

Federal Agencies—Regional or Local Levels — FA

COMMENT FA 01



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
525 NE Oregon Street
PORTLAND, OREGON 97232-2737

F/NWR5

April 11, 2003

Jim Blanchard
Special Projects Officer
US Bureau of Reclamation
PO Box 815
Ephrata, WA 98823-0815

RE: National Marine Fisheries Service's (NOAA Fisheries) Comments on the Banks Lake Drawdown, Draft Environmental Impact Statement.

Dear Mr. Blanchard:

Thank you for the opportunity to comment on the Banks Lake Drawdown, Draft Environmental Impact Statement. This environmental analysis was conducted to evaluate the effect of drafting Banks Lake to elevation 1,560 feet - a 10-foot drawdown. This evaluation was called for in Action 31 in the NOAA Fisheries' 2000 Federal Columbia River Power System (FCRPS) Biological Opinion. Completion of this NEPA analysis provides the information needed to evaluate the environmental effects of operating this project 10 feet from full.

In general, the document was thorough in its analysis. We support the conclusions of the document, although question why the refill of Banks Lake needs to occur in a 10-day period in September. We strongly support the extension of boat ramps and dock facilities to mitigate the recreational impacts of the proposed operation. An extended refill period of the lake to 1,565 feet (greater than 10 days) would assume the ramp improvements have been made. We believe the document could be improved by the following recommendations:

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1. Clearly state early in the document that this operation is being evaluated to increase flows in the lower Columbia River to improve the survival of Endangered Species Act listed Snake River juvenile fall chinook, as well as helping improve the survival of Hanford Reach juvenile fall chinook, which are not listed.

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2. Provide a more complete list of citations which describe the effect of flow on juvenile fall chinook survival.

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3. Include in the economic analysis of the proposed action alternative an evaluation using separate energy replacement costs for the months of August and September instead of assuming a weighted average marginal cost of power for both months. For example, Northwest Power and Conservation Planning Council staff indicate that the average marginal cost of energy in August is about \$40 and average marginal cost of energy in

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September is about \$32.50. Applying these monthly average marginal energy values to the FCRPS energy impacts associated with the proposed action alternative indicates that implementation of the proposed action could result in a net revenue increase to the FCRPS of about \$4 million. Thus we recommend the economic evaluation be redone to reflect the monthly average marginal energy values.

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For your convenience, more specific proposed changes in the document are enclosed. We appreciate the opportunity to comments on the Draft Environmental Impact Statement. If you have any questions on these comments please contact Paul Wagner of my staff at 503-231-2316.

Sincerely,



Brian J. Brown
Assistant Regional Administrator
Hydropower Division

Enclosure

cc: Jim Fodrea, USBR
Lorri Bodi, BPA
Witt Anderson, USACE
Bill Shake, USFWS

**NOAA Fisheries
Comments on the Banks Lake Drawdown, Draft Environmental Impact Statement**

Note: The redline/strikeout format was used to propose edits to the existing text. The page and paragraph location of the text is referenced at the beginning of each paragraph where a change is proposed.

S-1 Purpose and Need.

The purpose of the proposed action is to enhance the probability of meeting flow objectives in the Columbia River at McNary Dam during the juvenile out-migration of ESA-listed anadromous salmonid stocks (specifically Snake River fall chinook salmon) by altering the August drawdown of Banks Lake from elevation 1565 down to elevation 1560. An evaluation of the environmental effects of operating Banks Lake up to 10 feet down from full pool ~~to comply~~ with Action 31 of the Reasonable and Prudent Alternative of the Federal Columbia River Power System of the Reasonable and Prudent Alternative of the Federal Columbia River Power System Biological Opinion, issued by the National Marine Fisheries Service on December 21, 2000.

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The project need is to provide increased flows to improve the survival of ESA-listed salmonid stocks by modifying Banks Lake's operations.

1-1 Purpose and Need.

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2-1 second paragraph under Alternatives Development Process

Banks Lake reservoir ~~has always been~~ is authorized to operate between the full pool elevation of 1570 feet and a minimum elevation of 1545 feet at any time of the year. However, since 1981 the August reservoir elevation of Banks Lake has ranged between 1569.5 feet and 1565 feet. Reclamation has determined that these historic operations of Banks Lake reservoir elevations (between 1570 feet and 1565 feet) constitute the normal August operations. ~~The TMT~~ During the development of the 2000 FCRPS Biological Opinion NMFS (NOAA Fisheries) considered how fish passage could be further optimized by using additional water between elevations 1565 and 1560, which is evaluated in the pProposed Action Alternative.

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3-10 last paragraph of the page under the heading Fish The last sentence of this paragraph is not completed. It is uncertain how much of the paragraph is missing in the printed copy of this document.	08
3-21 National Marine Fisheries Service Banks Lake drawdown is one of several RPA actions recommended by NMFS to improve flows for ESA listed juvenile anadromous migrating fish. In addition to providing physical barriers	09
4-2 No Action Alternative The last sentence in this paragraph is not completed. It is uncertain how much of the paragraph is missing in the printed copy of this document.	10
4-18 Action Alternative National Marine Fisheries Service. —The Banks Lake drawdown would augment flows in August, when the flow objectives at McNary Dam are 200,000 cfs. This flow objective is intended to primarily benefit Snake River fall chinook salmon. The non-listed Hanford Reach fall chinook population would benefit from this operation as well. The Snake River fall chinook juvenile migrations tends to peak at McNary Dam in the second half of mid-July with numbers tapering off through into mid-August. Nearly half of the Snake River fall chinook can be transported from the Snake river collector dams and may not benefit from flow augmentation through the McNary to Bonneville reach of from the Columbia River. However, even barged fish are likely to benefit from flow augmentation from Bonneville Dam to ocean entry.	11
There is some uncertainty surrounding flow augmentation benefits for fish survival. Snake River fall chinook is one species that appears to have a stronger flow survival relationship, although that survival relationship is also influenced by water temperature and turbidity (Giorgi, Miller, and Stevenson 2002; Bilby et al. 2002; Connor et al. (1998); Connor et al. (2000); Connor et al. (2001); Connor et al. (2002); Connor et al. (in pressa); Connor et al. (in pressb)).	12
4-45 Anadromous Fish An action called for in the NMFS BIOP (NMFS 2000)- is flow management was based among other things as a measure to improve the survival of ESA-listed salmon. Maintenance of a flow of 200,000 cfs at on maintaining certain flows at McNary Dam during the July - August period is an objective of this BIOP. This flow target objective is achievable only with water coming from a variety of sources. But during August of many years, the flow objective target is not achievable without utilizing additional water from storage. To supplement flows during August, the action agencies will add water to the river from a number of sources, including (according to the proposed action) Banks Lake. While individually not significant in the overall flow of the Columbia River, the contribution to that flow by Banks Lake water, coupled with water from other-sources, makes it possible to meet flow- objectives targets in a majority large number of years.	13
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4-46 third paragraph under Relationship Between Short -Term Uses and Long-Term Productivity

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The Banks Lake water would be used to augment the flows in August when salmon flow objectives at McNary Dam are less than 200,000 cfs. This flow objective is intended to primarily benefit ESA-listed Snake River fall chinook salmon, although these flows also are likely to benefit the non-listed Hanford Reach fall chinook population. The Snake River fall chinook migration tends to peak in the second half of ~~mid~~-July with numbers tapering off ~~into mid~~-through August. Nearly half of the Snake River fall chinook can be transported from the Snake River collector dams and may not benefit from flow augmentation through the McNary to Bonneville reach of ~~from~~ the Columbia River. However, even barged fish are likely to benefit from flow augmentation from Bonneville Dam to ocean entry. In addition, there is some uncertainty surrounding flow augmentation benefits for fish survival. Snake River fall chinook is one species that appears to have a stronger flow survival relationship, although that survival relationship is also influenced by water temperature and turbidity. It is ~~hoped~~ anticipated that the additional August flow will enhance the survival of listed Snake River fall chinook populations.

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Additional References Cited:

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Connor et al. (1998) - Detection of PIT-Tagged Subyearling Chinook Salmon at a Snake River Dam: Implications for Summer Flow Augmentation (North American Journal of Fisheries Management)

Connor et al. (2000) - Forecasting Survival and Passage of Migratory Juvenile Salmonids (North American Journal of Fisheries Management)

Connor et al. (2001) - Early Life History Attributes and Run Composition of PIT-Tagged Wild Subyearling Chinook Salmon Recaptured after Migrating Downstream Past Lower Granite Dam (Northwest Science)

Connor et al. (2002) - Juvenile Life History of Wild Fall Chinook Salmon in the Snake and Clearwater Rivers (North American Journal of Fisheries Management)

Connor et al. (in pressa) - Migrational Behavior and Seaward Movement of Wild Subyearling Fall Chinook Salmon in the Snake River (North American Journal of Fisheries Management)

Connor et al. (in pressb) - The Influence of Flow and Temperature on Survival of Wild Subyearling Fall Chinook Salmon in the Snake River (North American Journal of Fisheries Management)

COMMENT FA 02



MAR 17 2000

Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

POWER BUSINESS LINE

In reply refer to: PG-5

Mr. Jim Blanchard, Special Projects Officer
U.S. Bureau of Reclamation
32 C Street
P.O. Box 815
Ephrata, WA 98823-0815

Dear Mr. Blanchard:

We are submitting comments that reflect input on your Banks Lake Drawdown Draft Environmental Impact Statement (EIS); this input is from the Bonneville Power Administration's (BPA) Operation Planning and Biological Opinion (BiOp) Implementation staff.

We would like to express our appreciation for your work in support of the Action Agencies and their implementation of the National Marine Fisheries Service 2000 BiOp of the Federal Columbia River Power System.

We have attached two technical pages of detailed comments for you to consider as you prepare the Final EIS. Most of our comments focus on the effects that this operation would have on hydropower generation and power revenues.

Our greatest concern pertains to the rapid refill schedule that is proposed for Banks Lake (September 1- September 10). We request that you consider an alternative refill target date of December 31 in the final EIS. A protracted refill would provide BPA the flexibility to refill Banks Lake during low price periods and light load hours. The economic benefits of refilling during low price periods could mean as much as \$1 million or more. Kristine Barlett, on my staff, has prepared the economic impact comments attached. [Please contact her with questions at (503) 230-3931; email: kibartlett@bpa.gov.]

The Draft EIS was also reviewed by Jim Irish our water quality manager. His comments are also included. We would like you to discuss in the Final EIS the role that Banks Lake might have in implementing the soon-to-be released water quality total maximum daily load (TMDL) for temperature on the Columbia River. The Draft Summary Implementation Strategy for the TMDL has proposed looking at selective warm water withdrawals from Lake Roosevelt to Banks Lake. It may be that the Banks Lake Drawdown and a protracted

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selective warm water refill in the fall may also advance water quality objectives.
[Please contact Jim Irish at (503) 230-5914; email: jtirish@bpa.gov.]

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Thank you for your consideration of our comments.

Sincerely,



Gregory K. Delwiche
Vice President, Generation Supply

Enclosure

General Comments

Economic Consideration of Banks Lake Refill: The accelerated refill schedule, from 1560' to 1565' in 10 days (Sept. 1 – Sept. 10), has the potential to be costly for BPA. There are two reasons that this short refill period is potentially expensive.

The first reason is the amount of water that will be taken out of Grand Coulee to fill 5' in Banks Lake. This movement of water from Lake Roosevelt into Banks Lake will come in the form of foregone sales or purchases – both of which will cost BPA. In order to minimize costs BPA requests the flexibility to refill Banks Lake during periods when energy prices are lowest. Typically the low price periods occur during light load hours (LLH) and weekends but they can occur at other times. If the refill period is restricted to 10 days BPA is forced to refill during a time that might not be economical. If more time were allowed for refill, BPA would then be able to take advantage of the low priced periods and therefore reduce the cost of refill.

The Dow Jones daily firm Mid-C Index for the past 7 years shows a LLH and heavy load hour (HLH) price differential for September ranging from \$3 to \$13 (with the HLH always being higher). If a \$5 price differential is assumed between HLH and LLH and an energy equivalent of the water being pumped into Banks Lake is assumed to be 89,000 MWh, the cost to BPA of not being able to take advantage of lower price periods to move that water into Banks Lake would be approximately \$350,000 (\$450,000 total FCRPS cost including costs allocated to BPA's Slice customers). If a \$10 price differential is assumed the cost increases to \$690,000 (\$890,000 total FCRPS cost including Slice customers allocation).

The second reason why the accelerated refill schedule is potentially costly to BPA is the load increase that occurs from pumping water into Banks Lake. Typically BPA attempts to maximize pumping in the LLH. The reason for this is BPA's system loads are lighter during those hours and the value of electricity tends to be less making it is more economical to pump on LLH as opposed to HLH. Due to the short refill period (10 days) it will be necessary to operate the pumps around the clock in order to keep up with irrigation withdraws *AND* refill 5' into Banks Lake. If more time were allowed to refill the 5' into Banks Lake BPA would be able to shape the pumping into the LLH and weekends and therefore could avoid pumping on the more costly HLH.

Worst case scenario: 5' refill of Banks Lake would be pumped entirely on HLH. This could be caused by either heavy irrigation withdraws and/or pump outages.

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Assuming the same \$5 price differential, as mentioned above, between LLH and HLH and a total pumping load of 33,000 MWh, the inability to shape the pumping load into the LLH would cost BPA approximately \$125,000 (\$165,000 total FCRPS cost including costs allocated to BPA’s Slice customers). If the price differential is increased to \$10 the cost increases to \$250,000 (\$330,000 total FCRPS cost including Slice customers allocation). If more time is allowed for refill there exists the ability to shape the pumping into LLH and therefore avoid this cost.

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Given the assumptions above regarding LLH/HLH price differential, if the two potential cost pieces from above are added together the total cost to BPA from the accelerated refill of Banks Lake can be estimated at approximately \$1,000,000 – more if the differential between HLH and LLH were greater than \$10, less if the differential were smaller than \$10. If more time was allowed for refill this cost could potentially be avoided.

Preferred Drawdown Alternatives: Of the drawdown alternatives examined BPA prefers the late draft alternatives. These alternatives are preferable because they provide additional generation in the second half of the month when streamflows are receding and generation is dropping. Also as the elevation of Banks Lake drops below 1568’, BPA begins to lose the ability to use the pump/generators as generators. Keeping the lake level above this elevation for as long as possible preserves BPA’s ability to generate with these units.

Water Quality Issues at Banks Lake: Assuming that the proposed Temperature TMDL will be put into effect during the time this drawdown is proposed, would the temperature of Banks Lake exceed the loading capacity given for the next downstream dam as allocated within the site potential allowance?

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Would the Low Water/Early draft and Early Draft cause Banks Lake to exceed the temperature requirements as waters of the state under the proposed WADOE Water Quality Standards that are considered for adoption by the state in July 2003? While the current water quality standards include agricultural water supply as a protected use, they do not clarify what level of water quality is needed. Some pollutants can adversely affect the direct use of water for agricultural water supplies without further treatment, particularly for irrigation. Would the low water/early draft and early draft cause the lake to exceed criteria identified as important for agricultural water supplies such as: electrical conductivity, dissolved oxygen, bicarbonate, Total Suspended Solids and pH?

COMMENT FA 03

From: "Patricia E Riley" <periley@usgs.gov>
To: <jblanchard@pn.usbr.gov>
Date: Wed, Mar 5, 2003 10:12AM
Subject: EIS Review

Jim,

USGS has no comments on Draft EIS for the Banks Lake Drawdown.

Thanks.

Trish Riley
U.S. Geological Survey
423 National Center
Reston, VA 20192
703.648.6822

COMMENT FA 04



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

March 7, 2003

Reply To
Attn Of: ECO-088

Ref: 01-026-BOR

Jim Blanchard
Bureau of Reclamation
Ephrata Field Office
P.O. Box 815
Ephrata, Washington 98823


Dear Mr. Blanchard:

The Environmental Protection Agency has received the Draft Environmental Impact Statement (EIS) for the proposed **Banks Lake Drawdown** (CEQ No. 030006) for review in accordance with our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act.

EPA Region 10 has used a screening tool to conduct a limited review of the draft EIS and, based upon the screen, we do not foresee having any environmental objections to the proposed project. Therefore, we will not be conducting a detailed review of the draft EIS.

Should you have any questions, please contact Bill Ryan of my staff at (206) 553-8561.

Sincerely,


Judith Leckrone Lee, Manager
Geographic Implementation Unit