



IN REPLY REFER TO:

UCA-1614
ENV-2.00

United States Department of the Interior

BUREAU OF RECLAMATION
Upper Columbia Area Office
1917 Marsh Road
Yakima, Washington 98901-2058

NOV 20 2006

Mr. Derek Sandison
Central Regional Director
State of Washington Department of Ecology
15 West Yakima Avenue, Suite 200
Yakima, WA. 98902Subject: Comments on the Draft Programmatic Environmental Impact Statement for the
Columbia River Water Management Program

Dear Mr. Sandison:

Thank you for the opportunity to comment on the Draft Programmatic Environmental Impact Statement for the Columbia River Water Management Program. Please find enclosed our comments regarding this document.

- 6-1 Our main concern is that the document identifies several immediate actions, but does not distinguish between the Bureau of Reclamation and the State's role in these actions. The State's proposed action is to fund and provide permitting for these projects; Reclamation is physically taking these actions, i.e. the supplemental feed route, drawdown of Lake Roosevelt, etc. The distinction between Ecology and Reclamation's responsibilities needs to be clearly defined.
- 6-2 Additionally, the Odessa Special Study is not an early implementation action, while the Lake Roosevelt drawdown contract is an early action. While both projects involve deliveries of project water to Odessa, they are separate and distinct.
- 6-3 Also ensure that the descriptions of the actions are accurate. For example, on page 2-9, Section 2.1.2.1, the Odessa Special Study is described as including a 30,000 acre feet diversion, which is actually part of the Roosevelt drawdown project.
- 6-4 Finally, the latest Odessa report, dated September 2006, is likely a more appropriate source for the final Environmental Impact Statement than the February 2006 Plan of Study.

Again, thank you for the opportunity to comment.

Sincerely,

Gerald W. Kelso
Area Manager

Enclosure

cc: Ms. Debbie Bird
Superintendent
National Park Service
Lake Roosevelt National Recreation Area
1008 Crest Drive
Coulee Dam, WA 99116
(w/copy of enclosure)

**Comments on the Draft Programmatic Environmental Impact Statement
for the Columbia River Water Management Program**

Reclamation
November, 2006

	Page	Paragraph	Comment
6-5	S-2 & S-3		The description of the proposed actions does not clearly describe the State's versus Reclamation's portion of the proposed actions.
6-6	S-3	S.2.2.1	These actions were requested by the State in the development of the 3-party MOU. Reclamation is cooperating with the State on these actions, but these were State proposals not Reclamation proposals.
6-7	S-3	S.2.2.1	Last sentence should include the Spokane Tribe of Indians in addition to the Confederated Tribes of the Colville Reservation.
6-8	S-3	S. 2.2.2.	Second sentence needs to include East Columbia Basin Irrigation District as well as the South Columbia Basin Irrigation District.
6-9	S-8	S.3.2.1	While the additional drawdowns are within current operations NEPA will have to be done to enter into the contracts and agreements with the State. As part of that process potential impacts will need to be addressed.
6-10	S-8	S.3.2.1	1 st paragraph, 2 nd sentence: Delete the words "Reclamation has determined that the ..." and replace as follows: "Drawdowns of the lake are within normal operations of the reservoir. National Environmental Policy Act (NEPA) compliance will be completed by Reclamation on Federal actions."
6-11			There is an incorrect assumption that there will be expansion of irrigated agriculture.
6-12	S-9	S.3.2.2	The proposed alternative feed route would not result in a change in cropping patterns or new irrigation in the South Columbia Basin Irrigation District. The amount of feed to Potholes reservoirs and deliveries to the South District would not change as a result of this action.

6-13	S-9	S.3.2.2	1st paragraph, next to last sentence. Change to read as follows: "The supplemental feed route is intended to provide a more reliable water supply to the South Columbia Basin Irrigation District. Mitigation/enhancement measures would be developed in Reclamation's NEPA for the project."
6-14	1-1		3 rd paragraph, next to last sentence. Delete "Reclamation has determined that the Lake Roosevelt drawdown does not require NEPA documentation because such " and change to read "Although drawdowns were included in the original authorization for the project, Reclamation will do NEPA on any Federal action for use of water such as water service contracts, trust water rights, etc. Such projects will require Ecology to issue permits and/or . . . SEPA."
6-15	1-3	1.3	The described competition between salmon and irrigation is perhaps overstated. Irrigation in the Columbia Basin consumes about 10% of the total discharge of the system. While conflicts between irrigation and salmon have arisen this text needs to put it into perspective relative to the other factors which have affected salmon populations.
6-16	1-8	1.4	The Odessa Subarea Special Study is not referenced in Section 1.2 as stated in the last sentence.
6-17	2-5		The Yakima Basin Storage Study is a feasibility level study not an appraisal study.
6-18	2-5		3 rd paragraph, last line, change to read: "It is estimated that a feasibility study and EIS would require three years for completion."
6-19	2-5		Last paragraph, change to: Reclamation is also involved in the Yakima River Basin Water Storage Feasibility Study. One of the storage alternatives identified in the study is a large reservoir, approximately 30 miles east of Yakima, identified as the Black Rock Reservoir.
6-20	2-8		About 121,000 acres of the Odessa Subarea are located within the authorized boundaries of the Columbia Basin Project.

6-21	2-8		Last sentence in partial paragraph at the top of the page: Should read: "During the Appraisal Assessment analysis Reclamation evaluated Wymer reservoir in conjunction with Bumping Lake Enlargement and the Keechelus-to-Kachess pipeline by filling it with water available from the Yakima River when the flows exceeded current target flows. Later, Reclamation evaluated Wymer with a Pump Exchange from the mouth of the Yakima River and filling Wymer from increased winter flows from Cle Elum reservoir and excess flows in the Yakima River."
6-22	2-8		Last line on page, change "120 acres" to 121,000 acres.
6-23	2-8		"Odessa Subarea" should be changed to "Odessa Ground Water Management Subarea."
6-24	2-8	2.1.2.1	There are 121,000 acres of groundwater irrigated acres within the Special Study area that are located within the Odessa Subarea, not Odessa Subarea acres
6-25	2-9		First line on page, change "230 acres" to 49,000 acres.
6-26	2-9		First bullet, change to read: "Construction of a scaled down version of the East High Canal . . ."
6-27	2-9		2 nd paragraph, 1 st line change "144,000 to 360,000 acre-feet" to "160,000 to 520,000 acre-feet."
6-28	2-9		4 th bullet in second set of bullets, change to read: "Construction of new off-channel reservoirs at Dry Coulee, Rocky Coulee, Black Rock Coulee, Lind Coulee and Lower Crab Creek, all in Grant County."
6-29	2-9		Second paragraph. The range of water supply needed for the alternatives are 160,000 to 520,000 acre-feet. Modification of operations to existing storage facilities may be needed but they are not considered "substantial" modifications.
6-30	2-9		The sentence that starts "Among the storage options under . . ." Is more accurately revised to state "Among the <u>water supply options</u> under consideration . . ." The bulleted list that follows is not limited only to storage options.

6-31	2-9		The first bulleted item, "Diversion of an additional 30,000 acre-feet from reoperation of Lake Roosevelt" is not included in the Odessa Special Study.
6-32	2-9		Fourth bulleted item. Black Rock Coulee should be deleted from the list. It is not a water supply or storage option for the alternatives. It is strictly a reregulating reservoir that is needed for alternatives using the East High. Lower Crab Creek should be added to the bullet.
6-33	2-9		Reclamation's NEPA compliance will be initiated in 2008.
6-34			1 st bullet: Add, "To serve the current groundwater irrigated lands."
6-35			3 rd bullet: Add, "Enlargement and partial extension..."
6-36	2-9		4 th bullet: Add, "north of Interstate 90."
6-37			3 rd paragraph: Change June to September.
6-38	2-11		"Yakima Basin Storage Study" to "Yakima River Basin Water Storage Feasibility Study."
6-39	2-21	2.3	It would be more accurate to indicate that Ecology would not have a role in implementation of the supplemental feed route, but the project may still be implemented by other parties.
6-40	2-23	2.5.1	1 st paragraph, line 2, change to read: "As part of the Memorandum . . . (Section 1.3.1.1), Reclamation will file appropriate water right applications . . ."
6-41			1 st paragraph, line 6, add "Spokane Tribe of Indians" along with the "Confederated Tribes of the Colville Reservation."
6-42	2-24	2.5.1.1	The full 82,500 acre-feet would not be diverted from FDR. Only the 30, 000 acre-feet for the Odessa sub-area would actually be diverted at FDR. The rest of the water would be released from FDR into the river and subsequently diverted at points downstream.
6-43	2-24	2.5.1.1	2 nd paragraph, line 3, change to read: ". . . approximately 40 feet in an average year and as much as 80 feet in a high flow year for flood control space."

6-44	2-27	2.5.2	1 st paragraph, line 3, change to read: "Potholes reservoir is located just south of Moses Lake and has 322,200 acre-feet of active storage and a total of 511,700 acre-feet." 2 nd paragraph, line 11, change "204,000" to "231,000."
6-45			
6-46	2-28	Fig 2.4	Figure should be modified to show Rocky Coulee Wasteway and continuation of the East Low Canal to the south.
6-47	3-3	Table 3-18	The treaties generally reserved fishing rights at usual and accustomed places, but the hunting privilege was reserved for open and unclaimed lands.
6-48	3-7		Reclamation and the Corps of Engineers operate the dams that make up the FCRPS while Bonneville markets the power excess to individual project needs.
6-49	3-7	3.1.2	Paragraph 2, 2 nd sentence should read: "Because of World War II, work on the irrigation system was delayed and the first Project water deliveries were delayed until 1952."
6-50	3-15		The average annual runoff figure reported is as measured at the Dalles rather than at the mouth of the Columbia River.
6-51	3-18	3 rd paragraph	"Flow targets" needs to be replaced with "flow objectives."
6-52	3-19	Table 3-4	All Columbia Basin Project water rights have a pre-1980 priority date. Table note should be rewritten as follows: "The Columbia Basin Project was authorized to irrigate 1,029,000 acres at its completion; currently the project irrigates about 671,000 acres."
6-53			
6-54	3-19	1 st paragraph	Again, replace term "flow targets" with "flow objectives."
6-55	3-20	3.4.1.3	Cold Springs and Haystack reservoirs are located in Oregon.
6-56	3-21		Paragraph 2, line 4, change 621,000 to 671,000.

6-57	3-21	2 nd paragraph	CBP does not use water stored in Banks Lake and Potholes Reservoir only. Might be best to state that the CBP uses water initially stored in Lake Roosevelt and then diverted to Banks Lake and Potholes Reservoir for delivery to CBP lands. Also about 671,000 acres are irrigated not 621,000 acres.
6-58			
6-59	3-23		The 361,000 acre figure apparently applies to lands irrigated that produce a crop, not to all irrigated lands.
6-60	3-23		Paragraph 2, line 1, change "Columbia River Basin Project" to "Columbia Basin Project."
6-61	3-23		Paragraph 2, line 7, change "over 620,000 acres" to "over 671,000 acres that are currently irrigated out of the authorized total of 1,029,000 acres."
6-62	3-23	2 nd paragraph	Should be revised to state "The CBP currently irrigates about 671,000 acres and is authorized to irrigate up to 1,029,000 acres." The 6 th sentence should be deleted. The 7 th sentence is not correct. The Columbia Basin Project uses an average annual 2.65 million acre-feet as measured at the Main Canal during the 2000-2004 period.
6-63			
6-64	3-28		Paragraph 2, line 1, change to read: "Winter/spring spill from Potholes Reservoir, if required, is passed down Lower Crab Creek. Naturally occurring flood water can also be passed down Lower Crab Creek." Delete the entire rest of this paragraph.
6-65	3-29	Table 3-7	In previous studies, rule curves are usually not included in public documents and are considered "sensitive" information. We ask that the State remove this information.
6-66			The discussion in this section is not relevant to the Lake Roosevelt drawdown although that is the section title. This is actually the Odessa Subarea discussion.
6-67	3-37	3.5.3.1	References Reclamation's Odessa Plan of Study (February 2006) to support some of the factual statements about the state of the aquifer which is not a credible source. Ecology must have some technical documents that they can use to support these statements.

6-68	3-46	3.6.1.6	There is a quote relative to water rights and harm that refers to "healthy fish populations." The take provisions apply to actual individuals of the listed species, not to populations. Populations of listed species may not be healthy, but if the activity does not result in the actual harassment to individuals of the species then there is no "take."
6-69	3-46	3.6.1.6	Discussions here seem to mix the concepts of take and jeopardy. Jeopardy is associated only with actions where the federal government funds, carries out, or approves the activity. The take prohibition applies to all actions, but only deals with the actual take of individuals of listed species.
6-70	3-86		There have been a number of surveys in the Crab Creek area, most notably work done by James Chatters, specifically: <u>Survey and Evaluation of Cultural Resources along Crab Creek and Dry Coulee, Grant County, Washington</u> . Office of Public Archaeology Institute for Environmental Studies, University of Washington. January, 1979.
6-71	4-48		Last paragraph, 1 st line. Meaning unclear.
6-72	5-18		Last line of paragraph 3, double check number and date of Drought Relief Act. This was recently re-enacted so it would have a current date and new P.L. number.
6-73	5-20		It would not be physically possible to store the Trust Water Program instream flow component in Banks Lake and then release it in a drought year. The instream flow component was intended to offset any impacts created by the diversions. To the extent the benefits of the releases are insignificant; they are offsetting what must be insignificant impacts from the diversions.
6-74	5-27		The alternate feed routes do not result in increased feed to Potholes. The amount of feed remains the same and there is no change in the relative amount of feed or the relative amount of irrigation runoff/return flow into the reservoir.
6-75	5-27		The Crab Creek feed route would not be longer than the current route. The W-20 and Frenchman Hills routes would be longer but feed would end in mid-May. It seems unlikely that the alternative feed routes would have any affect on water temperatures in the receiving waters.

6-76	5-28		It is unclear how contaminants in Potholes, such as fecal coliform or 2,3,7,8-TCDD could increase as a result of either the Crab Creek alternative or the W-20 proposal. The water to be fed comes from Banks Lake via Billy Clapp no matter which route is used; the routes do not involve activities that would likely increase loading of those contaminants.
6-77	5-29		The supplemental feed routes will not change the storage in Potholes Reservoir.
6-78	5-30		Crab Creek is not a navigable water of the state.
6-79	5-31		The channel can be dry for years at a time and is seldom flowing. This suggests that it is only dewatered during low flow periods, which is in error. The stream seldom supports any fish populations.
6-80	Appendix E		WRIAs, 37, 38, 39 (Yakima Basin), 2nd sentence: Should say: "The goals of the storage study are to provide a more normative flow condition for anadromous fish, a more reliable water supply for proratable irrigation water users, and water for future municipal water needs."
6-81	Appendix E		WRIAs, 37, 38, 39 (Yakima Basin), 3rd sentence: Change to read: "...evaluating at least two alternatives..."

Comment Letter No. 6 – U.S. Dept. of the Interior – Bureau of Reclamation

- 6-1. Clarifying information has been added to Section 2.5.
- 6-2. The Odessa Special Study is not included as an Early Action in the EIS as stated in Section 2.1.2.1. The Odessa Special Study is an example of a type of storage project that could be undertaken as part of the storage component of the Management Program.
- 6-3. The Final EIS text has been revised to remove that option.
- 6-4. Information from the September 2006 report has been incorporated into the Final EIS. It was not available when the Draft EIS was printed.
- 6-5. This has been clarified in Section 2.5. Section S2.2 is a summary section only.
- 6-6. The Final EIS text has been revised to clarify this.
- 6-7. The Final EIS text has been revised to include the Spokane Tribe.
- 6-8. The East Columbia Basin Irrigation District has been added to Section S.2.2.2 and Section 2.5.2.
- 6-9. The Final EIS text has been revised to clarify Reclamation’s NEPA review of the project.
- 6-10. See the response to Comment 6-9.
- 6-11. The Final EIS notes that there is a “potential” for expansion of irrigated agriculture, and it is listed as a potential impact, not an assumption. Because this is a programmatic evaluation, the range of potential impacts is discussed, which may overstate the potential for some impacts. The specific range of impact will be discussed as part of project level evaluations.
- 6-12. Section S.3.2.2 has been revised to clarify that no additional water would be delivered to Potholes Reservoir.
- 6-13. The Final EIS text has been revised.
- 6-14. The Final EIS text has been revised.
- 6-15. The Final EIS text has been revised.
- 6-16. The section number has been corrected to Section 1.1.
- 6-17. See the response to Comment 2-19.
- 6-18. The Final EIS text has been revised.
- 6-19. The Final EIS text has been revised.
- 6-20. The Final EIS text has been revised.

- 6-21. The Final EIS text has been revised.
- 6-22. The Final EIS text has been revised.
- 6-23. The Final EIS text has been revised.
- 6-24. The Final EIS text has been revised.
- 6-25. The Final EIS text has been revised.
- 6-26. The Final EIS text has been revised.
- 6-27. The Final EIS text has been revised.
- 6-28. The Final EIS text has been revised.
- 6-29. The Final EIS text has been revised.
- 6-30. The Final EIS text has been revised.
- 6-31. See the response to Comment 6-3.
- 6-32. The Final EIS text has been revised.
- 6-33. The Final EIS text has been revised.
- 6-34. The Final EIS text has been revised.
- 6-35. The Final EIS text has been revised.
- 6-36. The Final EIS text has been revised.
- 6-37. The Final EIS text has been revised.
- 6-38. The Final EIS text has been revised.
- 6-39. The Final EIS text has been revised..
- 6-40. The Final EIS text has been revised.
- 6-41. The Final EIS text has been revised to include the Spokane Tribe.
- 6-42. The Final EIS text has been revised.
- 6-43. The Final EIS text has been revised.
- 6-44. The Final EIS text has been revised.
- 6-45. The Final EIS text has been revised.

- 6-46. A revised figure 2-4 has been included in the Final EIS.
- 6-47. Table 3-3 has been revised in the Final EIS.
- 6-48. Comment noted. No change to text is needed.
- 6-49. The Final EIS text has been revised.
- 6-50. The text is corrected with the correct location of measurement.
- 6-51. The Final EIS text has been revised.
- 6-52. Table 3-3 has been revised in the Final EIS
- 6-53. The Final EIS text has been revised.
- 6-54. The Final EIS text has been revised.
- 6-55. The Final EIS text has been revised.
- 6-56. The Final EIS text has been revised.
- 6-57. The Final EIS text has been revised.
- 6-58. The Final EIS text has been revised.
- 6-59. The reference to the 361,000 acres was modified.
- 6-60. The Final EIS text has been revised.
- 6-61. The Final EIS text has been revised.
- 6-62. The Final EIS text has been revised.
- 6-63. The Final EIS text has been revised.
- 6-64. The text has been modified as suggested in the comment.
- 6-65. The text has been modified as suggested in the comment.
- 6-66. See the response to Comment 3-26.

Section 3.5 addresses ground water in the affected environment. Some water provided by additional drawdown of Lake Roosevelt may be used to replace ground water withdrawals in the Odessa Subarea. The discussion in Section 3.5.3.1 provides context regarding declining ground water levels in the Odessa Subarea and the need for replacement water provided by Roosevelt drawdown.

- 6-67. The text in section 3.5.3.1 has been revised and additional references have been included to support factual statements about the aquifer. The water quality discussion was rephrased to

exclude factual statements about water quality in the Odessa Subarea from the Odessa Subarea Plan of Study prepared by Reclamation.

- 6-68. Comment noted. The text in Section 3.6.1.6 has been changed to clarify the scope of a "take" under the ESA.
- 6-69. Comment noted. The text in Section 3.6.1.6 has been changed to distinguish "jeopardy" from "take".
- 6-70. Text has been changed to clarify the summary of survey information in Section 3.10.4.2. Generally, DAHP has relied on survey information from 1995 to the present because of the standards to which the surveys were conducted (subsurface testing, reporting standards, quality of maps provided). The sites identified by Chatters in 1978 are included in the count of sites in the vicinity of Crab Creek, although the citation was inadvertently omitted from Chapter 7.
- 6-71. Comment noted. The sentence has been amended.
- 6-72. The Final EIS has been revised to reflect the recent passage of the extension of the Drought Relief Act.
- 6-73. The Final EIS text has been revised to indicate that Trust Water would be stored in Lake Roosevelt.
- 6-74. The text in Section 5.2.1.3 was clarified to indicate that the annual volume of supplemental feed flows does not change, but the timing of the flow through the supplemental feed routes would change. The additional water refers to additional water during the spring without an increase in the annual volume of feed flow that is delivered to Potholes Reservoir.
- 6-75. Section 5.2.1.3 was revised to reflect the fact that the water from the supplemental feed routes is not expected to increase the temperature of the receiving waters because the Crab Creek alternative is not longer than the existing route and the use of the W-20 and Frenchman Hills Route would end in mid-May.
- 6-76. The water flowing from Banks Lake via Billy Clapp Lake would be of the same quality, but as it flows through the supplemental feed route system, it mixes with the water already in the system. If that water contains certain contaminants, then changing the timing of the feed flow may result in more contaminants being picked up as the water flows through the system. In addition, spreading the total volume of feed flow over a longer period (the annual volume of feed flow is not expected to change) decreases the dilution effects from larger volumes of flows through the supplemental feed route(s). This information was added to Section 5.2.1.3 for clarification. Specific information concerning the water quality impacts from the additional feed routes will be evaluated as part of Reclamation's EA on the Supplemental Feed Routes.
- 6-77. The ground water impacts discussion in section 5.2.1.4 was revised to reflect the fact that the supplemental feed routes would not increase the water level of Potholes Reservoir.

- 6-78. Impacts to ground water were revised in section 5.2.1.4 to reflect the fact that the supplemental feed routes would increase the water level of Potholes Reservoir by less than one foot.
- 6-79. The text in the Final EIS has been revised to clarify the status of flows in Crab Creek.
- 6-80. The Final EIS text has been revised.
- 6-81. The Final EIS text has been revised.



United States Department of the Interior

NATIONAL PARK SERVICE
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IN REPLY REFER TO:
L30

November 20, 2006

Derek Sandison
Regional Director
Department of Ecology
15 West Yakima Ave., Suite 200
Yakima WA 98902

Dear Mr. Sandison,

I am writing today in reference to the Draft Programmatic Impact Statement (DEIS) for the Columbia River Water Management Program. Please consider these comments as reflecting the viewpoint of the National Park Service (NPS) on the proposed actions identified under both Early Actions and Management Program Components.

Overall, your understanding of the extent and nature of the authority given to the National Park Service by the Secretary of the Interior to manage Lake Roosevelt National Recreation Area (NRA) is incomplete (3-78). Portions of the shoreline and water surface managed by the NPS include approximately 312 miles of shoreline, 47,438 acres of the 81,389-acre water surface, and 12,936 acres of land, or approximately 60% of the Upper Columbia River and its tributary watersheds. The developed facilities that the NPS manages for the public include 22 boat launch ramp areas, 27 campgrounds, and three concessionaire-operated marinas that provide moorage, boat rental, fuel, supplies, food service, and other services. Visitation to the recreation area has been between 1.3 and 1.5 million for the last several years, and has a significant impact on the economies of Lincoln, Ferry, and Stevens counties. The observation noted in the DEIS that "the recreation area is largely undeveloped" reflects a specific management direction to protect the area's scenic qualities documented in the recreation area's 2001 General Management Plan, not a general lack of interest in or visitation to, Lake Roosevelt NRA. Finally, Title 16 of the United States Code Subchapter One directs the National Park Service to "promote and regulate the use of the Federal areas known as national parks, monuments, and reservations (later amended to include all units of the NPS), which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."



Therefore, we conclude that your DEIS is flawed by the failure of the Responsible Official to consult with and obtain the comments of the NPS as required by WAC 197-11-060 (4). Our comments on specific sections of the DEIS follow.

- 7-2 1. **Proposal and Alternatives.** The impacts from the amount and timing of the additional water drawn from Lake Roosevelt that is proposed under the Early Action proposal are not well characterized. Although lake levels can fluctuate from 1208 to 1290 feet mean sea level during the months of March – May, they remain relatively stable at 1278 to 1290 feet mean sea level for the months of June, July, and August.
- 7-3 2. **Socioeconomics.** The DEIS does not adequately identify or discuss the economic value of the tourism to Lake Roosevelt NRA to the surrounding counties. All three of the marina concession operations, operating under contract with the NPS, would be negatively impacted. Dock systems, including rental slips, could be left high and dry during the busiest time of the year. Since existing rental slips are reserved well in advance, there would be no place for the boats assigned to the affected slips to go. The ability of the concessionaires to make a profit during the relatively short summer season would be negatively impacted, potentially putting these contracts at risk.
- 7-4 3. **Cultural Resources.** Archeological surveys of the NRA below 1290 feet mean sea level have been limited. The NPS considers the archeological sites an important and significant resource and their protection is inherent to the agency's mission. Higher lake levels protect over 200 submerged archeological sites, which could potentially suffer exposure when draw downs make them accessible to looting and damage from vehicles driven illegally on the exposed beaches. These sites are especially vulnerable during the peak visitor season.
- 7-5 4. **Impacts and Mitigation Measures for Early Actions.** As noted above, the impacts from the amount and timing of additional water drawn from Lake Roosevelt that is predicted under the Early Action proposal are not well characterized. An additional draw of one to one and one-half feet of water to elevations as low as 1276.5 mean sea level, will cause as many as 7, or approximately one-third, of our launch ramps to become unusable and is not within the normal range of lake operations for those months and should not be characterized as such. Swim platforms at a number of popular swimming beaches will be beached, and swimmers would be pushed outside the protective log booms. We recently spent nearly \$100,000 of our recreational fee dollars – revenue generated by daily and annual boat launch permits – to retrofit our facilities to be usable at the current summer draw down levels. Funding for additional retrofitting is not available and in some cases it is just not possible to further extend ramps. As noted above, the marina operations at all three of the concession operations operating under contract to the NPS would be adversely impacted. Although the Two Rivers Marina on the Spokane Indian Reservation is not a NPS facility, their launch ramp becomes unusable at 1280 feet mean sea level, pushing hundreds of additional visitors across the Spokane River to the already over-crowded Fort Spokane facilities on the NRA.
- 7-6 5. We also point out that the DEIS fails to identify or discuss impacts to the Spokane Tribe of Indians. The NPS, Colville Confederated Tribes, and the Spokane Tribe of Indians are all signatories to the Lake Roosevelt Cooperative Management Agreement, which requires that

7-6 the parties communicate, coordinate and standardize the management of recreational activities and the protection of the environment in their respective areas to the extent possible.

7-7 Based on our review and identification of these deficiencies, we recommend that the DEIS be rewritten after the Department of Ecology consults with the National Park Service to properly identify the potential impacts to the NRA's recreational, natural, and cultural resources as required by law and policy. Only then can the Deciding Official make a fully informed decision regarding the appropriate management strategy to adequately address this extremely sensitive but important issue. We appreciate this opportunity to comment on the DEIS and look forward to working with you in the future.

Sincerely,

Deborah Bird

Deborah Bird
Superintendent

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Richard Sherwood
Spokane Tribe of Indians
PO Box 100
Wellpinit WA 99040

Ed Wimberly
Lake Roosevelt Vacations Inc.
Box 340
Kettle Falls WA 98141

Comment Letter No. 7 – U.S. Dept. of the Interior – National Park Service

- 7-1. Additional information has been added to Sections 3.1.2 and 3.9.4.1 regarding the National Recreation Area.
- 7-2. Comment noted. Additional information and analysis on the impacts from the amount and timing of additional drawdown will be provided in the Supplemental EIS that Ecology will be preparing on the Lake Roosevelt drawdown.
- 7-3. See the response to Comment 4-25.
- 7-4. These comments are addressed in Sections 3.10.4.1 and 5.1.1.9.
- 7-5. Comment noted. Additional information and analysis on the impacts from the additional drawdown will be provided in the Supplemental EIS that Ecology will be preparing on the Lake Roosevelt drawdown.
- 7-6. Additional information on impacts to Spokane Tribe has been added to the Final EIS. Ecology will continue to coordinate with all parties, including the Spokane Tribe, as the Supplemental EIS is developed. Although it is not anticipated that the drawdowns will require changes to the Lake Roosevelt Cooperative Management Agreement, Ecology will meet with the representatives to coordinate Future Studies for Off Channel Reservoir Proposals.
- 7-7. Comment noted.



Department of Energy

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

Official File

POWER SERVICES

November 16, 2006

In reply refer to: PG/5

Mr. Derek Sandison, Central Regional Director
Washington State Department of Ecology
Central Regional Office
15 W. Yakima Avenue, Suite 200
Yakima, WA 98902-3452

Dear Mr. Sandison:

Thanks for the opportunity to review and comment on the Draft Programmatic Environmental Impact Statement (EIS) for the proposed Columbia River Water Management Program. We have reviewed the draft EIS and offer the following observations and comments.

8-1 As you are aware, the Bonneville Power Administration (BPA) is a federal agency that has a statutory obligation to market and transmit the power generated by federal dams along the Columbia River, known as the Federal Columbia River Power System (FCRPS), while balancing our other responsibilities such as fish and wildlife. We believe it is important to fully understand the impact of activities or programs that could affect our numerous responsibilities regarding the FCRPS before they are implemented. The draft EIS "Chapter 4 Impacts and Mitigation Measures", however, says very little about the power impacts of the proposed Columbia River Water Management Program other than to say that, "diverting water from the Columbia River for storage and use elsewhere might reduce the amount of water available to generate hydropower and support navigation activities."(pg 4-21) We believe this to be understated. Furthermore, the EIS is silent to the fact that lifting (the lowest lift of the four remaining for storage projects is 210 feet) at least one million acre feet would create a winter time load greater than most utilities in the area. The draft EIS is silent as well in regards to the impacts to the regional transmission system

8-2 As the State of Washington moves forward with consideration and development of its proposed Columbia River Water Management Program, we believe that a more in depth assessment of the power impacts of the proposed actions will need to be completed. While the initial Columbia River Initiative had an economic study which looked at the power implications and the potential loss in revenue, that information is now outdated. Any proposed actions under the currently proposed Program should be reviewed with new information regarding the price of power and the replacement or the opportunity cost of power. We are interested in working with the State on future assessments of these costs.



8-3

In addition, we would like to clarify a statement made in the EIS about the duration of the Columbia River Treaty. The EIS states that the Treaty "has a 60-year duration." (p. 3-45). In fact, the Treaty has no termination date. The Treaty allows either Canada or the U.S. the option to terminate the Treaty in 2024 with a 10 years advance notice. If neither party chooses the option, the Treaty can continue in perpetuity without any changes. The discussion of the Treaty is brief, but it is important to correctly describe what happens in 2024.

My staff is available to continue to work with you and your staff as more information becomes available and you move through the consideration process for your proposed Program. I have asked Rob Diffely at (503) 230-4213 or Cindy Custer at (360) 943-5375 to be the points of contact for further discussions on aspects of the Program of interest to BPA.

Sincerely,

Stephen R. Oliver
Vice President, Asset Management

cc:

Mr. Jim Barton, Corps of Engineers
Mr. Pat McGrane, Bureau of Reclamation
Mr. Bill Gray, Bureau of Reclamation
Mr. Dan Hallar, Washington State Department of Ecology

Comment Letter No. 8 – Department of Energy – Bonneville Power Administration

- 8-1. Because no specific storage projects have been proposed under the Management Program, it is not possible to provide detail on impacts to the power or transmission systems. This information will be provided when project level environmental reviews are conducted. See the Master Responses for a Programmatic EIS, and Future Studies for Off Channel Reservoir Proposals. The potential for impacts to power generation are acknowledged in Section 4.1.1.12.

As stated in Section 4.1.1.12, Ecology will continue to coordinate with Bonneville Power Administration and other entities to determine potential impacts associated with proposed projects and will identify appropriate mitigation for any project that could reduce power generation.

- 8-2. As noted in Section 4.1.1.12 Public Services and Utilities, Ecology and the Bureau of Reclamation will “coordinate and negotiate with the Bonneville Power Administration, Columbia River PUDs, and the Corps of Engineers to determine potential impacts and appropriate mitigation.” As noted in response to your Comment 8-1., a more thorough analysis of the impacts on power from the proposed actions will be conducted at the time a specific project arises.
- 8-3. The text of the Final EIS and Table 3-3 have been amended to reflect this comment.



State of Washington
Department of Fish and Wildlife

Mailing Address: 600 Capitol Way N. • Olympia, WA 98501-1091 • (360) 902-2200, TDD (360) 902-2207
Main Office Location: Natural Resources Building • 1111 Washington St. SE • Olympia, WA

November 20, 2006

Derek Sandison
Department of Ecology
15 West Yakima Ave., Suite 200
Yakima, Washington 98902-3452

RE: Comments on DEIS for Columbia River Basin Water Management Program

Dear Mr. Sandison,

9-1 Washington Department of Fish and Wildlife (WDFW) recognizes the importance of the Columbia River Water Management Program in improving instream conditions for fish in the Columbia Basin, and appreciates the opportunity to comment on the Ecology's Draft Programmatic EIS. Ecology's sensitivity to fish and wildlife concerns in the Columbia Basin leads us to hope that further collaboration will provide even better understanding of the costs to fish and wildlife associated with this program. WDFW participation in implementation of this Program continues to be focused on assuring the Program appropriately balances water for instream and out-of-stream uses, as called for in its enabling legislation.

It is gratifying to see that Ecology has incorporated many of WDFW's early recommendations into this document; for example, the inclusion of WDFW's habitat mitigation policy in the appendices indicates acknowledgement of that policy as an important consideration in Program implementation. Throughout this document, and through action in Program implementation, Ecology appears to be moving in the direction of mitigation sequencing (including a preference for in kind, in place, and in time compensation), which WDFW commends.

While the DEIS provides good information about the key benefits of the Program, there are some topic areas that are of particular concern to WDFW.

Prohibition of cross-WRIA transfers is problematic

9-2 WDFW is concerned that the Columbia River Water Bill's prohibition of cross-WRIA transfers will limit the benefits for instream water uses. While we can understand the concern trying to be addressed by this provision, it is also clear that more

Derek Sandison
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9-2 ecosystem benefits can be gained when conservation or acquisition of water occurs far upstream, and the new use occurs far downstream. The longer temporal and spatial distance "new" water travels through the tributaries and mainstem, the more its presence benefits instream needs. In this way, both the needs of fish and water users can be met with the same water. This is one important way this program would be able to meet the dual objectives of water for instream and out-of-stream uses.

Inadequate assessment of indirect effects of program implementation on terrestrial habitats, resident fish, and wildlife; Cumulative effects need more consideration

9-3 In general, the DEIS highlights potentially positive water-related benefits, yet gives only cursory treatment to associated negative impacts to terrestrial wildlife, resident fish, and at-risk habitats. Relatively speaking, the document provides a much better analysis of issues related to aquatic habitats and fish than it does of wildlife and terrestrial habitats. Also, there is far more detail for the direct impacts from early actions, such as water storage, management, and delivery alternatives. Unfortunately, little attempt has been made to quantify the substantial adverse impacts to wildlife and terrestrial habitats that will occur as increased water availability leads to conversion of shrub-steppe and other terrestrial habitats, reduction of open space, and increasing amounts of irrigated land and urban development. Also, wetlands impacts and mitigation are not adequately addressed. Fragmentation of shrub-steppe and other habitats is already extreme in the Columbia Basin and could be exacerbated by this program. The extent to which this program could enable additional conversion of native terrestrial habitats to cropland or wetland habitat is of special concern to WDFW. The indirect and cumulative effects of the interplay among the many independent program components, including changes in land use, changes in cropping patterns, habitat conversion, and general population growth, must be strengthened in this DEIS. Please refer to our more detailed comments, enclosed.

Fish and wildlife-related recreation is missing

9-4 Fish and wildlife-related recreation (fishing, hunting, and viewing) is an important "industry" throughout Eastern Washington, yet consideration of and impacts to these recreational activities are not adequately addressed in the DEIS.

Mitigation for program-related project impacts to fish and wildlife must be integrated into project planning

9-5 Mitigation for the program's cumulative impacts should be planned and funded as an integrated package, to include acquisition, development, restoration and operation, maintenance, and management for the life of the project. Many of the

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9-5 areas potentially inundated or impacted by this program have already been designated as mitigation for earlier storage projects, so future mitigation ratios must be increased significantly to compensate for the successive losses. Mitigation projects should address habitat fragmentation if we expect smaller areas of quality habitat to remain highly productive, and should preserve connectivity between remaining habitats. The key objectives for integrating mitigation planning into project development is to properly estimate total project costs, and to avoid having mitigation issues blindsides stakeholders and agencies as the project proceeds through the permitting process.

Further environmental review must occur for all projects funded through the program

9-6 A programmatic EIS is necessarily general in its assessment of impacts from program-initiated projects; however, it is not always clear from the document that additional, more detailed, environmental review is anticipated for all actions under the program. WDFW suggests the EIS emphasize that projects funded through the Columbia River Water Supply Development Account will be undergoing environmental (i.e. SEPA/NEPA) review on a project-by-project basis, based on individual site merits.

WDFW Preferred Alternatives

Following is a summary of WDFW's preferred alternatives for policy issues presented in the DEIS.

9-7

Policy Issue No.	Title	WDFW's Preferred Alternative
0	Selecting Storage Projects	No preference.

9-8

1	Calculating Net Water Savings from Conservation	Option 2: (incorporating scientific evidence) allows for updating the method to consider the latest information and the specific objectives of the program.
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9-9	2	Funding Criteria for Conservation Projects	WDFW proposes a fourth option that provides for better sharing between needs, as follows: <i>"Net water savings will be managed in the Trust Water Right Program for tributary or mainstem flow enhancement in proportion to public funds expended for conservation/acquisition projects. Where private funding is also used, the proportion of net water savings set aside for flow enhancement from Program conservation and acquisition projects shall not be less than one-third. That proportion of water not held in trust for stream flow enhancement may be used to mitigate for out-of-stream uses authorized by permits that would be issued under the program."</i>
9-10	3	Defining "Acquisition" and "Transfer"	Option 1 (acquisition and transfer means any non-storage project) provides the most flexibility and potential support for the dual goals of the management program.
9-11	4	Conditioning Water Rights on Instream Flows	Option 2 (waive the instream flow rule where permits or transfers shift consumptive demand away from critical flow periods) provides more incentives, the best flexibility, and best supports the dual goals of the program.
9-12	5	Initiating Voluntary Regional Agreements	Option 1 (process VRAs as proposed). Until procedures are refined and implementation tested, Ecology should not "aggressively pursue" additional VRAs.
9-13	6	Processing Voluntary Regional Agreements	Option 1 (Hillis rule) represents the most conservative approach, ensuring consistent application of Hillis' protective measures and offering the best opportunity to improve conditions for fish and wildlife resources.
9-14	7	Defining "No Negative Impact" to Instream Flows of the Columbia and Snake Rivers	WDFW supports a hybrid of options 4C-1 and 4C-4 that excludes withdrawal above the point of water savings, yet allows opportunity for reach benefits over a longer distance downstream. In the absence of modification, Option 1 is preferred.

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9-5	8	Defining the Main Channel and One-Mile Zone	Option 1 (No backwater areas included) is preferred by WDFW. Excluding backwaters is more conservative, allows for better review of individual water management decisions, and offers the best opportunity to protect fish and wildlife resources.
9-6	9	Coordinating VRA Mitigation and Processing New Water Rights	No preference.
9-7	10	Coordinating VRA and Non-VRA Processing	WDFW prefers option 3 (grouped by WRIA) because this provides the best, most expedient opportunity to achieve instream benefits.
9-8	11	Funding Projects Associated with a VRA	No preference.
9-9	12	Inclusion of Exempt Wells in Water Use Inventory	WDFW urges Ecology to include exempt wells in the information system.

Enclosed you will find WDFW's more detailed comments. Please do not hesitate to consult us on fish and wildlife related issues as you work toward the final EIS. WDFW appreciates the opportunity to comment, and pledges our continued commitment to work collaboratively with Ecology to ensure implementation of the Columbia River Basin Water Management Program continues to benefit both instream and out-of-stream needs.

Sincerely,

T. Scott

Teresa Scott
Natural Resource Policy Coordinator
Columbia River Policy Group

ENCLOSURE

Washington Department of Fish and Wildlife
Draft EIS - Columbia River Water Management Program - Detailed Comments

General Areas of Concern

I. Species information and impacts missing from document

- 9-20 A. Treatment of fish and wildlife species and impacts is uneven
- The geographic scope of impacts from the Columbia River Water Management Program (CRWMP) covers a broad range of terrestrial and aquatic habitat types, yet not all associated fish and wildlife species are addressed. A brief narrative was given for each priority fish species that describes their relevance to the CRWMP. Priority wildlife species need more discussion so that their relevance to the CRWMP is made clear.
- 9-21 B. Analysis of impacts to wildlife is lacking for most Wildlife Species of Special Concern
- Wildlife issues received only superficial and sometimes misleading coverage. Most wildlife discussions appear to have been done with limited literature review, little incorporation of science, and no apparent experience with eastern Washington terrestrial habitats. Within the main body of the text, Table 3-17 (pg 3-63) lists 18 federally listed wildlife species and gives their State status. This list is incomplete and fails to recognize many of the species of concern in the program area. Most of the species in Table 3-17 will not be impacted by the CRWMP (i.e., grizzly bears, lynx, and wolves); however, many state and federal priority species that are not listed will likely be impacted. Although a WDFW-provided table was included as an appendix to the DEIS, discussion of how these species are associated with the CRWMP should be provided.
- 9-22 C. The Fish and Wildlife sections do not discuss bivalves (mussels and clams) and lamprey, which are important trophic components of the Columbia River ecosystem.
- 9-23 D. The impact or potential impact of river conditions (especially temperature) on fish migration and fish disease is not discussed.
- 9-24 E. The differentiation between fish stocks that are ocean type versus stream type (i.e. spring chinook and fall chinook) should be described.
- 9-25 F. Impacts of flow fluctuations on nesting success of waterfowl and shorebirds should be discussed.

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II. Other topics missing from document

- A. There is inadequate description of recreational fishing, hunting, and wildlife-related viewing; discussion of impacts to, and mitigation for, these activities is missing. Fish and wildlife related recreation plays a key economic role within the Program's geographic scope. Warmwater and resident trout fisheries, hunting, and viewing could all be affected by various alternatives, not just salmon and steelhead fishing. To demonstrate what's needed, WDFW staff provides the following information relating to the Hawk Creek storage site:

Recreation - Hunting: turkey; mule deer; California quail; ring-necked pheasant; gray partridge

Recreation - Fishing: Hawk Creek and Indian Creek, and potentially Snook Canyon Creek, contain resident native species and non-native fish populations, including brook trout. Some species would likely be negatively impacted by the construction of an impoundment, while others may benefit. The streams are within the bull trout overlay, however, the only bull trout found in the system to-date was at the mouth of Hawk Creek below the natural barrier falls. [The USFWS conducted survey work in Hawk Creek in the late 1990's. Their report may provide more fish presence information.] WDFW annually stocks rainbow trout in Cottonwood Creek, a tributary to Hawk Creek. Stocking on other portions of Hawk Creek was discontinued a number of years ago.

- B. The document lacks references to artificial production ("hatchery") programs.

- C. There appears to be little discussion regarding the justification or need for increased irrigated agriculture, yet this assumption forms the foundation ("Purpose and Need") for the Program. Much of the irrigated agricultural lands within Washington are in Conservation Reserve Programs and many irrigated crops are in such oversupply that there are governmental programs to provide price support or remove lands from production. There appears to be no discussion regarding the economic effect of increased supply on value of existing production.

- D. The document is missing a discussion on impacts to NPDES operational permits for irrigation and mosquito districts. A listing of current NPDES permits is needed, along with their duration and specific provisions. Will conditional changes be needed?

- E. There is very little discussion of fish passage conditions and potential impacts,

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- 9-30 especially if there are plans to modify existing storage or conveyance facilities. Many of these conveyance facilities are natural water bodies that require fish passage.
- 9-31 F. There is no mention of the Hanford National Refuge and Monument *Fifteen-Year Management Plan* and potential conflicts with the *Columbia River Management Act*.
- 9-32 G. There is no mention of the potential positive or negative effects of the Program on shoreline and slope stability at White Bluffs on the Hanford National Refuge and Monument and on tribal burial areas on Columbia River islands.
- 9-33 H. There are no discussions of impacts or mitigation to federal Farm Bill programs, such as CRP, CREP, and EQIP. Pgs. 2-11 discussion of NRCS should be written to encourage more and better participation on behalf of NRCS.
- 9-34 I. The document makes no reference to impacts to oak habitat and associated species. The WRIA 30 storage projects referenced in Appendix E have the potential to impact scrub oak habitat, state-threatened Western Gray Squirrels, and other PHS and sensitive species associated with this habitat type.

III: Lack of Depth of Analysis

A. Inadequate Literature Review and Analysis

- 9-35 In general, the document lacks peer review literature references, especially when there are science discussions. (Examples: pages 3-25, 3-34, 3-36, and 3-62). Review of literature and pertinent Best-Available Science, especially relative to wildlife, was not apparent. Citations in the EIS are largely from very general publications, "gray" literature, and personal communications. Existing published literature was largely ignored. A large body of technical and scientific work has been, and is being, conducted within the program area. Much of this work can be found at:

http://wdfw.wa.gov/science/science_papers.html and
http://wdfw.wa.gov/wlm/research/songbird/shrub_p.htm.

- 9-36 B. Inadequate address of shrub-steppe issues
The summary discusses the potential loss of shrub-steppe but the document

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9-6 does no further justice nor does it quantify the potential direct and indirect loss. The direct loss could come from new footprints of infrastructure, water bodies, and vegetation and habitat changes resulting from increased surface water runoff and elevated groundwater levels. The indirect loss could come from the conversion of shrub-steppe to agricultural land. This lack of information and attention suggests that shrub-steppe and its obligate species are a low priority, yet this is not the case. The document should discuss in further depth the potential impacts, and address how to mitigate for the lost habitat and its obligate species.

9-7 C. Potential Impacts to Wetlands are not quantified

The document identifies where wetlands might be located, but presents no quantified data that would address the potential magnitude of impacts.

9-8 D. Lower Crab Creek Underrepresented

The upper reaches of Crab Creek are discussed, but very little is mentioned of lower Crab Creek and the potential impacts (beneficial or harmful) to the lower reaches. Spawning and rearing fall chinook and summer steelhead have been documented in lower Crab Creek.

IV. Special Topics

9-9 A. Changes in Agriculture and "Water Conservation" Will Have Negative Impacts to Wildlife

Most of the changes described for agriculture will have detrimental impacts to wildlife. The values of agriculture to wildlife largely decrease in the progression from less intensive (dry-land wheat, grain corn, and barley) to more-intensive farming (orchard, vineyard, and potatoes). More intensive agriculture means less feed is available, more chemicals enter the environment, and there is less idled ground. Social tolerance is low regarding wildlife-related crop damage.

9-40 B. Adding More Water to an Arid Ecosystem Not Beneficial to Endemic Plants and Animals

The EIS overstates the idea that adding more water to the uplands will have positive benefits. A large part of the project area is arid shrub-steppe or desert. The CRWMP will increase the amount of water on this landscape. The endemic plants and animals adapted to this xeric environment will not benefit from more water; they will likely be harmed. Another problem is adding water

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9-40 out-of-sync with the natural hydrology of the region. Most precipitation in central Washington occurs outside of the growing season. Adding more water to a desert environment outside the normal period will not benefit locally adapted, endemic species. From experience with the Columbia Basin Irrigation Project we know that this unnatural hydrology promotes invasive-exotic vegetation, wildlife, and noxious weeds. These topics need to be addressed in the DEIS.

9-41 C. Restoration of Disturbed Arid Habitats Will Be Difficult and Costly

These arid habitats are extremely fragile. Areas with disturbed soils or vegetation are difficult to restore. Restoration of any disturbed site will require a significant amount of time and expense. Native habitats adjacent to irrigated agriculture, canals, wetlands, or reservoirs will be impacted by proximity to weed sources, water, excess nutrients, and chemical overspray.

9-42 D. Mitigation Should Include Acquisition

This EIS should identify habitat acquisition, restoration, and maintenance as likely mitigation for impacts associated with this program. Most major water storage projects in the Columbia Basin have relied on acquisition as an important part of mitigation packages for losses associated with their projects.

9-43 E. Supplemental Irrigation Infrastructure around Potholes Will Impact Wildlife

Lincoln County has a large population of migratory mule deer. Conveyance of 30,000 acre-feet of water to the Odessa area would likely impact to deer population survival, and provide further interference to migration and movements. The hundreds of miles of existing canals within the Columbia Basin Irrigation Project kill many deer per year (annual deer losses in some years are estimated at more than 200 animals). Addition of canals warrants a cumulative impact analysis, and channel configurations may need to be redesigned to prevent entrapment of deer and other wildlife.

9-44 F. Increase in Artificial Wetlands May Not Improve Conditions

There has been a tremendous increase in wetland habitats within the existing project area due to existing irrigated agriculture. While these wetlands provide some benefit, new acres of artificial wetland surrounded by invasive exotic vegetation may not improve upon current conditions. Several very large mosquito control districts cover most of the Columbia Basin. These districts aggressively spray wetlands with a variety of insecticides. Potholes Reservoir and Moses Lake have high concentrations of pesticide residues some of which are a byproduct of insecticides used for mosquito control. More artificial

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9-4 wetlands equates to more insecticides used for mosquito control. The DEIS needs to examine how an increase in use of toxic chemicals affect fish and wildlife species.

G. Impacts Relating to Smaller Storage (and other funded) Projects Must Be Addressed

Although we understand that project-specific environmental review will be necessary, we nevertheless believe that impacts that could result from projects funded through the CRWMP are not thoroughly considered in the Draft Programmatic EIS. Some specific comments regarding potential projects in Klickitat County (used as an example) are outlined below.

9-5 The potential for Klickitat County impoundments or other measures in the program to facilitate development of additional irrigated agriculture or industry in the county is not addressed in even a programmatic sense. Even smaller Klickitat County impoundments, and throughout the basin, will destroy some riparian and riverine wetland habitat critical to numerous wildlife species. These impacts to riparian habitat are difficult to mitigate effectively. Specifically, projects that have been referenced in Klickitat County would all have adverse effects on critical deer ranges and migration routes. Impacts would include direct habitat loss due to inundation and indirect losses associated with infrastructure and blocking of migration corridors. Impacts to fish and wildlife from smaller projects funded through this Program need to be addressed.

H. Cumulative Impacts Need More Analysis

9-6 As stated above, we understand that most storage projects will undergo project-specific environmental review. However, smaller habitat changes associated with conservation projects may not gain further environmental review, yet will certainly have cumulative impacts. Also, the CRWMP will facilitate development and changes in land use patterns incrementally over many years. Cumulative impacts will likely be the most significant environmental concern associated with this program, yet analysis of cumulative Program effects is lacking.

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Specific Comments by Paragraph & Page

Summary

- 9-47 S.2.2.1 - Lake Roosevelt drawdown: The nature and mechanism of the drawdown is not clearly described with the language "to divert ... acre-feet from its existing storage right for water in Lake Roosevelt."
- 9-48 S.3.1 - Columbia River Water Management Program: Benefits and impacts of providing more out-of-stream water are mentioned, but there is no mention of any benefits or impacts of flow augmentation.
- Improved water supplies may expand agricultural and municipal development. *Suggest that will replace may in this sentence.*
- 9-49 S.3.1.1 - Storage Component: Most of the bullets are harmful effects. What about beneficial effects? Identify which are harmful and which are beneficial.
- The list of potential impacts needs to more specifically recognize that habitat impacts will also occur away from the storage facility. More water in shallow aquifer associated with a new facility will increase weeds and "artificial habitats." Need to recognize that storage and water conveyance infrastructure can form barriers to migration and movement, and continue to fragment habitats.
- 9-50 S.3.1.1 - Storage Component, Fish, Wildlife & Plants: Please list the type and location of fish passage impediments. Also, the relationship between higher flows and better salmon survival is well established.
- 9-51 S.3.1.2 - Conservation Component, Fish, Wildlife and Plants: First bullet, change "increased stream flows would *might* benefit fish." Not all flow increases, may be beneficial to all fish and wildlife species.
- 9-52 S.3.1.2 - Overly positive list. Conservation in one area will increase development in another. Increased instream flows may increase movements of undesirable fish such as carp. Permanent ponds or artificial wetlands that are out-of-sync with natural hydrology may have limited value.
- 9-53 S.3.1.2 - Need to equate more water rights to more development and more habitat impacts.
- 9-54 S.3.1.3 and S.3.2.2. - List all the potential environmental consequences, not just the primary impacts.

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- 9-55 [S.3.2.1 - Lake Roosevelt Drawdown: The only consideration given to wildlife impacts to nesting waterfowl, which seems very limited. Additional drawdown needs to be treated as a cumulative impact for Lake Roosevelt and other water storage facilities in the program areas.
- 9-56 [S.5 (Paragraph 1) - We appreciate the recognition that expansion of irrigation into shrub-steppe will be an area of controversy. We suggest that this concept be expanded to any commercial, urban, or other agricultural development.
- 9-57 [S.5 (Paragraph 2) - The recognition that acquisition for proposed storage facility will be controversial is accurate and warranted. Mitigation for habitat impacts should also include habitat protection through acquisition, which will also be controversial.

Chapter 1

- 9-58 [1.3.1 - Most of the environmental factors that affect salmonid smolt rearing and migration instream and near dams are well documented in scientific literature. To say that there is "scientific uncertainty" without referring to this is misleading.
- 9-59 [1.3.1.3 - National Research Council Report : (pg 1-6 & 7 and throughout the document). change "Natural National Research Council"
- 9-60 [1.5 - Scoping Process: (pg. 1-9, last paragraph, last sentence and pg. 1-10, 1st sentence, and others): Correct Appendix lettering to be consistent between text, the table of contents, and the appendix headings.

Chapter 2

- 9-61 [2.1 - Description of the Program: The project inventory, demand forecast, and data management systems are much more than administrative support functions. Development of these tools is critical to support decisionmaking relating to water management in the Basin.
- 9-62 [2.1.2.1 - Please be more specific on the "environmental effects" that must be evaluated.
- Re: pump exchange: Discussion of the pump exchange for the Yakima River should include a description of the potential benefits: Keeping cool upper river water in the river - replacing its withdrawal for irrigation use with warmed lower Yakima River water - can either maintain or cool the river, depending on conditions and amounts.

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- 9-63 [Re: Aquifer Storage and Recovery: Groundwater WACs apply. Permits for withdrawal are necessary.
- 9-64 [Re: Odessa Subarea Special Study: Are these acreages correct? 120? And 230?
- 9-65 [2.1.2.2 - 1st paragraph: There are trust program options, such as temporary versus permanent trusts, that should be discussed.
- 9-66 [Re: Infrastructure improvements: It is okay to line canal and ditches PROVIDED they are not natural drainages. Water conservation funding should be prioritized based on savings efficiency in tributary streams.
- 9-67 [Re: On-Farm: Urban landscape irrigation should have similar programs as "On-Farm Conservation and Irrigation Efficiency Improvements."
- 9-68 [Re: Pump Exchanges: The Edison Street pump station is not the only alternative for this pump and pipe site. It should be noted in the document that the 57 cfs from the Columbia River in July and August contradicts the Columbia River Management Act requirements and the National Research Council Report recommendations.
- 9-69 [2.2.8 (Page 2-18) - Defining "No Negative Impact" to Instream Flows of the Columbia and Snake Rivers: The definition of pool is somewhat vague. From section 6.2.7 it appears that the term pool refers to a reservoir, not a stream characteristic. To avoid confusion a different term should be used, or the term pool should be defined.
- 9-70 [2.2.9 (Pg 2-19) - The OHWM is already described in state statute. There is also a federal definition and interpretation for OHWM, as well as a WDFW definition in WAC 220-110.
- 9-71 [2.5.2.1- Crab Creek Route Alternative: There is less risk in creating entrapment of migrating deer and other mammals if canals are constructed with minimal dredging and improved water crossing structures.
- 9-72 [2.5.3.1- CSRIA VRA: In addition to the pump exchanges, off-channel reservoirs, irrigation efficiency projects, ASR projects, it is mentioned that "other measures" are also under consideration. What are "other measures"? Could land transfers to areas more efficiently irrigated with less environmental impact be considered as well as water exchanges? Please be more descriptive for the CSRIA proposal.
- 9-73 [The \$10 per acre-foot per year falls far short of the funding required to restore equivalent flow in the Columbia River at market prices. Even basic assumptions show that the State will not see our initial investments for

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9-73 mitigation expenditures repaid until decades after the new right is issued.

Chapter 3

9-74 3.1.1 - The land use description is too vague. What are the metrics for the various land uses? Please identify the historic, present, and potential shrub-steppe acres within the Project action area.

9-75 3.1.2 - It is misleading to portray all river modifications as beneficial for fish migration or as beneficial to fish and wildlife. In general, river modifications that benefit fish and wildlife originate as mitigation (e.g., fish ladders, flow augmentation) for impacts of other river "benefits."

9-76 Table 3-1 (Page 3-3): Columbia County is upstream of Bonneville Dam. The table is incorrect.

9-77 Figure 3-5 (Page 3-8): Box Canyon and Cowlitz Falls dams were omitted from the map. In addition the Spokane River dams are missing (e.g. Post Falls, Monroe Street, Nine Mile, Long Lake, Upper Falls, and Upriver, Little Falls).

9-78 3.4.1.4 - Flows continue to decline in Mill Creek in the fall months until rain events occur on a regular basis.

9-79 3.4.1.6 - Walla Walla County is not within the Columbia Basin Project area. It is across the Snake River from the project area.

9-80 3.4.1.6 - Please identify how much of this irrigated land was converted from native shrub-steppe, and how much additional shrub-steppe could potentially be lost to new irrigation.

9-81 3.4.2. - Surface Water Quality: Please provide statistics regarding the levels of nutrients and pesticides in streams as a result of land use practices related to the Columbia River Project. We suggest using an appendix for this information if it is a large database. Make a distinction between stream temperature increases attributable to storage reservoirs and to runoff from irrigated agriculture.

9-82 3.4.2.2. Please identify the BOR "right" as a conveyance easement. Also, if there is a written agreement between BOR and the state regarding exceeding pre-construction flows please reference it and include a copy within the Final EIS.

9-83 Re: Supplemental Feed Route: The recognition that both Moses Lake and Potholes Reservoirs have impaired water quality from elevated pesticide and other contaminants is important. A contributing factor to this poor water

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9-83 quality is that these water bodies are part of the largest mosquito control district in the state. The wetlands and shorelines associated with these lakes are routinely sprayed with a variety of insecticides. Any increase in wetlands or shorelines associated with the CRWMP will increase mosquito control efforts, and may further impair water quality. Much of the water eventually ends up back in the Columbia River.

9-84 Table 3-12 (Pg 3-40) "Ecology 2006" is not in the bibliography.

Section 3.7 - Fish, Wildlife, and Plants

Numerous concerns with this section of the document are represented in "General Areas of Concern," above.

9-85 3.7.1.3 - Lacks a WAC reference for PHS. Also, the document does not mention the WDFW PHS Management Recommendations. There are several that relate to the type of habitat impacts expected for this project.

Native shellfish. See comments above. The list is incomplete.

9-86 3.7.1.4 (Pg 3-55): Be consistent. Is it ephemeral or intermittent? They have a different meaning. If different reaches are functionally different, identify which reach is which.

(pg 3-56): What are blue-ribbon trout streams and why are they so productive? How will this project affect the values and functions for those streams?

9-87 3.7.2 - Please be more precise on the amount of shrub-steppe conversion: "over half" is not very precise.

9-88 3.7.2.2 - Odessa Ground Water Management Subarea section and throughout this entire section. "Much of the area"; "numerous"; "Natural spring-fed wetlands are present"...Please provide the metrics.

9-89 3.7.3.1 - What is "free water"? See 2nd paragraph.

9-90 (Pgs. 3-62 & 63, whole section) - Wildlife Habitat: This section is extremely general and is not very well researched or written. These general paragraphs do not add much information to the document. It would be appropriate for this section to focus on priority species and not be so generic. The document cites a very odd list of shrub-steppe dependant species that includes elk and bighorn sheep. This section also inappropriately depends upon "gray" literature without any apparent recognition of the wealth of peer reviewed literature available.

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- 9-91 3.7.3.2 (Pgs. 3-63, 64, 65, whole section) - Federal and State Listed Species: This section is woefully inadequate. WDFW notes that some ideas from earlier comments were inserted, but with very little synthesis and analysis. Just adding the list of >70 species as Appendix I does not help the average reader understand how each species may or may not be effected by this program. Descriptions of the species-of-conservation-concern that are unique to the program area should be provided in this section.
- 9-92 There was a better job done for fish (section 3.7.1) where there is a section for federally listed species, state listed species, and state PHS. There should be a parallel analysis and review conducted for wildlife. Each special status species (state or federal) including candidates, species of concern, or PHS species) needs to be listed and a short description of its relevance to the CRWMP provided (in the same manner as presented for fish).
- 9-93 As written, there is an incomplete table of federally listed species, state listed species are in an appendix, PHS species are not included, and the narrative is limited to a half page of generic text. There is no synthesis of information and how this program may impact these species. More details will come with project specific environmental review, but some synthesis is needed addressing the environmental concerns that need to be scoped in the programmatic EIS. This section should be the heart of section 3.7 Fish, Wildlife, and Plants.
- American Pelicans: State Endangered species.
- 9-94 3.7.3.3 (Pg. 3-65) - These very short descriptions of the various study areas for early actions studies are poorly written and overly general. The few specifics that are included mislead the reader to think that wildlife occurring in the area, and associated concerns, are limited. For example, the three sentence description of the Odessa Ground Water Management Subarea includes a statement about "13 anadromous fish species listed under ESA" and "listed terrestrial species include pygmy rabbits and bald eagles." This gives the impression that concerns about wildlife are limited to pygmy rabbits and bald eagles.
- 9-95 3.8.2.1 (Pg. 3-70 to 3-73 and elsewhere) - Value of goods and services: Fishing, hunting, watchable wildlife, and water based recreational values (monetary and social) have largely been ignored in this section and elsewhere in the document. At the same time it is a major component and goal of current Columbia Basin water management and contributes significantly to the Basin's overall economy.

Chapter 4

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- 9-96 4.0 (pg. 4-1, Paragraph 2) - While it may be true that "on-farm conservation improvements would have limited impact for short periods of time," this assertion does not take into account the cumulative impacts of all single-farm conservation improvements. This program intrinsically encourages single-farm water conservation that is intended to cumulate to a large-scale water savings. The cumulative environmental impacts of these savings need to be examined.
- 9-97 4.1.1 (Pg. 4-2, Paragraph 3) - The idea that a single large storage facility may have less environmental impacts than several smaller facilities is speculative and not supported by facts. Such statements indicate bias toward large storage.
- 9-98 4.1.1.3 (Pgs. 4-5 through 4-8) - Surface Water: There appears to be no acknowledgement that a storage facility will convert a stream to a reservoir. This is a significant change.
- 9-99 4.1.1.5 (Pg. 4-14) - Water Rights, Short Term Impacts: It is unclear how the impacts to water rights are greater for off-channel storage.
- Section 4.1.1.6 - Storage Component - Fish, Wildlife, and Plants
- 9-100 (Pg. 4-15) - The impacts of filling the reservoir are not identified.
- 9-101 (Pg. 4-15) - Short-term Impacts, Fish, 4th bullet: Change to read "Altering the quantity (instream flow levels), flow rate, and quality"
- 9-102 (Pg. 4-16, Paragraph 1) - Short-term impacts to vegetation and habitat may be more significant than portrayed. Disturbance to fragile shrub-steppe may take a lifetime to recover. The idea that impacts would be greatest only in "undisturbed shrub-steppe habitats" is too limiting. Much of the remaining fragmented shrub-steppe has been disturbed in some way. Fire is a common and natural process in shrub-steppe - is habitat that has been disturbed by fire of lower priority? This paragraph states that grazed shrub-steppe has reduced value. Most existing shrub-steppe is grazed. While impacts do occur on poorly managed range, impacts on a well-managed range may be minor or insignificant. Disturbance, whether natural or artificial, is a constant occurrence in shrub-steppe, and recovery from disturbance is a long and slow process.
- 9-103 (Pg. 4-16, Paragraph 4) - Implying that the "addition of water to arid areas may increase plant diversity through alteration of vegetation communities" to balance loss of shrub-steppe is not supported by fact. From experience in the Columbia Basin, much of the vegetation associated with the artificial hydrology is exotic and invasive (Eurasian milfoil, Russian olive, Asian elm, purple loosestrife, phragmites, salt cedar, reed canary grass, yellow iris, and

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- 9-103 many more). Often there are nearly monotypic stands of this undesirable vegetation, having very little wildlife value.
- 9-104 (Pg. 4-17, Paragraph 2, 3) - Need to recognize that wetland dependant gnats are responsible for transmitting Epizootic Hemorrhagic Disease (EHD) disease to white-tailed deer and may limit populations in certain areas; they are not Columbia white-tailed deer, which only occur further down the Columbia River. The statement that no pygmy rabbits occur in the wild is speculative. The current wording implies bias against shrub-steppe protection.
- 9-105 (Pgs. 4-17 and 4-18) - Mitigation: For wildlife, mitigation needs to include habitat acquisition, restoration, and maintenance. For example, with respect to the Hawk Creek site, the proposal to inundate this habitat would represent the largest conversion of the existing habitat since the conversion to agriculture. The comparison must be made between what is left and what will be lost if this reservoir is constructed. The public already has complaints about mule deer damage at Seven Bays, just north of the Hawk Creek drainage. Flooding of such a vast area of habitat would inevitably lead to more wildlife conflicts. The current northernmost location of sharp-tailed grouse would be impacted by the project: Areas of excellent shrub-steppe habitat have been identified as future areas for re-introduction of this State Threatened species. These areas are now within the identified inundation zone, eliminating habitats necessary for implementation of the recovery strategy.
- 9-106 (Pg. 4-18, Paragraph 2) - Again, mitigation for terrestrial impacts needs to include habitat acquisition, habitat restoration, and habitat maintenance. Most major water storage projects have acquired and restored habitats to mitigate for losses. Long-term O&M funding for mitigation properties also needs to be recognized as a "cost of doing business". Omit construction of wildlife structures and nest boxes as a mitigation option - they are recognized as having extremely limited value.
- 9-107 4.1.1.7 - Socioeconomics - (pg. 4-31) Table 4.2 - Fish Element: Mitigating for fish passage (upstream and downstream) is a major concern for dams, especially for those on-channel. Under new large storage, new small storage, and modifications to existing storage, please include the need for fish passage.
- 9-108 (Pgs. 4-18 & 19) - Need to recognize the current value of ecotourism to the project area. This is an important and growing socioeconomic parameter in the program area (e.g., Coulee Corridor, Othello Sandhill Crane Festival, Coulee City Bald Eagle Festival, Audubon birding loop, traditional hunting and fishing recreation).

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- 9-109 4.1.1.8 (Pg. 4-22) - Land and Shoreline Use: This whole section discusses the changes in the landscape that this program will produce. Any or all of these changes (list on 4-22 e.g., conversion of non-irrigated lands to agriculture) will have adverse environmental impacts. These socioeconomic changes are acknowledged here but are not adequately discussed in the sections dealing with plants and wildlife. These socioeconomic changes will likely drive the most significant terrestrial impacts. More study of potential impacts associated with the changes indicated in the list on pg. 4-22 is necessary.
- 9-110 4.1.2.6 - Conservation Component - Fish, Wildlife, and Plants - (Pg. 4-39, Paragraph 3) - Lining canals will create impassible barriers for deer and other wildlife unless mitigation can be engineered. These will cause direct mortality from drowning. Need to recognize the cumulative effects of these and many other types of water conservation projects.
- 9-111 (Pg. 4-39, Paragraph 5) - Increased and dependable instream flows may be good for some species, but one cannot make the leap to the conclusion that permanent and persistent wetlands are more beneficial than temporary or intermittent wetlands. We have no shortage of artificial permanent wetland in the Columbia Basin. Wetlands that occasionally dry up are more productive.
- 9-112 (Pg. 4-40, Paragraph 1) - Dewatered wetland will convert to dry land vegetation, but noxious weeds will initially invade; active management will be necessary to restore permanent and desirable vegetation. Weeds will also be a problem within intensively farmed lands.
- 9-113 4.1.2.13 (Pg. 4-44) - Comparison of Impacts for General Types of Storage Projects, Heading and 1st sentence: Is this a typo? Change "Storage projects" to "Conservation projects".
- 9-114 Section 4.1.3 - VRA Component - (Pg. 4-48, 1st para, sentence 2) - Add to end of sentence to read, "The primary impacts that would be associated with VRAs would be to water rights *and to stream flows outside mandated no-net-loss months.*"
- 9-115 (Pg. 4-49) - Voluntary Regional Agreement Component: As elsewhere throughout the document (page 5-19 several times and in the references), the National Research Council is incorrectly referred to as the "National Resource Council" or its variant, "Natural Research Council."
- 9-116 (Pg. 4-50) - Cumulative Impacts: Incorrectly implies that cumulative impacts were included in previous sections. Not true for wildlife. This section only barely mentions impacts to wildlife.

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Chapter 5

Section 5.1 - Lake Roosevelt Drawdown

- 9-117 [5.1.1.3 (Pg. 5-4) - Surface Water, Long Term Impacts, Heading for second paragraph: Change "Water Quantity" to "Water Quality"
- 9-118 [5.1.1.6 (Pg. 5-9) - Fish, Wildlife, and Plants: Mitigation: Fish: Last paragraph: Change last sentence and add another: "Holding water in the Trust Program and discharging only during drought conditions might result in have a greater influence on benefit to downstream flow and habitat conditions and to those in the lake than an annual release strategy. Other options for use of this water to better leverage benefits to stream flows and fish species (e.g. enhancement of tributary flows and source exchange, for instance) will be explored with resource agencies."
- 9-119 [(Pgs. 5-8 and 5-9) - Fish, Wildlife, and Plants: Again, the National Research Council is incorrectly referred to as the National Resources Council.
- 9-120 [(Pg. 5-8, Paragraph 1) There does not appear to be much analysis on the effect of additional drawdown of Lake Roosevelt. The document seems to indicate that impacts already occur, so a little more impact is not significant. A cumulative impacts analysis should be done. Not sure if it is valid to indicate that more mud flats may be beneficial. Littoral zone subject to this increment of drawdown is likely not a limiting habitat for managed fish in Lake Roosevelt.
- 9-121 [What is the range or total area of horizontal shoreline impacts?
- 9-122 [5.1.2 (Pg. 5-12, Paragraph 5) - Please tell us why no additional studies are planned for impacts to fish and wildlife related to new infrastructure that will supply 30,000 acre-feet of water to the Odessa Subarea.
- 9-123 [5.1.2.6 (Pg. 5-19) - Impacts in Receiving Areas - Fish, Wildlife, and Plants: Long Term Impacts, Fish, 1st paragraph, last sentence: Change and add a sentence. "This relatively insignificant magnitude of flow increase makes the mainstem augmentation from Lake Roosevelt inconsequential with respect to biological resources. Other options for use of this water to better leverage benefits to stream flows and fish species (e.g., enhancement of tributary flows through source exchange, for instance) will also be explored with resource agencies."
- 9-123 [5.1.2.6 (Pgs. 5-19-20) This EIS is inadequate in presenting the potential impacts to wildlife associated with the infrastructure needed to move 30,000 acre-feet of water to this area. The impacts associated with this will be potentially huge if the predicted socioeconomic development is accurate.

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- 9-12 [5.1.2.8 Land and Shoreline Use. There is no mention of the potential loss of shrub-steppe from conversion to agricultural practices. Also, Counties and Cities are not fully planned under GMA ordinances. Their critical habitat ordinances are updated every year (maybe every two?), as a result of the changing natural and anthropogenic environments. If growth is a result of more water, those impacts from that growth should be addressed in this document.
- 9-12 [Section 5.2 - Supplemental Feed Route
- 9-12 [5.2.1.4 (Pg. 5-29) - "Crab Creek is not currently a perennial waterway." Please specify which reach is not perennial? The lower reaches flow year round and support valuable fish resources.
- 9-12 [5.2.1.5 - There is a discussion regarding federal easements rights. It should be made clear that these are only easements, and that the state retains jurisdiction on projects that may affect the bed or flow of the respective stream or waterbody, regardless of the federal easement. In most cases, the federal government does not own the land. Modifications for conveyance purposes do not imply federal jurisdiction or ownership over the respective water body. The easement agreements must be scrutinized and crafted carefully to ensure the state retains jurisdiction. Even if the state sells the land to the federal government, it still retains regulatory jurisdiction over projects that affect the bed or flow of the respective waterbody.
- 9-12 [There is very little meaningful discussion on the potential impacts of cool water to small drainages. This includes the potential for cool groundwater influence.
- 9-12 [5.3 - Voluntary Regional Agreements - (Pg. 5-40): VRAs will result in more water rights being granted. The locations of water use need to be recognized and impacts at those locations evaluated.
- 9-12 [5.5 - Cumulative Impacts: Esquatzel Creek is a natural drainage system that has been modified over decades. Anecdotal information suggests that salmon formerly used this drainage. It currently supports only resident fish stocks because of numerous modifications. An increase in groundwater into the Odessa Subarea is very likely to influence flow in Esquatzel Creek. BOR considers it a wasteway, but WDFW manages the system as a stream. Impacts to this habitat should be addressed.

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Chapter 6

9-130 [This section is poorly formatted. Paragraph numbers are confusing, policy alternatives are not numbered sequentially, and options under each topic are not numbered or otherwise labeled for reference.

Policy Alternative: Selecting Storage Projects

9-131 [No preference.

Policy Alternative: Calculating Net Water Savings from Conservation

9-132 [The second alternative ("Develop and use a methodology incorporating scientific evidence on the benefits of the net water savings to instream flows") might be no different from the first alternative ("Use Guidance-1210 methodology"), but the former allows for updating the method to consider the latest information and the specific objectives of the program.

Policy Alternative: Funding Criteria for Conservation Projects

9-133 [In general, WDFW supports projects that place a priority on water conservation strategies in tributaries because these project provide greater fish benefits. Under this Program, such projects can also improve Columbia River mainstem flows. WDFW also values storage and water conservation strategies that optimize instream flow fish benefits while minimizing impacts on terrestrial species.

9-134 [With respect to this policy alternative, the third alternative ("Funding projects to obtain one-third of the benefit to instream purposes and two-thirds to benefit out-of-stream water allocation") may be the most socially and politically viable of the three alternatives. The second alternative ("Funding projects to benefit only instream flows and water quality") is most consistent with WDFW concerns.

9-135 [However, WDFW recommends that a portion of any/all conserved water should be set aside for stream flow enhancement. Conservation and set-asides are among the limited number of tools available for stream flow enhancement, especially where fish flow deficits from prior out-of-stream allocation already exist. Conserved water should be available for either tributary or mainstem flow enhancement, whichever provides the best fish flow benefit. We acknowledge that private incentives for conservation are also important to the success of this program. To that end, we suggest a compromise fourth policy alternative that provides opportunity for sharing between needs, as follows:

"Net water savings will be managed in the Trust Water Right Program for tributary or mainstem flow enhancement in proportion to public funds expended for conservation/acquisition projects. Where private funding is also

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9-135 [used, the proportion of net water savings set aside for flow enhancement from Program conservation and acquisition projects shall not be less than one-third. That proportion of water not held in trust for stream flow enhancement may be used to mitigate for out-of-stream uses authorized by permits that would be issued under the program."

Policy Alternative: Defining "Acquisition" and "Transfer"

9-136 [The first alternative (acquisition and transfer means any non-storage project) makes the most sense and provides the most flexibility and potential support for the dual goals of the management program. WDFW currently uses the non-storage project approach in flow restoration and it has resulted in significant fish benefits.

Policy Alternative: Conditioning Water Rights on Instream Flows

9-137 [The second option, in which instream flow rule would be waived when/where permits or transfers shift consumptive demand away from critical flow periods, provides more incentives for such transfers, the best flexibility, and thus the opportunity to benefit both fish and people needs. The *overriding consideration of the public interest* (OCPI) would be invoked under this option; doing so has risks and should be used sparingly. A formal adoption of criteria for reliance on OCPI, developed through public rulemaking, would reduce the risk of overuse of OCPI; current safeguards and statutory requirements would not be affected.

Policy Alternative: Initiating Voluntary Regional Agreements

9-138 [VRAs are a new concept with no history of performance and minimal apparent advantages (and some risk, especially during periods outside of "no-flow-impact" months) to stream flows and fish resources. Until implementation procedures have been refined, and the currently-proposed VRA has been tested by time and experience, Ecology should not direct its limited resources toward "aggressively pursuing" additional VRAs.

Policy Alternative: Processing Voluntary Regional Agreements

9-139 [WDFW recommends that Ecology continue to process new water rights applications according to the "Hillis Rule." Under this option, if a VRA meets the current Hillis criteria, then it could be processed ahead of applications that do not meet Hillis criteria. This represents the most conservative approach, ensuring consistent application of Hillis' protective measures and offering the best opportunity to improve conditions for fish and wildlife resources.

Policy Alternative: Defining "No Negative Impact" to Instream Flows of the Columbia and Snake Rivers

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9-140 WDFW recommends a hybrid of options 4C-1 and 4C-4 that excludes withdrawal above the point of water savings to provide protection against reach impacts above that point.

9-141 The first alternative, same pool and downstream (4C-1), is the most consistent with WDFW's current preferred practice for flow protection and tributary enhancement. It provides for an acceptable protection compromise against reach impacts, allows important opportunity for tributary enhancement benefits, and provides opportunity for reach benefits over a longer distance than the other options do. However, excluding withdrawal upstream from the point of savings (as represented in option 4C-4) provides even better fish flow benefits. A hybrid provides the best protection for fish.

Policy Alternative: Defining the Main Channel and One-Mile Zone

9-142 Including or excluding backwaters in the definition ultimately affects what water uses could be included in the streamlined water rights processing of the Voluntary Regional Agreements (VRAs). Backwater areas, and tributary mouths associated with backwater areas, provide important and often unique fish and aquatic wildlife habitat deserving of continued consideration and protection. These backwaters also have a very strong hydraulic and ecological connection with the mainstem. While there are benefits and concerns for each alternative, the first alternative (No backwater areas included) is preferred by WDFW. Excluding backwaters is more conservative, allows for better review of individual water management decisions, and offers the best opportunity to protect fish and wildlife resources. This alternative would reduce the unintended potential for impacts to tributaries.

That said, there is no reason why Ecology should not include backwater areas in their inventory of existing water rights regardless of the option selected. Contrary to the statement in the last paragraph of this section, the need for this inventory to support of the overall Columbia River Water Management Program would still exist.

Policy Alternative: Coordinating VRA Mitigation and Processing New Water Rights

9-143 Although Ecology's choice of preferred alternative will profoundly influence the success of VRA implementation, there is no clear reason for WDFW to prefer one option over the other.

Policy Alternative: Coordinating VRA and Non-VRA Processing

9-144 WDFW prefers the third option, in which Ecology would group all applicants in the Columbia River one-mile corridor with tributary WRIA permitting. This not only helps Ecology find mitigation water, it also makes the most sense in terms of

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9-144 hydraulic and ecological connection with the mainstem, and enhances Ecology's ability to target water conservation and acquisition in tributaries and reaches where fish needs are more critical.

Policy Alternative: Funding Projects Associated with a VRA

9-145 Although Ecology's choice of preferred alternative will profoundly influence the success of VRA implementation, there is no clear reason for WDFW to prefer one option over the other two. WDFW's concern is for the outcome: that mitigation is achieved. How it is funded, at least among the general options proposed in the DEIS, is not a direct concern to WDFW.

Policy Alternative: Inclusion of Exempt Wells in Water Use Inventory

9-146 WDFW strongly recommends the second alternative, to include exempt wells inventory in the information system. We believe that this is consistent with both the intent and spirit of the legislation and that including exempt wells in the information system is necessary in order to provide a clear and accurate picture of water supply, demand, and use. Not including exempt wells in the inventory will result in an incomplete accounting of water use and restrict the effectiveness of the overall water management program in meeting its goals.

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- 9-1. Comment noted.
- 9-2. Comment noted. Transferring water across WRIA boundaries could be permitted with legislative approval. Ecology could seek that approval if warranted by a specific project.
- 9-3. Ecology acknowledges and appreciates your concern regarding potential impacts to shrub-steppe habitat. In response to your comments and others, additional information on shrub-steppe habitat, wildlife, terrestrial habitat, and wetlands has been added to the Final EIS. Additional discussion of potential impacts has been added. The EIS acknowledges that shrub-steppe habitat has been fragmented through past development and that the fragmentation could be exacerbated by additional development in the Columbia River Basin. See also the responses to Comments 1-84 and 1-85.

As noted in responses to your more detailed comments, below, it is not possible to quantify potential impacts to wildlife and terrestrial habitat in a Programmatic EIS because project details are not known. Instead a range of possible impacts is presented. Impacts will be quantified in future project level review of specific projects. It is possible to provide more detailed discussion of impacts for the early actions because more detail is known about the projects.

- 9-4. Additional information on wildlife-related recreation has been added to the Final EIS. See the response to your Comment 9-26.
- 9-5. It is acknowledged that mitigation for the program's cumulative impacts should be identified as early as possible and incorporated into the overall Management Program. Such efforts have begun between Ecology and WDFW, and will continue as program implementation proceeds. This programmatic EIS evaluates the range of impacts that could occur from projects that will be proposed under the Management Program (see the Master Response regarding a Programmatic EIS). As a Programmatic EIS, impacts, and accompanying mitigation measures, are broad and in some cases general in nature. When project level environmental analysis is conducted on specific projects (see the Master Response regarding Future Studies for Off Channel Reservoir Proposals), detailed impacts will be evaluated and specific mitigation measures will be developed. At that time, Ecology will coordinate with WDFW to determine what types of mitigation measures are most appropriate.
- 9-6. Additional information has been provided in Section S.4 regarding the future environmental review that will take place for projects proposed under the Management Program.
- 9-7. Comment noted.
- 9-8. Your preferences regarding the Policy Alternatives are noted. See the revised Chapter 6 in the Final EIS for Ecology's revised Policy Alternatives.

Ecology has elected to propose a rule that would adopt its current GUID-1210

methodology for consumptive use and net water savings calculations. The amount of water that would be available for mitigation of mainstem uses less than or equal to the amount accepted into the Trust Water Rights Program for the secondary reach (below all return flows). See the revised Section 6.2.2 in the Final EIS.

- 9-9. Ecology has worked with the Columbia River Policy Advisory Group and others and will develop funding criteria for screening and ranking conservation and other water supply projects. Ecology proposes the one-third share for instream purposes initially to ensure that measuring and accountability systems are fully implemented and uncertainties associated with management of the trust water rights and new permits are defined and addressed. This approach provides assurance that new permits would not reduce mainstem Columbia River flows. The magnitude of the cost-share will be determined through rulemaking. A significant fraction of the conservation and non-storage projects are expected to originate within tributary basins where instream flow benefits will be the greatest. See the revised Section 6.1.4 in the Final EIS.
- 9-10. Ecology has defined acquisition to include six methods to achieve net water savings. These methods are described in the revised Section 6.2.2 in the Final EIS.
- 9-11. Ecology has elected to continue the application of WAC 173-563 to instream flows. Waiver of the flows would occur only as described in RCW 90.54.020(3)(a) and WAC 173-563-080. Ecology has decided to continue making OCPI determinations on a case-by-case basis.
- 9-12. Ecology has decided it will primarily pursue VRAs when it is approached by applicants. Ecology would more actively organize or match up water users when it benefits the program and is in the public interest.
- 9-13. Ecology has elected to continue processing applications in accordance with the existing WAC 173-152. Applications would be taken “out of line” only when they meet the criteria for expedited process.
- 9-14. Ecology has selected the “Same pool and downstream” alternative. See the revised Section 6.1.9 in the Final EIS.
- 9-15. Ecology has elected to interpret the main channel and one-mile zones described in RCW 90.90 literally. This would not include some backwater areas within tributary rivers. Ecology has delineated the boundary of the one-mile zone based on ordinary high water levels associated with the existing river channel.
- 9-16. Ecology plans to aggressively pursue funding of water supply projects to make mitigation water available for such permits. However, adequate mitigation water may not be available for new water rights associated with a VRA. Ecology may request permission from the applicant to be skipped over if the applicant has not provided enough information on the application.

If state-funded mitigation is unavailable and those applicants earlier in line who require mitigation cannot provide their own, Ecology would allow those earlier in line to

voluntarily step aside for up to two years. If adequate mitigation were not provided within the two-year period, the application would be denied to the extent that mitigation was inadequate. If the earlier applicant declined to step aside, Ecology would process the application and would deny the application if it failed the four-part test under RCW 90.03.290.

- 9-17. See the revised Section 6.2.11 in the Final EIS. Ecology elected to organize applications within the one-mile zone by WRIA. However, when the source of water for permits is a mainstem source such as modification of an upstream storage facility, rather than an acquisition or other project in a tributary stream, Ecology would process applications within the one-mile corridor in priority order.
- 9-18. Ecology has selected the first alternative, which does not distinguish whether the acquisition or conservation project is associated with a VRA. Projects that benefit the Columbia River would be screened and ranked by a Technical Advisory Group (TAG) using criteria to be established by departmental policy or rule.
- 9-19. Ecology has elected to include exempt uses in its information system. This inventory will be phased in and will first include the information available in electronic formats.
- 9-20. The FEIS text has been revised to include additional information regarding priority wildlife species, particularly Sections 3.7.2 and 3.7.3 describing the affected environment and 4.1.1.6, 4.1.2.6, 4.1.3.6 describing the impacts, to expand the discussion of terrestrial wildlife species and impacts. A section specific to priority species has been added to Section 3.7.3 and more detailed descriptions of key species have been included. The Final EIS text includes information from the CCP/EIS for the Hanford Reach, WDFW's Comprehensive Wildlife Conservation Strategy (CWCS) and other additional and relevant documents.
- 9-21. The Final EIS text includes an expanded discussion of potential impacts to wildlife. Refer to responses to Comments 1-84 and 9-20. Table 3-17 provides a comprehensive list of the listed species potentially present in all of the Management Program project area with no emphasis on which species could be impacted (please see Master Response for a Programmatic EIS). Species that will be impacted are discussed in Chapter 4. In response to your comment, federal species of concern have been moved from the appendix into the table to be included in the main body of Section 3.7.
- 9-22. Information on bivalves and lamprey are included in the Final EIS.
- 9-23. Temperature effects on fish migration and fish disease have been included in the Final EIS.
- 9-24. Information on stock differentiation has been added to the Final EIS.
- 9-25. As stated in Section 4.1.1.6, "Increasing the storage of existing facilities may result in changes in vegetation communities and fluctuating water levels that expose less or more rock, vegetation, mudflat, etc. depending on the amount of water released. Long-term rapid fluctuations in water surface levels at facilities and downstream channels could

have impacts on near bank and over bank plants and wildlife. Impacts could include loss of plants or nesting habitat for waterfowl and shorebird species.” Additional text has been added to Section 4.1.1.6 clarify that impacts are not limited to breeding birds, but can occur at other times of the year.

- 9-26. The Final EIS text has been revised to expand the discussion of fish and wildlife related recreation. It is acknowledged that these are important activities throughout the Management Program area.
- 9-27. A general discussion of potential impacts to hatchery programs has been added to Section 4.1.1.6 of the Final EIS. Impacts to hatchery programs will be assessed during project specific environmental review.
- 9-28. The legislature determined that the purpose of the Management Program is to provide improved water supplies for community development and instream flows for fish. The Management Program is intended to provide more secure water rights for existing water uses. Some expansion of agriculture may also occur under the Management Program. An expanded discussion of the economic impacts of increased water supplies is included in the Socioeconomic sections—Sections 4.1.1.7 and 4.2.1.7.
- 9-29. It is not possible to address the need for conditional changes to the NPDES general permits for aquatic mosquito control and irrigation system aquatic weed control at this time, because the changes to irrigation districts are not known. The need for changes to these permits will be evaluated during project specific environmental review of projects. NPDES permits are identified as a type of permit that could be required for components of the Management Program in the Fact Sheet of the Final EIS.
- 9-30. Fish passage conditions are discussed generally in the EIS text, due to the programmatic nature of the evaluation. It is acknowledged that some of the conveyance facilities discussed in the document could provide fish passage. The specific fish passage considerations will be incorporated into subsequent project level evaluations as projects are identified.
- 9-31. The US Fish & Wildlife Service released the *Draft Hanford Reach National Monument Comprehensive Conservation Plan and Environmental Impact Statement (CCP/EIS)* for public comment on December 6, 2006. The CCP/EIS is the first step in planning for the Monument and presents 6 alternatives for its future management. USFWS is holding 4 public meetings on the CCP/EIS in late January and early February 2007, and final comments on the document are due February 23, 2007. The CCP/EIS can be accessed at: <http://www.fws.gov/hanfordreach/documents/draftccp/draft-ccp.pdf>.

Ecology will consider the Hanford Management Plan in future environmental review of projects proposed under the Management Program.

- 9-32. The potential to impact a variety of cultural resources, including burials, is discussed in Section 4.1.1.9.

- 9-33. The Final EIS text has been revised to include a brief discussion of these programs. Ecology will continue to work closely with local conservation groups and the Natural Resource Conservation Service (NRCS) as part of implementing the Management Program. The Conservation Reserve Program is described in Section 3.7.2. Text has been added to Section 4.1.1.6 to highlight coordination with NRCS.
- 9-34. Additional information has been added to Section 3.7.2 regarding the presence of oak habitat and western gray squirrels and to Section 4.1.1.6. The projects recommended for WRIA 30 would undergo project level environmental review when proposed. See the revised Section S.4 regarding future environmental review.
- 9-35. Comment noted. The analysis of existing conditions included many of the references on the web pages listed in your comment and used pertinent best available science. The discussion of existing conditions was developed to the extent that it would be useful in the document on a programmatic level. In response to your comment, additional literature and citations have been incorporated into the Final EIS.
- 9-36. Please refer to the responses to Comments 1-84 and 1-85, the Master Response for a Programmatic EIS and Section S.4 regarding project-specific review. It is acknowledged that implementation of the Management Program could result in direct or indirect habitat losses. It is also acknowledged that shrub-steppe habitat is unique and important to wildlife throughout the region. Ecology will continue to coordinate with WDFW and other wildlife managers to ensure that habitat protection is an important consideration when evaluating potential specific projects.
- 9-37. It is difficult to quantify potential impacts to wetlands prior to identification of specific projects. It is acknowledged, however, that such impacts are a possibility. All project level evaluations will include a discussion of potential impacts to sensitive resources, including wetlands, and will discuss all applicable regulator requirements associated with impacts to these resources.
- 9-38. Impacts to Upper Crab Creek are discussed in connection with the Supplemental Feed Route. That project is not expected to impact Lower Crab Creek. The Lower Crab Creek site is undergoing additional feasibility and environmental review as described in the Master Response regarding Future Studies for Off-Channel Reservoir Proposals.
- 9-39. The Final EIS text has been revised to acknowledge potential negative impacts to wildlife associated with changes in agriculture. Additional project specific impacts will be identified at the time that specific projects are identified.
- 9-40. Comment noted. The intent of the statement regarding additional water to uplands is to acknowledge that vegetation communities in the project area have the potential to change due to proposed elements of the Management Plan; in some cases this will not be a positive effect. It is understood that much of the area is arid shrub-steppe and adding water to these communities would result in a change in the species composition and diversity. In response to your comments, text in Section 4.1.1.6 has been revised to discuss the potential increase in invasive vegetation, wildlife, and noxious weeds due to the altered hydrology. The cumulative impact discussions have been revised to highlight

these concerns.

- 9-41. Comment noted. As stated in Section 3.7.2, remaining shrub-steppe habitats are in need of protection and difficult to restore. Section 3.7.3.1 notes the chemical exposure to wildlife associated with irrigated agriculture.
- 9-42. Habitat acquisition has been added as a potential mitigation measure in Section 4.1.1.6 and in Table 4-2. Ecology understands and anticipates that habitat acquisition will be a part of future storage projects. This has been clarified in the Final EIS.
- 9-43. Comment noted. As stated in Section 5.1.2.6, long-term impacts to mule deer may be increased from current levels if infrastructure such as canals were built to supply water to the Odessa Subarea. This impact, a cumulative impact analysis, and proposed mitigation measures will be analyzed in detail in the NEPA EIS prepared by Reclamation (see Section 2.1.2.1).
- 9-44. Comment noted. The Final EIS text has been revised to reflect this risk. Impacts to wildlife from toxic chemicals would be regulated by existing water quality regulations (i.e., Clean Water Act, Model Toxics Control Act, etc.). Potential impacts will be evaluated during project specific review. Ecology will coordinate with the Mosquito Control Districts to continue to address this issue.
- 9-45. Klickitat County is identified as one of the counties included in the Management Program (Section 3.1) and the discussion of project impacts in the EIS includes Klickitat County. Storage projects that have been proposed for the Klickitat Basin (WRIA 30) as part of the Watershed Planning process are presented in Appendix E of the EIS. It is acknowledged that storage projects could negatively affect riparian and riverine wetland habitat, which can be difficult to effectively mitigate. The Final EIS text has been revised to discuss potential cumulative impacts associated with storage projects. The EIS includes a programmatic evaluation of potential impacts of both large and small storage projects (Chapter 4). As noted in your comment, additional project level review will be conducted for any specific projects proposed in Klickitat County.
- 9-46. Cumulative impacts are described in Sections 4.3 and 5.5. Additional information has been added to these sections for the Final EIS.
- 9-47. Section S.2.2.1 is a summary section. Additional information on the Lake Roosevelt drawdowns is provided in Section 2.5.1.
- 9-48. It is not a forgone conclusion that the implementation of the Management Program will expand agriculture and municipal development. Many of the Management Program components are intended to sustain existing uses and/or protect instream uses.
- 9-49. Section S.3.1.1 is a summary section. Additional information on project impacts is provided in Chapters 4 and 5.
- 9-50. Section S.3.1.1 is a summary section. Additional information on project impacts is provided in Chapters 4 and 5. It is not possible to list the type and location of fish

passage impediments at this time because of the programmatic nature of the Management Program.

- 9-51. The requested change has been made.
- 9-52. Section S.3.1.2 is a summary section. A bullet was added to note impacts of potential impacts to wildlife of expanded irrigation. Additional information on impacts is included in Section 4.1.2.6.
- 9-53. Section 3.1.2 is a summary section. Additional information of conservation projects is provided in Section 4.1.2, including impacts to habitat.
- 9-54. The purpose of a summary section is to summarize the major impacts. As stated in the document, additional impacts are described in Chapters 4 and 5.
- 9-55. Additional impacts to wildlife are described in Section 5.1.2.6 and will be evaluated in more detail in the Supplemental EIS Ecology will prepare for the Lake Roosevelt drawdown.
- 9-56. Other types of development have been added to the paragraph.
- 9-57. Comment noted. See the response to your Comment 9-42.
- 9-58. The statement in Section 1.3.1 regarding uncertainty is a summary of the conclusions from the National Research Council report. See the response to Comment 5-5 regarding stream flows and fish.
- 9-59. This has been corrected throughout the document.
- 9-60. The appendix number in Section 1.5 has been corrected to Appendix C and other appendix numbers have been checked throughout the document.
- 9-61. Comment noted. These components are important to the implementation of the Management Program, but they do not require analysis under SEPA.
- 9-62. Information on improved streamflows and water quality has been added to the summary description. Additional information on the benefits and impacts of the proposed project is being evaluated by Reclamation in a separate study.
- 9-63. The Aquifer Storage and Recovery section is a brief description of a type of project that could be undertaken as part of the Management Program. Specific permits needed would be evaluated during project level environmental review.
- 9-64. The acreage has been corrected.

- 9-65. Comment noted. Ecology will evaluate a range of options for trust programs, as discussed in Appendix D.
- 9-66. Comment noted.
- 9-67. Conservation programs for urban landscape irrigation would be considered under municipal conservation programs.
- 9-68. Comment noted. The Kennewick Irrigation District's proposal for a pump exchange involves use of the Edison Street facility. Reclamation has evaluated another potential location for a pumping facility upstream of Edison Street. The 57 cfs deficit in the Columbia River associated with the proposed project, is a preliminary planning number. It will be recalculated after the irrigation district's existing water rights are recalibrated and opportunities for mitigation have been more fully explored. It is likely that the deficit will be greatly minimized or eliminated in the final proposal.
- 9-69. A definition of pool has been provided in Section 6.1.1.
- 9-70. The ordinary high water mark definition under consideration here would not change the accepted definition of ordinary high water mark. Ecology is considering how far to extend the OHWM relative to the main channel of the Columbia River; whether to extend the OHWM to backwater areas or just to the main channel of the river.
- 9-71. Comment noted.
- 9-72. Details of the CSRIA VRA will be provided in the Implementation Plan that Ecology will develop. The Implementation Plan will be subject to SEPA review.
- 9-73. See the Response to Comment 5-14.
- 9-74. Section 3.1 is an introductory section. Land use is discussed in more detail in Section 3.9 and historic and present shrub steppe habitat is discussed in Section 3.7.
- 9-75. Fish and wildlife habitat was removed from this list.
- 9-76. Table 3-1 has been corrected.
- 9-77. Figure 3-5 was provided by the Bonneville Power Administration and shows major dams on the Columbia system. It is not intended to show all dams.
- 9-78. Section 3.4.1.4 was revised to incorporate the information provided in the comment about the end of the flow decline in Mill Creek.
- 9-79. Blocks 3 and 4 of the Columbia Basin Project are located in Walla Walla County. Their water supply is pumped from the McNary Pool.

- 9-80. No existing information exists on the amount of shrub steppe habitat that was converted to irrigated agriculture by the Columbia Basin Project. However, in comparing the maps of historical and existing shrub steppe habitat (Figures 3-12 and 3-13), it would appear that most of the 671,000 acres irrigated by Phase 1 of the Columbia Basin Project were shrub steppe habitat.
- 9-81. The USGS has studied the occurrence, distribution, and transport of pesticides in agricultural irrigation return flow from four drainage basins in the Columbia Basin Project (Wagner et al. 2006). The study described the land use within each of the four drainage basins and provides a baseline indication of the concentration of pesticides and nutrients in the surface water due to land use practices in the Columbia Basin Project. This information has been summarized in Section 3.4.2; however, statistical correlation between land use and chemical concentrations is not readily available from this study.

Instantaneous temperature measurements were also taken as part of the study. Stream temperature increases attributable to storage reservoirs are briefly discussed in Section 3.4.2. More information can be found in the Temperature TMDL for the Columbia River Basin (US EPA 2002b). The concentration of nutrients present in streams in the Columbia River Basin (includes the Columbia Basin Project) was studied by the USGS as part of the National Water Quality Assessment (NAWQA) Program (Williamson et al. 1998). The study reports concentrations of nutrients in the streams, but does not attempt to distinguish between natural inputs and inputs from land use practices.

It is acknowledged that increased intensity of land uses, including residential as well as agricultural land uses, have been documented as increasing the degradation of water quality. Nutrients from fertilizer use and pesticides have negative effects on aquatic biota, as well as other wildlife. It will be necessary for surface water managers throughout the basin work to implement existing regulations aimed at controlling impacts to surface and ground water bodies as the region continues to develop.

- 9-82. This paragraph was modified at the suggestion of Reclamation. See the response to Comment 6-65.
- 9-83. The operating levels of Moses Lake and Potholes Reservoir would not change with the Supplemental Feed Route. Wetlands and shorelines would not increase on those two water bodies and therefore would not change mosquito control efforts.
- 9-84. The citation has been corrected.
- 9-85. The Final EIS text has been revised to include a new section specific to WDFW priority species and more detailed descriptions of key species. References to PHS data and WDFW PHS Management Recommendations have been added.
- 9-86. The Final EIS has been revised to use consistent terminology.
- 9-87. The Final EIS text has been changed to use “approximately 50 percent” instead of “over half.” The most recent and available scientific literature assessing the loss of native shrub-steppe habitat in the state consistently reports a figure of about 50 percent. This

figure is based on previous mapping studies and a 2000 study by WDFW that mapped remaining habitat using a thematic mapping sensor on the Landsat 5 satellite platform (Jacobsen and Snyder 2000).

- 9-88. Please refer to Master Response for a Programmatic EIS. At this point, details are not available to specifically quantify acreages of wetlands, shrub-steppe habitat, etc.; however, it is acknowledged that habitat losses have occurred because of conversion to agriculture.
- 9-89. The word “free” has been changed to “available” in Section 3.7.3.1 for clarification. Water in shrub-steppe environments is limited due to lack of precipitation and high evapotranspiration rates. The text describes how this lack of available water narrows the number of species present to those that are physiologically adapted to high temperatures and dry climate. Some species must have daily access to water for survival (ungulates, bats, etc.) and others can survive on the water provided in food (sage sparrow, etc.)
- 9-90. Section 3.7.3.1 is intended to provide a general overview of wildlife habitat, habitat elements, and associated wildlife species in the project area; priority species specific to the project area are discussed in the following sections. Section 3.7.3.4 has been revised to describe priority species in greater detail. In response to this comment, additional research of available literature was conducted and new citations have been utilized in Section 3.7.3.1. For the second part of this comment, see the response to Comment 9-20.
- 9-91. See the response to Comment 9-20.
- 9-92. See the response to Comment 9-20. The Final EIS has been revised to provide more synthesis of the potential impacts of the Management Program.
- 9-93. There was no intent to imply that concerns about wildlife are limited to pygmy rabbits and bald eagles. It is acknowledged that concerns about wildlife habitat are comprehensive and address a wide range of species. The descriptions of the various study areas for early actions are meant to refer back to the vegetation communities and habitat types previously described (to avoid repetition) and provide any available information from specific reports on the particular early action study area.
- 9-94. The Final EIS text has been expanded to provide a broader discussion.
- 9-95. Text has been added to section “3.2.2.2 Jobs and Incomes” to describe the value of recreation related to natural-resource amenities in Washington state and in eastern Washington, in particular.
- 9-96. Section 4.0 is the introduction to the section and generally describes the range of impacts associated with different types of storage and conservation projects. Additional information on impacts of conservation projects is discussed in Section 4.2. Cumulative impacts are described in Section 4.3.

- 9-97. The EIS has been revised to suggest that while the affected area for a large storage project may be limited to a single area, that area could have extensive resources.
- 9-98. A discussion of converting streams to reservoirs is contained in the long-term impacts paragraph of Section 4.1.1.3. A separate environmental review would be required of any reservoir proposal. Detailed environmental studies and consultation with agencies would be required.
- 9-99. The text of the Final EIS has been amended to reflect this comment.
- 9-100. Impacts of filling the reservoir on short-term nutrient loading and productivity increases with decomposition of inundated organic material are included in Section 4.1.1.6.
- 9-101. The requested change has been made.
- 9-102. Comment noted. It is acknowledged that specific impacts to shrub-steppe habitat could be locally significant. The potential for impacts to valuable habitat will be considered when evaluating the feasibility of individual projects. Additional site-specific studies would be conducted to more accurately assess these impacts when projects are identified. The Programmatic EIS identifies the range of possible impacts associated with the Management Program. For short-term impacts to vegetation, the greatest level of impact would be the loss of shrub-steppe habitat (Note: the word “undisturbed” has been replaced with “intact” in the Final EIS to reduce confusion with the disturbance caused by fire). The relative value of the habitat is unknown at this time, so a worst case scenario is the upper range of impact (i.e., intact shrub-steppe). The lowest level of impact would be the loss of habitat provided by existing agricultural lands. Refer to the response to Comment 9-36.
- 9-103. The Final EIS text acknowledges that communities will change due to the addition of new water. The Final EIS text has been revised to outline the potentially negative impacts and includes the species noted in your comment.
- 9-104. The comment regarding white-tailed deer is acknowledged. The sentence regarding pygmy rabbits in the wild has been removed from the Final EIS and pygmy rabbits have been added to the group of listed shrub-steppe-dependent-species that would incur an increased risk for further habitat loss.
- 9-105. See the response to Comments 9-36 and 9-42. Refer to Master Responses for a Programmatic EIS and Future Off-site Storage Projects. Habitat acquisition will be included in the list of mitigation options considered for project-specific evaluation.
- 9-106. See the response to Comments 9-36 and 9-42. Construction of wildlife structures has been removed as requested in your comment. It is acknowledged that long-term mitigation costs need to be incorporated into overall project costs. The Final EIS text has been revised to reflect this information.
- 9-107. Your comments are noted. At your suggestion, Section 4.1.1.1 Socioeconomics–Long-Term Impacts has been amended to describe possible impacts to regional ecotourism in

light of the proposed actions. A more in-depth analysis of the economic impacts will be conducted if a specific project related to the area is proposed.

- 9-108. It is acknowledged that ecotourism is a growing economic factor in the Columbia River Basin. The Final EIS text has been revised to list some of the ecotourism activities.
- 9-109. Additional information on the impacts of conversion of non-irrigated lands to agriculture has been added to Section 4.1.1.6.
- 9-110. Comment noted. The cumulative effects sections of Chapters 4 and 5 have been revised.
- 9-111. Comment noted.
- 9-112. Comment noted. Section 4.1.1.6 has been revised to include the increase in exotic and invasive species as a potential impact.
- 9-113. The Final EIS text has been revised.
- 9-114. Comment noted. The text of the EIS has been changed to reflect this comment.
- 9-115. The name has been corrected throughout the document.
- 9-116. The cumulative impacts section has been revised as have the sections on plants and wildlife.
- 9-117. The Final EIS text has been revised.
- 9-118. The suggested sentence has been incorporated into the Final EIS.
- 9-119. The Final EIS text has been revised.
- 9-120. Ecology has determined that the drawdown of Lake Roosevelt has the potential to have a significant adverse environmental impact and will be preparing a Supplemental EIS on the drawdown.
- 9-121. It is anticipated that minimal additional infrastructure will be required to supply the 30,000 acre-feet of water to the Odessa Subarea. The water will be transmitted from Banks Lake using the East Low Canal. The area being supplied is already under irrigation using groundwater. The 30,000 acre-feet of replacement water will be delivered to the existing irrigation system. In some cases conveyance systems will need to be constructed to deliver water to individual farms.
- 9-122. The suggested sentence has been incorporated into the Final EIS.
- 9-123. See the response to Comment 9-121.
- 9-124. As stated in Section 5.1.2.8 (first paragraph under Long-term Impacts), the indirect impacts of agricultural conversion are discussed in Section 4.1.1.8. "Fully planning under GMA" means that the cities and counties are meeting the requirements of the

Growth Management Act for planning and updating their comprehensive plans and other GMA plans and ordinances. GMA requires that counties and cities update their critical areas ordinances every five years. The revisions are done in response to a legislative requirement, not in response to changing natural and anthropogenic environments. Compliance with adopted comprehensive plans will be evaluated as part of project level environmental analysis that will be conducted on specific projects.

- 9-125. Section 5.2.1.4 has been revised to include information about the perennial reach of Crab Creek.
- 9-126. The text in Section 5.2.1.5 quotes statutory language regarding title to beds and shores when the United States constructs a reservoir or other irrigation work. Beyond this, the EIS does not discuss federal easement rights and does not offer an interpretation of the statutory language.
- 9-127. An explanation has been added to Section 5.2.1.4 that describes how increased ground water flows into Rocky Coulee Creek could be a source of cool water to the creek that could improve water quality
- 9-128. The locations of water rights that might be granted under VRAs are not known at this time.
- 9-129. Impacts to Esquatzel Creek will be evaluated as part of project specific environmental analysis when a specific project is proposed. The Creek is not expected to be impacted by any of the early action projects.
- 9-130. Comment noted.
- 9-131. Comment noted.
- 9-132. See the response to Comment 9-8.
- 9-133. See the response to Comment 9-9.
- 9-134. See the response to Comment 9-9.
- 9-135. See the response to Comment 9-9.
- 9-136. See the response to Comment 9-10.
- 9-137. See the response to Comment 9-11.
- 9-138. See the response to Comment 9-12.
- 9-139. See the response to Comment 9-13.
- 9-140. See the response to Comment 9-14.

9-141. See the response to Comment 9-14.

9-142. See the response to Comment 9-15.

9-143. See the response to Comment 9-16.

9-144. See the response to Comment 9-17.

9-145. See the response to Comment 9-18.

9-146. See the response to Comment 9-19.



STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

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October 16, 2006

Mr. Derek I. Sandison
Central Regional Office
Department of Ecology
15 West Yakima Avenue, Suite 200
Yakima, Washington 98902

Log No.: 101606-01-COE-S
Re: Columbia River Water Management Plan

Dear Mr. Sandison;

Thank you for contacting our department. We have reviewed the Draft Programmatic Environmental Impact Statement (DEIS) for the Columbia River Water Management Plan.

10-1 We understand from the document that federal permits and/or federal funding may be required for elements of this plan. As noted on page 3-80 of the DEIS compliance with Section 106 of the National Historic Preservation Act will be required, and we anticipate on-going consultation with the responsible agencies pursuant to 36CFR800.

In terms of this DEIS we concur with your identification of cultural resources in Section 3.10 as a significant resource topic and their protection under both federal and state laws.

10-2 The analysis of impacts in Sections 4.1.1.9 and 5.1.2.9 and specifically the statements on page 5-22 does not accurately reflect either the short-term or long-term impacts at a project level. From our experience with cultural resources impacts at existing reservoirs in Washington State the short term impacts at the project level are significant and require the development of a Programmatic Memorandum of Agreement for the life of the project to assure archaeological, historic, and traditional cultural properties are appropriately identified, evaluated, and property specific treatment plans are developed.

10-3 Existing reservoirs in Washington have ongoing programs for the life of the project to assure that operational changes, on-going erosion, and new project elements address cultural resource issues as they surface. Our experience is that long term impacts are significant, on-going, and require a robust Cultural Resources Management Plan (CRMP).

We look forward to further consultation and working with your agency and the other consulting parties as you identify specific projects.



Mr. Derek I. Sandison
Central Regional Office
Department of Ecology
15 West Yakima Avenue, Suite 200
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Page 2

10-4 We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

These comments are based on the information available at the time of this review and on the behalf of the State Historic Preservation Officer in conformance with Executive Order 0505 and Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

Robert G. Whitlam, Ph.D.
State Archaeologist
(360) 586-3080
email: rob.whitlam@dahp.wa.gov

cc: C. Pleasants
K. Valdez

Comment Letter No. 10 – Department of Archaeology and Historic Preservation

10-1. Comment noted.

10-2. As this is a Programmatic EIS, it is not intended to analyze impacts on a project level. (Refer to the Master Response regarding a Programmatic EIS.) Section 5.1.2.9 (page 5-22 in the Draft EIS) discusses the impacts to cultural resources in receiving areas; much of this is already in agricultural use and the continued use of the land for agriculture is considered to have low impact on cultural resources. Section 4.1.1.9 addresses the need for a Programmatic Agreement.

10-3. The Final EIS text in Section 4.1.1.9 has been revised to reflect this comment.

10-4. Ecology will continue to coordinate with DAHP and will provide you with relevant correspondence. Comments from the Tribes are included

Volume II of the Final EIS, along with responses.