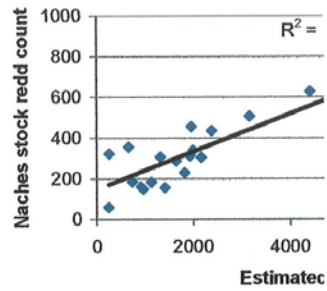
Final Action: Approved.

Signed on 2/22/07 at WDFW Yakima HQ and YN Toppenish HQ


x_____ Policy Representative, Yakama Nation


x_____ Policy Representative, Wash. Dept. of Fish & Wildlife

	Prosser co	Roza count to 8/15	Est. escap	Na. L.	Na Bum redds
2006	5572	3636	1936	311	
2005	7882	5499	2383	434	
2004	14413	9996	4417	628	
2003	4999	1840	3159	505	
2002	14054	8383	5671	577	
2001	19763	11172	8591	800	
2000	17422	10793	6629	834	
1999	1795	873	922	159	
1998	1878	735	1143	181	
1997	3126	1298	1828	228	
1996	2946	1526	1420	156	
1995	528	276	252	58	
1994	1283	552	731	183	
1993	3795	1789	2006	340	
1992	4282	2956	1326	305	
1991	2750	0			
1990	2202	1942	260	321	
1989	4112	3451	661	354	
1988	3590	1419	2171	303	
1987	3758	1796	1962	455	
1986	8557	2838	5719	849	
1985	3815	2161	1654	286	
1984	2321	1346	975	148	



Yakima Klickitat Fisheries Project Policy Group Decision 2007 - 03

Short Description of Subject: Recent low survival rates of hatchery-origin spring Chinook returning to the upper Yakima River have caused a reduction in the number of hatchery fish (SH) that can be used to supplement the upper Yakima population. Current survival rates have also impacted the abundance of hatchery control fish (HC), which are being used to satisfy a number of research objectives in the Yakima Klickitat Fisheries Project (YKFP). All the spring Chinook produced from the Cle Elum Supplementation Research Facility (CESRF) are tagged and marked so that the treatment origin of each hatchery fish can be identified at the adult stage. However, in some cases tag loss prevents treatment identification in a hatchery fish. Their uncertain origin prevents staff from treating them as SH or as HC fish and consequently they cannot be used for supplementation or research purposes. Yakima/Klickitat Fisheries Project (YKFP) scientists propose using a genetically based pedigree procedure to identify the origin of each hatchery fish that could be a possible HC fish, but cannot be unambiguously identified because it has lost one or more of its tags. This procedure will ensure that each fish produced by the project can be used for supplementation or research purposes.

Additional Detail: In 2002 a hatchery control line was established at the CESRF. The line was initiated to enable project scientists to compare 13 adult and 15 juvenile traits in these fish to SH and wild control fish. The principle objective of these comparisons is to determine whether inadvertent domestication caused by hatchery practices is occurring. The first adult returns from the HC line took place in 2005 when 52 jacks (3-yr-old males) were recovered. In 2006, HC fish returned to the upper Yakima and all of these fish were used to perpetuate the HC line and for trait comparison purposes. A preseason forecast suggests that hatchery fish will be approximately two-thirds as abundant in 2007 as they were in 2006. A minimum of 86 HC fish (43 males and 43 females) is needed to meet the research and production requirements of the YKFP. Due to expected low survival it is likely that not enough known HC fish will be available to meet production and research needs in 2007. However, in 2006, the treatment origin of 88 out of 2,006 hatchery adults recovered at the Roza Adult Monitoring Facility could not be identified. Approximately 37 (42%) of those fish were likely HC individuals, while the remainder were SH fish. None could be used to meet project objectives because of their uncertain origin.

Given the expected scarcity of HC fish and the value of both HC and SH individuals to the project, YKFP scientists propose that the following steps be taken to identify the treatment of hatchery fish whose origin is impossible to decipher because of tag loss. First, each of these fish should receive an adult PIT tag in the ventral girdle to enable individual recognition. Next scales should be taken and used to age each fish so that its brood year can be identified. A small amount of fin tissue should be removed from each adult and this material should be placed in 100% ethanol with a label that can be linked to its PIT tag number. Fin material could be removed from the trailing edge of the dorsal fin ("V"-like notch) or a small amount could be excised from the posterior tip of the dorsal fin. Each fish should then be treated as though it was being used as potential broodstock. Thus, they should be injected with antibiotics, transported to the CESRF

and held in a raceway provided with floating cover. In addition they should be subjected to typical formalin treatments to reduce disease and *Saprolegnia* infestation while being held in the raceway.

Pedigree assignments will be performed using methods similar to those used to assign parentage to the fry produced in the Cle Elum observation stream. The microsatellite genotypes of prospective HC parents (based on the scale ages of the returning fish) will be determined from the fin clips taken when the fish were spawned and then the genotypes of the unknown returning adults will be compared to this baseline to see if they were their progeny. DNA samples and biological information collected at the time the parents were spawned will be used to help refine these assignments. For example, the males each female was crossed with are known and thus the genotypes of her potential offspring will be known further reducing any possible parental assignment errors. The identification of unknown hatchery adults will be done routinely throughout the migration period to minimize fish handling work and to provide timely updates on the abundance of HC and SH fish. If no definitive pedigree determination can be made for a fish after 21 days, then that fish will be sacrificed.

Once the treatment origin of an unknown hatchery fish has been determined the following steps will be taken. All known HC fish will have a small portion of the upper lobe of their caudal fin clipped and they will then be transferred into the raceway holding the fish destined for broodstock. Fish identified as being SH individuals may be released back into the upper Yakima River or used as future broodstock if desired. They will not be fin clipped. By performing this work, additional HC and SH fish will become available to the project.

We estimate that approximately 100 to 140 adult fish will need to have their microsatellite genotypes characterized. Fifty to sixty will be HC parental fish from BY 2003 and the remainder will be potential offspring captured in 2007. Currently, 3000 fry originating from the observation stream are scheduled to undergo microsatellite analysis (500 from six separate populations). To accommodate this proposed work, we will reduce the number of fry analyzed from each population by about 25. Such a reduction will have a negligible effect on our ability to assess the reproductive success of the fish placed into the observation stream.

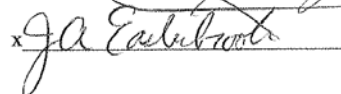
The use of pedigree assignments to determine the origin of hatchery fish that have lost their tags should occur when survival estimates suggest that HC fish abundance will be less than 120 individuals. Alternatively, such a procedure could also be performed if YKFP scientists recommend that additional SH fish be allowed to naturally spawn in the upper Yakima.

Proposed Action: Conduct genetically based pedigree analyses to identify the treatment origin of hatchery fish when pre-season forecasts suggest that fewer than 120 HC fish will return to the upper Yakima and prioritization of adult HC pedigree is higher than spawning channel fry pedigree.

Final Action: Approved.

Signed on 3/28/07 at Nelson Springs (Gleed)

x  - Policy Representative, Yakama Nation

x  - Policy Representative, Wash. Dept. of Fish and Wildlife