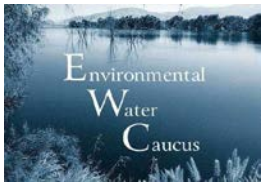
AQUALLIANCE
DEFENDING NORTHERN CALIFORNIA WATERS



CA Save Our Streams Council

September 9, 2019

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Re: Coalition Comments on Grassland Bypass Project Long-Term Storm Water Management Plan EIR Addendum and Initial Study--A Full EIR-EIS is Required.

Thank you for the opportunity to provide public input concerning the proposed Grasslands Bypass Project Long-Term Storm Water Management Plan, 2020 – 2035 (GBP Stormwater Plan) as described in Notice of Availability (SCH No. 2007121110), draft Addendum to the 2009 GBP EIR/EIS and CEQA Initial Study.[1]

[1] Available at these links: http://sldmwa.org/grasslandbypass/NOA_CEQA_GBP%20Addendum%2008-14-19.pdf
http://sldmwa.org/grasslandbypass/LTSWMP%20Initial%20Study%20080519.pdf

The GBP began in 1995 as a two-year program, and its Federal use agreements for the San Luis Drain have been extended now through Three Use Agreements. All of these permits and environmental reviews and findings were predicated on zero discharge at the end of each period. First for 5 years, then 10 more and then 10 more. All that time--25 years--the polluted discharge was exempted from meeting protective water quality standards or only required to meet relaxed standards. Furthermore, over that 25 years the project steadily reduced both monitoring of the discharge and compliance with water quality standards. The Grassland Drainers under the GBP Storm Water Plan are now proposing a 4th Federal Use Agreement starting in January 2020. Enough is enough. Too much time has already passed without adequate progress on meeting water quality standards. Species are hanging by a thread and migratory bird deformities continue. If the 4th Federal Use Agreement is not approved by December 31, 2019, all discharges (including stormwater) into the San Luis Drain from the GBP are required to cease, and this is what should happen. The cessation of these selenium laden pollutants has been promised for the last 25 years and must stop. Further, providing an addendum rather than a full EIR/EIS to accurately inform decision makers does not comply with CEQA and NEPA requirements.

The First Use agreement[2] (1995) for the San Luis Drain authorized use of a 28-mile portion of the Drain by the San Luis Delta Mendota Water Authority (SLDMWA) to carry agricultural drainage water to Mud Slough. There was no stipulation to discharge stormwater. In fact, in a 1997 report titled, "A Storm Event Plan for Operating the Grassland Bypass Project"[3] by the Grassland Area Farmers and the SLDMWA, several issues were identified regarding major storm events in the GBP including:

1. *Storm water runoff carries sediment that should not be transported in the Grassland Bypass, or deposited in the San Luis Drain;*
2. *It is not possible during major storm events to separate agricultural drainage water from surface runoff and storm water flows;*
3. *It will not be possible to divert all of the commingled surface runoff, storm water flows, and agricultural drainage water through the Grassland Bypass Channel during major storm events.*
4. *During some storm events, the instantaneous flow rate in Panoche Creek, which carries water from hills adjacent to the agricultural area can exceed 12,000 cubic feet per second, while the average daily flow rate during such events can exceed 2,000 cubic feet per second. These flows can generate more than 40,0000 acre-feet of water during a two-week period that includes a storm event.*

Further, both the purpose of the project and use agreement confirm the use only for agricultural drainage. For example, the Grassland drainers stated explicitly in 1997, " *The Grassland Bypass*

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http://www.sldmwa.org/grasslandbypass/LTSWMP%20Addendum%20080519.pdf

[2] See http://calsport.org/news/wp-content/uploads/GBP-First-Use-Agreement-1995.pdf

[3] See pages 2-3: "*A Storm Event Plan for Operating the Grassland Bypass Project*" by the Grassland Area Farmers and the SLDMWA, 1997.

Channel and the San Luis Drain were designed and constructed explicitly for the purpose of conveying agricultural drainage water. Neither facility can accommodate storm water flows nor surface runoff from major storm events."[4] The 1995 First Use Agreement stated clearly,"*The AUTHORITY has requested that the UNITED STATES permit it to use a portion of the San Luis Drain consisting of approximately 28 miles from the terminus (Kesterson Reservoir) to Milepost 105.72, Check 19 (near Russell Avenue) for the discharge and transportation of a maximum flow of 150 cubic feet per second (cfs) of drainage water to Mud Slough (said portion hereinafter referred to as the Drain")* highlight added.[5] Finally the NEPA documents all stated the purpose of the project was for "*a field experiment designed to evaluate approaches to agricultural drainage management. There is no commitment, at this time, to approve long-term use of the Drain*." [6]

These issues of permitting continued discharge of pollutants from the Federal San Luis Drain are significant and should not be handled by an Addendum to the 2009 GBP EIR/EIS that planned on zero discharge to the San Luis Drain after 2019.

We, the signatory organizations on these comments, recommend that the proposed 15-year extension to use the San Luis Drain to discharge stormwater into Mud Slough (North) and the San Joaquin River from Sack Dam to the Merced River be denied and that no permit or use agreement be granted. At a minimum a full Environmental Impact Report/Statement (EIR/EIS) must be completed. The CEQA addendum process being proposed would allow storm water and agricultural drain water laced with selenium (and other toxic drainwater constituents such as salt, sulfates, boron, and mercury) through the federal San Luis Drain to Mud Slough and the San Joaquin River and the Delta Estuary. Below, we detail our concerns in several areas and recommend what we believe is the only reliable and cost effective public solution--order the cessation of this polluted discharge and retire these drainage impaired lands as determined in federal study after study.[7]

The CEQA/NEPA analysis in the 2009 GBP EIR/EIS does not support an "Addendum"

Under CEQA Guidelines section 15164, an Addendum presents changes to an EIR that are

[4] Ibid. page 12.

[5] Op. cit. First Use Agreement 1995 pages 1-2.

[6] USBR,SLDMWA,EPA& USFWS letter to Karl Longly, CVRWQCB 11-3-95 pg 2 http://calsport.org/news/wp-content/uploads/USBR-SLDMWA-EPA-USFWS-11-3-95-Ltr-to-CRWQCB.pdf and Supplemental Environmental Assessment April 1991 and the FONSI dated October 18,1991.

[7] The San Joaquin Valley Drainage Program (SJVDP) *A Management Plan for Agricultural Subsurface Drainage and Related Problems on the Westside San Joaquin Valley,* also known as the "Rainbow Report" (September 1990) Also see USGS *Technical Analysis of In-Valley Drainage Management Strategies for the Western San Joaquin Valley, California* Open-File Report 2008-1210 By: Theresa S. Presser and Steven E. Schwarzbach

https://pubs.er.usgs.gov/publication/ofr20081210 Also see USBR Final Environmental Impact Statement in May 2006 and signed the Record of Decision (ROD) for the *San Luis Drainage Feature Re-evaluation EIS* in March 2007, selecting the "In-Valley/ Water Needs/ Land Retirement Alternative."

not significant enough to require a supplemental EIR. A supplemental EIR is required if, as defined in Section 15162(a)(1), (a) there have been substantial changes to the Project; (b) new significant environmental effects have been identified; or (c) there has been a substantial increase in the severity of previously identified significant effects. The GBP Stormwater Plan is a substantial change from the 2009 GBP EIR/EIS. In the 2009 EIR/EIS it was assumed that all drainage discharges into the San Luis Drain would cease by the end of 2019.

Under the proposed GBP Stormwater Plan selenium contaminated discharges would continue adding additional stormwater commingled with subsurface agricultural drainage into the San Luis Drain for an additional 15 years. This is a substantial change and should be analyzed in a full EIR/EIS. Further, there are numerous impacts that are significant and need to be disclosed, including: 1) cumulative impacts to downstream beneficial uses 2) the failure to meet protective water quality standards 3) impacts to endangered and listed species and 4) migratory bird impacts. All of these impacts warrant a full EIR/EIS analysis to adequately inform decision makers of the risks posed by continuing these discharges without proper permits and compliance with the Clean Water Act, including state and federal non-degradation policies.

The undersigned organizations, have a long-standing interest in the GBP because contaminants in agricultural drainage discharges have profound effects to the environment, including effects to downstream waterways, aquatic life, and migratory birds. We include our previous comments on the GBP EIR/EIS and Basin Plan Amendment by reference.[8]

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[8] Coalition comments of environmental, fishing and environmental justice organizations opposed U.S. EPA's proposed federal water quality criteria for selenium applicable to California. March 28, 2019. http://calsport.org/news/wp-content/uploads/PCL-et.-al-Cmt-Letter-EPA-Ca-Selenium-Criteria-Doc-No.-EPA-HQ-OW-2018-00....pdf

Comments of the Pacific Coast Federation of Fishermen's Associations Requesting Denial of Proposed Waste Discharge Requirements for Surface Water Discharges from the Grassland Bypass Project, Stephan C. Volker, June 22, 2015 https://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/wdrs_development_archive/2015may/2015_05_gbp_com_pcffa.pdf

Re: Land Retirement Benefits to Grasslands Bypass Project and Draft Waste Discharge Requirements, Coalition Letter to CVRWQCB Follow-up on Grasslands WDR, September 8, 2014 http://calsport.org/news/wp-content/uploads/Coalition-response-letter-to-Longley-re-gbp-land-retirement.pdf

Coalition Comments Re Draft Waste Discharge Requirements for the Grassland Bypass Project, June 30, 2014. http://calsport.org/news/wp-content/uploads/Final-coalition-comments-on-Draft-GBP-WDR-6.30.14.pdf

Coalition Comments: Grasslands Bypass Project -- Violations of the Endangered Species Act and Reduced Monitoring Threaten Endangered Species and Public Health, November 27, 2013http://calsport.org/news/wp-content/uploads/2013/12/Coalition-Letter-on-GBP-ESA-Violations-Monitoring-Reductions-LTR.Corrected-.pdf

Coalition Comments: Opposition to the Proposal to Curtail Monitoring at the Grassland Bypass Project. August 11, 2011http://calsport.org/news/wp-content/uploads/2011/09/Opposition-To-Grassland-Bypass-Monitoring-Reductions.pdf

CSPA, CWIN and AquAlliance submit Comments to State Water Board Regarding Grassland Bypass Project and Basin Plan Amendment. September 22, 2010.http://calsport.org/news/cspa-cwin-and-aqualliance-submit-comments-to-state-water-board-regarding-grassland-bypass-project-and-basin-plan-amendment/

The proposed drainers' GBP Stormwater Plan effectively sanctions continued excessive pollution, especially during stormwater events, of Mud Slough (North), the San Joaquin River, and ultimately the Sacramento-San Joaquin Delta, by failing to enforce science-based protective water quality standards for selenium and allowing the continued contamination of these water bodies. Excess selenium in streams kills or deforms fish and other aquatic life and is a human-health concern in drinking-water supplies. Under the proposed Stormwater Plan, selenium (and other drainwater constituents, such as salt, sulfates, boron, and mercury) will continue to be discharged from the federally owned San Luis Drain directly into the waters of the state and nation. The failure to enforce protective selenium water quality objectives transfers pollution from these Grassland drainers through this federal drain to the waters of the state, harming beneficial uses of these waters for our members' commercial beneficial use, the domestic water supply, public health, and other public trust values. In addition, impacts of climate change which were not considered in previous environmental assessments in concert with implementation of the GBP Stormwater Plan must be disclosed in a full EIR/EIS review.

The GBP Drainers propose to continue to use the federally owned San Luis Drain from 2020 to 2035 to convey stormwater commingled with contaminated agricultural drainage water to the San Joaquin River via Mud Slough (North). The GBP Stormwater Plan includes a number of management actions and commitments that will not be sufficient to protect downstream beneficial uses..

A National Pollutant Discharge Elimination System (NPDES) permit must be required.

The US EPA and by delegation California State and Regional Boards have the authority to regulate agricultural drainage under the Clean Water Act (CWA), having comprehensive federal statutory authority for regulating pollutant discharges to the nation's navigable waters. The term "pollutant" includes "agricultural waste discharged into water" and the term "navigable waters" encompasses the San Joaquin River, its principal tributaries, and arguably inflowing ditches and drains. Thus, discharges of agricultural drainage water to the San Joaquin River and its tributaries is subject to regulation under the CWA (Thomas and Leighton-Schwartz, 1990). The

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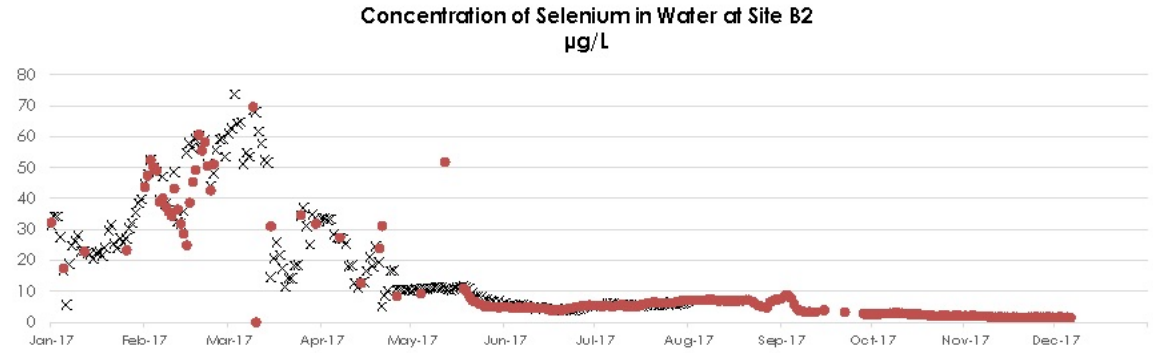
Sierra Club et. al. Comments: Grassland Bypass Project & San Joaquin River Selenium Basin Plan Amendments September 22, 2010. https://www.waterboards.ca.gov/water_issues//programs/tmdl/docs/sjr_selenium/comments092210/jim_metropulos.pdf

Comments of California Sportfishing Protection Alliance and California Water Impact Network on the draft environmental impact report for the Irrigated Lands Regulatory Program and related documents. Also attached are several comments prepared by three expert consultants September 27, 2010 http://calsport.org/doc-library/pdfs/207.pdf

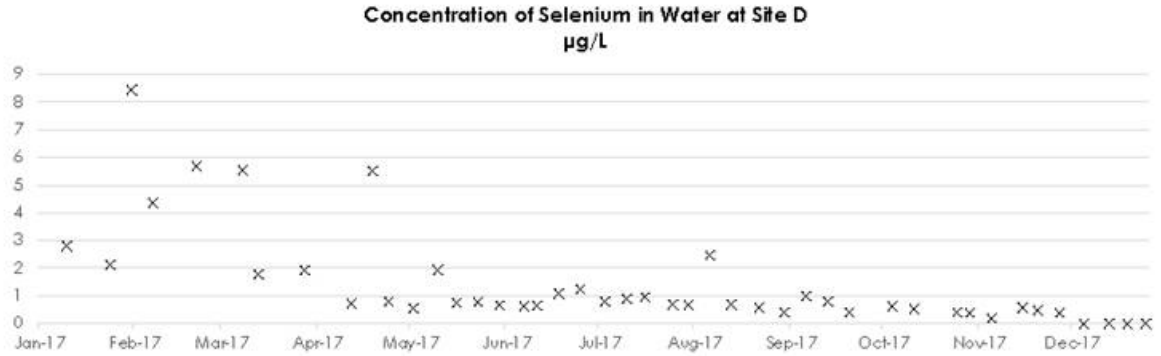
Environmental Coalition Comments on Draft Staff Report for Grasslands Bypass Project Basin Plan Selenium Amendments to The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, April 26, 2010https://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/grasslands_bpa_coalition_ltr.pdf

GBP Stormwater Plan should be required to obtain a NPDES permit to discharge pollution to navigable waters or to discharge commingled groundwater, surface water and agricultural drainage containing pollutants such as selenium, boron, salt, sulfate and mercury.[9]

Significant discharges of selenium-laden drainage and contaminated groundwater still is occurring from the GBP. For example, during the winter/spring of 2017, water quality monitoring data clearly show high selenium concentrations (e.g., 20-40 µg/L) associated with high flow conditions in water entering the San Luis Drain from the GBP. The figure below shows selenium concentrations at Site B2 in the San Luis Drain during 2017.



Although the San Luis Drain flow adds a relatively small percentage of flow to Mud Slough, it nevertheless substantially increased the selenium concentrations in Mud Slough in 2017 to unacceptably high levels of 5-10 µg/L. Dilution is not the solution to pollution—especially in the case of selenium, which bioaccumulates in the food chain and magnifies impacts on fish, wildlife, migratory birds and terrestrial species (Lemly and Skorupa, 2007; Skorupa 1998; USDI 1998).



A comprehensive cumulative effects analysis on downstream impacts of the GBP Stormwater Plan in an EIR/EIS is needed.

[9] https://www.epa.gov/cwa-404/clean-water-act-section-402-national-pollutant-discharge-elimination-system

The GBP Stormwater Plan will allow continued discharges of a blend of stormwater, polluted groundwater and drainage to Mud Slough (North) and the San Joaquin River. This plan should be analyzed in a full EIR/EIS and the cumulative impacts to downstream anadromous fish, wildlife, and terrestrial species should be included in that analysis. Impacts to the Delta Estuary and its species from the proposed action, as well as other actions, are profound. Continued operation of the CVP and SWP is likely to jeopardize the continued existence of endangered species in the Delta, and stormwater runoff and subsurface agricultural drainage from GBP and nearby CVP-irrigated lands contaminates the San Joaquin River and hence the Delta with selenium and other toxic constituents. See testimony from Restore the Delta on Salinity and Selenium Science and Modeling for the Bay/Delta Estuary.[10]

Further, in a letter from National Marine Fisheries Service (NMFS) to the SWRCB on the San Joaquin River Selenium Control Plan Basin Plan Amendment (dated September 22, 2010), NMFS states that selenium contamination in the San Joaquin River is problematic in restoring spring and fall-run Chinook salmon to the upper reach of the San Joaquin River. The NMFS letter further noted that selenium in the San Joaquin River could negatively affect Central Valley steelhead and the Southern distinct population segment of the North American green sturgeon[11].

Studies by the US Geological Survey have documented elevated levels of selenium in the food chain and green sturgeon. Since these impacts are potentially significant, an EIS must be prepared[12] along with a complete CEQA analysis to accurately inform decision-makers before allowing these pollutants to be spread downstream.

Greater outflow of the San Joaquin River associated with CVP and SWP operations in the Delta could result in even further transport of selenium and sulfate from agricultural drainage discharges in the San Joaquin River and into the Delta (Lucas and Stewart 2007). Also, note the Lucas and Stewart (2007) discussion on seasonal trends of bivalve selenium concentrations in the North Delta and its relationship to the San Joaquin River, "*Several explanations for the temporal trends in bivalve Se concentrations (which did not exist in the 1980's) are possible. One possibility is that refinery inputs of selenium have been replaced by San Joaquin River inputs. Models indicate that if SJR inflows to the Bay increase, as they may have in recent years with barrier management, particulate Se concentrations in the Bay could double, even with no increase in irrigation drainage inputs to the SJR. The fall increase in Se in C. amurensis also occurs during the time period when the ratio of SJR/Sac River inflow is highest. Further changes in water management could exacerbate these trends…*".

[10] Testimony on Recent Salinity and Selenium Science and Modeling for the Bay/Delta Estuary Submitted by Tim Stroshane Senior Research Associate California Water Impact Network (CWIN) August 17, 2012 https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/california_waterfix/exhibits/docs/RestoretheDelta/part2/RTD_161.pdf

[11] https://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/sjr_selenium/comments092210/howard_brown.pdf

[12] See 40 C.F.R. § 1508.27(b)(9)

Stormwater runoff from GBP and its upstream watershed can also contain elevated concentrations of mercury. Results from the CalFed Mercury study found elevated levels of mercury in fish from the lower San Joaquin River and Mud Slough (Davis et al. 2000; Slotton et al. 2000). A significant finding of the CalFed Mercury Study in the San Joaquin Basin was that Mud Slough contributes about 50% of the methylated mercury at Vernalis (legal boundary of the Delta), but only 10% of the water volume during the non-irrigation season (September to March) (Stephenson et. al., 2005).

Sulfate loading in the San Joaquin River from the GBP discharges in concert with Delta operations could result in downstream environmental impacts that should be considered in a full EIR/EIS. Sulfate reducing bacteria are the primary agents responsible for the methylation of mercury in aquatic ecosystems. Wood et al. (2006) found that sulfate concentrations are about seven times higher in the San Joaquin River than in the Sacramento River, and that addition of sulfate is predicted to stimulate methylmercury production when it is limiting. Two factors influencing sulfate concentrations in the Bay-Delta are the electrical conductivity (EC) and the ratio of San Joaquin River to Sacramento River water.

The 5 ppb Se water quality performance goal in Mud Slough and San Joaquin River upstream of Merced is not protective of downstream beneficial uses and public trust resources.

Pursuant to the Endangered Species Act (ESA) of 1973 (as amended), and prior to the USEPA promulgating water quality objectives (including selenium) for the State of California in the California Toxics Rule (CTR), the USEPA was required to consult with the US Fish and Wildlife Service and the National Marine Fisheries Service (Services) and obtain the Services' concurrence that none of the proposed criteria would jeopardize any ESA-listed species. *Upon that review, the Services found that the 5 µg/L chronic criterion for selenium proposed by USEPA in the CTR would likely jeopardize 15 ESA-listed species* (Emphasis added). To avoid a final ''Jeopardy Opinion'' from the Services, and the associated legal ramifications, the USEPA agreed to reevaluate their CWA criteria guidance for selenium by 2002 (FWS and NMFS 2000).[13]

To comply with the Service's 2000 Biological Opinion on the CTR, USEPA in November 2018 proposed new water quality objectives for California (lentic and lotic water, and fish tissue) that would be protective of listed species: Federal Selenium Criteria for Aquatic Life and Aquatic-Dependent Wildlife Applicable to California Docket RIN, 2040-AF79 EPA-HQ-OW-2018-0056 FRL-9989-46-OW. The USEPA's proposed rule did not include waters within known selenium-contaminated geographical areas, including tributary flows into the San Francisco Bay Delta system such as, the San Joaquin River from Sack Dam to Vernalis, Mud Slough, Salt Slough, along with the water supply channels in the Grassland watershed, and the Grasslands Ecological Area in Fresno and Merced Counties. Instead, the USEPA proposed rule defers to existing State established water quality objectives for Mud Slough (North) and the San Joaquin River upstream

[13] https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OW-2018-0056-0009&contentType=pdf

of the Merced River of 5 µg/L 4-day average (as defined in the Regional Board's June 2010 Basin Plan Amendment to address Selenium Control in the San Joaquin River Basin[14]).

Supporting documentation for this USEPA Docket for Selenium in California includes 2 reports by USFWS: Species at Risk from Selenium Exposure in California Inland Surface Waters, Enclosed Bays and Estuaries, for a list of species considered most at risk for selenium exposure in CA[15] and Species at Risk from Selenium Exposure in the San Francisco Estuary [16]. The species identified at most risk for selenium exposure in the San Joaquin Valley and San Francisco Estuary were denoted as:

Mammals:	Buena Vista Lake Ornate Shrew;
Birds:	Bald Eagle, California Black Rail, California Clapper Rail, California Least Tern, Greater Scaup, Lesser Scaup, White-winged Scoter, Surf Scoter, Black Scoter;
Reptiles:	Giant Garter Snake;
Fish:	Chinook Salmon, Steelhead, Green Sturgeon, White Sturgeon, Delta Smelt, and Sacramento Splittail.

The proposed GBP Stormwater Plan is seeking to comply with the selenium water quality objectives specified in the 2010 Basin Plan Amendment (5 µg/L, 4-day average), but the proposal is lax, allowing for high spikes of selenium contaminants that will bio-accumulate throughout the ecosystem. The Stormwater plan includes mitigation measures that establish a Mud Slough (North) water quality "goal" of 3 µg/L Se, 4-day average. For every 3 months that meet this 3 µg/L performance goal, one exceedance of 5 µg/L 4-day average is allowed. These goals and objectives would likely result in harm to aquatic fish and wildlife as denoted in the Service's 2000 Biological Opinion on the CTR. We recommend that State and Federal Fish and Wildlife agencies be consulted on the effects of implementation of the GBP Stormwater Plan and relaxed standards that are not protective of migratory birds and endangered anadromous fish populations.

Our organizations have submitted several comment letters on protective selenium objectives in California.[17] In March 2019, PCFFA and others provided comments to the USEPA on their proposed selenium criteria for California.[18] We recommended that a chronic, legally binding selenium objective of no greater than 2 µg/L (4-day average) be included in the GBP Stormwater

[14] https://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/sac_sj_basins_salinity_staffrpt.pdf

[15] https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OW-2018-0056-0144&contentType=pdf

[16] https://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OW-2018-0056-0265&contentType=pdf

[17] http://calsport.org/news/wp-content/uploads/EPA-Selenium-Cmt-LTR-Re-Docket-No.-EPA-HQ-OW-2004-0019.pdf and http://calsport.org/news/wp-content/uploads/Technical-Review-2004-EPAs-Draft-Tissue-Based-Selenium-Criterion.pdf

[18] Coalition comments of environmental, fishing and environmental justice organizations oppose U.S. EPA's proposed federal water quality criteria for selenium applicable to California. March 28, 2019. http://calsport.org/news/wp-content/uploads/PCL-et.-al-Cmt-Letter-EPA-Ca-Selenium-Criteria-Doc-No.-EPA-HQ-OW-2018-00....pdf

Plan for receiving waters of stormwater/drainage discharges. That comports with the recommendations of several experts that the criterion should be 2 µg/L or less (DuBowy 1989; Lemly and Skorupa 2007; Peterson and Nebeker 1992; Swift 2002). Exceeding the water criterion should trigger additional biological monitoring to determine if the tissue criteria for selenium proposed by USEPA has also been exceeded.

The Proposed and Existing Monitoring and Reporting Program for GBP are not sufficient to assess environmental impacts and protect beneficial uses.

The monitoring and reporting program that was revised by the Regional Board in 2015[19] is inadequate to determine the level of pollution being discharged by the GBP and adjacent agricultural lands, and the harm it is causing to the environment. We have provided comments three times on the inadequacies of the Revised Monitoring and Reporting Program for the GBP. We hereby incorporate by reference our coalition letters of August 11, 2011, April 22, 2013, and November 26, 2013, and June 22, 2015. We also refer to comments submitted to the Regional Board by USFWS on the Revised Monitoring and Reporting Program for the GBP dated June 22, 2015 and June 25, 2015.[20] The USFWS recommended that the Regional Board reinstate weekly water quality monitoring for selenium at GBP Stations J, K, and L2 as exceedences of 2 µg/L are still occurring in those wetland channels, those channels are listed on the State's 303(d) list as impaired for selenium, and elevated selenium in those channels could be resulting in harm to federally listed species.

As part of Regional Board **ORDER R5-2015-0094,** Waste Discharge Requirements for the GBP (2015 WDR), sampling frequencies for Mud Slough, Grasslands wetland channels, and Salt Slough were 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 20 years. Significant spikes of selenium and other drain water pollutants are not being monitored under the existing monitoring and reporting requirements.

In addition, we specifically protested the change in the Hills Ferry monitoring site (Site H) to China Island (Site R). There is a comprehensive database with documented selenium water quality violations at Hills Ferry. Site R appears closer to the mouth of the Merced River than Site H, allowing for greater dilution and underrepresenting the contaminant threat in the San Joaquin River upstream of the Merced River.

We also opposed adoption of the monitoring and reporting program in the 2015 WDR and recommended 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

[19] https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/fresno/r5-2015-0094.pdf

[20] https://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/wdrs_development_archive/2015may/2015_05_gbp_com_usfws.pdf See this link for a copy of the USFWS letter to Ms. Margaret Wong Regional Water Quality Control Board, Central Valley Region: USFWS Comments on the May 2015 Draft Waste Discharge Requirements for the Surface Water Discharges from the Grassland Bypass Project and the Discharges to Groundwater from the Growers in the Grassland Drainage Area @ http://calsport.org/news/wp-content/uploads/Exhibit-5.pdf

sufficient to protect public trust values, endangered species and evaluate compliance with water quality standards. Here we reference and reiterate our previous comments and recommend a vigorous monitoring program that does not hide or understate the discharge of selenium and other toxins through stormwater discharges into Mud Slough and the San Joaquin River.

We further recommend that monitoring and reporting for total mercury and methyl-mercury concentrations in water and biotic tissue be required at all sampling locations of the GBP to establish a mass-balance of sources of mercury in this watershed.

The Stormwater Detention Basins - Another Kesterson in the Making - Effects to Wildlife Are Not Disclosed.

The proposed GBP Stormwater Plan includes use of an unspecified acreage of existing ponds and the addition of up to 200 acres of stormwater detention basins (regulating reservoirs) to store and regulate disposal or distribution of stormwater. How is such a basin different from an evaporation pond? Proposed use of regulating ponds to help control flow as a part of the engineered reuse system and ponding during flood events in the GBP area also may create a potential wildlife exposure risk similar to those originally realized at Kesterson National Wildlife Refuge (Presser and Ohlendorf, 1987). Ponding of stormwater and agricultural drainage will support an aquatic food chain and be attractive hazard to birds within a short period of time.

Selenium poses a hazard to fish and wildlife because of its toxicity at environmentally relevant concentrations and its tendency to accumulate in food chains (Skorupa, 1998). The San Joaquin Valley provides critically important habitat for wintering waterfowl of the Pacific Flyway. Eight to twelve million ducks and geese, along with hundreds of thousands of shorebirds and other marsh birds annually winter or pass through the valley. The history of the ecological impacts of disposal of selenium at Kesterson National Wildlife Refuge within the valley is well documented (e.g., Presser and Ohlendorf, 1987; SJVDP, 1990a, b). Additionally, from 1986 to 1993, the National Irrigation Water-Quality Program (NIWQP) of the U.S. Department of the Interior (USDOI) studied whether contamination was induced by irrigation drainage in 26 areas of the western United States. This program developed guidelines to interpret effects on biota of selenium (USDOI, 1998). These guidelines, along with revisions based on more recent studies and modeling, can be used to interpret and guide management and mitigation of the risk of selenium in food chains and wildlife.[21] The GBP reuse areas present opportunities for wildlife use and selenium exposure. Proposed use of regulating ponds to help control flow as a part of the engineered reuse system and ponding during stormwater events in the GBP area also may create a potential wildlife exposure risk similar to those originally realized at Kesterson National Wildlife Refuge[22] (Presser and Ohlendorf, 1987).

The GBP has been monitoring and reporting annual bird use from April thru June at the SJRIP drainage reuse area since 2008. Many of those reports are posted on the SFEI website, however,

[21] https://pubs.usgs.gov/pp/p1646/

[22] https://pubs.usgs.gov/of/2008/1210/

no reports have been posted since the 2015 report. We note that additional reports were made available during the public comment period at this website.[23]

The 2017 wildlife monitoring report for the GBP drainage reuse area (SJRIP) documented 50 avian species were observed at the drainage reuse area between April 13 and June 21, 2017. Eighteen species either were observed nesting or were suspected of nesting, including Swainson's hawk, a species listed by the State of California as a threatened. Twelve of the species observed—spotted sandpiper, least sandpiper, whimbrel, western wood-peewee, willow flycatcher, American pipit, savannah sparrow, White-crowned sparrow, common yellowthroat, yellow warbler, Wilson's warbler, and western tanager—were present only as spring Migrants.[24]

The draft Addendum notes that the filling of these stormwater detention basins will begin with the first significant storm (typically December), and basins will be emptied by May. So, the potential is that stormwater commingled with drainage water will be stored in basins for up to 6 months! If these basins will hold water longer than 30 days, a state water permit is required (CCR, Title 23, Sec, 657-658). As described in Skorupa et al (2004), low winter temperatures substantively increase the toxicity of dietary selenium to birds, fish, and mammals. And the SJRIP wildlife monitoring reports do document use of the drainage reuse area by a large number of avian species (50 in 2017), including twelve species that are spring migrants. We recommend, therefore, that effects of disposal of selenium in the SJRIP and stormwater detention basins consider the effects of winter stress to birds in an EIR/EIS analysis.

Expansion of the SJRIP Drainage Reuse Area--An Unpermitted Selenium Disposal Site Masquerading as a Treatment Facility.

The GBP Stormwater Plan Addendum includes a proposed expansion of the existing drainage reuse area from 6,100 acres analyzed in the 2009 EIR/EIS to 7,550 acres of reuse area and increase in acreage of 1,450 acres. A significant environmental concern at the SJRIP is ponding of seleniferous drainage water within the fields of the reuse area. The addendum includes mention of a contingency plan in the event of inadvertent flooding, but only a reference to the plan is included in the Addendum. It should be noted that bird use could increase in the vicinity of the SJRIP with the addition of drainwater detention basins.

Further, the 2017 SJRIP Wildlife Monitoring Report noted that the mitigation site for the SJRIP, which was supposed to provide compensation for avian exposure at the SJRIP, documented extremely elevated selenium concentrations in some bird eggs collected there. This suggests that the mitigation site is not providing compensation benefit for the SJRIP and also highlights the breadth of selenium contamination and wildlife exposure in this area. [25]

[23] http://www.summerseng.com/grasslandbypassproject.htm

[24] https://drive.google.com/file/d/1mudCtShFmoQ-RW0YJaVF2-oia2TIXqn5/view

[25] Ibid. page 20.

Table 5. Selenium Concentrations in Recurvirostrid Eggs from the Mitigation Site in 2017

ID Number	Field Number[1]	Date	Embryo[2] Condition	Embryo[2] Status	Embryo Age (days)	Selenium (ppm, dry wt)[3]	Log Base 10	Anti-Log
Black-Necked Stilt								
PM-01	MS-01	June 9	U	U	1	3.74	0.5729	
PM-02	MS-02	June 9	L	N	13	4.52	0.6551	
PM-03	MS-03	June 9	U	U	1	5.54	0.7435	
American Avocet								
PM-04	MA-01	June 9	L	N	9	51.1	1.7081	
PM-05	MA-02	June 9	U	U	1	8.7	0.9395	
Arithmetic/***geometric mean***						14.7	0.9238	***8.4***
Standard deviation						20.4	0.4591	***2.9***
Standard error							0.2053	***1.6***
Lower limit of 95% confidence interval							0.5214	***3.3***
Upper limit of 95% confidence interval							1.3263	***21.2***

[1] See Appendix H.

[2] L = live; N = normal; U = unknown.

[3] ppm, dry wt = parts per million dry weight.

Treatment Methods Have Not Operated Effectively.

The 2009 EIR/EIS for the GBP included treatment as a significant component of the plan to reduce selenium in discharges to the San Luis Drain. What is the status of the treatment plant? The 2009 GBP EIR/EIS included a bio-treatment plant to reduce the selenium load being discharged, and to achieve the zero discharge of subsurface agricultural drainage after 2019. There is no mention of treatment in the GBP Stormwater Plan. More than thirty million dollars has been invested in a demonstration treatment plant that still is not functioning and where a federal audit found questionable expenditures.[26]

Long term viability and legality of GBP Drainers' Proposed Actions.

Given that the latest plan for adding the discharge polluted storm water is a 15-year program, it raises questions regarding the long-term viability of the actions proposed in the GBP Stormwater Plan. The 2009 EIR/EIS relied on unproven treatment technologies to treat and reduce the volume of drainage from the GBP that would need to be disposed of. These treatment technologies have yet to prove reliable or cost effective. Without treatment, how will drainage volumes and selenium loads be managed at the SJRIP? Can the SJRIP remain viable after 15

[26] https://www.doioig.gov/reports/bureau-reclamation%E2%80%99s-cooperative-agreement-no-r16ac00087-panoche-drainage-district

additional years of irrigation with selenium and salt-laden drainage? What is the life of the reuse area before too much salt accumulation prevents future agricultural use? Where is the selenium and salt that is accumulated in the SJRIP ultimately disposed of? All of these questions need to be evaluated in a full EIR/EIS. Dubbed a treatment area, the SJRIP is looking more and more like an unpermitted selenium and salt disposal facility.

Reuse of polluted drainage in the GBP's SJRIP drainage reuse area won't eliminate the loading of wastes. It is simply stockpiling wastes on land. The continued recycling of agricultural drainage 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.

Land Retirement should be considered as a viable alternative.

Our organizations have previously submitted comments to the Regional Water Board about the success of land retirement in relation to the GBP's drainage volume load reductions.[27] The USBR's 2004 Broadview Water Contract Assignment Draft Environmental Assessment cites Summer's Engineering as predicting a load reduction of 17,000 tons of salt, 1,500 pounds of selenium, and 52,000 pounds of boron to the San Joaquin River each year from the cessation of irrigation on 9,200 acres of agricultural land in Broadview Water District as per Table 4-1 below (USBR 2004). This amounts to a per acre reduction of 0.28 AF of drainage, 1.85 tons of salt, 0.16 pounds of selenium and 5.65 pounds of boron.

TABLE 4-1
DRAINAGE AND WATER QUALITY EFFECTS OF PROPOSED ACTION ON THE SAN JOAQUIN RIVER

	Existing Conditions	Under Proposed Action Conditions	Estimated Reduction Attributable to Proposed Action
BWD Drainage to San Joaquin River (afy)	3,700	1,100	2,600
BWD Estimated Salt Production (tons/yr)	24,300	7,300	17,000
BWD Estimated Selenium Production (lbs/yr)	2,140	640	1,500
BWD Estimated Boron Production (lbs/yr)	74,000	22,000	52,000

Source: Summers Engineering, 2003

Land retirement likely accounted for most of the reductions in selenium, and the majority of reductions in drainage volume, boron and salt claimed by the Grasslands Bypass Project in the 2009 EIR/EIS.

[27] See Coalition letter to CVRWQCB on Selenium Basin Plan Amendment, April 26, 2010, p 15-16; http://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/grasslands_bpa_coalition_ltr.pdf and Coalition letter to Karl Longley on Land Retirement Benefits to Grasslands Bypass Project and Draft Waste Discharge Requirements: http://calsport.org/news/wp-content/uploads/Coalition-response-letter-to-Longley-re-gbp-land-retirement.pdf

The US EPA, in a letter regarding the Bay Delta Conservation Plan,[28] strongly recommended the USBR's Land Retirement Program be revived to save water and prevent further selenium contamination and impacts to endangered species (page 13):

> ***Recommendations:*** *To mitigate for the project's impacts to selenium levels in the estuary as a result of the BDCP operations, consider reviving and funding the Bureau of Reclamation's Land Retirement Program[17] to remove from cultivation and irrigation large areas of selenium laden lands on the West side of the San Joaquin Valley. This would save irrigation water, reduce discharges of selenium into the San Joaquin River basin, and advance attainment of selenium reduction targets[18] set by EPA and the Central Valley Regional Water Quality Control Board. Evaluate the extent to which restoration of these "retired" lands to the native plant community could also contribute to the recovery of threatened and endangered plants and animals listed by FWS. Consider analyzing the cost/benefit of implementing treatment technologies vs. land retirement. Although cost/benefit analyses are not required under NEPA, such an analysis may be useful to decision makers and the public in this case."*

Further, the USBR's the San Luis Drainage Feature Re-Evaluation (SLDFRE) Final EIS in 2006 found that land retirement was the most cost-effective solution to managing drainage in the San Luis Unit. Three land alternatives were evaluated in the SLDFRE EIS, 306,000 acres, 194,000 acres and 100,000 acres respectively. The Final EIS found that the only environmentally and economically preferred alternative was to retire 306,000 acres (In-Valley/Drainage Impaired Area Land Retirement).[29] It's clear from the NED findings in Table N-10 below that additional land retirement would provide increased net economic benefits.

Table N-10
Benefit/Cost Summary
Changes Relative to the No Action Alternative ($/year in 2050)

Subarea	In-Valley Disposal	Out-of-Valley Disposal	In-Valley/ Groundwater Quality Land Retirement	In-Valley/ Water Needs Land Retirement	In-Valley/ Drainage-Impaired Area Land Retirement
Total NED Benefit	$37,962,000	$38,430,000	$31,164,000	$20,629,000	$9,931,000
Total NED Cost	51,225,000	51,370,000	46,767,000	30,778,000	6,288,000
Net NED Benefit	**-$13,263,000**	**-$12,940,000**	**-$15,603,000**	**-$10,149,000**	**$3,643,000**

Notes:
Values represent net NED benefits relative to No Action.
Values rounded to nearest $1,000. Totals may not add due to rounding.

Moreover, the US Fish and Wildlife Service, in their Fish and Wildlife Coordination Act Report (FWCAR) for SLDFRE, recommended that all of the northerly area within the San Luis Unit (GBP Drainage Area) be retired as well,[30] but USBR did not consider that alternative. The

[28] http://calsport.org/news/wp-content/uploads/bay-delta-conservation-plan-deis.pdf

[29] SLDFRE Final EIS, Appendix N, Table N-10, page N-17, accessed at https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=2240

[30] SLDFRE Final EIS, Appendix M, USFWS FWCAR accessed at https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=2236

Service concluded on page 67 of the FWCAR, "*To avoid and minimize risks and effects to fish and wildlife resources in the San Joaquin Valley and Pacific Flyway, the Service recommends land retirement on all drainage impaired lands in the SLU. This approach would maximize the elimination of drainage at its source, and therefore avoidance of adverse fish and wildlife effects*."

By ignoring permanent land retirement, the GBP Stormwater Plan Addendum will continue to kick the can down the road and concentrate and store salt, selenium, boron and other toxic substances in the shallow aquifers of the Grasslands area. This creates an ongoing risk of toxic selenium discharges to wetland water supply channels, Mud Slough, the San Joaquin River and the Bay-Delta estuary, especially in wetter years.

Conclusion

We urge all polluted discharges of agricultural drainwater and stormwater cease as required under the current federal Use Agreement and Water Board WDR. We recommend land retirement and curtailing the importation of additional water supplies that mobilizes these contaminants on the west side of the Southern San Joaquin Valley. Despite repeated promises, no viable treatment has been developed in the more than two decades of myriad attempts. Before proceeding to load even more contaminants on downstream beneficial uses, we recommend no new use agreement be granted and before any further discharges of either stormwater, agricultural drainage or contaminated groundwater are permitted, that a full EIS/EIR be completed. Before the proposed drainers' GBP Stormwater Plan is considered, a complete environmental analysis is needed. The EIS/EIR should include:

- A National Pollutant Discharge System Permit prior to any additional use of the federal San Luis drain for discharge of contaminants from the west side into the San Joaquin River and Delta Estuary;
- A comprehensive cumulative effects analysis of stormwater and drainage disposal into Mud Slough and the San Joaquin River and Delta Estuary;
- A chronic, legally binding selenium objective of no greater than 2 µg/L (4-day average) is established for receiving waters of stormwater/drainage discharges;
- No exceedance of the 2 µg/L selenium water criterion which if exceeded should trigger all discharges to cease and additional biological monitoring to determine if the tissue criteria for selenium proposed by USEPA in November 2018 has also been exceeded;
- An analysis of effects of disposal of selenium in the SJRIP and stormwater detention basins to wildlife including factors such as winter stress;
- A description of the status and viability of drainage treatment at the SJRIP;
- A description and evaluation of the long-term viability of drainage disposal strategies at the SJRIP and describe where is the salt, selenium and other contaminants that accumulate are ultimately disposed. This should not become an unregulated dumping ground for west side contaminants.

Finally, Congress in its authorization of the San Luis Unit in 1960, never envisioned use of the San Luis Drain for stormwater discharge. As stated Congress provided a under specified

conditions including approval by the State of California[31] for "…*provision for constructing the San Luis interceptor drain to the Delta designed to meet the drainage requirements of the San Luis unit…", Senate Report No 154, page 2, San Luis Unit, Central Valley Project, California, April 8, 1959.*[32] This brings into question whether the "Drain" can be legally used for storm water discharge without Congressional approval.

The use of the federal San Luis Drain for stormwater also raises consistency questions with existing State Board orders. The California State Water Resources Control Board (SWRCB), following the Kesterson debacle, issued its Order WQ 85-1 in February 1985. The SWRCB found that agricultural drainage and wastewater reaching Kesterson Reservoir "is creating and threatening to create conditions of pollution and nuisance" (Emphasis added). The Order then warned "If the Bureau closes Kesterson Reservoir and continues to supply irrigation water to Westlands Water District without implementing an adequate disposal option, continued irrigation in the affected area of Westlands Water District could constitute an *unreasonable use of water*" (Emphasis added). We urge the project proponents and State and Federal permitting agencies to not repeat the mistakes made at Kesterson Reservoir in the 1980's. The continued irrigation of these toxic soils constitutes an unreasonable use of water and continued and future disposal of agricultural drainage in ponds, land, and in surface waters will cause significant harm to public trust resources and violates non-degradation policies.

Thank you for your consideration,

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[31] See PL86-488 San Luis Act June 3, 1960: Proviso: *(2) received satisfactory assurance from the State of California that it will make provision for a master drainage outlet and disposal channel for the San Joaquin Valley, ...which will adequately serve, by connection therewith, the drainage system for the San Luis unit or has made provision for constructing the San Luis interceptor drain to the delta designed to meet the drainage requirements of the San Luis unit as generally outlined in the report of the Department of the Interior, entitled "San Luis Unit, Central Valley Project," dated December 17, 1956.* The State of California has not made such a provision and Congress never consider the use of the drain for stormwater.

[32] See H. Rpt 399...http://calsport.org/news/wp-content/uploads/Exhibit-3.pdf
S. Rpt 154...http://calsport.org/news/wp-content/uploads/Exhibit-4.pdf

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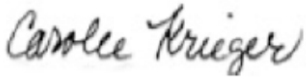

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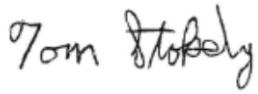

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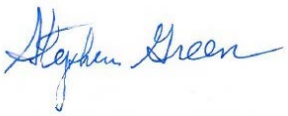

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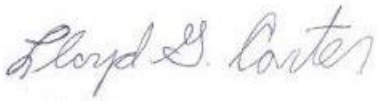

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