Northwest Power and Conservation Council

November 12, 2003

MEMORANDUM

TO: Council Members

FROM: Doug Marker and Mark Fritsch

SUBJECT: Spill Offset Committee Update

Please find attached the agenda for the Spill Offset Committee of November 11th, and the resulting draft overview document (containing principles, potential offset measures and questions). The principles are draft and are currently being debated. Also attached, as an example, is a draft matrix that attempts to demonstrate the consistency of potential measures with the draft offset principles. At your meeting next week Council staff will review this information with the Council.

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DRAFT AGENDA

Ad hoc Spill Offset Committee
Wednesday, November 5, 2003
9:00 to 12:00
CBFWA Conference Room
503 229-0191

1. Discuss draft Offset Principles (Below)

2. Consider and discuss potential offsets in light of principles (See below)

3. Develop science issues and frame questions to potentially be provided to the Science Workgroup

4. Needed actions, schedule, and next meeting if necessary.

D R A F T

OFFSETS TO POTENTIAL SPILL REDUCTION

DISCUSSION

The Northwest Power and Conservation Council's Mainstem Amendment of 2003 calls for an evaluation of summer spill. Based on analyses of research performed in conjunction with the FCRPS 2000 Biological Opinion, spill generally provides the highest passage survival at most mainstem hydro facilities. Therefore, any reduction in spill is presumed to result in some level of reduced survival to listed Snake River Fall Chinook and other stocks migrating through the lower Columbia at the time spill is ceased or reduced. Many believe the resulting increase in juvenile mortality can be compensated through "offsets" designed to enhance survival in one or more life stage. Thus, whatever survival was associated with the spill can potentially be offset through implementation of additional non-spill measures.

OFFSET PRINCIPLES:

1. Offset measures should be designed to provide equal or greater survival, as measured or estimated, than provided by current Biop spill requirements,.
2. Offset measures should be temporally consistent, i.e., as a priority they should provide survival benefits to juveniles or adults of the affected brood years.
3. Offset measures should capture the diversity of the affected stocks, i.e., provide survival benefits to the portion of the outmigration suffering the loss
4. Offset measures should address anticipated losses to each of the affected stocks, whether listed or not.
5. Offset measures for Fall Chinook should be over and above those currently contemplated by the Biop for implementation and whose survival benefits are included in the analysis of jeopardy (Base), now or in the future.
6. Offset measures must be implementable or commited to in writing in the year spill is reduced including provisions for NEPA, Consultation, etc.
7. Offset Measures should be funded or implemented over an above the current fish and wildlife spending caps or programs.

POTETNTIAL OFFSETS – The following have been mentioned a potential offset measures.

1. Increases in predator control measures
    a. Pikeminnow Program
    b. Terns
    c. Cormorants
    d. Walleye
    e. Smallmouth Bass
    f. Marine mammals
2. Changes in operation (e.g. flow augmentation) or system configuration (e.g. RSW's)

3. Commercial harvest reductions
4. Increased law enforcement
5. Habitat improvement
6. Supplementation

A matrix indicating the degree of compliance with each of the above principles is attached.

POTENTIALLY IMPACTED STOCKS

Deschutes River fall Chinook*	Mid-Columbia fall Chinook
Klickitat River fall Chinook	Umatilla River fall Chinook
Yakima River fall Chinook	Marion Drain fall Chinook
Mid-Columbia summer Chinook*	Hanford Reach fall Chinook*
Priest Rapids Hatchery fall Chinook	Snake River fall Chinook**
Upper Columbia steelhead adults	Snake River steelhead adults
Ringold Springs Hatchery fall Chinook	Upper Columbia steelhead adults***

* Denotes an indicator stock for U.S.-Canada PST Chinook management
** Listed as threatened under ESA
*** Listed as endangered under ESA

QUESTIONS FOR CONSIDERATION

1. What type of analysis can be done to determine the level of offset that might be appropriate or necessary? Can quantitative analyses be done or can it only be qualitative?
2. What are the potential risks and benefits of using offset measures to compensate for the impact of reduced or curtailed spill for summer migrants?
3. What species/ESU's would be affected and to what degree?
4. What is the feasibility of implementing the offset measure in 2004? In subsequent years?
5. Would a mix of offset measures reduce the uncertainty and, if so, what measures might be included?
6. Are the measures least cost?

MEASURE	P-1 Equal or Greater Survival	P-2 Temporally Consistent	P-3 Captures Diversity	P-4 Addresses All Stocks	P-5 Appropriateness	P-6 Implementable	P-7 Over and Above	Comments and Considerations
Increase Predator Control Measures								
a. spot control measures	C	C	C	C	C	C		Seem that this measure could be implemented in a timely manner and address site specific trouble spots
b. Pikeminnow Program	?	?	?	?	?	?		On-going and is assumed to be meeting the intentions of the program
c. Caspian Terns	I	I	I	I	I	I		migration (?) vs. run timing differences
d. Cormorants	I	I	I	I	I	I		Not well defined
e. Smallmouth Bass	C	C	C	C	C	PC		Oregon, Washington and Idaho have better opportunity to address this issue
f. Walleye	C	C	C	C	C	PC		Oregon, Washington and Idaho have better opportunity to address this issue
g. Marine Mammals	C	I	I	I	I	I		Possible benefit to adults. Not well defined
Changes in Operation								
a. Flow Augmentation	C	C	C	C	C	C		
b. RSW's	C	C	C	C	C	C		
Manage turbine operations to maximize passage survival	C	C	C	C	C	C		(as opposed to peak operating efficiency) * see footnote
Commercial Harvest Reductions	C	C	C	C	C	?		Not certain this can be implemented in a timely manner
Increased Law Enforcement	PC	PC	PC	PC	C	C		
Habitat Improvements								
Lower Columbia and Estuary habitat restoration	C	C	C	C	C	C		Several new projects implemented. Investments have been limited in the past. Habitat vital to transitional needs of the salmonids and other species.
Supplementation	C	C	C	C	C	C		

Skalski, J.R., D. Mathur, P.G. Heisey. 2002. Effects of turbine operating efficiency on smolt passage survival. North American Journal of Fisheries Management 22:1193-1200.

"C" = Consistent with the Principle, PC = Partially or Potentially Consistent, I = Inconsistent, ? = don't know or TBD.