



CLEAN, FLOWING WATERS FOR THE WEST

The Center for
Environmental Law & Policy

January 31, 2011

Charles Carnohan
Odessa Special Study Manager
U.S. Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Rd.
Yakima, WA 98901

Derek Sandison
Office of Columbia River
Washington Department of Ecology
15 W. Yakima Ave., Suite 200
Yakima, WA 98902

Via e-mail to odessa@usbr.gov and dsan461@ecy.wa.gov

Re: Odessa Subarea Special Study Draft EIS

Mr. Carnohan and Mr. Sandison:

These comments on the Odessa Subarea Draft Environmental Impact Statement (DEIS) are submitted on behalf of:

- Center for Environmental Law & Policy, (rosborn@celp.org) 25 W. Main, Suite 234, Spokane, WA 99201
- Sierra Club Washington State Chapter, Attn: Tristen Brown, Conservation Chair (trilliam@u.washington.edu), 180 Nickerson St., Suite 202, Seattle, WA 98109
- Columbia Riverkeeper, Attn: Lauren Goldberg, Legal Director (Lauren@columbiariverkeeper.org), 724 Oak St., Hood River, OR 97031
- Spokane Audubon Society, Attn: Lindell Haggin (lindell4118@comcast.net), P.O. Box 9820, Spokane, WA 99209
- Lower Columbia Basin Audubon Society, Attn: Rick Leaumont, Conservation Chair, (leaumont@owt.com), 9016 Sunset Trail, Pasco, WA 99301
- Spokane Falls Trout Unlimited, Attn: Harvey Morrison, President (harveym@roenassociates.com), P.O. Box 30185, Spokane, WA 99223

(collectively "CELP"). Our comments fall into general and topical categories, as enumerated below. CELP also adopts and incorporates by reference the comments, including attachments, submitted by Professors Norm Whittlesey and Walt Butcher, by James D. McClure of Colfax, and by Rick Leaumont on behalf of the Lower Columbia Basin Audubon Society. Please also note that our organizations sponsored an alert that returned approximately 650 postcards from our members, many with individualized comments that are being transmitted to you under separate cover.

I. General Questions & Comments

1.1 The Odessa Subarea DEIS should be withdrawn and re-issued with complete and accurate information.

For the many reasons discussed below, the DEIS is inadequate and should be withdrawn and amended and, only if the project can be justified from both environmental and economic perspectives, re-issued as a draft that includes proper analysis of impacts and appropriate economic analysis.

The Fish & Wildlife Coordination Act Report (draft Sept. 16, 2010) ("CAR"), prepared by the U.S. Fish & Wildlife Service and issued at the same time as the DEIS also notes that the DEIS fails to fully consider the substantial impacts associated with the proposed actions. For example, U.S. Fish & Wildlife Services notes that "Reclamation's estimates do not reflect a complete picture of habitat impacts that will result to areas outside the Project Area, no[r] do they consider temporary impacts," and "the Service has determined that the area of impacts will be much greater than that reported by Reclamation in the acreage estimates . . ." CAR at 28-29. The issues and impacts raised in the CAR study merit serious consideration that can only occur with a new DEIS.

1.2 The DEIS, although issued jointly with the WA Department of Ecology, is inadequate for Washington SEPA purposes.

The DEIS states that it is prepared in accordance with the Washington State Environmental Policy Act (SEPA) requirements (Cover Letter, 10/26/10). However, there are identified adverse impacts for which it is stated that no mitigation will be suggested or required, most particularly substantial negative impacts to surface water quality in Banks Lake. DEIS, p. 4-59 and subsequent references to mitigation for various alternatives. Unlike the federal NEPA, state SEPA laws require substantive mitigation for all significant adverse impacts to the environment. The DEIS fails to satisfy SEPA requirements.

1.3 Failure to include water storage reservoir mitigation renders the proposed project out of compliance with state laws.

At Section 1.3.4, p. 1-9 of the DEIS, you indicate that RCW Ch. 90.90 authorizes this project. That statute requires that "Columbia Basin development account" funds spent on storage projects must include mitigation that benefits instream flows in addition to fostering new water diversions from the Columbia River (see p. 1-10, "In Feb. 2006 the State legislature direct[ed] Ecology to aggressively pursue development of water resources benefiting both instream and out-of-stream uses . . ." and p. 1-12 "Water for allocation to instream uses could be provided by . . . any new storage within the Study alternatives being address in this EIS."). No such mitigation is identified in this DEIS. We understand (pers. comm. with Al Josephy of the Department of Ecology) that Columbia River Account funds were utilized for this project. Given that the project depends on development of new storage, including Rocky Coulee and Black Rock Coulee Reservoirs, it appears that mitigation is non-compliant with state laws and funding that are cited as a basis for the study.

1.4 Failure to consider 2003 Banks Lake Drawdown information renders the DEIS incomplete.

While the DEIS mentions the 2004 Banks Lake Drawdown EIS, p. 1-15, it fails to mention the ROD associated with that EIS, which adopted the No Action Alternative and concluded that Banks Lake should not be drawn by an addition 5 feet in order “to avoid adverse impacts identified in the FEIS to recreation, resident fish, vegetation, cultural resources, the local economy around Banks Lake, and Federal and non-Federal power production.” The DEIS also fails to cite or discuss the substantial public opposition to Banks Lake drawdown as represented in comments submitted on the Banks Lake Drawdown draft EIS. See Attachments 1 and 2 (Banks Lake FEIS and ROD (2004) and XX (Banks Lake DEIS Comments (2003).

1.5 Cumulative Impacts

The identification of just four water projects as “cumulative impacts” associated with the proposed Odessa actions, at Section 1.8.1, p. 1-18, is inadequate. The DEIS fails to discuss past actions of damming and withdrawing water from the Columbia River. Attached are comments from CELP, et al. submitted in response to the Lake Roosevelt Incremental Storage Releases Project draft Supplemental EIS (issued by WA Department of Ecology) and Environmental Assessment (issued by the Bureau of Reclamation). See Attachments 3 and 4. We specifically reference and incorporate the discussion and associated attachments into this comment letter, including discussion of cumulative impacts. Also attached are a map and pie chart describing water projects into which the Department of Ecology is pouring massive amounts of funding. See Attachments 17 and 18. Much more activity related to water supply developments is occurring than is discussed in the DEIS. Piecemeal evaluation of projects violates NEPA and SEPA requirements.

1.6 \$12 million dollars spent on the Odessa Subarea studies is a massive waste of public funds.

At public meetings your two agencies have indicated that you have spent more than \$12 million on preparation of the DEIS and associated documents. This appears to be a massive waste of public funding for a project that cannot even remotely meet federal protocols for water projects (e.g., the U.S. Water Resources Council’s Economic & Environmental Principles & Guidelines for Water and Related Land Resources Implementation Projects (March 1983)), which require a 1:1 ratio or better for benefits and costs. See Attachment 5. To what extent have USBR and Ecology recommended that state and federal funds be spent assisting Odessa-area irrigators in changing over to dryland farming? Why is this option not discussed in the DEIS?

II. Topical Comments

2.1 Rationale for “need and purpose” is incorrect: Odessa Subarea farmers affirmatively rejected Columbia Basin Project water.

USBR’s failure to build the second half occurred because the majority of landowners within the second-half boundary **rejected** project water, contrary to assertions in the DEIS (ES p. ES-2; Purpose and Need, p. 1-2) and in public presentations. The DEIS rests on an interpretation of history that is incomplete. Because the DEIS cites as its purpose a false obligation to bring water to the Odessa, the failure of the DEIS to accurately describe or even acknowledge CBP history (and the consequences of those land withdrawals for the CBP) undermines the fundamental rationale for the DEIS.

The DEIS should accurately recount the history that led to decisions not to extend Project water to the eastern third of the CBP. An examination of the historic record of the CBP reveals that many farmers (especially those owning land within the eastern third of the CBP) rejected Project water during the 1940s. This rejection of Project water effectively ended the build-out of the Project.

Historian Paul Pitzer wrote in *Grand Coulee: Harnessing a Dream* (WSU Press, 1994) that the 1943 Columbia Basin Project Act “allowed farmers to withdraw their land from the project with the understanding that then they would receive no water. . . . By 1946 east side farmers withdrew over 300,000 acres - nearly a third of the [Columbia Basin Project] total.”

Pitzer explains the reasons for the land withdrawals:

The land withdrawals were a result of factors unique to the Columbia Basin Project. Not all the land was always arid; farmers had successfully raised grain on the east side since the 1880s. Only during dry cycles or when grain prices dropped was their interest in irrigation heightened, and even then they produced a paying crop if they owned enough acres. Unless conditions suited their purposes, they saw no reason to work with the Bureau of Reclamation and a few refused to comply with stringent land ownership restrictions under any conditions. They wanted cheap subsidized irrigation and the right to keep all the land they owned.

Another source for understanding what led farmers to withdraw 300,000 acres from the CBP is Dr. George MacInko in his article published by the American Geographical Society [The Columbia Basin Project: Expectations, Realizations, Implications, Geographical Review, Vol 53, No. 2 (Apr., 1963), pp. 185-199]

It is extremely unlikely that all the one million acres will ever be irrigated. Shortly after contracts were drawn up in 1945 between the Bureau of Reclamation and the project irrigation districts some 300,000 acres, about 30 per cent of the irrigable acreage, were voluntarily withdrawn from project development. Most of the withdrawn lands belong to wheat farmers in the eastern part of the project, where rainfall and soils favor dry farming. Here annual precipitation excess of eight inches and light-brown loessal soils with fair moisture-retention capability permitted three technological developments, put into effect after initial project planning had taken place, to revolutionize wheat farming. The tractor replaced the horse, and because of its great efficiency it reduce the period of soil disturbance considerably and permitted better timing of farm operations ...

The net effect of these innovations was an increase in soil moisture and a decrease in wind erosions, which made wheat growing under dry-land methods profitable. By 1948, the first year of operation, wheat farming had been reestablished over most of the eastern third of the project area. This fact was the cause of the first of the major setbacks to the orderly implementation of the project irrigation plan – the withdrawal of 300,000 acres of the best project lands. ...

Ever-increasing costs of the irrigation construction program have resulted in further reductions of irrigated acreage. ...

As noted by Pitzer, the consequence of farmers withdrawing 300,000 acres from the Project “made east side canal construction impractical.” The land withdrawals also “traumatized” Bureau officials. (Pitzer, p. 274).

Since the 1940s the response from the U.S. Bureau of Reclamation has been that the CBP will be built in phases. The DEIS continues in this course.

The Study fails to either acknowledge or accurately describe the CBP history of Odessa-area farmers withdrawing 300,000 acres from the Project – and the consequences of those land withdrawals for the CBP. Never describing relevant history and consequences, the Study offers only that “surface water would be provided as part of the continued phased development of the CBP.” (ES-2).

2.2 The Proposed Project creates incentives for environmentally destructive actions, including groundwater mining and soil poisoning.

At pp. 1-7 and 1-8, the DEIS indicates the project would provide water only to those farmers who have destroyed local aquifers and are causing harm to their own soils (via “sodicity” phenomenon). As discussed in Comment 2.1 above, the rationale that farmers were “promised” project water is incorrect. The DEIS is inadequate for its failure to advise about the destruction of public and private resources that are occurring as a result of state-sanctioned over-pumping of the Odessa aquifer system.

2.3 Federal-State MOU is not binding and therefore does not provide a proper basis for finding that USBR must prepare an Environmental Impact Study.

The Purpose and Need statement, p. 1-9, indicates that the 2004 Memorandum of Understanding (MOU) between USBR, Ecology and various irrigation districts creates a “need to fulfill the commitments” made in the MOU. However, USBR makes the exact opposite argument in its briefing in the matter of *CELP & Columbia Riverkeeper v. Dept. of Interior*, U.S. District Court for Eastern Dist. of Washington, Docket No. 2:09-cv-160-RMP (now pending in the 9th Circuit Court of Appeals). In the Defendants’ Memorandum in Support of Cross-Motion for Summary Judgment and Opposition to Plaintiffs’ Motion for Summary Judgment, at pages 11-13, USBR argues at length that the MOU is not binding and did not require preparation of an EIS for the Lake Roosevelt Incremental Storage Releases Project. See Attachment 6. This inconsistency indicates both the bias toward water development that is occurring in the basin, and a lack of integrity in the decision process that is driving the Odessa Subarea Project.

2.4 The DEIS fails to consider a Dryland Reversion Alternative, which is viable and likely to occur.

2.4.1 Extensive discussion of 8 action alternatives belies the fundamental flaw in the DEIS, that is the failure to examine the reversion of all Odessa Subarea irrigated lands to dry-land agriculture. Contrary to the DEIS and Economics Technical Report absurd assumption that dry-land wheat farming is unprofitable, the hundreds of thousands of acres of dry-land cropping in and adjacent to the Odessa Subarea reveal a viable and profitable sector of the agricultural economy.

2.4.2 A dry-land reversion alternative should be studied and incorporated as an alternative to the DEIS action alternatives. There is a substantial body of

-
- research and literature on dry-land cropping, much of it being developed at WSU's Lind Dryland Research Station, in the heart of the Odessa Subarea. See <http://www.lindstation.wsu.edu/index.html>, Attachment 7 (Lind Station information and bibliography), and Attachment 8 (Schillenger & Papendick, Then & Now: 125 Years of Dryland Wheat Farming (Agronomy Journal 2008).
- 2.4.3 One important new development in dryland cropping is the potential for inter-seasonal plantings of camelina, an nitrogen-fixing oil-seed that can be processed into biodiesel fuels. Inland Empire Oilseeds, a new biodiesel plant in the city of Odessa provides a local market for the crop. See Attachment 9 (Spokesman-Review article) and Inland Empire Oilseeds website (URL: <http://www.inlandempireoilseeds.com/index.cfm>). This new crop provides potential for increasing the profitability of dryland farming in the Odessa Subarea.
- 2.4.4 Dryland cropping is a valuable alternative to irrigated agriculture, in part because it is not dependent on water in an arid environment.
- 2.4.5 Regrettably, USBR and the Department of Ecology have spent more than \$12 million studying infeasible water supply alternatives, providing false hope to irrigators that a federal-state bail-out is possible. The public would be far better served if use of remaining Odessa study funds is directed to evaluating mechanisms, funding, and other actions needed to support conversion of Odessa irrigated farms to dryland cropping.
- 2.4.6 The DEIS is deficient for failure to consider a comprehensive dryland reversion alternative.
- 2.5 The Economics Technical Report and related analysis in the DEIS is inadequate, incorrectly applies the federal Principles & Guidelines for water projects, and mandates the conclusion that none of the action alternatives is feasible.**
- 2.5.1 As noted above, CELP adopts the "Review of Economic Technical Report Odessa Subarea Special Study" submitted as comment on the DEIS earlier this month by Professors Norman K. Whittlesey and Walter R. Butcher.
- 2.5.2 The DEIS reference at p. 1-8, Section 1.3.2.2 to conclusions set forth in the Bhattacharjee and Holland 2005 study continues to be inaccurate. That study indicated that in a worst case situation, which the authors noted was unlikely to occur, where there was immediate loss of 35,000 acres of potato production, an input-output modeling analysis showed loss of \$630 million **OR** 3,600 job. The continuing inaccurate characterization of the results of the study are a sad commentary on the quality of the DEIS and supporting documents, as well as USBR bias toward attempting to show illusory benefits.
- 2.5.3 Moreover, the problems with this study were critiqued by Prof. Joel Hamilton, in a publication that is cited but not discussed. We request that USBR direct its economics team to consider the flaws in the Battarcharjee-Holland Report raised in the Hamilton critique. See Attachment 10 (Hamilton Review)

- 2.5.4 The ETR makes improper use of the Principles & Guidelines, including use of improper crops to construct farm budgets.
- 2.5.5 The ETR overestimates pumping depths, leading to inaccurate estimate of net farm income in the no action alternative, which in turn inflates the agricultural benefits associated with the action alternatives.
- 2.5.6 As a corollary, the ETR and DEIS fail to use best available science to evaluate pumping depths, including the April 2010 USGS study on Columbia Plateau groundwater availability. See Attachment 11 (Snyder & Haynes, 2010). Instead, although not explicit, there appears to be questionable reliance on the GWMA study.
- 2.5.7 Whittlesey & Butcher re-calculate benefits based on accurate use of the Principles & Guidelines, and find that the ETR over-estimates agricultural benefits by 85%.
- 2.5.8 The municipal benefits discussion in the ETR and DEIS is based on an unsupported assumption that a decrease in groundwater pumping will cause improvements in groundwater levels and therefore benefit municipal water supplies.
- 2.5.9 Assumptions regarding energy surpluses are not realistic given changed in Grand Coulee Dam and Columbia River operations due to 2024 changes in the Columbia River treaty. It is predicted that reduction in summer hydropower generation will be especially large (greater than 1,000 average megawatts) in low water years. See Attachment 12a-e (U.S. Entity, Columbia River Treaty Supplemental Report and Appendices, September 2010).
- 2.5.10 The ETR and DEIS fail to consider or even explain mitigation costs associated with action alternatives.
- 2.5.11 The DEIS states at several points, e.g. pp. ES-32 and 4-46, that it is assumed that all applicable laws, regulations and BMPs will be followed, including with respect to groundwater resources. One set of laws with major economic impact are Washington state requirements that wells be constructed and sealed in a manner that protects aquifers and prevents water cascading of water. Many existing wells in the Odessa Subarea do not meet these requirements and are thus in violation of well construction laws and rules. Well casing, especially at depth, is an expensive undertaking, but these costs are not discussed in economic or other analyses in the DEIS.
- 2.5.12 The recent adjustment of the federal water project interest rate from 4.375 to 4.125 (75 Fed. Reg. 82066 (12-29-10)) will increase the present value of a 100-year steady stream of benefits by about 6%. This rate change presents an opportunity for USBR to re-appraise the discounting and compounding in the ETR's benefit-cost analysis and make it consistent with instructions in Principles and Guidelines. The decrease in benefit/cost ratio from correcting for egregious departures from required P&G procedures will exceed the gains from the lower discount rate.
- 2.5.13 The instructions regarding discounting and "comparing costs and benefits at a single point in time" are in Section 2.1.2 and 2.1.3 on p. 19 of the P&G's.

Reclamation stated in its September 2008 release on the Odessa Study that it will follow the P&G requirements. However, the ETR benefit-cost is calculated on the basis of total present values of benefits and costs over the life of the total project rather than on the basis of average annual equivalents.

- 2.5.14 Moreover, the ETR has the installation period ending when the last phase of installation is completed, whereas the P&G's call for the installation period to end when the first phase is completed.
- 2.5.15 The ETR includes benefits for production from the end of each phase up to 2025 plus benefits for 100 years to 2125 whereas the P&G calls for counting benefits from the beginning of production on Phase 1 for 100 years until 2018. This approach effectively extends the period of benefit accumulation to more than 100 years for the earlier phases, perhaps explaining why the reported benefits per acre for the Partial Replacement Alternative (57,000 acres south of I-90, constructed in earlier phases) are 40% higher than benefits per acre for the 45,500 acres added to make up the Full Replacement alternative. Annual equivalent benefits are then divided by annual equivalent costs to calculate the benefit-cost ratio. This is the way it was done and reported in the highly flawed 1989 NED analysis.
- 2.5.16 The Bureau cannot select an alternative that does not meet or exceed the 1:1 benefit-cost ratio required by federal law.

2.6 Columbia River Treaty changes in 2024 will mandate change in flood operations at Grand Coulee Dam, not discussed in the DEIS.

- 2.6.1 It is anticipated that the Columbia River Treaty may be re-negotiated in the next few years with commensurate changes in operations of the Columbia River, including at Grand Coulee Dam. While the outcome of negotiations is difficult to predict at this time, there is one change that is certain. The arrangements for flood control will change, regardless of other treaty terms. The U.S. Entity, comprised of the Army Corps of Engineers and the Bonneville Power Administration, implements the Treaty on behalf of the United States public. In September 2010, the U.S. Entity stated that:

Under the Treaty, the two nations jointly manage the Columbia River for power generation and flood control as it flows from British Columbia into the United States. Although the Treaty has no termination date, it does have two provisions that take effect on and after Sept. 16, 2024, that will change how flood control is implemented between Canada and the United States and that may impact power benefits as well. . . . Whether the Treaty is continued or terminated, requirements for flood control provided by the Treaty projects will automatically change in 2024 to an operations referred to as "Called Upon." Currently, the Treaty provides a dedicated amount of Canadian storage for flood control. This will change to a protocol where the United States may call upon Canadian storage for U.S. flood control but only after making effective use of its own reservoirs.

See Attachment 12a. The U.S. Entity reports indicate that reservoir levels are driven by a combination of flood control objectives and fisheries flow targets. Future operations at

Grand Coulee Dam will be affected by changes that occur as a result of provisions contained in the Columbia River Treaty.

2.6.2 It is reasonably foreseeable that CRT changes will affect how Grand Coulee Dam is operated, including the availability of water for irrigation supply to the Odessa Subarea.

2.6.3 The DEIS says nothing about the Columbia River Treaty. This omission is a major flaw in the document and requires withdrawal and re-issuance.

2.7 The proposed project does not have water rights for implementation and the DEIS is inadequate for failure to consider cumulative impacts

2.7.1 The statement at DEIS, pp. 4-66 and 4-68, Sections 4.5.3.2 and 4.5.8.1 (and perhaps elsewhere), that the Project already has the water rights necessary for action alternatives is incorrect. While the CBP holds storage rights for Lake Roosevelt, a "secondary" permit would be required to divert water from the Columbia River for delivery to the Odessa Subarea.

2.7.2 As discussed throughout these comments, the DEIS is inadequate for purposes of supporting a decision by the Department of Ecology to issue a secondary permit to USBR to divert water to the Odessa Subarea.

2.7.3 The failure to discuss the cumulative impact of increased water diversions from the Columbia River, as added to past, present and foreseeable future actions affecting Columbia River diversions and flows renders the DEIS inadequate. Some 5-6 million acre feet of water is diverted annually from the Columbia River for irrigation and other uses. Neither USBR nor the Department of Ecology has analyzed the cumulative impacts of the total diversions from the Columbia.

2.7.4 In addition the states of Idaho and Oregon divert water from the Columbia or its major tributaries. Not discussed here or elsewhere.

2.7.5 The National Research Council's report on Columbia River instream flows recommends that no further diversions be made from the Columbia River, in order to retain flexibility in river management. See Attachment 13 (Columbia River: Instream Flows, Water Withdrawals, and Salmon Survival, NAS Press 2004).

2.8 The DEIS does not use best available science to describe groundwater resources.

2.8.1 As a corollary, the ETR and DEIS fail to use best available science to evaluate pumping depths, including the April 2010 USGS study on Columbia Plateau groundwater availability. See Attachment 11 (Snyder & Haynes, 2010).

2.8.2 The statement at pp. 4-50 and 4-66, that the state lacks authority to require well casing is incorrect.

2.9 DEIS surface water quality discussion is inadequate.

- 2.9.1 The DEIS claims to “address the [action alternatives] potential effects” on heavy metals. However, the EIS in fact fails to discuss the action alternatives’ impacts on heavy metals in Lake Roosevelt, Banks Lake, the Columbia River downstream of Grand Coulee Dam, and the analysis area irrigation network. This omission is striking given the Bureau’s acknowledgement that Lake Roosevelt contains “significant levels of zinc, lead, copper, arsenic, cadmium, and mercury contamination.” DEIS at 3-16. For example, the EIS fails to disclose the direct, indirect, and cumulative environmental impacts sending Lake Roosevelt water, which contains “significant levels” of heavy metals, to Banks Lake and the analysis area irrigation network. While the EIS summarily concludes that “[a]dditional re-suspension of sediment-bound metals . . . is not anticipated,” the Bureau fails to explain its rationale to support this conclusion.
- 2.9.2 Section 4.4 identifies the Bureau’s impacts analysis methodology as “qualitative.” See *e.g.* DEIS at 4-54 (“A comprehensive water quality model has not been developed for Lake Roosevelt, so anticipated impacts resulting from the action alternatives were assessed in a qualitative fashion similar to the *Final Environmental Impact Statement for the Lake Roosevelt Incremental Storage Releases Program* (Ecology 2008).” Setting aside the merits of the Bureau’s qualitative approach, the Bureau repeatedly fails to identify the rationale behind the conclusions it draws in Section 4.4. For example, the Bureau repeatedly concludes that action alternatives would have only a “minimal” impact on water quality. See DEIS at 4-53; 4-57; 4-58; 4-63. Yet, the agency fails to explain the bases for its conclusions.
- 2.9.3 Statements in Section 4.4 expressly contradict other sections of the DEIS, which concede that the No Action Alternative would result in conversion to dryland farming. DEIS at ES-31 (describing consequences of “No Action” alternative and stating “[s]ignificant impact in the Study Area with change from irrigated agriculture to dryland farming conditions.”); ES-36 (“The No Action Alternative would significantly change land use as irrigated agriculture transitions to dryland farming conditions.”). Section 4.4 asserts:

The action alternatives would not alter land use practices or the amount of water used on the farms for agricultural purposes, so return flow regimes (volume and timing) of the drains and Crab Creek are not anticipated to change. Consequently, *the only reason water quality would be impacted is if the new surface water supply is of better or poorer quality than the existing groundwater source.*

DEIS at 4-55 (emphasis added). This statement is not supported by the EIS. In fact, new surface water supplies are *not* the only reason that water quality would be impacted. If the Bureau selects the “No Action Alternative,” water quality would be *beneficially* impacted by reduced pesticide and fertilizer inputs to Crab Creek and the Columbia River. See DEIS at 4-56 (identifying water quality improvements under the No Action Alternative due to conversion from irrigation agriculture to dryland farming.). The Bureau should revise the EIS to accurately and fully disclose the water quality benefits of the No Action Alternative.

- 2.9.4 Without support in science or technical analysis, the Bureau summarily underestimates the benefit the No Action Alternative, which would result in conversion from irrigated agriculture to dryland farming. If the Bureau pursues the No Action Alternative, the agency acknowledges that “as groundwater

-
- supplies decline further, irrigated lands would be converted to dryland crops." DEIS at 56. As a result, less pollutant laden pesticides and fertilizers would be conveyed to the canal and drain system and, in turn, Crab Creek and the Columbia River. The Bureau concludes that the No Action Alternative would cause surface water quality to "improve slightly." DEIS at 4-56. The Bureau fails to describe the qualitative or quantitative method for arriving at this conclusion. The Bureau further attempts to cabin the water quality benefits of dryland farming (*i.e.*, the No Action Alternative) by summarily asserting that the "No Action Alternative would not resolve" water quality issues and exceedances in Lake Roosevelt, Banks Lake, the Columbia River downstream of Grand Coulee Dam, and the analysis area irrigation network. Yet, it is unclear that *any* one action would "resolve" water quality impairment in the Upper Columbia River. Regardless, the extent to which the No Action Alternative would "resolve" water quality impairment is irrelevant; instead the proper inquiry is what environmental impacts (positive and negative) would result from the No Action Alternative.
- 2.9.5 The Bureau discloses that, under existing conditions, Banks Lake regularly exceeds Washington State's water quality criteria for temperature. DEIS at 4-57. Nonetheless, every action alternative will result in significant, negative impacts to temperature in Banks Lake. While the Bureau concedes that the temperature impacts will be significant, it fails to disclose the extent to which each alternative will change the temperature regime in Banks Lake.
- 2.9.6 The Climate Impacts Group projects that August mean surface air and maximum stream temperatures in the Columbia River Basin will range from stressful to fatal for salmon. See Attachment 14 at C-1, Fig. 9, p.13. However, the DEIS fails to disclose the direct, indirect, and cumulative impacts of removing more water from Lake Roosevelt or the Columbia River downstream of the Grand Coulee Dam. For example, in subsection 4.4.10, which discusses Alternative 3D (Full—Combined), the Bureau fails to examine the long term temperature impacts of removing more water from Lake Roosevelt.
- 2.9.7 The DEIS fails to analyze the extent to which incremental releases will contribute to and exacerbate warming of river and stream temperatures in the basin. The Columbia River at and below Lake Roosevelt are water quality limited for temperature under the Clean Water Act. See Washington 303(d) list (approved by EPA in January, 2009). The DEIS fails to account for the cumulative effects of removing more water from a waterbody that the state and federal environmental agencies list as impaired for temperature.
- 2.10 DEIS wildlife discussion is inadequate and the action alternatives would cause significant harm to wildlife habitat and at-risk species.**
- 2.10.1 The U.S. Fish & Wildlife Service succinctly states the problem. "We have . . . determined that the most limited and imperiled habitat type in the Project Area is shrub-steppe. This Project, if implemented, would significantly and adversely impact shrub-steppe habitat." CAR at p. 58. The CAR study also notes that the area of impact is much greater than that utilized by USBR in its DEIS analysis, including that buffer widths should be 1600 feet, "significantly greater than the 600-foot wide buffer areas used in the Project." CAR at 25.

2.10.2 As noted above, CELP adopts and incorporates by reference the DEIS comments of James D. McClure, submitted separately.

2.10.3 The DEIS fails to address long-standing, systemic impacts on wildlife created by agricultural development in the basin, including up to 68% loss of shrub-steppe habitat and associated plant and animal species.

2.10.4 Further, the DEIS action alternatives will contribute to further degradation of much of the last remaining pockets and corridors of shrub-stepped habitat, a significant impact that cannot be ameliorated in any reasonable time frame. Shrub steppe is extremely difficult to repair and restore.

2.10.5 Any impacts to Greater Sage Grouse and Columbia Sharp-tailed Grouse, which are now functioning in isolated pockets around the Columbia Basin and which are the subject of substantial recovery efforts, are not acceptable.

2.11 Water supply management issues, including climate change impacts, are not adequately discussed in the DEIS.

2.11.1 The assumption that flows in excess of target flows for the Columbia River at Priest Rapids, McNary and Bonneville dams (DEIS at p. 4-7) belies the complexities of climate change impacts, Columbia River Treaty-based changes for flood control, and the cumulative impacts of a century of water diversions from the Columbia River.

2.11.2 Climate scientists are now grappling with the concept of "non-stationarity," i.e., the realization that past streamflow and weather variations may not continue into the future. See Attachment 14 (Bracken article). While the DEIS represents a first effort to model and describe climate change impacts, the conclusions are based on modeling that utilizes past climate and weather scenarios, specifically from 1929 to 1998. DEIS at p. 4-7. The very real concern that the past is not an acceptable guide to future water availability in the Columbia River is not discussed in the DEIS.

2.11.3 A cautious approach and further analysis seems particularly important given that the Columbia Icefields, headwaters of the Columbia River, are melting. See Attachment 16 (Natural Resources Canada web excerpts). For example, identifying the Columbia Icefields as a location of substantial loss of glacial mass, Natural Resources Canada states, "[t]he most far-reaching result of predicted climate change in alpine areas is likely to be the effect of decreased snowpack and glacier ice on the discharge of the rivers that drain from the mountains." The DEIS contains no discussion of the impact of melting headwaters on future Columbia River flows.

2.11.4 The DEIS also fails to discuss the impacts identified in the University of Washington, Climate Impact Group's Washington Climate Change Impacts Assessment. See Attachment 14. Even using conservative historical estimates for modeling climate change, the report finds that lethal water temperatures for cold-water fisheries (salmon) will become more prevalent, stream-flow runoff will decrease and water supply will become more stressed. The rather sanguine conclusions that increasing diversions from the Columbia River will have minimal

to no impact on water resources fails to account for a larger context in which dire projections are being made.

2.11.5 The DEIS also fails to discuss climate impacts identified in the U.S. Fish & Wildlife Coordination Act Report, at pp. 30-32, that even though precipitation may increase in the Columbia River basin, it is expected there will be less "effective precipitation," and that climate change will work negative effects on water temperatures, and increased pollutants, turbidity and salinity.

2.11.6 New diversions of surface water for irrigation supply will effectively work permanent changes in the river and reservoir management. Permanent changes increase inflexibility in management options. The DEIS contains little discussion of how new water diversions will limit the capacity of USBR to manage Grand Coulee Dam for multiple objectives required by law.

2.11.7 By failing to account for past impacts combined with projected changes, both environmental (climate change) and human-caused (treaty changes), the DEIS is deficient for lack of analysis concerning future management of flows in and diversions from the Columbia River.

Conclusion

Thank you for the opportunity to provide comments on the Odessa Subarea DEIS. Please provide responses to CELP and to the organizations for whom this letter is prepared at the addresses listed on page 1 above.

Sincerely,



Rachael Paschal Osborn
Executive Director
Center for Environmental Law & Policy
509-209-2899 / rosborn@celp.org

And on behalf of

- Columbia Riverkeeper, Hood River, OR
- Sierra Club Washington State Chapter, Seattle, WA
- Spokane Audubon Society, Spokane, WA
- Lower Columbia Basin Audubon Society, Pasco, WA
- Spokane Falls Trout Unlimited, Spokane, WA

Attachment No.	Document
1 and 2	2004 Banks Lake Drawdown FEIS comments & responses, and ROD
3	CELP-Sierra Club comments on Lake Roosevelt Drawdown draft Supplemental Environmental Impact Statement (6-30-08)

4	CELP, -Columbia Riverkeeper-Sierra Club comments on Lake Roosevelt Drawdown draft Environmental Assessment (4-17-09)
5	U.S. Water Resources Council's Economic & Environmental Principles & Guidelines for Water and Related Land Resources Implementation Projects (March 1983)
6	USBR Response Brief in USDC case <i>CELP & CRK v. USBR et al.</i> , U.S. District Court for Eastern Dist. of Washington, Docket No. 2:09-cv-160-RMP, Defendants' Memorandum in Support of Cross-Motion for Summary Judgment and Opposition to Plaintiffs' Motion for Summary Judgment (2-22-10)
7	Lind Dryland Research Station information and bibliography from website
8	Schillenger & Papendick, "Then & Now: 125 Years of Dryland Wheat Farming" (Agronomy Journal 2008)
9	Caldwell, B., "Odessa Refinery Meeting Biodiesel Demand" (Spokesman-Review, 1-10-10)
10	Hamilton, Joel R., "A Review of 'The Economic Impact of a Possible Irrigation-Water Shortage in Odessa Sub-Basin: Potato Production and Processing,'" Sanjoy Battacharjee and David Holland, School of Economic Sciences, Washington State University, June 6, 2005."
11	Snyder, D.T., and Haynes, J.V., Groundwater conditions during 2009 and changes in groundwater levels from 1984 to 2009, Columbia Plateau Regional Aquifer System, Washington, Oregon, and Idaho: U.S. Geological Survey Scientific Investigations Report 2010-5040 (2010) and Appendix A.
12a	U.S. Entity, Columbia River Treaty 2014/2024 Review, United States Entity Supplemental Report (Sept. 2010)
12b	U.S. Entity, Columbia River Treaty 2014/2024 Review, United States Entity Supplemental Report, Appendix A (Sept. 2010)
12c	U.S. Entity, Columbia River Treaty 2014/2024 Review, United States Entity Supplemental Report, Appendix B (Sept. 2010)
12d	U.S. Entity, Columbia River Treaty 2014/2024 Review, United States Entity Supplemental Report, Appendix C (Sept. 2010)
12e	U.S. Entity, Columbia River Treaty 2014/2024 Review, United States Entity Supplemental Report, Appendix D (Sept. 2010)
13	National Research Council, Columbia River: Instream Flows, Water Withdrawals, and Salmon Survival (NAS Press 2004)
14	University of Washington, Climate Impact Group, Washington Climate Change Impacts Assessment (2009)
15	Bracken, Nathan S., "Climate Change Impacts on Water Supply" (LSI, Sept. 2010)
16	Natural Resources Canada, "Climate Change Impacts and Adaptation," excerpts from website (viewed on 1-31-11)
17	WA Department of Ecology, Office of Columbia River, OCR Funded Projects (10-27-10)
18	WA Department of Ecology, Office of Columbia River, Status of the \$200M[illion]OCR Account (10-20-09)