Updated Proposed Action for the FCRPS Biological Opinion Remand

Appendix B: The 19 Bureau of Reclamation Projects in the Remanded FCRPS Biological Opinion

Bureau of Reclamation
Pacific Northwest Region

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ABBREVIATIONS AND ACRONYMS

BA	Biological Assessment
BiOp	Biological Opinion
BPA	Bonneville Power Administration
CFR	Code of Federal Regulations
cfs	cubic feet per second
ESA	Endangered Species Act
FCRPS	Federal Columbia River Power System
kW	kilowatt
M&I	Municipal and industrial
NMFS	National Marine Fisheries Service
NOAA Fisheries	National Oceanic and Atmospheric Administration, formerly known as NMFS
O&M	Operation and routine Maintenance
PA	Proposed Action
Reclamation	Bureau of Reclamation
RPA	Reasonable and Prudent Alternative
Stat.	U.S. Statutes at Large
USFWS	United States Fish and Wildlife Services
USGS	United States Geological Service

INTRODUCTION

This report revises and updates Appendix A of the 1999 Multi-Species BA of the FCRPS which provides descriptions of the Reclamation projects in the Columbia River basin in the states of Washington, Oregon, Idaho and Montana. The Reclamation projects are listed in Table 1-1. A total of 31 Reclamation projects were included in similar lists in the 1999 BA and 2000 BiOp. There are now 19 projects listed. Two projects, Arnold and Crescent Lake Projects on the Deschutes River, were inappropriately included as Reclamation Projects in the 1999 BA and the 2000 BiOp, and separate consultation was completed for ten of the Snake River projects.

As part of the UPA, Reclamation proposes to undertake 19 separate Federal actions in the Columbia River basin involving future operation for 19 Federal Reclamation projects. Reclamation does not coordinate operations between all 19 projects, but rather operates divisions, projects, or groups of projects independently. While not required by the ESA or the ESA regulations, Reclamation has chosen, as a matter of administrative convenience, to consult on the mainstem effects of the operation of the19 projects as part of the UPA for FCRPS consultation.

Reclamation is conducting separate consultations on the tributary effects of the operation of its projects that are within the range of the listed species. This will provide complete ESA coverage for the entire effect of the tributary projects.[1]

ESA section 7 consultations have been completed, are currently underway, or scheduled to begin on all Reclamation projects that affect listed Columbia River salmonids. In principle, the mainstem hydrologic effects of Reclamations tributary operations are intended to be consistent with the hydrologic effects prepared for each individual project consultation. The hydrologic effects calculated at the mouth of the tributary for each individual tributary consultation are assumed to be the hydrologic effects of that project on the mainstem Columbia River for this consultation. Reclamation routed and accumulated the individual tributary effects at key points in the mainstem Snake and Columbia Rivers for the determination of mainstem hydrologic effects displayed in Table 1-2.

Reclamation's approach to consultations has evolved over time for the individual tributary projects. Those tributary consultations have similarities to the analytical framework currently being used in the remanded FCRPS BiOp as note in the in the individual project discussions below.

[1] Reclamation chose to consult on the irrigation operation of the Columbia Basin Project as one of the separate actions in the FCRPS consultation, instead of in a separate consultation.

Table 1-1. Reclamation Projects in Operation in the Columbia River Basin		
Project	**Location**	**Subbasin or Stream**
Upper Columbia River (Upstream of Snake River Confluence)		
Hungry Horse	Western Montana, north of Flathead Lake	South Fork Flat Head River
Bitterroot	Western Montana, south of Missoula	Bitterroot River
Big Flat Unit of the Missoula Valley	Western Montana, north of Missoula	Clark Fork
Frenchtown	Western Montana, north of Missoula	Clark Fork
Dalton Gardens	North Idaho, north of Coeur d'Alene	Spokane (Hayden Lake)
Avondale	North Idaho, north of Coeur d'Alene	Spokane (ground water)
Rathdrum Prairie	North Idaho, northwest of Coeur d'Alene	Spokane (ground water)
Spokane Valley	Eastern Washington, east of Spokane	Spokane (ground water)
Columbia Basin	Central Washington	Columbia River
Chief Joseph Dam	North-central Washington, from Canadian border to Wenatchee	Okanogan and Columbia Rivers
Okanogan	North-central Washington, near Okanogan	Okanogan River
Yakima	Central Washington, near Yakima	Yakima River
Lower Columbia (Downstream of the Snake River Confluence)		
Umatilla	Northeast Oregon	Umatilla and Columbia Rivers
Crooked River	Central Oregon, north of Bend	Crooked River
Deschutes	Central Oregon, north of Bend	Deschutes River
Wapinitia	North-central Oregon, south of The Dalles	Deschutes River
The Dalles	North-central Oregon, near The Dalles	Columbia River
Tualatin	Northwest Oregon, west of Portland	Tualatin River (Willamette River)
Snake River		
Lewiston Orchards	West-central Idaho, near Lewiston	Clearwater River

Update to the tributary consultations

The project consultation status and approach is provided for the following:

- Columbia River tributary projects within the range of the listed species
- Columbia River tributary projects outside the range of the listed species
- Columbia Basin Project
- FCRPS Projects
- Snake River projects

Columbia River tributary projects within the range of listed salmon and steelhead. These projects include the Okanogan Project, Chief Joseph Project, Yakima Project, Umatilla Project, Crooked River Project, Deschutes Project and Wapanitia Project, Lewiston Orchards Project, The Dalles Project, and the Tualatin Project.

Yakima Project. Reclamation prepared a BA in 2000. In this consultation the future effects of the project's irrigation requirements have been included in the environmental baseline so the primary effects are due to discretionary flood control operations. Flood control operations in the Yakima basin are informal and discretionary and not subject to Section 7 of the 1944 Flood Control Act. A BiOp from NOAA Fisheries is expected in early 2005.

Umatilla Project. Reclamation reinitiated ESA consultation with NOAA Fisheries and prepared an updated BA on operations of the Umatilla Project in the Umatilla Basin in May of 2003. The BA for the Umatilla project compared operations of the Umatilla River with and without Reclamation operation, i.e., the future effects of Federal irrigation are not in the environmental baseline. This approach is similar to the use of a "reference operation" in the FCRPS remand consultation. A BiOp was received from NOAA Fisheries in April of 2004. Reclamation intends to release a decision statement early in 2005. Consultation on operations of the Phase I and II pump exchange which pumps water from the Columbia River in exchange for water that would have been diverted from the Umatilla River is included in this BiOp. Phase I pumps water from the John Day pool and Phase II pumps water from the McNary pool. Average annual net diversions are shown in table 1.2

Deschutes River Basin Projects. Reclamation consolidated consultations on its Crooked River, Deschutes, and Wapanitia Projects into this one basin consultation. The BA was submitted to USFWS and NOAA Fisheries in 2003. The BA for the Deschutes River compared operations of the Deschutes River with and without Reclamation operations, i.e., the future effects of Federal irrigation were not in the environmental baseline. This approach is similar to the use of a reference operation in the FCRPS remand consultation. A BiOp is expected from NOAA Fisheries in 2004.

Lewiston Orchards. Lewiston Orchards was originally included in the 1998 BA for the Upper Snake projects. However, an opinion was never provided for that project. In April 2001, Reclamation provided a separate BA to NOAA Fisheries specifically on the Lewiston Orchards Project. Consultation was put on hold awaiting completion of the Nez Perce water rights settlement (part of the Snake River Basin Adjudication). The BA for Lewiston Orchards

Irrigation District compared operations with and without Reclamation, i.e. the future effects of Federal irrigation were not in the environmental baseline. This approach is similar to the FCRPS use of a reference operation. A draft BiOp was received from NOAA Fisheries in July 2004.

Tualatin Project. Reclamation initiated consultation in March 2004. A NOAA Fisheries' species list was received which reported that no FCRPS impacted species were present in the project. The Tualatin project consultation has not sufficiently progressed to the point of preparing an effects analysis. The approach to the effects analysis is expected to be similar to the FCRPS use of a reference operation. Effects would occur at or below the confluence of the Willamette and the Columbia Rivers and will not affect the quantitative gaps analysis in the FCRPS BiOp.

Okanogan Project. Reclamation, Bonneville Power Administration (BPA), the Confederated Tribes of the Colville Reservation, and the Okanogan Irrigation District are conducting a study to pursue irrigation efficiencies and fish restoration opportunities. A draft BA is scheduled to be completed in 2004. The Okanogan project consultation has not sufficiently progressed to the point of preparing an effects analysis. This approach to the effects is likely to be similar to the FCRPS use of a reference operation that includes future non-discretionary irrigation operations (i.e. adjusted reference operation). It is anticipated that it will be no net mainstem effects. However, further mainstem consultation may be required.

Chief Joseph Project. This Chief Joseph irrigation project is not part of the Chief Joseph Dam which is operated by the Corps of Engineers. Consultation on the facilities only was initiated and concluded in 2001. As a result screens were added to two of the facilities. Mainstem effects of operations of the project were not included in the 2001 consultation. Two divisions, Foster Creek and Greater Wenatchee pump directly from the Columbia River, and one division, Lake Chelan, pumps from Lake Chelan. The mainstem effects of the Chief Joseph project are consulted on in this BiOp. Irrigation effects of the Chief Joseph project are shown in Table 1.2.

The Dalles Project. This Dalles irrigation project is not part of the The Dalles Dam which is operated by the Corps of Engineers. The Dalles project pumps directly from The Dalles Dam forebay. Informal consultation was initiated and concluded in 1992 on project facilities. The mainstem effects were not part of that consultation. The mainstem effects of operations of The Dalles Project are included in this consultation and shown in Table 1.2.

Summary. The following Table 1.2 accounts for the mainstem effects of the Reclamation projects listed above and are to be incorporated into the FCRPS jeopardy analyses to determine the effect of the proposed action on the listed species:

Table 1.2.- Cumulative Mainstem Effects of Reclamation Projects in cfs (+) depletions, (-) increase

Project	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Chief Joseph Dam Project	2	0	0	0	0	0	10	64	138	190	112	22
∑ Effects at Priest Rapids	2	0	0	0	0	0	10	64	138	190	112	22
Lewiston Orchard	4	2	0	1	3	14	40	27	17	3	5	4
∑ Effects at Lower Granite	4	2	0	1	3	14	40	27	17	3	5	4
Yakima	0	0	0	0	0	0	0	-298	389	-27	0	0
Umatilla Phase II pump exchange	62	0	0	0	0	0	2	8	47	137	146	96
∑ Effects at McNary	68	2	0	1	3	14	52	-199	591	303	263	122
Umatilla Phase I Pump Exchange	32	0	0	0	0	-5	-10	-2	52	19	138	50
Umatilla River	-196	5	186	244	314	-91	27	-51	-129	26	-36	-135
Deschutes	-167	-7	31	100	98	453	163	13	-104	-84	-138	-136
The Dalles	4	0	0	0	0	0	7	27	37	47	38	22
∑ Effects at Bonneville	-259	0	217	345	415	371	239	-212	447	311	165	-77

Columbia River tributary projects outside the range of listed salmon and steelhead. There are no separate consultations needed on these projects that are all located in the blocked areas above Chief Joseph Dam. All their effects on listed salmon and steelhead are mainstem effects, not tributary effects. These include the Bitterroot, Big Flat Unit of the Missoula Valley, and Frenchtown Projects in Montana; and the Dalton Gardens, Avondale, Rathdrum Prairie, and Spokane Valley Projects near Spokane, Washington.

Montana Projects. Consultation is completed with FWS for the Montana Projects. All operations were deemed non-discretional, thus the future irrigation operations were deemed to have no net hydrologic effect on the mainstem Columbia River. This approach is similar to the FCRPS use of a reference operation that includes non-discretionary irrigation operations .

Spokane Area Projects. A No Effects Findings was completed for the Spokane area projects, which with the exception of Dalton Gardens are all groundwater pumping projects. All operations for Dalton Gardens were deemed non-discretionary thus future irrigation operations have no net effect. This results in no hydrologic effect on the mainstem Columbia River due to operations of these projects.

Columbia Basin Project

The proposed operation of the Columbia Basin Project is amended from the 1999 BA to include the implementation of three small water management programs, one of which is ongoing and was place in 2000 BiOp and two that are new. The ongoing Quincy Groundwater Subarea Program involves the use of groundwater artificially stored in the Quincy Basin as a result of project irrigation development and operation. Reclamation issues licenses for the use of project groundwater stored in the Quincy Basin. It does not involve any additional diversions at Grand Coulee Dam and does not impact return flows to the Columbia River since groundwater in the Quincy Basin flows to Potholes Reservoir.

One new program involves the use of conserved project surface water to replace existing deep well pumping in the Odessa aquifer. This does not involve any additional diversions at Grand Coulee. A portion of the project water conserved as a result of efficiency improvements to existing facilities in the East Columbia Basin Irrigation District is used to replace the deep well pumping. The remainder of the conserved water is being reserved for resident fish and wildlife purposes on the Project. The second new program is referred to as the 508-14 program. Reclamation issues licenses for groundwater pumping of Project water supplies in the Franklin County portion of the groundwater area designated in Washington Administrative Code 508-14. This program does not involve any additional diversions of water from the Columbia River and would have minimal effects through reduction of return flows to the Columbia River. The reduction is estimated by the USGS to be equal to or less than about 0.1 cfs, on Columbia River depletions as a result of Columbia Basin Project operations.

Reclamation will continue its investigation of listed salmon and steelhead use of project wasteways (RPA Action 37 from the 2000 BiOp) with final field observations in 2004. A report with recommendations will follow.

Reclamation will also continue its water quality monitoring of surface return flows through 2006 (RPA Action 39 from the 2000 BiOp). A final report will follow.

The total mainstem effect of the Columbia Basin Project operation is captured in the FCRPS BiOp effects analyses. No additional effects need to be analyzed

FCRPS Projects

Hungry Horse Project. Hungry Horse Project, located in northwest Montana is one of the 14 FCRPS projects. Hungry Horse also has a completed FWS BIOP. The total mainstem effect of Hungry Horse operation is captured in the FCRPS BiOp effects analyses. No additional effects need to be analyzed

Grand Coulee Project. Grand Coulee Dam, located in Central Washington, is one of the 14 FCRPS projects. The total mainstem effect of the Columbia Basin Project operation is captured in the FCRPS BiOp effects analyses. No additional effects need to be analyzed

Snake River projects

The 1999 BA included 11 of Reclamations' Snake River Projects as part of the proposed action. During the preparation of the 2000 FCRPS BiOp, Reclamation and NOAA FISHERIES Fisheries agreed to exclude all of those projects, except Lewiston Orchards, from the FCRPS consultation and consult on them in a separate consultation to address anticipated settlements in the SRBA. A BiOp for the operation of the Snake River projects' was completed in 2001; and, the operation of the Snake River projects is not part of this UPA. Consequently, the operational effects of these projects are included in the environmental baseline for the FCRPS consultation. Reclamation has re-initiated consultation on these projects.