



## AQUALLIANCE

DEFENDING NORTHERN CALIFORNIA WATERS

September 22, 2010

Jeanine Townsend  
Clerk to the Board  
State Water Resources Control Board  
1001 I Street,  
Sacramento, CA 95814

E-mail <[commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov)>

Subject: Comment letter—San Joaquin River Selenium Control Plan Basin Plan  
Amendment

Dear Ms. Townsend:

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

The California Water Impact Network (C-WIN), the California Sportfishing Protection Alliance (CSPA), AquAlliance and others submitted extensive written and oral comments to the Central Valley Regional Water Quality Control Board for the hearing on May 27, 2010 and to the lead agencies for the EIS/EIR which we incorporate by reference.<sup>1</sup> The vast majority of our comments were either ignored completely, or insufficient responses were given by Regional Board staff. We also incorporate by reference the comments of Felix Smith dated September 8, 2010 and the comments from the coalition that includes the Pacific Coast Federation of Fishermen's Associations, Planning and Conservation League, Friends of the River, Friends of Trinity River, North Coast Rivers Alliance, Southern California Watershed Alliance and Sierra Club California dated September 22, 2010.

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<sup>1</sup> C-WIN/CSPA Comments on the GBP EIS/R are incorporated by reference and available at <http://www.c-win.org/poisoned-lands-and-grasslands-bypass-project.html>

**We recommend that the State Water Resources Control Board reject the proposed Basin Plan Amendment.** This letter identifies the issue areas in which we believe the Regional Board inadequately or incorrectly addressed our comments, both orally and in writing as follows:

- ❖ Consistency of the Proposed Amendment with the Basin Plan
- ❖ Consistency of the Proposed Amendment with the California Toxics Rule
- ❖ CEQA Compliance
- ❖ CESA Compliance
- ❖ Recommendation to SWRCB for Cease and Desist Order
- ❖ Conflicts with San Joaquin River Restoration Program
- ❖ Migratory Bird Treaty Act
- ❖ Concentration and storage of selenium in aquifers
- ❖ Federal and State Anti-Degradation Policies
- ❖ Impacts to green sturgeon
- ❖ Violation of MUN water quality objectives at Hills Ferry

Instead, we recommend that the Basin Plan Amendment be sent back to the Regional Board with instructions to revise the amendment to a maximum 2-year extension, and to consider land retirement as the Best Practicable Treatment and Control option in the CEQA Functional Equivalency Document, along with additional biological monitoring, completion of a watershed sediment/selenium reduction program to reduce upslope selenium inputs during storm events and an adaptive management strategy developed by all stakeholders.

We also request that the State Water Resources Control Board issue a cease and desist order (CDO) of surface water deliveries for irrigation of the Grasslands area and lands draining to the Grasslands area based on the technical and economic infeasibility of irrigating drainage problem lands in the Grasslands Drainage Area and the larger San Luis Unit of the CVP. In the CDO, we also recommend that the State Board make findings of wasteful and unreasonable use of water pursuant to Water Code Section 100 and violation of the Public Trust, similar to those in State Water Resources Control Board Order WQ 85-1 which concluded that agricultural drainage from portions of the San Luis Unit of the CVP was creating and threatening to create conditions of pollution and nuisance, and the continued irrigation of affected lands could constitute an unreasonable use of water.

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

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

Our specific comments on each point of contention with the Regional Board's responses, or lack thereof, to comments and issues are attached.

Respectfully submitted,



Carolee Krieger, President  
California Water Impact Network



Bill Jennings  
Chairman Executive Director  
California Sportfishing Protection Alliance



Executive Director  
AquAlliance

cc: Ken Salazar, Interior Secretary  
David Hayes, Deputy Interior Secretary  
Don Glaser, BOR Regional Director  
Rod McGinnis, NMFS  
Ren Lohofener, USFWS  
Dan Nelson, San Luis Delta-Mendota Water Authority  
Alexis Strauss, USEPA  
Charles Hoppin, Chairman SWRCB  
Kate Hart, Chairman CVRWQCB  
Lester Snow, Resources Secretary  
John McCamman, Department of Fish and Game  
Mark Cowin, Department of Water Resources  
Mark Madison, City of Stockton  
Interested parties

## **SPECIFIC COMMENTS ON THE PROPOSED BASIN PLAN AMENDMENT**

### **1. CONSISTENCY OF THE PROPOSED AMENDMENT WITH THE BASIN PLAN**

Tom Stokely of C-WIN testified at the May 27 Regional Board hearing that the Basin Plan Amendment to extend a 14 year waiver to meet the 5 ppb selenium water quality objective for another 9-plus-years and 3 months for a total of almost a quarter of a century is inconsistent with several Basin Plan policies.

Chapter 3 of the Basin plan on pages III—1.00 and III- 2.00 contains SEVEN IMPORTANT POINTS THAT APPLY TO WATER QUALITY OBJECTIVES.

#### **A. Important Point 4 on page III-2.00 states as follows:**

*“Where the Regional Water Board determines it is infeasible for a discharger to comply immediately with such objectives or criteria, compliance shall be achieved in the shortest practicable period of time (determined by the Regional Water Board), not to exceed ten years after the adoption of applicable objectives or criteria.”*

A cumulative 24-year, 9-month waiver does not meet the criteria in Basin Plan Important Point No 4.

**Staff and board response at hearing**—no response.

**Discussion**— Considering the significant challenges of agricultural water use and water quality in the Grasslands area, we agree that immediate implementation of the Basin Plan selenium objectives would not be in the best interests of the public. However, an additional delay of 9 years and 3 months after 14 years of delay is simply too long, and it defers dealing with the real issue of adding clean water to poison land. We believe our proposal to send the proposed Amendment back to the Regional Board for revision for a maximum 2 year extension is reasonable and more consistent with State Board policies. There are clearly other alternatives that could have been selected besides No Action and a 9 year 3 month renewal alternative. Two years would allow the major stakeholders, including commenting environmental, fishing and conservation groups, the Grasslands Drainers, the Bureau of Reclamation, U.S. Fish and Wildlife Service and others to initiate and pursue alternative adaptive management strategies.

**B. Important Point No. 2 states as follows:** *“that achievement of the objectives depends on applying them to controllable water quality factors. Controllable water quality factors are those actions, conditions or circumstances resulting from human activities that may influence the quality of the waters of the State, that are subject to the authority of the State Water board or the Regional Water Board, and that may be reasonably controlled. Controllable factors are not allowed to cause further degradation of water quality in instances where uncontrollable factors have already resulted in water quality objectives being exceeded. The Regional Water board*

*recognizes that man made changes that alter flow regimes can affect water quality and impact beneficial uses.”*

The Staff report does not recognize the fact that delivery of clean water to poison ground is the source of these problems.

**Staff and board response at hearing**—no response.

**Discussion**—The written staff response to our comment that land retirement is the answer to these problems is that it is outside the purview of the Regional Board (see CEQA discussion below). However, it is clearly within the Regional Board’s purview to make a recommendation to the State Board to consider the effect of water deliveries to this poisonous land and its effect on water quality. No such recommendation was discussed or considered by the Regional Board or its staff.

**C. Important Point 1 states in relation to water quality objectives:**

*“Better enforcement of the water quality objectives or adoption of certain policies or redirection of staff and resources may also be proper responses to water quality problems.”*

**Staff response at hearing and in written response to comments**—It would be too much work to regulate 100+ dischargers.

**Discussion**—The staff and Regional Board could have considered reallocating resources to deal with 100+ discharges, but did not even consider it. They just gave up.

**D. Tom Stokely of C-WIN also stated at the 5/27 hearing that the Basin Plan needs to be updated to reflect current costs of cleaning up these selenium discharges.** The Basin Plan contains a 1990 cost estimate for the San Joaquin River Subsurface Agricultural Drainage Control Program. The San Luis Drainage Feature Re-Evaluation contains extensive cost estimates that should be reviewed for an update of Page IV-38.00 of the Basin Plan. The Basin Plan estimates it will cost \$3.6 million/year to \$27.4 million/year to meet selenium objectives in the San Joaquin River. The Preferred Alternative selected in Reclamation’s Record of Decision, which includes the Grasslands area and portions of Westlands which drain subsurface water to the Grasslands and potentially the San Joaquin River will cost nearly \$50 million/year.<sup>2</sup>

Approximately \$60 million of the \$100 million spent so far on the Grasslands Bypass Project were public funds, equating to a public subsidy. Additional state bond act funding is anticipated, resulting in an anticipated increase in subsidies. Furthermore, the Bureau of Reclamation has indicated that its Record of Decision for the San Luis Drainage Feature Re-Evaluation, which

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<sup>2</sup> San Luis Drainage Feature Re-Evaluation Final EIS, Bureau of Reclamation, page 2-34, Table 2.5-3.  
<http://www.usbr.gov/mp/sccaosld/docs/index.html>

includes the Grasslands Bypass Project, is infeasible for cost reasons.<sup>3</sup> Therefore, the project is not cost effective.

**Staff and board response at hearing**—Staff stated orally and in the Response to Comments Document (R10-C) that the basin plan cost estimates are fine. There was no response on cost effectiveness except to state in the FED that the recommended alternative maintains farm profits.

**Discussion**—The Basin Plan is outdated and should be amended. The excessive costs compared to benefits makes continued irrigation of these lands infeasible.

**2. The proposed Basin Plan Amendment is not consistent with the California Toxics Rule.**

The California Toxics Rule (CTR) promulgated by USEPA in May 2000 contains a maximum 10-year time limit on compliance schedules.<sup>4</sup> The maximum time that the CTR allows for a compliance schedule is ten years after the adoption of the final rule, regardless of how many years after the final rule the first permit renewal occurred.

**Discussion**—Approval of the proposed Basin Plan Amendment would be in violation of the CTR by extending the compliance schedule to a total of 24 years and 3 months, well beyond the 10 years allowed in the CTR.

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

**A.** We stated in our letter to the Regional Board that the Purpose and Need Statement for the Final Environmental Impact Statement and Report (EIS/EIR) for the Grasslands Bypass Project 2010-2019 “*To facilitate drainage management that maintains the viability of agriculture in the Project Area and promotes continuous improvement in water quality in the San Joaquin River*” was unduly narrow for the Regional Board and State Board to consider the proposed Basin Plan Amendments because it favors continued agriculture in the Grasslands area over other beneficial uses of water. As Judge Racanelli stated in *United States v. State Water Resources Control Board*, water quality planning (of which basin plan amendments are a kind) is about identifying and protecting beneficial uses, not protecting water rights or contractual water services. The range of alternatives in the EIS/EIR and FED analyzed was not reasonable because neither the lead agencies nor the Regional Board in the Draft Staff Report considered the possibility of land retirement as a permanent solution to selenium tainted drainage. In focusing

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<sup>3</sup> See letter from Commissioner of Reclamation Mike Connor to Senator Dianne Feinstein, 9/1/10, [http://www.c-win.org/webfm\\_send/120](http://www.c-win.org/webfm_send/120), accessed 9/21/2010.

<sup>4</sup> See page 34, <http://www.epa.gov/fedrgstr/EPA-WATER/2000/May/Day-18/w11106.htm>. Accessed 9/19/10.

on keeping agriculture in business in this area is to ignore the Board's mandate to protect all beneficial uses of water. Alternatives which would consider less time than 9 years, 3 months, land retirement, rotational fallowing until a treatment plant comes on line, dry land farming of biofuels such as camelina that the Navy could use at the Lemoore Naval Air Station in Westlands, conversion of cultivated lands to solar farms, and Integrated Farm Drainage Management (IFDM) were not considered because the Purpose and Need Statement was inherently the continuation of status quo agriculture in the Project Area, at the expense of water quality and other beneficial uses.

**Staff and board response**— The Response to comments document (response R1a-C) stated that the Final EIS/EIR has been certified and is not subject to Board action. It also stated that the Regional Board cannot mandate land retirement. It went on further to state that the No Action Alternative will result in rising groundwater and forcible retirement of land. Those statements were reiterated by Regional Board staff at the 5/27 public hearing.

**Discussion**—The Regional Board cannot mandate land retirement or other alternatives, but it has a responsibility under CEQA to consider feasible alternatives and mitigation measures in the Functional Equivalency Document (FED). As stated numerous times by C-WIN, CSPA and AquAlliance in writing and at the 5/27 public hearing, land retirement from irrigation is the only solution that have been proven to reduce the amount of toxic drainage created and to reduce groundwater levels.<sup>5</sup> Neither the EIS/EIR nor the FED prepared by Regional Board staff considered land retirement as an alternative. The No Action Alternative in the EIS/EIR predicted that additional land would be salinized and taken out of production compared to the Action Alternatives, but it was not an inherent part of the alternative, it was an environmental consequence of the alternative.

Furthermore, while it's true that the EIS/EIR has already been approved by Reclamation and the San Luis Delta Mendota Water Authority, the Regional Board apparently relied on that document and its Functional Equivalency Document for compliance with CEQA. The purpose and need statement as well as the alternatives were unduly narrow to comply with CEQA. Therefore, the process is not in compliance with CEQA.

We recommend that the State Water Resources Control Board reject the proposed Basin Plan Amendment and send it back to the Regional Board with instructions to revise the Purpose and Need Statement, consider an alternative with less time than 9 years 3 months, and consider land retirement in some form as part of an action alternative.

**B. The No Action Alternative is not accurately portrayed in the EIS/EIR and the FED.** We commented in writing and Tom Stokely commented orally at the 5/27 Regional Board hearing that the No Action Alternative is mischaracterized as a doomsday alternative that would

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<sup>5</sup> USGS Professional Paper 1210: "*Land retirement is a key strategy to reduce drainage because it can effectively reduce drainage to zero if all drainage-impaired lands are retired.*" <http://pubs.usgs.gov/of/2008/1210/>, accessed 9/21/2010.

result in disbanding of the regional drainage efforts, massive selenium contamination of the wetlands, the San Joaquin River and rising groundwater.

**Staff and board response**— Response to comments R1b-C and R1d-C reiterate the doomsday scenario that the regional drainage entity would disband, that water quality degradation would ensue and WDR's on individual dischargers would take years to enforce.

**Discussion**—The proposed Basin Plan Amendment is NOT a vote by the Regional Board or the State Board to continue with or without the drainage entity. It is highly likely that the Grasslands Area Farmers (GAF) would continue to work cooperatively to solve their drainage problems as part of the larger Westside Regional Drainage Management Plan. The inability to discharge selenium contaminated drainage water in excess of Basin Plan water quality objectives means that the GAF would find other ways to deal with their problem such as increased use and size of the San Joaquin River Improvement Project (reuse area). Ultimately, the Regional Board would have to take enforcement actions against the drainers. The proposed Basin Plan Amendment appears to be a rationale for the Regional Board to avoid doing its job, to avoid using its authority appropriately. Comments by USEPA and others agree with us that the No Action Alternative is inappropriately characterized.

**C. The cumulative impacts analysis in the FED and EIS/EIR should have considered and analyzed the impacts of this project on restoration of salmon in the San Joaquin River, as well as the cumulative impacts of groundwater pumping.** We commented in writing and orally by Tom Stokely at the 5/27 Regional Board hearing that the CEQA documentation did not fully consider impacts to restore salmon in the San Joaquin River, nor did it consider the impacts of groundwater pumping in the region on water quality. C-WIN provided documentation from Dr. Dennis Lemly, research biologist and expert on selenium, that the continued selenium discharges into the San Joaquin River would kill up to 50% of the juvenile salmon and steelhead.<sup>6</sup> Comments by the U.S. Fish and Wildlife Service on the EIS/EIR noted that Reclamation mischaracterized selenium impacts on salmonids in the San Joaquin River.<sup>7</sup> USFWS stated in their comments to the Regional Board that “...*the revised compliance schedule...is not protective of salmonids and could result in the loss or harm to outmigrating young salmon on the San Joaquin River.*”

**Staff and board response**—Response to comment R3-USFWS stated that “*the information on impacts to salmonids was considered in drafting the staff report.*” Response to comment R11-C stated that “*groundwater pumping, water transfers and land use decisions are outside the scope of the proposed Amendments.*”

**Discussion**—Regardless of authority, the Regional Board has an obligation under CEQA to disclose probable environmental impacts to water quality, fish, wildlife and other resources, as

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<sup>6</sup> [http://www.c-win.org/webfm\\_send/9](http://www.c-win.org/webfm_send/9), accessed 9/19/10.

<sup>7</sup> [http://www.waterboards.ca.gov/centralvalley/water\\_issues/grassland\\_bypass/usfws\\_att\\_e.pdf](http://www.waterboards.ca.gov/centralvalley/water_issues/grassland_bypass/usfws_att_e.pdf), accessed 9/19/10



well as cumulative impacts from other reasonably foreseeable actions. There was no disclosure in the FED regarding potential impacts to and conflicts with the San Joaquin River Restoration Program and the likely mortality of salmonids, nor was there disclosure that regional groundwater pumping efforts may be degrading water quality and increasing biological exposure to selenium.

**D. There is a deferred mitigation violation in the EIS/EIR and FED for water supply to state and federal refuges.** We commented in writing and Tom Stokely stated at the 5/27 Regional Board hearing that the mitigation well water supply for loss of Mud Slough habitat was not completed and that there is no mitigation monitoring requirement that the well meet the 2 µg/l Basin Plan objective for wetland water supplies.

**Staff and board response**—Comment R12-C stated that there is clean groundwater in the area and that the water supplied will have to comply with the 2 µg/l objective.

**Discussion**— The response did not address the fact that there is no mitigation monitoring requirement to ensure that the 2 µg/l objective is met. The response did not provide specific information regarding the water quality of the proposed well either—it just asserted that it would be fine without providing evidence. A more suitable and reliable source of water would be water from the Delta provided by the Exchange Contractors.

**E. The EIS/EIR and FED fail to identify a flood control plan for the upper watershed as a potential mitigation measure.** Our written comments and those of the USFWS stated that a significant amount of selenium is discharged during storm events and that a key to meeting water quality objectives is to control those discharges.

**Staff and board response**—Response to comment R15-C stated that this issue is outside the scope of the proposed amendments, but that such a plan was to be addressed in the Use Agreement.

**Discussion**—The Regional Board has an obligation under CEQA to identify feasible alternatives and mitigation measures. Clearly an upslope watershed program that reduces selenium inputs into the Grasslands area would greatly improve the possibility that Basin Plan water quality objectives for selenium will be met. Prohibitions on cultivation of floodplains, limitations on Off-Highway Vehicle use, grazing and other land-disturbing activities would be key components of a plan to reduce significant upslope seleniferous sediment discharges.

**F. The Regional Board's Functional Equivalency Document fails to adequately describe and analyze the impacts from a reverse osmosis treatment facility.** The FED mentions only the energy impacts of a reverse osmosis facility to treat contaminated drainage. However, the entire success of this project to meet water quality objectives relies on a treatment facility that is admittedly not technically feasible, funded or designed. The FED should include a more robust description of the facility, its cost to build and operate, and at least range of estimated impacts including, but not limited to energy usage and global warming impacts.

4. **There is no attempt to achieve compliance in the proposed project's design with the California Endangered Species Act (CESA) for the Delta Smelt, Giant Garter Snake, Swainson's Hawk, San Joaquin Kit Fox, spring run Chinook and other state-listed species for the Proposed Action.** We commented in writing and Tom Stokely stated orally at the 5/27 Regional Board hearing that there is no information in the record that the project proponents have done anything other than coordinate with the Department of Fish and Game's (DFG) Wildlife Refuge unit. However, there has not been issuance of a CESA incidental take permit or consistency determination by DFG, as required by law. Coordination should not be confused with attaining protection and recovery of endangered species.

**Staff and board response**—Written response R3-C restates that DFG has had ample opportunity for input. It does not address the lack of CESA documentation for the proposed Basin Plan Amendment. During the 5/27 Regional Board hearing, Ms. Wadhvani of the Regional Board staff responded that there were no impacts to listed species and therefore no consultation with DFG was required.

**Discussion**—The fact that there was consultation with the National Marine Fisheries Service and a Biological Opinion from the U.S. Fish and Wildlife Service indicates that there is a potential for impacts to state listed species. There is a specific process in Fish and Game Code 2080.1 where a federal biological opinion can be used to satisfy CESA requirements. No such consistency determination by the Department of Fish and Game has been issued. The proposed Amendment cannot be approved until CESA has been complied with.

5. **Recommendation to SWRCB for Cease and Desist Order for delivery of irrigation water to toxic lands.** We commented in writing and Tom Stokely stated orally at the 5/27 Regional Board hearing that since the cause of the problem of subsurface agricultural drainage is application of irrigation water, the Regional Board should make a recommendation to the State Board to issue a Cease and Desist Order for delivery of water to these lands.

**Staff and board response**—The delivery of water is outside of the purview of the Regional Board.

**Discussion**—As discussed in Important Point Number Two in item 1 above, Basin Plan policy states that "*achievement of the objectives depends on applying them to controllable water quality factors.*" Clearly, the application of surface water to toxic lands is a controllable factor. The Regional Board has the authority and obligation to make recommendations to the State Board when water rights affect water quality. The Regional Board has not done so and did not address the issue adequately.

6. **The proposed Basin Plan Amendment conflicts with the San Joaquin River Restoration Program.** We commented in writing and orally by Tom Stokely at the 5/27

Regional Board hearing that there information in the record from both research biologist Dennis Lemly and the U.S. Fish and Wildlife Service (USFWS) that the continued selenium discharges into Mud Slough and the San Joaquin River could result in substantial mortality of salmon and steelhead.

**Staff and board response**—Response to comment R3-USFWS stated that “*the information on impacts to salmonids was considered in drafting the staff report.*”

**Discussion**—There is no discussion in the FED or the Staff Report on the potential for significant impacts to salmon restoration in the San Joaquin River. There is no discussion of the scientific disagreement between Reclamation and USFWS regarding impacts to salmonids. The concurrence memo to Reclamation from the National Marine Fisheries Service does not absolve the Regional Board from disclosing potential scientific disagreements regarding the biological impacts to a major federal salmon restoration program on the San Joaquin River.

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

**Staff and board response**—Response R7C stated that operation of the drainage reuse area is outside the scope of the proposed Amendments, but that the issue will be considered in issuance of Waste Discharge Requirements.

**Discussion**—The FED checklist should have identified that part of the project is potentially resulting in take of bird species protected by the Migratory Bird Treaty Act, including black necked stilts and American Avocets within the reuse area.

Other sources of selenium should have also been identified in the FED. Six sumps along the Delta-Mendota Canal discharge highly contaminated groundwater into the DMC, which supplies water to refuges and wetlands in Grasslands. The U.S. Fish and Wildlife Service’s Biological Opinion<sup>8</sup> also indicated that the Poso/Rice/Almond drain areas adjacent to the Grasslands area are discharging uncontrolled drainage water into areas such as the Agatha Canal, which periodically has extremely high selenium levels.

Additionally, a study by the U.S. Fish and Wildlife Service<sup>9</sup> identified that several bird species protected under the 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 MBTA. By allowing continued discharges of selenium in excess of Basin Plan

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<sup>8</sup> [http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc\\_ID=4826](http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826). Accessed 9/22/2010.

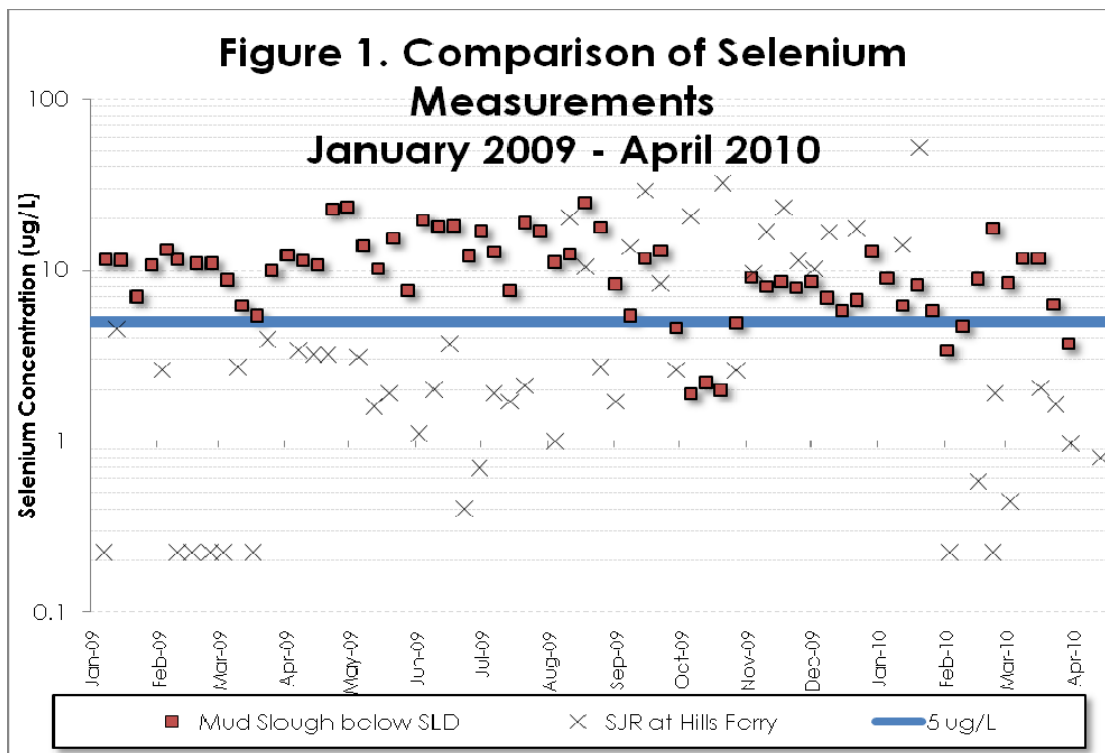
<sup>9</sup> [http://www.swrcb.ca.gov/rwqcb2/water\\_issues/programs/TMDLs/northsfbayselenium/Species\\_at\\_risk\\_FINAL.pdf](http://www.swrcb.ca.gov/rwqcb2/water_issues/programs/TMDLs/northsfbayselenium/Species_at_risk_FINAL.pdf), accessed 9/19/10.

objectives, there is downstream contamination and selenium bioaccumulation in the Bay-Delta which should be addressed in the FED and staff report. The staff report does not even acknowledge that over 40,000 acres in the Delta are listed as impaired by selenium and the San Joaquin River is a major source of that impairment. Furthermore, these discharges are contaminating navigable waterways in violation of the Commerce Clause of the U.S. Constitution (Article I, Section 8, Clause 3) and the Public Trust.

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

**Staff and board response**—Written response to comment R6a-C does not address selenium storage in aquifers, but states that continued participation by the discharges in CV-SALTS is important.

**Discussion**—Weekly samples taken at Site H (San Joaquin River at Hills Ferry) show selenium levels on January 19 and 20, 2010 higher than selenium in Mud Slough downstream of the San Luis Drain discharge (52 µg/l vs. 8.2 µg/l). This indicates that either there are unregulated discharges in that area, or that the regional aquifer has filled up with selenium-contaminated drainage water and is discharging to the river or Mud Slough. See Figure 1 below.



Source: U.S. Bureau of Reclamation

The staff report and FED fail to disclose adequately the risks of continuing to reuse and concentrate selenium contaminated agricultural runoff/drainage from these lands in regional aquifers, and that the Basin Plan Amendment provides a free ride to unregulated dischargers.

## **9. Inconsistency of Basin Plan Amendment with State and Federal Antidegradation Policies**

Both the federal government and the State of California have adopted antidegradation policies as part of their approach to protect water quality. The Selenium BPA is inconsistent with both of these regulations.

### **A. Federal Antidegradation Policy**

Federal antidegradation policy (40 CFR Section 131.12) states in part:

*(a) The State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:*

*(1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.*

*(2) Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.*

*(3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.*

The Regional Board Staff report (p. 25) acknowledges that the amendment will result in “temporary continuation of the potential impairment to warm freshwater habitat, spawning and wildlife habitat.” In fact the Board acknowledges that “with the amendments, water quality in

Mud Slough (north) will remain vulnerable to degradation for up to an additional nine years, three months beyond 1 October 2010.” (*Ibid.*)

The Regional Board argues that the amendment is consistent with federal antidegradation law because the degradation of state waters is justified. Specifically, the Board argues that the degradation is justified because it will improve water quality in the future. (Staff Report, *supra*, p. 25.) However, this circular argument fails to account for alternative actions which could be taken to benefit wildlife without first degrading state water. The Regional Board fails to support any contention that the amendment is necessary.

The Board also concludes that wildlife will degrade without the amendments because “the cooperative drainage management organization (GAF) could dissolve; and with it, the economic support for the regional drainage management system . . . ” (Staff Report, *supra*, p. 25.) The report continues to conjecture as to what difficulties might ensue if the GAF were to dissolve. *Ibid.* This argument is purely speculative. There is no firm basis for asserting that the GAF would dissolve without the amendments or any basis for asserting what would happen if the GAF were, in fact, to dissolve.

The Regional Board states that the “discharge of agricultural subsurface drainage on a controlled, limited basis . . . is allowable under the federal anti degradation policy because the permanent diversion . . . has long-term environmental benefits to the wildlife utilizing this portion of the Pacific Flyway and the Grasslands Ecological Area . . . ” (Staff Report, *supra*, p. 25.) Delta farmland, part of the Pacific Flyway, is an extremely important habitat for a wide range of birds and wildlife. International conservation programs, as well as local and regional forms of habitat designations and programs all recognized that these lands are an important part of the landscape used by these migratory birds. Give the land’s ecological significance, any degradation of water quality is prohibited under the federal antidegradation policy.

## B. State Antidegradation Policy

The Regional Board also argues that the amendment is a justified violation of state antidegradation laws. Antidegradation provisions of the State Water Resources Control Board Resolution No. 68-16 (“Statement of Policy with Respect to Maintaining High Quality Water in California”) states in part:

*“(1) Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.*

*“(2) Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing*

*high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.”*

The Regional Board argues that the amendment is consistent with the state antidegradation policy because water degradation will continue to occur with or without the amendment. (Staff Report, *supra*, p. 26.) Essentially this argument is based on the assumption that without the amendment no alternative actions will be taken. The argument also fails to acknowledge that regardless of what may or may not happen in the future, the amendment will worsen the present quality of the water which is inconsistent with State antidegradation policy.

The Regional Board argues that the “maximum benefit to the people of the State is best served by temporarily allowing water quality in Mud Slough (north) to be degraded in a controlled manner while full regional drainage management capability is developed.” The Regional Board has failed to show that the amendment will result in the *best practicable treatment* or control of the discharge necessary to *circumvent pollution* and ensure that the *highest water quality consistent with maximum benefit to the people* of the State will be maintained as required under State antidegradation policy. As a result, the Selenium BPA violates State antidegradation policy.

#### **10. Impacts to green sturgeon, a federally—listed threatened species are not disclosed.**

Green Sturgeon are extremely sensitive to selenium.<sup>10</sup> While there is no information about specific selenium levels in green sturgeon from the Delta, white sturgeon, which USFWS considers to be a representative surrogate species for the green sturgeon, have been the subject of detailed studies within the San Francisco Bay estuary. San Francisco Bay white sturgeon were found to have extremely high levels of selenium, in some cases exceeding the threshold of reproductive toxicity by up to seven times in adults and thirty five times in eggs.<sup>11</sup> The high bioaccumulation efficiency of Asian clams and their importance in the diet of white and green sturgeon ensures that any selenium reaching the estuary from upstream sources contributes to the exposure risk of green and white sturgeon.

Kaufman et al<sup>12</sup> determined that green sturgeon are more sensitive to selenium than white sturgeon, and that white sturgeon should NOT be used as surrogate species for green sturgeon. An article recently published in Science and the Total Environment<sup>13</sup> clearly documents the

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<sup>10</sup> [http://www.rcamnl.wr.usgs.gov/Selenium/Library\\_articles/Beckon\\_and\\_Maurer\\_Effects\\_of\\_Se\\_on\\_Listed\\_Species\\_SLD\\_2008.pdf](http://www.rcamnl.wr.usgs.gov/Selenium/Library_articles/Beckon_and_Maurer_Effects_of_Se_on_Listed_Species_SLD_2008.pdf), page 30, accessed 9/19/2010.

<sup>11</sup> Ibid, page 30.

<sup>12</sup> [http://198.31.87.66/sciconf\\_08/sciconf\\_abstract.shtml](http://198.31.87.66/sciconf_08/sciconf_abstract.shtml)

<sup>13</sup> “A proteomic analysis of green and white sturgeon larvae exposed to heat stress and selenium.” Frédéric Silvestre, Javier Linares-Casenave, Serge I. Doroshov, Dietmar Kültz. Published in Science in the Total Environment, 408 (2010) 3176–3188

sensitivity of green sturgeon to selenium. It strengthens the evidence that EPA's proposed criteria for selenium are not protective of green sturgeon. The article reports that selenium at the proposed EPA criterion concentration of 7.9 ug/g (maternal whole body dry wt.) would cause about 90% mortality of larvae that hatch from the eggs of green sturgeon. The study determined larval/egg LC05 of 3.07 µg/g and LC10 of 3.73 µg/g, which translates into maternal whole body LC05 of 1.93 µg/g and LC10 of 2.34 µg/g.

Observed levels of selenium in the Bay-Delta are likely to have an adverse effect on green sturgeon. The studies listed above show that green sturgeon is as sensitive as salmonids to selenium, except that green sturgeon are even more vulnerable because they eat clams, many of which bioaccumulate very high selenium levels that have not declined in recent years.

Given existing high levels of selenium in Bay-Delta white sturgeon and recent declines especially for green sturgeon, it's clear that selenium from the Grasslands Bypass Project has a very significant negative impact on green sturgeon.<sup>14</sup> The Regional Board failed to disclose this impact in the staff report and FED.

#### **11. The proposed Amendment contributes to violation of State Board Resolution No. 88-63, Sources of Drinking Water Policy.**

Resolution No. 88-63: Sources of Drinking Water Policy states that all waters of the state are to be protected as existing or potential sources of municipal and domestic supply water (MUN). The proposed Basin Plan amendments are inconsistent with this policy because they fail to protect a MUN beneficial use. The drinking water standard for selenium is 50 µg/l. This water quality objective was exceeded at Site H (Hills Ferry on the San Joaquin River) on January 20, 2010 (52 µg/l) and on November 6, 2007 (86.1 µg/l). Furthermore, in reviewing historical weekly monitoring data at Site H (October 1996 through March 2010), it appears that water quality in the San Joaquin River is already degrading, rather than improving. See Figure 2 below. Consider the following:

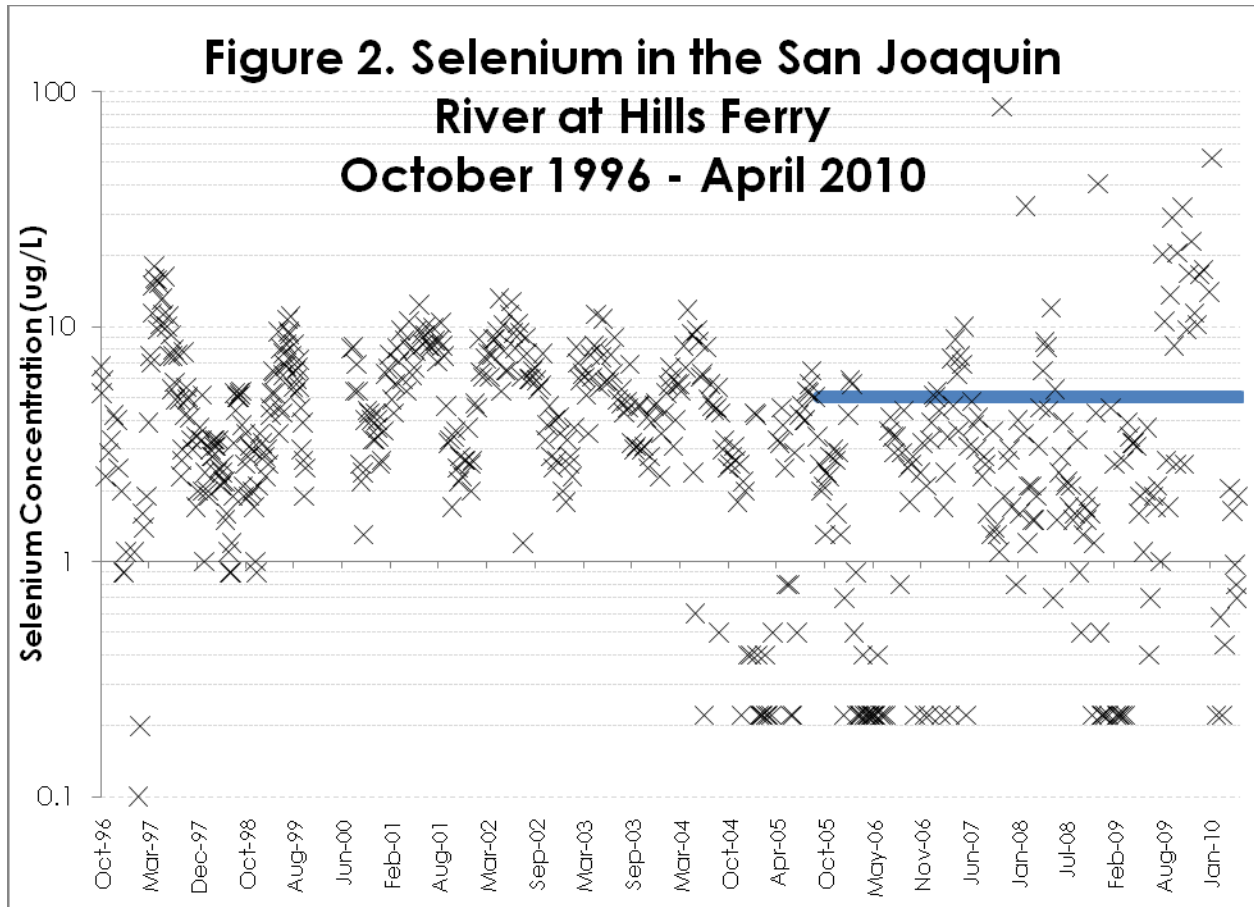
- ❖ The drinking water standard of 50 µg/l for selenium has been exceeded twice since 2007.
- ❖ Between August 11, 2009 and January 20, 2010, the average weekly selenium concentration at Hills Ferry was 15.77 µg/l.

There are either unregulated discharges into the San Joaquin River and Mud Slough, or selenium has concentrated in the regional aquifer and is discharging to surface waters. It is clear that drinking water is at further risk from the proposed Basin Plan Amendment.

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<sup>14</sup> [http://science.calwater.ca.gov/publications/sci\\_news\\_0309\\_sturgeon.html](http://science.calwater.ca.gov/publications/sci_news_0309_sturgeon.html)





Source: U.S. Bureau of Reclamation