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April 26, 2010

Gail Cismowski
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114

Re: Comments on Draft Staff Report for Grasslands Bypass Project Basin
Plan Selenium Amendments to The Water Quality Control Plan for the
Sacramento River and San Joaquin River Basins

Dear Ms. Cismowski:

Thank you for the opportunity to provide input concerning the proposed Grasslands Bypass Project Basin Plan Amendment to allow continued selenium discharges to Mud Slough and the San Joaquin River in excess of Basin Plan Water Quality Objectives. As we understand it, the proposed action is to delay implementation of the 5 µg/l (4 day average) Basin Plan Objective for selenium in Mud Slough (north) and the San Joaquin River from Sack Dam to the Merced River from October 1, 2010, until December 31, 2019. It also proposes a **new** 15 µg/l (30 day average) interim "Performance Goal" for the same water bodies effective December 31, 2015.

The Grasslands Bypass Project currently discharges highly contaminated agricultural drainage water via 27 miles of the San Luis Drain into Mud Slough with a daily average selenium concentration of 54 ppb (30 day average). The Grasslands Area Farmers admittedly do not have the funds or the technology to reduce the concentration of selenium in their drainwater.¹

The signatory organizations recommend that the proposed 10-year extension to continue harmful selenium discharges into Mud Slough and the San Joaquin River from Sack Dam to the Merced River NOT be granted. Instead, we recommend that a maximum 2 year extension be granted, with a caveat that the "Best Available Technology" of land retirement be exercised along with additional monitoring and a watershed sediment/selenium reduction program to reduce upslope selenium inputs during storm events.

We also request that the Central Valley Regional Water Quality Control Board recommend that the State Board issue a cease and desist order (CDO) of surface water deliveries for irrigation of the Grasslands area and lands draining to the Grasslands area based on the technical and economic infeasibility of irrigating drainage problem lands in the Grasslands Drainage Area and the larger San Luis Unit of the CVP. In the CDO, we recommend also that the State Board make a finding of wasteful and unreasonable use of water pursuant to Water Code Section 100 and violation of the Public Trust.

The Basin Plan Amendment proposal is deficient and should be rejected by the Regional Board for the following reasons, which are explained in greater depth in the attached detailed comments:

- ❖ The Environmental Impact Report/Statement (EIR/S) certified by the San Luis Delta Mendota Water Authority and the proposed Regional Board staff Functional Equivalency Document (FED) do not meet the legal requirements of CEQA and

¹ GBP Final EIS/R, p ES-2, Section ES-2. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4412
Accessed 4/20/10.

are not based on the Regional and State Boards' responsibilities to protect beneficial uses of water.

- ❖ The purpose and need for "continuous water quality improvement" of the San Joaquin River is not met under the Use Agreement's proposed load objectives for wet and above-normal water years until 2015 because improvements sought through the proposed project are not continuous and are essentially deferred for over 9 years without promise that water quality standard violations would be resolved even by then.
- ❖ There is no attempt to achieve compliance in the proposed project's design with the California Endangered Species Act (CESA) for the Delta Smelt, Giant Garter Snake, Swainson's hawk, San Joaquin Kit Fox and other state-listed species for the Proposed Action. There is no information in the record that the project proponents have done anything other than coordinate with the Department of Fish and Game's (DFG) Wildlife Refuge unit, but there has not been coordination with DFG's CESA unit. Coordination should not be confused with attaining protection and recovery of endangered species.
- ❖ The proposal jeopardizes restoration of the San Joaquin River's salmon runs by continuing to kill up to 50% of juvenile salmon and Central Valley steelhead due to aquatic, bioaccumulating selenium exposure. NMFS' concurrence memo under the Endangered Species Act did not consider information from U.S. Fish and Wildlife Service and selenium/salmonid research biologist Dennis Lemly that the EIS/EIR underestimates San Joaquin River juvenile salmonid selenium, exposure, bioaccumulation, and subsequent mortality.
- ❖ The Draft Staff Report is inaccurate in its assertion that all agricultural lands discharging contaminated drainage into the Grasslands Drainage Area are participating in the Grasslands Bypass Project. Some lands do not participate in the Grasslands Bypass Project and continue to discharge into wetland water supply channels.
- ❖ There is ample evidence that the Grasslands Bypass Project and the larger Westside Regional Drainage Plan are concentrating and storing selenium, salt and boron in the shallow aquifers of the region, prolonging the risk of surface water discharges with large selenium loads and regional degradation of groundwater.
- ❖ There is strong evidence contained in the U.S. Fish and Wildlife Service's Biological Opinion for the Grasslands Bypass Project and other reports of existing and continued high risk of selenium exposure to listed species and birds protected under the Migratory Bird Treaty Act from the Grasslands Bypass Project.

- ❖ The Existing Basin Plan Water Quality Objectives for selenium are inadequate to prevent bioaccumulation and harm to various terrestrial and aquatic species. The U.S. Environmental Protection Agency is in the process of issuing new selenium water quality criteria nationally and for the Bay-Delta that are more restrictive than the existing 5 µg/l water quality objective.
- ❖ Monitoring is inadequate to verify whether claims of success are actually true.
- ❖ Land retirement and cost effectiveness were not considered in the FED at all as the Best Available Technology. There are no financial or technical assurances that the Basin Plan selenium objectives will EVER be met. **The Public Trust is not being met.**
- ❖ Cumulative effects of water transfers in the lower San Joaquin River Basin in recent years coupled with increased groundwater pumping are not considered. There has been no evaluation or consideration of what is the best type and amount of groundwater pumping combined with land retirement to reduce high salty/seleniferous groundwater in the region, as recommended in the Rainbow Report.
- ❖ The mitigation water supply for additional wetland habitat within federal and State refuge areas has not been assured to be free of selenium because its source is local groundwater within drainage impaired areas. This violates the National Wildlife Refuge System Improvement Act of 1997 (PL 105-57), which stipulates that the Secretary of Interior shall under Sec 5 4(a) “assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the Refuge System and the purposes of each refuge.” A more suitable mitigation water supply would be Delta Mendota Canal water from the Delta.
- ❖ There is no regional enforcement plan by the Regional Board or State Board to control application of surface water supplies to upslope lands such as the northerly area of Westlands that are contaminated with selenium and other toxic materials naturally occurring in soils. The irrigation of those upslope areas creates a hydraulic gradient of contaminated groundwater that contributes to the discharges via the Grasslands Bypass Project.
- ❖ There is no plan for monitoring or remediation of the excessive levels of mercury which Mud Slough discharges to the San Joaquin River. Mud Slough discharges 50% of the methylated mercury found in the San Joaquin River at Vernalis during the non-irrigation season, yet only provides 10% of the river’s flow during the non-irrigation season.
- ❖ There is no watershed plan to prevent or reduce selenium contaminated runoff from the upper watershed during storm events. There is strong evidence that

storm-related periodic overland sheet flow causes substantial spikes of selenium in the Grasslands area that persist and bioaccumulate.

- ❖ There is no federal Fish and Wildlife Coordination Act Report for this project; therefore, the project is not in compliance with the Fish and Wildlife Coordination Act.

In short, our organizations consider this “*Draft Staff Report for Amendments to The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins To Address Selenium Control in the San Joaquin River Basin*” to be seriously inadequate and not in compliance with the California Environmental Quality Act, the National Environmental Policy Act, the Porter-Cologne Act, the Federal Clean Water Act, the California Endangered Species Act, the Federal Endangered Species Act, the Fish and Wildlife Coordination Act, the Migratory Bird Treaty Act, the California Water Code, the Delta Protection Act, the Reclamation Act, the California Constitution’s prohibition on Wasteful and Unreasonable Use of Water (Article X, Sec 2), and other applicable laws and regulations.

Please include our organizations and contact persons on your distribution list for all further notices related to these and all other Basin Plan Amendments affecting selenium in the San Joaquin River and Mud Slough.

Our specific comments on each point of contention are attached.

Respectfully submitted,



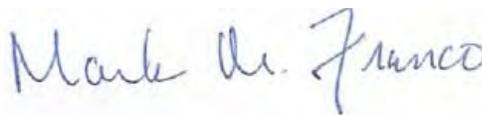
Jim Metropulos
Senior Advocate
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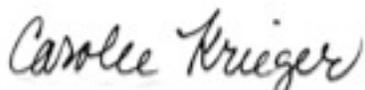
Steven L. Evans
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Karen Schambach, California Field
Director, Public Employees for
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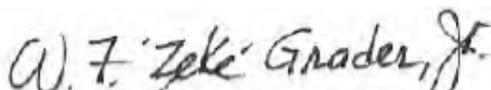
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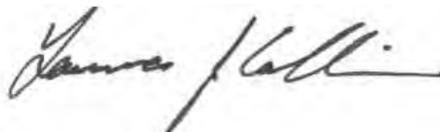
Carolee Krieger, President
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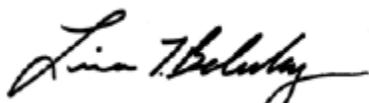
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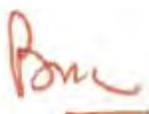


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Alexis Strauss, USEPA
Charles Hoppin, Chairman SWRCB
Karl Longley, Chairman CVRWQCB
Lester Snow, Resources Secretary
John McCamman, Department of Fish and Game
Mark Cowin, Department of Water Resources
Mark Madison, City of Stockton
Interested parties

SPECIFIC COMMENTS ON THE PROPOSED BASIN PLAN AMENDMENT

- 1. The Environmental Impact Report/Statement (EIR/S) certified by the San Luis Delta Mendota Water Authority and the proposed Regional Board staff Functional Equivalency Document (FED) do not meet the legal requirements of CEQA and are not based on the Regional and State Boards' responsibilities to protect beneficial uses of water.**

The Purpose and Need Statement for the Final Environmental Impact Statement and Report (EIS/EIR) for the Grasslands Bypass Project 2010-2019 “*To facilitate drainage management that maintains the viability of agriculture in the Project Area and promotes continuous improvement in water quality in the San Joaquin River*” was unduly narrow for the Regional Board and State Board to consider the proposed Basin Plan Amendments because it favors continued agriculture over beneficial uses of water. The range of alternatives fully analyzed was not reasonable because neither the lead agencies nor the Regional Board in the Draft Staff Report considered the possibility of land retirement as a permanent solution to selenium tainted drainage. In focusing on keeping agriculture in business in this area is to ignore the Board's mandate to protect all beneficial uses of water. Alternatives which would consider land retirement, conversion of cultivated lands to solar farms, and Integrated Farm Drainage Management (IFDM) were not considered because the Purpose and Need Statement was inherently the continuation of status quo agriculture in the Project Area, at the expense of water quality and other beneficial uses.

The proposed 9 year 3 month time extension to meet the 5 µg/l Basin Plan selenium objective and TMDL for Mud Slough (north) and the San Joaquin River from Sack Dam to the confluence of the Merced River is an egregious deferral of the State Board and Regional Board mandates to protect beneficial uses of water under the federal Clean Water Act and the Porter Cologne Water Quality Control Act.² The justification for the State action is that agricultural profits and viability will be ensured (see Draft Staff Report, p 48 of 60). The Grasslands Bypass Project has already been extended once before for 8 years with promises that Basin Plan Selenium Objectives would be met by 2009, yet now an additional 9 years and 3 months is requested based on a thin hope that technology and publicly subsidized funding will be available to construct and operate a drainage treatment facility. It is clear that the proposal is simply a stalling tactic to continue to extract as many public subsidies as possible until the land is salinized or a technological miracle occurs.

² **§ 13000 PORTER-COLOGNE WATER QUALITY CONTROL ACT:** The Legislature further finds and declares that activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.

The EIS/R analysis includes an unrealistic No Action Alternative that skews the analysis toward the Proposed Action, rather than an Environmentally Preferred Alternative that would ultimately reduce overall creation of seleniferous agricultural drainage, not just discharges through the Grasslands Bypass Project and Mud Slough.

The California Water Impact Network (C-WIN) and the California Sportfishing Protection Alliance (CSPA) recommended throughout EIS/EIR process³ a maximum two year extension and evaluation of an alternative which includes land retirement and reinitiation of the San Luis Drainage Decision Analysis process originally launched by the U.S. Geological Survey. We believe that our recommended alternative will lead to a solution that is cost effective and technically feasible, but it has been unreasonably rejected and ignored. The C-WIN/CSPA Alternative is more likely to lead to zero discharge of subsurface contaminated agricultural drainage sooner and more continuously from the Grasslands Drainage Area to Mud Slough and the San Joaquin River than the proposed action which admittedly⁴ relies on unproven and unfunded technology. The Regional Board staff has summarily dismissed the C-WIN/CSPA proposal as the same as the No Action Alternative because of the 2 year time frame. However, the No Action Alternative contains no plan for land retirement and is therefore not the same alternative.

Staff's description of the No Action Alternative is not accurate because absent the proposed action, vigorous regulatory enforcement by the Regional Board to institute source control would alleviate the water quality problems using its authorized powers. Even the Regional Board, in its comments on the DEIS/EIR noted as follows:

"The No Project alternative seems mischaracterized. Why would the "ongoing program for drainage management" cease if the Use Agreement were not extended. If the extension is not granted, wouldn't it simply mean the discharges must employ more aggressive source control measures while the Project continues to develop to the point where all drainage can be managed to avoid violating water quality objectives?"⁵

The City of Stockton, in its September 3, 2009 comment letter on the FEIS/EIR astutely noted as follows:

"Because the No Action Alternative makes unreasonable and unsupported assumptions about agricultural and water management practices in the Project Area under the no-action scenario, many if not all of the EIS/EIR's determinations regarding the significance of Project-related environmental impacts are undermined. The failure to

³ C-WIN/CSPA Comments on the GBP EIS/R are incorporated by reference and available at <http://www.c-win.org/poisoned-lands-and-grasslands-bypass-project.html>, accessed 4/21/10.

⁴ GBP Final EIS/R, p ES-2, Section ES-2.
http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4412 Accessed 4/20/10.

⁵ GBP FEIS/R Responses to State and Regional Agency Comments p 19 of 40,
http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4432 accessed 4/20/10.

evaluate a credible No Project Alternative is a fatal flaw that requires that the EIS/EIR be revised and recirculated to evaluate a No Action Alternative that is grounded on evidence and reasonable assumptions regarding likely future management and drainage control actions in the absence of Project implementation.”⁶

The EIR/S therefore sets up an unrealistic worst case scenario for the No Action Alternative, which then predisposes the analysis to enable the SLDMWA to recommend the Preferred Alternative. Unfortunately, despite appropriate comments by Regional Board staff on the EIS/EIR, the Regional Board’s own environmental checklist on the Basin Plan Amendment does not address the deficiencies of the EIS/EIR. It simply reiterates support for continued irrigated agriculture in the Grasslands Drainage Area (environmental checklist items 2 and 9), when the Regional Board should instead be ensuring that all beneficial uses of water are protected.

The Regional Board should more meaningfully address CEQA in its environmental checklist and Functional Equivalency Document (FED). CEQA provides for an exemption from preparation of an EIR for plans, policies, or guidelines adopted under the State Board’s Water Quality Control (Basin)/208 Planning Program, so long as a written report is prepared and submitted in compliance with sections 3777-3781 of the State Board’s regulations (Public Resources Code § 21080.5; 23 C.C.R. § 3782.)

The FED does not comply with CEQA or the State Board’s regulations, because it does not analyze or mitigate the potentially significant adverse environmental impacts of the Draft Policy or identify the benefits of potential alternative approaches such as land retirement. The U.S. Geological Survey (USGS), states that “*Land retirement is a key strategy to reduce drainage because it can effectively reduce drainage to zero if all drainage-impaired lands are retired.*”⁷ The Regional Board’s FED completely ignores that well-known fact.

The Regional Board cannot approve the proposal because a feasible alternative exists—land retirement—that it has failed to consider, let alone evaluate adequately.

- 2. The purpose and need for “continuous water quality improvement” of the San Joaquin River is not met under the Use Agreement’s proposed load objectives for wet and above-normal water years until 2015 because improvements sought through the proposed project are not continuous and are essentially deferred for 10 years without promise that water quality standard violations would be resolved even by then.**

The very narrow Purpose and Need statement “*To facilitate drainage management that maintains the viability of agriculture in the Project Area and promotes continuous*

⁶ Letter from Mark Madison, Director of Municipal Utilities, City of Stockton to Judy Tapia and Joe McGahan, 9/3/09.

⁷ Open File Report No. 2008-1210. <http://pubs.usgs.gov/of/2008/1210/>; accessed 4/18/2010

improvement in water quality in the San Joaquin River” is not met, even by the proposed action because the proposed 2010-2015 load limits remain the same as existing load limits.

The selenium load limits in the proposed Use Agreement for wet and above normal years fail to show continuous improvement in the first five years of the proposed extension because they are the same as existing discharge limits for those water year types, and therefore conflict with the project purpose and need for continuous improvement of water quality in the San Joaquin River. Given that some of the largest selenium discharges occur as a result of storm runoff in wetter years, this provides little assurance of “continuous improvement” of water quality because it leaves intact the likelihood that sources of high selenium loads will be inadequately controlled during wetter years.

- 3. There is no attempt to achieve compliance in the proposed project’s design with the California Endangered Species Act (CESA) for the Delta Smelt, Giant Garter Snake, Swainson’s Hawk, San Joaquin Kit Fox and other state-listed species for the Proposed Action. There is no information in the record that the project proponents have done anything other than coordinate with the Department of Fish and Game’s (DFG) Wildlife Refuge unit, but there has not been coordination with DFG’s CESA unit. Coordination should not be confused with attaining protection and recovery of endangered species.**

The EIS/EIR and Regional Board Draft Staff Report mention, but do not demonstrate how the proposed project and basin plan amendment attain California Endangered Species Act compliance. The Regional Board’s Draft Staff Report simply states that “CDFG has been working closely with the Bureau and Authority to craft the 2010-2019 Use Agreement’s wildlife monitoring and protection and impact mitigation requirements.” The Department of Fish and Game (DFG) has been disappointingly silent throughout the environmental review. DFG will need to issue concurrence statements for the NMFS and USFWS Biological Opinions, or issue separate CESA clearance for Delta Smelt, San Joaquin Kit Fox, Giant Garter Snake, Swainson Hawk Sacramento River winter-run Chinook, spring run Chinook, and other state-listed species affected by the Proposed Action.

In regard to the need for a CESA consultation on the Delta Smelt, the USFWS Biological Opinion (USFWS BO) makes a statement that would lead a reasonable person to conclude that adverse impacts will occur as follows:

“...the Service believes that the smelt would more appropriately fall under the ‘may affect’ category, with the subsequent required analysis of whether or not the project is likely to adversely affect the species.”⁸

There is also substantial evidence in the USFWS BO indicating that harmful levels of selenium are bioaccumulating in San Joaquin Kit Fox and Giant Garter snakes due to consumption of contaminated rodents and amphibians, respectively (see discussion under item 8 below).

The Regional Board, as a State Agency, is also required to comply with CESA for approval of the Basin Plan Amendment. There is no indication that process with DFG has been initiated, let alone completed. Approval of the Basin Plan Amendment would therefore be unlawful pursuant to CESA.

4. The proposal jeopardizes restoration of the San Joaquin River’s salmon runs by continuing to kill up to 50% of juvenile salmon and Central Valley steelhead due to aquatic, bioaccumulating selenium exposure. NMFS’ concurrence memo under the Endangered Species Act did not consider information from U.S. Fish and Wildlife Service and selenium/salmonid research biologist Dennis Lemly that the EIS/EIR underestimates San Joaquin River juvenile salmonid selenium, exposure, bioaccumulation, and subsequent mortality.

The GBP EIS/EIR fails to provide public or peer-reviewed analysis when it responded to comments and substantial evidence that there are significant impacts to salmon, steelhead and other aquatic life from selenium exposure and bioaccumulation. The lead agencies’ response to comments was that there will be no significant impacts from selenium discharges to salmon restoration in the San Joaquin River, despite the analyses by William Beckon et al (USFWS)⁹ identifying substantial evidence that juvenile Chinook salmon are very sensitive to selenium discharges from the San Luis Unit of the CVP.

The reintroduction of Chinook salmon and existing Central Valley Steelhead are adversely affected by selenium discharges from the project, according to the memo to Tom Stokely of C-WIN from Dennis Lemly, Research Biologist¹⁰. Up to 50% of the juvenile salmon and steelhead in the San Joaquin River downstream of the Merced River would be killed by the continued selenium discharges. The USFWS, in an e-mail to Reclamation, also challenged the analysis and findings in the FEIS/EIR on impacts to

⁸ USFWS Biological Opinion on the Grasslands Bypass Project, December 2009, p 2-3
http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826 . Accessed 4/20/2010.

⁹http://www.rcamnl.wr.usgs.gov/Selenium/Library_articles/Beckon_and_Maurer_Effects_of_Se_on_Listed_Species_SLD_2008.pdf

¹⁰ http://www.c-win.org/webfm_send/9; ; accessed 4/18/2010

salmonids (Attachment 1). The response in the EIS/EIR disregarded both the C-WIN/CSPA and USFWS comments and concluded that the:

“GBP is unlikely to have a significant impact on the fish reintroduced as part of the SJRRP. Because both projects would be expected to improve conditions for salmonids in the SJR and, therefore, they would not have a cumulatively significant impact.”¹¹

The EIS/EIR should be recirculated because there was no opportunity for the public or a peer review of claims in the EIS/EIR responses to comments that selenium loading and bioaccumulation of selenium in the Bay-Delta food chain and ecosystem is not a problem. Since the San Joaquin River from the Merced River to the Delta Boundary and Suisun Bay are listed as impaired for selenium under Section 303(d) of the Clean Water Act (SWRCB 2006), the EIR/S's claims are farfetched, at best. The FEIS does not address the overall problem of continued selenium loading and contamination of the food chain in the Bay-Delta. As the SWRCB noted in the 303(d) listing of waters in the North Bay, *“exotic species may have made food chain more susceptible to accumulation of selenium; health consumption advisory in effect for scaup and scoter (diving ducks)...”¹²*

The National Marine Fisheries Service's (NMFS) November 18, 2009 Endangered Species Act determination of not likely to adversely affect Central Valley Steelhead, Southern DPS of green sturgeon and other listed species could not have considered the comments of Dennis Lemly and the U.S. Fish and Wildlife Service (Attachment 1) that there would be significant mortality of juvenile salmonids and other species from selenium exposure. It is difficult to fathom that mortality of 50% of the juvenile Central Valley steelhead in the San Joaquin River would generate a finding of not likely to adversely affect if that information had been closely examined by NMFS.

Furthermore, given that attempts at restoration of Chinook salmon in the San Joaquin River are imminent through the San Joaquin River Restoration Program, the Regional Board should include cold water fisheries in the Basin Plan as a beneficial use of the San Joaquin River upstream of the Merced River.

- 5. The Draft Staff Report is inaccurate in its assertion that all agricultural lands discharging contaminated drainage into the Grasslands Drainage Area are participating in the Grasslands Bypass Project. Some lands do not participate in the Grasslands Bypass Project and continue to discharge into wetland water supply channels.**

¹¹ FEIS/EIR Responses to federal agencies page I-69 (page 69 of 80).

http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415. Accessed 4/20/2010

¹² http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/2002cwa303d_listof_wqls072003.pdf p 30; accessed 4/18/2010.

The U.S. Fish and Wildlife Service Biological Opinion for the Grasslands Bypass Project (USFWS BO) identified additional lands within the Almond Drive drain (1,100 acres) and Poso/Rice drain area (7,000 acres). These lands either need to be included under the GDA or individual WDR's issued to reduce or eliminate selenium discharges. These areas continue to contaminate wetland water supply channels with selenium from agricultural drainage.¹³ The CVRWQCB incorrectly identifies that all lands within the Grasslands participate in the GBP. C-WIN and CSPA commented on the DEIS/EIR that these lands should be included mandatorily, but there has been no effort to incorporate those lands, and the CVRWQCB has not addressed this issue in the Draft Staff Report either.

The USFWS BO states that the drainage from these 2 areas is above 2 µg/L a majority of the time.¹⁴ The September Monitoring Report for the Grasslands Bypass Project shows elevated selenium levels (26.4 µg/L) in the Agatha Canal (that supplies water to South Grasslands wetlands) during the week of August 10, 2009.¹⁵ The same report also shows elevated selenium levels in the San Joaquin River at Hills Ferry for the week of August 11, 2009 (20.3 µg/L), August 19, 2009 (10.5 µg/L), September 8, 2009 (13.6 µg/L) and September 15, 2009 (29.0 µg/L). These numbers may be indicative of uncontrolled drainage from the Almond Drive and Poso/Rice areas immediately north of the Grasslands Drainage Area.¹⁶

The GBP EIS/R in 2001 and the EIS/R for the GBP Extension in 2009 noted that the proposed action may include the addition of approximately 1,100 acres of farmland to the GBP's Drainage Project Area (DPA), found immediately adjacent to the DPA, south of the SLD and east of the Grassland Bypass Channel, that currently drain to wetland channels, in the area identified by Chilcott (2000)¹⁷ as the Poso Rice Drain Area. The EIS/EIR for the GBP Extension noted the following with respect to these lands that continue to discharge drainage directly into the Grassland wetland supply channels that are outside of the DPA:

"The GDA does not include the lands that are described, and they are not under the jurisdiction of the Grassland Basin Drainers (GBD). Additionally the GBD have no authority to compel these lands to become part of the GBP. However, the GBD will work with the landowners in the areas described to encourage management of drain waters that may contain selenium that is entering wetland supply channels and specifically will

¹³ For location of Rice and Almond drainage areas, see Figure 4, p 11. Chilcott, J. (2000). *Review of Selenium Concentrations in Wetland Water Supply Channels in the Grassland Watershed*. Staff Report, CalEPA, California Regional Water Quality Control Board, Central Valley Region, Sacramento, CA.

¹⁴ USFWS BO, p 85-86. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826. Accessed 4/20/2010.

¹⁵ http://legacy.sfei.org/grassland/reports/gbpdfs/gbp_0909.pdf, Table 13, p 14.

¹⁶ http://legacy.sfei.org/grassland/reports/gbpdfs/gbp_0909.pdf, Table 18, p 16.

¹⁷ Chilcott, J. (2000). *Review of Selenium Concentrations in Wetland Water Supply Channels in the Grassland Watershed*. Staff Report, CalEPA, California Regional Water Quality Control Board, Central Valley Region, Sacramento, CA.

*work with the 1,100 acres of lands that are identified as lands that "... could be annexed to the GDA."*¹⁸

Bureau of Reclamation water contracts specify that the recipient must comply with all applicable water quality standards and requirements, yet there was no discussion in the EIS/EIR of Reclamation's authority, only excuses why the Grasslands Drainers cannot annex those other lands themselves. The CVRWQCB does have the authority to require these discharges to comply with Water Quality Objectives.

The Regional Board should require that the Almond and Rice/Poso landowners participate in the Grasslands Bypass Project or be subject to individual Waste Discharge Requirements and penalties.

6. There is ample evidence that the Grasslands Bypass Project and the larger Westside Regional Drainage Plan are concentrating and storing selenium, salt and boron in the shallow aquifers of the region, prolonging the risk of surface water discharges with large selenium loads and regional degradation of groundwater.

The EIS/EIR identifies the following impacts in comparing Existing Conditions to the Proposed Action:¹⁹

- Increase in selenium and boron soil concentrations
- Unsaturated-zone soil salinity in the GDA doubles
- Projected net increases in the area affected by a shallow water table

The Grasslands 2010-2019 EIS/EIR also fails to mention the problem of boron in treated water and its suitability for irrigation use. Studies conducted to date indicate a need for a 36/1 dilution ratio of fresh water to treated drainage water in order to avoid crop damage.²⁰ Despite admission that no feasible or cost effective solution exists, the FEIS is optimistically unsubstantiated in its claims for a future solution.

Salt, selenium and boron savings extrapolated from Broadview Contract Assignment EA in the 2004 EA/FONSI on the Broadview contract "assignment" to Pajaro Valley Water Management District et al cites a load reduction of 17,000 tons of salt, 1,500 pounds of selenium, and 52,000 pounds of boron to the San Joaquin River each year (Reclamation 2004) from the cessation of irrigation on 9,200 acres.²¹ This amounts to a per acre reduction of 1.85 tons of salt, 0.16 pounds of selenium and 5.65 pounds of

¹⁸ GBP FEIS/R, Response to USFWS, page 55 Of 80,
http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415, accessed 4/21/10

¹⁹GBP FEIS/EIR, p ES-9, 10, Table ES-1.
http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4412 accessed 4/20/10

²⁰ <http://pubs.usgs.gov/of/2008/1210/of2008-1210.pdf> , p 15 (22 of 44) ; accessed 4/18/2010.

²¹ USBR. Broadview Water Assignment Project Draft EA/FONSI. April 2004 p 4-2.

boron. Multiplying this times the remaining approximately 60,000 acres irrigated in the Grasslands area, permanent land retirement of the entire area could result in a maximum reduction of 111,000 tons of salt, 9700 pounds of selenium and 339,000 pounds of boron discharges to aquifers, groundwater and the GBP. Given that existing discharges of selenium through the GBP have been below 5,000 pounds for the past several years, it's clear that there is an ongoing accumulation of selenium, salt and boron in the groundwater within the Grasslands area.

USGS scientists forecast that aquifers of the western San Joaquin Valley contain so much selenium that even if the San Luis Drain were built with an annual discharge of 43,500 pounds of selenium/year with no new additions of selenium (no irrigation); it would still take 63 to 304 years to eliminate the accumulated selenium from the aquifers.²² This does not account for the remaining upslope selenium in nearby source rock and soils.

By ignoring permanent land retirement, the Grasslands Bypass Project through the proposed Basin Plan Amendments will continue to concentrate and store salt, selenium, boron and other toxic substances in the shallow aquifers of the Grasslands area. This creates an ongoing risk of toxic selenium discharges to wetland water supply channels, Mud Slough, the San Joaquin River and the Bay-Delta estuary, especially in wetter years.

7. There is strong evidence contained in the U.S. Fish and Wildlife Service's Biological Opinion for the Grasslands Bypass Project and other reports of existing and continued high risk of selenium exposure to listed species and birds protected under the Migratory Bird Treaty Act from the Grasslands Bypass Project.

Black necked stilts and American avocets are two species that are covered by the Migratory Bird Treaty Act (MBTA)²³ and occur in the project area. The recent monitoring report on the Grasslands reuse area by HT Harvey and Associates²⁴ identified a deformed black necked stilt and abandoned stilt nests, in addition to the findings of selenium contamination. Other migratory waterfowl covered by the MBTA are adversely affected, such as northern shovelers.²⁵

The USFWS noted in its Biological Opinion that egg-selenium concentrations in avocet and stilt eggs collected at the San Joaquin River Improvement Project's Drainage-Reuse Area in 2008 exceeded all geometric mean selenium concentrations in similar

²² <http://pubs.usgs.gov/pp/p1646/> ; accessed 4/18/2010.

²³ [United States Code](#) Title 16, Chapter 7, Subchapter II

²⁴ HT Harvey and Associates, **San Joaquin River Water Quality Improvement Project, Phase I Wildlife Monitoring Report 2008. July 29, 2009**

²⁵ USFWS BO, p 88. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826. Accessed 4/20/2010.

bird eggs collected at Kesterson Reservoir.²⁶ Kesterson was ultimately closed due to violation of the Migratory Bird Treaty Act.

The above-referenced HT Harvey monitoring report also identified several nesting Swainson's hawks (a State listed species) in the vicinity of the recently acquired lands for the San Joaquin River Improvement Project's Drainage Reuse Area and just to the south of the Grassland private wetlands.

8. The Existing Basin Plan Water Quality Objectives for selenium are inadequate to prevent bioaccumulation and harm to various terrestrial and aquatic species. The US Environmental Protection Agency is in the process of issuing new selenium water quality criteria nationally and for the Bay-Delta that are more restrictive than the existing 5 µg/l water quality objective.

In 2000, the USFWS and NMFS issued a joint Biological Opinion on the Environmental Protection Agency's California Toxics Rule.²⁷ In that Opinion, the Environmental Protection Agency committed to revise its national 304(a) acute and chronic aquatic life criteria for selenium and will propose revised acute and chronic aquatic life criteria for selenium in California . Further EPA committed to

*"...utilize existing information to identify water bodies impaired by selenium in the State of California. Impaired is defined as water bodies for which fish or waterfowl consumption advisories exist or where water quality criteria necessary to protect federally listed species are not met. Pursuant to Section 303(d) of the CWA, EPA will work, in cooperation with the Services, and the State of California to promote and develop strategies to identify sources of selenium contamination to the impaired water bodies where federally listed species exist, and use existing authorities and resources to identify, promote, and implement measures to reduce selenium loading into their habitat."*²⁸

Consistent with the California Toxics Rule Biological Opinion, the U.S. Environmental Protection Agency will shortly be issuing new national and San Francisco Bay selenium water quality criteria based on Section 304(a) of the Clean Water Act and the Biological Opinion for the California Toxics Rule.²⁹ The new selenium water quality criteria will be

²⁶ USFWS BO, p 90: "It is notable that the geometric mean, egg-selenium concentration in recurvirostrid eggs collected at the SJRIP Phase I area in 2008 (50.9 µg/g) exceeded all geometric mean selenium concentrations in recurvirostrid eggs collected at Kesterson Reservoir from 1983 to 1985 (Ohlendorf and Hothem 1994) as denoted in Tables 10 and 11."

²⁷ USFWS/NMFS Biological Opinion on California Toxics Rule; letter to Felicia Marcus, Region IX USEPA Administrator, March 24, 2000.

²⁸ USFWS/NMFS Biological Opinion on California Toxics Rule; letter to Felicia Marcus, Region IX USEPA Administrator, March 24, 2000. p 10

²⁹ Personal Communication with Diane Fleck, U.S. Environmental Protection Agency, Region IX, 4/7/2010.

based on consideration of bioaccumulation using the Presser/Luoma (USGS) model. The new water quality criteria are likely to be lower than existing Basin selenium water quality objectives of 2 µg/l and 5 µg/l.

The USFWS GBP BO provides documentation on the extent of contamination of various species. The USFWS BO utilized a “Lemly methodology” selenium toxicity assessment of the South Grasslands. The score was 20, which is considered a high hazard. The discussion states as follows:

*“Given the fact that giant garter snakes forage on fish and tadpoles, and these media are the most selenium-impacted of the media sampled in the South Grasslands, it is reasonable to conclude that the giant garter snake is likely adversely affected by selenium by their diet in this area”.*³⁰

Selenium sampling among small mammals and insects bodes poorly for the San Joaquin Valley Kit Fox; the USFWS GBP BO reported that:

*“HT Harvey and Associates began small mammal sampling in 2008 at the SJRIP drainage reuse area. That effort yielded the capture of 8 deer mice (*Peromyscus maniculatus*), 7 house mice (*Mus musculus*), and one western harvest mouse (*Reithrodontomys megalotis*) within the portion of the SJRIP Reuse Area that has been receiving drainage water since 2001 (existing project facility). Of those samples, 31.3% were at or above the LOAEC for selenium in dogs (e.g., 7.2 µg/g). It is likely that any kit foxes foraging at the SJRIP drainage reuse area would be exposed to elevated levels of selenium through ingestion of the resident mammal prey species.”*³¹

To continue waiving the 5 µg/l selenium Water Quality Objective in the Basin Plan for another 9 years and 3 months is inexcusable, given that the existing selenium water quality objectives are already not protective of fish and wildlife, and selenium bioaccumulation in biota is occurring. Recommending a 15 µg/l selenium (monthly mean) performance goal for Mud Slough (North) and the San Joaquin River above the Merced River in the Basin Plan Compliance Table IV- 4 will provide no protection to aquatic life and will result in harm to biological resources using those waters.

9. Monitoring is inadequate to verify that the claims of success are actually true.

There hasn't been enough monitoring to confirm success that in reducing discharges of selenium. Monitoring is currently inadequate to determine if selenium contamination of biota and downstream water quality is decreasing. In order to better determine impacts

³⁰ USFWS BO, p 116. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826. Accessed 4/20/2010.

³¹ USFWS BO, p 124. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826. Accessed 4/20/2010.

on Mud Slough and the San Joaquin River, year-round water quality monitoring and reporting from Site H and Site N should be reinstated. Total selenium loading in the San Joaquin River should be measured at Vernalis, but is not.

Waste Discharge Requirements WDR's require public disclosure of information, but there isn't enough information to claim success. To the contrary, the USFWS BO³² for the GBP indicates that there is an ongoing high hazard level of selenium contamination to the biota. American Avocet eggs in the San Joaquin River Improvement Project Phase 1 area exceeded criteria submitted to USEPA by a factor of 50% and are likely to exhibit reduced reproductive success. Liver selenium levels in shovelers, coots, and black-necked stilts from the South Grasslands during 2005 were also found to be significantly above background levels.

The USFWS BO also indicated that "...selenium concentrations in sediments and invertebrates are likely due to a continuing influx of selenium contamination that has not been fully abated in the area."³³

The USFWS Biological Opinion for the GBP makes it clear that selenium cycling continues within Grasslands and is attributable to historic use of agricultural drainage resulting in a reservoir of selenium in wetlands and supply channel sediments, storm-water inflows, and unregulated inflows of subsurface drainage directly into wetlands or indirectly into their supply channels.³⁴

Monitoring of rodents and aquatic and terrestrial insects in the Grasslands Drainage Area and downstream in the San Joaquin River and the Bay-Delta estuary would provide better information on selenium bioaccumulation in prey species to determine if a finding of No Significant Impacts is actually justified. Reinstatement of year-round monitoring and reporting at Sites H and N would provide better information on selenium concentrations in the Merced River. Measuring total selenium at Vernalis would allow determination the total amount of selenium in the San Joaquin River.

10. Land retirement and cost effectiveness were not considered in the FED at all as the Best Available Technology. There are no financial or technical assurances that the Basin Plan selenium objectives will EVER be met. The Public Trust is not being met.

Numerous government studies identify the high economic and environmental cost of continuing to irrigate these lands, and that the only reliable Public Trust solution to

³² USFWS BO, p 90. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826. Accessed 4/20/2010.

³³ USFWS BO, p 88. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826. Accessed 4/20/2010.

³⁴ USFWS BO, p 88. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826. Accessed 4/20/2010.

reverse the drainage problem is to halt irrigation of these lands. The National Economic Development Cost/Benefit Summary for the San Luis Drainage Feature Re-Evaluation³⁵, disclosed that the alternative with the least amount of land retirement (100,000 acres for the In-Valley Groundwater Quality Land Retirement Alternative) had a negative benefit/cost summary amounting to \$15.603 million/year in 2050 dollars, or a negative \$780.15 million over the 50 year life of the project. Conversely, the alternative with the greatest amount of land retirement (300,000 acres- In Valley Drainage Impaired Land Retirement Alternative) had a positive benefit/cost summary of \$3.643 million/year in 2050 dollars, or a positive \$182.15 million over the 50 year life of the project. Reclamation's preferred alternative with 194,000 acres of land retirement and over 180,000 acres remaining in production, including the Grasslands (In-Valley Water Needs Land Retirement Alternative) lost \$10.149/million/year, or a loss of over half a billion dollars (\$507.4 million) over 50 years.

The National Economic Development Report Summary for the San Luis Drainage Feature Re-evaluation Record of Decision (SLDFR ROD) concluded that any alternative with less than 300,000 acres of land retirement would be a net economic loss. The Grasslands Bypass Project 2010-2019 EIS/EIR, by contrast, refuses to look at the overall economics through a National Economic Development-like approach, let alone consider land retirement. It narrowly looks at costs to local farmers only.

The U.S. Geological Survey has been clear that any solution to drainage problems must include land retirement. In relation to the San Luis Feature Re-Evaluation and subsequent settlement negotiations convened by Senator Feinstein, the USGS has stated that:

*"Land retirement is a key strategy to reduce drainage because it can effectively reduce drainage to zero if all drainage-impaired lands are retired."*³⁶

USGS goes on to state that *"The treatment sequence of reverse osmosis, selenium bio-treatment and enhanced solar evaporation is unprecedented and untested at the scale needed to meet plan requirements."*

Reclamation's CVPIA land retirement program has demonstrated that there can be a rapid reduction in shallow groundwater from cessation of irrigation.³⁷

The Feasibility Report for the San Luis Drainage Feature Re-evaluation (SLDFR)³⁸ recommended significant increases in subsidies for San Luis Unit contractors in order to

³⁵ San Luis Drainage Feature Re-Evaluation Final EIS, Appendix N Table N-10, p N-17 (21 of 36)
http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=2240 accessed 4/20/ 2010.

³⁶ <http://pubs.usgs.gov/of/2008/1210/> accessed March 29, 2010.

³⁷ CVPIA Land Retirement Land Retirement Demonstration Project Annual Reports
http://www.usbr.gov/mp/cvpia/3408h/data_rpts_links/index.html accessed 3/29/ 2010.

implement the Preferred Alternative for the SLDFR, which did not include maximum land retirement. The Feasibility Report also concluded that the Preferred Alternative which included providing drainage to continued irrigated agriculture the Grassland area was not financially feasible or economically justified (p 97).³⁹ The report concluded that the technology was feasible, but admitted as follows:

“Though the reverse osmosis treatment plants are not at a feasibility level design, this does not affect the finding of technical feasibility. Reverse osmosis technology is continually evolving and improving over time. The Report anticipates these improvements will be incorporated as they become available over the 50-year life of the project.”

The CVRWQCB Draft Staff Report (p 7) states as follows regarding reverse osmosis treatment:

“The EIS/EIR for the 2001 Use Agreement between the Bureau and Authority anticipated that appropriate drainage treatment technology could be identified within a few years of adoption of the agreement. Several technologies were tested but results have been mixed, with no clear Best Practicable Treatment and Control option emerging. The operators now have more information than they did in 2001, but treatment technology must still be tested and validated as appropriate for the GBP.”

Reclamation requested and was approved a National Economic Development waiver for the SLDFR preferred alternative, the In-Valley-Water Needs Land Retirement Alternative, which had an annual net loss of \$10,149,000 (\$507,450,000 over 50 years) and only retired 194,000 acres. We believe this was an economically unjustified decision to select an alternative which has a negative cost-benefit of over half a billion dollars over the 50 year life of the project compared to one that has a positive cost-benefit of over \$182 million. More land retirement should have been selected. The 79,000 acres in the Grasslands was not analyzed for land retirement in the SLDFR or the Grasslands 2010-2019 EIS/R. The only option considered for Grasslands under that process was continued reuse and eventual (and uncertain) reverse osmosis treatment, thus ensuring a negative cost/benefit economic analysis.

The economic analysis contained in the GBP EIS/EIR completely ignores land retirement and simply looks at costs to growers from the proposed action and concludes that the project is cost effective, although implementation costs will somewhat reduce farm profits.⁴⁰

³⁸ p xxvii, http://www.usbr.gov/mp/sccao/sld/docs/sldfr_report/index.html, accessed 3/29/ 2010.

³⁹ P 97, http://www.usbr.gov/mp/sccao/sld/docs/sldfr_report/index.html, accessed 3/29/ 2010.

⁴⁰ GBP FEIS/R, p 272 of 391, Section 8.

http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4412 accessed 4/20/10.

Reclamation's subsequent San Luis Drainage Feature Re-Evaluation (SLDFR) Feasibility Report concludes for Panoche, Pacheco, San Luis and Westlands water districts that:

*"None of the four water districts have the ability to fully repay its assigned capital costs of drainage service facilities. The implementation of either action alternative would far exceed their ability to repay the associated costs of the project when coupled with their existing obligations... None of the San Luis Unit contractors would be able to pay the Restoration Fund charges if [the] action alternative is implemented."*⁴¹

An adequate economic analysis by Reclamation, San Luis Delta-Mendota Water Authority and the Regional Board should include all costs to society of the proposed action, including, but not limited to water subsidies, loss of water-related resources elsewhere (salmon, recreation, etc.), crop subsidies, CVP Project Power Use subsidies, realistic reverse osmosis treatment costs, California Water Bond subsidies (Props 50 and 84), sediment management and disposal, and the costs of offsite environmental pollution such violation of Delta salinity standards and the need for and cost of freshwater dilution flows from New Melones to meet San Joaquin River salinity requirements. This level of accounting and analysis would provide the fullest accounting of the costs of alternatives associated with Grasslands Drainage Area problems, and would meet the disclosure requirements of NEPA and CEQA. As presented in the Grasslands 2010-2019 EIS/EIR and the Regional Board's Draft Staff Report, however, we contend that the economic analysis fails to meet the NEPA and CEQA requirement to provide full disclosure of proposed project impacts, including economic effects related to physical changes to the environment. A more thorough economic analysis for the GBP 2010-2019 would show that this project just doesn't make sense and that land retirement is the only cost effective and realistic alternative that would pass the balancing test of the Public Trust.

The SWRCB should consider the broadest economics approach of continued irrigation of these lands as it balances Public Trust Doctrine issues with the Grassland drainers' request of the SWRCB for continued delay in having to meet Mud Slough and San Joaquin River water quality standards for salt, boron and selenium. The EIS/EIR's optimistic claims for a future solution are unsubstantiated. Land retirement is the Best Available Technology and the most cost effective option, not the GBP's reliance on reverse osmosis.

11. Cumulative effects of water transfers and increased groundwater pumping are not considered. There has been no evaluation or consideration of what is the best type and amount of groundwater pumping combined with land retirement to reduce high salty/seleniferous groundwater in the region, as recommended in the Rainbow Report.

⁴¹ U.S. Bureau of Reclamation. San Luis Drainage Feature Re-evaluation Feasibility Report. March 2008. p 27.

There are several projects in the vicinity of Grasslands to pump shallow and deep groundwater into various aqueducts to provide irrigation water and water transfers.⁴² These are primarily Warren Act pumping or pumping by the San Joaquin River Exchange Contractors (10 and 25 year programs). While the Rainbow Report⁴³ states that land retirement and selective groundwater pumping are suitable tools to be used to reduce or eliminate drainage and high groundwater, there has been no evaluation of how existing groundwater pumping and associated water transfers affects drainage and groundwater in the Grasslands watershed.

Most of the signatories to this letter sent in a comment letter on March 29, 2010 outlining concerns with the most recent groundwater transfer Environmental Assessment by Reclamation.⁴⁴ Concerns include

- No Evaluation of Water Quality Impacts – Selenium & Other Contaminants
- Public Involvement has been curtailed
- The analysis relies on flawed data
- The need for the project is misleading
- The location of the over 23 CCID groundwater supply wells are not disclosed, along with an accurate description of the depth from which water is extracted
- There is no description or map of which conveyance facilities will be used for the water transport of this tainted water
- Neither hydrological data, nor peer-reviewed groundwater modeling of the volumes to be pumped, nor actual water quality data are provided to support the Bureau's conclusions of no significant impact
- The project does not adequately consider groundwater quality degradation
- The DEA does not provide any data to support the conclusion there will be no impact to threatened species such as the Giant garter snake, to Central Valley steelhead, winter-run Chinook salmon, or migratory birds

⁴² 1. *EIS/EIR Water Transfer Program for the San Joaquin River Exchange Contractors Water Authority 2005–2014*, dated December 2004.

2. *Groundwater Pumping/Water Transfer Project for 25 Consecutive Years Environmental Assessment/Initial Study SCH# 2007072012*, dated November 30, 2007.

3. *Transfer of up to 4,400 Acre-feet of Central Valley Project Water from Firebaugh Canal Water District to San Luis Water District or Westlands Water District Environmental Assessment*, dated April 21, 2009

4. *Central California Irrigation District Transfer of up to 15,000 Acre Feet to San Luis, Panoche, Del Puerto and Westlands Water Districts Environmental Assessment*, dated May 5, 2009.

5. *Amendment to Approve an Additional 5,500 Acre-Feet to Central California Irrigation District's Transfer of up to 15,000 Acre-Feet to San Luis, Panoche, Del Puerto, and Westlands Water Districts Supplemental Environmental Assessment*, dated July 23, 2009.

⁴³ Final Report of the San Joaquin Valley Drainage Program, September 1990). http://www.cwin.org/webfm_send/10. Accessed 4/21/2010.

⁴⁴ Attachment 2. Letter from Coalition to Shauna McDonald, USBR, March 29, 2010 re: Draft EA/FONSI for Transfer of up to 20,500 acre-feet of Central Valley Project Water from Central California Irrigation District to San Luis, Panoche, Del Puerto and Westlands Water Districts and up to 5,000 acre-feet of Central Valley Project Water from Firebaugh Canal Water District to San Luis Water District or Westlands Water District, EA-10-02March 2010.

- The impacts to the San Joaquin River Restoration Program are not considered
- No data or analysis is provided regarding the cumulative impacts from the project

The U.S. Fish and Wildlife Service also sent in comments on the above referenced Draft EA/FONSI for transfer of up to 20,500 acre-feet of CVP water from CCID to certain irrigation districts and 5,000 acre-feet of water from Firebaugh Canal Water District to certain irrigation districts. USFWS expressed similar concerns to those in the Coalition letter referenced above. The USFWS also recommended:

*“In addition, due to likely effects to water quality of wetland water supplies and associated adverse effects to giant garter snakes in the project area, the Service recommends that Reclamation initiate consultation with the Service pursuant to section 7(a) of the ESA for this project.”*⁴⁵

Some of the irrigation districts in the region have standards for water quality of pumped groundwater for water transfers, but others do not. There is no overall limitation or prescription for the volume, depth of pumping, and quality of groundwater pumped in the region. There is no evaluation of the water quality effects of groundwater pumping on the water quality of the confined or semi-confined aquifers.

While USGS states that groundwater pumping is part of the proposed solution for drainage problem lands by lowering high groundwater,⁴⁶ there is no discussion or evaluation of groundwater pumping parameters in either the EIS/EIR or the Regional Board’s Draft Staff Report Environmental Checklist. This is a glaring error that must be rectified prior to approval of the proposed Basin Plan Amendments for selenium in order to ensure that ongoing activities such as groundwater pumping and water transfers into and out of the region to not exacerbate poor water quality conditions, especially as it relates to selenium, salt and boron discharges through the Grasslands Bypass Project.

12. The mitigation water supply for additional wetland habitat within federal and State refuge areas has not been assured to be free of selenium because it would draw from local groundwater within drainage impaired areas. This violates the National Wildlife Refuge System Improvement Act of 1997 (PL 105-57), which stipulates that the Secretary of Interior shall under Sec 5 4(a) “assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the Refuge System and the purposes

⁴⁵ Attachment 3, April 10, 2010 letter from Kenneth Sanchez, Assistant Field Supervisor, Fish and Wildlife Service to Shauna McDonald, Bureau of Reclamation regarding Comments on the Draft Environmental Assessment on the Transfer of Up to 20,500 acre-feet of Central Valley Project Water from Central California Irrigation District to the San Luis, Panoche, Del Puerto and Westlands Water Districts, and Up to 5,000 acre-feet of Central Valley Project Water from Firebaugh Canal Water District to San Luis and Westlands Water Districts, DEA-10-12.

⁴⁶ USGS Professional Paper 1210, p 3 (10 of 44). <http://pubs.usgs.gov/of/2008/1210/of2008-1210.pdf>. Accessed 4/21/2010.

of each refuge.” A more suitable mitigation water supply would be Delta Mendota Canal water from the Delta.

The proposed mitigation for impacts to Mud Slough, wetlands and wildlife refuges is to provide water supplies for additional wetland and marsh habitat on federal and state wildlife refuges and lands. The mitigation areas would likely be the China Island Unit of the North Grasslands State Wildlife Area and an as-yet unnamed unit of the federal wildlife refuge system. However, the plan is to use local groundwater. Groundwater in the Grasslands area is highly contaminated with selenium and is an inadequate source of water for refuges. There is no discussion in the EIS/EIR or the Regional Board’s Environmental Checklist regarding selenium standards for these wetland mitigation water supplies. This is then an unmitigated impact without such a standard. Clean water supplies of Delta-Mendota Canal water from the Delta would be a suitable water supply, but that is not the proposed mitigation water supply.

Therefore, there is an unmitigated significant impact for loss of aquatic habitat in Mud Slough from the Proposed Project. The Regional Board should require mitigation water supplies of adequate water quality, or its FED will be deficient in mitigating this impact to less than significant levels.

13. There is no regional enforcement plan by the Regional Board or State Board to control the upslope hydraulic gradient of contaminated subsurface drainage created by irrigation of the northerly area within the Westlands Water District.

On October 22, 2008, Regional Board Executive Office Pamela Creedon wrote to Westlands Water District General Manager Tom Birmingham regarding the lack of resolution for San Luis Unit drainage problems:

“These discussions have raised concerns regarding the potential impact irrigation in the Westlands Water District may have on groundwaters of the State and its threat of exposure to wildlife. Irrigation water when applied to leach salts from the root zone possesses a threat to ground water quality both in the immediate area of application and adjacent areas where groundwater migrates.”

It is our understanding that the Regional Board has taken the position that the irrigated lands waiver of discharge applies and therefore stringent Waste Discharge Requirements are unnecessary.

This is contrary to information about the hydrogeology of the western San Joaquin Valley. The State Board’s Water Rights Decision 1641⁴⁷ states as follows:

⁴⁷p 82-83

http://waterboards.ca.gov/waterrights/board_decisions/adopted_orders/decisions/d1600_d1649/wrd1641_1999dec29.pdf; Accessed 4/21/2010.

“The drainage problem may not be caused entirely by the farmer from whose lands the drainage water is discharged. In the western San Joaquin Valley, the salts originate from the application of irrigation water and from soil minerals, which dissolve as water flows through the soil. The salts are stored in groundwater. As more water is applied, hydraulic pressures increase, water moves downgradient, and salt-laden waters are discharged through existing drainage systems and directly to the river as groundwater accretion. (SJREC 5a.) Drainage found in a farmer’s field may originate upslope and may not have risen into the tile drains on the downslope farmer’s land but for the pressures caused by upslope irrigation.” (SJREC 5a, pp. 27-29.)”

The Draft Staff Report ignores the upslope hydraulic gradient as a key source of contaminated irrigation drainage water that contains not only elevated salts and boron, but also selenium created by irrigation of the northerly area of Westlands and simply allows continued degradation of groundwater of the Grasslands watershed, ultimately resulting in continued excessive discharges of selenium into Mud Slough and the San Joaquin River, exceeding Basin Plan selenium water quality objectives.

14. There is no plan for monitoring or remediation of the excessive levels of mercury which Mud Slough discharges to the San Joaquin River. Mud Slough discharges 50% of the methylated mercury to the San Joaquin River at Vernalis, yet only provides 10% of the river’s flow during the non-irrigation season.

According to the San Joaquin Basin Mercury Study funded by CalFed (Stephenson et. al., 2005), Mud Slough contributes about 50% of the methylated mercury at Vernalis, but only provides 10% of the total water volume during the September-March period.⁴⁸ The project in no way attempts to monitor, let alone improve water quality for mercury discharges, despite requests by various commenters, including the U.S. Environmental Protection Agency.

The USFWS BO documents the mercury problem very well.⁴⁹ Eighteen miles of Panoche Creek and the San Joaquin River from Bear Creek to the Delta boundary are listed under the 2006 Clean Water Act Section 303(d) as water quality limited for mercury impairment. Mercury levels in fish from the lower San Joaquin River and Mud Slough have been found to have elevated mercury levels.

The Regional Board should require the Grasslands Farmers to initiate monitoring to determine the source of mercury in the Grasslands Drainage Area and initiate appropriate remediation.

⁴⁸ <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentVersionID=10637>; accessed 4/18/2010

⁴⁹ ⁴⁹ USFWS BO, p 94-95. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826. Accessed 4/20/2010.

15. There is no watershed plan to prevent or reduce selenium contaminated runoff from the upper watershed during storm events. There is strong evidence that periodic overland sheet flow causes substantial spikes of selenium in the Grasslands area that persist and bioaccumulate.

The EIS/EIR fails to incorporate a watershed/sediment management plan to **prevent** further sedimentation of the San Luis Drain and the subsequent need to remove sediment from the Drain, as requested by various commenters. Upslope land management activities such as overgrazing, cultivation of seasonal watercourses and lack of erosion control actions all contribute to periodic loading and concentration of selenium of sediment and water into the San Luis Drain, Mud Slough and the San Joaquin River.

Much of the selenium that comes into the Grasslands area is periodic storm-induced sheet flow from the northern portion of Westlands in the Panoche and Silver creek watersheds, as discussed in the USFWS BO⁵⁰, and upslope BLM lands. Stormwater discharges into the Grasslands area are specifically exempted in the Use Agreement from having to pay penalties, yet these periodic spikes of selenium are significant and in 1998, Presser and Luoma estimated that the cumulative El Nino year discharge of selenium from Panoche Creek was 8,000 lbs.⁵¹ Discharges range from 4 µg/L to 155 µg/L selenium during a February 1998 storm.⁵² These discharges contaminate wetland water supply channels, Mud Slough and the San Joaquin River.

The EIS/EIR fails to require development of a Watershed Plan to reduce the amount of toxic sediment that accumulates in the Drain. The Sediment Management Plan is complete, but does not include **preventative** Watershed Management Plan to prevent sedimentation in the first place. The Sediment Management Plan only deals with the contaminated sediment in 28 miles of the San Luis Drain. In some cases, the sediment in the San Luis Drain could be classified as Hazardous Waste (> 1000 µg/L). A Watershed Plan would be mitigation for use of the San Luis Drain and wetland water supply channels, and should be included as part of the project. It should be part of the decision and certainly required before the CVRWQCB approves the proposed Basin Plan Amendment.

⁵⁰ USFWS BO, p 86. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826. Accessed 4/20/2010.

⁵¹ Presser, T.S. and S. N. Luoma. (2006). *Forecasting Selenium Discharges to the San Francisco Bay-Delta Estuary: Ecological Effects of a Proposed San Luis Drain Extension*. U.S. Geological Survey Open-File Report 00-416, 196 pp. Available at: <http://pubs.usgs.gov/pp/p1646/>. Accessed 4/21/2010.

⁵² Chilcott, J. and R. Schnagl. (April 1, 2008). *Central Valley Selenium Control Program. Presentation to the North Bay Selenium Advisory Committee Meeting*. Central Valley Regional Water Quality Control Board, Central Valley Region, Sacramento, CA. 69 pp. Available at: http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/northsfbayselenium/Central_Valley_Selenium_Control_Program.pdf. Accessed 4/21/2010.

Examples of measures in the watershed plan to prevent additional selenium inputs to Grasslands would be a limitation of cultivation of seasonal watercourses, sediment catchment basins, revegetation of erosive seasonal waterways, etc. Watershed protection programs are common throughout California. CalEPA and the Resources Agency have created a California Watershed Council to assist with such efforts.⁵³ This is not rocket science.

16. There is no federal Fish and Wildlife Coordination Act Report for this project; therefore, the project is not in compliance with the Fish and Wildlife Coordination Act.

Although the FEIS/R states that, “A *Fish and Wildlife Coordination Act* report will be provided at the conclusion of the NEPA process with recommendations, to Reclamation”,⁵⁴ the public record for the project⁵⁵ contains no record of a Fish and Wildlife Coordination Act (FWCA) Report from the U.S. Fish and Wildlife Service for this project. Since the FWCA requires such a report for activities that affect fish and wildlife, the project cannot possibly be in compliance with that law. The USFWS Biological Opinion for the Grasslands bypass Project is limited to review of listed species and is not a substitute a FWCA report.

⁵³ http://cwp.resources.ca.gov/cwc_about.php

⁵⁴ GBP FEIS/R, p 16-2 (345 of 391) http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4412 accessed 4/20/10.

⁵⁵ http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3513, accessed 3/29/2010

LIST OF ATTACHMENTS

Attachment 1- E-mail from Thomas Maurer, USFWS, to Shauna McDonald, BOR, Subject: Reply to the BOR response to FWS comment #10 on the Continuation of the GBP Draft EIS/EIR. November 18, 2009

Attachment 2- Letter from Coalition to Shauna McDonald, USBR, March 29, 2010 re: Draft EA/FONSI for Transfer of up to 20,500 acre-feet of Central Valley Project Water from Central California Irrigation District to San Luis, Panoche, Del Puerto and Westlands Water Districts and up to 5,000 acre-feet of Central Valley Project Water from Firebaugh Canal Water District to San Luis Water District or Westlands Water District, EA-10-02. March 2010.

Attachment 3- April 10, 2010 letter from Kenneth Sanchez, Assistant Field Supervisor, Fish and Wildlife Service to Shauna McDonald, Bureau of Reclamation regarding Comments on the Draft Environmental Assessment on the Transfer of Up to 20,500 acre-feet of Central Valley Project Water from Central California Irrigation District to the San Luis, Panoche, Del Puerto and Westlands Water Districts, and Up to 5,000 acre-feet of Central Valley Project Water from Firebaugh Canal Water District to San Luis and Westlands Water Districts, DEA-10-12.

Tom Stokely

From: "Terry Young" <terry_young@mindspring.com>
To: "Tom Stokely" <tstokely@att.net>
Cc: "Hal Candee" <hcandee@altshulerberzon.com>
Sent: Friday, January 15, 2010 3:34 PM
Subject: FW: Reply to the BOR response to FWS comment #10 on the Continuation of the GBP Draft EIS/EIR
Hi, Tom. I have this response from Maurer on the salmon issue, but I scanned my records and I don't have anything like a formal letter. I'll keep looking and send it on to you if I find it.

Dr. Terry F. Young
6114 La Salle Ave. #328
Oakland, CA 94611
T 510-531-4053
F 510-531-4049

-----Original Message-----

From: [Thomas Maurer@fws.gov](mailto:Thomas_Maurer@fws.gov) [mailto:Thomas_Maurer@fws.gov]
Sent: Monday, January 04, 2010 10:51 AM
To: terry_young@mindspring.com
Subject: Fw: Reply to the BOR response to FWS comment #10 on the Continuation of the GBP Draft EIS/EIR

Terry,

here is the final response I sent to BOR on the salmonid and selenium issue. If you have any other questions let me know.

Happy 2010!
Tom

~~~~~  
Thomas C. Maurer  
Chief, Investigations and Prevention Branch  
Sacramento Fish and Wildlife Office  
U.S. Fish and Wildlife Service  
2800 Cottage Way, Room W-2605  
Sacramento, California 95825  
(916) 414-6594  
fax 414-6713  
[thomas\\_maurer@fws.gov](mailto:thomas_maurer@fws.gov)  
~~~~~

----- Forwarded by Thomas Maurer/SAC/R1/FWS/DOI on 01/04/2010 10:37 AM

Thomas
Maurer/SAC/R1/FWS
/DOI To
smcdonald@usbr.gov
11/18/2009 05:43 PM cc
Kathy Wood/R8/FWS/DOI@FWS, Joy

Winckel/SAC/R1/FWS/DOI@FWS, Janet
Whitlock/SAC/R1/FWS/DOI@FWS, Daniel
Welsh/SAC/R1/FWS/DOI@FWS,
Douglas.Hampton@noaa.gov

Subject

Reply to the BOR response to FWS
comment #10 on the Continuation of
the GBP Draft EIS/EIR

Dear Shauna,

I was asked to review the Bureau's response to Service comment #10 on the Grassland Bypass Project FEIS and to provide comments to you. Since Dr. Beckon is in the Ukraine on a Fulbright Fellowship it took awhile longer to get his input and respond than I had planned.

For many reasons the Bureau response to Service comment #10 in the Grassland Bypass Project FEIS (Appendix I-02 pages I-59 to I-65) minimizes the likelihood that selenium levels in the lower San Joaquin River are impacting salmonids now and in the future.

The Bureau response misinterprets the discussion of the Hamilton et al. (1990) study by the Service in its Beckon and Maurer (2008) document. Beckon and Maurer (2008) noted USEPA's perceived deficiencies with the 60-90 day dataset in Hamilton et al. (1990) only to articulate why USEPA discounted the results. Not noted by the Bureau response is that Beckon and Maurer (2008) also discusses why the Hamilton et al. (1990) results are actually reflective of real-world selenium exposures and are useful data that USEPA should not have discounted. Beckon and Maurer (2008) then go on to note several other studies on salmonid sensitivity to selenium that support the Hamilton et al. (1990) 60-90 day exposure results and confirm that salmonids are very sensitive to selenium.

Saiki et al. (1991) clearly documents that juvenile salmonids were present in the lower San Joaquin River for periods of time that were sufficient for them to accumulate selenium to levels that may have caused mortality in as much as 25 percent of the fish rearing in these areas. There is good reason to believe that right now, and in the future, juvenile salmonids continue to be at risk.

Site H is not as problematic a sampling site as it is described for monitoring selenium levels in this stretch of the San Joaquin River. Although the site is inappropriate to use for selenium load

calculations, the historic data clearly shows that selenium concentrations here can reach high levels throughout much of the year regardless of Merced River influences. The highest selenium levels occur in the summer when Merced River flows through the side channel would not be influencing site H. Currently, sampling at site H is less frequent, and thus potential spikes of selenium may not be observed. A more detailed analysis of the data at this site may assess how well the current sampling regime would detect the highest selenium levels. Even the current reduced sampling effort shows concentrations over 9 µg/L. This is above the 20 percent mortality level and three times higher than the 10 percent mortality level for salmonids (attached chart includes more recent data for 2007).

The Bureau response to Service comments seems to imply that fish being exposed to selenium must reach an equilibrium tissue concentration before toxicity occurs, yet, this is not the case. Also, the 3.3 µg/L selenium concentration represents a direct 10 percent mortality-an extreme toxicological endpoint that puts an additional stress on an already challenged fish community. Selenium effects on other physiological functions that might influence smoltification and indirect survival are unknown but can not be discounted.

The Bureau response to Service comments also too easily brushes off steelhead as not being anymore at risk than Chinook salmon by simply comparing adult and juvenile migration patterns of steelhead to the spring-run Chinook. The references noted in Beckon and Maurer (2008) clearly show that steelhead migratory patterns are much more complicated-they are best described to be nearly year-round spawners, juveniles will hold over for many months to a year, or may not even migrate to the ocean. Beckon and Maurer (2008) referenced a study on rainbow trout, of which steelhead are a variant, indicating a 20 percent mortality of fry if female rainbow trout have a tissue selenium concentration of only 2.93 µg/g whole body dry weight. For these reasons steelhead are likely at greater risk than Chinook salmon.

In simple terms the fish will tell the story. The Service recommends that, at the very least, follow-up monitoring similar to Saki et al. (1991) should be conducted to show whether salmonids are being exposed to selenium for sufficient periods of time at the concentrations occurring in the lower San Joaquin River now and in the future.

A copy of Beckon and Maurer is also attached to this e-mail. Please don't hesitate to contact me if you have any questions.

Tom

~~~~~  
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~~~~~

[attachment "Reply to BOR response to FWS comment #10 on GBP EIR
CHART.doc" deleted by Thomas Maurer/SAC/R1/FWS/DOI] [attachment
"Beckon_Maurer_2008_Effects_Selenium_Listed_Species.pdf" deleted by
Thomas Maurer/SAC/R1/FWS/DOI]

Attachment 2



NORTH
COAST
RIVERS
ALLIANCE



March 29, 2010
Revised

Ms. Shauna McDonald
Bureau of Reclamation
1243 N Street
Fresno, CA 93721

Re: Draft EA/FONSI for Transfer of up to 20,500 acre-feet of Central Valley Project Water from Central California Irrigation District to San Luis, Panoche, Del Puerto and Westlands Water Districts and up to 5,000 acre-feet of Central Valley Project Water from Firebaugh Canal Water District to San Luis Water District or Westlands Water District, EA-10-02 March 2010.

Dear Ms. Mc Donald:

Thank you for the opportunity to comment on the Draft EA/FONSI for the 2 year proposed transfer of up to 30,500 acre-feet of CVP contract surface water from Central California

Irrigation District [CCID] and Firebaugh Canal Water District [FCWD] to Westlands, San Luis, Panoche, and Del Puerto Water Districts. We received no scoping notice of the proposed action and observed a notice of the DEA on March 19th with a comment period ending March 29th on the Bureau's Mid Pacific website where the DEA unavailable for at least two days during that minimal ten day comment period. Announced on March 24th the Bureau of Reclamation extended the comment deadline to April 9th for a project that is planned to commence on April 1, 2010, nine days before the close of the comment period and consideration of public comments.¹

As we understand the proposed action, CCID intends to transfer 20,500 acre-feet of CVP surface water to the lands of CCID landowners which are located in other neighboring districts. FCWD also intends to transfer up to 5,000 acre-feet of CVP surface water to the lands of FCWD landowners which are located in other neighboring districts. The lands of these multi-district owners are also in San Luis, Panoche, Del Puerto, and Westlands Water Districts. Within CCID and FCWD, the districts propose to substitute locally pumped groundwater for the transferred surface water supplies from the CVP. Both FCWD and CCID anticipate pumping high volumes of shallow groundwater, some of which is within the aquifer contaminated by selenium, agricultural drainage and other agricultural contaminants leached from the soil.

In general we find the DEA woefully deficient and insufficient to support informed decision making. Public involvement and the environmental information provided prior to the completion of the EA have been non-existent despite extensive public involvement and concern. There are numerous inaccuracies and assertions which are little more than water project developer opinions unsupported by data or facts asserting there is no impact on the environment from this project. Misleading statements are made to support an urgent need that presents a flawed analysis of available water for delivery and limits the range of alternatives considered. Six other environmental assessments involving the substitution of groundwater supplies for surface contract sales and transfers are proffered as a rationale for this project. Instead these are ample evidence that there is a systematic segmentation of the project impacts from these various projects that propose to substitute surface water contract supplies for long term groundwater pumping. We urge the document be reissued for public comment after the substantive deficiencies are fixed.

No Evaluation of Water Quality Impacts – Selenium & Other Contaminants. The DEA's most glaring omission is the Bureau's failure to analyze water quality impacts of the proposed action carefully. The Bureau makes no attempt to evaluate the quality of groundwater that would be pumped from under lands of the CCID and the FCWD to substitute for Central Valley Project surface water that the two districts would transfer to their Transfer Recipient Districts (TRDs). This groundwater occurs in an area well know for high concentrations and loads of selenium and other contaminants, each of which are easily mobilized by irrigation water from upslope

¹ http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=5243

agricultural activities. Both FCWD and CCID anticipate pumping high volumes of shallow drainage tainted groundwater from approximately 23 largely undisclosed well locations within CCID and 5 wells within FCWD that will be used to substitute for the transferred surface water supplies. Some of the tainted groundwater from FCWD would be pumped directly into the Mendota Pool where it would then enter FCWD's Intake Canal for distribution to participating landowners in the district. At the present time monitoring data for selenium and other contaminants in the Delta Mendota Canal, Mendota Pool and at Vernalis are not gathered and were not presented in this DEA, despite the fact that the Bureau has staff in its Fresno office producing monthly monitoring reports on Delta Mendota Canal water quality, including salts and selenium concentrations and loads.

The DEA acknowledges no restrictions for selenium in pumped groundwater from FCWD, and makes no attempt either to document selenium concentrations and loads from the DMC's discharge into the Mendota Pool or to assess the total concentrations and loads from the proposed action and the DMC's discharge in relation to TMDL regulations for selenium that is enforced by the Central Valley Regional Water Quality Control Board. The restrictions on levels of selenium in pumped groundwater from CCID are not defined in the DEA, even though they are clearly stated in these adopted regulations. The amount of water that is proposed to be pump from the semi-confined aquifer is much more than the San Joaquin Valley Drainage Program had recommended. It is likely that with these higher pumping volumes, the highly contaminated shallow drainage will migrate down and contaminate the wells being used.²

The DEA indicates CCID requires salt water quality levels for blended downstream quality not to exceed 700 mg/L, but the DEA does not require monitoring or reporting with regard to groundwater quality in either district to ensure this blended salt standard is achieved and the quality of the receiving waters are not degraded from the various contaminants identified in this groundwater.³ For the FCWD the DEA notes the groundwater often exceeds 3,000 mg/L of

² See SJVDP [1990] As noted in the Final Report of the SJVDP, groundwater management may be viewed as a planned degradation of the groundwater resource, even though this degradation is occurring under existing conditions. As part of the SJVDP Planning effort, a finite element model was used to develop a detailed analysis of pumping the semi-confined aquifer for management of the shallow water table (Quinn, et al., 1990). The results of the analyses showed the importance of well field design and such factors as depth of pumping, pumping rate, and aquifer properties for achieving management of the shallow water table through groundwater pumping. The final recommendations included only 8,000 AFY in a well field area of 10,000 acres with even well spacing on the quarter mile grid.

³See BOR EA/IS for 25-Year Groundwater Pumping/Water Transfer Project for the San Joaquin River Exchanges Contractors Water Authority 2007. "Along the Outside Canal west of Firebaugh, electrical conductivities ranged from about 3,700 to 6,400 micromhos in 2002 at the Snyder and Del Rey wells. Near the First Lift Canal north of Arbios, the electrical conductivity was about 5,500 micromhos in 1989. These three wells are thus located in the highest salinity area for groundwater in the Sierran Sands. The first two of the wells are in the area where the water for transfer would be developed. A number of monitor wells have been installed in the area that would develop the water for transfer by the Exchange Contractors, Westland WD, Broadview WD, and other entities. TDS concentrations were about 11,000 mg/l in groundwater at a depth of about 50 feet at FC-7, near Nees Avenue and the DMC. A TDS concentration of 9,900 mg/l was found in groundwater from a depth of about 50 feet at FC-6, near

salt. The groundwater quality data presented in the DEA is from previous groundwater investigations contained in a previous Environmental Assessment⁴ from 2000-2004 and appears to be from deep wells and not applicable to the proposed shallow drainage tainted groundwater pumping proposed in this project. The DEA, without any analysis or data declares that increasing the groundwater pumping transfer program from 15,000 acre feet per year to 40,500 acre feet per year will not have any water quality or air quality impacts nor will it “likely have little or no direct effect on groundwater levels or flow patterns within the source area over the 25-year duration” of the project.⁵

Public Involvement has been curtailed. Courts have consistently wanted to see evidence of meaningful public involvement for environmental assessments. Council on Environmental Quality [CEQ] regulations require public involvement in Environmental Assessments [EAs] to the fullest extent practicable (40 C.F.R § 1501.4(e)(2)). Providing a ten day comment period for a draft EA when the document was only available for 8 days is not sufficient, when federal agencies and their responsible entities typically apply a 15-day public comment standard prior to agency approval and implementation of proposed actions. We appreciate the additional nine days of comment period to April 9, 2010, but note the announcement seems to both grant the public an extended time period and to take away consideration of comments by keeping the federal action date of April 1, 2010.⁶ No information or input from the public in the form of scoping or stakeholder meetings were conducted to make sure there was meaningful public involvement prior to the approximately eight day comment period provided prior to the Bureau’s decision to transfer up to 61,000 acre feet of surface water over a 2-year period and substitute an equal amount of groundwater to replace this transferred contract supply.

Herndon Avenue, between the Second and Third Lift Canals. This groundwater is present in oxidized Coast Range deposits above the Sierran Sands, and also contains significant selenium concentrations. That is, selenium concentrations exceeded the drinking water standard and fish and wildlife water quality criteria”. [pp 3-62] “Few water supply wells have been completed in most of the FCWD and Camp 13 Drainage District because of the poor groundwater quality and the availability of canal water for irrigation. These wells are either deep wells (600 to 710 feet, tapping strata below the Corcoran clay) in the west part of the area that would develop the water for transfer or shallow wells in the east part (180 to 390 feet deep, tapping strata above the Corcoran clay). Wells in the City of Firebaugh and CCID wells in the area are generally less than about 250 feet deep. Better quality groundwater has generally been present between about 100 and 250 feet in depth than in other depth intervals in the east part of the area where the water for transfer would be developed.” (page3-58)

⁴ **ibid.**

⁵ Draft FONSE-10-02 March 2010 pg 5. In the 2007 EA 15,000 AFY was authorized and 30,500 AFY is authorized in this DEA for a total of 40,500 AFY.

⁶ <http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=32041>

The DEA relies on flawed data. Courts have consistently held misleading data presented as fact or failing to take “hard look” at the project’s true effect fails to inform the public of project’s environmental impact.⁷

The need for the project is misleading. As a basis for the purpose and need the DEA presents several facts that are misleading. First, while the Bureau of Reclamation did issue an allocation of 5% on February 26, 2010, this allocation has subsequently been increased closer to 25% for most South of Delta contractors.⁸ Equally while it might be technically correct that CVP contractors “south-of-Delta” experienced reduced “water supply allocations” in 2007, 2008 and 2009, most did not experience huge reductions in water deliveries and received 74% to 100% of their contract water supplies⁹. In fact Westlands Water District, the most junior water contractor received 74% of their CVP contract as of 5-13-09 from various sources including the state’s drought water bank and groundwater pumping. And in 2008 and 2009 they had surplus or carryover storage. Table 1 at page 11 of the DEA that lists the “Average SOD agricultural allocation as a percentage of the contract total” is misleading, because it does not include the actual deliveries, carryover and surplus supplies provided to these contractors. It again reiterates the inaccurate allocation figure of 5% for 2010.

The location of the over 23 CCID groundwater supply wells are not disclosed, along with an accurate description of the depth from which water is extracted. The depth cited in the DEA consequences section, suggest this is in the relatively shallow 180 to 240 feet, an area that could include selenium and agricultural drainage tainted groundwater above the Corcoran Clay. Without information on where these wells are located, the water quality impacts and impacts to wildlife, public health and air quality are not fully disclosed and therefore cannot be accurately determined by the Bureau and district administrators. This lack of information about the spatial extent of CCID wells that are integral to the proposed action compounds the Bureau’s failure to evaluate water quality impacts from pumping local groundwater supplies to substitute for CVP surface water supplies. These flaws in the DEA cast doubt on Bureau’s compliance with the purpose and intent of the National Environmental Policy Act.

Further there is no description or map of which conveyance facilities will be used for the water transport of this tainted water. The spatial location of the wells, the volume pumped and location of conveyance facilities all can have significant impacts on the environment.¹⁰ The DEA merely states, “Landowners in CCID would pump from up to 23 wells interspersed throughout

⁷ Natural Resources Defense Council v U.S. Forest Service (9th Cir. August 5, 2005) and Native Ecosystems Council v. U.S. Forest Service (9th Cir. August 11, 2005)

⁸ <http://www.usbr.gov/mp/PA/water/index.html>

⁹ Lester Snow to Senator Feinstein, May 15, 2009.

¹⁰ See Rainbow Report (San Joaquin Valley Drainage Program 1990)

CCID with a total capacity of 75 cfs.” page 5 and concludes there would be no impact on endangered species ... “because water would move in existing facilities..” pg 37. There is an aerial map of the five wells in the FCWD with well # 5 discharging directly into the Mendota Pool (Figure 3 of the DEA). It is likely the discharge of this degraded water directly into the Mendota Pool would require a permit pursuant to the federal Clean Water Act and the state’s Porter-Cologne Water Quality Control Act. Briefly at page 6 of the DEA mentions potential hearings to determine if CEQA or other aspects of the California Water Code apply. Clearly before this project proceeds, compliance with CEQA and all required permits need to be disclosed and acquired.

Neither hydrological data, nor peer-reviewed groundwater modeling of the volumes to be pumped, nor actual water quality data are provided to support the Bureau’s conclusions of no significant impact. Pumping of groundwater in the semi-confined aquifer (above the Corcoran clay layer) from drainage impacted areas while protecting the environment, public health and maintaining agricultural productivity is a complex feat, and the disclosure of all the steps the Bureau needs to take to achieve this outcome is missing from the DEA. The DEA seems to suggest the six other “related environmental analyses” completed from 2004-2009 provides adequate assurance and data, despite the segmented and different project definitions, without doing the analysis to demonstrate that is in fact the case. *Indeed, this is not the case.* The volume of water, this specific 2 year program and the 25 year time period of the overall Exchange Contractor’s water transfer program, and lack of information on well locations makes this conclusion and the document flawed. Furthermore, reliance on the 2007 EA, where two wells were pumped for 45 to 60 days at 1,000 ac feet from a different aquifer is not conclusive.¹¹

The project does not adequately consider groundwater quality degradation. Pumping such large volumes of water from the aquifer (above the Corcoran clay) will result in a steep gradient where selenium, salts and other contaminants will likely migrate.¹² Salts leached from the soil, pesticide byproducts and from the applied groundwater will also add contaminants that will further degrade the groundwater. No monitoring is required in FCWD and while the CCID

¹¹ See Hydro Report in Appendix F **ibid**. USBOR 2007 pg 139 pg 2.

¹² See “Geologic Sources, Mobilization & Transport of Selenium from the California Coast Ranges to the Western San Joaquin Valley, A Reconnaissance Study”. USGS 90-4070. Presser, Swain, Tiball & Severson. 1990

“Irrigation-Induced Contamination of Water, Sediment, and Biota in the Western United States.” USGS Professional Paper 1655, 2003. More than 40 percent of the surface water-samples exceeded the U.S. Environmental Protection Agency [USEPA] aquatic-life chronic criterion [5 micrograms per liter]. In groundwater, more than 35 percent of the selenium concentrations exceeded the MCL [50 micrograms per liter]. Because ground water can discharge to the surface where wildlife can be exposed to it the criteria used for ground water were both the maximum contaminant levels (MCL’s) for drinking water and the chronic criteria for the protection of freshwater aquatic life”. pp 1.

requires “non-detect” for selenium in the well water pumped from this project, there is no definition of what this limit is or even if monitoring is required to determine this level. FCWD will discharge directly into the Mendota Pool. There is no selenium limit and as the DEA notes groundwater often exceeds 3,000, mg/l TDS.¹³ Finally the DEA at page 22 also concludes there will be no subsidence from this groundwater pumping. No data is provided only this assurance from the project advocates, “The Mendota Pool Group reports have shown that pumping from shallow aquifers does not cause subsidence”. This is based on one year of data based on significantly different volumes of water pumped. With one district requiring monitoring of groundwater conditions and the other not, the Bureau must step in and require consistent administration of the National Environmental Policy Act, the federal Clean Water Act, and the California Porter-Cologne Water Quality Control Act to ensure that the waters of the United States and the state of California are protected through appropriate implementation of the proposed action.

The DEA does not provide any data to support the conclusion there will be no impact to threatened species such as the Giant garter snake, to winter-run Chinook salmon, or migratory birds. As mentioned FCWD will discharge directly into the Mendota Pool and yet the DEA at page 26 indicates there is no impact to the Giant garter snake or to the water quality of the Mendota Pool where flows are diverted into the Grasslands area. Again as mentioned there is no monitoring required nor data collected regarding the selenium contaminants in FCWD groundwater that will be discharged directly into the Mendota Pool nor is it clear what levels of selenium will or will not be detected in the CCID monitoring. These discharges are likely to elevate selenium, salt, mercury and other contaminant levels in these surface waters threatening migratory birds, the Giant garter snake and other wildlife.¹⁴

Further the impacts to the San Joaquin River Restoration are not considered. Much of the following statement at page 17 regarding the San Joaquin River is not accurate:

“The reach from Gravelly Ford to Mendota Pool (about 17 miles) is perennially dry except during flood control releases from Friant Dam. During the irrigation season, most of the water released from the Mendota Pool to the SJR and to irrigators is imported from the Delta via the DMC. This water has higher concentrations of Total Dissolved Solids than water in the upper reaches of the SJR, and can be affected by runoff and seepage into the canal. The reach from Gravelly Ford to Mendota Pool (about 17 miles)

¹³ DEA at page 25: “Groundwater in FCWD has generally not been pumped for direct irrigation use (without mixing), because of the high salinity (often exceeding about 3,000 mg/l of total dissolved solids) (Reclamation 2004).”

¹⁴ See Drainage Solutions: Homage to the Ponds of Folly, Joseph Skorupa, U.S. Fish and Wildlife Service. 2003 U.C. Salinity/Drainage Annual Conference March 26, 2003. WWD Peck Ranch SE 750 ug/l 50% embryo deformity rate; severe overall avian reproductive failure >70%; WWD Britz-Deavenport SE 65 ug/L 33% embryo deformity rate; WWD Red Rock Ranch SE 1,600 ug/l deformity rates 60%,5%,0%,100%; WWD Unidentified Cotton Gin Unknown degree of contamination; groundwater discharge of unknown purpose 16% embryo deformity rate.

is perennially dry except during flood control releases from Friant Dam. During the irrigation season, most of the water released from the Mendota Pool to the SJR and to irrigators is imported from the Delta via the DMC. This water has higher concentrations of Total Dissolved Solids than water in the upper reaches of the SJR, and can be affected by runoff and seepage into the canal.”

The San Joaquin River restoration project has altered this description and the impacts significantly. We agree it is likely seepage, runoff and ground-water from this project will likely contribute to the pollution found in the San Joaquin River. The San Joaquin River is listed as “water quality limited” under Section 303 (d) of the Clean Water Act for multiple constituents of concern including selenium, electrical conductivity (salt) and boron. The Central Valley Regional Water Quality Control Board, peer-reviewed analysis supporting the TMDL objectives for the San Joaquin River water quality objectives identify groundwater as providing 4% of the overall flow draining the lower San Joaquin River watershed at an average concentration of 1,600 mg/L, contributing 30% of the overall salt load.¹⁵ As noted on page 17 of the DEA “Panoche Creek in the Westlands Water District, an ephemeral stream, also flows into Mendota Pool and, during high flows in the winter and spring, high concentrations of selenium have been brought into Mendota Pool via Panoche Creek flows (North State Resources 1999).”

Finally increased surface water deliveries to the 300,000 acres of selenium laden lands and identified drainage impaired lands within Westlands Water District and the approximately 74,000 acres of selenium laden lands and drainage impaired lands within the northerly area will also bring increased groundwater seepage and migration to the San Joaquin River over this specific 2 year project and the 25 year period of the project.¹⁶ No data, monitoring or analysis of these project impacts is provided.

No data or analysis is provided regarding the cumulative impacts from the project. Selenium concentrations precipitate from solution in to sediment and over time bioaccumulate in plant material, benthic invertebrates, fish species, mammals, and fish species, including benthic feeders like sturgeon. The danger of bringing this selenium-laden water to surface and spreading it on fields or in grasslands has brought death, deformity and reproduction problems to wildlife, and the proposed action has serious potential to result in similar outcomes.¹⁷

¹⁵ August 6, 2007 CRWQCB Letter to Bob Eckart USBOR from Gail Cismowski: Comments on the Draft EA and Initial Study for the 25-Year Water Transfer Project for the San Joaquin River Exchange Contractors Water Authority.

¹⁶ See the San Luis Drainage Feature Re-evaluation Record of Decision [2006] Bureau of Reclamation. http://www.usbr.gov/mp/scao/sld/docs/sldfr_report/slfr_3-08_v02.pdf

¹⁷ The U.S. Geological Survey, in cooperation with the SJVDP and as part of the Regional Aquifer System Analysis Program completed a report on the sources, distribution, and mobility of selenium in the San Joaquin Valley, California (Gilliom and others, 1989). This report noted the following with respect to groundwater pumping in the drainage impacted area: “*The large quantity of high-selenium ground water (50 to 1000 pg/L) in the general range of 20 to 150, feet below the water table makes it desirable to use management practices that leave this water where it is, rather than bring it to the land surface or allow it to move into parts of the aquifer that*

The cumulative impacts analysis in the DEA does not include the addition of this surface water transfer along with the cumulative impacts from all the supplemental water imports that will irrigate toxic selenium lands on the Westside of the Central Valley including the various Warren Act contracts, transfers, exchanges, and assignments and these impacts on selenium drainage offsite at Westlands Water District and the various other west side districts receiving these additional supplies of water.¹⁸ In addition the four environmental assessments listed on page 3 as related environmental analyses document how this DEA and the other EA's foster a segmentation of the project need and purpose—providing supplemental water to these Westside CVP contractors—and avoids a hard look at the long term cumulative impacts from delivering imported water to irrigate selenium soils identified by the Bureau of Reclamation as

may be used for water supply. Water-table control strategies based on increasing groundwater discharge need to be carefully evaluated with respect to their potential to affect the movement of water with high selenium concentrations movement of water with high selenium concentrations."

See USBOR Draft EA/IS for 25-Year Groundwater Pumping-Water Transfer Project for the San Joaquin River Exchange Contractors Water Authority. August 27, 2007 USFWS Comments—proposed action would degrade groundwater, increase selenium concentrations in DMC sumps, lessened water quality in the Main Canal and add selenium and mercury loads into refuges and pump mercury and selenium into the Delta Mendota Canal upstream of the Mendota Pool where Mercury levels in fish are already at unsafe levels and the San Joaquin River is listed on the 2006 Clean Water Act Section 303 [d] list. Pp 1-20

¹⁸ Final WQ Data Report for the WWD 2008 Pump-In Project 09/25/2008 (PDF, 40 KB). Description: DWR Bryte Lab data final water quality report for the Westland's ...www.water.ca.gov/publications/browse.cfm?letter=F - Cached

Also see DWR Bulletin 132-95 Westlands Water District--"Turn-In" Agreements. In August 1994, the Department signed two "turn-in" agreements with Westlands Water District. Under the terms of these agreements, WWD could pump up to 100,000 acre-feet of ground water directly into the California Aqueduct from WWD's wells located alongside the aqueduct. In addition, WWD could also pump up to 50,000 acre-feet of ground water into the Mendota Pool for conveyance to the California Aqueduct through WWD's Lateral 7."

"During the term of these agreements, March 1994 through February 1995, 16,000 acre-feet of water was conveyed from the Mendota Pool to the California Aqueduct, through Lateral 7, and 84,600 acre-feet of water was pumped directly into the California Aqueduct. The total, 100,600 acre-feet was conveyed by the Department to Reaches 5 through 7 to be used within WWD's service area."

"Westlands Water District--Kings River Water. A letter agreement signed May 12, 1995, between the Department and Westlands Water District approved the acceptance into the California Aqueduct of up to 10,000 acre-feet of Kings River Water for delivery to WWD through Reaches 5, 6, and 7 of the California Aqueduct. This nonproject water will be made available to WWD through an agreement between WWD and the Kings River Water Association. The water will be released from Pine Flat Reservoir and will flow to the Mendota Pool via the Kings River and Fresno Slough. WWD will then convey the water from the Mendota Pool to the California Aqueduct through WWD's Lateral 7."

Also see: Westlands Water District. 1995. Conveyance of Nonproject Groundwater from the Mendota Pool Area Using the California Aqueduct, Draft Environmental Impact Report, Westlands Water District. pp. 303

causing harm to ground water quality, fish, wildlife and agricultural production. Water delivery to these lands that leach toxins into the ground water and surrounding surface waters is not possible without the Bureau of Reclamation's delivery system and to a large extent the water storage facilities of the federal government.

In short, our organizations consider this draft Environmental Assessment and proposed Finding of No Significant Impact (FONSI) to be seriously inadequate and out of compliance with the National Environmental Policy Act. Please include our organizations and contact persons on your distribution list for all further notices related to these and all other transfers affecting south of Delta Central Valley Project contractors.

Respectfully submitted,



Jim Metropulos
Senior Advocate
Sierra Club California



Steven L. Evans
Conservation Director
Friends of the River



Zeke Grader
Executive Director
Pacific Coast Federation of Fisherman's
Federation Association Inc.



Larry Collins
President
Crab Boat Owners



Carolee Krieger
Board President and Executive Director
California Water Impact Network



Bill Jennings
Chairman Executive Director
California Sportfishing Protection Alliance



Bruce Tokars
Salmon Water Now



Jonas Minton
Senior Water Policy Advisor
Planning and Conservation League



Conner Everts
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Southern California Watershed Alliance

Warren V. Truitt President
Save the American River Association
Fred Egger President
North Coast Rivers Alliance

Cc:

Dorothy R. Rice, Executive Director, State Water Resources Control Board

Pamela C. Creedon, California Regional Water Quality Control Board, Central Valley Region

Mark Cowin, Director, Department of Water Resources

John McCamman, Director, California Department of Fish and Game

Lisa Jackson, EPA Administrator

Jared Blumenfeld, Region 9 EPA Administrator

Michael Connor, Commissioner Bureau of Reclamation

Donald Glaser, Regional Director Bureau of Reclamation

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Richard Atwater, General Manager, Inland Empire Utilities Agency

Michael R. Markus, General Manager, Orange County Water District

Kevin P. Hunt, General Manager, Municipal Water District of Orange County

Gary Bobker, The Bay Institute

Kate Poole, NRDC

Trent Orr, Earthjustice

Antonio Rossmann, Rossmann and Moore

Interested Parties



United States Department of the Interior



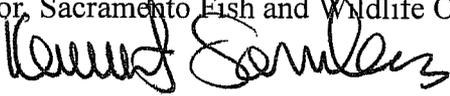
FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

In Reply Refer To:
81420-2010-TA-0527

9 April 2010

To: Shauna McDonald, Resources Management Division,
Bureau of Reclamation, South-Central California Area Office,
Fresno, California

From: Assistant Field Supervisor, Sacramento Fish and Wildlife Office,
Sacramento, California 

Subject: Comments on the Draft Environmental Assessment on the Transfer of Up to 20,500 acre-feet of Central Valley Project Water from Central California Irrigation District to San Luis, Panoche, Del Puerto and Westlands Water Districts, and Up to 5,000 acre-feet of Central Valley Project Water from Firebaugh Canal Water District to San Luis and Westlands Water Districts, DEA-10-12

This memorandum transmits U.S. Fish and Wildlife Service (Service) review and recommendations on the U.S. Bureau of Reclamation's (Reclamation) Draft Environmental Assessment (DEA) dated February 2010, on the Transfer of up to 20,500 acre-feet of Central Valley Project (CVP) Water from Central California Irrigation District (CCID) to San Luis, Panoche, Del Puerto and Westlands Water Districts, and up to 5,000 acre-feet of CVP Water from Firebaugh Canal Water District (FCWD) to San Luis and Westlands Water Districts. We received your press release announcing the availability of the DEA 10-12 for public comment on March 19, and the press release extending the public comment period to April 9, 2010 on March 24, 2010. The Service provides these comments and recommendations under authority of, and in accordance with, provisions of the National Environmental Policy Act (NEPA) (40 CFR Part 1500), and within associated guidance from the President's Council on Environmental Quality. Our focus in providing these comments is to assist Reclamation in its efforts to "...make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment" [40 CFR Part 1500.1(c)]. We are also providing comments on DEA 10-12 pursuant to section 7(a) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) (ESA).

Based on the project description provided, our primary concerns regarding the proposed action are related to: 1) the need for adequate water quality standards and monitoring assurances, since some of the groundwater from this project will comingle with refuge water supplies, and with waters used by the giant garter snake; 2) potential further cumulative effects of this action, when combined with other reasonably foreseeable actions which have the potential to further erode the

current baseline status of the giant garter snake; and 3) because of the potential for affects on the giant garter snake we are recommending that Reclamation initiate consultation with the Service pursuant to section 7(a) of the ESA

Proposed Action

Reclamation proposes to approve the transfer of up to 20,500 acre-feet/year (AFY) of CVP water from CCID to the transfer recipient districts San Luis, Panoche, Del Puerto and Westlands Water Districts (TRDs) that will be exchanged with well water pumped from within CCID and the transfer of up to 5,000 AFY of CVP water from FCWD to TRDs San Luis and Westlands Water Districts that will be exchanged with well water pumped from within FCWD from April 1, 2010 through December 31, 2010 and April 1, 2011 through December 31, 2011. The groundwater would be pumped from CCID and FCWD from the upper aquifer, and above the Corcoran Clay layer, at a depth of between 180 to 240 feet, and blended with surface-water deliveries. For the CCID transfer, landowners would pump from up to 23 wells, interspersed throughout district into district conveyance facilities. For FCWD, landowners would pump groundwater from four wells directly into the Intake Canal and one well would discharge water directly into Mendota Pool near the Intake Canal. Some of the wells in CCID are located in the drainage-impacted area of the district; all of the wells in FCWD are located in a drainage-impacted area. The Proposed Action would free-up a commensurate quantity of water from CCID and FCWD supplies equivalent to the quantity developed from groundwater pumping.

Related Actions

Grassland Bypass Project

The Service recently completed a biological opinion on the Third Use Agreement for the Grassland Bypass Project (GBP BO), 2010 – 2019 on December 18, 2009 (Service File No. 2009-F-1036). This consultation included an updated Status of the Species and Environmental Baseline on the threatened giant garter snake (*Thamnophis gigas*) in the vicinity of the DEA's current project. The garter snake has been adversely affected by water management actions (i.e. water transfers/exchanges, and ground water pumping, which have contributed to changes in cropping patterns) in the San Joaquin Valley and the current baseline of this species in the Grasslands wetlands and Mendota Pool vicinity indicates the species is experiencing significantly declining numbers, reduced reproduction and distribution through this portion of its range.

We incorporate GBP BO by reference to these comments and ask Reclamation use the revised Environmental Baseline for the giant garter snake in their evaluation of effects in the DEA. A copy of the Grasslands Bypass Project 2010 – 2019 Biological Opinion is available at: http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3513

San Joaquin River Exchange Contractors 25-Year Transfer Project

The Service previously commented on the 25-year Groundwater Pumping/Water Transfer Project for the San Joaquin River Exchange Contractors Water Authority (25-Year Transfer Project) on August 27, 2007 (Service File No. 07-I-1580). This project authorized a maximum groundwater pumping regime of 15,000 AFY from drainage-impaired lands in CCID and

FCWD. This program involves the use of up to 15 new wells and 5 existing wells. Groundwater is pumped from the upper aquifer above a depth of 350 feet (above the Corcoran clay) but below the drainage-impaired shallow groundwater, blended with surface water deliveries into two CCID canals (Outside and Main) to ensure adequate water quality for irrigation needs, and then delivered downstream for agricultural use and refuge water supplies. The pumped groundwater would substitute for CVP surface water delivery primarily from the Delta Mendota Canal (DMC).

Because the current project considered in the DEA involves groundwater pumping and exchanges that are similar to those considered in the 25-year Transfer Project and involve some wells in drainage-impacted areas, we incorporate our comments here by reference and ask that Reclamation consider these comments when revising and finalizing the DEA. A copy of the Service comments on the 25-year Transfer Project is available at: http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=3034

Meyers Groundwater Banking Project

The Service previously provided comments on the Meyers Farms Family Trust Exchange Contract (related to operations of the Meyers Groundwater Banking Project (Meyers GWB)) on August 13, 2007 (Service File No. 07-TA-1458). The Meyers GWB involves storage and exchange of CVP water facilitated by the operation of a water bank adjacent to Mendota Pool. The bank is a privately owned facility located east of the Fresno Slough branch of Mendota Pool. The bank stores Kings River flood flows and CVP water, and at a later date, based on hydrological conditions and demand, a like volume of CVP water would be pumped from the bank and returned to Mendota Pool for exchange with Reclamation in the following manner: (1) extracted water would be delivered to end users who divert water from Mendota Pool, and (2) Reclamation would exchange the water pumped from the San Luis Reservoir and San Luis Canal.

Because the Meyers GWB involves groundwater pumping and exchanges into the Mendota Pool similar to the pumping from well #5 in FCWD described in the DEA for this project, we incorporate this memo here by reference. Specifically, we ask that Reclamation consider the effects of the Proposed Action in the DEA in combination with the Meyers GWB, and other projects described in this memo in the Cumulative Effects section of the DEA.

Mendota Pool Group 10-Year Exchange Agreement

The Service previously conducted an ESA review of the Mendota Pool Group 10-Year Exchange Agreement EIS (MPG Exchanges) on January 13, 2005 (Service File No. 04-I-1482) and concluded that that project, with the environmental commitments included in the EIS, may affect but would not likely adversely affect the giant garter snake within the project area. Because the MPG Exchanges involve groundwater pumping and exchanges into the Mendota Pool similar to the pumping from well #5 in FCWD described in the DEA for this project, we incorporate this memo here by reference.

Specifically we ask that Reclamation review and adopt the design constraints and environmental commitments made in the FEIS for the MPG Exchanges (USBR 2005) for any well water pumped into the Mendota Pool from this project including:

- Pump well water into Mendota Pool only when flow in Fresno Slough is to the south.
- Well water with Total Dissolved Solids (TDS) concentrations greater than 2,000 mg/L will not be pumped into the Mendota Pool. During the fall months, when there is reduced flow in the Mendota Pool and water quality at the Mendota Wildlife Area is most critical, well water with TDS higher than 1,200 mg/L TDS will not be pumped into Mendota Pool.
- Selenium in well water pumped into Mendota Pool will not exceed 2.0 µg/L.

Central Valley Project Improvement Act

The 102nd Congress passed multipurpose water legislation the Central Valley Project Improvement Act (CVPIA) Public Law 102-575, which was signed into law October 30, 1992. Title 34 of the CVPIA mandated changes in management of the CVP, particularly for the protection, restoration, and enhancement of fish, wildlife, and associated habitats. To help further guide these changes, the CVPIA, in section 3402(f), identified that one of its purposes is to “achieve a reasonable balance among competing demands for CVP water, including the requirements of fish and wildlife, agricultural, municipal and industrial and power contractors.” The conditions of CVP water transfers were defined in Section 3405(a)(1) of the CVPIA and we ask that Reclamation consider the following relevant provisions and revise the DEA as follows:

1. *No transfer will be authorized unless the transfer is consistent with State law, including but not limited to provisions of the California Environmental Quality Act (CEQA) (§3405(a)(1)(D)).*

Service Comments and Recommendations: The DEA does not reference any CEQA documentation for this project and a quick search on CEQANet on April 5, 2010 revealed that no CEQA documentation had been filed with the State Clearinghouse for this project from FCWD, CCID, the San Joaquin River Exchange Contractors Water Authority or the San Luis Delta Mendota Water Authority.

2. *No transfer will be authorized if it results in a significant reduction in quantity or quality of water currently used for fish and wildlife purposes... alternative measures and mitigation activities will be developed and implemented as integral and concurrent elements of any such transfer to provide fish and wildlife benefits substantially equivalent to those lost as a consequence of such transfer ((§3405(a)(1)(L)).*

Service Comments and Recommendations: Some of the groundwater from this project will comingle with refuge water supplies, and with waters used by the giant garter snake. Reclamation should consider these impacts and develop measures to compensate for these effects to fish and wildlife resources.

3. *No transfer will be authorized unless it is determined that such transfer will have no significant long-term adverse impact on groundwater conditions in the transferor's service area ((§3405(a)(1)(J)).*

Service Comments and Recommendations: The DEA does not analyze the potential for degradation of the production wells by downward migration of the contaminated shallow groundwater. Aquifer degradation has been identified as an anticipated effect of groundwater pumping in or near drainage impacted areas in the western San Joaquin Valley (Quinn et al., 1990; Quinn 1991; SJVDIP 1999; SJVDP 1990; USBR 2004). Because at least some of the wells in the project are located within the drainage-impacted areas of CCID and entirely within the drainage-impacted area of FCWD, Reclamation should consider the potential for groundwater degradation in the DEA. We further recommend, that Reclamation more broadly evaluate the implications of groundwater degradation on an ecosystem level (including, but not necessarily limited to listed species impacts) associated with this project such as future impacts to water quality of refuge water supplies in the Grasslands and Mendota Pool.

Biological Opinion on Implementation of CVPIA

The Service completed a biological opinion on the implementation of the CVPIA on November 21, 2000 (Service File No. 98-F-0124) (CVPIA BO). The following language is excerpted from page 2-50 of the CVPIA BO, Reclamation and Fish and Wildlife Service Commitments for New and Continuing Project Actions:

The actions identified in this section VI have been developed by Reclamation and the Service to conserve listed species and address impacts resulting from past and continuing actions related to the operation and maintenance of the CVP and implementation of the CVPIA. The programs implemented pursuant to the CVPIA are intended to provide mitigation of past CVP effects on fish, wildlife, and associated habitats, including listed species and critical habitat.

It is critical that these commitments be considered in any future consultations regarding Reclamation and Service actions because they are an essential part of the Environmental Baseline condition. Proper evaluation of the incremental effects of Reclamation and Service actions cannot be undertaken without a proper accounting of these measures and provisions. Subsequent tiered consultations addressing future actions or programs carried out by Reclamation (e.g., contract renewal) shall consider what incremental effect, if any, such action or program causes in addition to the effects included in the existing environmental baseline and not impacts that may result from past actions of operation and maintenance of the CVP.

The CVPIA BO provided guidance on coordination between Reclamation and the Service regarding Conjunctive Use Projects (page 2-58): *“Within the affected groundwater basin, CVP water deliveries can also allow increased agricultural or urban development using groundwater (either within or outside designated service areas) by directly recharging the aquifer or indirectly freeing groundwater supplies for other users. Future conjunctive use projects*

involving Reclamation will be coordinated with the Service's Sacramento Fish and Wildlife Office Endangered Species Division to address effects to listed species."

The current project described in the DEA fits the description of a Conjunctive Use Project in the CVPIA BO. Although Reclamation provided notice of availability of the DEA for this project, no coordination with the Service was completed regarding effects to listed species prior to the release of the DEA.

Specific Comments

Proposed Action is not well defined

The proposed action in the DEA provides incomplete information pursuant to NEPA on the scope, location, and associated impacts of the project. The Service believes that there are several aspects of the proposed action that are not adequately described and/or analyzed in the DEA. As a result, it is difficult to fully assess the impacts of this project on water quality of surface water bodies that are used by the giant garter snake. The Service recommends that the DEA for this project be revised to address the following deficiencies:

Location of wells in CCID

The locations of the 23 wells in CCID are not provided in the DEA. The DEA does provide an aerial photograph of the five well locations in FCWD. Depth of wells is described in Environmental Consequences section as relatively shallow, from 180 to 240 feet. This depth corresponds to the shallow, poorer quality water in the aquifer above the Corcoran clay (as depicted in the 25-year San Joaquin Exchange Contractor Groundwater Pumping/Transfer EA, USBR 2007). Reclamation should revise the DEA and include a map that discloses the location of the 23 wells in CCID that will be involved in this project and a description of which wells are within the drainage-impaired lands of CCID.

Information on which conveyance systems will be impacted

No map or description of the CCID conveyance facilities is provided in the DEA, the only language describing where the pumped water would go within CCID is on page 5, "*Landowners in CCID would pump from up to 23 wells interspersed throughout CCID with a total capacity of 75 cfs...*" and from page 37, "*...because water would move in existing facilities, there would be no effect on endangered species.*" However, in an e-mail to Reclamation dated March 24, 2010, Chris White of CCID noted that some of the wells in CCID would pump into conveyance facilities that are used to deliver refuge water (White *in litt.* 2010). Four wells in FCWD would be pumped into the District's Intake Canal; well #5 would discharge directly into Mendota Pool (Figure 3 of the DEA). Therefore, there is potential that well water both from CCID and FCWD could reach and impact surface waters where giant garter snakes are present (e.g., Grasslands wetlands and Mendota Pool). Reclamation should delete the sentence on page 37 of the DEA concluding "*no effect*" to listed species, and revise the document to disclose which conveyance systems and downstream waters could potentially receive this pumped groundwater.

Quality of extracted water

Water quality data (electrical conductivity (EC) and TDS) is presented in the DEA for CCID's Main Canal (for the years 2000 to 2004) on page 14 (Tables 4 and 5). However, there is no information provided with respect to the recent quality of groundwater (TDS, selenium or mercury) that has been pumped from the same aquifer (above the Corcoran clay) in CCID or FCWD. Similar projects involving pumping of groundwater in FCWD and CCID have been implemented since 2007. For FCWD, the DEA also notes on page 3 a similar transfer action took place in 2009: *"This action was identical to the corresponding proposed action analyzed in this document, except that the amount of water was 600 acre-feet less, the action took place only from April through September 2009, and a fifth well that would pump into Mendota Pool was not included."* And for CCID, the DEA notes that, *"The action was identical to the corresponding proposed action analyzed in this document, except that the amount of water was less [5,000 AF less], and the action took place only from March 2009 through December 2009."* Yet, there is no water quality data presented in the DEA from either the 2009 groundwater transfers or from the 25-Year Transfer Project (USBR 2007). Without this water quality information, it is not possible to assess the impacts of the proposed action on downstream surface water quality.

Reclamation should provide recent data on water quality from comparable wells in CCID and FCWD in the DEA. In addition, Reclamation should summarize water quality data in the Main Canal before and after implementation of similar previous groundwater transfer programs in CCID and FCWD.

Commitments on quality of groundwater pumped

Water quality commitments for groundwater pumped from this project differ between CCID and FCWD. The CCID requires "non-detect" for selenium in the well water pumped from this project, but does not define what the detection limit for selenium is (i.e., there are different detection limits depending on which analytical methodology is employed). The CCID also established a maximum of 1,500 mg/L TDS in well water pumped into their district conveyance facilities, and commits to not exceed 700 EC (in $\mu\text{S}/\text{cm}$) in downstream blended water quality. But there are no monitoring or reporting requirements, and as noted above, no water quality data of extracted water from previous groundwater exchanges/transfers involving CCID, or downstream water quality is presented in the DEA.

FCWD has poorer quality water (the entire district is drainage-impaired). The DEA notes that groundwater often exceeds 3,000 mg/L TDS. Four of the wells in FCWD would pump directly into the district's Intake Canal for use on agricultural lands and would not affect surface waters. One well, well #5 in FCWD will pump water directly into the Mendota Pool. There are no water quality commitments for water pumped from wells in FCWD.

We recommend that Reclamation adopt the water quality commitments from the MPG EIS (USBR 2005) for well water pumped into Mendota Pool. For any groundwater pumped into or affecting the quality of refuge water supplies, or waters occupied by giant garter snake, the Service recommends that Reclamation require this water not exceed 2 $\mu\text{g}/\text{L}$ selenium. This selenium standard is consistent with requirements of other Reclamation groundwater exchange

programs including the MPG EIS and with the DMC Pump-In Program (USBR 2010). Further, to address effects to downstream uses, the DEA should include a list of applicable water standards/objectives (e.g., TDS concentrations for irrigation suitability in CVP contracts, selenium objectives in Grassland Marshes, etc) and identify how the proposed Project will ensure that groundwater pumping into supply canals will not affect the achievement of those standards. This project, as well as other groundwater pump-in projects affecting refuge water quality, should include a monitoring and reporting requirement for TDS, selenium and mercury. Finally, the DEA should consider the refuge water directive of Section 3406(d) of the CVPIA, requiring firm water supplies of suitable quality to maintain and improve wetland habitat on units of the National Wildlife Refuge System in the Central Valley of California, Los Banos and North Grasslands wildlife management areas; and on the Grasslands Resources Conservation District.

Analyses of Environmental Consequences are incomplete and/or insufficient

Effects analysis of water quality impacts incomplete

On page 22 of the DEA, it is assumed that FCWD's groundwater pumping into district conveyance and into Mendota Pool would not increase TDS by more than 30 mg/L. Reclamation should provide water quality data or analysis to support this conclusion in the DEA. The DEA notes that CCID requires 700 EC ($\mu\text{S}/\text{cm}$) downstream blended quality, but provides no description of how that is measured or reported and provides no recent water quality data from similar groundwater pump-ins to support this conclusion.

Land use analysis is incomplete

Land use is described for only half of the districts involved in this project. There are no land use descriptions for CCID, Panoche, and Del Puerto WD's. Yet on page 24, the DEA concludes that "*There would be no land use changes in CCID.*" And on page 28 the DEA finds, "*The giant garter snake, because of extensive losses of suitable natural wetlands, now relies on rice fields in parts of its range. Some rice is grown in portions of some of the districts involved in these proposed actions...The Proposed Action also would not change the land use patterns of the cultivated or fallowed fields that do have value to listed species...There would be no loss of acres of land planted with rice as a result of these proposed actions.*" No rice acreage is denoted in the DEA for FCWD or CCID, and no data is provided to support the conclusion.

Water quality analysis assumes no effect to giant garter snake

On page 28 of the DEA Reclamation concludes that diminished water quality in the supply water would have no effect on the giant garter snake, "*TDS would remain at or below 700 mg/L, which would be low enough to protect the giant garter snake both in Mendota Pool and in suitable habitat in the Grasslands wetlands. Requirements by CCID for non-detect levels of selenium, and the fact that FCWD will not approve any water transfer involving a substitution of groundwater that FCWD believes would interfere with their ability to meet water quality objectives imposed by the Central Valley Regional Water Quality Control Board would protect the giant garter snake from effects of elevated selenium. There would be no loss of acres of land planted with rice as a result of these proposed actions.*" There is no data or analysis to support the conclusion that TDS at or below 700 mg/L would be adequate to protect the giant garter snake. Further, there is no monitoring or reporting program to ensure that wetland water supplies remain at or below 700 mg/L TDS.

Increasing salinity in wetland water supplies could have deleterious effects to the habitat used by the giant garter snake. This was pointed out in a comment letter from the California Department of Fish and Game on the Meyers GWB (CDFG 2005), a project that allows groundwater pumping into the Mendota Pool, *“The water to be extracted from MFWB would be more saline and contain different minerals than that present within the Delta-Mendota Canal/Mendota Pool/Fresno Slough system. This extracted water could degrade existing water quality within the Mendota Pool system, particularly if the banked water is returned to the Fresno Slough during dry or critically dry years as planned. The Project appears to exchange high quality delta water for water that would be degraded as a result of integration with the impaired groundwater in MFWB vicinity. The EA states that Mendota Pool is included in the “2002 Clean Water Act Section 303(d) List of Water Quality Limited Segments,” and that the salinity in Mendota Pool is “generally acceptable for both agriculture and aquatic life.” Any actions that further impair the water quality of Mendota Pool should be avoided due to the potential impacts on aquatic life and the terrestrial species that depend on this biota.”*

Effects to San Joaquin River Restoration are not considered

The DEA notes on page 17 that the reach of the San Joaquin River from Gravelly Ford to Mendota Pool *“is perennially dry except during flood control releases from Friant Dam.”* This appears to be old language and should be updated with current information from the San Joaquin River Restoration Program.

Listed species effects not adequately analyzed and Formal Section 7 Consultation is warranted

The DEA concludes on page 37 that, *“Since there would be no ground disturbance, no adverse water quality changes in garter snake habitat, and because water would move in existing facilities, there would be no effect on endangered species.”* The Service does not concur with this conclusion. Although project impacts are difficult to fully evaluate due to incomplete information provided on the Proposed Action in the DEA, because the project would authorize pumping of lower quality water into conveyance or surface waters that provide water to wetland habitats occupied by giant garter snakes, the Service believes that this project could adversely affect giant garter snakes in the Grasslands wetlands and Mendota Pool vicinity. As a result, the Service recommends that Reclamation initiate formal consultation under the ESA for effects to giant garter snakes and their habitats.

Cumulative Effects Analysis is incomplete

The DEA does not consider the effect of this project cumulatively with other existing projects. For example, other projects in the vicinity of the Proposed Action include: the San Joaquin River Exchange Contractor’s 10-year Transfer Program, the San Joaquin River Exchange Contractor’s 25-Year Transfer Project; MPG Exchanges; Meyer’s GWB; San Joaquin River Restoration Program and the Grassland Bypass Project Extension, 2010-2019. Of particular concern is the effect of the Proposed Action in the DEA combined with the effects of other projects on the achievement of water quality objectives and Total Maximum Daily Loads (TMDLs) in the Grassland wetland supply channels and the San Joaquin River. Further, the

DEA does not consider the effect of this groundwater pumping project with other similar projects on regional groundwater degradation.

The proposed action, in concert with other groundwater pumping projects, lessens water quality in the Main Canal (owned by CCID) which provides refuge water supplies to much of the Grasslands wetlands. As the Service noted in comments on the San Joaquin River Exchange Contractor's 25-Year Groundwater Pumping/Water Transfer Project, "*...the proposed action is expected to lessen water quality in the Main Canal (the supply source to some wildlife management areas in the Grasslands) by 30 to 70 $\mu\text{S/cm EC}$ during March through October of non-critical years and up to 90 $\mu\text{S/cm EC}$ during critical years (equating to roughly an 8-12% increase in EC/TDS concentrations). A TDS increase of 8 to 12% in the Main Canal would cascade through the delivery systems resulting in an increase of TDS delivered to Refuge units which already receive water at and above water quality standards...could cumulatively compromise the ability of the Grasslands Refuges to meet their obligations to comply with the SJR Salt TMDL.*" The 25-Year Transfer Project EA/IS assumed that extracted water would be approximately 2,000 mg/L TDS, and authorized up to 15,000 AFY of groundwater pumping. The proposed action would authorize an additional 25,500 AFY of groundwater pumping/exchanges. Of that, 20,500 AFY would be authorized to be pumped within CCID with a commitment that TDS of extracted water not exceed 1,500 mg/L TDS. An additional 5,000 AFY would be authorized to be pumped from FCWD, it is unknown what portion of that 5,000 AFY would be pumped directly into Mendota Pool from well #5. Although there are no water quality commitments for groundwater pumped from FCWD wells, the DEA notes that TDS often exceeds 3,000 mg/L TDS.

Reclamation should discuss the relationship between the Proposed Action and past, present and future reasonably foreseeable projects in the Cumulative Effects Section of the EA. Specifically, Reclamation should provide additional information on cumulative impacts of past and present and reasonably foreseeable future projects on achievement of water quality objectives and TMDLs in the Grassland wetland supply channels and the San Joaquin River.

Conclusion

In conclusion, the Service recommends that the DEA be revised to address the information deficiencies identified in this memo and be recirculated for public comment. In addition, due to likely effects to water quality of wetland water supplies and associated adverse effects to garter snakes in the project area, the Service recommends that Reclamation initiate consultation with the Service pursuant to section 7(a) of the ESA for this project.

We appreciate the opportunity to review this DEA. If you have any questions or comments about this memo, please contact Ms. Susan Jones or Ms. Joy Winckel of my staff at (916) 414-6600.

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