CA Save Our Streams Council

NORTH
COAST
RIVERS
ALLIANCE

June 30, 2014

Karl E. Longley, Chairman
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200,
Rancho Cordova, California 95670-6114

Re: Draft Waste Discharge Requirements for the Grasslands Bypass Project

Dear Chairman Longley and Members of the Regional Board;

Thank you for the opportunity to comment on the draft Waste Discharge Requirements (WDR) for the Grasslands Bypass Project (GBP). We appreciate your staff's attempt to regulate the Grassland Drainers[1] discharge of selenium and other pollutants into Mud Slough North and the San Joaquin River. The draft WDR falls short of protecting beneficial uses along with evaluating, disclosing, regulating and monitoring this pollution discharge to ensure the protection and improvement of the quality of the waters of the San Joaquin River along with endangered and threatened species including salmon, steelhead, sturgeon and other aquatic species that are adversely impacted.

The WDR is not consistent with federal and state law and fail to implement required federal and state mitigation requirements contained in the FEIR/EIS, USFWS Reasonable and Prudent measures required in USFWS's Biological Opinion and the USBR governing use agreement dated December 18, 2009. The failure of the WDR to adhere to these required mitigation measures and monitoring requirements renders protection of the sloughs, wetlands, San Joaquin River and the Bay-Delta estuary beneficial uses at risk from extensive contamination and leaves the costs of cleanup and remedies upon other users.

Issuance of the proposed WDR for the GBP follows the 2010 Basin Plan Amendment that delays implementation of the 5 ppb selenium water quality objective in Mud Slough North and the San Joaquin River from the Mud Slough Confluence to the Merced River. The WDR will perpetuate a polluted dead zone in those reaches. Our principle concerns with the proposed WDR are the following:

1. The WDR fail to implement required mitigation measures contained in final EIS/EIR, the 2009 Use Agreement and the US Fish and Wildlife Service's Biological Opinion for the GBP. This failure perpetuates a chronic pattern of non-compliance by the Drainers.
2. As a condition of meeting the WDR objectives, the Drainers propose new activities that do not have WDR's and have never been evaluated under CEQA or NEPA.
3. The WDR proposed monitoring and reporting program included with the WDR is inadequate to determine the level of pollution being discharged by the Drainers, the impact to beneficial uses, harm to downstream uses and compliance with the Clean Water Act. Other state and federal agencies have raised concerns with the proposed reduced monitoring.
4. Pursuant to Basin Plan policies, the proposed project should be subject to an NPDES permit.

We urge the Regional Board to send the proposed WDR back to the drawing board. There is noncompliance with the mitigation measures in the Use Agreement, the Final EIS/EIR and the Biological Opinion permit conditions under which the project must meet to

[1] Grassland Drainers include the Broadview Water District (retired drainage fees paid by Westlands Water District), Charleston Drainage District, Firebaugh Canal Water District, Pacheco Water District, Panoche Drainage District, Widren Water District (retired lands, water transferred to Westlands Water District.) and the Camp 13 Drainage District (located in part of Central California Irrigation District) whose boundaries encompass approximately 97,000 gross acres of irrigated farmland on the Westside of the San Joaquin Valley.

discharge pollutants in excess of adopted standards. Under such circumstances of non-compliance the Basin Plan requires an immediate prohibition of discharges exceeding Basin Plan selenium objectives. The 2010 selenium Basin Plan Amendment specifically states (item 6 on page IV-26.00- emphasis added):

"*c. The discharge of agricultural subsurface drainage water to the San Joaquin River from Sack Dam to Mud Slough (north) is prohibited after 1 October 2010, unless water quality objectives for selenium are being met. The discharge of agricultural subsurface drainage water to Mud Slough (north) and the San Joaquin River from the Mud Slough confluence to the Merced River is prohibited after 31 December 2019 unless water quality objectives for selenium are being met.* ***The prohibition becomes effective immediately upon Board determination that timely and adequate mitigation, as outlined in the 2010-2019 Agreement for Continued Use of the San Luis Drain1 has not been provided.*****"**

We urge the Central Valley Regional Water Quality Control Board to enforce the Basin Plan and prohibit discharges into Mud Slough North that violate the Basin Plan Water Quality Objectives for selenium and redraft the proposed WDR.

Any adoption of a WDR for the GBP along with a required monitoring and reporting plan must include measureable outcomes to ensure the legally required mitigation measures, the reasonable and prudent requirements of the Biological Opinion and conditions of the Use Agreement and ROD are enforced. These measures include adequate biological and water quality monitoring to ensure the protection of water quality, public trust values and beneficial uses. Further the WDR needs to ensure there is a viable plan to cease this polluted discharge by the 2019 compliance deadline.

The Grasslands Bypass Project has received consecutive extended pollution discharge time schedules to comply with downstream water quality objectives. The current demonstration waste treatment systems being tested will either work or not. Full-scale deployment of waste treatment and disposal of wastes will either be affordable to the District or not. The answers should be available in the next year or so. The environment and public health should not have to wait until the end of 2019 to discover that the issue of Grassland Drainer's toxic waste disposal remains unresolved. The GBP WDR needs to include requirements to revisit the issue annually to evaluate progress and the feasibility of treatment and disposal. If it becomes apparent that these approaches are technically infeasible or economically prohibitive, then the prohibition should be triggered before the expiration of the compliance schedule.

Reuse of polluted drainage in the GBP's San Joaquin River Water Quality Improvement Project isn't eliminating the loading of wastes. It is simply stockpiling wastes on land. WDRs also regulate discharges to land. The continued recycling of wastes will ultimately turn vast areas of the Central Valley into wastelands. The practice of drainage reuse is not sustainable and will inevitably lead to having to permanently fallow more and more land. This practice of drainage reuse needs to be stringently regulated in WDRs.

Attached are specific comments on the draft WDR and the status of the Grasslands Bypass Project to support our findings and recommendations.

Sincerely,

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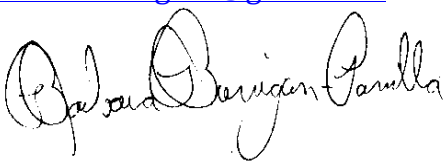

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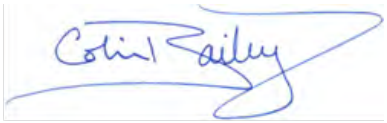

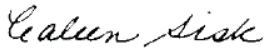

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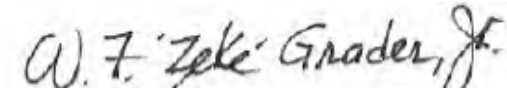

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Attachments:

1- Coalition letter of August 11, 2011 on Grasslands Bypass Project Monitoring Program
2- Coalition letter of April 22, 2013 on Grasslands Bypass Project Monitoring Program
3- Coalition letter of November 26, 2013 on Grasslands Bypass Project Monitoring Program
4- Coalition letter of October 17, 2011 on the Panoche Demonstration Treatment Plant.

Specific Comments on Proposed Waste Discharge Requirements for Grasslands Bypass Project

1. There is a pattern of chronic non-compliance with the mitigation measures in final EIS/EIR, the 2009 Use Agreement and the Biological Opinion by the US Fish and Wildlife Service

We have researched compliance with the FEIS/EIR mitigation measures, the Record of Decision, and the terms and conditions of the 2009 USFWS BO and found a consistent and chronic lack of compliance by the Dischargers. How then can the Regional Board expect the proposed WDR to be consistent with state and federal laws if existing requirements are not met?

A. USBR Federal Conditions from Use Agreement for the San Luis Drain to Discharge Pollutants in Excess of Standards into Mud Slough and the San Joaquin River are not enforced by the proposed WDR.[2]

The 2009 Use Agreement specifies wetland habitat mitigation requirements for the loss of habitat in the affected reach of Mud Slough North and the San Joaquin River between the Mud Slough confluence and the Merced River Confluence:

> *"• CDFG Mitigation Proposal: Supply year-round water to a series of ponds between Mud Slough and the San Joaquin River. Water will be delivered through an existing pipeline and turned out into natural swales to create wetland habitat. The water surface area of the ponds will be approximately 95.3 acres. (Mud Slough affected area in China Island=76.8 acres.) As a result of the applied water vegetation will emerge in and around the ponds. Water will likely be developed locally from wells.*
> *• USFWS Mitigation Proposal: Create year around wetlands on USFWS lands. This proposal will establish 31.6 acres of year around wetland marsh habitat. It may create wetland Slough habitat in a drainage ditch next to the Schwab Unit (BGOO 1). This could create a broad yet linear habitat that could provide slough mitigation habitat. The final site has not been selected. (Mud Slough affected area within San Luis Unit= 24 acres) Water will likely be developed locally from wells."*

The GBP WDR needs to contain measureable milestones and penalties for any failures to complete the required wetland mitigation measures within the 5-year period that has now transpired since the required mitigation was established.

Without a compliance schedule and penalties, the 2009 Use Agreement remains unfulfilled. Such noncompliance also likely constitutes a violation of the Basin Plan thus, necessitating prohibition of discharges exceeding the 5 ppb selenium water quality objective in Mud Slough North and the San Joaquin River from Mud Slough to the Merced River.

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[2] See 2009 Use Agreement at http://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/gbp_2010_2019_use_agree.pdf

The preamble on page 6 of the 2009 Use Agreement between Reclamation and the San Luis Delta Mendota Water Authority (SLDMWA) contains this commitment:

"E. It is also the intention and objective of RECLAMATION and the AUTHORITY, among other things, to pursue planning for a report to the Oversight Committee by the end of Year Four (2013) on measures to meet loads in Years Six through Ten (2015-2019) in order to meet water quality objectives in Mud Slough by the compliance date fixed in the Regional Board's Basin Plan …. These efforts will be coordinated with the California Department of Fish and Game and the United States Fish and Wildlife Service to accommodate their activities relating to endangered and non-endangered species in or adjacent to Mud Slough.

The required report must be a part of the WDR requirements. It is not. In fact only a draft report dated December 26, 2013, from Joseph McGahan of SLDMWA[3] could be located. This report raises further questions of compliance with the Basin Plan and Water Board Discharge requirements. The report states the long-term plan is to route polluted drainwater and storm drainage onto Broadview Water District lands. It is unknown if this letter is part of the existing project, whether the proposed actions have been evaluated by the Water Board pursuant to CEQA, or whether this action has been evaluated in accordance with NEPA, ESA and Migratory Bird Treaty Act. It appears either the project is a necessary part of the Drainers' WDR requirements and thus, must be evaluated, or that the Drainers have yet to comply with required project elements and conditions. This is a critical aspect of the proposed discharge of pollutants to the watershed and thus, necessarily needs to be addressed in the WDR.

The following load reports and plans, again a necessary part of the proposed discharge and project found at page 12 of the Use Agreement also are missing from the proposed WDR:

"*G. Management Plans. The AUTHORITY shall prepare the following reports and develop the following plans:*

> *1. By the end of Year Four (2013), a Report to the Oversight Committee provided at a noticed meeting regarding the Draining Parties' plan to meet loads in Years Six through Ten (2015-2019).*
> *2. No later than Year Seven (2016), the Draining Parties shall begin developing a long-term storm water management plan, which may include evaluation of utilizing the San Luis Drain to bypass storm water flows around some wetland areas.*
> *3. The Draining Parties, in coordination with Reclamation, shall develop a Sediment Management Plan consistent with this Agreement.*"

Again protections required for the State of California China Island Wildlife Area watershed are absent from the WDR. Have the construction and design of retainer dikes or other protection measures received the necessary water board permits and other permits for constructing facilities in wetland and watershed areas? Are modifications a part of the proposed WDR? If so has there been CEQA and NEPA compliance?

[3] See http://www.c-win.org/webfm_send/439

"*(d) Protection of China Island. The Authority coordinated with the California Department of Fish and Game regarding the design and construction of retainer dikes or other measures to protect Fish and Game's China Island Wildlife Area and the immediately adjacent portion of the San Joaquin River from drainage water discharged from the Drainage Area. In addition, the AUTHORITY shall enter into a Memorandum of Agreement with the California Department offish and Game relating to use of Mud Slough (North) within the boundaries of the China Island Wildlife Area. Said MOA may be modified from time to time with the mutual consent of the parties thereto."* (page 13)

Discharging pollutants to the San Luis Drain for discharge to San Joaquin River has resulted in accumulation of more than 200,000 cubic yards of contaminated sediments in the San Luis Drain. This discharge of sediments to the waters of the state and nation typically needs a permit and yet the WDR is silent regarding the disposition of these sediments, requiring action only when they reach hazardous waste levels, yet not disclosing the contamination status. Beneficial uses are impacted at pollutant levels for Se in sediment is 2 mg/kg (dry weight) and the toxicity threshold is 4 mg/kg (dry weight), (see page 113 of GBP Annual Report, 2004-2005) which is merely a small percentage of the hazardous waste trigger. What are the results of the sediment testing in the San Luis Drain required on page 13 of the Use Agreement? Is the monitoring detecting selenium movement and migration? Are selenium levels in the San Luis Drain approaching hazardous waste levels? Have they already reached hazardous waste levels? USEPA also expressed concerns about contaminated sediments in the Drain and the possible need for a Clean Water Act 404 permit to remove those sediments in their May 30, 2009 comment letter on the GBP Draft EIS/EIR.[4]

"(f) Sediment. Selenium already contained in sediments in the Drain is a source of concern because flows may suspend and transport sediments; selenium may migrate into the water column; and sediments may act as a sink, and selenium may concentrate into sediment. To avoid re-suspending sediment in the Drain, the maximum rate of flow in the Drain shall be 150 cfs. Under normal operations, flows will be slow enough to not cause sediment movement. Monitoring activities will detect any movements or selenium migration. In the event that selenium in sediments migrates into the water column, such selenium will be included in the total annual load discharged by, and attributed to, the Authority. If monitoring results indicate that the Drain behaves like a sink, the measured loads will be used to estimate total selenium concentration within the sediments, and the information will be used to determine if the sediments must be removed from the Drain. Sediments will be removed well before composite concentrations indicate hazardous material values. The specific details of responses to monitoring results that indicate any of these scenarios exist will be presented in the Sediment Management Plan specified in III.G.3."

The GBP WDR should also require sediment monitoring reports on a monthly basis per page 20 of the Use Agreement and those reports should be made publicly available.

B. Failure of WDR to ensure compliance with USFWS 2009 Biological Opinion:

[4] See http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415

The ROD states on page 5:

"*On December 18, 2009, the FWS issued a biological opinion (2009 Biological Opinion) to Reclamation concluding that the Preferred Alternative may affect the giant garter snake* ***(Thamnophis gigas)*** *and the San Joaquin kit fox* ***(Vulpes macrotis mutica).*** *The 2009 Biological Opinion provides reasonable and prudent measures and terms and conditions to implement those measures. The operation of the entire project, including the SJRIP reuse area, will be subject to the terms and conditions specified in the 2009 Biological Opinion."*

An overview of noncompliance with the Biological Opinion (BO) adopted in 2009 shows that Reclamation has not complied with several reasonable and prudent measures (RPMs), and terms and conditions. By not complying with the BO, the Drainers/Reclamation have not complied with the ROD and therefore have not complied with the Use Agreement conditions, again necessitating imposition of the prohibition of discharges, per the Basin Plan Amendment.

The GBP WDR must include measures to control discharge that are consistent with the RPMs in the USFWS 2009 BO. These include (BO page 146):

"The following terms and conditions implement Reasonable and Prudent Measure Number II for the giant garter snake:

1. *"…closure (piping or permanent closure) of all open conveyance ditches in the SJRIP. ."*

2. The WDRs must include a schedule and commitment *to refine the closure process in a manner that minimizes the potential for harm to aestivating giant garter snakes."*

3. The WDRs need a condition to prevent the occurrence of ponded water and emergent vegetation.

4. The WDRs need to include conditions that ensure the discharge does not harm endangered species that depend on aquatic resources for survival and the WDRs need conditions consistent with the RPMs in the FWS BO. These WDR conditions include: a commitment for Reclamation to pursue all feasible means to provide full Incremental level 4 refuge water supplies in the Grasslands and Mendota areas.

5. *"2. … to send a letter within six months of this Opinion, addressed to the Regional Water Quality Control Board, noting that 1) the Use Agreement, even after signature, allows for a certain number of acres and locations (as described in the Use Agreement) to be added to the GBP; 2) the effectiveness of efforts by Reclamation and GBP cooperating landowners to reduce agricultural drainage on a regional scale remains an even greater challenge to the extent that some lands remain outside of ongoing collaborative efforts in the GBP; and 3) Reclamation supports their voluntary participation."*

What is the status of plumbing the DMC sumps into the reuse area and why is this not required as part of the WDR? (BO page 147 below)

"3. Reclamation will include a commitment in the GBP Extension ROD that by October 1, 2012, subject to any necessary negotiation with the Authority and any required regulatory agencies, as appropriate, Reclamation and/or the Authority will complete the necessary infrastructure to route the drainage from the DMC sumps (described in the Environmental Baseline of this opinion) to the SJRIP drainage reuse area. Reclamation will negotiate with the Water Authority the necessary terms to include Reclamation's DMC sumps into the GBP and SJRIP facility reuse area."

The USFWS BO also contains reasonable and prudent measures for the San Joaquin kit fox that should be included in the proposed WDR:

"The following terms and conditions implement Reasonable and Prudent Measure Number II to minimize the effect on San Joaquin kit fox of the incidental take associated with implementation of the SJRIP drainage reuse area:

1. Reclamation will include a commitment in the GBP Extension ROD to implement a process whereby suitable kit fox habitat is permanently protected and maintained to compensate for the loss of habitat associated with the boundary of the SJRIP drainage reuse area.

a. The exact amount of compensation habitat will be commensurate with the amount of reuse area determined on an annual basis to be unsuitable due to contamination of the kit fox's prey base, starting with those reuse areas already in place in 2009 and recalculated annually as additional reuse area acreage is added throughout the life of the Use Agreement. The impact area will be calculated by determining the area of interface between the reuse area and adjacent habitat, extending for fifty yards from the boundary line in both directions. This interface zone is based on the likelihood of kit fox prey (e.g., small mammals, large insects) moving outside the boundary of the reuse areas and on kit foxes venturing inside the reuse areas to forage

b. Habitat compensation will include a 151-acre parcel of undisturbed native lands, owned by the Panoche Drainage District (PDD), a member of the Authority, adjacent to and south of the South Grassland wetland supply channels. The PDD and the Authority will commit to setting this parcel aside within the first year after receiving this signed biological opinion. The parcel will be protected in perpetuity using a process that includes a conservation easement held by a Service-approved third party, a Service-approved management plan, and an endowment to fund annual management tasks identified in the management plan."

Has the 151-acre parcel been set aside in perpetuity for kit fox habitat? Has other compensation habitat been set aside for the kit fox? Has an endowment fund been established to pay for maintenance and operation?

"c. Reclamation and the Authority will meet with the Service on an annual basis to review the monitoring data and discuss appropriate compensation. This annual meeting will occur after the annual wildlife reporting has been compiled, starting in March 2010. Compensation habitat will be set aside at a ratio to be determined based on data from the Tiered Monitoring Program, and may be phased in over the duration of the project (see 1.d below). If the monitoring documents selenium concentrations in coyote hair that are < 5 µg/g dry weight (Level of Concern), then no compensation habitat will be required. If the monitoring documents selenium concentrations in coyote hair ≥ 5 µg/g, indicative of potential for adverse effects (i.e., Level of Concern), but ≤ 10 µg/g (i.e., 10 µg/g Toxicity Threshold), the ratio will be 0.5:1 (compensation habitat : reuse area interface zone). If the monitoring documents selenium concentrations in coyote hair above 10 µg/g (i.e., those indicative of adverse reproductive effects), then the ratio shall be 1:1 from that year forward. In addition, coyote blood samples that have concentrations of selenium < 1 mg/L shall not require compensation habitat. However, any coyote blood samples that show selenium concentrations above 1 mg/L shall act as the same trigger as the Toxicity Threshold for hair, i.e., the compensation ratio shall be 1:1 from that year forward.

d. Documentation shall be provided to the Service demonstrating that all samples were obtained from coyotes captured from within or immediately adjacent to reuse areas in agricultural production and irrigated with drainwater. Coyote sampling shall not begin until the agricultural season is well under way, with sufficient vegetative growth to support small mammal prey populations.

e. Phasing will be done each year in increments of 10% of the total determined for that year based on the annual calculation of the amount of habitat degraded during the prior year (1.a.) and the appropriate rate based on Tiered Monitoring (1.b.) and will be provided within twelve months of the detection.

2. Reclamation will include a commitment in the GBP ROD that Reclamation will establish a Memorandum of Understanding (MOU) with the Service for coordination in the development of the Tiered Monitoring Plan and any associated annual study plans. The Plan will be finalized no later than May 1 of each year. The MOU will also include the annual meeting to determine compensation for the effect or incidental take of kit foxes resulting from exposure to selenium-contaminated prey originating in the drainage reuse areas. The SJRIP Wildlife Monitoring Reports including the data from the tiered food chain monitoring program on the SJRIP shall be provided annually to the Environmental Contaminants and Endangered Species Divisions of Service's SFWO, and shall be made available to all interested parties by posting them on the Grassland Bypass Project's website where the other monitoring reports are posted: http://www.sfei.org/grassland/reports/.

Has the coyote monitoring been done? What are the results? What is the status of the tiered monitoring program? Where is the 2012 annual report for the San Joaquin River Water Quality Improvement Project?

Furthermore, the USFWS disagreed with an initial concurrence with a finding of "no effect" for splittail by USEPA on the 2001 Grasslands Bypass Project in a November 4, 2002 letter.[5] USFWS stated that their approval of the project was predicated on fulfillment of the 2000 Joint Biological Opinion for the California Toxics Rule[6] in which EPA is required to promulgate new and more restrictive selenium criteria. That requirement of the 2000 Joint Biological Opinion has yet to be met.

In conclusion, there is no evidence presented in the staff report or from the Dischargers to indicate that any of the reasonable and prudent measures or the terms and conditions of the Biological Opinion have been met. Therefore, the mitigations and conditions of the Use Agreement have not been met and the Board should, per the Basin Plan amendment, immediately prohibit discharges that exceed the Basin Plan water quality objectives in Mud Slough and the San Joaquin River from Mud Slough to the Merced River. The Board should require compliance with the GBP BO in the proposed WDR.

C. Record of Decision and FEIS/EIR Mitigation Measure Compliance should be included in the WDR.

As a condition of pollution discharge, the Dischargers should be required to meet in the WDR the required mitigation measures of the ROD and USFWS BO: (ROD page 2):

"The decision includes implementation of the mitigation measures listed in Section 15 of the FEIS/EIR and the reasonable and prudent measures and terms and conditions in the 2009 Biological Opinion from the U.S. Fish and Wildlife Service (FWS). These measures are required to implement the Preferred Alternative."

The mitigation measures listed in Table 15-1 of the FEIS/EIR should also be incorporated into the GBP WDR to ensure that there is compliance with state and federal mitigation requirements.

The March 2010 Draft Staff Report for the selenium Basin Plan Amendment at page i indicates that the EIS/EIR water quality mitigation measures would be included in new WDR if the 2010 Basin Plan Amendment were adopted (emphasis added):[7]

"*While the Basin Plan serves as the foundation for the selenium control program in the San Joaquin River Basin, there are other elements to the Board's regulatory efforts. Pursuant to the Basin Plan, waste discharge requirements (WDRs) have been issued to the Grassland Bypass Project to regulate discharges of agricultural subsurface drainage. If the Board amends the control program in the Basin Plan, the WDRs will be updated to reflect the changes.* ***The WDRs will also require compliance with water***

[5] See http://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/usfws_att_a.pdf
[6] See Joint Biological Opinion for California Toxics Rule at http://www.c-win.org/webfm_send/40
[7] 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 Draft Staff Report March 2010, Page i. Accessed at http://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/wqc_sacsjrb_salinity_amend_plandraft.pdf

quality-related mitigation measures identified in the EIR/EIS prepared for the project. *Over time, the Board may determine that WDRs must be issued to other dischargers. All WDRs contain a Monitoring and Reporting Program to ensure that time schedules are met and discharges are in compliance with the limits set in the Board order. As part of the WDRs or pursuant to a separate request, the Board may require dischargers to prepare and submit technical reports related to the discharge."*

2. **New activities have been proposed and are occurring that have never been evaluated under CEQA or NEPA**

As discussed above under non-compliance with the Use Agreement, a plan is required by the end of 2013 on how the Dischargers will achieve zero discharge by 2019. The "draft" letter dated December 26, 2013 states as follows:

"Create an area in the old Broadview Water District (BVWD) for springtime flows. The area could be planted to a winter crop like wheat or let natural vegetation grow. These flows could be captured easily from the Panoche Davidson Drain and from Firebaugh Canal Water District (FCWD). Temporary pumps may be needed to pump the water. Assuming sufficient flows in the Davidson Drain are present, ~ 1,700 acres in northwestern BVWD could be developed, allowing up to 850 AF at 6" per acre. Diverting flows from FCWD to BVWD would require pump stations and pipelines with significant lift. The pipeline would have to cross Nees Avenue which would likely require a jacked crossing."

Where is the environmental review for this new proposed measure? How will it be monitored? What are the impacts of construction? This is clearly new information that requires a supplemental environmental analysis.

Another very significant new activity that has not been adequately evaluated for significant cumulative impacts is the transfer of water from the San Joaquin River Exchange Contractors (SJREC) to other water districts outside of the Grasslands Drainage Area. These water transfers have significantly reduced the amount of water in the Grasslands wetlands and their water supply channels, thereby reducing dilution of contaminated agricultural discharges, threatening violation of Basin Plan water quality objectives to wetland and refuge water supplies. And yet the monitoring program eliminates monitoring of wetland supply channels and Salt Slough at a time when violations are likely to occur because of the transfers. We hereby incorporate by reference our comment letters on those water transfers.[8]

Therefore, before adopting the proposed WDR, additional environmental review and ESA consultation is required.

3. **The proposed monitoring and reporting program is inadequate to determine the level of pollution being discharged by the GBP and the harm it is causing.**

[8] See July 3, 2012 Coalition comment letter on Draft Environmental Impact Statement (DEIS/EIR) [State Clearinghouse No. 2011061057] for the Proposed San Joaquin River Exchange Contractors water transfer program, accessed at http://www.c-win.org/webfm_send/242

Our coalition has commented three times on the inadequacies of the revised Monitoring and Reporting program for the Grasslands Bypass Project, never having received a response. We hereby incorporate by reference and attach as part of these comments, our coalition letters of August 11, 2011,[9] April 22, 2013,[10] and November 26, 2013.[11] We also incorporate by reference and attach as part of these comments, our October 17, 2011 comments on the Panoche Demonstration Treatment Plant.[12]

We oppose adoption of the proposed monitoring and reporting program for the Grasslands Bypass Project and recommend a more robust monitoring plan similar to the 2001 GBP Monitoring requirements. The reduction in monitoring frequency and locations will prevent the collection of necessary data sufficient to protect public trust values, endangered species and evaluate compliance with water quality standards. We recommend a vigorous monitoring program that does not hide or understate the ongoing discharge of selenium and other toxins into Mud Slough and the San Joaquin River.

It is the responsibility of the Dischargers who are being given a permit to pollute to provide accurate monitoring of their pollution that can be peer reviewed and publicly reviewed. This requirement is spelled out in the Use Agreement. Ironically, reduced monitoring for selenium and other Westside contaminants is stated as necessary to save money in order to add monitoring for pesticides and mercury. Reductions and shifts in funding are not an adequate rationale for reduced monitoring levels. The proposed monitoring plan's change to reduce daily selenium monitoring to monthly or weekly grab samples is simply unacceptable and does not meet the requirements of the Clean Water Act for a four day average, especially for a TMDL listed water body.

The proposed monitoring and reporting program significantly reduces the level of monitoring compared the 2001 monitoring and reporting program.[13] The proposed monitoring program reduces monitoring to the point that it cannot be determined if water quality objectives are being met or if biological impacts are occurring. Without sufficient data, there will be no way to use USGS models to accurately predict the fate and transport of the pollutants to the San Joaquin and Delta.

Testing for additional chemicals but failing to accurately monitor for spikes in the selenium that stays in the food chain compounding the problem for years is not protective of beneficial uses. Jim Claus found his cattle were dying from eating grasses contaminated with selenium that had bio-accumulated due to such polluted discharges. History is replete with deformed species such both at Kesterson National Wildlife Refuge and more recently the discovery of two-headed trout due to selenium contamination of the food chain.

A selenium hazard assessment was completed in the FWS BO for the south Grasslands

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[9] http://www.c-win.org/webfm_send/196
[10] http://www.c-win.org/webfm_send/400
[11] http://www.c-win.org/webfm_send/402
[12] http://www.c-win.org/webfm_send/194
[13] http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/fresno/5-01-234-mrp-rev2.pdf

wetland channels and found a moderate to high hazard in those channels. The intervals for the final hazard characterization are based on scores for the individual components, thus they are not a simple average or midpoint. The rationale for this is that three distinct routes of exposure are possible for selenium (water, planktonic food-chain, detrital food-chain). Based on field evidence, Lemly (1996) concluded that the hazard from all three together should be greater than if each is considered separately. The Lemly selenium hazard assessment is intended to gauge the potential for certain levels of selenium impact in an ecosystem. High hazard denotes an imminent, persistent toxic threat sufficient to cause complete reproductive failure in most species of fish and aquatic birds (Lemly 1996b). A high hazard may not be occurring at present in the south Grasslands, vis-a-vis total reproductive failure and community collapse, but the High hazard rating does indicate that the ecosystem is on the brink and could get worse rapidly if conditions change even slightly (owing to the steepness of the selenium toxicity curve, increases in selenium from flood events, droughts, etc.) and that actions should be taken to reduces selenium levels.

A more conservative hazard assessment analysis of the South Grasslands was also done in the FWS BO and found a moderate hazard in the south Grasslands wetland channels. As defined by Lemly, moderate indicates a persistent toxic threat of sufficient magnitude to substantially impair, but not eliminate reproductive success. Some species will be severely affected while others will be relatively unaffected (Lemly 1996b). The FWS BO found that it is reasonable to conclude that the federally and state listed as threatened giant garter snake is likely adversely affected by selenium by their diet in this area (GBP BO page 116). It is therefore biologically indefensible to be eliminating sampling locations and reducing sampling frequency for selenium in the south Grasslands.

Reducing monitoring is not warranted, given that the levels of pollution downstream from the GBP continue to exceed water quality standards. For example, selenium concentrations at the San Luis Drain discharges into Mud Slough averaged 24.8 µg/l in December 2012 and 31.4 µg/l in January 2013, five to six times the water quality objective. The project discharges other harmful pollutants, for example, according to the Dischargers, the discharge of boron from the GBP increased by 63% between water year 1995 (prior to the Project's commencement of operation in September 1996) and 2010. In December 2011, the average concentration of selenium discharged from the GBP into Mud Slough was 29.8 µg/l, nearly six times higher than the maximum selenium concentration allowed within Mud Slough under the Basin Plan, 5.0 µg/l.

Table 1 below compares the elimination and reduction of proposed monitoring and reporting requirements from the 2001 Grassland Monitoring Program compared to the current proposal. Sampling frequency for Mud Slough, Grasslands and Salt Slough are being reduced or completely eliminated. Stations, A, B, C, I2, F, J, K, L/L2, M/M2, G and H have all been eliminated from required monitoring. We can see no technical justification or rationale for this reduction in monitoring for a project that has exceeded water-quality objectives and standards for more than fifteen years. Significant spikes of selenium and other pollutants will not be detected under the proposed monitoring and reporting requirements.

We specifically protest the change in the Hills Ferry monitoring site (Site H) to China Island

(Site R). There is a comprehensive database with documented violations at Hills Ferry, with which to compare future monitoring to but that doesn't exist at China Island. It also appears that China Island is closer to the mouth of the Merced than Hills Ferry.

Furthermore, an Email From Tomas Maurer, Chief, Investigations and Prevention Branch Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service to Shauna McDonald [USBR],[14] 11-18-09 states:

"*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).*"

We request specific justification for this change to explain why Site R is more "representative" than Site H.

Table 1 Change in Monitoring from 2001 Grassland Monitoring Program to Proposed 2014 WDR

Site	Location	Parameters	Method	Frequency	Changes 2014
A	Check 17	EC, Se, Boron, TDS	Sonde, grab, autosampler	Daily/weekly	No monitoring required
B	Near Gun Club Rd	pH, EC, temp, Boron, Molybdenum, Nutrient series, Se, TDS	Grab, 24 hour composite	Daily/Weekly	No monitoring required
B2	SLD at Terminus Mud Slough	EC, Temp	Sonde, continuous	Daily	EC and Temp eliminated; Daily flow only
B3	San Luis Drain Gun Club siphon	pH, EC, temp, total Se, Boron, molybdenum, nutrients,	Grab	Weekly and monthly	New station

[14] Accessed at http://www.swrcb.ca.gov/rwqcb5/water_issues/grassland_bypass/usfws_att_e.pdf

		pesticides			
C	Mud Slough Upstream of San Luis Drain	pH, EC, temp, total Se, Boron, molybdenum, nutrients	Grab	Weekly except monthly for molybdenum	No monitoring required
D	Mud Slough Downstream of San Luis Drain	pH, EC, temp, Se, Boron, molybdenum, nutrients	Grab and Sonde	Daily, weekly	Added weekly TOC and pesticides added; nutrients weekly instead of monthly
I2	Mud Slough Backwater below San Luis Drain	pH, turbidity, Se, Boron, Molybdenum, nutrient series	Grab	weekly	No monitoring required
F	Salt Slough	pH, EC, temp, Se, Boron,	Grab and Sonde	Weekly, daily	No monitoring required
J	Camp 13 ditch	EC, Se, Boron	Grab	weekly	No monitoring required except stormwater
K	Agatha Canal	EC, Se, Boron	Grab	weekly	No monitoring required except stormwater
L/L2	San Luis Canal (CCID)	EC, Se, Boron	Grab	weekly	No monitoring required
M/M2	Santa Fe Canal	EC, Se, Boron	Grab	weekly	No monitoring required
G	SJR Fremont Ford	pH, EC, temp, Se, Boron, molybdenum, nutrients	Grab, Sonde	Weekly/daily	No monitoring required
H	SJR Hills Ferry	pH, EC, temp, Se, Boron,	Grab, Sonde	Weekly, daily	No monitoring

					required
N	Crows Landing	pH, EC, temp, Se, Boron, molybdenum, nutrients	Grab, Sonde	Weekly, daily (Se), monthly for molybdenum	EC, temp, Se and Boron reduced daily to weekly
R	SJR at China Island Unit	pH, EC, Temp, Se, Boron, Molybdenum, nutrients and pesticides	Grab	Weekly monthly	New Station

Elimination of the L and M monitoring sites will eliminate detection of unregulated discharges from landowners from the Almond Drain area who are not participating in the GBP. These discharges are described in pages 11 and 12 of the "Staff Report of the California Environmental Protection Agency Regional Water Quality Control Board Central Valley Region Review Of Selenium Concentrations In Wetland Water Supply Channels In The Grassland Watershed May 2000" By Jeanne Chilcott.[15] Monitoring those sites is also important to assess the impacts of transfer programs that recapture tailwater that historically flowed into the wetland channels. That tailwater acted as dilution in those channels. Tailwater is typically low in selenium.

The USFWS also provided critical comments on revisions of the GBP monitoring program in 2013 that do not appear to have been taken into consideration by the Regional Board in its draft Monitoring and Reporting Plan.[16] We contend that the proposed Monitoring and Reporting Plan does not reflect the best available science and agency consensus.

There is an incorrect detection limit in the Monitoring and Reporting Plan. In Attachment 1 of Attachment B there is a table on Analytical Methods and Reporting Limits. It incorrectly states a reporting limit for Se of 2 ppb. The correct reporting limit should be 0.4 ppb Se.

In conclusion, monitoring should not be allowed to be reduced because the discharges continue to violate water quality standards.

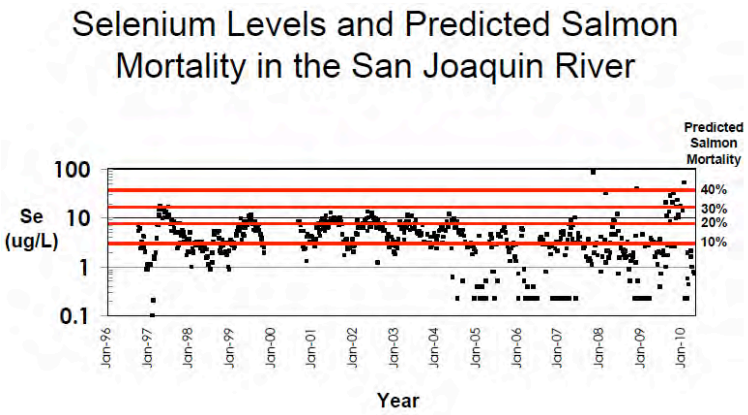
Other Considerations

The proposed WDR is inadequate to protect beneficial uses, including but not limited to salmon, steelhead and sturgeon. Figure 1 below shows how selenium levels detected in the San Joaquin River at Hills Ferry have reached levels that cause significant mortality of

[15] See http://www.waterboards.ca.gov/rwqcb5/water_issues/water_quality_studies/2ppbrpt.pdf
[16] USFWS Thomas Leeman, Chief San Joaquin Valley Division, Endangered Species Program to Stacy Brown, US Bureau of Reclamation. "Comments on the Grassland Bypass Project 2013 Revised Monitoring Plan." April 22, 2013. Accessed at http://www.c-win.org/webfm_send/441

salmonids.

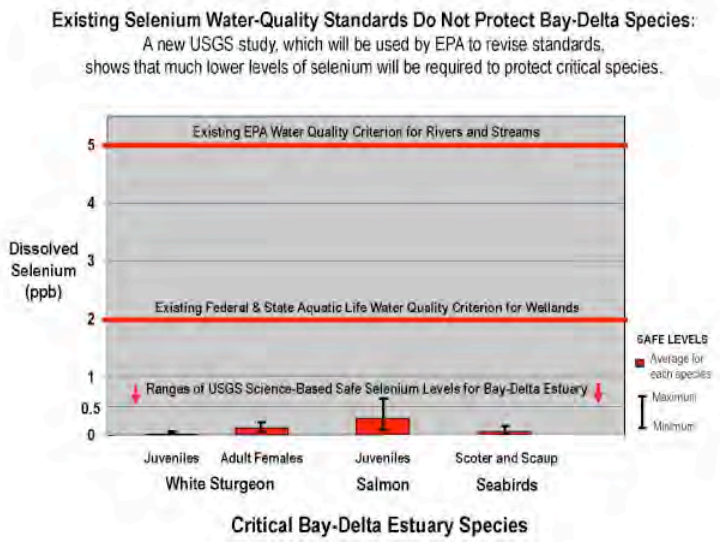
Figure 1



Selenium concentrations measured in the San Joaquin River at Hills Ferry (data from the U.S. Bureau of Reclamation)

Biological impacts of selenium occur at much lower levels than allowed by the proposed WDR. A recent study by the U.S. Geological Survey found that existing selenium water quality objectives of 2 µg/l and 5 µg/l respectively, are inadequate to protect aquatic and avian species [see Figure 2]. The proposed WDR should take into account this new information. FWS and NMFS in the BO for the California Toxics Rule also concluded that 5 ug/L would not be protective of aquatic dependent listed species.

Figure 2



The US Environmental Protection Agency recently proposed new selenium criteria that is even less protective than current water quality objective and criteria. We hereby incorporate by reference our coalition letter of June 13, 2014 on the Draft Aquatic Life Ambient Water Quality Criterion for Selenium – Freshwater." [17]

According to the Basin Plan (page IV-15.00),[18] the Grasslands Bypass Project should be subject to an NPDES permit.

Table 1 in Attachment A to the proposed WDR contains a significant error. The 15 ug/l monthly mean was a performance goal and was in italics in the basin plan amendment. The 20 ug/l should be an acute or maximum number not a monthly mean. Therefore, the proposed WDR should be withdrawn and rewritten.

Also worthy of mention is that USEPA has proposed new draft Se criteria. Because of selenium's persistence in the environment, and it's propensity to bioaccumulate up the food chain, EPA "reserved" or dropped the acute criterion for Se as part of their effort to establish protective ambient criteria for Se.

The Panoche Pilot Treatment Plant should be included in the proposed WDR. Monitoring and reporting on the pilot treatment plant is necessary sooner rather than later to determine if it will work. This is an unknown treatment technology and output. Past performance of a reverse osmosis and biological treatment plants as part of the San Luis Drainage Feature Re-evaluation (SLDFR Feasibility Report Appendices 2008) was dismal and application of treated effluence to crops required significant dilution to prevent boron damage. The USGS has stated that "*The treatment sequence of reuse, reverse osmosis, selenium bio-treatment, and enhanced solar evaporation is unprecedented and untested at the scale needed to meet plan requirements.*"[19] It is ludicrous to not include reporting and monitoring of this pilot plant upon which much of the success of the GBP hinges upon.

The proposed WDR fails to consider land retirement as "Best Practicable Treatment or Control (BPTC)." Proposed treatment through reverse osmosis and other means has yet to prove technically or financially feasible. 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*."[20] As can be seen in figure 3 the majority of pollutant load reductions occurred with land retirement:

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[17] See http://www.c-win.org/webfm_send/440

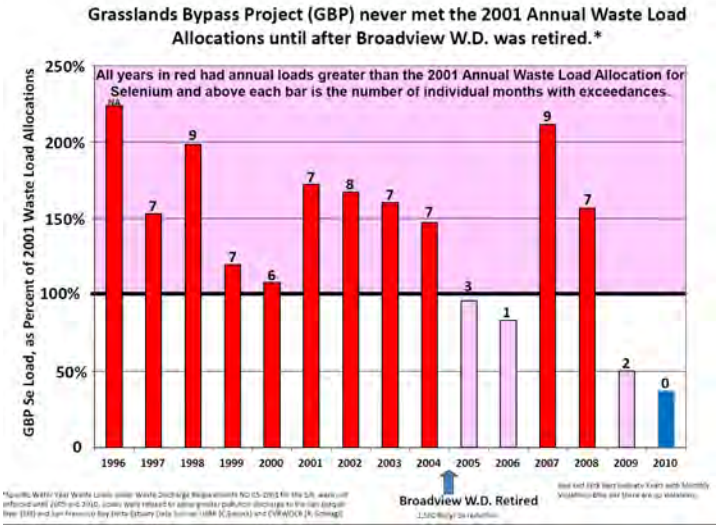
[18] *"The Regional Water Board favors the construction of a valley-wide drain under the following conditions:*

- *All toxicants would be reduced to a level which would not harm beneficial uses of receiving waters.*
- *The discharge would be governed by specific discharge and receiving water limits in an NPDES permit.*
- *Long-term, continuous biological monitoring would be required"*

[19] USGS Open File Report 2008-1210, page 1, accessed at http://pubs.usgs.gov/of/2008/1210/of2008-1210.pdf

[20] Ibid, page 2

Figure 3



We also point out that global warming will continue to reduce the dilution capacity of the San Joaquin River. The Bay Delta Conservation Plan (BDCP) predicts an average annual increase in selenium concentration in sturgeon over existing conditions and no action alternatives. BDCP predicts an increase in residence time for selenium that would result in bioaccumulation in fish tissue. BDCP predicts increased pollutant impacts from the San Joaquin River due to the loss of dilution from the Sacramento River. While these won't occur during the life of the WDR, it should be considered in evaluating the ability of the treatment system to meet specific target reductions.

Furthermore, not only is climate change causing less dilution of this pollution, but it is also increasing the potential drought. The combination of drought and water transfers reduces the dilution of pollution, which is not a viable management strategy. There must be a cumulative effects analysis of drought and water transfers on the GBP.

ATTACHMENT 1

NORTH COAST RIVERS ALLIANCE

August 11, 2011

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Re: Opposition to the Proposal to Curtail Monitoring at the Grassland Bypass Project

Dear Grassland Bypass Project Data Collection & Review Team and Oversight Committee:

The undersigned groups oppose reductions in the monitoring program for the Grassland Bypass Project and, furthermore, recommend a comprehensive reassessment of the need for enhanced monitoring and scientific evaluation. We can see no technical justification or rationale for this reduction in monitoring for a project that has exceeded water-quality objectives and standards for more than fifteen years. We urge the Oversight Committee to reject this unjustified reduction in monitoring and require a reassessment of monitoring and study needs in view of the historical experience with the Grasslands Bypass Project and the long-ignored scientific recommendations of the United States Geologic Survey (USGS) and others to take a systematic, mass-balance approach to understanding the impacts of selenium and other contaminants from the Project. The discharge of selenium and other contaminants in excess of Federal and State water-quality standards threaten populations of Salmon, Steelhead, and Sacramento Splittail, as well as the waterfowl and wildlife resources of the State and Federal National Wildlife Refuges in the area. At the proposed concentrations, mortality of Chinook salmon, steelhead, Sacramento Splittail, waterfowl, and other wildlife are predicted in or adjacent to Mud Slough, the San Joaquin River, and the Delta Estuary. (See Figure 6)

We appreciate the opportunity to comment upon the United States Bureau of Reclamation (USBR) and San Luis Delta Mendota Water Authority (SLDMWA) draft monitoring proposal pending before the Data Technical Committee. The draft proposal would curtail the monitoring program for the discharge of selenium, salt, boron and other contaminants being drained into Mud Slough and the San Joaquin River, using the Federal San Luis Drain as the wastewater collection and discharge conduit. The monitoring proposal would reduce the frequency of monitoring for critical contaminants and supporting parameters at various sites, with no technical justification or analysis of increased bias and uncertainty in tracking water-quality compliance and Project effectiveness. These reductions will mask the pollution spikes in the watershed, river and estuary and provide insufficient data needed to model impacts to the

San Joaquin River and the Delta Estuary. These deficiencies have been previously outlined by the scientific community, but continue to be ignored.

In a declaration before the United States District Court for the Eastern District of California filed by Mr. Glaser, Mid-Pacific Region Director, USBR, on April 1, 2011[1], Mr. Glaser and USBR reported, "On February 16, 2010, the Regional Board staff announced that it would no longer conduct water quality monitoring at twelve sites for the GBP, because of funding and staffing shortage. In addition, staff for the California Department of Fish and Game expressed doubts that they could continue biological monitoring for the project due to staff losses. Reclamation is working with other agencies to revise the Project's monitoring program, and will assign staff and seek funding to assure that the water quality and biological monitoring requirements are met."[2]

Operating under State of California Waste Discharge Requirements (WDRs), USBR and SLDMWA (Dischargers) have transported selenium and other contaminants from the San Luis Drain to the San Joaquin River starting in 1995 as a "temporary" two year project that was next extended to 2000, and then again extended to 2009, and recently extended again to 2019.(See Figure 1) USBR data document that, from 1996 to 2008, the dischargers have dumped 85,954 lbs of selenium, 25,251,000 lbs of Boron and 9,772,610 tons of salt to Mud Slough, the San Joaquin River, and the Delta Estuary.[3]

Even before 1995, these Dischargers drained selenium and other contaminants from the San Luis Drain, via Mud Slough to the San Joaquin River actually began under two Clean Water Act National Pollutant Elimination System (NPDES) permits.[4] (See Figure 1) Under those permits the selenium pollution controls and monitoring frequencies were much stronger. The compliance monitoring took place at the point of discharge not some 30 miles downstream. And concentrations at the point of discharge were much lower for Mud Slough (north) along with concentrations measured in the San Joaquin River monitoring sites. First, in November of 1987, USBR was allowed to drain the Kesterson ponds via Mud Slough into the San Joaquin River. A second NPDES permit to discharge selenium contaminated groundwater was issued to the Dischargers, USBR and SLDMWA, in March of 1996, where toxic drainage and ground water discharged also had similar monitoring and water quality compliance requirements.[5]

Under the previous and present permits Dischargers use sumps and pumps to move groundwater collected from subsurface drainage systems, which collect contaminated groundwater from as deep as 100 feet drawing from contaminated water from basically horizontal groundwater wells some 50- 100 feet in depth[6] to collect pollution from over 97,000 acres and discharge toxic contaminants that exceed federal and state water quality standards, violate the Sacramento-San Joaquin Valley Basin plan, degrade beneficial uses, and create a nuisance and burden for downstream users to clean up, thus passing these environmental hazards and treatment costs to downstream users.

What is the rationale for curtailing monitoring?

Repeated requests to develop a comprehensive and effective monitoring program for the Grasslands Bypass Project have not been acted upon.[7] There has been a consistent failure to develop

monitoring to determine the fate and transport of selenium and other contaminants in the food chain where it's magnified effects result in a narrow window of exposure before mortality. Despite the lack of monitoring, selenium concentrations in avocet and stilt eggs at the Grasslands Drainers' reuse area have been found to exceed those found at Kesterson National Wildlife Refuge![8] Further the project has failed to track the selenium loading from the Grassland Drainage Area into the San Joaquin River, the Sacramento-San Joaquin Delta and the North Bay (e.g. Suisun Bay), as required in the 2001 Record of Decision for the GBP.[9] Biological monitoring and impacts especially to coldwater fish have not been monitored.[10] For example a Lemly index was not determined for San Joaquin River sites due to lack of sufficient sample of invertebrates and because bird eggs, one component of the index, are not sampled there. Selenium is being exported to southern California's water supplies through the California Aqueduct threatening drinking water quality and likely is accumulating in fish and reservoirs in Southern California as a result.[11]

Also the GBP has failed to monitor and consider the long term impacts of discharging selenium through wetland and slough areas adjacent to federal and state wildlife refuges, the San Joaquin River and Delta Estuary.[12] This history of inadequate monitoring and insufficient scientific assessment will be made far worse if the proposed reductions in monitoring are allowed. We find absolutely no evidence that the proposed reductions are based on documented scientific analysis.

Models Accurately Document an Ongoing Failure to Meet Water Quality Standards in the San Joaquin River and Mud Slough (North) and Continue to Impair the Bay-Delta.

Since 1994, models used to establish the amount of selenium loads to be discharged to the San Joaquin River and Delta Estuary have accurately documented that these loads of pollution do not meet Federal and State standards for minimal protection of water quality.[13] [See Figures 3-5] Moreover, since 2000 the load models used have even been modified to permit greater discharges of pollution without triggering a violation. These modifications include relaxing criteria for violation rates, choosing a monthly mean instead of a 4 day average, and changing the water years.[14] Environmental Defense Fund estimates the change from the four-day flow averaging period to a one month averaging period resulted in a 21 percent to 44 percent increase in allowable loads.[15] "If implemented as an interim compliance, this change in the averaging period would be expected to cause numerous violations of the water quality standards. Similarly, relaxing the once-in-three year excursion rate to a once-in five-month per year rate resulted in a significantly higher allowable load."[16] These predicted violations have proven accurate.[17] Using similar calculation assumptions, USBR figures for 2009-2019 predict violations also for the continued loads of pollution allowed.[18] The dischargers use these generous load targets and the ability to meet them as a sign of success. The fact remains, however, that they fail to meet safe concentrations in the Mud Slough (north) wetland channels through State and Federal Wildlife Refuges and concentrations remain extremely high in Mud Slough (north) and in the San Joaquin River above the compliance point measured some 30 miles away. Along with the violations of the federal and state water quality standards, concentrations of selenium in fish and wildlife also remain high. Scientists predict a high mortality for coldwater fish such as salmon and green sturgeon from these concentrations.[19]

The San Joaquin River downstream of the Merced River has been delisted as water quality impaired because of dilution water from the Merced River, weak standards and inadequate monitoring mentioned above. The selenium contamination, however, continues to drain into the Bay-Delta with predictable results. The Clean Water Act Section 303(d) list of water quality limited stream segments lists 41,736 acres in the Delta, 5,657 acres in the Carquinez Straights, 70,992 acres in San Francisco Bay Central, 9,024 acres in San Francisco Bay south and 68,349 acres in San Pablo Bay as impaired by selenium.[20] The west side discharges are a major source of those water quality impairments.[21] Health advisories are in effect for scaup, scoter and benthic feeding ducks in many of those areas.

A study by the U.S. Fish and Wildlife Service[22] for USEPA identified that several bird species protected under the Migratory Bird Treaty Act (MBTA) are considered "species most at risk" from selenium contamination in the San Francisco Bay. Greater scaup, lesser scaup, black scoter, white-winged scoter, surf scoter and bald eagle are listed as "species most at risk" from selenium contamination and all are covered by the Migratory Bird Treaty Act (MBTA). By allowing continued discharges of selenium in excess of Basin Plan objectives from the Grasslands Bypass Project, there is downstream contamination and selenium bioaccumulation in the Bay-Delta, and increasing likelihood of MBTA and ESA violations by the United States.

Government Scientists Have Criticized the Existing Monitoring Program and Proposed Reductions Further Erode Protection of Public Resources

EPA has urged the development of a comprehensive monitoring program if the project is extended.[23] USFWS comments have identified numerous monitoring deficiencies with regard the fate and transport of selenium and the long term effects on especially on coldwater fish, wildlife and endangered species.[24]

In 1996 USGS scientists provided the Oversight Committee with a comprehensive critique of the proposed monitoring plan, developed in cooperation with USBR. [25] Many of USGS comments still apply. They include recommendations for assessing the fate and transport of selenium in the project area; evaluation of selenium in sediment and its transport; evaluation of suspended particulate forms of selenium from the discharges; and for better biological and water quality monitoring. One of the main findings of the USGS review is that a monitoring program and study is needed to evaluate the mass balance of SE that includes the dissolved and suspended particulate forms of selenium. This continuing lack of comprehensive monitoring for the management of selenium contamination is also echoed in a recent scientific article, by Luoma & Presser 2009:[26]

"Uncertainties in protective criteria for Se derive from a failure to systematically link biogeochemistry to trophic transfer and toxicity (Figure 1). In nature, adverse effects from Se are determined by a sequence of processes (12). Dilution and redistribution in a water body determine the concentrations that result from mass inputs. Speciation affects transformation from dissolved forms to living organisms (e.g., algae, microbes) and nonliving particulate material at the base of the food webs. The concentration at the base of the food web determines how much of the contaminant is taken up by

animals at the lower trophic levels. Transfer through food webs determines exposure of higher trophic level animals such as fish and birds. The degree of internal exposure in these organisms determines whether toxicity is manifested in individuals. Se is first and foremost a reproductive toxicant (both a gonadotoxicantanda teratogen): the degree of reproductive damage determines whether populations are adversely affected. Adverse effects on reproduction usually occur at lower levels of exposure than acute mortality, but such effects can extirpate a population just as effectively as mortality in adults."

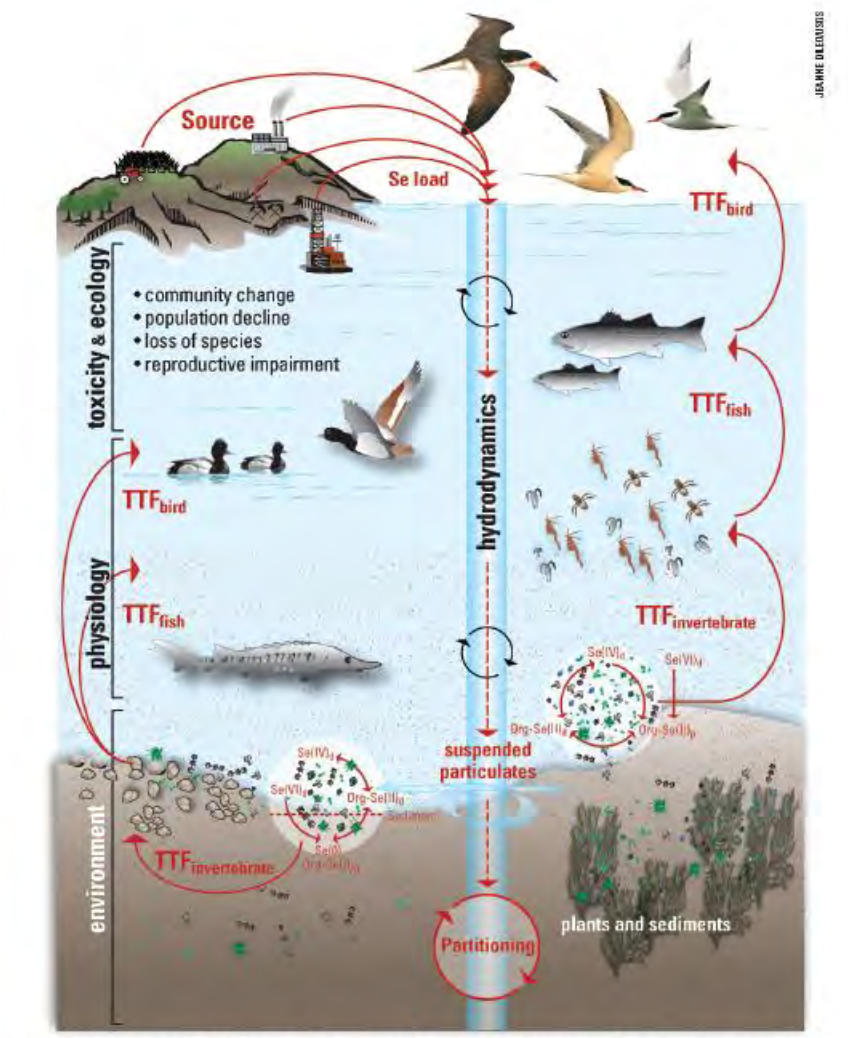

FIGURE 1. Conceptual model of Se fate and effects emphasizing the roles of speciation, biogeochemical transformation, and trophic transfer factors in modeling two aquatic food webs: a water column food web and a benthic food web. TTF = trophic transfer factor. Subscript d means dissolved, subscript p means particulate.

As of 2007 an estimated 222,025 cubic yards of sediment has accumulated in the San Luis Drain.[27] This is nearly a four-fold increase over the original 55,788 cubic yards of sediment that were recommended for removal at the beginning of the project, but never carried out.[28] Also contained in the USGS report on the Review of the Grassland Bypass Channel Project Monitoring Program is the

following assessment of the entire monitoring program: "The original Monitoring Plan is not adequate because it does not account for all appropriate sources and sinks of selenium, salt, and boron within the GBCP area and because the sampling design does not adequately address temporal, width, and depth variability in chemical concentrations and loads."[29] These contaminated sediments and suspended particulates in the water pose a toxic danger in the Drain, as well as, in Mud Slough and the San Joaquin River, that continue to grow and the proposed reductions in monitoring do not remedy these problems and shortcomings.

Conclusion: Continued Monitoring and a More Rigorous Approach are Necessary to Protect the Public Interest and Water Quality.

Rather than reduce monitoring, as proposed, we urge a substantial increase in the current 2001 monitoring plan to ensure compliance with state and federal law, while at the same time immediately initiating a comprehensive, peer-reviewed reevaluation of the monitoring program and the amounts of selenium being discharged under the current Total Maximum Daily Load (TMDL) and WDRs implementing the TMDLs. As noted in the November 3, 1995 agency letter, "There is no commitment, at this time, to approve long-term use of the Drain." [30] Further in 2001 the Regional Board staff reported, "If monitoring demonstrates that the water quality objectives are not being met then additional load reductions or amendments to the TMDL will be required."[31] As noted previously and documented in figures 3-5, discharges exceed federal and state water quality standards. The Waste Discharge Requirements and compliance monitoring need to be strengthened not relaxed.

Based on current science, the continued extension of discharges from the Grasslands Bypass Project make it more important than ever to ensure that a long-term monitoring and scientific assessment finally address the impacts of the Project and the realistic chances of future reductions in contamination. Please add us to any notifications regarding changes in the monitoring program or waste discharge requirements.

Sincerely,

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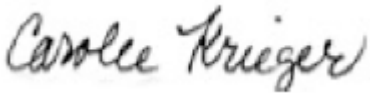

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Susan Moore, Field Supervisor, US Fish and Wildlife Service
Tom Maurer and William Beckon, US Fish and Wildlife Service
Karen Schwinn & Eugenia McNaughton, US Environmental Protection Agency
Julie Vance and John Shelton, California Department of Fish and Game
Kim Forrest, Wildlife Refuge Manager
San Luis National Wildlife Refuge Complex U. S. Fish and Wildlife Service
Interested Parties

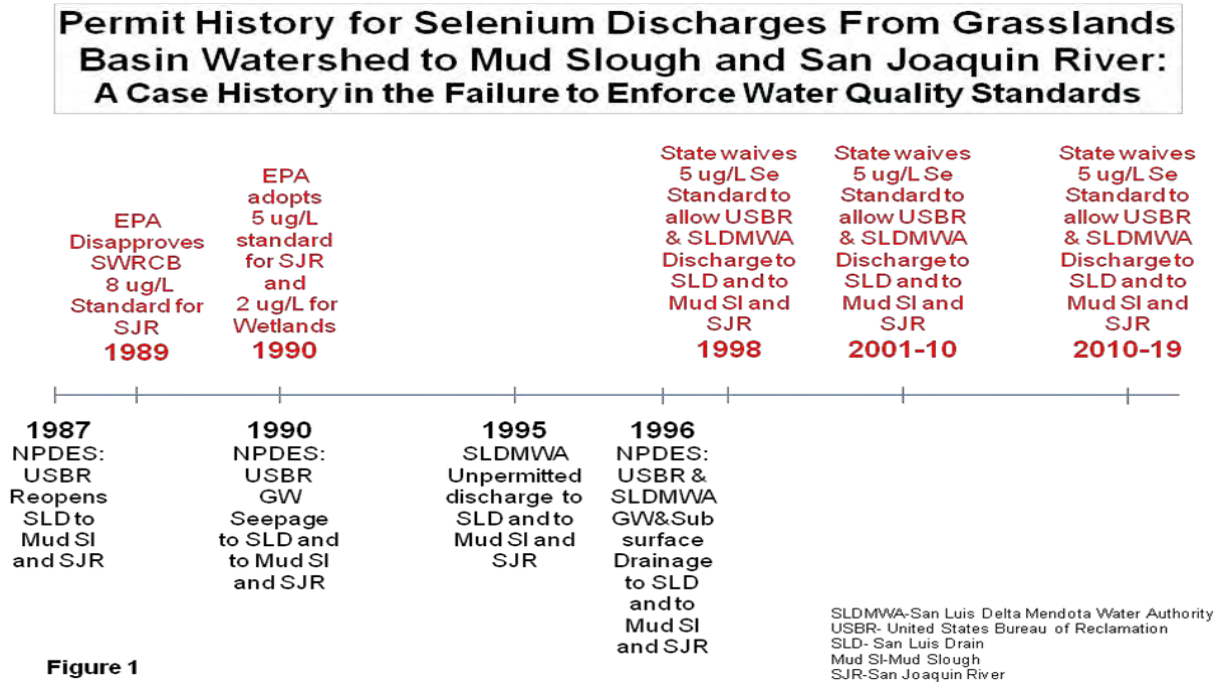


Figure 1

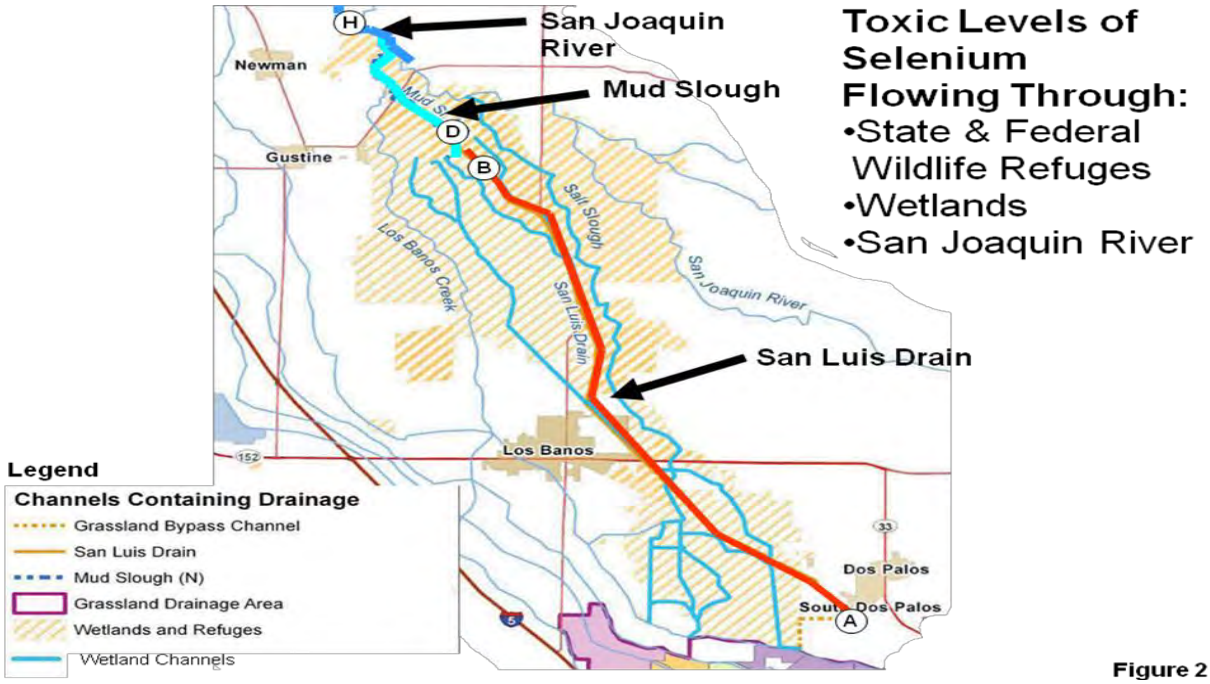


Figure 2

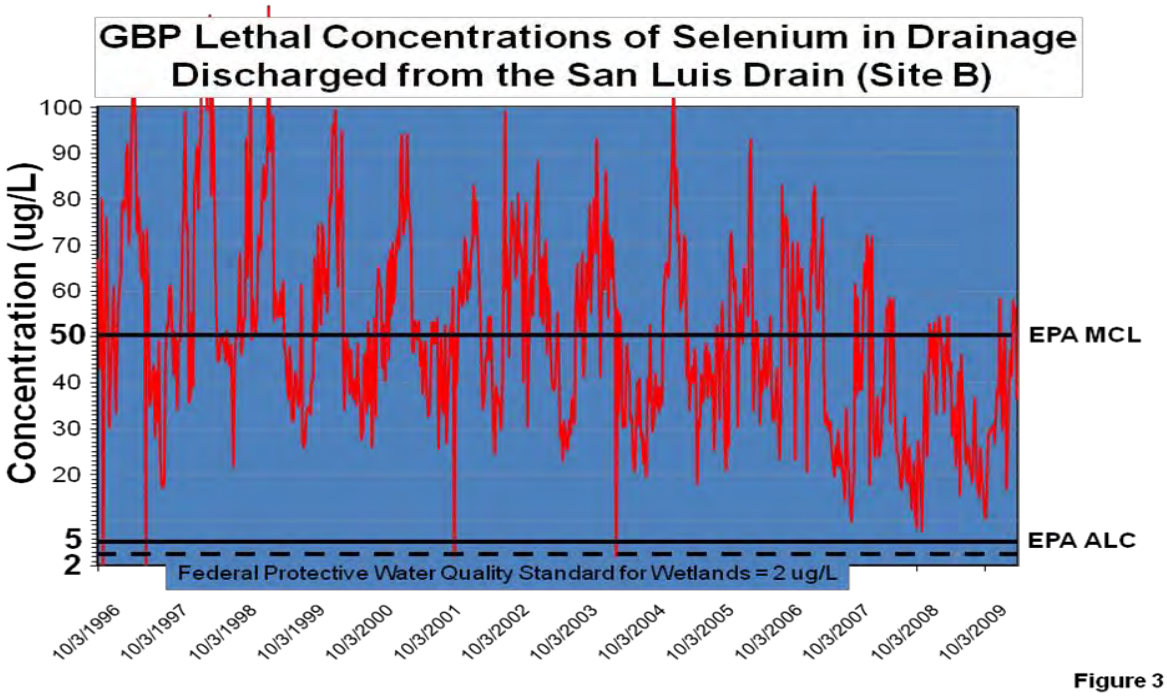


Figure 3

Data from USBR-Eacock MCL=Maximum Contaminant Level for Drinking Water ALC=Aquatic Life Criterion

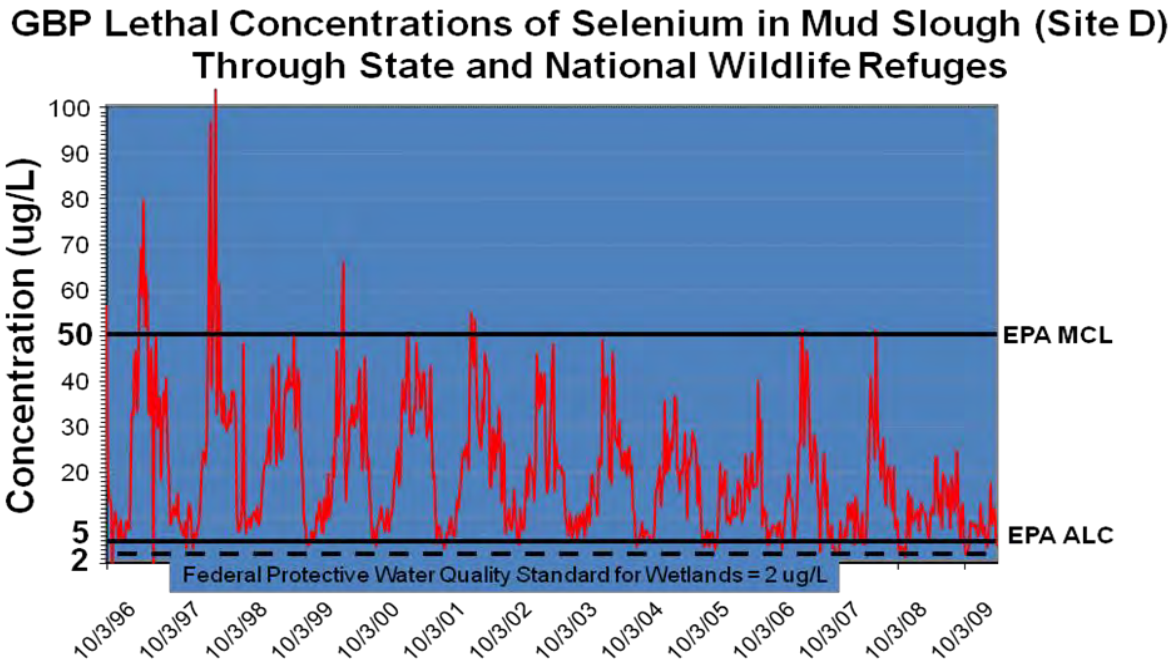


Figure 4

Data from USBR=Eacock MCL=Maximum Contaminant Level for Drinking Water ALC=Aquatic Life Criterion

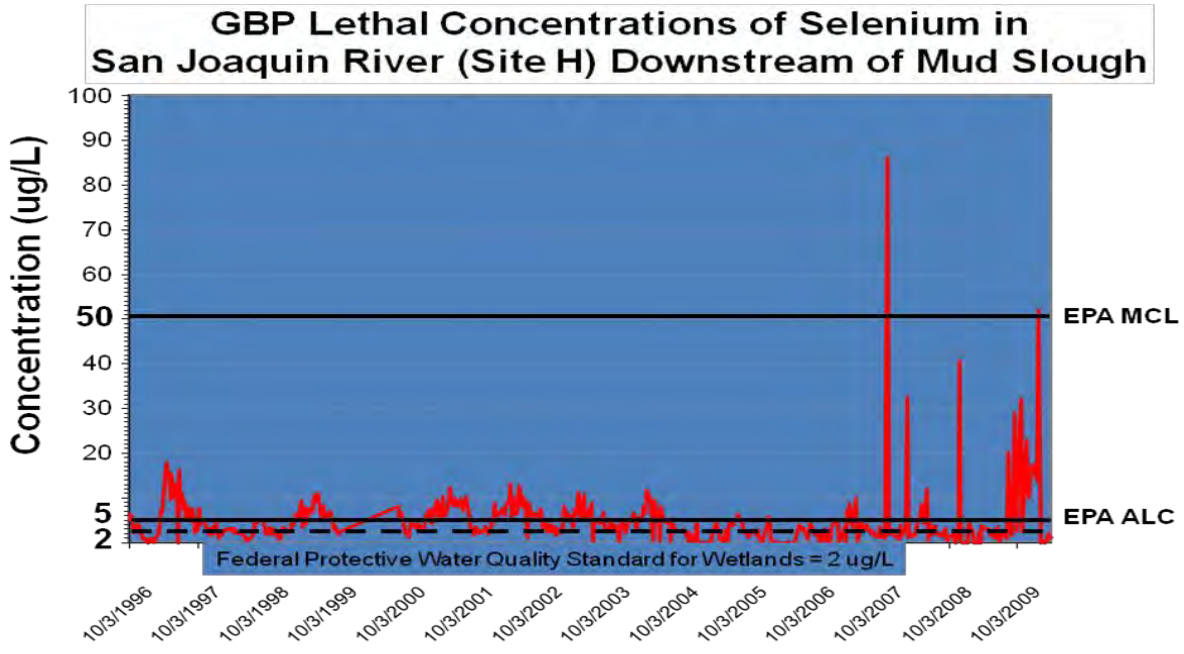
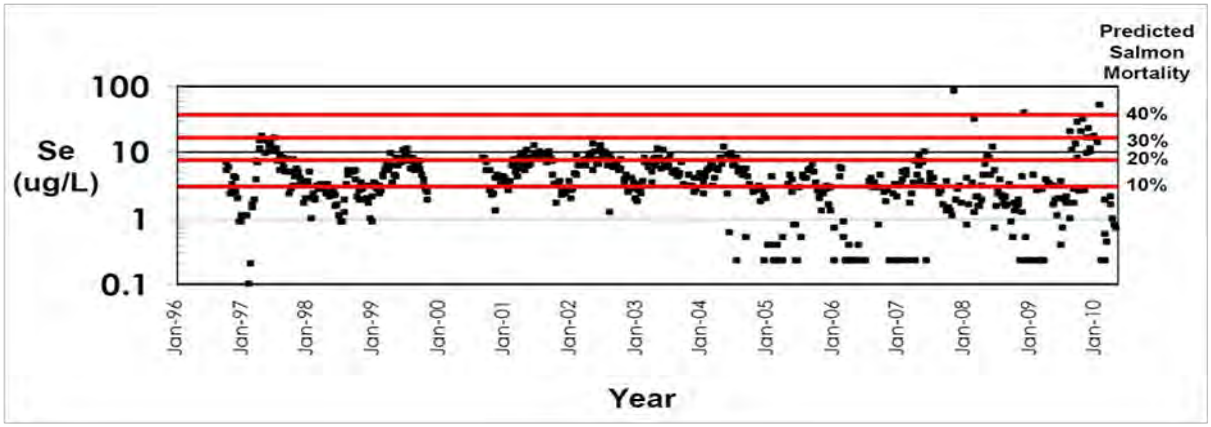


Figure 5

Data from USBR Eacock MCL=Maximum Contaminant Level for Drinking Water ALC=Aquatic Life Criterion

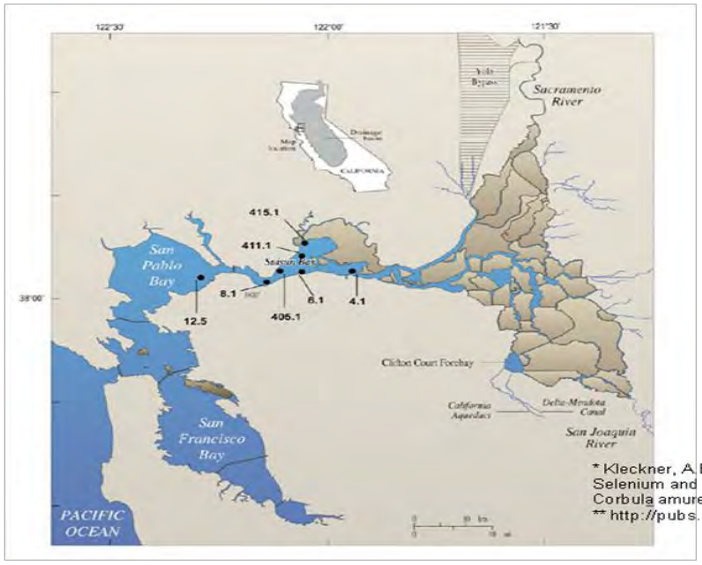
Selenium Levels in the San Joaquin River are not Safe for Salmon



Selenium concentrations measured in the San Joaquin River at Hills Ferry (data from USBR [Eacock]and USFWS [Maurer & Beckon])

Figure 6

Selenium Impacts in Bay-Delta



Unsafe levels of Selenium concentrations found in Suisun Bay and Northern San Francisco Bay 2 to 22 ppb.*

Selenium loads per day from Westside irrigators contribute approximately 10 to 30 times daily selenium load compared to the Sacramento and Oil refineries combined.**

* Kleckner, A.E., Stewart, A.R., Elrick, K., and Luoma, S.N., 2010, Selenium and stable isotopes of carbon and nitrogen in the benthic clam Corbula amurensis from Northern San Francisco Bay, California: May 1995b
** http://pubs.usgs.gov/pp/p1646/

Figure 7

ENDNOTES

[1] Federal Defendants' Status Report of April 1, 2011. Case 1:88-cv-00634-OWW-DLB Document 864 Filed 04/01/11 page 6 & Glaser Third Declaration pg 6-7

[2] Ibid.

[3] http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4418 pg 26 of 66 FEIR/EIS Final EIS/EIR, Private/individual comments Part 2, Grassland Bypass 2010-2019

[4] Order No. 87-201 NPDES No. CA 0082171 Waste Discharge Requirements for United States Department of the Interior Bureau of Reclamation & Order No 90-027 NPDES NO CA 0082368 WDRs for USBR.

[5] Order No 96-0922 NPDES No. CA 0083917 Waste Discharge Requirements for USBR and San Luis Delta Mendota Water Authority adopted March 22, 1996.

[6] http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4413 "Tile drainage systems affect groundwater-flow in upper parts of the semi-confined aquifer. Seasonal changes in groundwater levels and drain flow indicate field conditions are affected by upslope irrigation activities. Furthermore, observation well data show that groundwater movement is upward towards the drainage systems from depths as great as 100 feet below land surface (Deverel and Fio, 1991; Fio, 1994)." Pg 236 of the PDF

[7] http://www.epa.gov/region9/nepa/letters/Grassland-Bypass-FEIS.pdf EPA March 30, 2009 Detailed EIS/EIR Comments RE Grassland Bypass Project Continued Use of San Luis Drain: *"Develop a comprehensive monitoring program that includes multiple contaminants and follow-up for detected biological effects…this program should cover biological as well as water quality and sediment components."*

http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415 pg 15 -52 of PDF USFWS March 22, 2009 Comments RE Continuation of GBP 2009 to 2019 USFWS recommends… "*An evaluation of the environmental effects of continued acute spikes of selenium to the biota in the vicinity of the Grasslands wetland supply channels…Selenium bioaccumulates rapidly in aquatic organisms and a single pulse of selenium (>10 µg/L) into aquatic ecosystems could have lasting ramifications….Maier et al. found that the invetebrate food web was still contaminated at >4 µg/L 12 months after selenium treatment when the monitoring ended even though water concentrations were <1 µg/L."*

http://pubs.usgs.gov/pp/p1646/pdf/pp1646.pdf pg 26. ... "monitoring was not sufficiently frequent to accurately characterize loads during variable flows."…annual data are not available from individual farm-field sumps to help qualify source-area shallow groundwater conditions and determine long-term variability in selenium concentrations…compliance monitoring sites are 50 and 130 miles downstream from the agricultural discharge. Pg 118-119.

Grassland Bypass Project 1999-2000 Annual Report at page 4, "The Oversight Committee recommended that additional studies be undertaken to establish the sources of selenium." http://openlibrary.org/books/OL23302134M/Grassland_bypass_project

Grassland Bypass Project 2001-2002 Annual Report at page 4, "The Oversight Committee recommended that additional studies be undertaken to establish the sources of selenium." http://openlibrary.org/books/OL23302136M/Grassland_bypass_project

" A Review of the Grassland Bypass Channel Project Monitoring Program" Presser, Sylvester, Dubrovsky and Hoffman, December 1996
http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Presser_etal_GBP_monitoring_plan_1996.pdf
http://www.swrcb.ca.gov/rwqcb5/water_issues/grassland_bypass/usfws_att_e.pdf Email From Tomas Mauer, Chief, Investigations and Prevention Branch Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service to Shauna McDonald [USBR], 11-18-09: "*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)."*

[8] USFWS 2009 Biological Opinion for the Grasslands Bypass Project page 90. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826 "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)…"

[9] USBR 2001 Record of Decision page 6. http://www.usbr.gov/mp/grassland/documents/rod_final_09-28-01.pdf

[10] http://www.swrcb.ca.gov/rwqcb5/water_issues/grassland_bypass/usfws_com.pdf "*Selenium concentrations in the food-chain of these impacted waters have often reached levels that could impact or even kill a substantial proportion of young salmon (Beckon et al. 2008) if the salmon, on their downstream migration, are exposed to those selenium-laden food items for long enough for the salmon themselves to bioaccumulate selenium to toxic levels. Based on existing water quality data for selenium in specific reaches of the San Joaquin River, Beckon and Maurer (2008) concluded that there remains a substantial ongoing risk to migrating juvenile Chinook salmon and steelhead in the San Joaquin River as noted in Attachment E. The Service asks that the Regional Board consider the protection of Chinook salmon and steelhead in the San Joaquin River, including the reach between Sack Dam and the Merced River, in this Basin Plan Amendment."[page 6 of pdf]*

[11] http://calitics.com/tag/Selenium Napolitano, Garamendi, et al., November 26, 2010.
Personal Communication Rudy Schnagl to Ms Schifferle, 8-8-11 'Flow models document most of the San Joaquin River is diverted to the California Aqueduct, thus contaminants are likely captured and sent south.'

[12] Suisun Bay in the Delta is selenium impaired and agriculture is listed as a source in the 303(d) listing of this water body. Further, EPA is in the process of developing a site specific selenium objective for the Delta, so reduced monitoring of the GBP could further hinder compliance with this future objective.

[13] http://www.swrcb.ca.gov/rwqcb5/water_issues/tmdl/central_valley_projects/san_joaquin_se/se_tmdl_rpt.pdf "*There would be effectively no allocation of selenium load in the absence of Merced River dilution flows. The source analysis has shown that subsurface agricultural return flows from the DPA are the primary source of selenium load in the lower SJR Basin." [page 14]* Also see 1994 Regional Board staff report, Total Maximum Monthly Load Model for the San Joaquin River (Karkoski, 1994),

[14] November 3, 1995, Letter to Karl Longley Central Valley Regional Water Quality Control Board from Dan Nelson, SLDMWA, Roger Patterson, USBR; Felicia Marcus, USEPA; Joel Medlin USFWS. *"A commitment to specific monthly and annual selenium load values which assure that within 2 years, the Water Authority will implement actions sufficient o reduce selenium loads to the River by at least 5 percent per year up through the end of the 5th year. …the parties agree that for the purpose of establishing selenium load reductions, the following water quality objectives are now applicable: (a) 5 ppb selenium, measured as a 4-day average, in the San Joaquin River and Mud Slough and (b) 2 ppb selenium, measured as a monthly mean, in Salt Slough and the wetland channels.*

[15] 1994 Environmental Defense Fund, Terry Young and Chelsea Congdon "Plowing New Ground" pg 35.

[16] Ibid.

[17] http://www.swrcb.ca.gov/rwqcb5/water_issues/tmdl/central_valley_projects/san_joaquin_se/se_tmdl_rpt.pdf pg 20 of the PDF

"Load allocations in this TMDL [for the SJR] are established for meeting the selenium water quality objective in the SJR downstream of the Merced River confluence. There would be effectively no allocation of selenium load in the absence of Merced River dilution flows. The source analysis has shown that subsurface agricultural return flows from the DPA are the primary source of selenium load in the lower SJR Basin….. Attainment of the selenium water quality objective upstream of the Merced River confluence may require significant changes to the DPA discharge, including the relocation of the discharge point."
http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/sjr_selenium/comments092210/susan_moore.pdf pg 2 of the PDF

[18] http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4418 pg 26 of 66 FEIR/EIS Final EIS/EIR, Private/individual comments Part 2, Grassland Bypass 2010-2019
http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3513
Also see Appendix C of the December 17, 2009 Agreement for the Continued Use of the San Luis Drain Agreement No. 10-WC-20-3975. Predicted violations of CWA standards will continue with proposed loads approximately until years 9 and 10. They will be violated for those years unless "highly speculative treatment" is achieved. See http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415 pg 4 of 40 of the PDF. EPA comments on the DEIS/EIR for Continued Use of the San Luis Drain for Discharge into Mud Slough and the San Joaquin River.

[19] http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3513

[20]http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/303dlists2006/epa/state_usepa_combined.pdf
[21]http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/sjr_selenium/comments092210/susan_moore.pdf see page 2 of the PDF
[22]http://www.swrcb.ca.gov/rwqcb2/water_issues/programs/TMDLs/northsfbayselenium/Species_at_risk_FINAL.pdf, accessed 4/20/11.
[23] http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415 see EPA comments pg 5 of 40 of the PDF.
[24] http://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/ http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/sjr_selenium/comments092210/susan_moore.pdf
[25] http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Presser_etal_GBP_monitoring_plan_1996.pdf and see USFWS comments and EPA comments RE USBR NEPA Document at http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415
[26] http://pubs.acs.org/doi/abs/10.1021/es900828h
[27] http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415 see USFWS comment pg 33 of 40 of the PDF.
[28]http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Presser_etal_GBP_monitoring_plan_1996.pd @ pg 81 of the pdf.
[29]http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Presser_etal_GBP_monitoring_plan_1996.pdf @ pg 15 of the pdf
[30] November 3, 1995 Letter From USBOR, USFWS, US EPA and San Luis Delta Mendota Water Authority to Karl Longley, Chair of the Regional Water Quality Control Board: Re Basin Plan Amendment for the San Joaquin River. *"The Selenium load reductions proposed will not necessarily achieve these water quality objectives by the end of the 5th year, and thus a long-term implementation schedule will be required……It is understood that load reductions of this sort are only a first step and do not fully protect against the environmental impacts which may result from selenium discharges during months when water levels are low in the San Joaquin River*" at pages 3-4.
[31]http://www.swrcb.ca.gov/rwqcb5/water_issues/tmdl/central_valley_projects/san_joaquin_se/se_tmdl_rpt.pdf *"Load allocations in this TMDL are established for meeting the selenium water quality objective in the San Joaquin River (SJR) downstream of the Merced River confluence. There would be effectively no allocation of selenium load in the absence of Merced River dilution flows. The source analysis has shown that subsurface agricultural return flows from the Drainage Project Area (DPA) are the primary source of selenium load in the lower SJR Basin….. Attainment of the selenium water quality objective upstream of the Merced River confluence may require significant changes to the DPA discharge, including the relocation of the discharge point."*

ATTACHMENT 2

CA Save Our Streams Council

NORTH COAST RIVERS ALLIANCE

April 22, 2013

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Sent via FAX and e-mail to: 559-487-5397
and sbrown@usbr.gov

RE: Grassland Bypass Project Revised Monitoring Plan Comments

We oppose adoption of the proposed Monitoring Plan for the Grasslands Bypass Project. The reduction in frequency and locations is insufficient to provide information needed to protect public trust values, endangered species and evaluate compliance with water quality standards. We recommend a vigorous monitoring program that does not hide or understate the ongoing discharge of selenium and other toxins into Mud Slough and the San Joaquin River. We also oppose plans to direct stormwater discharges through the San Luis Drain without a publicly vetted Stormwater Management Plan, which was promised years ago and is still not available.

Since the August 2011 initial announcement of reductions in monitoring for the discharge of pollutants from the San Luis Drain to the San Joaquin River from the Grassland Drainers, there have been further reductions in the frequency of pollution monitoring. [See our August 2011 letter for details- Attachment 1]. The compliance point is still some 30 to 50 miles away from the initial discharge of pollutants and

relies on dilution from the Merced River to achieve compliance [See Figure 1]. For over two decades, what was supposed to be a temporary two-year program to divert Westside pollutants to the San Joaquin River and Delta Estuary has received a pollution waiver, allowing lethal levels of selenium to be discharged into Mud Slough North, the San Joaquin River and ultimately to bio-accumulate in the Sacramento-San Joaquin River Delta Estuary [See Figure 2].

Figure 1

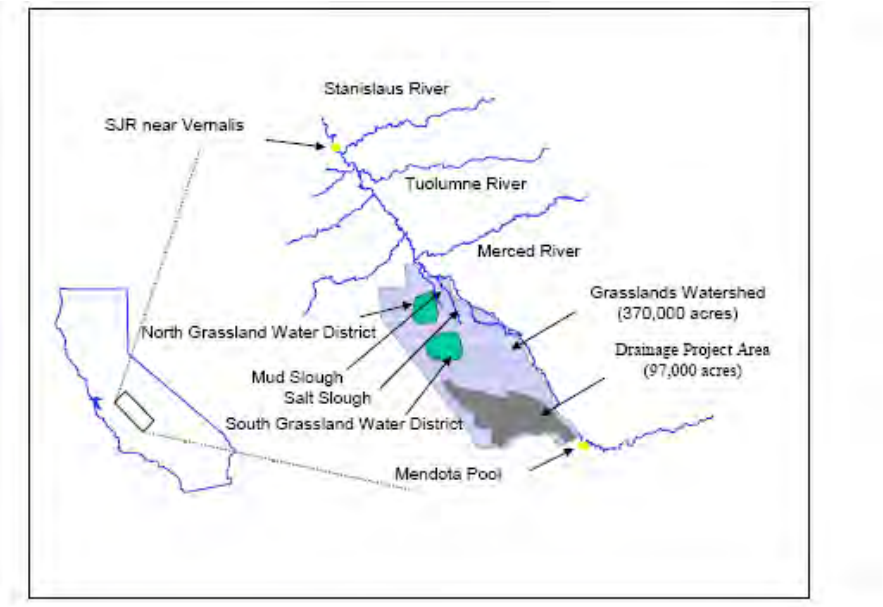
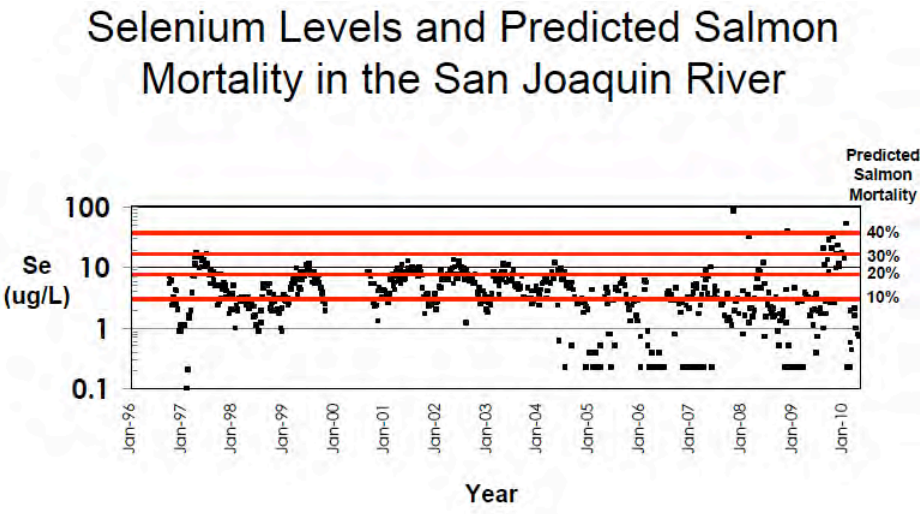


Figure 2



Selenium concentrations measured in the San Joaquin River at Hills Ferry (data from the U.S. Bureau of Reclamation)

Since conception of the project, the key to adopting this transfer of pollutants from Westside drainers to our public water resources rested upon a comprehensive biological, water quality, and sediment monitoring program in order to protect beneficial uses. And yet this monitoring program has been consistently curtailed so that it is likely the data collection will be insufficient to accurately measure and predict the fate of this selenium contamination and other contaminants on downstream uses, including salmon, steelhead and sturgeon facing extinction, other aquatic resources, and ground water supplies.

At the present time, the rationale for these monitoring reductions is insufficient money. And yet the primary source of selenium and other contaminants being discharged is from the drainers in the Drainage Project Area [see Figure 1]. The costs of this monitoring program are part of the contractual agreements allowing this pollution to be transferred to downstream areas. Absent a guaranteed funding stream, this discharge should be stopped per the original 1995 USBR use agreement.

The reduction of monitoring frequency tends to underestimate the pollution and overestimates the "success" of the project as follows:

- The nature of the selenium and other contaminants' variability during any given month, with spikes due to various hydrologic and management events, minimizes or underestimates pollution because there is only a small chance that the important spikes in concentration will be sampled. USBR and the Grassland Drainers regularly collect samples aimed at estimating monthly means, but fail to assess the fate and transport of selenium contamination that is discharged into the San Luis Drain, travels adjacent to state and federal wetlands, then flows into Mud Slough North before being discharged to the San Joaquin River and ultimately to the Delta. This overly simplified approach leaves a major and unacceptable gap in our understanding of where and how ecosystems are exposed to selenium.
- The enforceable concentration standard is some 30-50 miles away from where the high concentrations of selenium are initially discharged, which allows a major stretch of river and sloughs unprotected.
- Monitoring of selenium contamination in sediments proposed for discharge to residential or industrial sites per the 2009 Grasslands Bypass Project Record EIS/EIR (see Attachment 3) is insufficient to protect these areas from selenium contamination and potentially further spreading this contaminant.
- Monitoring stations have been dropped and, in the case of Fremont Ford on the San Joaquin River, the reduction from weekly samples to monthly makes obtaining a meaningful monthly mean improbable.

Furthermore, there is no clear commitment from the dischargers and federal government that even this reduced program will be funded sufficiently. This absence of reliable funding support creates an unacceptable level of uncertainty to measure the outcomes of this pollution transfer from one watershed to another.

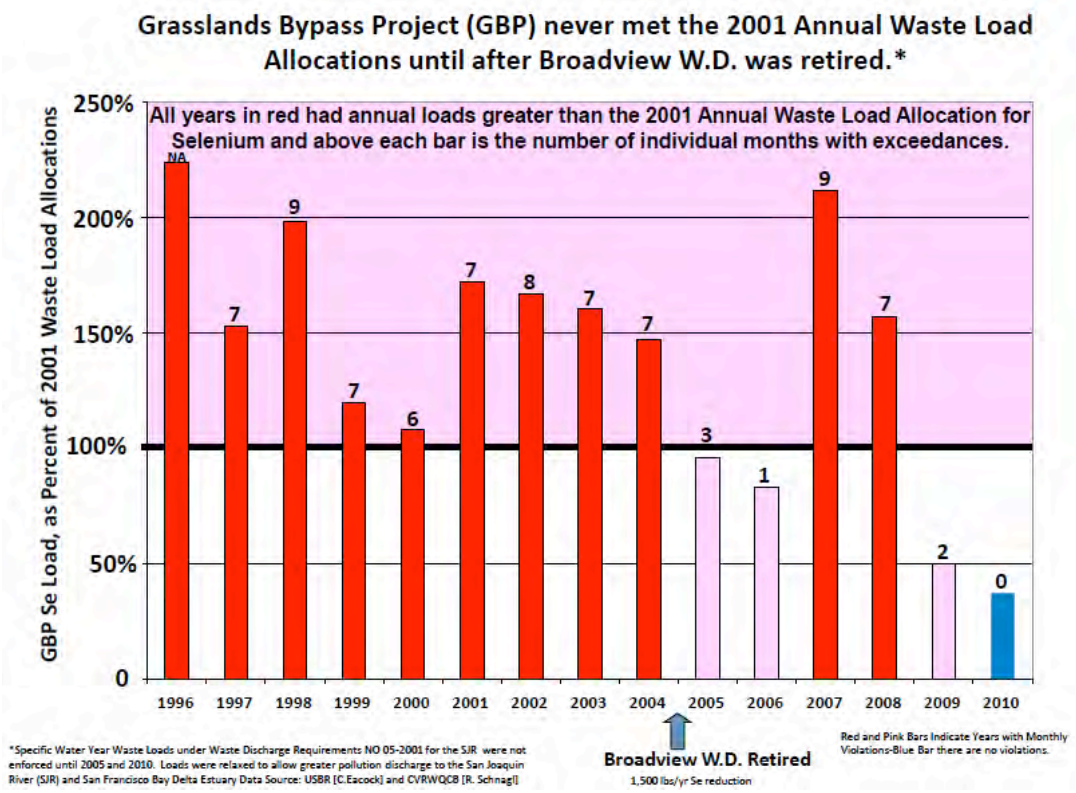
Other projects related to the Grassland Bypass Project including the discharge of drain waste water to two projects located on land owned by the Panoche Drainage District—The San Joaquin River Improvement Project (SJRIP) and Selenium Treatment Demonstration Project—are not considered in the monitoring program. Monitoring the fate of pollutants in this drain water used to irrigate crops as part

of the SJRIP, the inflow and outflow of the Selenium Treatment Demonstration project, and the fate of selenium and other contaminants in treated water used for irrigation is critical to understanding if ground water supplies and plant material are collecting and concentrating selenium along with other pollutants being discharged or treated.

As you can see from Figure 3, most of the success in the reduction of source drainage discharge has occurred through land retirement. The significant progress made in reducing loads is most likely from retirement of 10,000 acres in Broadview and 44,000 acres in Westlands' Northerly area that drains into Grasslands. Extrapolating the savings from the Broadview Contract Assignment EA in 2004, the retirement of 54,000 acres should conservatively result in a reduction of 7,500 lbs. of selenium, 85,000 tons of salt and 260,000 lbs. of boron. Those reduced loads could account for virtually all of the progress made to date in reducing polluted groundwater discharges from Grasslands.

Monitoring to document how the mass balance of pollutants being discharged from the drainage area is largely left out of the analysis. The proposal to utilize the San Luis drain to discharge stormwater from the west side to the San Joaquin River will further compound this transfer of pollution costs to other downstream beneficial uses.

Figure 3



The heart of the problem rests with the fact that the monitoring plan does not have an appropriate success or failure measurement against a specific benchmark. The benchmark or compliance point is downstream of the Merced. While there have been reductions in the wetlands of the Grasslands

Watershed, the gathering and concentrating all this pollution that travels through state and federal refuges and then discharges to the river have exceeded safe levels most of the time.

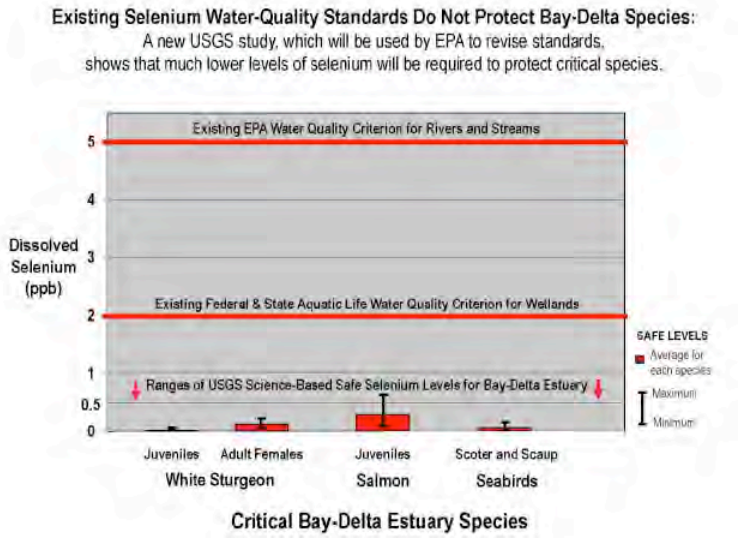
The pledge to have the "data" or monitoring "peer reviewed" does not meet scientific peer review standards. Basically the pledge amounts to relying on a nonprofit group that has a financial stake in continuing the project. Being funded for 20 years by the drainers and USBR to post the data, this group has not had the expertise to peer review it. This is not a scientifically grounded peer review. Basically those polluting will collect and disseminates data which is then posted. These groups, including the dischargers along with the Grasslands Water District, own the data. Many have found that obtaining or conducting an independent analysis of the data that is not biased is difficult.

The United States Geological Survey listed as technical advisors have the expertise to statistically analyze the monitoring program. They are not funded, however, to determine if the reduced frequency of monitoring and relying on means or averages instead of the legally required CWA 4 day average is accurate in reflecting the amount and concentrations of selenium or other contaminants being discharged into the system. The issue is compounded when the program underestimates the amounts by not measuring the peaks of selenium which have been shown to stay in the ecological system for weeks after the event. .

Ironically reduced monitoring for selenium and other Westside contaminants is stated as necessary to save money in order to add monitoring for pesticides and mercury.

In addition to the Monitoring Plan's lack of benchmarks for success or failure, our understanding is that no action will be taken on the discharge of sediments unless they exceed hazardous waste standard of 100 µg Se/g wet weight [see Attachment 3]. Biological impacts of selenium occur at much lower levels than that. A recent study by the U.S. Geological Survey found that existing selenium water quality objectives of 2 µg/l and 5 µg/l respectively, are inadequate to protect aquatic and avian species [see Figure 4]

Figure 4



In addition, monitoring and analysis of the impacts of water transfers from the San Joaquin River Exchange Contractors (SJREC) to other areas should be included. The reduction in tailwater and groundwater in the area is likely to increase the concentration of selenium in water supplies for refuges and other wildlife areas and the canals serving them. One of the key assumptions in the environmental documents for the water transfer program is that the methods used to develop water for transfer will not cause a change in current hydrologic conditions in waterways. Reclamation committed in the most recent SJREC Water Transfer Program environmental document to conduct a formal coordination process to identify other programs that could significantly affect the assumptions or effectiveness of the water transfer program including the following:

- The Westside Integrated Resources Plan
- Various CVP yield improvement studies
- Land retirement studies and implementation
- San Luis Drainage Feature Re-evaluation Drainage Program implementation
- Grassland Bypass Project and related studies
- All components of the San Joaquin River Restoration Program, as described in the San Joaquin River Settlement Act and related Stipulation for Settlement, including but not limited to Restoration Flow releases and measures taken for the protection, recirculation, and recapture of Restoration Flows.

The addition of a single annual monitoring sample for selenium at the China Island State Refuge is largely ineffective in accurately predicting the impacts to that section of the river. The discharge of contaminants in San Joaquin River from Mud Slough and the Merced River will remain largely unknown under the proposed monitoring reductions.

We find the proposed monitoring plan lacking in both comprehensiveness and scientific rigor. Instead of providing information about toxic discharges of selenium and other toxins, and their environmental fate in the hydrologic system, it will mask their impacts on the environment.

Sincerely,

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Attachment 1- August 2011 Coalition Letter on GBP Monitoring
Attachment 2- September 2011 Coalition Letter on exclusion of public
Attachment 3 Sediment Management Plan From Appendix B of the Final EIS/R for the Grasslands Bypass Project, p 4-1

Attachment 1

NORTH COAST RIVERS ALLIANCE

August 11, 2011

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2800 Cottage Way
Sacramento, CA 95825-1846

Ren Lohoefener
Regional Director
U.S. Fish and Wildlife Service
Pacific Southwest Regional Office
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Re: Opposition to the Proposal to Curtail Monitoring at the Grassland Bypass Project

Dear Grassland Bypass Project Data Collection & Review Team and Oversight Committee:

The undersigned groups oppose reductions in the monitoring program for the Grassland Bypass Project and, furthermore, recommend a comprehensive reassessment of the need for enhanced monitoring and scientific evaluation. We can see no technical justification or rationale for this reduction in monitoring for a project that has exceeded water-quality objectives and standards for more than fifteen years. We urge the Oversight Committee to reject this unjustified reduction in monitoring and require a reassessment of monitoring and study needs in view of the historical experience with the Grasslands Bypass Project and the long-ignored scientific recommendations of the United States Geologic Survey (USGS) and others to take a systematic, mass-balance approach to understanding the impacts of selenium and other contaminants from the Project. The discharge of selenium and other contaminants in excess of Federal and State water-quality standards threaten populations of Salmon, Steelhead, and Sacramento Splittail, as well as the waterfowl and wildlife resources of the State and Federal National Wildlife Refuges in the area. At the proposed concentrations, mortality of Chinook salmon, steelhead, Sacramento Splittail, waterfowl, and other wildlife are predicted in or adjacent to Mud Slough, the San Joaquin River, and the Delta Estuary. (See Figure 6)

We appreciate the opportunity to comment upon the United States Bureau of Reclamation (USBR) and San Luis Delta Mendota Water Authority (SLDMWA) draft monitoring proposal pending before the Data Technical Committee. The draft proposal would curtail the monitoring program for the discharge of selenium, salt, boron and other contaminants being drained into Mud Slough and the San Joaquin River, using the Federal San Luis Drain as the wastewater collection and discharge conduit. The monitoring proposal would reduce the frequency of monitoring for critical contaminants and supporting parameters at various sites, with no technical justification or analysis of increased bias and uncertainty in tracking water-quality compliance and Project effectiveness. These reductions will mask the pollution spikes in the watershed, river and estuary and provide insufficient data needed to model impacts to the

San Joaquin River and the Delta Estuary. These deficiencies have been previously outlined by the scientific community, but continue to be ignored.

In a declaration before the United States District Court for the Eastern District of California filed by Mr. Glaser, Mid-Pacific Region Director, USBR, on April 1, 2011[1], Mr. Glaser and USBR reported, "On February 16, 2010, the Regional Board staff announced that it would no longer conduct water quality monitoring at twelve sites for the GBP, because of funding and staffing shortage. In addition, staff for the California Department of Fish and Game expressed doubts that they could continue biological monitoring for the project due to staff losses. Reclamation is working with other agencies to revise the Project's monitoring program, and will assign staff and seek funding to assure that the water quality and biological monitoring requirements are met."[2]

Operating under State of California Waste Discharge Requirements (WDRs), USBR and SLDMWA (Dischargers) have transported selenium and other contaminants from the San Luis Drain to the San Joaquin River starting in 1995 as a "temporary" two year project that was next extended to 2000, and then again extended to 2009, and recently extended again to 2019.(See Figure 1) USBR data document that, from 1996 to 2008, the dischargers have dumped 85,954 lbs of selenium, 25,251,000 lbs of Boron and 9,772,610 tons of salt to Mud Slough, the San Joaquin River, and the Delta Estuary.[3]

Even before 1995, these Dischargers drained selenium and other contaminants from the San Luis Drain, via Mud Slough to the San Joaquin River actually began under two Clean Water Act National Pollutant Elimination System (NPDES) permits.[4] (See Figure 1) Under those permits the selenium pollution controls and monitoring frequencies were much stronger. The compliance monitoring took place at the point of discharge not some 30 miles downstream. And concentrations at the point of discharge were much lower for Mud Slough (north) along with concentrations measured in the San Joaquin River monitoring sites. First, in November of 1987, USBR was allowed to drain the Kesterson ponds via Mud Slough into the San Joaquin River. A second NPDES permit to discharge selenium contaminated groundwater was issued to the Dischargers, USBR and SLDMWA, in March of 1996, where toxic drainage and ground water discharged also had similar monitoring and water quality compliance requirements.[5]

Under the previous and present permits Dischargers use sumps and pumps to move groundwater collected from subsurface drainage systems, which collect contaminated groundwater from as deep as 100 feet drawing from contaminated water from basically horizontal groundwater wells some 50- 100 feet in depth[6] to collect pollution from over 97,000 acres and discharge toxic contaminants that exceed federal and state water quality standards, violate the Sacramento-San Joaquin Valley Basin plan, degrade beneficial uses, and create a nuisance and burden for downstream users to clean up, thus passing these environmental hazards and treatment costs to downstream users.

What is the rationale for curtailing monitoring?

Repeated requests to develop a comprehensive and effective monitoring program for the Grasslands Bypass Project have not been acted upon.[7] There has been a consistent failure to develop

monitoring to determine the fate and transport of selenium and other contaminants in the food chain where it's magnified effects result in a narrow window of exposure before mortality. Despite the lack of monitoring, selenium concentrations in avocet and stilt eggs at the Grasslands Drainers' reuse area have been found to exceed those found at Kesterson National Wildlife Refuge![8] Further the project has failed to track the selenium loading from the Grassland Drainage Area into the San Joaquin River, the Sacramento-San Joaquin Delta and the North Bay (e.g. Suisun Bay), as required in the 2001 Record of Decision for the GBP.[9] Biological monitoring and impacts especially to coldwater fish have not been monitored.[10] For example a Lemly index was not determined for San Joaquin River sites due to lack of sufficient sample of invertebrates and because bird eggs, one component of the index, are not sampled there. Selenium is being exported to southern California's water supplies through the California Aqueduct threatening drinking water quality and likely is accumulating in fish and reservoirs in Southern California as a result.[11]

Also the GBP has failed to monitor and consider the long term impacts of discharging selenium through wetland and slough areas adjacent to federal and state wildlife refuges, the San Joaquin River and Delta Estuary.[12] This history of inadequate monitoring and insufficient scientific assessment will be made far worse if the proposed reductions in monitoring are allowed. We find absolutely no evidence that the proposed reductions are based on documented scientific analysis.

Models Accurately Document an Ongoing Failure to Meet Water Quality Standards in the San Joaquin River and Mud Slough (North) and Continue to Impair the Bay-Delta.

Since 1994, models used to establish the amount of selenium loads to be discharged to the San Joaquin River and Delta Estuary have accurately documented that these loads of pollution do not meet Federal and State standards for minimal protection of water quality.[13] [See Figures 3-5] Moreover, since 2000 the load models used have even been modified to permit greater discharges of pollution without triggering a violation. These modifications include relaxing criteria for violation rates, choosing a monthly mean instead of a 4 day average, and changing the water years.[14] Environmental Defense Fund estimates the change from the four-day flow averaging period to a one month averaging period resulted in a 21 percent to 44 percent increase in allowable loads.[15] "If implemented as an interim compliance, this change in the averaging period would be expected to cause numerous violations of the water quality standards. Similarly, relaxing the once-in-three year excursion rate to a once-in five-month per year rate resulted in a significantly higher allowable load."[16] These predicted violations have proven accurate.[17] Using similar calculation assumptions, USBR figures for 2009-2019 predict violations also for the continued loads of pollution allowed.[18] The dischargers use these generous load targets and the ability to meet them as a sign of success. The fact remains, however, that they fail to meet safe concentrations in the Mud Slough (north) wetland channels through State and Federal Wildlife Refuges and concentrations remain extremely high in Mud Slough (north) and in the San Joaquin River above the compliance point measured some 30 miles away. Along with the violations of the federal and state water quality standards, concentrations of selenium in fish and wildlife also remain high. Scientists predict a high mortality for coldwater fish such as salmon and green sturgeon from these concentrations.[19]

The San Joaquin River downstream of the Merced River has been delisted as water quality impaired because of dilution water from the Merced River, weak standards and inadequate monitoring mentioned above. The selenium contamination, however, continues to drain into the Bay-Delta with predictable results. The Clean Water Act Section 303(d) list of water quality limited stream segments lists 41,736 acres in the Delta, 5,657 acres in the Carquinez Straights, 70,992 acres in San Francisco Bay Central, 9,024 acres in San Francisco Bay south and 68,349 acres in San Pablo Bay as impaired by selenium.[20] The west side discharges are a major source of those water quality impairments.[21] Health advisories are in effect for scaup, scoter and benthic feeding ducks in many of those areas.

A study by the U.S. Fish and Wildlife Service[22] for USEPA identified that several bird species protected under the Migratory Bird Treaty Act (MBTA) are considered "species most at risk" from selenium contamination in the San Francisco Bay. Greater scaup, lesser scaup, black scoter, white-winged scoter, surf scoter and bald eagle are listed as "species most at risk" from selenium contamination and all are covered by the Migratory Bird Treaty Act (MBTA). By allowing continued discharges of selenium in excess of Basin Plan objectives from the Grasslands Bypass Project, there is downstream contamination and selenium bioaccumulation in the Bay-Delta, and increasing likelihood of MBTA and ESA violations by the United States.

Government Scientists Have Criticized the Existing Monitoring Program and Proposed Reductions Further Erode Protection of Public Resources

EPA has urged the development of a comprehensive monitoring program if the project is extended.[23] USFWS comments have identified numerous monitoring deficiencies with regard the fate and transport of selenium and the long term effects on especially on coldwater fish, wildlife and endangered species.[24]

In 1996 USGS scientists provided the Oversight Committee with a comprehensive critique of the proposed monitoring plan, developed in cooperation with USBR. [25] Many of USGS comments still apply. They include recommendations for assessing the fate and transport of selenium in the project area; evaluation of selenium in sediment and its transport; evaluation of suspended particulate forms of selenium from the discharges; and for better biological and water quality monitoring. One of the main findings of the USGS review is that a monitoring program and study is needed to evaluate the mass balance of SE that includes the dissolved and suspended particulate forms of selenium. This continuing lack of comprehensive monitoring for the management of selenium contamination is also echoed in a recent scientific article, by Luoma & Presser 2009:[26]

"Uncertainties in protective criteria for Se derive from a failure to systematically link biogeochemistry to trophic transfer and toxicity (Figure 1). In nature, adverse effects from Se are determined by a sequence of processes (12). Dilution and redistribution in a water body determine the concentrations that result from mass inputs. Speciation affects transformation from dissolved forms to living organisms (e.g., algae, microbes) and nonliving particulate material at the base of the food webs. The concentration at the base of the food web determines how much of the contaminant is taken up by

animals at the lower trophic levels. Transfer through food webs determines exposure of higher trophic level animals such as fish and birds. The degree of internal exposure in these organisms determines whether toxicity is manifested in individuals. Se is first and foremost a reproductive toxicant (both a gonadotoxicantanda teratogen): the degree of reproductive damage determines whether populations are adversely affected. Adverse effects on reproduction usually occur at lower levels of exposure than acute mortality, but such effects can extirpate a population just as effectively as mortality in adults."

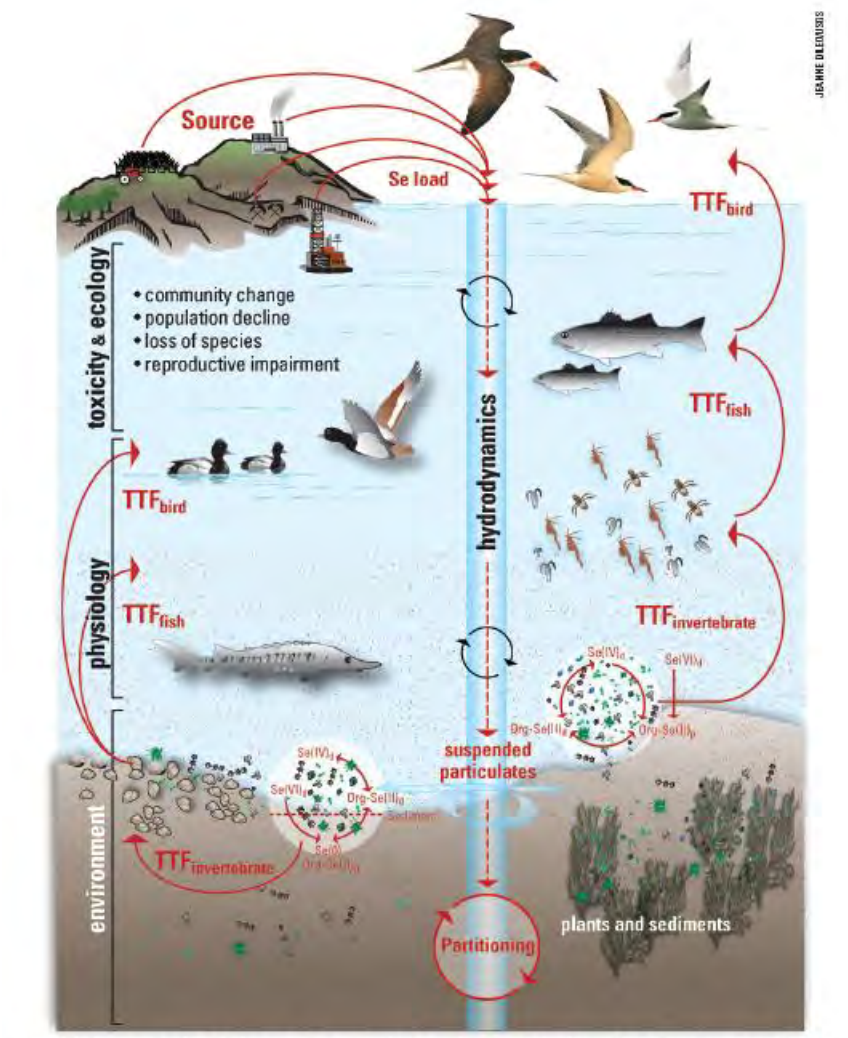

FIGURE 1. Conceptual model of Se fate and effects emphasizing the roles of speciation, biogeochemical transformation, and trophic transfer factors in modeling two aquatic food webs: a water column food web and a benthic food web. TTF = trophic transfer factor. Subscript d means dissolved, subscript p means particulate.

As of 2007 an estimated 222,025 cubic yards of sediment has accumulated in the San Luis Drain.[27] This is nearly a four-fold increase over the original 55,788 cubic yards of sediment that were recommended for removal at the beginning of the project, but never carried out.[28] Also contained in the USGS report on the Review of the Grassland Bypass Channel Project Monitoring Program is the

following assessment of the entire monitoring program: "The original Monitoring Plan is not adequate because it does not account for all appropriate sources and sinks of selenium, salt, and boron within the GBCP area and because the sampling design does not adequately address temporal, width, and depth variability in chemical concentrations and loads."[29] These contaminated sediments and suspended particulates in the water pose a toxic danger in the Drain, as well as, in Mud Slough and the San Joaquin River, that continue to grow and the proposed reductions in monitoring do not remedy these problems and shortcomings.

Conclusion: Continued Monitoring and a More Rigorous Approach are Necessary to Protect the Public Interest and Water Quality.

Rather than reduce monitoring, as proposed, we urge a substantial increase in the current 2001 monitoring plan to ensure compliance with state and federal law, while at the same time immediately initiating a comprehensive, peer-reviewed reevaluation of the monitoring program and the amounts of selenium being discharged under the current Total Maximum Daily Load (TMDL) and WDRs implementing the TMDLs. As noted in the November 3, 1995 agency letter, "There is no commitment, at this time, to approve long-term use of the Drain." [30] Further in 2001 the Regional Board staff reported, "If monitoring demonstrates that the water quality objectives are not being met then additional load reductions or amendments to the TMDL will be required."[31] As noted previously and documented in figures 3-5, discharges exceed federal and state water quality standards. The Waste Discharge Requirements and compliance monitoring need to be strengthened not relaxed.

Based on current science, the continued extension of discharges from the Grasslands Bypass Project make it more important than ever to ensure that a long-term monitoring and scientific assessment finally address the impacts of the Project and the realistic chances of future reductions in contamination. Please add us to any notifications regarding changes in the monitoring program or waste discharge requirements.

Sincerely,

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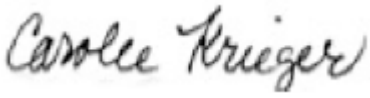

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Susan Moore, Field Supervisor, US Fish and Wildlife Service
Tom Maurer and William Beckon, US Fish and Wildlife Service
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Julie Vance and John Shelton, California Department of Fish and Game
Kim Forrest, Wildlife Refuge Manager
San Luis National Wildlife Refuge Complex U. S. Fish and Wildlife Service
Interested Parties

Permit History for Selenium Discharges From Grasslands Basin Watershed to Mud Slough and San Joaquin River: A Case History in the Failure to Enforce Water Quality Standards

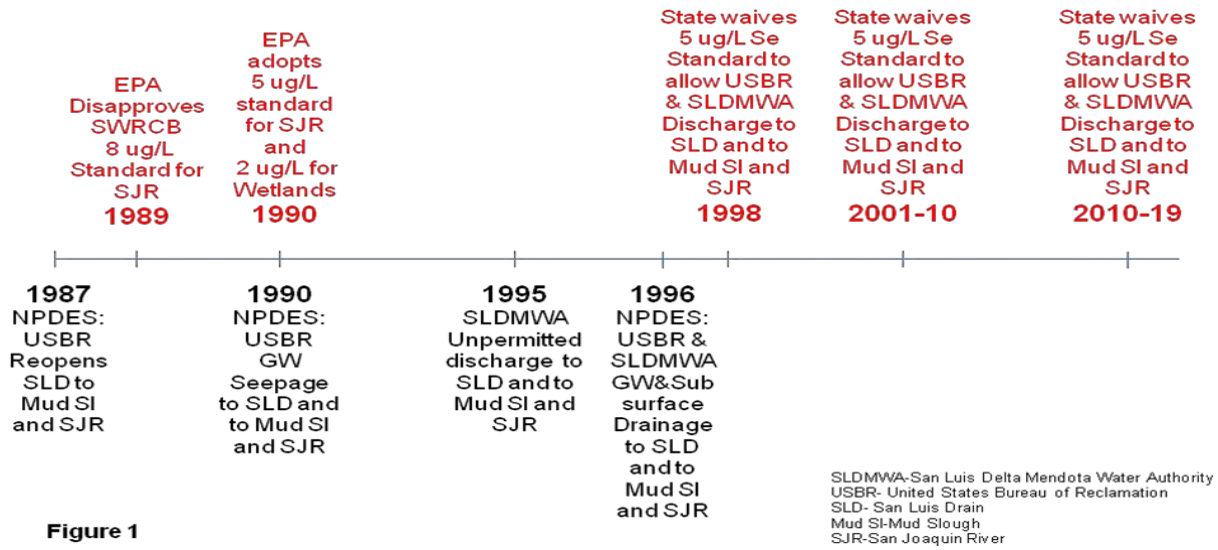

Figure 1

Attachment 2

September 7, 2011

Michael L. Connor
Commissioner Mail Code 91-00000
Bureau of Reclamation
1849 C Street NW
Washington DC 20240-0001

RE: Closure of Grassland Bypass Project (GBP) Data Collection and Review Team (DCRT) Meetings to Selected Members of the Public

Dear Commissioner Connor:

Late Friday, September 2, 2011, we were informed by Reclamation's Chair of the Grassland Bypass Project's Data Collection and Review Team (DCRT) that "outside observers" will be barred from the meetings of these public agencies who oversee the monitoring of the GBP. This action seems arbitrary and designed to exclude those most impacted by pollution caused by the GBP—the conservation, fishing and community groups advocating for water quality downstream from the discharge.

No rationale was provided as to why these meetings suddenly need to be held in secret, behind closed doors, excluding only selected members of the public, while others are granted access. For example, consultants for the dischargers, the San Francisco Estuary Institute, lawyers for the Grassland Drainers, and others, are given access.

The DCRT email indicates that "Policy documents developed by the DCRT relating to the program's implementation are subject to both scientific and public review prior to approval by the GBP Oversight Committee." We cannot find evidence in the public record to support this contention, especially with regard to critical monitoring changes made over the last decade. For example, monitoring changes recommended by the DCRT were implemented for several years without Oversight Committee approvals,[1] or at least no public record has yet been made available regarding such approvals.[2] The public record indicates that only one Oversight Committee meeting was held from 2000 to 2010.[3]

In October 2010,[4] at the hearing before the State Water Resources Control Board, where another decade-long pollution waiver was granted, commitments were made to allow interested parties access to the proceedings of these various technical and monitoring committees. Since that time, several members of the public have monitored the meetings. On August 2, 2011, the DCRT requested comments by August 12, 2011, regarding the proposed "Interim Water Quality Monitoring Program." We responded by the due date.[5] It appears that this critical look at the proposed monitoring program triggered a backlash, whereby, certain members of the public henceforth will be excluded from these meetings of public agencies. In particular, C-WIN's Tom Stokely, noted significant discrepancies in the proposed request for expending a half a million dollars on a Panoche Water District source canal lining project. The claim of reducing selenium by some 1000 lbs was later revised to 100 lbs. Clearly, in the public interest, these plans need this kind of careful scrutiny.

It appears that the DCRT wants to exclude downstream interests from observing these data collection and reporting meetings where, at least in the past, monitoring changes have been recommended and implemented without Oversight Committee review or approval. Closing the door to the public, and especially to those most impacted by the discharge of this pollution, is arbitrary and without merit. A double standard is created whereby those with

interest in continuing the toxic discharges are allowed access, while those impacted are excluded.

As noted in our correspondence of August 12, 2011, we remain concerned that the toxic discharges of this project are neither adequately regulated nor monitored.[6] Some of the "proposed" reductions in monitoring are already being implemented. For example, selenium concentrations at various sites on the San Joaquin River, including its mouth at Vernalis, are no longer monitored. No one is charged with doing an integrated analysis of the consequences of this project on the San Joaquin River, source water and Bay-Delta Estuary. The establishment of the Oversight Committee[7] and this hierarchy committee structure amounts to a mirage of oversight and lacks the checks and balances promised. It appears that the dischargers of this toxic pollution have made a calculated bet that this "Hodge Podge" of consultants, miscellaneous reports, and volumes of uninterrupted raw data, will obscure the impacts. And, when damage occurs, they will have the concurrence of state and federal regulators to insulate them from the costs of clean up and damages. Barring the public from observing the process further creates a barrier to insulate these polluters.

New government studies[8] indicate that safe levels of selenium need to be up to 50 times less than the current water quality objectives sanctioned for the San Joaquin River flowing into the Bay Delta Estuary.[9] (See Attachment A) State regulators have determined almost all this toxic selenium comes from the west side of the San Joaquin Valley.[10] Recent federal reports document this toxic selenium pollution is showing up in source water below the federal export pumps at the terminus of the Delta Mendota Canal in the Mendota Pool at levels exceeding water quality objectives adopted to protect beneficial uses.[11]

We urge you to take action to ensure the Grassland Bypass Project "team meetings" are open to public observers, including both the Data Collection and Review Team and the Technical and Policy Review Team. Continuation of secret, closed door meetings, largely directed by the dischargers, creates a cozy regulatory environment where pollution impacts are thrust upon downstream users to treat and clean up, In the case of selenium this will cause irreparable harm because of its bio-magnification throughout the food web of the estuary or to fresh water supply exports.

Respectfully submitted,

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Sierra Club California

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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
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Conner Everts
Executive Director
Southern California Watershed Alliance

Frank Egger, President
North Coast Rivers Alliance

CC:
Lisa P. Jackson, EPA Administrator
Daniel M. Ashe, Director, US Fish and Wildlife Service
Eric C. Schwaab, NOAA, Assistant Administrator for Fisheries
John Laird, California Secretary for Natural Resources

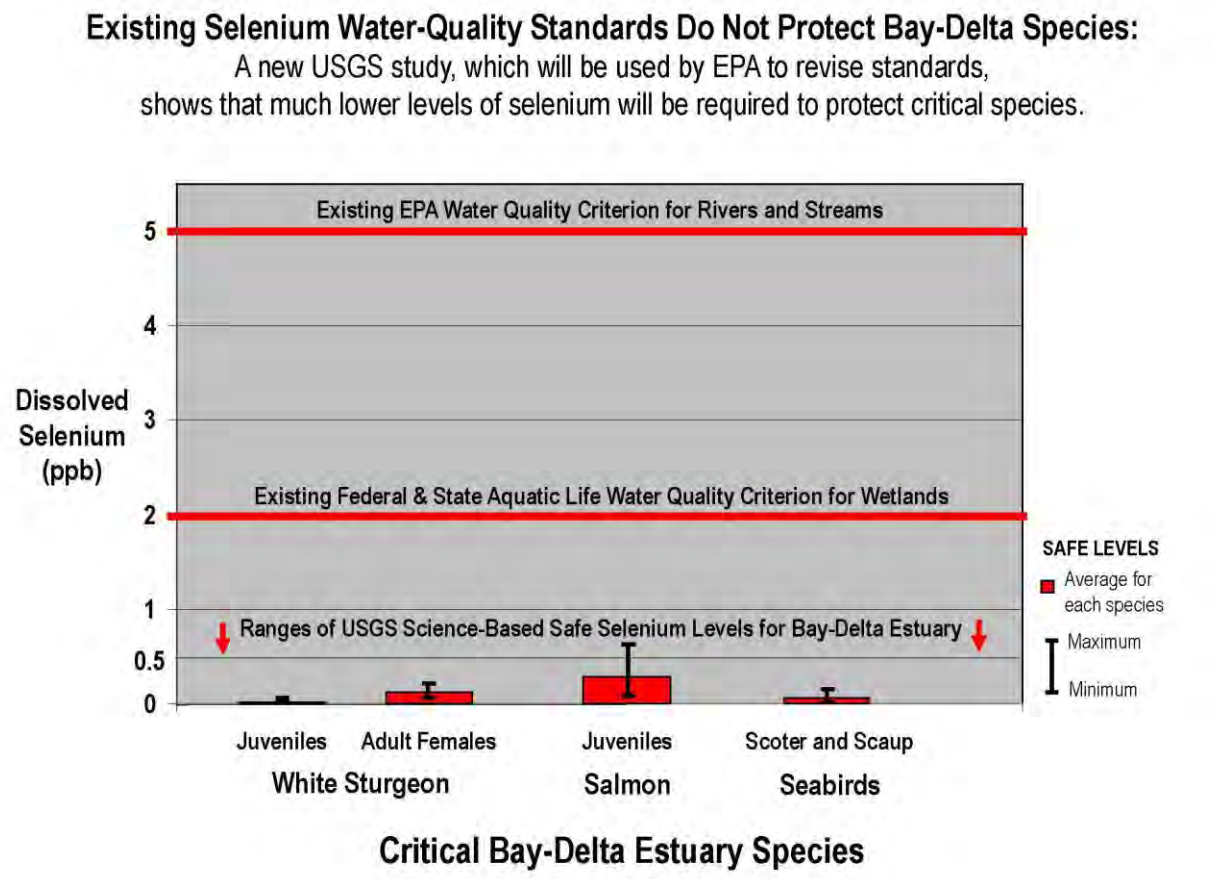
Grassland Bypass Project Oversight Committee:

Donald Glaser, USBR, Regional Director
Jared Blumenfeld, Administrator (Region 9)
Ren Lohoefener, USFWS, Regional Director
Pamela Creedon, CVRWQCB, Executive Officer
Charlton Bonham, California DFG, Director

Data Collection and Review Team

Interested Parties

Attachment A:



Since 2002, under the Clean Water Act, Section 303, and the Endangered Species Act, the United States Environmental Protection Agency (EPA) has been required to adopt acute and chronic aquatic life criteria for Selenium taking into account the bioaccumulation of this contaminant as it magnifies throughout the food chain often causing reproductive failure, teratogenic effects and death. The terms

and conditions also included reevaluating and revising selenium criteria for the protection of semi-aquatic wildlife. The just released peer reviewed United States Geological Survey (USGS) study, also part of the terms and conditions, models the fate and transport of selenium in the San Francisco Bay-Delta Estuary and as agreed, the report will serve as the basis for revised water quality criteria for the protection of wildlife species. http://www.epa.gov/region9/water/ctr/

*** *The above graph prepared by CSPA & CWIN is directly based on the results from the U.S. Geological Survey (USGS) study. http://www.epa.gov/region9/water/ctr/selenium-modeling_admin-report.pdf The USGS study evaluated a series of selenium exposure scenarios using a set of specific guidelines and modeling choices from the range of temporal hydrodynamic conditions, geographic locations, food webs, and allowable dissolved, particulate, and prey Se concentrations (which we have referred to as "safe levels"). According to the USGS, "The specificity of these scenarios demonstrates that enough is known about the biotransfer of Se and the interconnectedness of habitats and species to set a range of limits and establish an understanding of the conditions, biological responses, and ecological risks critical to management of the Bay-Delta".*

The following scenarios were evaluated by USGS for a range of hydrologic conditions and residence times (See Tables 17, 18 and 19 in the USGS report):

- *Predicted allowed dissolved Se concentrations for Bay-Delta transects at different effect guidelines and associated levels of protection (USFWS, 2009b) for a suspended particulate material>C. amurensis>sturgeon food web.*
- *Predicted allowed dissolved Se concentrations for Bay-Delta transects at different effect guidelines and associated levels of protection (USFWS, 2009b) for a suspended particulate material>C. amurensis>clam-eating bird species food web.*
- *Predicted allowed dissolved Se concentrations for landward transects at different effect guidelines and associated levels of protection (USFWS, 2009b) for a suspended particulate material>aquatic insect>juvenile salmon food web.*

The CSPA-CWIN summary graphic of this data shows the results for critical Bay-Delta species, aggregated across all combinations of target tissues (eg. Whole body, eggs, or diets) that have known levels of concerns, as summarized by the U.S. Fish and Wildlife Service. Results are also combined across all hydrologic conditions for each species.

The ranges of "allowable" or safe levels of dissolved selenium clearly show that, although EPA will need to specify exact safety levels, flow conditions, and species, new standards for the Bay-Delta will need to be substantially less than 0.5 parts per billion dissolved selenium to be protective.

Endnotes:

[1] http://www.swrcb.ca.gov/centralvalley/water_issues/swamp/water_quality_reports/gbp_04_05_wq_chptr.pdf
"Modifications to the Water Quality Monitoring Program. During the Phase I of the GBP a number of issues were resolved with respect to the water quality monitoring program. These modifications and clarifications to the monitoring program are discussed in the previous Annual Reports (USBR, 1998 and SFEI, 1999, 2000, 2001, 2003, and 2004). Prior to August 2003, nutrient samples were collected at Stations B and D as part of a research program external to the GBP water quality monitoring program. In an effort to minimize program costs, the DCRT agreed to incorporate that data into the water quality monitoring program. Frequently, due to reasons outside of the control of the DCRT, these data were unavailable. In August 2003, in an effort to prevent this loss of data, routine collection of nutrient samples at Stations B and D was assumed by the CVRWQCB.
DCRT Proposed monitoring changes in 2005:
http://swrcb2.swrcb.ca.gov/centralvalley/board_decisions/tentative_orders/0504/gbp/gbp-staff-report-3.pdf

U.S. Bureau of Reclamation, et. al. June 2002, Monitoring Program for the Operation of the Grassland Bypass Project, Prepared by the Grassland Bypass Project Data Collection and Review Team. See http://www.usbr.gov/mp/grassland/documents/monitoring_program_phase_2.pdf

[2] Sierra Club California, California Water Impact Network, Friends of the River, the Southern California Watershed Alliance and the California Sportfishing Protection Alliance filed A Freedom of Information Act request on August 3, 2011, for the times, places, agendas, meeting notes and attendees for the Grassland Project Oversight Committee meetings from 2000-2010. We were informed the request was "complex" and thus is in the "QUE" behind 18 other complex requests and likely will not adhere to the 20-day response period.

[3] http://legacy.sfei.org/grassland/reports/gbppdfs/AnnualReports/GBP%20Annual%20Report%200405.pdf

[4] http://calsport.org/cspa_files/CSPA_CWIN-SJR%20SeleniumCont.pdf

[5] http://www.pcl.org/files/GrasslandMonitoring.pdf

[6] *"In 2003, a series of events led to a worst-case scenario in one field within the SJRIP. A channel broke …. Water collected in one end of the field and remained for several weeks (late April through mid-May) during the nesting season. Eggs were collected, as they have been since 2001, but because there was standing water present, more nests were observed than had been in previous years. These eggs were found to have selenium at concentrations similar to egg concentrations found in Kesterson years earlier. Subsequent conversations with US Fish & Wildlife Service confirmed that at these concentrations, embryo viability would be severely compromised. A "take" had occurred."*
http://swrcb2.swrcb.ca.gov/centralvalley/board_decisions/tentative_orders/0504/gbp/gbp-staff-report-3.pdf
http://www.calsport.org/7-23-08.pdf

http://www.swrcb.ca.gov/rwqcb5/water_issues/grassland_bypass/usfws_att_d.pdf Deformed embryos found at the project in 2008 with selenium content of the egg greater than 70 ppm, greater than Kesterson levels.
High Selenium concentrations in eggs found 2003-2006
http://www.lloydgcarter.com/files_lgc/Drainage%20letter.pdf

[7] "*The GBP Oversight Committee (OC) consists of representatives from USBR, USFWS, CDFG, CVRWQCB, and USEPA. The role of the OC is to evaluate overall operations of the GBP, to assess monetary charges to SLDMWA for selenium loads exceeding those specified in the UA II, and to act on other issues brought to them by the Technical and Policy Review Team (TPRT) and/or the public. Specific charge or mission to the OC is found in the UA II*."
http://www.usbr.gov/mp/grassland/documents/monitoring_program_phase_2.pdf

[8] http://www.epa.gov/region9/water/ctr/

[9] http://www.c-win.org/webfm_send/188

[10] http://swrcb2.swrcb.ca.gov/centralvalley/board_decisions/tentative_orders/0504/gbp/gbp-staff-report-3.pdf "*The WDRs for the project state "During water year 2000, releases from the (San Luis) Drain contributed 97% of the selenium, 55% of the boron, 36% of the salt and 13% of the volume of water discharged to the San Joaquin River from the Grassland Watershed*."

[11]https://www.c-win.org/selenium-press-room.html
http://www.c-win.org/webfm_send/187 & http://www.c-win.org/webfm_send/186

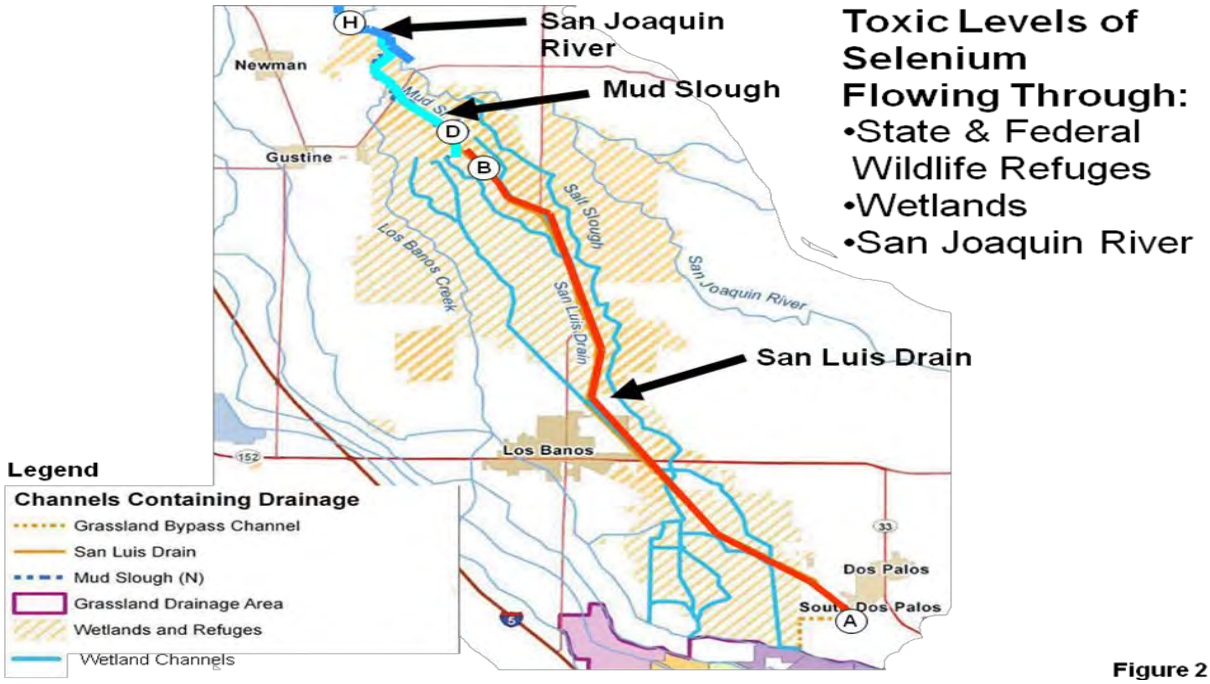


Figure 2

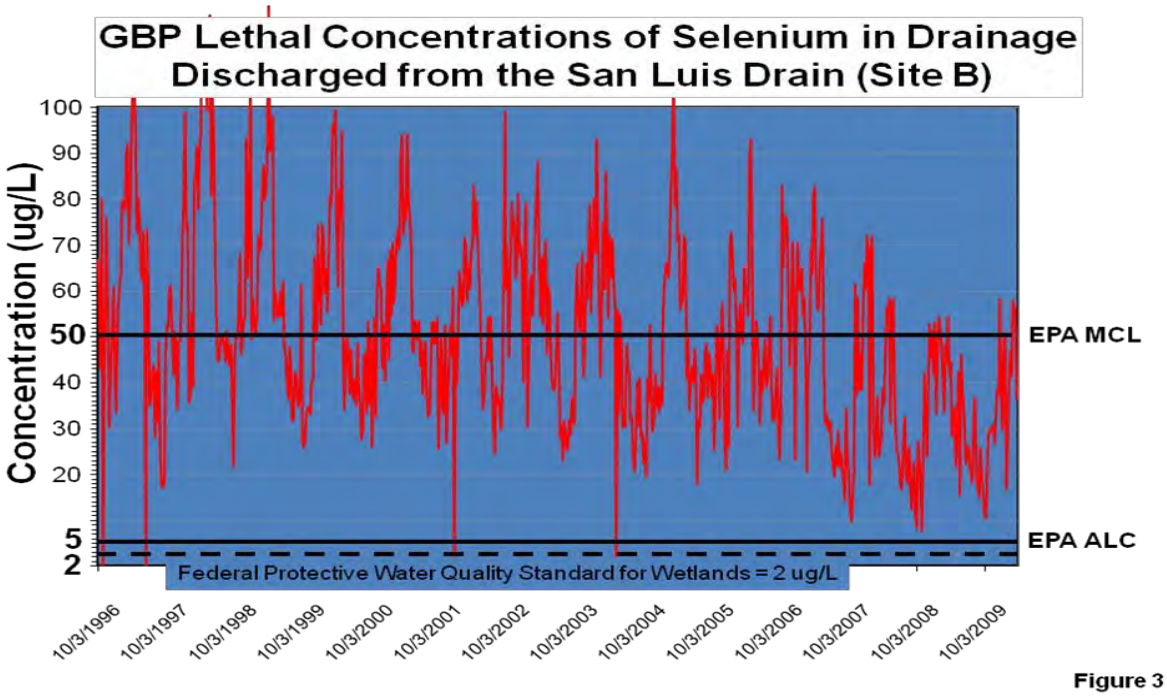


Figure 3

Data from USBR-Eacock MCL=Maximum Contaminant Level for Drinking Water ALC=Aquatic Life Criterion

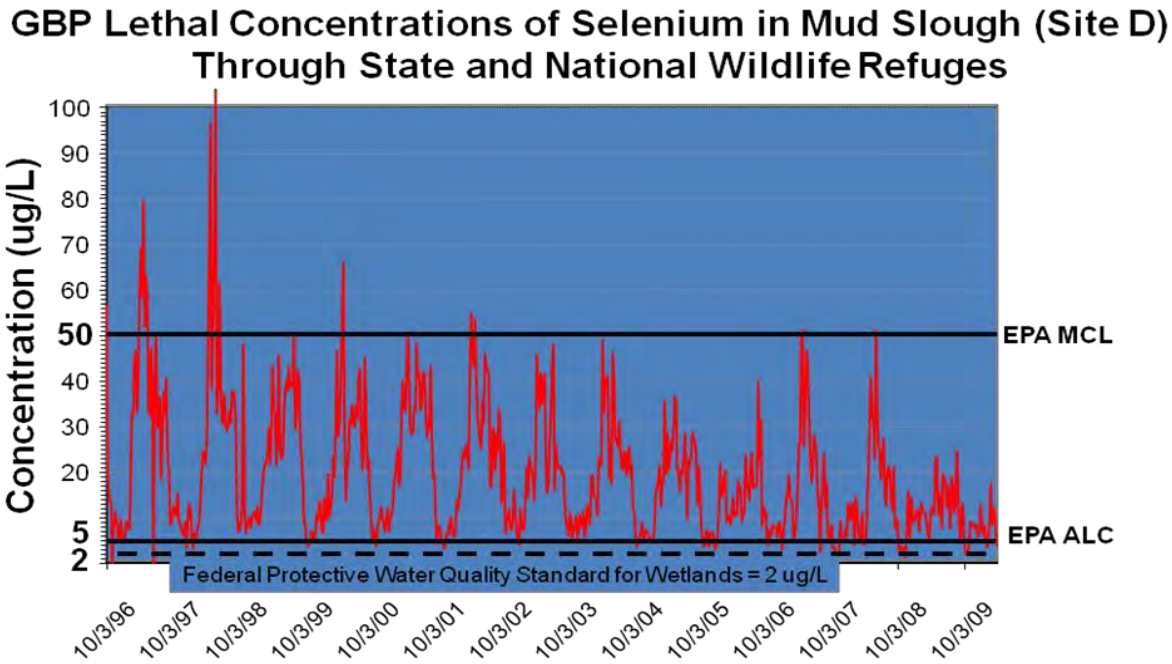


Figure 4

Data from USBR=Eacock MCL=Maximum Contaminant Level for Drinking Water ALC=Aquatic Life Criterion

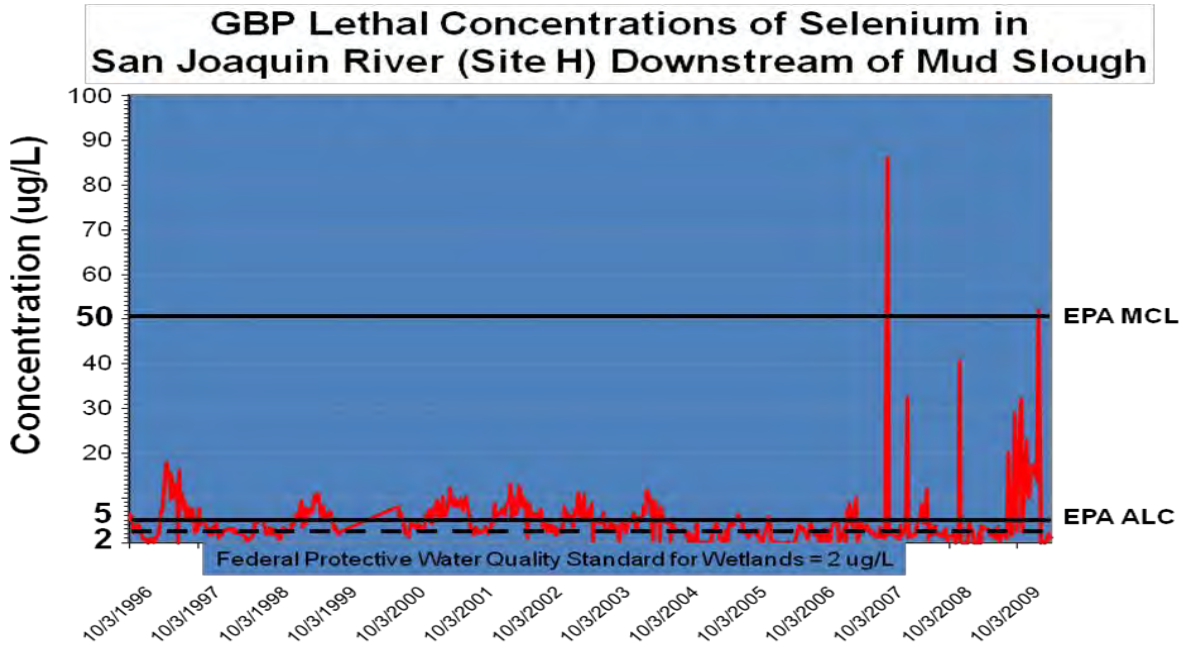
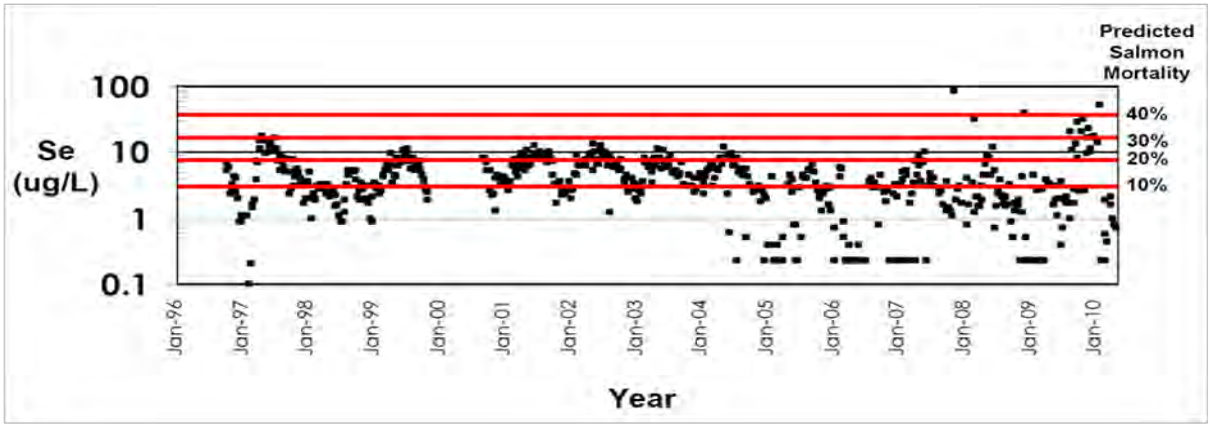


Figure 5

Data from USBR Eacock MCL=Maximum Contaminant Level for Drinking Water ALC=Aquatic Life Criterion

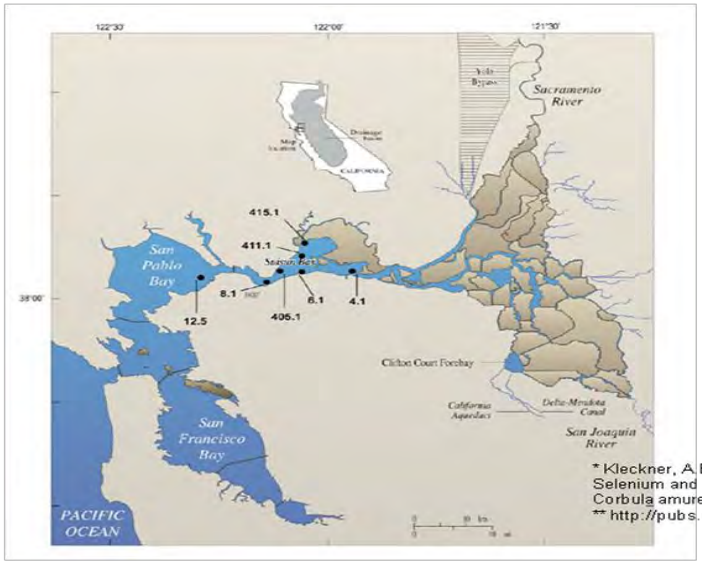
Selenium Levels in the San Joaquin River are not Safe for Salmon



Selenium concentrations measured in the San Joaquin River at Hills Ferry (data from USBR [Eacock]and USFWS [Maurer & Beckon])

Figure 6

Selenium Impacts in Bay-Delta



Unsafe levels of Selenium concentrations found in Suisun Bay and Northern San Francisco Bay 2 to 22 ppb.*

Selenium loads per day from Westside irrigators contribute approximately 10 to 30 times daily selenium load compared to the Sacramento and Oil refineries combined.**

* Kleckner, A.E., Stewart, A.R., Elrick, K., and Luoma, S.N., 2010, Selenium and stable isotopes of carbon and nitrogen in the benthic clam Corbula amurensis from Northern San Francisco Bay, California: May 1995b

** http://pubs.usgs.gov/pp/p1646/

Figure 7

ENDNOTES

[1] Federal Defendants' Status Report of April 1, 2011. Case 1:88-cv-00634-OWW-DLB Document 864 Filed 04/01/11 page 6 & Glaser Third Declaration pg 6-7

[2] Ibid.

[3] http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4418 pg 26 of 66 FEIR/EIS Final EIS/EIR, Private/individual comments Part 2, Grassland Bypass 2010-2019

[4] Order No. 87-201 NPDES No. CA 0082171 Waste Discharge Requirements for United States Department of the Interior Bureau of Reclamation & Order No 90-027 NPDES NO CA 0082368 WDRs for USBR.

[5] Order No 96-0922 NPDES No. CA 0083917 Waste Discharge Requirements for USBR and San Luis Delta Mendota Water Authority adopted March 22, 1996.

[6] http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4413 "Tile drainage systems affect groundwater-flow in upper parts of the semi-confined aquifer. Seasonal changes in groundwater levels and drain flow indicate field conditions are affected by upslope irrigation activities. Furthermore, observation well data show that groundwater movement is upward towards the drainage systems from depths as great as 100 feet below land surface (Deverel and Fio, 1991; Fio, 1994)." Pg 236 of the PDF

[7] http://www.epa.gov/region9/nepa/letters/Grassland-Bypass-FEIS.pdf EPA March 30, 2009 Detailed EIS/EIR Comments RE Grassland Bypass Project Continued Use of San Luis Drain: *"Develop a comprehensive monitoring program that includes multiple contaminants and follow-up for detected biological effects…this program should cover biological as well as water quality and sediment components."*

http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415 pg 15 -52 of PDF USFWS March 22, 2009 Comments RE Continuation of GBP 2009 to 2019 USFWS recommends… "*An evaluation of the environmental effects of continued acute spikes of selenium to the biota in the vicinity of the Grasslands wetland supply channels…Selenium bioaccumulates rapidly in aquatic organisms and a single pulse of selenium (>10 µg/L) into aquatic ecosystems could have lasting ramifications….Maier et al. found that the invetebrate food web was still contaminated at >4 µg/L 12 months after selenium treatment when the monitoring ended even though water concentrations were <1 µg/L."*

http://pubs.usgs.gov/pp/p1646/pdf/pp1646.pdf pg 26. ... "monitoring was not sufficiently frequent to accurately characterize loads during variable flows."…annual data are not available from individual farm-field sumps to help qualify source-area shallow groundwater conditions and determine long-term variability in selenium concentrations…compliance monitoring sites are 50 and 130 miles downstream from the agricultural discharge. Pg 118-119.

Grassland Bypass Project 1999-2000 Annual Report at page 4, "The Oversight Committee recommended that additional studies be undertaken to establish the sources of selenium." http://openlibrary.org/books/OL23302134M/Grassland_bypass_project

Grassland Bypass Project 2001-2002 Annual Report at page 4, "The Oversight Committee recommended that additional studies be undertaken to establish the sources of selenium." http://openlibrary.org/books/OL23302136M/Grassland_bypass_project

" A Review of the Grassland Bypass Channel Project Monitoring Program" Presser, Sylvester, Dubrovsky and Hoffman, December 1996
http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Presser_etal_GBP_monitoring_plan_1996.pdf
http://www.swrcb.ca.gov/rwqcb5/water_issues/grassland_bypass/usfws_att_e.pdf Email From Tomas Mauer, Chief, Investigations and Prevention Branch Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service to Shauna McDonald [USBR], 11-18-09: "*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)."*

[8] USFWS 2009 Biological Opinion for the Grasslands Bypass Project page 90. http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826 "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)…"

[9] USBR 2001 Record of Decision page 6. http://www.usbr.gov/mp/grassland/documents/rod_final_09-28-01.pdf

[10] http://www.swrcb.ca.gov/rwqcb5/water_issues/grassland_bypass/usfws_com.pdf "*Selenium concentrations in the food-chain of these impacted waters have often reached levels that could impact or even kill a substantial proportion of young salmon (Beckon et al. 2008) if the salmon, on their downstream migration, are exposed to those selenium-laden food items for long enough for the salmon themselves to bioaccumulate selenium to toxic levels. Based on existing water quality data for selenium in specific reaches of the San Joaquin River, Beckon and Maurer (2008) concluded that there remains a substantial ongoing risk to migrating juvenile Chinook salmon and steelhead in the San Joaquin River as noted in Attachment E. The Service asks that the Regional Board consider the protection of Chinook salmon and steelhead in the San Joaquin River, including the reach between Sack Dam and the Merced River, in this Basin Plan Amendment."[page 6 of pdf]*

[11] http://calitics.com/tag/Selenium Napolitano, Garamendi, et al., November 26, 2010.
Personal Communication Rudy Schnagl to Ms Schifferle, 8-8-11 'Flow models document most of the San Joaquin River is diverted to the California Aqueduct, thus contaminants are likely captured and sent south.'

[12] Suisun Bay in the Delta is selenium impaired and agriculture is listed as a source in the 303(d) listing of this water body. Further, EPA is in the process of developing a site specific selenium objective for the Delta, so reduced monitoring of the GBP could further hinder compliance with this future objective.

[13] http://www.swrcb.ca.gov/rwqcb5/water_issues/tmdl/central_valley_projects/san_joaquin_se/se_tmdl_rpt.pdf "*There would be effectively no allocation of selenium load in the absence of Merced River dilution flows. The source analysis has shown that subsurface agricultural return flows from the DPA are the primary source of selenium load in the lower SJR Basin." [page 14]* Also see 1994 Regional Board staff report, Total Maximum Monthly Load Model for the San Joaquin River (Karkoski, 1994),

[14] November 3, 1995, Letter to Karl Longley Central Valley Regional Water Quality Control Board from Dan Nelson, SLDMWA, Roger Patterson, USBR; Felicia Marcus, USEPA; Joel Medlin USFWS. *"A commitment to specific monthly and annual selenium load values which assure that within 2 years, the Water Authority will implement actions sufficient o reduce selenium loads to the River by at least 5 percent per year up through the end of the 5th year. …the parties agree that for the purpose of establishing selenium load reductions, the following water quality objectives are now applicable: (a) 5 ppb selenium, measured as a 4-day average, in the San Joaquin River and Mud Slough and (b) 2 ppb selenium, measured as a monthly mean, in Salt Slough and the wetland channels.*

[15] 1994 Environmental Defense Fund, Terry Young and Chelsea Congdon "Plowing New Ground" pg 35.

[16] Ibid.

[17] http://www.swrcb.ca.gov/rwqcb5/water_issues/tmdl/central_valley_projects/san_joaquin_se/se_tmdl_rpt.pdf pg 20 of the PDF

"Load allocations in this TMDL [for the SJR] are established for meeting the selenium water quality objective in the SJR downstream of the Merced River confluence. There would be effectively no allocation of selenium load in the absence of Merced River dilution flows. The source analysis has shown that subsurface agricultural return flows from the DPA are the primary source of selenium load in the lower SJR Basin….. Attainment of the selenium water quality objective upstream of the Merced River confluence may require significant changes to the DPA discharge, including the relocation of the discharge point."
http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/sjr_selenium/comments092210/susan_moore.pdf pg 2 of the PDF

[18] http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4418 pg 26 of 66 FEIR/EIS Final EIS/EIR, Private/individual comments Part 2, Grassland Bypass 2010-2019
http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3513
Also see Appendix C of the December 17, 2009 Agreement for the Continued Use of the San Luis Drain Agreement No. 10-WC-20-3975. Predicted violations of CWA standards will continue with proposed loads approximately until years 9 and 10. They will be violated for those years unless "highly speculative treatment" is achieved. See http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415 pg 4 of 40 of the PDF. EPA comments on the DEIS/EIR for Continued Use of the San Luis Drain for Discharge into Mud Slough and the San Joaquin River.

[19] http://www.usbr.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3513

[20]http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/303dlists2006/epa/state_usepa_combined.pdf
[21]http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/sjr_selenium/comments092210/susan_moore.pdf see page 2 of the PDF
[22]http://www.swrcb.ca.gov/rwqcb2/water_issues/programs/TMDLs/northsfbayselenium/Species_at_risk_FINAL.pdf, accessed 4/20/11.
[23] http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415 see EPA comments pg 5 of 40 of the PDF.
[24] http://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/ http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/sjr_selenium/comments092210/susan_moore.pdf
[25] http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Presser_etal_GBP_monitoring_plan_1996.pdf and see USFWS comments and EPA comments RE USBR NEPA Document at http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415
[26] http://pubs.acs.org/doi/abs/10.1021/es900828h
[27] http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4415 see USFWS comment pg 33 of 40 of the PDF.
[28]http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Presser_etal_GBP_monitoring_plan_1996.pd @ pg 81 of the pdf.
[29]http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Presser_etal_GBP_monitoring_plan_1996.pdf @ pg 15 of the pdf
[30] November 3, 1995 Letter From USBOR, USFWS, US EPA and San Luis Delta Mendota Water Authority to Karl Longley, Chair of the Regional Water Quality Control Board: Re Basin Plan Amendment for the San Joaquin River. *"The Selenium load reductions proposed will not necessarily achieve these water quality objectives by the end of the 5th year, and thus a long-term implementation schedule will be required……It is understood that load reductions of this sort are only a first step and do not fully protect against the environmental impacts which may result from selenium discharges during months when water levels are low in the San Joaquin River*" at pages 3-4.
[31]http://www.swrcb.ca.gov/rwqcb5/water_issues/tmdl/central_valley_projects/san_joaquin_se/se_tmdl_rpt.pdf *"Load allocations in this TMDL are established for meeting the selenium water quality objective in the San Joaquin River (SJR) downstream of the Merced River confluence. There would be effectively no allocation of selenium load in the absence of Merced River dilution flows. The source analysis has shown that subsurface agricultural return flows from the Drainage Project Area (DPA) are the primary source of selenium load in the lower SJR Basin….. Attainment of the selenium water quality objective upstream of the Merced River confluence may require significant changes to the DPA discharge, including the relocation of the discharge point."*

4.0 SEDIMENT APPLICATION

This section describes the management of dredged materials based on results of sediment sampling compared to the stated risk criteria as described in Section 3.0

4.1 HAZARDOUS MATERIAL DISPOSAL

If the concentration of selenium in the dredged material is equal to or greater than 100 µg Se /g, wet weight the sediment will be handled according to all applicable State and local regulations for hazardous materials and disposed in a licensed hazardous waste facility. The nearest facility to the Site which accepts hazardous material is Kettleman Hills Landfill, located in Kings County.

4.2 LAND APPLICATION

Dredged sediments that have selenium concentrations below 100 µg Se /g wet weight may be locally reused through land application. Although the human health standard for selenium is greater than the hazardous waste standard, as a precaution, the more stringent standard has been used in this plan to determine if land application is appropriate. Current proposals for land application of the sediments include agricultural lands adjacent to the Drain; however, other options for land application may include residential and industrial reuse and open space lands if such parcels become available. Table 3 summarizes the appropriate land application based on measured selenium concentrations within dredged sediments, as further discussed in the following sub-sections.

Table 3. Acceptable Concentrations of Selenium in Dredged Material by Land Use

Land Use	Acceptable Concentration of Se in Sediment
Residential development	< 100 µg Se /g, wet weight
Industrial development	< 100 µg Se /g, wet weight
Agriculture	< 10 µg Se /g, dry weight*
Open Space (Wetland and Upland)	< 2 µg Se /g, dry weight

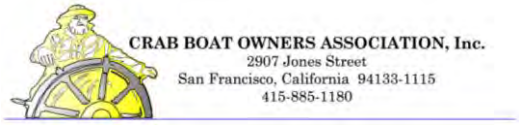
Note: *Source: Zawislanski et al 2001. The 10 µg/g concentration is a general guideline recommended by the Lawrence Berkeley National Laboratory which if exceeded triggers certain monitoring as described in Section 4.2.2 below.

4.2.1 RESIDENTIAL/INDUSTRIAL REUSE

If selenium concentration less than 390 micrograms per gram dry weight with less than 97 percent moisture content (which would exceed hazardous material criteria), sediments may be applied on lands zoned for residential use. If the concentration of selenium is greater than 390 micrograms per gram, dry weight, but below hazardous material criteria, the sediments may only be applied on land areas zoned for industrial use.

ATTACHMENT 3

Corrected Version



CA Save Our Streams Council

NORTH

COAST

RIVERS

ALLIANCE

November 26, 2013

Sally Jewell
Secretary of Interior
1849 C St., N.W.
Washington, D.C. 20240

Rod McInnis
Regional Administrator
National Marine and Fisheries Service
501 West Ocean Blvd, Suite 4200
Long Beach, CA 90802

Jared Blumenfeld
Regional IX Administrator
US Environmental Protection Agency
75 Hawthorne St.
San Francisco, CA 94105

Subject: Grasslands Bypass Project -- Violations of the Endangered Species Act and Reduced Monitoring Threaten Endangered Species and Public Health

The Honorable Ms. Jewell, Mr. McInnis and Mr. Blumenfeld;

The Bureau of Reclamation (BOR), as the lead federal agency for the extension of the Grasslands Bypass Project (GBP) in California's San Joaquin Valley, is failing to meet USFWS conditions required in the 2009 and 2001 Biological Opinions[1] for the project and, after receipt of new information, BOR has not initiated required consultation with the National Marine and Fisheries Services (NMFS) and USFWS. These two actions violate ESA requirements. In addition, the original project was predicated on comprehensive monitoring to evaluate possible impacts, but BOR's proposed reductions in monitoring for the GBP will now result in unacceptable risks to public health and the biological resources of the Grasslands Area wetland channels, San Joaquin River and the Bay-Delta Estuary due to the project's discharge of polluted groundwater into these watercourses. Without your intervention, risks to public health will likely go undetected and the biological conditions deemed necessary by federal scientists to protect endangered species will not be met.

As background, the GBP was originally authorized as a temporary project in the early 1990s to discharge selenium, boron, salts and other pollutants from the San Joaquin Valley, via the federal San Luis Drain. The GBP was pitched as innovative, but there is nothing innovative about collecting pollutants in the San Luis Drain and discharging them to the nation's waterways. The promised treatment solution has yet to become a reality.[2] Now, more than twenty years later, the GBP is still discharging toxic pollutants. Longtime residents of California and USFWS scientists recall the1984 pictures of birds with twisted beaks, deformed heads and the limp, dead chicks of migratory waterfowl caused by high levels of selenium accumulating in refuges. These birds died by the thousands in Kesterson National Wildlife Refuge near Los Banos – one of the state's worst wildlife disasters.

The GBP has operated under a succession of exemptions from the Federal and State 5 parts per billion (ppb) selenium water-quality standards and the 2 ppb aquatic standard for Mud Slough North and Grasslands Area wetland channels. Selenium and other pollutants traverse through national refuge channels to the San Joaquin River and into the Bay-Delta Estuary. Monitoring has demonstrated lethal levels of pollutants from the project in the San Joaquin River and wetlands. Endangered Species potentially impacted by the GBP include the Giant Garter Snake, San Joaquin Kit Fox, Salmon, Sturgeon, Steelhead, and more than 20 others.[3] Other species are also impacted like the Sacramento splittail that forages in the selenium impacted food chain in the Delta.

With this historical background, the BOR adopted a Record of Decision in 2009 that required implementation of reasonable and prudent measures contained in the USFWS Biological Opinions. BOR has failed to implement many of these measures, including a requirement to complete annual reports on the status of compliance with the Biological Opinion. BOR's failure to follow these conditions raises serious legal questions about ESA compliance. Further compounding the situation, BOR has proposed a Reduced Monitoring Program (RMP) that results in a lack of accountability and will likely result in significant impacts to fish and wildlife without anyone knowing. At risk are endangered species in the Delta Estuary, San Joaquin River, and Grasslands

wetland channels, migratory birds and wildlife that inhabit National Wildlife Refuges where these pollutants traverse. The concerns raised by federal scientists have been ignored.[4]

Your action is needed to carry out President Obama's efforts to ensure scientific integrity and transparency in the federal government, to remedy the compromised quality of data from BOR's reduced monitoring program (RMP), and to ensure the efficacy of data to document the fate and transport of selenium being discharged into the waters of the state and nation.[5] The following remedies are needed to ensure these federal scientific safeguards and protocols are met:

1. Reinitiate USFWS and NMFS consultation under the Endangered Species Act for sturgeon, salmon, steelhead, and Giant Garter Snake, and ensure that all monitoring data is made available to these scientists for review. Make NMFS part of the oversight and review committee for the project.

2. Require greater outreach and public health warnings and culturally-appropriate educational materials to anglers of color whose fish consumption is higher and where customs include taking fish home at a higher rate, fishing more frequently, and sharing their fish with friends and family. "Do not consume fish" public health warnings in English[6] and posting selenium levels with GBP drainer interpreted data is not sufficient to protect people of color, especially those with limited English or internet access from the elevated public health risks.

3. Pursuant to DOI's Scientific Integrity Policy and the Federal Data Quality Act,[7] withdraw the existing Record of Decision (ROD) and adopt a policy decision that is consistent with available data and mitigation promises, and which contains enforcement measures and consequences sufficient to ensure conditions contained in the biological opinions are implemented. Such action will go a long way to restore public trust in DOI's decision making and promises.

4. Pursuant to the 2010 DOI Information Quality Mission[8] and the DOI & OMB Peer Review policy,[9] require that the proposed RMP is peer reviewed to ensure that selenium water quality monitoring data is sufficient to measure the 4-day average Clean Water Act requirements at the point of discharge to the San Joaquin River, sufficient data is collected to meet USGS modeling protocols to determine fate and transport of selenium including the Delta-Estuary, and, as requested by USFWS, sufficient biological monitoring occurs in the San Luis Drain Sediment and at the valley treatment and reuse site to confirm that selenium is not accumulating in wildlife to levels of concern.

Thank you for consideration of this request. Details on the issues raised above are provided in the attached specific comments. Your intervention is critical to ensure that the expertise and protocols of USFWS and USGS scientists are followed and implemented with regard to such an important federal action.

We look forward to hearing from you regarding our requests.

Sincerely,

Carolee Krieger
Executive Director
California Water Impact Network
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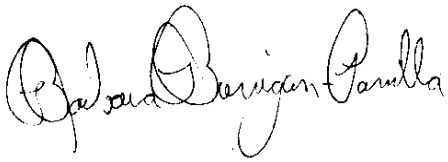
Bill Jennings
Chairman and Executive Director
California Sportfishing
Protection Alliance
deltakeep@me.com



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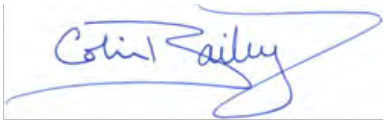

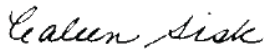

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Specific Comments

BOR Violation of ESA Requirements

The massive discharge of contaminants in a wetland and hydrologic system with numerous Federally-listed endangered species makes compliance with ESA absolutely critical.[10] However, BOR has violated ESA requirements by (1) not complying with conditions specified in the USFWS Biological Opinions, and (2) not initiating consultations with USFWS and NMFS when significant new information has become available.

The USFWS has issued Biological Opinions on the GBP (2001) and the GBP Extension (2009), which spell out specific conditions that need to be met to protect Endangered Species.[11] On December 21, 2009, BOR adopted a Record of Decision (ROD) that pledged to meet the specified conditions in the USFWS Biological Opinions regarding protection of Endangered Species from the extension of the GBP. In short, BOR pledged that GBP collection of polluted groundwater and utilization of the federal San Luis Drain to discharge these contaminants, such as selenium, in a manner that would not result in concentrations in excess of water quality standards.[12]

Primary Areas of BOR noncompliance with USFWS Biological Opinion:

1. Many of the reasonable and prudent measures required in the 2009 Biological opinion have not been followed nor implemented as required in the 2009 ROD for the Grassland Bypass Project Extension.

2. Required annual reports to ensure compliance with the BO have not been filed with USFWS.

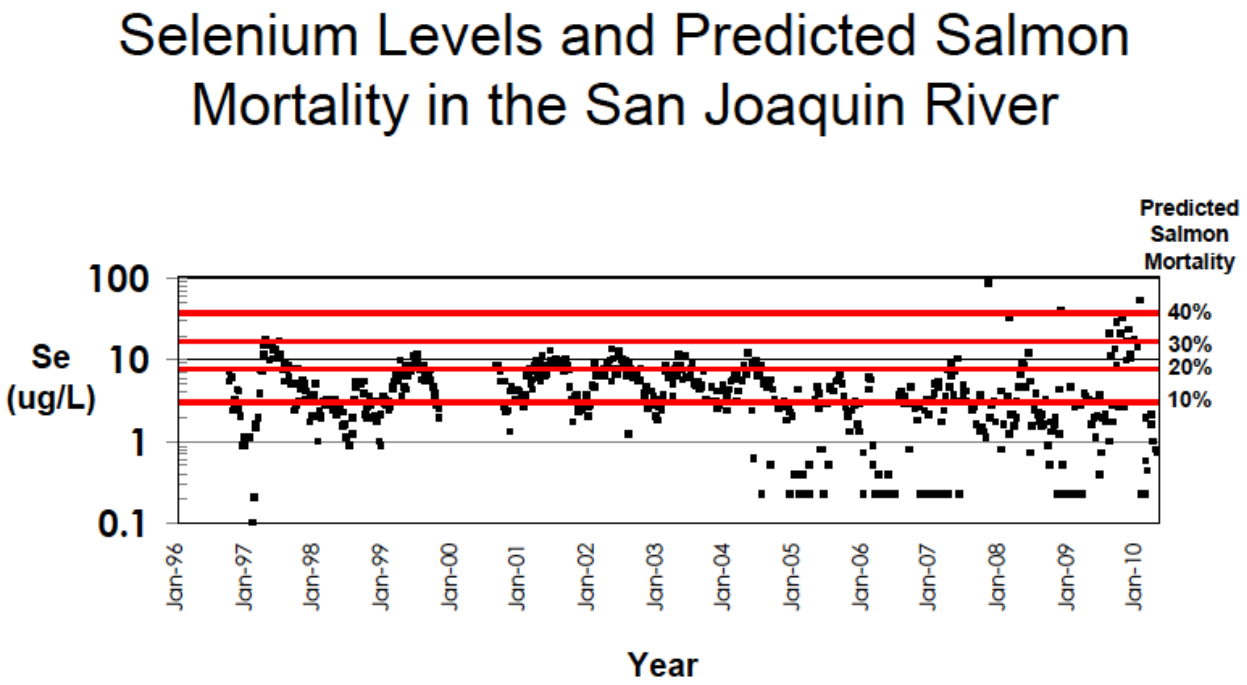
3. Despite a deadline of October 1, 2012 and a $6.384 million grant from BOR to the Grassland Drainers (Panoche Drainage District), several sumps that discharge highly contaminated groundwater (including mercury) into the Delta Mendota Canal have not been rerouted. Failure to take action impacts refuge water quality with high levels of pollution.

4. In accordance with the 2009 BOR Use Agreement, by the end of 2013 the private Grassland Drainers are required to provide a plan to meet specified selenium and salt loads at a noticed public meeting. This has not occurred.

5. Required pollution prevention protections in waste discharge requirements (designed to prevent further impacts from selenium and other contaminants) have not been issued for the valley pilot treatment plant scheduled for operation in spring 2014.

In addition to these specific instances of noncompliance with the Biological Opinion, monitoring data subsequent to the 2009 GBP BO and the NMFS concurrence

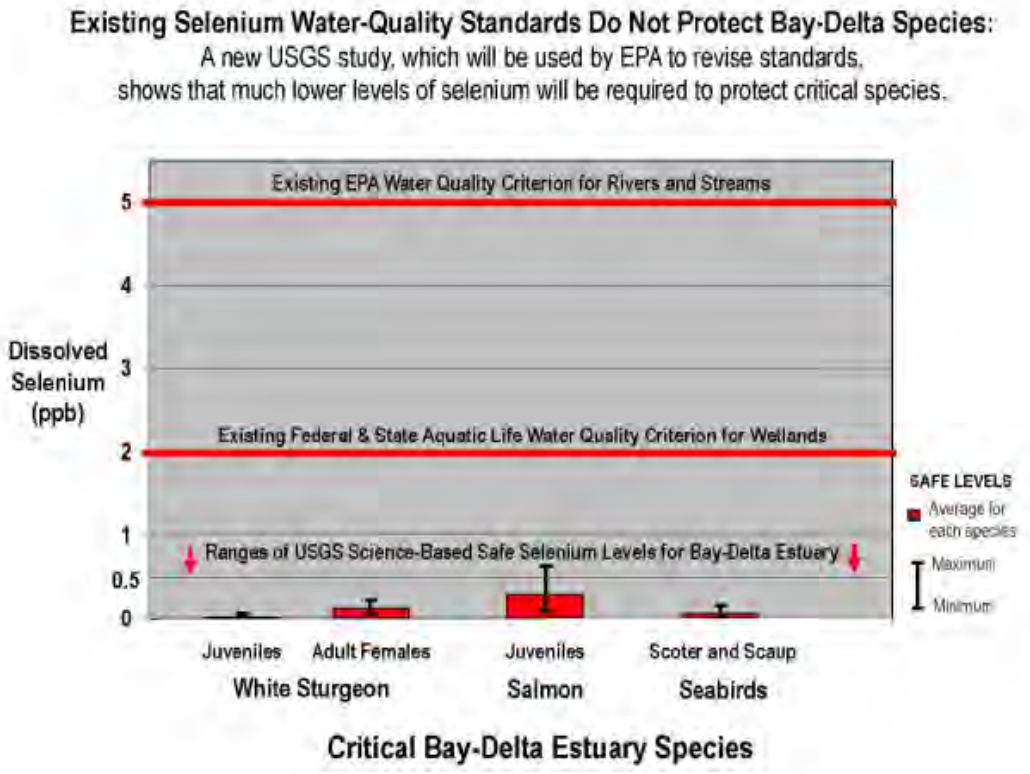
memo showed that selenium levels in the San Joaquin River were consistently not protective of salmon. As summarized in the graph below, the new monitoring data show selenium concentrations exceeding lethal levels for salmon, as determined by USFWS.[13]



Selenium concentrations measured in the San Joaquin River at Hills Ferry (data from the U.S. Bureau of Reclamation)

Unfortunately this monitoring data was not provided to USFWS or to NMFS at the time of their consultation for the project to extend the discharge of these pollutants for another decade. Additional new information developed by the United States Geological Survey [USGS], which documents that selenium water quality standards are not protective of Bay-Delta species, also was not considered. [See Figure 2]. Even without this critical information, the USFWS's 2009 Biological Opinion determined necessary protections were warranted and conditioned BOR's actions.

Figure 2: USGS 2010 Results Released 2011.[14]



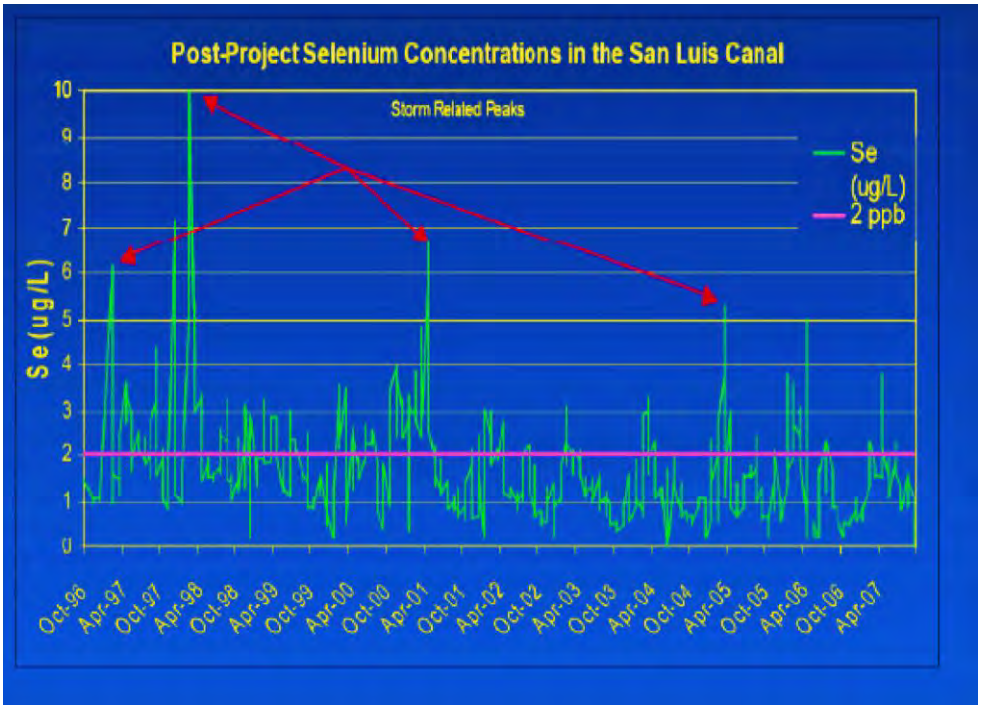
In summary, BOR has (1) failed to follow the conditions of the USFWS Biological Opinion, (2) failed to reinitiate consultation with both USFWS and the NMFS when they became aware of new monitoring data showing that lethal levels of selenium were found at the project monitoring sites in 2009 and reported in 2010, and (3) failed to take into account the USGS findings that existing selenium aquatic standards are not protective of Bay-Delta Estuary species.

Reductions in Monitoring Compromise Accountability and Resource Protection

A fundamental premise of the GBP was that progress or non-progress would be tracked by adequate monitoring, so that changes could be made if necessary to protect public health, water quality and endangered species. BOR reductions in monitoring include dropped sites, reduced sampling frequency, and reductions in contaminant coverage—and these reductions compromise accountability. Specifically, USFWS scientists raised objections to the discontinuation of the "monitoring and reporting of Stations L2, M2, and G as part of the GBP…..and that the substituted *"proposed sampling frequency at Stations L2, M2 and G [monthly] is not sufficient to establish monthly means for water quality."*[15] USFWS in 2010 commented[16] on the elevated selenium levels in these Grassland wetland channels measured at the monitoring site where L2 exceeded safe levels on a regular basis as documented in the weekly monitoring reports shown in Figure 3. Removing the monitoring site or reducing the

frequency to monthly does not remove the contaminants or risk to wildlife. Such an action suggests intent to hide the pollution instead of disclosing it and being transparent.

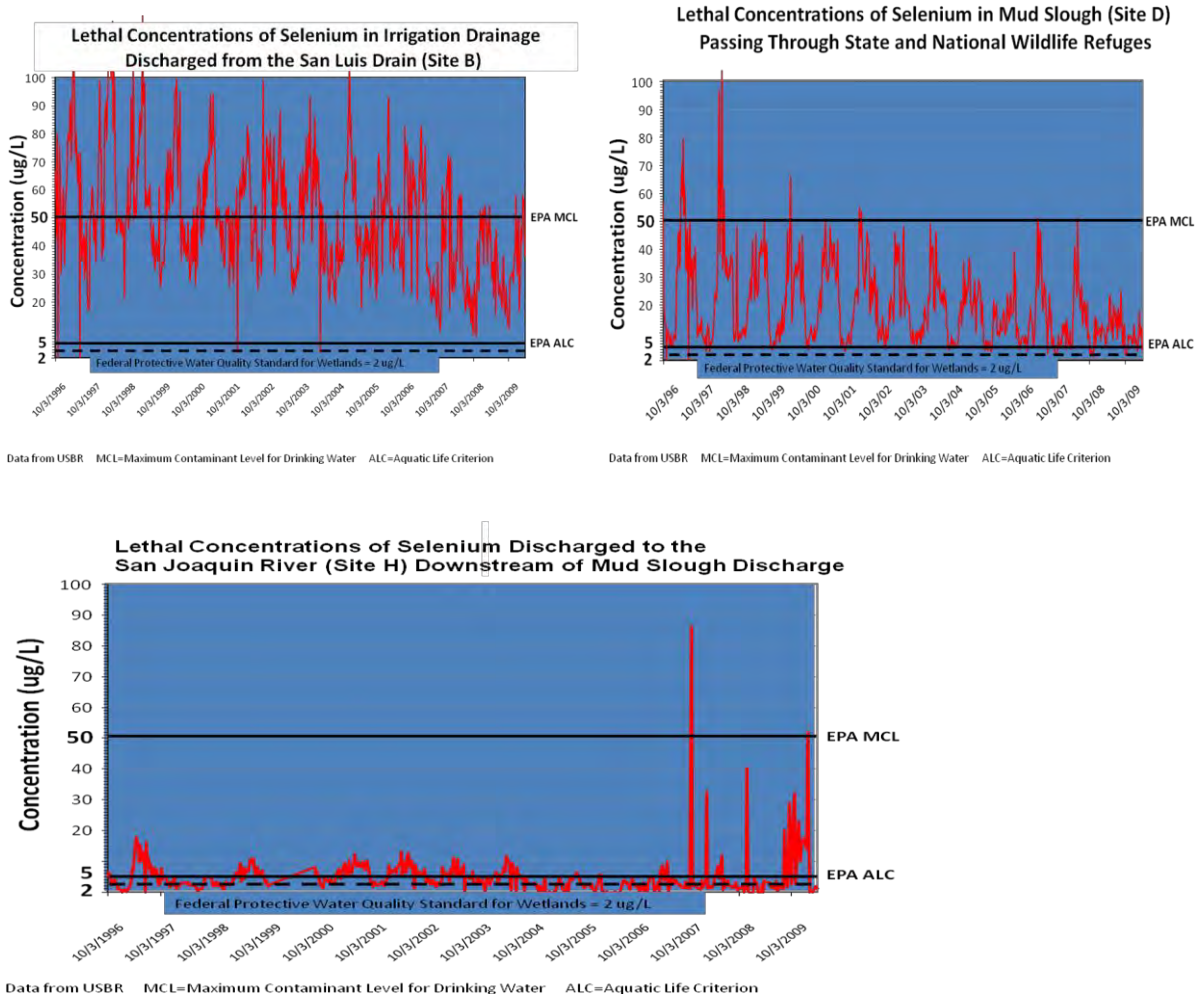
Figure 3: Spikes in Selenium Concentration at Hills Ferry are not an isolated Event. Weekly Selenium Concentrations in the San Luis Canal, 1996-2007 from Chilcott and Schnagl, 2008.



As USGS scientists have pointed out, "*The use of the San Joaquin River as a de-facto drain generated environmental commitments……However, that commitment has lost importance in the latter years of the project as monitoring has been cutback."* [17] Further USGS points out, *"It has been recognized from the inception of protection of the San Joaquin River from Se in 1985 that bioaccumulation through the food web represents the greatest risk to aquatic ecosystems*."[18] Citing new information, in 2010 NMFS raised concern for the survival of spring- and fall-run Chinook salmon if high levels of selenium measured as high as 52.0 ppb in the San Joaquin River at Hills Ferry, stating, *"Selenium concentrations this high will be problematic in restoring spring and fall-run Chinook salmon…In addition regular reoccurrence of high selenium levels for prolonged periods could negatively affect Central Valley (CV) steelhead and the Southern distinct population segment of Northern American green sturgeon…both of which are listed as threatened under the Endangered Species Act (ESA).*[19]" Federal scientists, the Clean Water Act, and other federal protection statues require adequate monitoring to ensure polluters are not contaminating the nations' water ways. Because Selenium magnifies in the food chain, small amounts accumulate across time leading to reproductive deformities, death and public health hazards.[20] As USGS scientists warn, "*Specifically, the Bay-Delta ecosystem is connected to the San Joaquin River ecosystem….Toxicity problems may not appear equally in all components of a hydrologic unit because some components may be more sensitive than others. For*

example, the San Joaquin River, as a flowing water system may be less sensitive to Se effects … than adjacent wetlands, the Delta or the Bay, where residence times and biogeochemical transformations of selenate are more likely."[21] Failing to adequately monitor this lethal pollutant could lead to bird deformities, extirpation of species, and other wildlife impacts, such as those found at the Kesterson National Wildlife Refuge. Concerns raised by federal scientists and others have been ignored and the reduced monitoring has already been "unofficially" adopted.[22] Sustained reduction of the monitoring of this pollution has serious implications, not only in tracking deadly selenium contamination, but also because the lack of suitable data will render USGS selenium models useless. Without adequate monitoring there is no accountability.

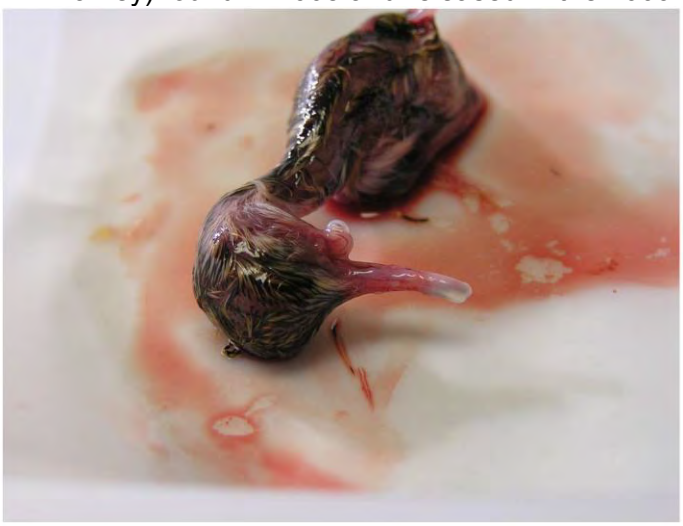
Figure 4: GBP Selenium Monitoring Sites [B, D & H] Show Past Violations of Drinking Water Quality & Aquatic Standards—Under Proposed RMP These Sites Are Eliminated, or Selenium Monitoring is Eliminated or the Frequency Reduced.



Federal scientists also alerted BOR to the problems of rerouting and disposal of drainage loads at the "In Valley Treatment Site" or the GBP reuse area without proper monitoring protocols.[23] "*It is important that the RMP include monitoring and reporting of water, groundwater, and wildlife monitoring in the SJRIP and those reports are posted on the GBP site…"* [24] This federal recommendation along with monitoring of discharges from the proposed pilot treatment facility are not included in the RMP. Bird deformities,

such as the black-necked stilt embryo below (Figure 5), have been found in this GBP project reuse area. These and other data indicate that selenium exposure is occurring in the food chain.[25] At these levels, the selenium concentrations exceed selenium concentrations in shorebird eggs collected at Kesterson Reservoir from 1983 to 1985. The GBP reuse and treatment area, where polluted ground water is discharged for experimental crop irrigation and reuse, is home to over 42 species of birds. In this experimental discharge reuse area, bird eggs have consistently been found above the threshold for substantive risk (high risk,>10 ug/g selenium).[26]

Figure 5 Selenium Deformed Black-necked Stilt Embryo at the GBP Reuse Area--(Photo: HT Harvey) found in 2008 and released in the 2009 GBP monitoring report.



Under the proposed RMP, BOR and the Grassland drainers would drastically reduce or discontinue monitoring for selenium at sites along San Joaquin River above the Merced River. USFWS scientists[27] commented that the water flowing through and around the State and Federal Wildlife Refuges and wetlands along the river and sloughs for approximately 50 miles upstream to the point of discharge would be eliminated or reduced to monthly or quarterly grab samples. They emphasize that this monitoring frequency is "not sufficient to establish monthly means." USGS has for some time commented on insufficient monitoring, "*Most importantly, station H (San Joaquin River at Hill Ferry) has been eliminated, leaving unmonitored, under state and federal guidance, that area of the river that is most impacted by SE discharge from the GBP..*"[28] Sturgeon, steelhead and salmon all travel in that section of the river. The selenium discharge levels are known to be lethal in these areas as shown under the previous monitoring programs for the GBP. The original monitoring promises and commitments need to be kept.

References:

[1] http://www.usbr.gov/mp/grassland/documents/trans_final_bo_09-27-01.pdf
http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826

[2] See USGS http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/feinsteinltr0001-from-Director.pdf

[3] http://www.swrcb.ca.gov/rwqcb5/water_issues/grassland_bypass/usfws_com.pdf Also see http://www.usbr.gov/mp/grassland/documents/trans_final_bo_09-27-01.pdf and the 2009 Biological Opinion @ http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826

[4] Ibid. USFWS RMP Comments @ page 3.

[5] See Salazar's 2011 Scientific Integrity Policy. http://www.doi.gov/scientificintegrity/index.cfm

[6] http://oehha.ca.gov/fish/general/99fish.html "***Grassland Area (Merced County)***
Because of elevated selenium levels, no one should eat more than four ounces of fish from the Grassland area, in any two-week period. Women who are pregnant or may become pregnant, nursing mothers, and children age 15 and under should not any eat fish from this area."

[7]Ibid. *"Departmental decision making must be robust….Most importantly, it must be trustworthy"*

[8] DOI October 21, 2010 Information Quality Mission Statement http://www.doi.gov/archive/ocio/iq.html

[9] http://www.cio.noaa.gov/services_programs/pdfs/OMB_Peer_Review_Bulletin_m05-03.pdf "*Peer review involves the review of a draft product for quality by specialists in the field who were not involved in producing the draft. …Peer review should not be confused with public comment and other stakeholder processes. The selection of participants in a peer review is* ***based on expertise, with due consideration of independence and conflict of interest****." [emphasis added]*

[10]http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Beckon_and_Maurer_Effects_of_Se_on_Listed_Species_SLD_2008.pdf

[11] http://www.usbr.gov/mp/grassland/documents/trans_final_bo_09-27-01.pdf & 2009 Biological Opinion at http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826

[12] http://www.BOR.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3513

[13]http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Beckon_and_Maurer_Effects_of_Se_on_Listed_Species_SLD_2008.pdf

[14]The graph prepared by CSPA & CWIN is directly based on the results from the U.S. Geological Survey (USGS) study. http://www.epa.gov/region9/water/ctr/selenium-modeling_admin-report.pdf The USGS study evaluated a series of selenium exposure scenarios using a set of specific guidelines and modeling choices from the range of temporal hydrodynamic conditions, geographic locations, food webs, and allowable dissolved, particulate, and prey Se concentrations (which we have referred to as "safe levels"). According to the USGS, "The specificity of these scenarios demonstrates that enough is known about the bio-transfer of Se and the interconnectedness of habitats and species to set a range of limits and establish an understanding of the conditions, biological responses, and ecological risks critical to management of the Bay-Delta".
See Presser, T.S., and Luoma, S.N., 2010, Ecosystem-scale selenium modeling in support of fish and wildlife selenium criteria development for the San Francisco Bay-Delta Estuary, California: U.S. Geological Survey Administrative Report, 101 p. and Appendices A-D. [Published 12/14/2010; released by USEPA (Region 9, San Francisco, California) 8/29/2011]
[http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Presser_Luoma_AR_forcombined_all1.pdf] or [http://www.epa.gov/region9/water/ctr]

[15] USFWS Thomas Leeman, Chief San Joaquin Valley Division, Endangered Species Program to Stacy Brown, US Bureau of Reclamation. "Comments on the Grassland Bypass Project 2013 Revised Monitoring Plan." April 22, 2013. Pg 2.

[16]http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/san_luis_articles/USFWS_Comments_DEIS_Continuation_Grassland_Bypass_Project_2010-2019_3-23-2009.pdf

[17]http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/san_luis_articles/Presser_USGS_Comments_on_EIS_EIR_for_GBP_2-26-2001.pdf pg 1

[18] Ibid. USGS @ pg 2

[19]http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/sjr_selenium/comments092210/howard_brown.pdf @pg 1.

[20] Ibid. USGS @ pg 3 *Water-quality criteria may not be realistic indicators of ecological risk for estuaries… The technical limitations of the basis for the existing water quality criteria raise questions about their suitability as the sole standard to assure protection of the Bay-Delta…*
Se in the food web was sufficient to be a threat to some species and a concern to human health if those species were consumed." (Luoma and Presser, 2000). See also beginning at page 4-425
http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Moore_etal_1990_selections.pdf

[21] Ibid. USGS @ pg 8

[22] Personal Communication with Chris Eacock to Tom Stokely [CWIN] 11-18-2013] Also see: http://c-win.org/webfm_send/400

[23] Ibid. USFWS At page 4-5.

[24] Ibid. USFWS At page 5.

[25] *"In 2003, a series of events led to a worst-case scenario in one field within the SJRIP. A channel broke ….Water collected in one end of the field and remained for several weeks (late April through mid-May) during the nesting season. Eggs were collected, as they have been since 2001, but because there was standing water present, more nests were observed than had been in previous years. These eggs were found to have selenium at concentrations similar to egg concentrations found in Kesterson years earlier. Subsequent conversations with US Fish & Wildlife Service confirmed that at these concentrations, embryo viability would be severely compromised. A "take" had occurred."*
http://swrcb2.swrcb.ca.gov/centralvalley/board_decisions/tentative_orders/0504/gbp/gbp-staff-report-3.pdf
http://www.calsport.org/7-23-08.pdf

[26] The deformed embryo found in 2008 and documented in the 2009 Grassland Bypass Project monitoring report. Results of the 2008 wildlife monitoring program for the Grassland Bypass Project, San Joaquin River Water Quality Improvement Project were released in a July, 2009 report. As described on page 10 of the July, 2009, wildlife monitoring report, part of the normal monitoring protocol implemented by H.T. Harvey & Associates (hereafter H.T. Harvey) is to photograph each avian embryo that is examined. On page 22 of the July, 2009, wildlife monitoring report and as identified in Table 4 as ID Number 04, Field Number S-03on page 25 from an egg collected May 23rd, 2008, and contains 74.6 ppm selenium dry weight. Additionally a number of bird eggs found from 2003 to 2006 above toxicity levels all predicting substantial embryo deformities at the project site can be found at
http://pubs.usgs.gov/of/2008/1210/ pg 24]

[27] Ibid. USFWS RMP Comments @ pg 2.

[28]http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/san_luis_articles/Presser_USGS_Comments_on_EIS_EIR_for_GBP_2-26-2001.pdf

ATTACHMENT 4

NORTH COAST RIVERS ALLIANCE

October 17, 2011

Rain Healer
South Central California Area Office
U.S. Bureau of Reclamation
1243 N St
Fresno, CA 93721

Subject: Comments on Draft EA/FONSI (DEA) for the San Luis Drainage Feature Reevaluation Demonstration Treatment Facility at Panoche Drainage District's San Joaquin River Improvement Project (SJRIP) FONSI-10-030

Dear Ms. Healer:

We appreciate the opportunity to comment on the proposed demonstration project that will that will transport 'in ground' Panoche Water District polluted sump water directly to where it will be 'treated' by a yet to be disclosed treatment process. The treatment process will produce selenium hazardous waste residues, which will be trucked to a disposal site, as well as contaminated wastewater that will be then discharged in an irrigation ditch under a NPDES permit back into the SJRIP, Mud Slough, the San Joaquin River and the Delta. The Project may last 18 months or

operate indefinitely with an unknown operating time period that *may* need additional analysis.'[1]

We applaud the Bureau's recognition that these west side water pollution discharges need to comply with the Clean Water Act and require a National Pollutant Discharge Elimination System [NPDES] permit.[2] The project proposes the discharge of concentrations of selenium above Clean Water Act standards even after treatment along with other contaminants such as salt, boron, mercury.[3] We find there is insufficient data presented to make an informed decision regarding the impacts from the project. The full range of alternatives is not examined and without sufficient data regarding costs, treatment methods, and the levels of contaminants in the source water to be treated, one cannot meet the National Environmental Policy Act (NEPA) requirements to determine economic and technical feasibility. Absent is any consideration of the only proven effective method of solving this water pollution—stopping the import of water and application to these poisonous soils--and without cost figures, the public cannot make an informed decision regarding the environmental impacts, costs and trade-offs. It appears the DEA attempts to meet these requirements by citing other drainage documents[4] and yet, this new project is a significant departure from the treatment proposals contained in those documents. For example, the proposed treatment does not propose to remove salt, boron, or mercury and will continue to discharge lethal levels of selenium.

It is discouraging that despite the work of the last twenty plus years, Reclamation is presenting another project with a yet to be identified treatment process to remove selenium alone, without any cost analysis or analysis of the feasibility or consideration of a full range of alternatives, including the reduction of imported water to irrigate these poisonous lands—as has been recommended by numerous federal and state agencies as the most cost effective control solution that protects downstream users. This latest project is just another delay and distraction in meeting Clean Water Act water quality standards and will likely waste scarce taxpayer dollars.

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[1] http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=8298

[2] http://water.epa.gov/lawsregs/guidance/wetlands/section402.cfm

[3] http://www.usbr.gov/mp/sccao/sld/docs/index.html No information could be found on mercury treatment removal levels in the NEPA documents or previous 2004 or 2005 pilot testing. The conclusion mercury levels are projected to be low, is not supported by data.

[4] http://www.usbr.gov/mp/sccao/sld/docs/index.html

This demonstration project would spend millions of dollars on yet to be indentified treatment and then discharging the remaining pollutants into the SJRIP and natural water ways, claiming that these discharges will not harm the environment. The documents do not provide sufficient data to support this claim. As shown in Figure 4, after some 15 years of operation, the existing discharge concentrations are still lethal to fish and wildlife as the polluted water flows through national and state wildlife refuges before reaching the San Joaquin River, where significant salmon mortality is predicted.

The DEA fails to consider new information in the just released United States Geological Survey (USGS) study (See Figure 2).[5] Further the project appears to be segmented into various projects elements and pieces, which is in violation of NEPA. In April 2011, Reclamation, without NEPA review, agreed to grant Panoche Drainage District $4.24 M to construct pipelines and pump station at the same location and replace the Grassland Bypass Channel Inlet with a concrete structure.[6] Started under a 1995 FONSI and EA, this "temporary" pollution discharge project has been continued now for a quarter of a century. The full costs of this project along with all the pieces are not disclosed.

As you can see from Figure 2, if the existing load limits contained in the 2001 Waste Discharge Requirements for the Grassland Bypass Project had been enforced, the toxic discharges exceeded the selenium load target in every year until Broadview Water District lands are retired.[7] The project still misses the pollution control targets for 2 of 6 years after that land retirement. [The red bars show the years when they fail to meet the WDR targets and the green bars show when the dischargers meet the targets.] Clearly, the most effective treatment is land retirement.

The more water imported, the more the project pollutes downstream users and harms beneficial uses. Putting water on these toxic soils creates polluted ground and surface water. The rhetoric used by Reclamation to tout the benefits and success of the San Luis Drainage Grassland Bypass Project misleads the public. Often success is presented in percentages that compare a single year load value with either 1995 or 1996, both 100% supply allocation years, with, for example 2009, when water supply allocation was 10% nor 2008 when it was 40%. The benefits are not from the GBP project necessarily, but from the reduction in imported water supplies that create the pollution.

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[5] http://www.epa.gov/region9/water/ctr/

[6] http://apply07.grants.gov/apply/opportunities/instructions/oppR11AS20026-cfda15.507-instructions.pdf

[7] http://www.swrcb.ca.gov/rwqcb5/board_decisions/adopted_orders/fresno/5-01-234.pdf

There is insufficient information to make a finding of no significant impact. The FONSI and DEA do not meet the legal requirements of the National Environmental Policy Act [NEPA]. A full EIS is needed to prevent further waste of taxpayer dollars and to assure an alternative that will prevent the continued pollution of the water ways with selenium, salt and contaminants is adopted.

Respectfully submitted,

Jim Metropulos
Senior Advocate
Sierra Club California

Carolee Krieger
Executive Director
California Water Impact Network

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

Bill Jennings
Executive Director
California Sportfishing Protection

Barbara Vlamis
Executive Director
AquAlliance

Jonas Minton
Senior Water Policy Advisor
Planning and Conservation League

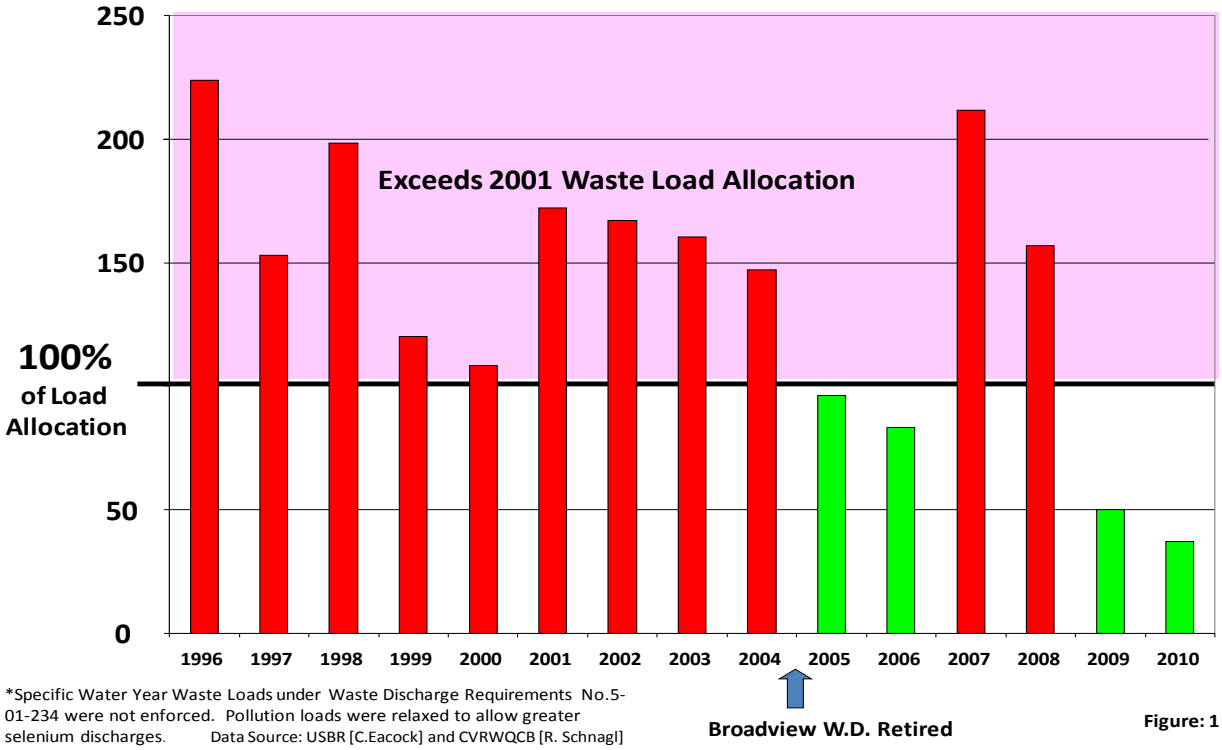
Conner Everts
Executive Director
Southern California Watershed Alliance

Frank Egger, President
North Coast Rivers Alliance

Attachment: Figures 1-6 & Detailed comments

cc: Nancy Sutley, Chair, Council Environmental Quality
Ken Salazar Interior Secretary
David Hayes, Deputy Interior Secretary
Don Glaser, Regional Director BOR
Alexis Strauss, USEPA
John Laird, Resources Secretary
Phil Isenberg, Delta Stewardship Council
Charles Hoppin, Chairman SWRCB
Kate Hart, Chair CVRWQCB
Rod McGinnis, NMFS
Ren Lohoefener, USFWS
Charlton "Chuck" Bonham, Department of Fish and Game
Gerry Meral, Department of Water Resources
Mark Madison, City of Stockton
Tom Howard, SWRCB
Rudy Schnagl, CVRWQCB
Interested parties

Grasslands Bypass Project met the Specific Water Year 2001 Waste Load Allocations only after Broadview W.D. was retired.*



*Specific Water Year Waste Loads under Waste Discharge Requirements No.5-01-234 were not enforced. Pollution loads were relaxed to allow greater selenium discharges. Data Source: USBR [C.Eacock] and CVRWQCB [R. Schnagl]

Figure: 1

Existing Selenium Water-Quality Standards Do Not Protect Bay-Delta Species:

A new USGS study, which will be used by EPA to revise standards, shows that much lower levels of selenium will be required to protect critical species.

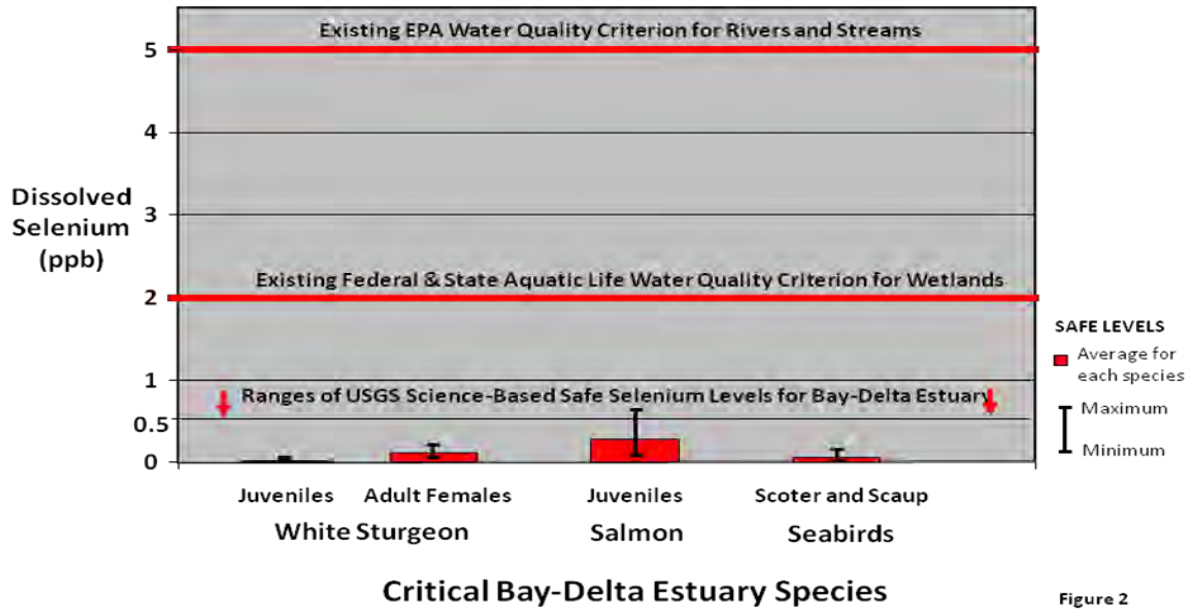


Figure 2

http://www.epa.gov/region9/water/ctr/http://www.epa.gov/region9/water/ctr/

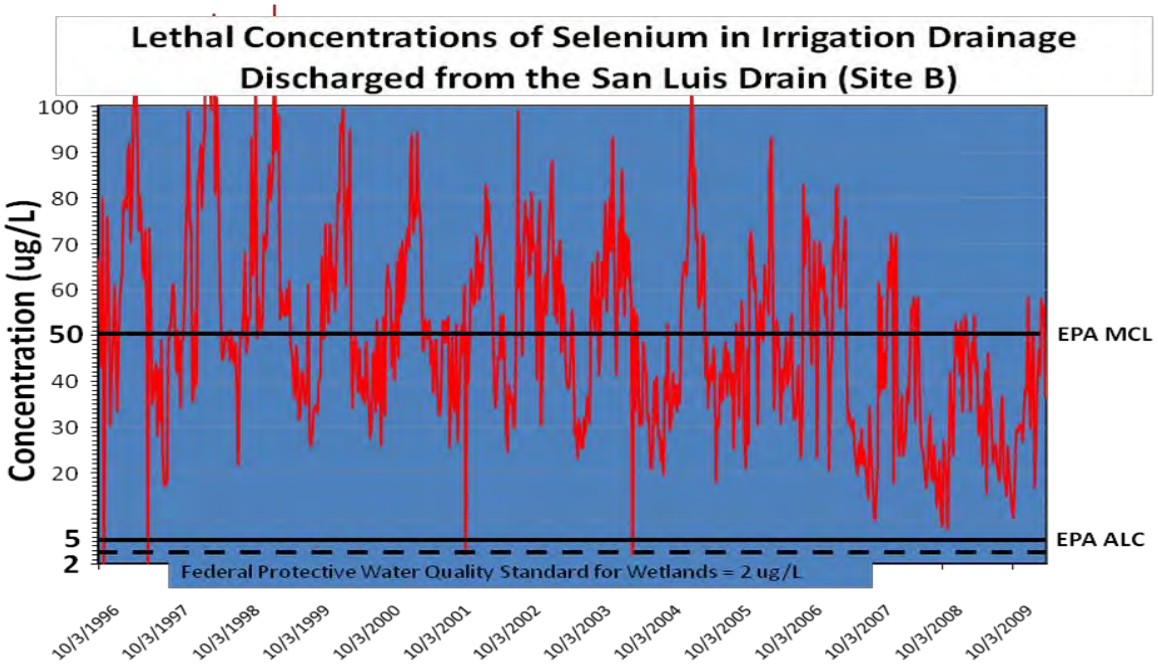


Figure 3

Data from USBR MCL=Maximum Contaminant Level for Drinking Water ALC=Aquatic Life Criterion

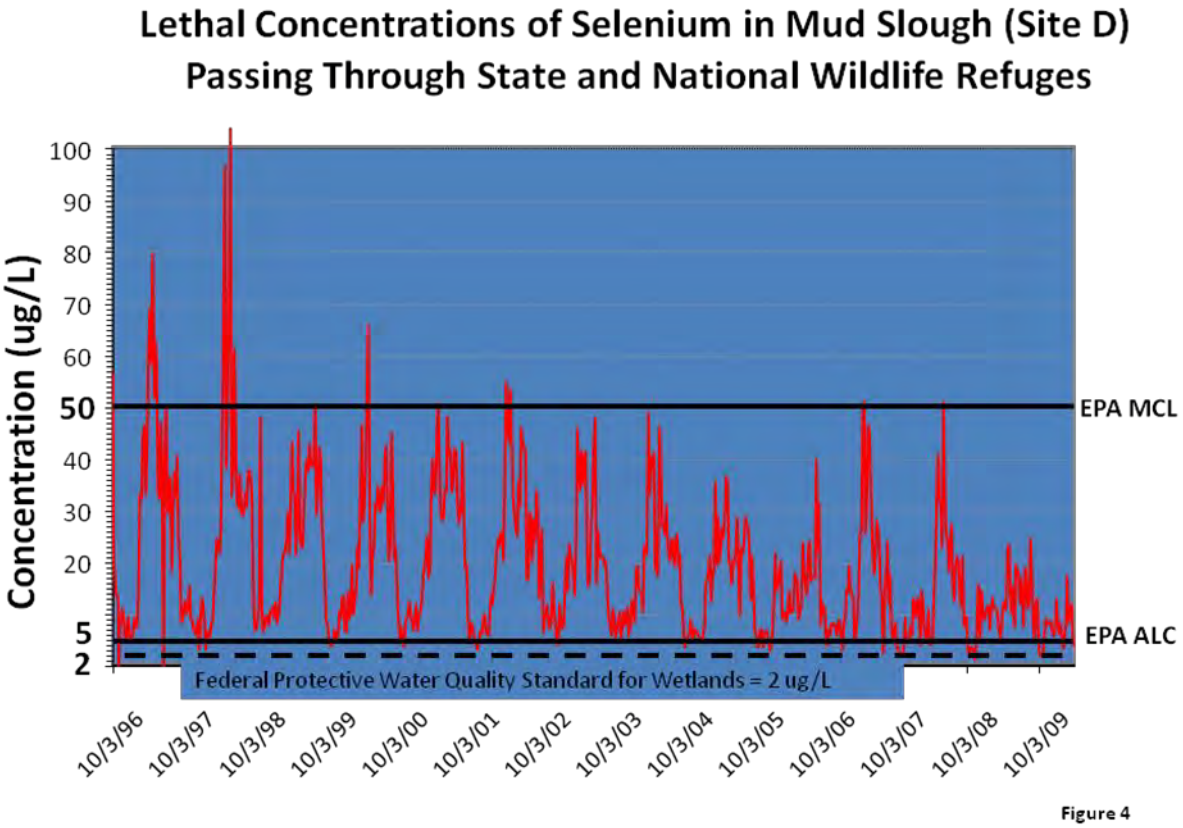
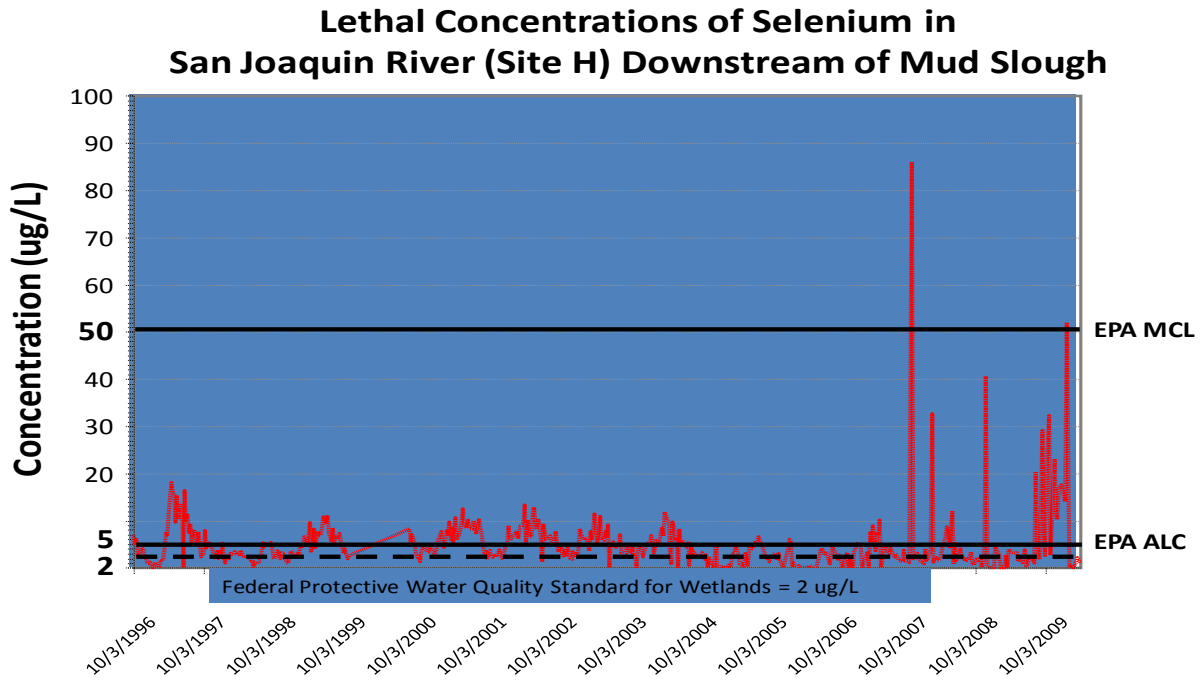


Figure 4

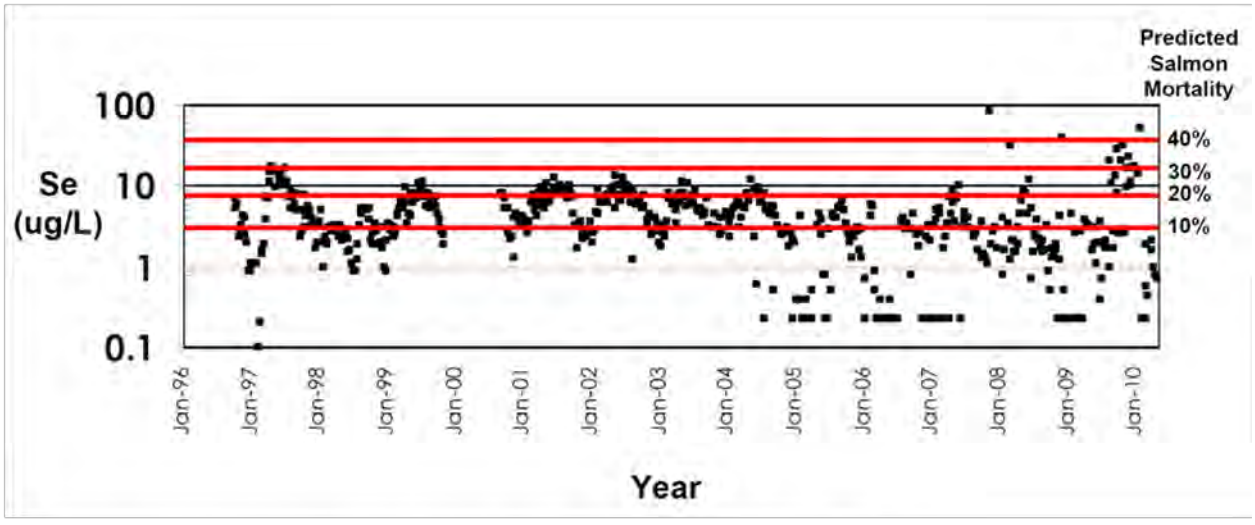
Data from USBR MCL=Maximum Contaminant Level for Drinking Water ALC=Aquatic Life Criterion



Data from USBR MCL=Maximum Contaminant Level for Drinking Water ALC=Aquatic Life Criterion

Figure 5

GBP Selenium Discharged to the San Joaquin River Causes Levels that are Dangerous for Salmon



Selenium concentrations measured in the San Joaquin River at Hills Ferry (data from the U.S. Bureau of Reclamation)

Figure 6

Specific Comments on Draft EA/FONSI for San Luis Drainage Feature Reevaluation Demonstration Treatment Facility At Panoche Drainage District

The Project Does Not Meet Drainage Needs or Existing Waste Discharge Requirements—This Project Is Yet Another Delay in Meeting Clean Water Act Requirements.

The proposed project does not meet the primary need "*to achieve a long-term, sustainable salt and water balance in the root zone of irrigated lands in the San Luis Unit and adjacent areas*" because the proposed demonstration plant will not remove salt from drainage water, nor will it reduce water table elevations. Removal of selenium but not salt from high groundwater does not meet the project need.

The Draft EA/FONSI fails to provide even rudimentary documentation on project costs in order to meet the proposed project purpose to "*demonstrate and operate the reverse osmosis (RO) and selenium biotreatment technologies described in the Feasibility Report in order to collect cost and performance data required for final design of the corresponding full-scale drainage service treatment components to be constructed in Westlands Water District (Reclamation 2008).*" The Draft EA/FONSI excludes the findings of the Feasibility Report that RO treatment is not cost effective compared to the value of crops grown and that substantial increases in subsidies to San Luis Unit contractors would be necessary in order to implement full-scale drainage service.[8]

As stated, the rhetoric used by Reclamation to tout the benefits and success of the San Luis Drainage Grassland Bypass Project is misleading and exaggerates the benefits. Often success is presented in percentages that compare a single year load value with either 1995 or 1996, both 100% supply allocation years, with, for example 2009, when water supply allocation was 10% nor 2008 when it was 40%. Failing to account for water delivery volume differences imported to irrigate these toxic soils

[8] http://www.usbr.gov/mp/sccao/sld/docs/sldfr_report/slfr_3-08_v02.pdf pg 99

misleads decision makers when analyzing the environmental impacts of the project. Appendix F is not up to date and perpetuates the misrepresentation. Not adjusting the averages for 'pre-project' and post project to account for water volume imports distorts the benefits. Simply put, the more water that is imported the more pollution created. As one can see from Figures 3 & 4 the consolidation of this drainage for discharge to Mud Slough and the San Joaquin River has consistently put lethal levels of selenium through National and State Wildlife areas and the San Joaquin River until it is diluted some fifty miles downstream from the point of discharge.

This project is inconsistent with Reclamations' current project Waste Discharge Requirements[9] permitting use of the San Luis Drain to discharge polluted water from the project to Mud Slough and the San Joaquin River: Item 29(i):

> *"An In-Valley Treatment/Drainage Reuse element of the Project will be implemented on up to 6,200 acre of land within the Grassland Drainage Area. This element of the Project is composed of three phases involving water reuse, removal of salt, selenium and boron, and the disposal of the removed salts to prevent them from discharging into the San Joaquin River. Approximately 17,000 acre-feet, or half of the total drain water produced in the Grassland Drainage Area will be handled by this element of the Project. Phase I involves the purchase of land and planting to salt-tolerant crops by 2003, Phase Ii involves the installation of subsurface drainage and collection systems and an initial treatment system, and Phase II involves the completion of construction of treatment removal and salt disposal systems by 2009."*

The proposed project treats just 200 gallons a minute, equivalent to about 40 garden hoses and only a small fraction of total drainage flow and contaminated groundwater,[10] and does not remove salts. Thus, the proposed project misses the mark in meeting Reclamation's permit conditions required to meet water quality protections.

The proposed project also does not meet the secondary project purpose "*to*

[9] http://www.swrcb.ca.gov/rwqcb5/board_decisions/adopted_orders/fresno/5-01-234.pdf

[10] http://www.usbr.gov/mp/ptms/docs/08-07-07_proj_update_west_side_reg_drainage.pdf

evaluate other innovative technologies, which may reduce the cost and environmental impacts as compared to the technologies evaluated in the Feasibility Report, while meeting the requirements for drainage service" because the document fails to identify those "innovative technologies." Because these technologies are not described at all, the reader can only assume that those technologies do not exist.

Failure to Consider a Full Range of Treatment and Pollution Control Alternatives

The Proposed Action does not meet the project need *to achieve a long-term, sustainable salt and water balance in the root zone of irrigated lands in the San Luis Unit and adjacent areas* because it does not remove salt from drainage water nor does it reduce high groundwater levels.

As stated by USGS Director Mark Myers in a letter to Senator Feinstein, May 2008, "*Perhaps the greatest uncertainties in the proposed plans are the technical feasibility of biotreatment of selenium at the scale and salinities to be encountered. (The feasibility report for treatment has still not been released and could not be reviewed for this letter.) Land retirement was the only alternative presented as an option to drainage treatment within the Reclamation EIS. Substitution of deep ground-water pumping that offsets a fraction of the surface water delivery is another alternative that has merit."*[11] [12] No feasibility report for treatment was provided in this DEA or a full range of treatment options. Further, without knowledge of the water chemistry to be treated the public and decision makers cannot make an informed decision regarding the feasibility of removing

[11] http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/feinsteinltr0001-from-Director.pdf

[12] http://www.usbr.gov/mp/sccao/sld/docs/sldfr_report/slfr_3-08_v02.pdf pg viii
The San Luis Unit was authorized with two appropriation ceilings. The construction of project works, except for distribution systems and drains, are covered by an indexable ceiling. The ceiling for the distribution systems and drains is not subject to indexing. The combined remaining construction cost ceiling for the San Luis Unit is $428,674,777. The total estimated cost to implement the In-Valley/Drainage-Impaired Land Retirement Alternative is $2.24 billion. The total estimated cost to implement the In-Valley/Water Needs Land Retirement Alternative is $2.69 billion. Thus, implementation of either of these action alternatives would exceed the combined remaining construction cost ceilings for the San Luis Unit.

selenium in water containing salts, mercury, boron, trace elements, nitrate and other contaminants. Many of these trace elements and contaminants can render the treatment ineffective.

A summary of the existing credible scientific evidence relevant to selenium removal at this scale and volumes along with the potential chemical interference from other contaminants was not provided. Instead the document relies on 1980 ground water quality data from Westlands Water District in the SLDFRE EIS.

No information is provided on either additional treatment alternatives or pollution control strategies such as curbing the importation of water to these contaminated soils and thus, the resulting polluted water being collected and discharged to the San Joaquin River and Delta Estuary. Without cost figures and detailed information regarding contaminants in this polluted groundwater caused by importing water, the public cannot make an informed decision regarding the environmental impacts, costs and trade-offs. Groundwater levels, groundwater quality and costs could be compared to the estimated costs based on reverse osmosis and undisclosed "innovative technologies." The averted costs of water, crop and power subsidies previously going to retired lands could be compared to the value of crops that would have otherwise been grown on the retired lands to determine improvements in salt and water balance in the root zone of remaining irrigated lands in the San Luis Unit and adjacent areas. Evaluation of such an alternative would help determine whether retirement of lands within the San Luis Unit would improve saline groundwater conditions.

Insufficient maps and information is provided to determine if the project is in the San Luis Unit of the Central Valley Project, and thus potentially authorized under Public Law No 88-488. At first glance the project appears to be outside of the service area. Thus, what authority and funding the proposed project is under is not clear. Further it appears there is no identified funding, and yet Reclamation is moving ahead with a controversial undefined project that might obligate Congress to expenditures not authorized.

The Proposed Action differs significantly from the Preferred Alternative in the San Luis Drainage Feature Reevaluation Record of Decision (SLDFRE ROD) in that it

proposes to directly treat sump water, rather than concentrated sump water that has gone through reuse and concentration at the San Joaquin River Improvement Project. This is a significant change. The decision to treat these polluted flows was based on a reduced volume to reduce the costs. Even that approach was not cost effective. The Proposed Action would result in even greater costs because of the larger volume of drainage to be treated.

The Proposed Action description fails to provide any cost estimates for plant construction, operation, energy needs, energy sources, or disposal of hazardous wastes. A cost-benefit analysis is relevant to the selection of not only the treatment options but weighing these against other alternatives. No cost benefit analysis is provided. Compliance with section 102(2) (B) of NEPA is not adequate given these deficiencies.

Section 3.1 Water Resources—Failure to Provide Meaningful Analysis of the Impacts From the Treatment Approaches.

The Draft EA claims that the project will cumulatively improve water quality and amounts of selenium discharged into Mud Slough would be "much less" but no specific quantities of selenium are provided. Without information or data, the project plan simply states that operating this treatment plant in perpetuity will not have an impact. Quantities of selenium and other contaminants discharged should be provided. Also the water quality parameters of the water to be treated are not provided. The chemistry affects the treatment efficacy. Trace elements, nitrate and other contaminants are known to render biological treatment ineffective in removing selenium. Large quantities of salts and other contaminants impact the effectiveness of reverse osmosis. No details are provided regarding the treatment methods so it is impossible to know what are the potential water pollution impacts and compliance with Clean Water Act standards. The proposal to discharge selenium at 10 µ/L would violate CWA standards.

Additionally, the project fails to identify mercury as a constituent of concern for this project. Additional monitoring of mercury should be performed to determine if it is of concern.[13]

[13] http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826 pgs 94-96 USFWS 2009 BO

Section 3.3 Biological Baseline Data Insufficient to Determine Impacts

The approach presented in this document is different from the schematic presented in the SLDFRE document referenced in the DEA. The poor maps, details and absence of a schematic for the project make assessment of the project impacts difficult. From the document it appears that "in-ground water" will be pumped directly to the proposed facility in pipes, enter the facility and then the discharge is to an existing irrigation drainage ditch. Without a better explanation or flow diagram the process at the facility and how the yet to be named alternative technology will enter into the project remain unknown. Without this information it is difficult to determine the impacts on biological resources.

The H.T. Harvey and Associates Panoche Drainage District, Giant Garter Snake Survey Report of July 8, 2008, admittedly was not conducted according to protocol timing of April 15 to June 1 and for a different project, but the map at page 8 where the two valley snakes were trapped could be useful in assessing the impacts of this project if the collection and distribution of the polluted flows were clearly defined and shown on the map. Also a Craig Swick survey of San Joaquin Kit Fox Range in 1973, found the range to include Delta Mendota Canal, which is not surveyed for this project, but is adjacent to the southern boundary. The USFWS Protocols Kit Fox cited in the Categorical Exemption used for the test borings are June 1999, which are out of date.

The sloppy information in this document is evident in the following incorrect statement on page 17: "*Under the GBP Biological Opinion (USFWS 2010), several thousand acres of agricultural lands in the vicinity of the SJRIP reuse area have been idled from irrigated agricultural use*." The reality is that the U.S. Fish and Wildlife Service's (USFWS) Grasslands Bypass Project Biological Opinion did not result in the retirement of any agricultural lands. The purchase/assignments of Broadview, Centinella, Widren and Mercy Springs water districts, as well as the Britz and Sumner Peck settlements where saline groundwater limits crop production were responsible for

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http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/san_luis_articles/USFWS_CEQA_Scoping_Comments_CVRWQCB_GBP_Extension_3-19-09.pdf Pgs 15-17

the land retirement.

However, it is true that in the Final Fish and Wildlife Coordination Act Report for SLDFRE, the USFWS recommended retirement of all San Luis Unit lands within the Grasslands area.[14] The Fish and Wildlife Coordination Act requires coordination with Fish and Wildlife Service when a permit or license will impact natural water ways or wetlands…..*otherwise controlled or modified for any purpose whatever, including navigation and **drainage**, by any department or agency of the United States*. (Emphasis added). Reclamation brushes this requirement aside without a valid justification. Further Reclamation also disregards the recommendation from the USFWS to retire of the 80,000 acres of San Luis Unit lands within the Grasslands Watershed area.[15] A new EIS should be prepared which considers retirement of all San Luis Unit lands within the Grasslands Drainage Area, as recommended previously by the U.S. Fish and Wildlife Service in their Coordination Act Report for SLDFRE.

At page 4, no data is provided to support the opinion, "The facility will be

[14] USFWS, 2006, Coordination Act Report on San Luis Drainage Feature Re-evaluation. Available at: http://www.usbr.gov/mp/mp150/envdocs/MP700_San%20Luis%20Drain_FinalEIS_App%20M%20(Part%201%20of%204).pdf.

[15] http://www.usbr.gov/mp/mp150/envdocs/MP700_San%20Luis%20Drain_FinalEIS_App%20M%20(Part%201%20of%204).pdf) pg 63:

> *We believe the Service's Preferred Land Retirement Alternative (full retirement) for the San Luis Drain Feature Re-Evaluation Project would release Reclamation from any future obligation to provide drainage service to the SLU while maximizing avoidance of adverse environmental effects. Our contention is that a full retirement alternative represents the most logical and least risky option to finally solve the drainage problem from the perspective of protecting and enhancing regional fish and wildlife resources. This land retirement alternative is compatible with CALFED and CVPIA goals and objectives by reducing project water demand, increasing available supplies, enhancing fish and wildlife habitat, and reducing contaminants reaching the Delta. It is an approach that appears most compatible with both the Service and Reclamation's respective missions, since the goal is to find a drainage solution for the study area which includes measures to preserve, protect, restore, and enhance fish and wildlife resources affected by water deliveries to the SLU.*
>
> *The Service strongly prefers to address SLU drainage issues with options that would eliminate the need for drainage service altogether. The Service believes the SLDFR should seek a more permanent and complete resolution of drainage issues in the San Joaquin Valley. Drain water management is expensive and risk-laden*.

operated year-round and will be lighted for safety and security. The effects to wildlife resources from this light source are expected to be negligible because of existing low value of the area to wildlife."

3.6 Indian Trust Asset Impacts Not Adequately Analyzed.

The Draft EA/FONSI fails to identify that the continued diversion of Trinity River water to the Grasslands area impacts the Indian Trust Assets of the Hoopa Valley and Yurok Tribes. The Bureau of Reclamation's 1959 water permits for the Trinity River Division of the Central Valley Project (CVP) included a significant expansion of the CVP service area within the San Luis Unit.[16]

The Draft EA/FONSI is part of an attempt to justify continued irrigation of lands that are causing impairment of the beneficial uses of water contaminating groundwater and harm to other beneficial uses. Continued taxpayer subsidies cannot be economically justified. This project will continue the taxpayer's downward economical spiral, throwing good money after bad money. Diverting water from the Trinity River will continue to adversely affect the salmon fishery that is the basis for the Hoopa Valley and Yurok Indian Trust Assets. The Draft EA/FONSI fails to disclose the negative economic and environmental impacts of continued irrigation of the San Luis Unit. Conversely, the document fails to identify the benefits of ceasing irrigation of toxic lands, including benefits to Tribal Trust and Public Trust assets.

3.7.1 Hazardous Waste

The DEA does not characterize 55,000 pounds of hazardous waste that is being created and stored at the facility before shipment to a hazardous waste facility. How much of it is selenium? What other constituents/pollutants are expected to be in it in what amounts? What is the cost of disposing of this amount of hazardous waste and cumulatively is it even feasible to consider disposal of a larger amount for the entire San Luis Unit? USGS raised questions regarding the feasibility—both technically and

[16] See http://tcrcd.net/exhibita.htm

economically—of treatment because of the sheer volumes to be treated if technically feasible. USGS estimates at 50 years, with 100,000 acres of land retirement and treatment for the rest of the drainage, there will be a requirement for salt storage of 20 million tons in evaporators or landfills. This salt will be contaminated with a variety of trace elements common in drainage waters including selenium, boron, molybdenum, chromium, and arsenic.[17]

3.9.2 Socioeconomic Impacts

What is the expected cost savings to the Panoche Drainage District from the reduced selenium discharged into Mud Slough? How many pounds will it be and what is the rate of savings?

3.10 Air Quality Impact and 3.11 Global Climate Impacts Not Fully Considered.

The Draft EA/FONSI is grossly inadequate in its evaluation of air quality and the impact on global climate change. The document fails to identify the source or amount of necessary electricity to run the demonstration plant. Will the project use CVP Project Power? If so, what will be the source of replacement power for CVP preference customers from increased demand for CVP Project Use Power? It is likely that replacement power would be generated from fossil fuels. Therefore, the air quality section completely fails to identify the air quality impacts of replacement fossil fuel energy. How much energy will it be and what kind of load will it create on the system? How much will the Western Area Power Administration's (WAPA) customer costs increase to purchase replacement power? How will it affect the power allocation and costs of the Hoopa Valley Tribe's WAPA contract? How will cost increases affect low income populations such as those within the Trinity Public Utilities District boundaries? If the plant is turned over to the contractors, who will pay for the energy for the plant? Is it a reimbursable CVP expense or non-reimbursable?

Cumulatively, a revised document should identify the expected global warming and air quality impacts from the replacement energy demand from fossil fuels for a fully built-out drainage system for the San Luis Unit, as well as, cost impacts to CVP customers, including low income and tribal customers.

[17] http://pubs.usgs.gov/of/2008/1210/ pg 2.