Interior Columbia Technical Recovery Team Meeting #5 Boise, ID March 11th and 12th, 02

Members present: Paul Spruell, Dale McCullough, Fred Utter, Phil Howell, Charlie Petrosky, Rich Carmichael, Pete Hassemer, Howard Schaller, David Johnson, Tom Cooney, Michelle McClure
Non-members present: Vince Kozakiewicz, Terry Elms, Henry Carson

I. Progress Reports and Discussion of Nodes approach

- NWFSC work on SR SSCH length at age, spawn timing, and red count correlations
- Charlie Petrosky's work on Idaho Recruits per Spawner
- Genetics subgroup dendrogram and principle components analysis
- Discussion on ways to interpret dendrogram:
    - Endpoints could be grouped geographically and their genetic distances compared
    - Endpoints separated by a small genetic distance could be lumped into larger groups using information about geography and hatchery influence

II. Test Area for Population Identification- Grande Ronde Nodes

	Genetic Distance	Proportion Hatchery Spawners	No. of Spawners ontributing to genetic sample	Juvenile Outplants	Historic Peak spawning population	Genetic T+4 analysis	Distance between closest spawning aggregate	Area available for spawning and rearing	Spawn timing	Length at age 4 and 5	Age proportion	Juvenile migration timing	Demographic correlation
Grande Ronde													
Wenaha		moderate		none									
Lookingglass Cr		high		none									
Indian Cr		unknown		none									
Catherine Cr		high		none	1,000			24 miles				70% fall	
Catherine vs. Upper G.R.	0.001						60 miles		similar	similar		very different	no sig. difference
Upper Grande Ronde		high		none	750			42 miles				10% fall	
(including Meadow, Sheep)													
Wallowa River													
Minam R		moderate		none	>1,000			29 miles			30% age 5	heavy to fall	
Minam vs. Lostine	0.003						25 miles				similar	similar	sig. difference
Lostine R		low		none	>1,000			30 miles			30% age 5	heavy to fall	
Lostine vs. Bear	?						4 miles		similar				
Bear Cr		low		none	<100			less than 5					
Hurricane Cr		moderate		none									
Upper Wallowa		moderate		none									

Consensus: Both Minam/Lostine and Catherine/Upper G.R. nodes divide two independent populations whether or not genetic information is considered. Some members would be

undecided were it not for genetics. The Bear creek and Lostine populations are not significantly different and should be lumped.

III. Status of TRT funding- Tom Cooney

1) Funding for the 1st three TRT products through October 2003 will amount to approximately 770 thousand dollars. Action agencies providing the funds may include the Bureau of Reclamation, the Corps of Engineers, and the Bonneville Power Administration.

A) Population ID (Data collection, analysis, and report preparation) – $250 K
B) Viability Criteria – $400 K
C) ESU Scenarios – $100 K

2) Immediate funding for data collection assistants

- IDFG – Terry Elms
- ODFW – Rich's Assistant
- WDFW – Dave Johnson to investigate

3) Genetic Data. Members would like a list of completed or pending genetic data projects before they request more data studies. IDFG Steelhead report is due in April.

4) Tom and Michelle will call members next week to make individual funding arrangements.

IV. Case Studies – Tom Cooney

1) The following sub basin assessments are in progress:

- WA Upper Columbia
- ID Clearwater Study
- OR Sandy/Santiam
- Proposed: Grande Ronde, Tucannon, and Yakima

2) A subset of TRT members could act as a review board for sub basin assessments and plans, using the case studies as models or examples. The board would help target the assessments to the right questions before the planning stage

3) Tom will draft a report on sub basin assessment questions and circulate to members for review

V. Proposed outline for Population Identification Report – Michelle McClure

Members listed in bold type next to sections will begin writing before the next meeting, starting with the Snake River and Upper Columbia Chinook ESU's.

1) Motivation/Intro/Focus- **Dave Johnson, Fred Utter, Michelle McClure**
Section will also include a section on diversity and how ESUs were defined

2) General Approach- **Rich Carmichael, Fred Utter, Paul Spruell, Michelle McClure**

A) Sequence of approach – defining subareas, and working within them
B) Approach to defining sub areas
C) Methods of analyses/comparisons within sub areas
D) Description of data types / Justification of use
-Includes relative merits of data types and confidence
E) Population identification confidence- definitions of high and low

3) ESU Setup- **Phil Howell**

Including boundaries and stream list and life history pattern summary

4) Data Rich Areas

A) Data types – Specific Methods. Rich Carmichael will contribute Grande Ronde support to Snake River ESU sections of data types 2 through 5.

1)Genetics- **Sub group**
Including related information (outplants, % hatchery spawners)
2) Life History – **NWFSC team**
Including spawn time, run time, and juvenile migration time
3) Morphology - **NWFSC team**
Including length at age and age structure
4) Demographic correlations- **Tom Cooney, Dave Johnson** (UCR) **NWFSC team** (SR)
5) Geographic distance/dispersal curve/straying – **NWFSC team**
6) Stream Order/Basin size- **Phil Howell**
7) Historic Escapement/Capacity- **Tom Cooney, Dave Johnson** (UCR) **Rich Carmichael, Charlie Petrosky, Pete Hassemer** (SR) Order of magnitude estimate

B) Results- High Confidence population definitions- **Subarea subgroups**
1) Sub Areas
2) Within Sub areas

5) Using data-rich situations to develop data poor population identification methods
A) Geographic distance / Dispersal curve
B) Geographic distance vs. Genetic distance
C) Basin size / Spawning areas
D) Landscape correlates

6) Applying model to data-poor situations
A) Methods
B) Results

7) Comparison with hypothesized historical population structure
A) Devising historical structure
B) Major points of similarity and difference

8) Conclusion/Discussion/Applications
Including recommendations for how to use the document, and outlining needs for further information

VI. Standardization of Snake River target streams See appendix at end of minutes for a list of streams or reaches that will be evaluated for presence of independent populations (note that we'll add additional if necessary).

VII. Tasks

1) The next meeting will be held on the **15th and 16th of April in Portland, OR**. Start time is **10:00 am**.

2) The NWFSC team will map the Idaho spawning area data and forward the map to Pete Hassemer and Charlie Petrosky for double-checking
3) The NWFSC team will produce a straying and dispersal curve summary and distribute to all population identification subgroups for use in writing their sections

Snake River Population Identification Target Streams/Reaches

Tucannon River
Asotin Creek
Grande Ronde River
- Wenaha River
  - Butte Creek
  - North Fork
  - South Fork
- Wallowa River
  - Minam River
    - Little Minam River
  - Bear Creek
  - Lostine River
  - Hurricane Creek
  - Upper Wallowa River
- Lookingglass Creek
  - Little Lookingglass Creek
- Indian Creek
- Catherine Creek
- Upper Grande Ronde River
  - Sheep Creek
  - Meadow Creek

Salmon River
- White Bird Creek
- Slate Creek
- Little Salmon River
  - Rapid River
- Bargamin Creek
- Horse Creek
- South Fork Salmon River
  - Poverty Flat
  - Stolle Meadows
  - Secesh River
    - Lake Creek
  - East Fork South Fork
    - Johnson Creek
- Chamberlain Creek
- Middle Fork Salmon River
  - Lower M. Fork (below Indian Cr summers)
  - Upper M. Fork (above Indian Cr springs)
  - Upper Big Creek
  - Lower Big Creek
  - Camas Creek
  - Upper Loon Creek
  - Lower Loon Creek
  - Indian Creek

  - Pistol Creek
  - Rapid River
  - Sulphur Creek
  - Bear Valley Creek
    - Elk Creek
  - Marsh Creek
    - Cape Horn Creek
- Upper Salmon River- mainstem summers
  - Panther Creek
  - North Fork Salmon River
  - Lemhi River
    - Hayden Creek
  - Pahsimeroi River
  - Warm Springs Creek
  - East Fork Salmon River
    - Herd Creek
  - Squaw Creek
  - Thompson Creek
  - Slate Creek
  - Yankee Fork
    - West Fork Yankee Fork
  - Upper Valley Creek
  - Lower Valley Creek
  - Alturas Lake Creek
  - Pole Creek
  - Beaver Creek
  - Smiley Creek
  - Frenchman Creek

Imnaha River
- Big Sheep Creek
  - Lick Creek