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### CA Save Our Streams Council

NORTH  
COAST  
RIVERS  
ALLIANCE



November 26, 2013

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

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

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

As background, the GBP was originally authorized as a temporary project in the early 1990s to discharge selenium, boron, salts and other pollutants from the San Joaquin Valley, via the federal San Luis Drain. The GBP was pitched as innovative, but there is nothing innovative about collecting pollutants in the San Luis Drain and discharging them to the nation's waterways. The promised treatment solution has yet to become a reality.<sup>2</sup> Now, more than twenty years later, the GBP is still discharging toxic pollutants. Longtime residents of California and USFWS scientists recall the 1984 pictures of birds with twisted beaks, deformed heads and the limp, dead chicks of migratory waterfowl caused by high levels of selenium accumulating in refuges. These birds died by the thousands in Kesterson National Wildlife Refuge near Los Banos – one of the state's worst wildlife disasters.

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

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

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

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

1. Reinitiate USFWS and NMFS consultation under the Endangered Species Act for sturgeon, salmon, steelhead, and Giant Garter Snake, and ensure that all monitoring data is made available to these scientists for review. Make NMFS part of the oversight and review committee for the project.
2. Require greater outreach and public health warnings and culturally-appropriate educational materials to anglers of color whose fish consumption is higher and where customs include taking fish home at a higher rate, fishing more frequently, and sharing their fish with friends and family. "Do not consume fish" public health warnings in English<sup>6</sup> and posting selenium levels with GBP drainer interpreted data is not sufficient to protect people of color, especially those with limited English or internet access from the elevated public health risks.
3. Pursuant to DOI's Scientific Integrity Policy and the Federal Data Quality Act,<sup>7</sup> withdraw the existing Record of Decision (ROD) and adopt a policy decision that is consistent with available data and mitigation promises, and which contains enforcement measures and consequences sufficient to ensure conditions contained in the biological opinions are implemented. Such action will go a long way to restore public trust in DOI's decision making and promises.
4. Pursuant to the 2010 DOI Information Quality Mission<sup>8</sup> and the DOI & OMB Peer Review policy,<sup>9</sup> require that the proposed RMP is peer reviewed to ensure that selenium water quality monitoring data is sufficient to measure the 4-day average Clean Water Act requirements at the point of discharge to the San Joaquin River, sufficient data is collected to meet USGS modeling protocols to determine fate and transport of selenium including the Delta-Estuary, and, as requested by USFWS, sufficient biological monitoring occurs in the San Luis Drain Sediment and at the valley treatment and reuse site to confirm that selenium is not accumulating in wildlife to levels of concern.

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

We look forward to hearing from you regarding our requests.

Sincerely,



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## Specific Comments

### BOR Violation of ESA Requirements

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

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

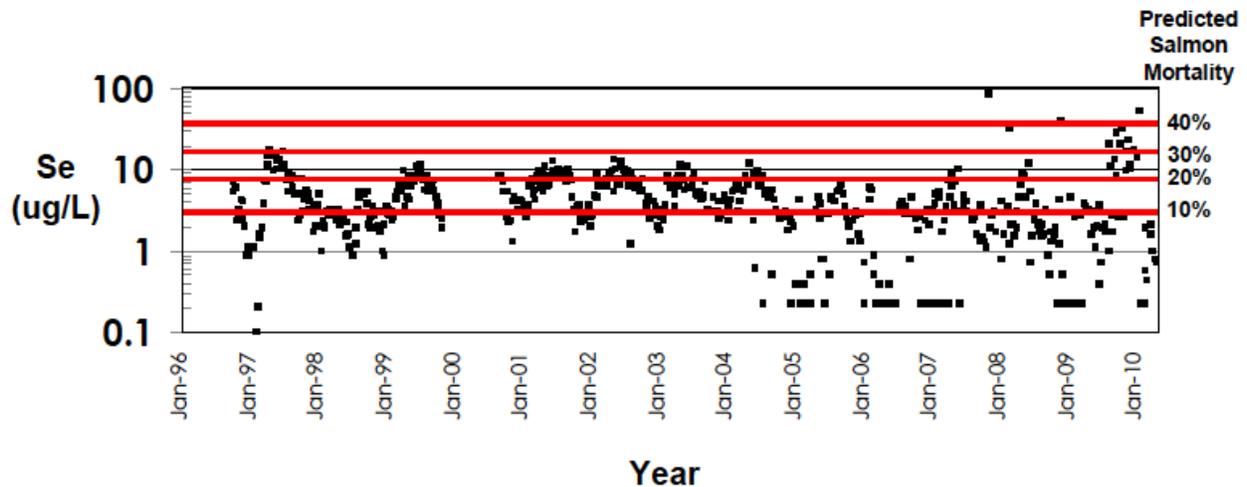
Primary Areas of BOR noncompliance with USFWS Biological Opinion:

1. Many of the reasonable and prudent measures required in the 2009 Biological opinion have not been followed nor implemented as required in the 2009 ROD for the Grassland Bypass Project Extension.
2. Required annual reports to ensure compliance with the BO have not been filed with USFWS.
3. Despite a deadline of October 1, 2012 and a \$6.384 million grant from BOR to the Grassland Drainers (Panoche Drainage District), several sumps that discharge highly contaminated groundwater (including mercury) into the Delta Mendota Canal have not been rerouted. Failure to take action impacts refuge water quality with high levels of pollution.
4. In accordance with the 2009 BOR Use Agreement, by the end of 2013 the private Grassland Drainers are required to provide a plan to meet specified selenium and salt loads at a noticed public meeting. This has not occurred.
5. Required pollution prevention protections in waste discharge requirements (designed to prevent further impacts from selenium and other contaminants) have not been issued for the valley pilot treatment plant scheduled for operation in spring 2014.

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

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

## Selenium Levels and Predicted Salmon Mortality in the San Joaquin River



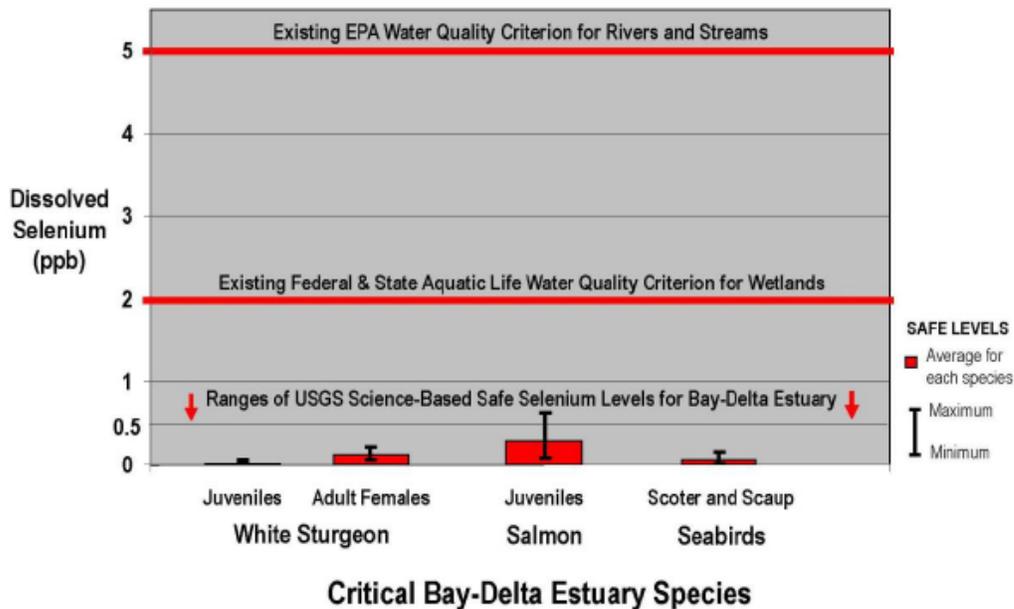
Selenium concentrations measured in the San Joaquin River at Hills Ferry (data from the U.S. Bureau of Reclamation)

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

Figure 2: USGS 2010 Results Released 2011.<sup>14</sup>

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

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



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

**Reductions in Monitoring Compromise Accountability and Resource Protection**

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

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

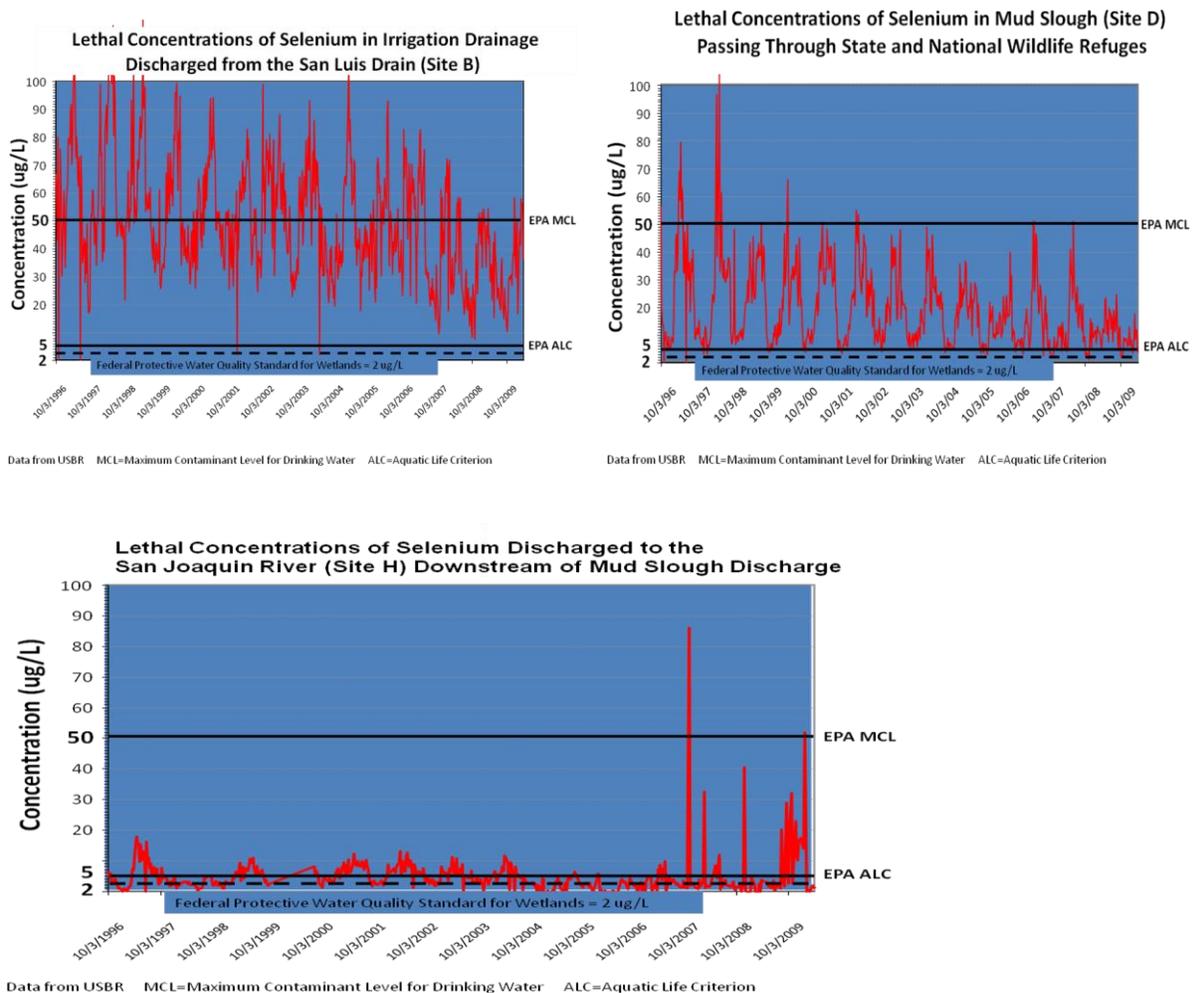
Figure 3: Spikes in Selenium Concentration at Hills Ferry are not an isolated Event. Weekly Selenium Concentrations in the San Luis Canal, 1996-2007 from Chilcott and Schnagl, 2008.



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

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

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



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

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

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



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

#### References:

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<sup>1</sup> [http://www.usbr.gov/mp/grassland/documents/trans\\_final\\_bo\\_09-27-01.pdf](http://www.usbr.gov/mp/grassland/documents/trans_final_bo_09-27-01.pdf)  
[http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc\\_ID=4826](http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826)

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<sup>2</sup> See USGS [http://www.camnl.wr.usgs.gov/Selenium/Library\\_articles/feinsteinltr0001-from-Director.pdf](http://www.camnl.wr.usgs.gov/Selenium/Library_articles/feinsteinltr0001-from-Director.pdf)

<sup>3</sup> [http://www.swrcb.ca.gov/rwqcb5/water\\_issues/grassland\\_bypass/usfws\\_com.pdf](http://www.swrcb.ca.gov/rwqcb5/water_issues/grassland_bypass/usfws_com.pdf) Also see [http://www.usbr.gov/mp/grassland/documents/trans\\_final\\_bo\\_09-27-01.pdf](http://www.usbr.gov/mp/grassland/documents/trans_final_bo_09-27-01.pdf) and the 2009 Biological Opinion @ [http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc\\_ID=4826](http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826)

<sup>4</sup> *Ibid.* USFWS RMP Comments @ page 3.

<sup>5</sup> See Salazar's 2011 Scientific Integrity Policy. <http://www.doi.gov/scientificintegrity/index.cfm>

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

<sup>7</sup>*Ibid.* "Departmental decision making must be robust....Most importantly, it must be trustworthy"

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

<sup>9</sup> [http://www.cio.noaa.gov/services\\_programs/pdfs/OMB\\_Peer\\_Review\\_Bulletin\\_m05-03.pdf](http://www.cio.noaa.gov/services_programs/pdfs/OMB_Peer_Review_Bulletin_m05-03.pdf) "Peer review involves the review of a draft product for quality by specialists in the field who were not involved in producing the draft. ...Peer review should not be confused with public comment and other stakeholder processes. The selection of participants in a peer review is **based on expertise, with due consideration of independence and conflict of interest.**" [emphasis added]

<sup>10</sup>[http://www.camnl.wr.usgs.gov/Selenium/Library\\_articles/Beckon\\_and\\_Maurer\\_Effects\\_of\\_Se\\_on\\_Listed\\_Species\\_SLD\\_2008.pdf](http://www.camnl.wr.usgs.gov/Selenium/Library_articles/Beckon_and_Maurer_Effects_of_Se_on_Listed_Species_SLD_2008.pdf)

<sup>11</sup> [http://www.usbr.gov/mp/grassland/documents/trans\\_final\\_bo\\_09-27-01.pdf](http://www.usbr.gov/mp/grassland/documents/trans_final_bo_09-27-01.pdf) & 2009 Biological Opinion at [http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc\\_ID=4826](http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=4826)

<sup>12</sup> [http://www.BOR.gov/mp/nepa/nepa\\_projdetails.cfm?Project\\_ID=3513](http://www.BOR.gov/mp/nepa/nepa_projdetails.cfm?Project_ID=3513)

<sup>13</sup>[http://www.camnl.wr.usgs.gov/Selenium/Library\\_articles/Beckon\\_and\\_Maurer\\_Effects\\_of\\_Se\\_on\\_Listed\\_Species\\_SLD\\_2008.pdf](http://www.camnl.wr.usgs.gov/Selenium/Library_articles/Beckon_and_Maurer_Effects_of_Se_on_Listed_Species_SLD_2008.pdf)

<sup>14</sup>The graph prepared by CSPA & CWIN is directly based on the results from the U.S. Geological Survey (USGS) study. [http://www.epa.gov/region9/water/ctr/selenium-modeling\\_admin-report.pdf](http://www.epa.gov/region9/water/ctr/selenium-modeling_admin-report.pdf) The USGS study evaluated a series of selenium exposure scenarios using a set of specific guidelines and modeling choices from the range of temporal hydrodynamic conditions, geographic locations, food webs, and allowable dissolved, particulate, and prey Se concentrations (which we have referred to as "safe levels"). According to the USGS, "The specificity of these scenarios demonstrates that enough is known about the bio-transfer of Se and the interconnectedness of habitats and species to set a range of limits and establish an understanding of the conditions, biological responses, and ecological risks critical to management of the Bay-Delta".

See Presser, T.S., and Luoma, S.N., 2010, Ecosystem-scale selenium modeling in support of fish and wildlife selenium criteria development for the San Francisco Bay-Delta Estuary, California: U.S. Geological Survey Administrative Report, 101 p. and Appendices A-D. [Published 12/14/2010; released by USEPA (Region 9, San Francisco, California) 8/29/2011] [\[http://www.camnl.wr.usgs.gov/Selenium/Library\\_articles/Presser\\_Luoma\\_AR\\_forcombined\\_all1.pdf\]](http://www.camnl.wr.usgs.gov/Selenium/Library_articles/Presser_Luoma_AR_forcombined_all1.pdf) or [\[http://www.epa.gov/region9/water/ctr\]](http://www.epa.gov/region9/water/ctr)

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

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<sup>16</sup>[http://wwwrcamnl.wr.usgs.gov/Selenium/Library\\_articles/san\\_luis\\_articles/USFWS\\_Comments\\_DEIS\\_Continuation\\_Grassland\\_Bypass\\_Project\\_2010-2019\\_3-23-2009.pdf](http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/san_luis_articles/USFWS_Comments_DEIS_Continuation_Grassland_Bypass_Project_2010-2019_3-23-2009.pdf)

<sup>17</sup>[http://wwwrcamnl.wr.usgs.gov/Selenium/Library\\_articles/san\\_luis\\_articles/Presser\\_USGS\\_Comments\\_on\\_EIS\\_EIR\\_for\\_GBP\\_2-26-2001.pdf](http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/san_luis_articles/Presser_USGS_Comments_on_EIS_EIR_for_GBP_2-26-2001.pdf) pg 1

<sup>18</sup> *Ibid.* USGS @ pg 2

<sup>19</sup>[http://www.waterboards.ca.gov/water\\_issues/programs/tmdl/docs/sjr\\_selenium/comments092210/howard\\_brown.pdf](http://www.waterboards.ca.gov/water_issues/programs/tmdl/docs/sjr_selenium/comments092210/howard_brown.pdf) @pg 1.

<sup>20</sup> *Ibid.* USGS @ pg 3 *Water-quality criteria may not be realistic indicators of ecological risk for estuaries... The technical limitations of the basis for the existing water quality criteria raise questions about their suitability as the sole standard to assure protection of the Bay-Delta... Se in the food web was sufficient to be a threat to some species and a concern to human health if those species were consumed.*" (Luoma and Presser, 2000). See also beginning at page 4-425 [http://wwwrcamnl.wr.usgs.gov/Selenium/Library\\_articles/Moore\\_etal\\_1990\\_selections.pdf](http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/Moore_etal_1990_selections.pdf)

<sup>21</sup> *Ibid.* USGS @ pg 8

<sup>22</sup> Personal Communication with Chris Eacock to Tom Stokely [CWIN] 11-18-2013] Also see: [http://cwin.org/webfm\\_send/400](http://cwin.org/webfm_send/400)

<sup>23</sup> *Ibid.* USFWS At page 4-5.

<sup>24</sup> *Ibid.* USFWS At page 5.

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

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

<sup>27</sup> *Ibid.* USFWS RMP Comments @ pg 2.

<sup>28</sup>[http://wwwrcamnl.wr.usgs.gov/Selenium/Library\\_articles/san\\_luis\\_articles/Presser\\_USGS\\_Comments\\_on\\_EIS\\_EIR\\_for\\_GBP\\_2-26-2001.pdf](http://wwwrcamnl.wr.usgs.gov/Selenium/Library_articles/san_luis_articles/Presser_USGS_Comments_on_EIS_EIR_for_GBP_2-26-2001.pdf)