# CV 01-00640-RE

## “Auribus teneo lupum”

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# Why is the Spokane Tribe participating in the case?

# The Spokane Reservation is located just upstream from Grand Coulee

- coordinated storage/release of water U.S./Canada
- generation of large amounts of low-cost electricity
- basin-wide flood control responsibilities
- water supply for irrigation of 500,000-plus acres in the CBP
- operating flexibility for FCRPS
- reliability/stability for systems serving the PNW and western U.S.
- support for transmission and secondary sales off system (low rates)
- ✓ lion's share of the burden of meeting needs of ESA-listed (and other) anadromous fish

# Spokane Tribe already knows the devastating loss of anadromous fish

Upper Columbia River salmon/steelhead were once mainstay in the tribal diet and way of life

- GLC eliminated migration of all remaining anadromous fish in 1939

Tribe advocates strategies which incorporate long-term recovery components

- remaining mid/upper Columbia River salmon and steelhead are vital to sustain biodiversity and resilience
- re-establish anadromous fish populations in blocked areas

# GCL operations under ESA 2004 BiOp

Operate to achieve URC flood control elevations by the first week in April

- assume additional flood control responsibilities to improve Snake River flows
- provide as much water as possible for fish (Apr. – June)

Refill by July 4

- shape/pulse water from upstream storage reservoirs
- provide water for summer flows (July – Aug.)
- drawdown Lake Roosevelt to (elevation 1278 – 1280)

plus …

# GCL operations under ESA 2004 BiOp …

Provide incubation/spawning flows for Columbia River fall chinook

- Vernita Bar Agreement

Support fall/winter chum flows below Bonneville

# Operations for ESA-listed fish wreak havoc on the Tribe's lands and cultural resources

Increased erosion, sloughing and land slides

- deep drawdowns in summer
- fluctuating reservoir elevations
- reduced water retention time

Exposure of gravesites, human remains, funeral objects

- National Historic Preservation Act, 16 USC 470; Native American Graves Protection and Repatriation Act, 25 USC 3001; Archeological Resources Protection Act of 1979, 16 USC 470aa; American Indian Religious Freedom Act, 42 USC 1996

# The Spokane, Colville, WDFW and federal agencies have invested substantial resources in establishing Lake Roosevelt's resident fish populations

Resident Fish Substitutions

- mitigation for anadromous fish losses in blocked areas under the Northwest Power and Conservation Council's resident fish substitution program
- resident fisheries on Lake Roosevelt and the Spokane Arm make an estimated $20 million annual contribution to the regional economy.

# Operations for anadromous fish harm resident fish in Lake Roosevelt

- reduced water retention time
- adverse impacts on water quality/quantity
- destruction of aquatic/riparian habitat and shoreline structure
- entrainment of resident fish
- disturbing/flushing toxic sediments through Reservation's waterways

# Operations for anadromous fish threaten tribal investments in economic development

Visitation at Lake Roosevelt National Recreation Area is about 1.3 to 1.5 million people annually

- peak visitation occurring from May to September.

Impacts on resident fisheries, deep reservoir drawdowns and lack of access impact the commercial viability of tribal economic development initiatives

- leverage past investments in fisheries and recreational facilities
- tribal boat launch/marina and casino.

## and the Spokane Tribe's "equitable" interest in the value of Grand Coulee

United States has repeatedly recognized the Tribe's interests and acknowledged need to compensate for Spokanes for lands taken

Settlement legislation passed the House (HR 1797) last year, now before the United States Senate

- compensation for Spokane Tribe proportional to Colville payments
- $5 million cultural repository for human remains, funerary items exposed by GCL operations

# Recap: What does the Spokane Tribe have at stake?

Tribal lands

Gravesites, human remains, funeral items

Water quality and quantity

Resident fish and wildlife

Investments in recreational and shoreline facilities

Equitable interest in the value of GCL

# Avoiding the train wreck: collaboration is the law of the case

## June 10, 2005 Order

- Denied 2005 summer flow subject to collaboration between parties
- Encouraged consensus on summer spill

## Oct. 7, 2005 Order

- Parties must confer and collaborate
- Must be cooperation between parties and all three branches of government

✓ **Collaboration with sovereigns necessary and must occur**

# Oct. 7, 2005 Opinion and Order of Remand

Prepare a new FCRPS BiOp within one year

- complies with the Endangered Species Act
- consistent with May 7th and May 26th, 2005 orders

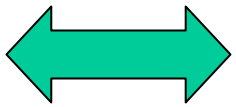
Collaborate with action agencies, states and tribes

- ✓ develop items included in proposed action
- ✓ clarify policy issues and narrow areas of scientific/technical disagreements

File detailed quarterly reports

- parties submit comments followed by status conference
- meet with sovereigns, discuss concerns

**Additional time**



**good faith collaboration**

**+**

**steady progress**

# What is Collaboration?

"a system of decision-making in which people and groups from opposing sides work together to formulate a plan of action that is acceptable to all involved."

- Senator Mike Crapo

# Develop items in the Proposed Action/RPA

Conceptual Framework for the Remand Process including the Jeopardy Analysis

- stepwise process: gap analysis, assessment of mortality factors, identification of offsite mitigation measures, RM&E, contingencies, implementation and governance

Update on the Nature and Scope of the FCRPS Proposed Action

- how collaborative process will develop a proposed action and, if there is a jeopardy determination, a reasonable and prudent alternative

2004 BiOp Remand Collaboration Process

- committee structure and dispute resolution for sovereigns, quarterly progress reports, monthly meetings with non-sovereigns
- analyses and deliberations will be coherent, decisions reached will be accompanied by a rationale and explanation of the supporting evidence.

# Clarify policy issues

- Determine the “gap” between ESUs’ current status and survival/recovery threshold
- Make decisions re acceptable levels of biological effectiveness, risk of extinction in the face of uncertainty
- Establish priorities and resolve conflicts between anadromous fish, other ESA-listed species and resident fish
- Assign relative responsibilities to hydro and other sources of mortality for filling the gap (All-H)
- Evaluate tradeoffs between anadromous fish operations, power system costs/reliability and other FCRPS purposes
- Reconcile FCRPS’ fish operations with adverse impacts cultural resources, other rights and interests

# Reach agreement/narrow areas of disagreement on scientific and technical information

FPC transition

- work with others to ensure FPC functions continue to be provided
- consistent with the 2003 mainstem amendments to the NPCC's Council's fish and wildlife program and language in House Report 109-275

Role of ISAB

- consider results from ISAB's peer-review of NOAA's comprehensive passage model (COMPASS)
- identify other areas where the ISAB might be used
  - ✓ assessment of flow/survival relationships
  - ✓ evaluation of spill/transport issues
- ISAB not determinative on issues, just helpful

# The multicollinearity problem

The inadequacy of the studies used … to investigate survival … does not suggest that … water velocity, temperature, and turbidity … are unimportant to migration and survival of juvenile salmon. However, flow rates, velocity, temperature, and turbidity are closely correlated with one another … and the current data are insufficient to allow delineation of the effects of individual attributes of flow. Understanding the effects of individual attributes of flow … is fundamental to determining the effectiveness of … efforts for increasing survival of juvenile salmon.

- Karl Dreher, Director
  Idaho Department Water Resources

# Multicollinearity …

Multicollinearity was considered … a problem … when it creates singularity in the inverse of the variance-covariance matrix …. Since multicollinearity is [sic] less that the extreme case still has an effect of inflating the variances of the parameters being estimate, we cannot rule [a variable] out … just because its slope parameter was not significant …. But when both moderately collinear pair of factors are able to remain in the model jointly, then it is good evidence that each factor is important to the relation being modeled.

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- Michele DeHart, Manager
  Fish Passage Center

$$\textbf{Inverse} = \left( \frac{\textbf{Adjoint}}{\text{determinant}} \right)$$

Variables may have the wrong sign

- can't distinguish "up" from "down"

Estimates are unstable

- large changes in parameter estimates occur when a handful of data is added/deleted

Results are subject to wide error

- key variables may fail significance tests
- prediction without meaningful hypotheses testing

# “The Columbia River and Safe Passage for Salmon”
# Panel II: Policy and Technical Issues

“a wolf by the ears”

“the one on the bottom is the determinant”

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