D. Section 4

Section 4.0

The CEQA environmental checklist form fails to identify impacts to: public services/utilities/service systems, agricultural resources, hydrology/water quality, and geology/soils. As stated elsewhere in these comments and below, there are several impacts that have not been identified.

Section 4.2 – Agricultural Resources

Page 4-7, Line 9: The EA/IS fails to identify areas (parcels) of productive farmland and grazing lands that may be inundated to assess short term and long-term impacts. Further, the conclusion there would be no impact on designated farmland is applied too narrowly. Assuming the project proponents are correct that this is a one year program, the EA/IS still fails to acknowledge that farmlands may well be flooded and production lost for this year. Even a one year loss of farmland is a significant impact, and will have both environmental and socioeconomic impacts.
Page 4-8, Line 15: The EA/IS fails to identify areas of productive farmland and grazing lands that may be inundated to assess short term and long-term impacts. Further, the conclusion there would be no impact on designated farmland is applied too narrowly. Assuming the project proponents are correct that this is a one year program, the EA/IS still fails to acknowledge that farmlands may well be flooded and production lost for this year. Even a one year loss of farmland is a significant impact, and will have both environmental and socioeconomic impacts.

Pages 4-8, Lines 16–21: Lands currently being farmed in Reach 3 would be impacted. They will have seepage. Lands farmed in Reach 3 need to be protected in order to continue farming. Reference is made to the attached Attachment 1 which is a tabulation of the parcels in Reaches 2 through 5 that have had significant impacts, some precluding farming practices, when any flood flows were present historically. Further, the release of Interim Flows or Restoration Flows should not be compared to the periodic and temporary flood flows. While farmlands may be inundated by flood flows, those only occur periodically, while restoration flows will occur annually and under all hydrologic conditions.

Page 4-8, Line 22: The statement that "The potential flows under the Proposed Action would not result in seepage effects on adjacent landowners' properties" is unsubstantiated and false.

Page 4-8, Lines 24-28: See comments above.

Page 4-8, Lines 28-33: Page 4-8 (Lines 28-33). The EA/IS must analyze the likely increased pumping that will occur if Friant division farmers need the water to irrigate their crops. It must also analyze the impacts of the increase in pumping on lands adjacent to the river in Madera and Fresno Counties. Madera County in their AB3030 plan of 2005 estimated that western Madera County is over drafted 80,000 af annually.

Section 4.3

Page 4-12, Lines 34-40: GHG emissions should be analyzed considering the San Joaquin Valley, not the state as a whole.

Section 4.4 – Biological Resources – Terrestrial

Page 4-18, Lines 27-41: It appears the analysis for valley elderberry longhorn beetle is incomplete. Data is missing and the EA/IS acknowledges that certain data collection was "not comprehensive and results may be outdated."

Section 4.5 – Biological Resources - Fish

This discussion in this section that addresses impacts in the Delta needs to be reconsidered in light of the most recent BOs for delta smelt and salmon.

Page 4-40, Line 15: How will this increase in export volume at Jones and Banks be quantified real time?

Page 4-40, Line 18: Compliance with the 2008 USFWS OCAP BO will limit the ability to increase Jones and Banks diversions.

Page 4-41, Line 25: What is the magnitude of changes in allowable Delta exports caused by the alteration in San Joaquin River flows, also considering the new BOs.

Page 4-44, Lines 5-7: The statement regarding months during which there will be increased San Joaquin River Delta inflows appears to conflict with the months stated at page 4-39.

Pages 4-44 & 45: There is no discussion of the Hills Ferry barrier and the steps that will be undertaken to address upstream migration and the effectiveness of the barrier, as required by Section 10004(h) of the Act.

Section 4.9 – Hydrology and Water Quality

Page 4-67, Line 33: Comparison of average annual water temperatures is not a meaningful basis for evaluation of impacts. Water temperatures must be assessed on an hourly or daily basis under varying seasonal operations scenarios to consider the full range of potential impacts.

Page 4-70, Lines 7-19: Groundwater impacts are not analyzed based on current groundwater conditions.

Page 4-71, Lines 4-7: The EA/IS concludes that there will be no "on- or off-site flooding." The purpose of the Interim Flows is to assess flooding and other adverse impacts. This conclusion is unfounded at this time.

Page 4-72, Lines 16-18: During the last high flow event in Reach 2b (2006) seepage impacts did occur at flows of 1,300 cfs. With 3-years of new growth in the channel it is unclear as to what level of flows can safely pass through the reach without causing significant impacts.

Page 4-72, Line 30: The Seepage Monitoring and Management Plan needs to include additional actions to help identify potential seepage areas. Use of aerial observation and photography may assist to some degree with timely reconnaissance of the river study area, however, in many cases it is likely that by the time aerial observations are made, the damage will have been done.

Section 4.10 - Land Use Planning

Page 4-87, Lines 8-9: The detour will cause the traffic to drive an additional 25 miles each way because there are no parallel roads; it is all private property and largely dirt roads. This is a potential significant impact to air quality.

Page 4-88, Lines 7-9: This statement is inaccurate. Lands in Reach 3 have impacts. For example, the City of Firebaugh's 2030 General Plan indicates development near the San Joaquin River that would be impacted.

Section 4.15 - Recreation

Page 4-99, Lines 1–6: There is no public access below Gravelly Ford. Below Gravelly Ford is either a flood control project; private property, or does not provide for access.

Section 4.17 – Utilities and Service Systems

Pages 4-104, 4-105-106: Sufficient water supplies are not available to serve the project from existing entitlements and resources. There is a chronic water shortage within the CVP, including the Friant Division. The EA/IS contains no analysis of the impacts of loss of 200,000 or more acre feet to the CVP.

Section 4.18 – Mandatory Findings of Significance

Pages 4-109: There is no discussion of cumulative effects. This has been pushed off to the PEIS/R. The EA/IS must consider, among others, the impacts on the recent BOs for Delta smelt and salmon.
Page 4-110, Lines 19-21: The PEIS/R was to have been completed by now. It does not seem possible that it is "speculative at present to identify the environmental impacts and their significance that will be addressed in the PEIS/R." This section is devoid of meaningful analysis of impacts.

Section 4.20 – Socioeconomic Effects and Environmental Justice

The statements in this section conflict with recent statements by Sec. Salazar regarding the impacts that the drought and the water supply situation are having on communities within the San Joaquin Valley. The impact of flows to lands adjacent to the river will have socioeconomic impacts resulting from loss of farmlands, interference with farming operations and potential loss of employment.

E. Section 5

Section 5.1 – Past and Ongoing Efforts

Page 5-1, Lines 14-23: The "Interim Flows" are part of the SJRRP; they are not a stand-alone action and should be analyzed as part of the entire program, not a one year event.

Page 5-2, Line 3: The San Luis-Delta Mendota Water Authority and Central California Irrigation District should be identified as cooperating agencies.

Page 5-2 Line 23: Comments on the previous "Stream Gage Rehabilitation and Monitoring Plan for Physical Parameters" documents do not appear to have been taken into account in this document.

IV. Comments on the Appendices, Tables and Figures

APPENDIX C

Appendix C – Friant Dam Releases for Restoration Flows

Page 1-1, Line 4: The document states that the appendix provides context for describing the release of Interim and Restoration flows from Friant Dam, but there is no description of the rational for the development of the Interim flows proposed for the 2010 Interim Flows Project.

Appendix C is devoid of any evaluation of the joint operations of the SOD CVP contractors and the Friant Unit, especially in light of the new Biological Opinions for Delta Smelt and Salmon, Steelhead and Green Sturgeon. Section 7 of Appendix C needs to include this evaluation; otherwise the impacts are understated (or never stated).

APPENDIX D

Page 1-2, Line 9: Seepage should also include "San Joaquin River" as well as flood channel

Page 1-2, Lines 17-19: Should be deleted, repetitive from lines 6-8.

Page 2-2, Lines 5-8: The mitigation plan needs to be in place prior to initiation of flows or seepage and other damage will occur.

Page 3-2, Lines 5-8: It is not clear who the project proponents are requesting to conduct the levee control and in what areas. Are the local landowners or the Levee District expected to add staff to conduct the extraordinary patrol due to Interim Flows?

Appendix D - Monitoring Program Attachment

Page 1-1, Lines 16-19: The document states "The intention of this plan is to identify direction for seepage monitoring and management, but not to offer details on the design of seepage monitoring activities." The point of a FONSI/Mitigated Negative Declaration is to support a finding of the absence of impacts or the full mitigation of impacts. This appendix suggested that these impacts will not be studied or known. This conflicts with the FONSI/Mitigated Negative Declaration.

Page 2-1, Table 2-1: In order to support a FONSI/MND, the monitoring locations listed as "to be in installed pending landowner agreements" must be operational prior to release of Interim Flows.

Page 3-1, Line 7-8: The existing wells and identified transects will provide very limited information on groundwater levels on private lands. In order to support a FONSI/MND, the program must install additional wells at critical locations based on input from local agencies and land owners.

Page -3, Figure 3-2: Existing groundwater monitoring wells must be surveyed to allow comparison of consistent water level information throughout the study area.

Page 3-4, Figure 3-3: There do not appear to be any groundwater wells proposed for installation in Reach 3. The proposed Interim flows may cause seepage impacts as a result of higher flow levels in this reach.

Page 3-5, Figure 3-4: Reach 4A only includes a single groundwater monitoring location. The program should consider installation of additional wells at critical locations based on input from local agencies and land owners.

The monitoring program makes no mention of utilizing existing groundwater wells and piezometers on local district or private lands within the study area.

Appendix D – Seepage Monitoring and Management Plan for Water Year 2010 Interim Flows

Page 2-1, Line 23: The seepage monitoring information must include timely aerial and on ground observations to allow adequate coverage and timely identification of potential seepage impact areas.

Page 2-2, Line 9: What mechanism do the project proponents have in place to clearly define how "impending rise in the water table" will be quantified to prevent seepage

impacts? Without this plan in place and readily available for public review and comment the project proponents cannot state they have mitigated any significant impacts.

Page 2-2, Lines 15-19: Once a seepage condition is detected impacts may already exist and the operational responses noted in Section 2.4 will only serve to reduce the magnitude of impacts but not eliminate them. TThe monitoring plan must be designed to pro-actively identify increases in seepage so that actions can be taken to prevent potential impacts to adjacent agricultural lands prior to the release of any Interim Flows.

Page 3-1, Lines 8-9: Full implementation of site-specific efforts to identify final monitoring locations and install groundwater monitoring wells, including on private lands, must be completed prior to release of any Interim flows.

Page 3-1, Lines 28-29: The use of monitoring transects 8 to 10 miles apart in combination with a few special interest transects is inadequate to assure there are no significant impacts to adjacent lands. Multiple sand strata below the ground surface are a direct conduit for the flow of seepage into adjacent fields. As the Program knows the RMC is in the process of helping Reclamation identify additional locations where groundwater monitoring and interim flow reduction mitigation trigger points need to be installed.

Page 3-2, Line 5: Levee patrols will have limited ability to identify adverse impacts to third parties from groundwater seepage. Aerial observation flights and photography must be used to quickly identify potential seepage areas of concern.

APPENDIX E

Appendix E – Flow Monitoring and Management Plan

Page 1-1, Lines 12-15: The document states "The intention of this plan is to identify direction for flow monitoring and management, but not to offer details on the design of flow monitoring activities." A document must be available for public review that provides the details of the management strategy and design, specific to the Interim flow monitoring activities.

Page 1-1, Lines 12-15: The document lacks any detail on what experimental methods and proposed analyses will be used as the basis for the monitoring plan, and because of this the project proponents can not accurately claim they have mitigated any significant impacts on third parties.

Page 2-4, Lines 2-3: Is there an expected level of accuracy associated with the flow monitoring that will be important to data analyses to establish estimates for reach losses etc.?

Page 3-1, Line 11: The seven flow monitoring locations are listed as necessary. How will the Interim flows provide meaningful data if the stations are not operable prior to release of flows?

APPENDIX G

Appendix G – Modeling

Page 2-5, Lines 12-18: Since the Near-River Groundwater model is not clearly defined, nor is it available for peer review, how will it be credibly used to assess potential seepage impacts on shallow groundwater levels? What quantitative methods, if any, were used to quantify seepage impacts to adjacent agricultural lands?

Page 4-10, Line 14: The procedure for determining the diversion to the Chowchilla Bypass to prevent flood damage in the Reaches 2B and 3 is attributed to Mussetter 2008. The Mussetter 2008 reference is not included in the references section.

Page 4-10, Line 25, 28 &31: The EA/IS incorrectly states the that the controlling factor in determining the flow split at the Chowchilla By-pass is 1,300 cfs in Reach 3. Reach 2b has the limiting factor of 1,300 cfs.

Page 4-11, Line 10-14: The EA/IS incorrectly states the flow capacity in Reach 4b is 300-400 cfs. The capacity of Reach 4B is zero.

Table 1-1: WY2010 Interim Flows Study Area w/in SJR Reaches and Flood Bypasses in Restoration Area.

Conclusion

The RMC has submitted these extensive comments with the hope that the USBR and DWR will take note of the significant issues and concerns that have been raised both substantively and procedurally. It is the goal of the RMC to see that as useful and complete of environmental documentation is prepared for this major project that will profoundly affect the landowners and farmers along the San Joaquin River.

In addition to these comments, we are transmitting the results of landowner surveys regarding impacts that will result when the flows are implemented. We are also submitting other documentation identified below to be included in the administrative record.

If you have any questions regarding these comments, please do not hesitate to contact either me or Steve Chedester.

Very truly yours,

Mari Martin

Mari Martin
President, RMC

Attachments and Enclosures

Attachments

1. Compilation of landowners impacts to property
2. Summary of previous submittals

Enclosures

1. Copy of Email Submittal of April 28, 2009 of the Central California Irrigation District depth to groundwater in shallow peizometers and deep well adjacent to the San Joaquin River information.

ATTACHMENT 1. COMPILATION OF IMPACTS TO LANDOWNERS
WHEN RIVER FLOWS ARE ABOVE EXISTING BASELINE

APN's	Root Zone	Impacts SFC Flooding	Farming Practices	Flooding	Levee Maintenance	>GW Levels	Loss of Riparian Habitat	Enhanced Riparian	Comments
042-220-008, 042-220-009, 042-220-010	v	v		v	v		v		loss of 158 acres likely
043-084-001, 043-082-002, 043-081-002, 043-081-003, 043-014-001, 043-013-001, 043-011-001, 013-050-08, 013-030-64S, 013-050-07S,013-020-26	v	v	v	v	v				
073-310-002, 073-310-003, 073-320-004, 073-320-005, 073-320-006, 073-340-007, 073-340-008, 073-360-019, 073-040-002, 073-040-003	v	v	v	v	v		v		3 to 4,000 acres loss, in 48
042-010-037 & 038	v	v	v	v					
042-010-030					v	v			
001-050-07, 001-160-02, 001-130-13, 001-050-21, 001-050-24, 091-121-002	v		v	v	v	v			
085-070-029, 085-070-028, 085-080-001, 085-070-027, 085-080-011, 085-050-014, 085-030-002, 085-380-030	v	v	v	v	v				
012-070-30, 013-260-08, 013-020-27	v		v						
041-010-001, 041-070-004, 041-130-003, 041-190-003, 041-190-007, 041-201-002, 041-201-001, 042-010-002, 042-010-004, 042-010-011, 042-010-013, 042-010-022, 042-051-005, 042-100-002, 042-100-004, 042-110-003, 042-150-003, 042-161-003, 042-191-002, 042-201-002, 042-220-002, 042-220-008, 042-231-004, 042-241-004, 042-252-002, 042-260-004, 042-270-002, 042-280-005, 013-270-02, 013-270-03, 013-270-04	v	v	v	v	v	v			
042-030-015						v			
042-010-010, 041-201-009, 041-190-004, 041-130-004, 042-051-011, 042-082-008, 042-300-001	v		v						
040-200-014, 040-200-015, 040-200-016, 040-200-011	v		v						loss of 2 acres, access to water for pumps
013-040-003, 013-040-016, 013-040-018, 013-020-024, 013-020-040			v		v			v	loss of 89 acres and well field of 10 pumps
042-110-008, 042-110-009	v				v				
013-040-28S	v	v		v	v				severe erosion on 040-165-002 in 2008
040-222-022, 040-222-023, 040-022-010-001, 020-181-003, 020-020-170-010, 020-170-008, 020-074-170-021, 074-170-023, 020-041-010-005, 041-010-007	v			v	v				105 acres potential loss
			v						
	v	v	v			v			up to 50 acres loss
	v		v				v		loss of 10 acres possible
	v	v	v	v	v				
085-080-022, 085-060-007, 085-040-007					v	v			potential loss of 10 acres
015-210-11, 015-210-12S						v			
042-072-004, 041-221-003									
041-130-001, 041-070-003	v	v	v	v	v				seepage is a serious threat, lower than neighbors' property
073-400-005, 073-400-012, 085-270-003, 085-270-007, 085-270-008, 085-270-009, 085-270-018, 008-080-07, 008-110-12, 008-130-15, 007-081-02, 007-091-01, 008-020-34, 001-110-11, 001-200-38	v		v						2437 potential acres impacted or lost
040-042-003, 040-044-001, 042-181-006, 042-182-001						v			
012-130-11S, 012-130-26, 013-020-38S, 012-040-13S, 012-070-21, 012-100-14, 013-020-40, 013-02-41, 012-0070-31S, 012-100-05S, 012-100-31, 012-130-18S	v	v	v	v	v		v		loss of 164 farmable, 6 riparian acres
012-070-37, 012-070-35, 012-040-14, 013-260-09	v	v	v		v				loss of 241 acres possible
013-020-44						v			
042-252-001, 042-200-001, 042-220-001	v	v	v	v	v		v		loss of 175 acres and other crop loss
041-130-006	v								
030-190-42, 060-040-08, 030-011-10, 030-190-43,			v						could cause septic tank failure at one parcel
030-011-09, 030-019-39, 070-030-12, 070-030-18, 060-060-46	v	v	v	v					
003-100-22, 003-100-21S, 003-100-26	v		v		v				potential house foundation issue
007-190-32S								v	
042-010-044	v								

APN's	Root Zone	Impacts SFC Flooding	Farming Practices	Flooding	Levee Maintenance	>GW Levels	Loss of Riparian Habitat	Enhanced Riparian	Comments
074-020-005, 074-020-004, 074-010-007, 074-010-010, 074-010-008, 074-010-009	v	v	v	v					
085-080-016, 085-090-018,					v				
085-110-012, 085-110-014	v	v	v						
073-400-009, 073-400-024, 073-400-027, 073-410-003, 085-370-170, 073-360-014, 073-350-001, 073-350-002, 073-410-005, 073-410-006073-390-018, 073-400-020, 073-400-022	v								
85-070-001, 85-070-025, 85-160-001, 85-060-003, 85-060-009, 85-060-10, 85-160-009, 85-160-010, 85-230-005, 001-110-020, 001-120-03, 001-060-05, 001-060-04, 001-140-05, 001-140-04, 001-120-08, 001-120-07, 001-060-03, 001-120-05, 001-110-14, 086-070-005, 086-080-008, 086-080-007, 089-090-006, 73-360-002, 73-390-008, 73-390-003, 73-360-003, 003-210-03, 003-220-10, 085-370-008, 085-270-020, 003-100-08, 003-100-19, 003-100-04, 003-110-27, 003-110-28	v		v						all of these parcels are along channels that are seepage control facilities, additional seepage will likely cause root zone inundation
030-200-02S, 030-210-06S	v	v	v						loss of 30 plus acres
042-191-001, 042-192-001, 042-220-004, 042-221-001, 042-231-002, 042-310-006, 042-310-007, 042-231-008, 042-232-001, 042-241-001, 042-241-002, 042-252-003, 042-260-003, 042-270-001, 042-280-002	v	v	v	v	v		v		potential acreage loss 1,117
042-010-046, 042-010-047						v		v	
013-260-10, 012-070-36	v		v						
041-190-001, 041-130-002	v	v	v	v					
060-050-16, 060-080-30, 060-060-14, 060-050-17, 030-220-12, 070-030-18, 070-030-11, 060-060-45, 060-120-21, 070-061-10,	v	v	v	v					
040-190-012	v	v	v	v	v				
001-060-01S, 086-080-008, 086-080-004	v		v						
085-700-026, 085-140-008, 085-140-009, 085-150-001, 085-150-003, 085-160-001, 085-160-003, 085-160-008, 085-170-011, 085-170-025, 085-170-032, 085-230-024, 085-230-034, 085-300-038, 085-230-039, 085-330-021, 085-330-030, 085-350-017, 085-360-005, 086-360-008, 085-360-013, 085-360-035, 085-360-039	v			v					
070-060-19	v		v						
015-070-34S, 015-030-21S, 015-030-22S			v			v			
040-131-005					v				
040-162-002, 040-162-003					v		v		
49-240-06, 49-240-07, 49-240-08, 49-240-09, 49-240-10, 65-050-04, 74-010-01, 74-010-02, 74-010-03, 74-010-05, 74-010-08, 74-030-01, 74-030-05, 74-030-11, 74-050-01, 74-050-02									loss estmated 1300 acres, pumps and equipment vulnerable
041-130-005	v	v	v	v	v				
040-131-009, 040-131-007, 040-132-023, 040-132-027	v		v	v	v		v		loss of 20 acres
01-080-07, 01-100-04, 01-100-09S, 01-100-10S, 01-100-12S, 01-100-13S, 01-110-07, 01-110-08, 01-110-23S, 01-110-24S, 01-200-30S01-210-15S, 01-210-16S	v	v	v	v		v			Estimate 20% loss of acreage, also increased water pumping from sub-surface interceptor system

ATTACHMENT 2. SUMMARY OF PREVIOUSLY PROVIDED MATERIALS

1. DVD of aerial flight over the San Joaquin River during the flood event of 2006 in which approximately 4,000 cfs were flowing through the Mendota Dam into Reach 3 and below from the Kings River. The DVD documents many farmed fields inundated from seepage from the San Joaquin River. The DVD was submitted to the Bureau in July 2006. A hard copy of the DVD will be hand delivered to Mr. Kevin Faulkenberry on 20 July 2009.

2. On April 28, 2009, Central California Irrigation District submitted depth to groundwater historical data on shallow observation wells and deep wells and Autocad map showing locations of wells. The depth to groundwater data is from 1983 to present. An electronic copy of the transmitting email and attached data files are submitted with the electronic submittal of these comments. A hard copy of the data will be hand-delivered to DWR and USBR on July 20, 2009.

EXHIBIT 2

COMMENTS OF THE EXCHANGE CONTRACTORS

SAN JOAQUIN RIVER EXCHANGE CONTRACTORS WATER AUTHORITY
CCID • CCC
FCWD • SLCC

Consisting of 240,000 acres on the Westside of the San Joaquin Valley

July 17, 2009

P.O. Box 2115
541 H Street
Los Banos, CA 93635
(209) 827-8616
Fax (209) 827-9703
e-mail: jtoscano@sjrecwa.net
Website: www.sjrecwa.net

Via E-Mail: InterimFlows@restoresjr.net
Mr. Jason Phillips
SJRRP Program Manager

Via E-Mail: faulkenb@water.ca.gov
Mr. Kevin Faulkenberry
DWR SJRRP Program Manager

RE: Comments Related to *Draft* Environmental Assessment and Finding of No Significant Impact/Initial Study and Mitigated Negative Declaration

Gentlemen:

The San Joaquin River Exchange Contractors Water Authority (Exchange Contractors) submit these comments on behalf of its member agencies, Central California Irrigation District, San Luis Canal Company, Firebaugh Canal Water District, and Columbia Canal Company. In addition, the Exchange Contractors fully support the comments submitted by the San Joaquin River Resource Management Coalition (RMC).

I. The Water Code Section 1725 and Section 1707 Transfer Petitions for Interim Flows filed with the SWRCB by the Bureau of Reclamation propose transfers and use of facilities owned by others as points of rediversion or as part of the plan of operations. However, the Project Description provides no adequate information in regard to the significant environmental impacts potentially arising from the use of those facilities and the mitigation measures for impacts from that use which have not been developed or implemented as part of the project Plan, including:

A. The potential for failure of the Mendota Dam or potential for damage is not described and not mitigated. Mendota Dam is an aged facility with known stability concerns and underflow

conditions. Additional water flowing into the Mendota Pool without careful management could stress the structure or cause failure. Underflow and repeated efforts to prevent undermining of the structure are currently routinely undertaken by CCID. Underflow pressures are in direct proportion to the height of water on the Dam. The EA does not describe these problems and potential impacts. It provides no measures for providing additional buttressing and/or automation of the structures and eventual replacement to absolutely prevent surcharges upon the Dam and additional pressures leading to underflow. The Project Plan for Interim Flows describes no plan to provide, if undermining of the structure develops because of the new use proposed by the United States during the irrigation season, as to how an emergency dewatering of the pool would be achieved to accomplish repairs and how the more than 300,000 acres dependent upon that facility would be supplied water during the approximate 10- to 20-day period that might be required to repair the structure.

B. The Project Description is incomplete. The Environmental Baseline and Project Description also fails to describe the project properly. The Mendota Dam is in an area of subsidence. Because of ground level lowering, the structure is already operated within narrow elevation differences to continue to allow irrigation water deliveries to other USBR contractors and Mendota Wildlife Area. The Project Description does not present any information as to the operational problems caused by the current elevation of this facility and condition and the additional dangers of waters entering the pool, rising over the dam and operation gates, and flowing in an uncontrolled fashion downstream or conversely the operators of the Mendota Dam not being made aware in fluctuations of flow into the Pool which reduce transfer water volume thus reducing the head and flows for operations of the users of the Mendota Dam and Pool. Water deliveries to agricultural customers may be damaged or unexpectedly interrupted by such fluctuations. The description also does not describe the overtopping of levees along Fresno Slough onto productive farm land or the City of Mendota which can possibly occur, nor the measures that would be implemented to avoid such conditions. The SJREC and its Members who, along with the SLDMWA, each control a critical part of the operations, stand ready to work to put together these needed measures with the United States, but the United States insists on conducting its efforts without admitting that this project is much more complicated and

environmentally significant impacts.

C. There is no description of how the United States intends to gain joint use of the facilities. Water Code Section 1775 provides for the SWRCB to determine in certain circumstances that joint occupancy and use of facilities is appropriate. Water Code Section 1800 provides for the SWRCB to receive petitions that the existing works of a party such as Mendota Dam and Pool do not develop fully the capacity of the stream and issue orders permitting the Bureau to provide for the improvement of the works. No plan for the works or measures to demonstrate that the Bureau should be granted such a right is included within the Environmental Assessment or the Petitions for Transfer. Without a description of what measures the Bureau proposes to take or the capacities it intends to use, it is not sufficient to state that an agreement will be entered into. Such a statement constitutes a vague illusion to possible mitigation measures without specifying exactly what the mitigation measure to avoid environmental harm is, and renders the EA defective.

D. No Transfer Petition can be processed for use of facilities or points of rediversion because the Bureau of Reclamation has no guaranteed legal access – eminent domain is unavailable. 23 California Code of Regulations Sections 775 through 777, copies of which are attached, require that as a part of an Application or Petition for Transfer that the applicant show that it can gain access to and the right to use the facilities necessary for the transfer. The Environmental Assessment does not include any such showing. Section 10005(b)(1) of the Restoration Act provides for voluntary agreements but does not provide for eminent domain. Section 10005(b)(2) refers to the 1937 Act (50 Statues 44 Chapter 832), but that Chapter provides no authority to use eminent domain powers for the purposes of fishery and wildlife uses of water. Interim Flows which are delivered for SJREC use are already legally permissible and customary, but the Bureau's insistence on calling these flows as "fish and wildlife flows" is masking the impacts and true broad effects of the proposed project.

To be legally sufficient under NEPA, the full "project" and its implementation

must be described. Failure to disclose a gap in authority or an undetermined means of implementing the project is both a defective description of the project and potentially ignores significant environmental impacts which will be encountered in attempting to implement the plan because it is incomplete.

II. Use of other points of rediversion are not fully described, nor environmental impacts identified.

A number of other points of rediversion consisting of canals and headworks of members of the Exchange Contract are described by the EA for Interim Flows, yet the total capacity to be run through those facilities and canals is not described, and the amounts of water to be delivered for fishery and wildlife use on an interim basis through those canals or over those structures is not declared. In the case of some of the facilities, the United States Fish and Wildlife Service may have a contract or easement or the Department of Interior Bureau of Reclamation may have a contractual right to deliver water or cause water to be delivered through the facility; however, in other areas there is a limit on capacity or there is no such existing right. The Project Description does not mention whether these existing authorities would be exceeded and under what authority the right to wheel additional waters would be obtained. The project cannot be properly described or its impacts quantified or described without a declaration of the specific quantities and time schedule. Some delivery amounts for fish or wildlife purposes may prevent agricultural deliveries or drainage into the canals. Delivery schedules may interfere with development of groundwater supplies and their transportation or cause seepage or overflow on farmers' lands.

The Project Description must trace the likely amounts of water through each point of rediversion, the maximum delivery for fish and wildlife purposes, the ultimate area to receive the water, and determine if the delivery schedule, together with the deliveries by the owner of the facility, would cause overtopping or damaging seepage or interfere with other customary operations. Further, any operational changes or account crediting impacts in San Luis Reservoir must be described or described as of

no impact.

III. The San Joaquin River Restoration Act requires that the Project include design and pricing of each fish protection screen and device before any Interim Flows occur. Congress has determined what an adequate Project Description and Environmental Assessment would include, and this one is deficient because those designs and cost estimates are not included and not declared as feasible of funding.

Section 10004 of the Restoration Act requires that

> ". . . prior to releasing any interim flows under the Settlement shall prepare an analysis in compliance with the National Environmental Policy Act of 1969 including, at a minimum, ... (E) an analysis of the likely Federal costs, if any of any fish screens, fish bypass facilities, fish salvage facilities and related operations on the San Joaquin River . . ."

The Environmental Assessment does not include a detailed design sufficient to determine the likely Federal costs of fish screening. Each diversion, gate, bypass, and canal must be described, as well as the likely fish protection devices to protect endangered species fish such as steelhead and winter run or spring run salmon or green sturgeon must be priced, and the total amount of money available for the project compared. The purpose of an Environmental Assessment is to determine if the plan for the project is complete and feasible, as well as whether the mitigation measures directed by Congress itself can be accomplished . . . before the project is commenced. This EA ignores the contents of the Act itself and is legally and factually deficient for that reason. If there is insufficient money to construct all of the fish protection facilities required, significant environmental impacts will be caused by commencing flows and not having the capability to implement even the mitigation measures required to be planned and priced by Congress in advance.

IV. The Project Description fails to fully or properly describe the water rights being proposed to be changed or altered by the Transfer Petitions or the impacts of accounting of water rights.

The Petitions propose an Alternate A in each of the supplements and state that "Approval of this Petition would authorize the dedication of release of water previously stored in Millerton Reservoir . . ." The Petitions are a part of the Project; however, nowhere in the EA Project description is this information regarding stored water as the source of Interim Flows included. The document is deficient in the Project description. The SWRCB defines stored water in its regulations as "water stored for more than 30 days." The first water arriving at a dam and reservoir is customarily treated as the first water released and attributed to the oldest water rights held at that location. The oldest water rights utilized by the Bureau at Friant Dam and Millerton Reservoir are the riparian and pre-1914 water rights of the Exchange Contractors which may be utilized only upon the condition and to the extent that the Exchange Contract is complied with.

The Environmental Assessment includes no description of the accounting procedure to be utilized to ensure that only "stored water" not subject to the Exchange Contractors rights (which the SWRCB has no jurisdiction to grant a Transfer Petition in regard to the Exchange Contractors right because they are pre-1914 rights) is released pursuant to these purported Transfer Petitions, if approved, and provides no accounting of the use and destination of the inflow of water subject to the Exchange Contractors' rights which the Bureau is authorized to divert and utilize. This is both an insufficient Project Description and also a failure to describe significant impacts and to mitigate for them. Without such a description and accounting controls, the Transfer Petitions improperly describe the Project in terms of the water rights to be utilized for fishery and wildlife purposes. The SWRCB has no jurisdiction to grant a petition to transfer riparian water rights or pre-1914 water rights. It may be that the Bureau has an accounting procedure in mind to ensure that only stored water is utilized for its project,

but there is no description of the system and without such a description the project is not correctly or understandably described. Substantial variances in flow rates could occur.

V. Water Code Section 1745.10 and 1745.11 are conditions upon approval of a transfer of surface water. Water Code Section 1732 states that only if these section are complied with by showing that a transfer of surface water will not result in increased groundwater pumping may a transfer be approved by the SWRCB. The EA fails to include these conditions or compliance measures.

The following comment rises because of the use of a transfer devise rather than simply treating the Interim Flows in year one as a part of a long term program. If no transfer was proposed and the water of the Interim Flows was used for existing authorized uses of the Bureau and the Exchange Contractors, Sections 1732, 1745.10 and 1745.11 would not apply. Copies of these Sections are attached. Those Sections require that the area from which the surface water was previously used be identified as a condition of approval of a transfer. They then require that the local water purveyor or District giving up the water be identified, and that that party agree that groundwater pumping by that District and private landowners will not be increased as a result of the transfer. This means that potential environmental impacts due to transferring surface water can be mitigated by enforceable conditions upon groundwater pumping the area from which the water will be taken.

This EA includes no such identification of groundwater which will not be subject to additional pumping demand and no such agreement of the Member Units of Friant that they will police each of their landowners and water users to make sure that the amount of surface water transferred through the Bureau's Interim Flow Transfer Petitions is not replaced by the District or by the landowners.

Conclusion

These Petitions for Transfer and the Environmental Assessment proposed under NEPA and CEQA should be withdrawn as inadequate and incomplete. The potential of Significant Environmental Impacts exists and they have not been identified or quantified, and mitigation has not been described. The Project Description is also incomplete.

Any commenting party may join and include these comments by referring to "Comments Related to Water Rights Project Description and Water Rights, and (B) Significant Environmental Impacts Not Identified or Mitigated."

Very truly yours,

SAN JOAQUIN RIVER EXCHANGE
CONTRACTORS WATER AUTHORITY

By _____
STEVE CHEDESTER,
Executive Director

EXHIBIT 3

COMMENTS OF THE FRIANT WATER USERS AUTHORITY

Gasdick, Alicia

From: William Luce [wluce@friantwater.org]
Sent: Monday, July 06, 2009 5:07 PM
To: InterimFlows@restoresjr.net; Kevin Falkenberry
Cc: Ronald D. Jacobsma; Robert Sawyer; Stephen H. Ottemoeller; Ernest Conant
Subject: FWUA Comments on Draft Interim Flow EA/IS
Attachments: FWUA Interim Flow EA-IS Comments.xls

Greetings...

Attached are comments of the Friant Water Users Authority on the Draft Environmental Assessment/Proposed Finding of No Significant Impact and Initial Study/Draft Mitigated Negative Declaration for the Water Year 2010 Interim Flows Project dated June 3, 2009.

Since the comment period has been extended until July 20, 2009, we reserve the right to supplement these comments.

Thank you.

Bill Luce, P.E., Consulting Resources Manager
Friant Water Users Authority
1974 N. Gateway Blvd., Suite #104
Fresno, CA 93727
Office: 559-562-6931
Cell: 559-802-0091
Fax: 559-562-6308
Email: wluce@friantwater.org

DOCUMENT & PAGE NUMBER	Paragraph, Section, or Line Numbers	COMMENT
FONSI		
Pg 3	Paragraph 4	In the third sentence, five invasive species are noted, but only four are listed.
Pg 3	Paragraph 5	The third sentence does not make sense. The sentence essentially says that changes in the VAMP releases from the Merced, Tuolumne, and Stanislaus rivers will not affect the ability to meet instream fish and water quality flow requirements in the Merced, Tuolumne, or Stanislaus rivers. And what that has to do with Interim Flow releases is not clear.
Pg 3	Paragraph 5	Fourth sentence states that the Proposed Action's effects on the Delta will be consistent with the analysis contained in the US Fish and Wildlife Service (USFWS) 2008 Operations Criteria and Plan (OCAP) Biological Opinion (BO). What about NMFS June 2009 BO?
Pg 4	Paragraph 12	The second sentence discusses an activity that is scheduled to occur beyond the timeframe of the Proposed Action.
Pg 5	Paragraph 13	The second sentence states that Reach 2 has (along with Reach 1) the greatest public access and instream flows. Neither of those are true for Reach 2.
DRAFT MITIGATED NEGATIVE DECLARATION (DMND)		
Pages 1-2	"Proposed Finding"	The last sentence of the Proposed Finding discusses the SWRCB's decision that the Proposed Project would have no unreasonable effects on fish, wildlife, or other instream beneficial uses and would not injure any legal us to the water under California Water Code Section 1725 et. seq. Since the SWRCB has not, to date, made such a decision it's not clear how the DMND could make such a statement.
Page 2	"Basis for Proposed Finding, paragraph 4"	The second sentence states WY 2010 Interim Flows would substantially increase the quantity of water flowing down the San Joaquin River. It's not clear what "substantially" means, but there will probably be times in WY 2010 when there is only a relatively small flow in the river.
Page 3	"Mitigation Measure Bio-1"	Sponge Plant is apparently missing from the list of invasive vegetation.
Environmental Assessment/Initial Study (EA/IS)		
1-2	30	replace "beginning" with "no later than"
1-5	21	change "diversion" to "rediversion"
2-1	14-15	Change beginning of sentence to: "Figures 2-1 and 2-2 show the average simulated..."
2-1	16	There should be an explanation regarding the reason for selecting Normal-Dry and Wet years as the only years for which such detailed information is made available and how the information will be used in making determinations of impacts.
2-1	19	Change 2-2 to 2-3
2-5	18	Change beginning of sentence to: "Figures 2-7 and 2-8 show the average simulated..."

DOCUMENT & PAGE NUMBER	Paragraph, Section, or Line Numbers	COMMENT
2-5	23	Change 2-7 to 2-9
2-9	26	It is unclear what "like amount" is referring to.
2-12	12	The sentence stating "Any increase in Delta exports directly resulting from WY2010 Interim Flows..." is inconsistent with the sentence on pg 2-9, ln 25 which says "Delta exports would not change in the Proposed Action..."
2-14	8	It is unclear what "water supply demands" are being considered.
2-15	2-3	Since the information in Table 2-5 is taken directly from Exhibit B of the Settlement Agreement, it's somewhat misleading for the SJRRP to claim credit for developing it.
2-15	11	Bulletin 120 is issued 4 times a year: the 2nd week of February, March, April, and May. Saying it will be finalized in May 2009 seems inconsistent.
2-15	20	Figure 2-2 appears to be the wrong figure to cite here. Perhaps Figure 2-9 is the correct one to cite.
2-17	2	Suggest replacing "additional" with "potential"
2-17	8	Suggest replacing "would" with "could"
2-17	16-19	The sentence beginning with "The volume..." doesn't seem to be needed. Suggest it be deleted.
2-26	33	The NMFS BO is no longer "pending"
2-29	32-34	The EA/IS should analyze the impacts on the lower Kings River from such a shift
2-31	11	The EA/IS states If groundwater levels at a monitoring well exceed an identified threshold, WY 2010 Interim Flov would be reduced or diverted. Diverted where and for how long?
3-2	29	This section seems to be mixing up the area immediately adjacent to the lake, which is the area that could possibly be affected by the proposed action, with upstream areas that include the "crest of the Sierra Nevada". All subsequent discussions and analysis of effects appear to be limited to the area immediately surrounding the lake.
3-3	22-24	The statement "Annual water allocations and release schedules are developed with the intent of drawing reservoir 24 storage to minimum levels by the end of September" is not correct, or at least not accurate Suggest replacing "are developed with the intent of" with "typically result in" and insert "near" prior to "minimum" on line 24
3-4	32-33	The EA/IS states "diversion structures are common in this reach" (Reach 3) However, the San Joaquin River Restoration Study Background Report (McBain and Trush (eds). 2002), Table 5-2 shows only 4 pumps and the Arroyo Canal in Reach 3, not enough to state diversion structures are common.
3-5	8-12	There is no mention of the wildlife refuge landscape adjacent to the river in Reach 4B1.
3-21	26-32	The causal relationship of human caused GHG to climate change is not undisputed. There are other plausible explanations for climate change that have nothing to do with human activities.
3-22	10	Suggest inserting "near Millerton Lake" following the first "Friant Dam" to be consistent with description on pg 3-23, ln 35-36.
3-25	2	Why are Mammoth Reach, Granite, Jackass, and Chiquito Creeks even discussed in this section when there is no possible way the proposed action can affect them?

DOCUMENT & PAGE NUMBER	Paragraph, Section, or Line Numbers	COMMENT
3-40	17	Water management considerations in the San Joaquin R and tribs also include reservoir releases for instream uses and the Stanislaus is operated at times for salinity control
3-41	15	Insert "native" between "Key" and "species"
3-47	1	The section is woefully deficient in describing the drainage and salt balance issues. For example, it is not the Corcoran clay that causes perched groundwater that contributes to salinization of soils, it is shallow clay layers and other subsurface conditions near the ground surface. Also, slow draining soils and inadequate leaching contribute to soil salinity and importation of salts in irrigation water can contribute to increasing salinity of usable groundwater.
3-61	2	Insert "maximum" prior to "volume"
3-61	14	There should be a reference to a specific datum or mean sea level for the two numbers.
3-63	8	Replace "fulfill riparian water rights" with "comply with Holding Contract requirements"
3-63	20-21	Replace "meet downstream water rights and contract diversions" with "comply with Holding Contract requirements"
3-63	24	Insert "not all of which are active on a regular basis" at the end of the sentence.
3-64	2	Revise the last part of the sentence to read, "only during periods of flood management flow releases."
3-64	15	Insert "controlled" between "accommodate" and "flood"
3-64	18-23	Isn't capacity in Reach 2B also limited by vegetation in the channel?
3-66	6	Add "and instream flow requirements" to the end of the sentence
3-66	9	Replace "constraints" with "agreements"
3-66	17	Insert "and permitted" between "nominal" and "pumping"
3-67	1-5	Replace "contracts" with "supplies" in line 1. The second sentence is not an accurate statement - lands served by Class 1 contracts include most of the crops in the Friant service area. Some Class 1 only districts are typically in the upslope areas, but the cropping scope is broader than described. In lines 4-5, revise the last phrase to read "is delivered as Class 1 water"
3-67	12-15	Replace the first sentence with: In addition to Class 1 and Class 2 water, Reclamation delivers water (called Section 215 water) made possible as a result of an unusually large water supply not otherwise storable for project purposes or frequent and otherwise unmanaged flood flows of short duration under the authority of Section 215 of the Reclamation Reform Act.
3-67	18	Replace "The CVP" with "Reclamation"
3-67	22	Add the San Felipe Unit as a CVP unit receiving water from the DMC, Jones PP, etc.
3-67	31-32	Revise the last part of the sentence to read, "in exchange for the use of waters of the San Joaquin River within tl Friant Division."
3-67	32-34	The sentence is not accurate relative to Exchange Contractor distribution system operations. If reference is to Reclamation treating the total EC supply as a unit for purposes of Reclamation's performance under the EC contract, the sentence should make that more clear.
3-67	41	The O'Neill Forebay is a regulating reservoir, not a "regulatory body"

DOCUMENT & PAGE NUMBER	Paragraph, Section, or Line Numbers	COMMENT
3-69	1-3	Suggest putting a period after "the DMC" and deleting the rest of the sentence. As stated the sentence is confusing.
3-69	4	The first sentence makes it appear that the water in Reach 3 is not usable, notwithstanding the normal deliveries to San Luis Canal Company. The last sentence doesn't make a lot of sense, except during flood flows, and then only applies to 4A, since no flows from 3 ever get to 4B.
3-70	16-19	Incomplete sentence
3-75	19-21	There is no data or description of circumstances, either in Fig. 3-6 or elsewhere, to substantiate the conclusion that groundwater levels have recovered from the previous drought.
3-88	8 and 21	The Friant Division service area does not include Kings County
3-91	3-4	Something is missing from the sentence
3-91	9 and 23 (and possibly elsewhere)	There is no "s" at the end of the word Grassland when referring to the water district and the Ecological Area
3-93	6	There is no mention of Skaggs Bridge Park (operated by Fresno County) in Reach 1
4-39	10	There are multiple references in this section (and elsewhere in the document as identified in other comments), starting with Tables 4-4 through 4-7 and at various locations in the text, to changes in flow resulting from proposed action flows in December 2009 and Jan 2010. There will be no Interim Flows during those two months, as correctly stated on Pg. 4-48, Ln. 21-22.
4-49	7-8	See prior comment regarding Dec '09 & Jan '10 Interim Flows
4-51	7	Should *e.g.* be used instead of *i.e.*?
4-51	8-20	The discussion in this paragraph (and elsewhere in the document) assumes there will be VAMP flows in Water Year 2010. As noted on page 2-26, the future of VAMP is uncertain for Water Year 2010. The document should not assume a continuation of VAMP.
4-68	11-12	See Comment for pg 3-68, Ln 4 regarding beneficial use of water from Reach 3.
4-68	27-28, 38,41	See prior comments regarding Dec '09 & Jan '10 Interim Flows
4-70	9-13	The increase in groundwater pumping above both existing conditions and No Action that will likely never be recovered due to the continuation of the project beyond this y ear (see comment on cumulative impacts). The fa that the change in GW pumping is within the normal range of variability does not change the fact that it occured a direct result of the proposed action. The impact to groundwater levels should be considered potentially significant.
4-74	5	Replace "naturally" with "under Existing and no Action alternatives"
4-82	7	VAMP is not a certainty. Insert "if any" at the end of the sentence.
4-84	5-7	The sentence does not accurately describe proposed operations and water rights actions in the Delta. Water would be recovered under a temporary change in point of diversion
4-85	4	"500" should be "384" to be consistent with Table 2-3
4-85	6-7, 12-15	See comment for pg 4-84. Water would be rediverted by Reclamation under temporary permit changes. It is Reclamation's obligation to make the necessary arrangements to return the water to Friant, in consultation with Friant Division LT contractors.

DOCUMENT & PAGE NUMBER	Paragraph, Section, or Line Numbers	COMMENT
4-85	19	How can a 384 KAF reduction in deliveries to Friant Division contractors be considered "less than significant?"
4-86	2-4	The system will not be operated under existing regulatory requirements if Reclamation rediverts water under temporary permits. Revise description accordingly.
4-86	4	Change 4-18 to 4-19
4-106	7-8	See comment from pg 4-85, Ln 12-15
4-110		The cumulative impacts section ignores the long term Restoration action by saying that the PEIS/R will analyze the impacts, but from the perspective of this document, it should be considered a separate project and the cumulative impacts on the Friant long-term Contractors' water supply and groundwater levels from the IF in 09-10 should be considered**potentially significant**when taken in combination with future reductions. Additional groundwater pumping from the proposed action is water permanently lost to the groundwater storage in a basin that is already over-drafted
4-111	11-13	To use the fact that "Water supply availability to Friant Water Users is highly variable on an annual basis, and the amount of water used as Interim Flows is within this range of annual variability" as an excuse to not analyze the effects of the Proposed Action is not acceptable. Impacts that result from the Proposed Action must be analyzed even if they are within the so-called range of annual variability.
6-9	30-31	Shorebird Research Group of the Americas (SRGA) is erroneously referred to, apparently due to a typo in the abbreviated name for the San Joaquin River Group Authority (SJRGA). Perhaps SJRGA is the correct abbreviation? Suggest replacing SRGA with SJRGA and deleting the reference to SRGA in the List of Abbreviations and Acronyms.
6-9	31 and beyond	See comment above regarding the uncertain future of VAMP
Appendix C		
3-1 to 3-10	The entire Section 3	Reference to and use of Expert reports and testimony should be eliminated from all analyses as such use is in violation of Paragraph 41 of the Settlement Agreement. In addition, it should be noted that the text refers to "testimony" when what has been used are Expert Reports. Since there are several expert reports on the record that are on the same subject and which may contain contradictory or conflicting statements or conclusions, it is inappropriate to arbitrarily select one expert over another. These expert reports have not been peer-reviewed or subjected to rigorous scientific review.
6-12	12	Delete reference to "Settlement's expert testimony." There is no such thing.

EXHIBIT 4

COMMENTS OF THE SWRCB

Linda S. Adams
Secretary for
Environmental Protection

State Water Resources Control Board

Division of Water Rights
1001 I Street, 14th Floor ♦ Sacramento, California 95814 ♦ 916.341.5300
P.O. Box 2000 ♦ Sacramento, California 95812-2000
Fax: 916.341.5400 ♦ www.waterboards.ca.gov/waterrights

Arnold Schwarzenegger
Governor

JUL 20 2009

FIRST CLASS AND ELECTRONIC MAIL

Mr. Jason Phillips, Program Manager
U.S. Bureau of Reclamation
San Joaquin River Restoration Program
2800 Cottage Way, MP-170
Sacramento, CA 95825
Interimflows@restoresjr.net

Dear Mr. Phillips:

COMMENTS ON ENVIRONMENTAL ASSESSMENT/INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION WATER YEAR 2010 INTERIM FLOWS PROJECT

This letter provides comments by the State Water Resources Control Board (State Water Board), Division of Water Rights, on the draft Environmental Assessment, Proposed Finding of No Significant Impact, Initial Study, and Draft Mitigated Negative Declaration (EA/FONSI/IS/MND) for the San Joaquin River Restoration Program's (SJRRP) Water Year 2010 (WY 2010) Interim Flows Project. Reclamation has petitioned the State Water Board for changes to its water rights to implement the interim flow provisions of the Stipulation of Settlement in *Natural Resources Defense Council, et al. v. Kirk Rodgers, et al.* (Settlement). Consequently, the State Water Board is a responsible agency under the California Environmental Quality Act (CEQA) for this project and will consider the EA/FONSI/IS/MND when determining whether or not to approve Reclamation's petitions to change its water rights.

The EA/FONSI/IS/MND explains that Reclamation proposes to temporarily change Friant Dam operations in Water Year 2010 (October 1, 2009, to September 30, 2010) to release Interim Flows from Friant Dam into the San Joaquin River and potentially downstream as far as the Sacramento-San Joaquin Delta. The purpose of the proposed action is to implement the provisions of the Settlement, which requires collecting relevant data on flows, temperature, fish needs, seepage losses, recirculation, recapture, and reuse to guide future releases of Interim Flows and Restoration Flows under the SJRRP. Interim Flows are specified in the Settlement and were approved by the United States District Court in October 2006. Further, the EA/FONSI/IS/MND indicates that the Interim Flows would be recaptured by existing water diversion facilities along the San Joaquin River and/or in the Delta.

Proposed Water Rights Changes

Pursuant to Water Code section 1725 et seq., Reclamation has filed petitions for change involving the transfer of water. Temporary changes approved pursuant to Water Code section 1725 may be effective for up to one year from the date of approval. Before approving such a change, the State Water Board must find that the transfer would only involve the amount of water that would have been consumptively used or stored by the permittee or licensee in the

absence of the proposed temporary change or conserved pursuant to Section 1011. (Wat. Code, §§ 1725.) Water Code section 1725 defines "consumptively used" to mean "the amount of water which has been consumed through use by evapotranspiration, has percolated underground, or has been otherwise removed from use in the downstream water supply as a result of direct diversion." In addition, the State Water Board must find that the proposed temporary change would not injure any legal user of the water during any potential hydrologic condition that the board determines is likely to occur during the proposed change, through significant changes in water quantity, water quality, timing of diversion or use, consumptive use of the water, or reduction in return flows. (*Id.,* § 1727, subd. (b)(1).) Prior to any approval, the State Water Board also must find that the proposed change would not unreasonably affect fish, wildlife, or other instream beneficial uses. (*Id.,* § 1727, subd. (b)(2).)

Reclamation also has filed a petition for change pursuant to Water Code section 1707. Section 1707, subdivision (a)(1) authorizes changes for the "purposes of preserving or enhancing wetlands habitat, fish and wildlife resources, or recreation in, or on, the water." The State Water Board may approve such a change if it determines that the proposed change will not increase the amount of water that the person is entitled to use, will not unreasonably affect any legal user of water, and meets other provisions of law. (Wat. Code, § 1707, subd. (b)(1)-(3).)

Regardless of its responsibilities under CEQA, the State Water Board must consider the full range of impacts associated with approving the change petitions in order to fulfill its responsibilities under the public trust doctrine, the Water Code, and the California constitution.

Based on our review of the EA/FONSI/IS/MND, State Water Board staff has the following comments:

Specific Comments

1. On page 3 the EA/FONSI/IS/MND states that "The Proposed Action's effects on the Delta will be consistent with the analysis contained in the US Fish and Wildlife Service (USFWS) 2008 Operations Criteria and Plan (OCAP) Biological Opinion (BO)." The EA/FONSI/IS/MND should also specify whether the project will be consistent with the National Marine Fisheries Service's (NMFS) recent OCAP BO addressing salmonids and green sturgeon. The EA/FONSI/IS/MND should also discuss the relevant regulatory restrictions that may affect this project that are included in the BOs.

2. On page 1-5, the EA/FONSI/IS/MND states that DWR and Reclamation are providing the EA/FONSI/IS/MND in advance of the issuance of a Programmatic EIR/S for the San Joaquin River Restoration Program, in order to facilitate the State Water Board's review of the petition for transfer pursuant to Water Code section 1725. As noted in the EA/FONSI/IS/MND, the State Water Board may only approve petitions for temporary transfer if the transfer would only involve the amount of water that would have been consumptively used or stored by the permittee or licensee in the absence of the proposed temporary change, would not injure any legal user of the water, and would not unreasonably affect fish, wildlife, or other instream beneficial uses. In order to make this determination, additional information concerning the Seepage Monitoring and Management Plan and the Flow Monitoring and Management Plan will be needed. (see specific comments below).

3. On page 2-5, lines 11-12 state that "...resulting flows in each reach, may be higher than the estimated maximums shown in the table depending on a variety of factors..." The document should also explain whether and when flows may actually be lower than expected, depending on actual evaporation, transportation, seepage, and diversion losses. Only the actual additional quantities of water reaching points of rediversion will be available for rediversion pursuant to any transfer. The document should explain how the quantity of water available for rediversion will be calculated and how such rediversions will be monitored. The document should include a mitigation measure to assure that the transfer does not result in rediversion of water that exceeds the amounts transferred, reduced by evaporation, seepage, and other losses. It should also include specific and clear monitoring and mitigation requirements to assure that there are no impacts to fish, wildlife, and other legal users of water from the project.

4. On page 2-5, lines 25-26 states "...Delta exports would not change in the Proposed Action compared to the No-Action Alternative." However, Table 4-19 provides estimates of potential changes in Delta exports under the proposed project compared to the no-action alternative. The discussion should be clarified.

5. Table 2-4 includes infiltration loss estimates only for Reach 2A. However, page 2-23 indicates that infiltration losses are also expected in Reach 4A. Though no estimate is available regarding the potential losses, it should be clearly stated that these infiltration losses will be monitored and will not be available for recapture pursuant to any transfer.

6. Table 3-8 lists striped bass as both introduced and native. The native listing should be removed.

7. Section 4.5 regarding potential impacts to fish from the proposed project does not describe the thresholds of significance that were used to determine whether impacts were significant or less than significant. In particular, the document does not adequately describe why an increase in reverse flows by 74% in February of dry years is a less than significant impact. Additional explanation should be provided.

8. On page 4-67, line 28-32 the document states "Constituents, including pollutants associated with agricultural practices in the region, which may have accumulated in dry segments of Reach 4A, would be flushed from sediments within the river channel through implementation of the Proposed Action. Surface water quality impacts within Reach 3 and Reach 4A under the Proposed Action would be less than significant." However, no information is provided to support the conclusion that water quality impacts would be less than significant. The basis for this conclusion should be provided.

9. Table 4-19 compares Delta exports under the proposed project with exports that would occur under the no-project alternative. Information should be provided on whether or not these are exports as they would exist under the OCAP BOs.

10. The Seepage Monitoring and Management Plan for WY 2010 [Appendix D] explains that the Restoration Area has historically experienced groundwater seepage to adjacent lands at elevated flows. However, the document fails to identify at what flows and at which locations in the Restoration Area such seepage and levee instability resulting from through-levee and under-levee seepage has occurred. Section 1.1 (Overview) states

that "the intention of this plan is to identify direction for seepage monitoring and management, but not to offer details on the design and seepage monitoring activities (e.g., location of groundwater wells, timing, and frequency of levee patrols)". To identify environmental and water quality impacts and determine affects of any levee seepage on groundwater, it is necessary to include additional information on groundwater wells. The Appendix does not provide any technical information on how the monitoring well locations will be established. Particularly, a description of the hydrologic setting, information on what approach will be used to select reliable sampling points, their effectiveness and durability, criteria for placement and number of wells, and the degree of spatial and temporal details considered to meet the goals of the Restoration Program are all missing.

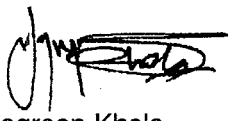
11. The EA/FONSI/IS/MND proposes channel modification at some reaches in the San Joaquin River but fails to provide sufficient technical information or supporting evidence that there would be a less than significant impact from the proposed activity. It is possible that deepening of stream channels could alter their interaction with groundwater, potentially impacting both local groundwater levels and in-stream water quality and fish and wildlife habitat. Appendix D does not include technical information and appropriate discussion to address these issues.

12. The map included in Appendix D shows only the location of existing wells but does not provide any information on existing and proposed monitoring wells. Technical information on existing and proposed monitoring wells is necessary in collecting representative water quality samples, determining salt aggregation and mobilization, and determining impacts from any lateral levee seepage and infiltration losses of water on groundwater. Without providing available and pertinent information on existing wells and proposed wells (not necessarily design information of wells), it is difficult to understand how the proposed actions would effectively achieve the project goals of collecting representative water quality samples; determining any salt mobilization; measuring impacts on wildlife habitat, groundwater, and impacts on water quality of agriculture and municipal wells on adjacent properties.

13. In addition, Appendix D does not provide information on any exploratory wells and test holes, abandoned wells, agriculture drainage wells and their proximity to canals, and water supply wells. Identification and information on any abandoned wells in the Restoration area should be included. Any available information on non-pumping water levels for all wells in the vicinity of the Restoration Area shall be included in the Appendix as it could provide historical information on the hydraulic conditions. Analysis of information may reveal changes in flow paths and serve as a check on the effectiveness of the wells to monitor changing hydrologic conditions. It is important to understand the seasonal changes in water levels and associated chemical concentration variability at the monitored area.

State Water Board staff looks forward to continue working with Reclamation and DWR on their environmental review effort for this project. If you have any questions concerning this matter, please contact Jagroop Khela, Water Resource Control Engineer with the Division of Water Rights at (916) 445-5968, or by e-mail at Jkhela@waterboards.ca.gov.

Sincerely,



Jagroop Khela
Water Resource Control Engineer

cc: (First Class Mail only)

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Continued on next page.

cc: Continued from previous page.

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Attachment 2

NICKEL FAMILY LLC

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(661) 872-5050 • Fax: (661) 872-7141

July 21, 2010

San Joaquin River Restoration Program (SJRRP)
United States Bureau of Reclamation
2800 Cottage Way
Sacramento CA 95825-1898

Attn: Mr. Jason Phillips

RE: WY 2010 SJRRP Interim Flows

Dear Sirs:

The Nickel Family, LLC, owner of the San Juan Ranch is writing this letter to formally request action relating to the WY 2010 Interim flow program within the SJRRP.

As President of the Nickel Family, LLC, I have been actively engaged in the interim flow program from the very beginning. My thoughts, concerns, and general viewpoint of how the program was progressing have been continuously documented with phone calls, e-mails, and letters.

I have clearly stated that these flows were not to impact my groundwater table, the salt levels within my fields, my farming practices, or my crop yields. I have even invested in my own field level monitoring program to have data that could help me react to issues in a quick and responsive nature based on the impacts of the river flows. Unfortunately, I now find that I must write this letter because of the damage we are experiencing because of the interim flows, and the lack of action by the USBR.

The USBR has bent over backwards to make sure that the environmental community continues to have their input in the process and receives every possible drop of water out of Friant. They have also made sure that there is an accurate water accounting in the Mendota Pool so that the Friant Contractors can recapture and recirculate their water. Unfortunately, when it comes to the folks directly impacted by the flows purposely dumped on us, it seems our voices fall on deaf ears. I, along with my neighbors, need to be shown the same professional courtesy and responsiveness as the other parties. We all agreed to a deal in the legislation and the Bureau agreed to terms and conditions in the SWRCB permit. Yet after only 7-8 months of interim flows, I as a third party am feeling the effects of unmitigated impacts, as are other similarly situated farmers.

There is absolutely no reason why third parties such as Nickel Family, LLC are not being worked with on a daily basis to figure out how to mitigate our issues with the current flow path in the River. You have approximately 50 cfs passing downstream of the Sack Dam into Reach 4a where we are having our issues. For a variety of reasons, the majority of this flow is not

making it past Washington Avenue. It is being checked up at a higher elevation in this reach and making its way out to our fields in the form of seepage. At this time, with the current flows in Reach 4a, the program is not receiving valuable information for either your Restoration or Water Management goal. **Therefore, the USBR should either immediately decrease flows or stop them all together downstream of Sack Dam, in order to gather data to see if it would lower the surrounding groundwater levels and benefit my operations.**

Based on the groundwater data collected to date, flow levels and height of water in the river, observations made in my various fields relating to plant health and vigor, salt build up in the soil, and expert opinions from various consultants, **I have had, and will continue to have, impacts from the current interim flow regime.**

Therefore, based on the Bureau's lack of response to my concerns I will be doing the following:

- I will take my issues before the State Water Resources Control Board staff and board members to prove to them that under the current program I am experiencing 3rd party impacts with no mitigation in sight.
- I will ask the SWRCB for immediate relief of the current flow regime downstream of Sack Dam for the remainder of the current permit.
- I will explain to the SWRCB in person as well as in writing the changes that need to be made as they review the proposed WY 2011 SWRCB permit for SJRRP flows

Of course I reserve the right to consider and take other actions to protect our rights. I hope that I will not have to take the USBR to court for monetary damages on my crop losses and salt buildup within my soil profile, but I will explore that as an option as my crops are harvested over the next 60 days.

As I have stated in the past, this is a long-term program that is just in its infancy stage, yet significant damages are already occurring and being ignored. Until the USBR focuses on working with the landowners on a daily basis and fostering a cooperative relationship while at the same time spending the resources in a productive manner within our service area, this program will never be a success.

Sincerely,

James L. Nickel

cc: Senator Feinstein
Congressman Cardoza
Congressman Costa

From: "Phillips, Jason R" <JPhillips@usbr.gov>
Date: July 22, 2010 6:07:39 PM PDT
To: Jim Nickel <jlnickel@nfllc.net>, DeeDee D'Adamo <ddadamo@earthlink.net>, Jim Costa <jimcostamc@mail.house.gov>, "Gasdick, Alicia E" <agasdick@usbr.gov>
Cc: JAMIE <jcnickel@nfllc.net>, Chase Hurley <chase@hmrd.net>, Christopher White <cwhite@ccidwater.org>, Scott Morris <smorris@kmtg.com>, "Leah_Russin@feinstein.senate.gov" <Leah_Russin@feinstein.senate.gov>, "Roos, Vince" <Vince.Roos@mail.house.gov>
Subject: RE: Jason Phillips letter

Dear Mr. Nickel,

We have received your July 21, 2010, letter regarding the San Joaquin River Restoration Program's Water Year 2010 Interim Flows (WY 2010 Flows) and will be providing a more detailed response in the near future. In your letter, you raise concerns that the Interim Flow releases are not in compliance with the Settlement, Public Law 111-11, and the State Water Resources Control Board Order. Although we understand that you feel differently, we believe we are implementing the WY 2010 Flows fully in compliance with the Settlement, Public Law 111-11, and the Order. I would propose that we meet and discuss the specific violations that you believe have occurred with a goal of better understanding why we have different conclusions.

The information currently available to us on groundwater levels in the area do not suggest that the Interim Flows are causing seepage impacts at this time. We understand that you may not agree with our assessment, and would like to continue to work closely with you to gather more information. In your July 21, 2010, letter and your e-mail on July 6, 2010, you have identified that you are experiencing potential salt damage to your crops. As was expressed in my July 6, 2010, and July 9, 2010, e-mails, we would like to work with you in the investigations you are conducting and are planning to have staff from Reclamation's Fresno, Sacramento, and Denver offices conduct a site visit to collect additional data, conduct informal interviews, and document the issues you have observed. We have planned this site visit with you for July 29. As I mentioned previously, any data you may have that you have not already shared with us would best utilize our collective resources to come to a better understanding of the issue.

We appreciate your willingness to allow Reclamation to monitor shallow groundwater and salinity conditions on your property and look forward to continuing to work with you to make progress on these issues.

Sincerely,

Jason Phillips

Jason Phillips

U.S. Bureau of Reclamation

SJRRP Program Manager

(916) 978-5456

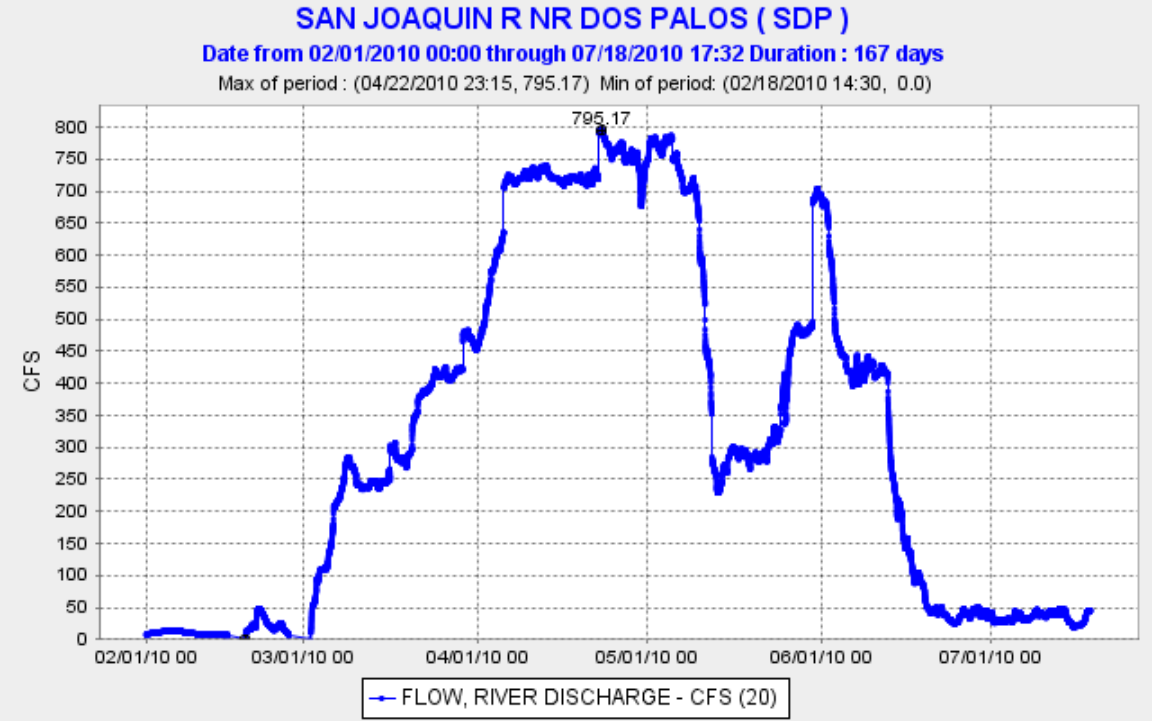
jphillips@usbr.gov

Attachment 3

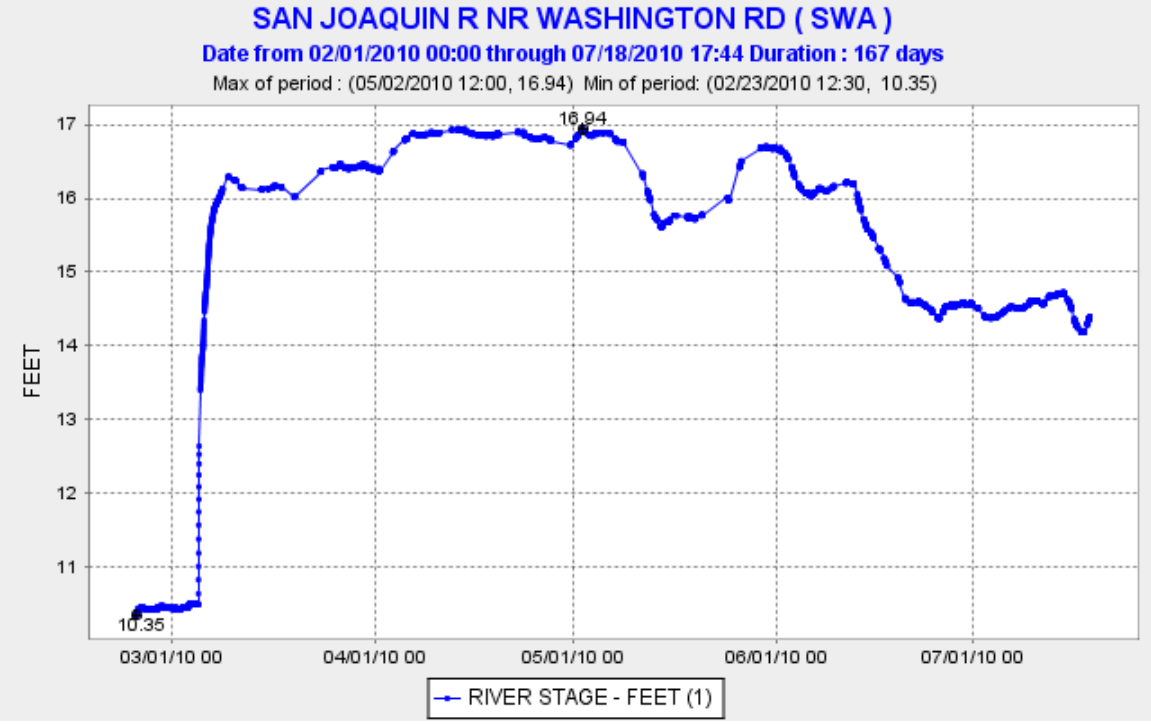
Report on the Effects of San Joaquin River Interim Restoration Flows on Shallow Groundwater Within CCID

Releases of San Joaquin River Interim Restoration Flows from Friant Dam began on October 1, 2009, and were temporarily terminated on November 20th 2009, which was the duration for flows in 2009. Largely due to channel losses, only a small volume of Interim Flows made it passed Sack Dam for a few days in November before releases were terminated.

Interim Flows were commenced again on February 1, 2010, and are scheduled to run through September 30, 2010. The flows passed Sack Dam on approximately February 20th, and have been flowing through Reaches 3 and 4A continuously since that time. The following chart is taken from the State of California, Department of Water Resources, California Data Exchange Center (CDEC) Website, showing the flows in the San Joaquin River, just downstream of the Sack Dam. The site is the San Joaquin River near Dos Palos, (SDP).



The measured flow at SDP, which is located at the head of reach 4A, represents the level of Interim Flows that were present in Reaches 3 and 4A in 2010. DWR also re-established a gauging station near Washington Avenue (SWA), at the end of Reach 4A in 2010, but the stage versus CFS flow rate has not yet been established. The following is the measured stage at SWA taken from CDEC. The flow at Washington Avenue should have about the same magnitude as at SDP.



To determine the actual depth of water in the San Joaquin River at SWA, one must subtract 10.35 feet from the measured gauge heights, for example, if the gauge height is 14', the depth of water in the SJR is approximately 3.7'. Looking at the graph, it can be seen that the depth of water was approximately 6.5' at the end of Reach 4A when the Interim Flows were at about 750 cfs. Even though the flows in reach 4A have dropped to a base level of around 40 cfs to 50 cfs near the end of June, the depth of flow in the lower Reach 4A has remained abnormally high, at a depth of 4.0' to 4.5 feet, due to the elevation of the Sand Slough Control Structure and the East Side Bypass channel.

As built drawings of the construction of the Sand Slough Control Structure and the East Side Bypass show that the Structure was built to only deliver low flow San Joaquin River flows to the head of the old Sand Slough near Washington Avenue. The structure is basically a 15’ long partial flume fitted with weir board guides on the upstream side, and a concrete low flow containment levee. The center bays are not efficient due to impacts from silt buildup and aquatic plants. Only the outer most bays are partially open. In addition, water is backing down from the East Side bypass even under the very low flows.

Sand Slough Control Structure

Interim Flow Water 4+’ deep, under very low flows., in Reach 4A.

(Photo looking westerly)

As a result of these flow obstructions the interim flows in the river remain over 4’ deep even under flows of around 40 cfs to 50 cfs. The water surface in the above photo, taken

on July 14, 2010, was at elevation of 103.5. At an elevation of 103.5, water in the river is only 4.0 feet below the surrounding ground surface to the west. Therefore, interim flows are contributing to very high groundwater levels in adjoining ground this flow condition.

Sand Slough Control Structure

Center bays completely plugged with silts and aquatics.

(Photo looking west)

High water mark adjacent to the Sand Slough Control Structure

Existing water line shown is at 40 cfs to 50 cfs Interim Flows, the visual High Water mark is from 750 cfs Interim Flow (Photo looking east)

As a direct result of the obstructions related to the East Side Bypass connection, the Interim Flow created a water surface within the river of about 6.5 feet deep or an elevations in the lower Reach 4A that was only 1.84 feet below the surrounding ground surface for most of March April and the first 10 day of March. In May, at least partially due to the information submitted CCID to the SJRRP, the Program reduced Interim Flows to about 350 cfs below Sack Dam into Reach 4A.

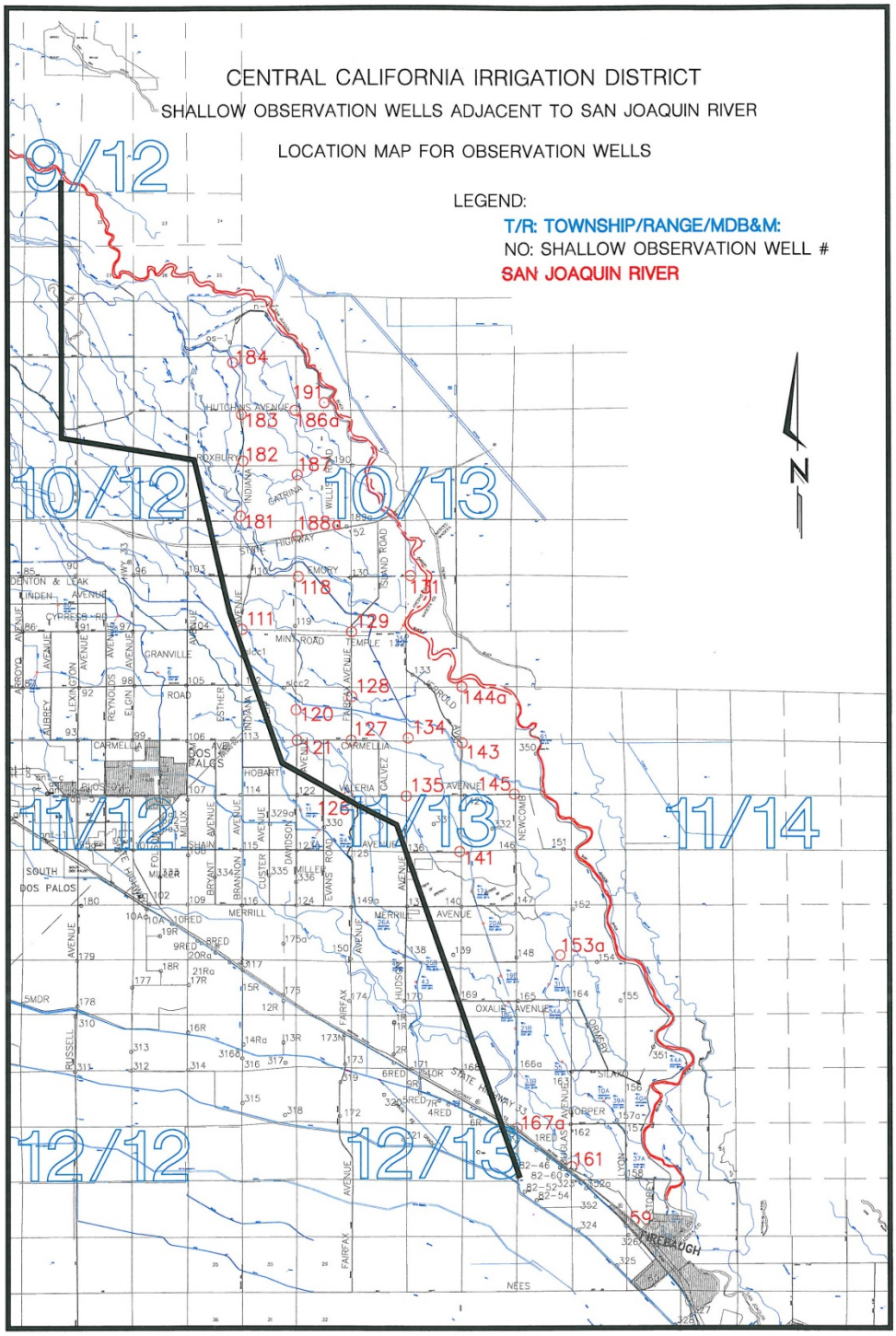
Table 1

	Interim Flow Rate (cfs)	River Stage (SWA) (Feet)	Depth of Water in River (Feet)	River WS versus Adjacent Land (Feet)
No Flow	0	10.35	0	-8.4
Low Flow	50	14.72	4.4	-4
Reduce Flow in April	350	15.7	5.35	-3.05
High 2010 Flow	750	16.95	6.6	-1.8

Table 1 shows the relationship between the Interim flow rates in Reach 4A and the resulting river water surface relative to the adjoining land. At the higher flows, during most of March, April and portions of May and June, the water surface in the river was between 2.4 and 1.8 feet below the surrounding ground surface. This has had a significant impact on the groundwater levels in Reach 4A.

Groundwater Levels:

CCID has maintained and monitored shallow groundwater observation wells within its service area since 1983. The District has typically measure depth to groundwater, and taken water samples to measure both Electroconductivity (EC) and Boron. The following is a base map showing the location of the CCID shallow observation wells within the CCID boundaries and within 3 miles of the San Joaquin River northwest of the City of Firebaugh.



Map of Shallow Observation Wells within 3 miles of the San Joaquin River

Red Highlighted Wells indicated locations impacted by Interim Flows

During the 2010 interim flow period CCID has monitored the depth to groundwater more frequently and has reported the information to the SJRRP. CCID has about 56 shallow observation wells within the area which we have been monitoring. Of these, groundwater levels within 25 wells are being impacted by interim flows.

OB. WELL NO.	Depth to Groundwater Measurement	Depth to Groundwater Measurement
Date of Measurement	6/28/2010	4/7/2010
110	-4.1	
111	-2.8	-3.2
118	-4.1	-4.5
119	-3.6	-5.0
120	-3.7	-4.5
121	-4.6	
126	-3.5	-4.2
127	-3.3	-3.8
128	-3.3	-4.3
129	-2.5	-1.6
130	-3.1	-7.4
131	-10.4	-12.5
132	-9.6	-9.1
133	-5.0	-7.8
134	-1.4	-1.8
135	-4.5	-5.3
136	-4.5	-5.9
139	-16.2	-15.8
140	-9.3	-9.0
141	-3.1	
142	-3.2	-3.4
143	-3.4	-3.8
145	-3.6	-3.9
146	-6.3	-5.6
147	-5.6	-7.9
148	-13.8	-13.7

OB. WELL NO.	Depth to Groundwater Measurement	Depth to Groundwater Measurement
Date Of Measurement	6/28/2010	4/7/2010
151	-5.3	-8.4
152	-6.3	-7.0
154	-5.7	-7.9
155	-9.3	-10.7
156	-5.8	-8.3
157	-5.1	-7.8
158	-11.0	-12.6
159	-13.1	-6.8
161	-1.6	-4.4
163	-10.9	-12.2
164	-7.1	-9.9
169	-12.9	-12.5
181	-9.7	-7.9
182	-3.0	-2.7
183	-2.5	-3.3
184	-4.3	-5.3
187	-2.4	-3.3
190	-10.3	-11.1
191	-6.2	-7.4
350	-8.5	-8.5
351	-9.5	-11.8
144A	-7.0	-6.2
153A	-3.3	-4.5
162A	-10.3	-11.7
165A	-11.3	-12.4
166A	-13.0	-12.7
167A	-2.3	-3.4
186A	-2.3	-4.5
188A	-4.1	-4.2
189A		
331A		

= Depths impacted by interim flows.

The Interim Flows have caused shallow groundwater in these areas to rise to the levels of March of 2006 when the river was in extreme flood stage (4500 cfs from Pine Flat Reservoir).

The following Chart 1 shows the impact of Interim Flows on shallow groundwater and shows all the depth measurements taken from the wells from the Spring of 2006 until today.

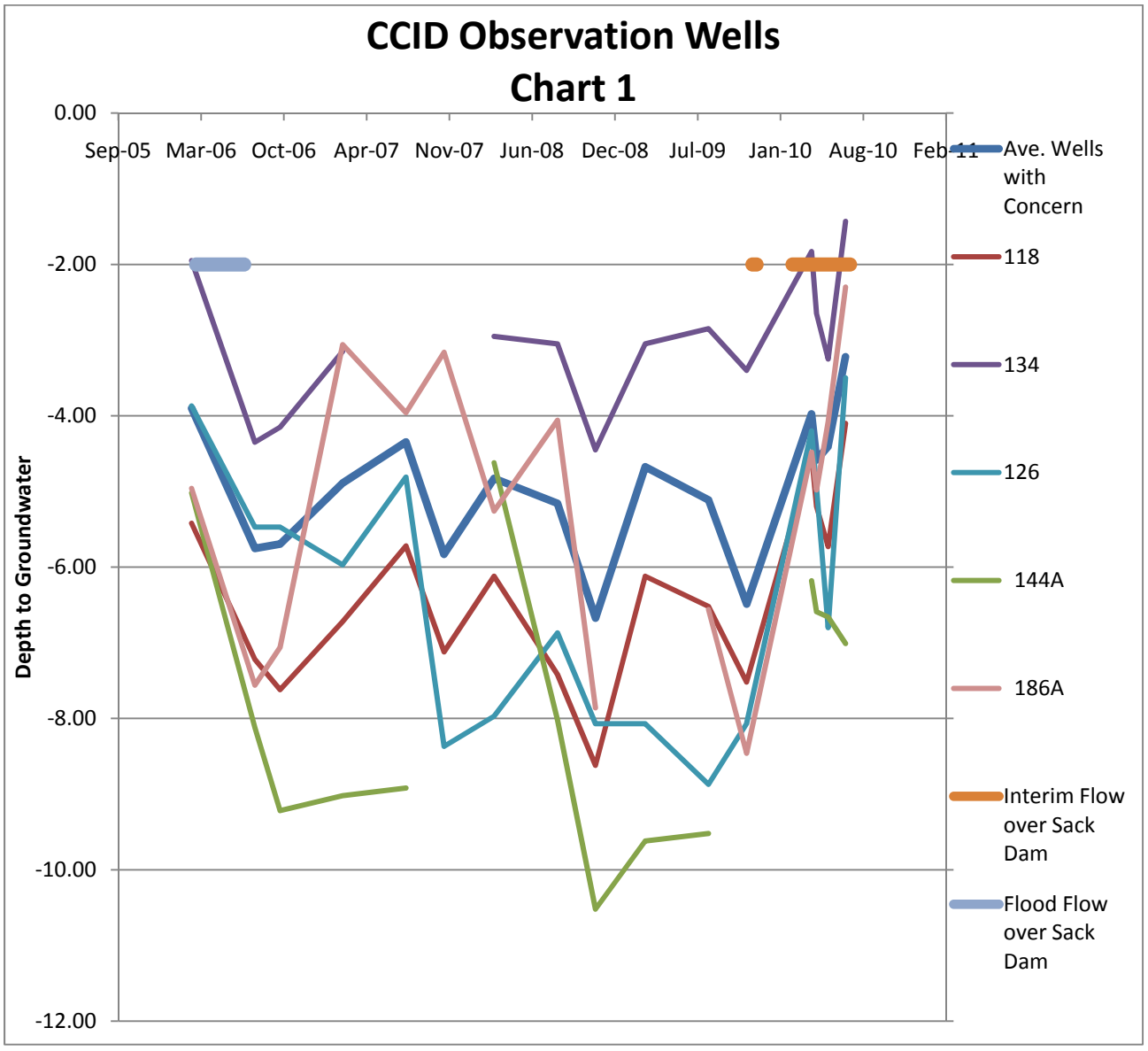
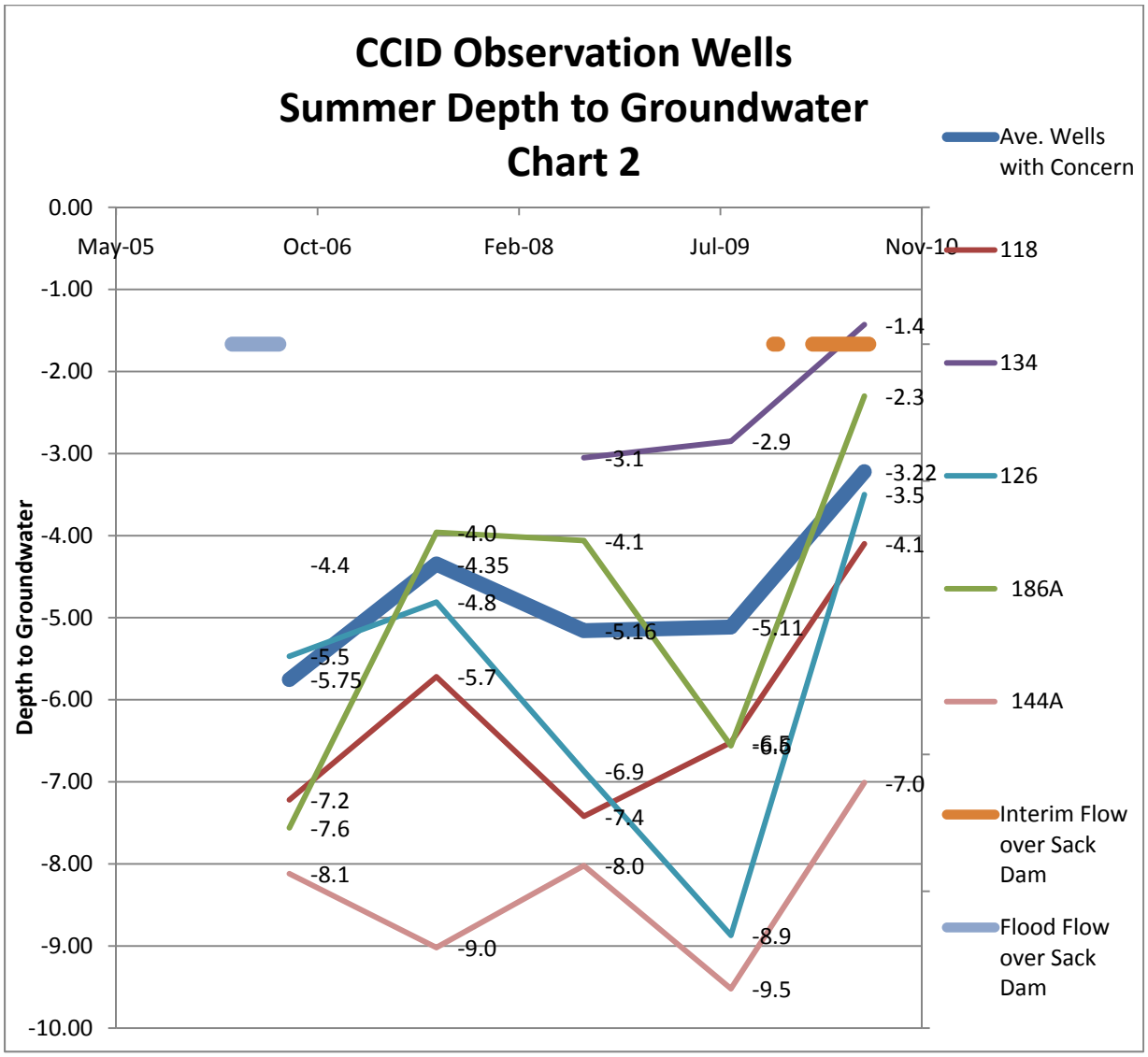


Chart 2 is a plot of the summer depths to groundwater in the same wells. The data shows that the summer of 2010 is on average 1.9 feet more shallow than summer 2009 and well within the buffer zone provided under the SJRRP seepage management program.



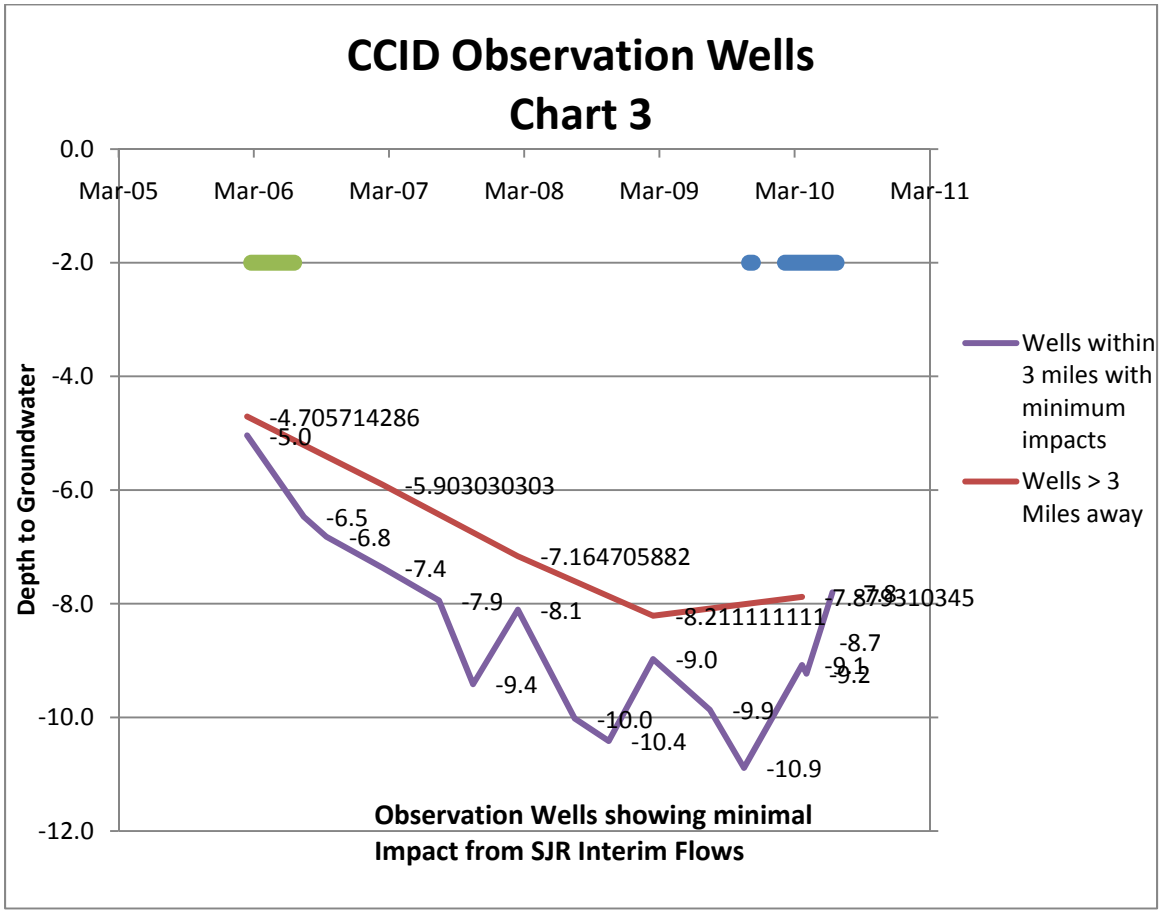
Question – How do we know that the increased levels are not simply from the rainfall this spring?

Answer – The groundwater impacts are primarily from Interim Flows.

1. The rainfall this spring is not significantly higher in this area than in 2009. The rainfall depths measured at Los Banos were as follows:
    1. 2009-2010 11.24”
    2. 2008-2009 7.02”
    3. 2007-2008 3.68”
    4. 2006-2007 10.93”

5. 2005-2006 14.86”

2. Only the groundwater in specific areas within 3 miles of the river is impacted. If these were rainfall related we would expect regional, across the board, impacts.
3. Almost none of the wells located 3 to 6 miles away from the river show any such impacts.
4. The hydrographs from continuous recorders within 2 CCID wells show direct correlation to the measured river stage within the SJR.



Question – What site conditions are present in areas where these impacts are occurring? What’s causing these impacts?

Answer –

1) The San Joaquin River in reaches 3 and 4A is situated on a ridge. On the west side, both surface and sub-surface drainage flows away from the river from east to

west. When flows are present in the river it immediately provides seepage into the adjacent groundwater.

2) The local landowners have long maintained that while the old sloughs are no longer directly connected to the river, they act as underground conduits (sand stringers). The location of many of the wells where impacts are encountered are near the old Poso and Santa Rita Sloughs. These sloughs are presently used to convey irrigation tailwater from the area. Gauge measurements of slough flow show equal or less in 2010 than 2009 eliminating tailwater or rainfall runoff as a factor.
3) The lower Reach 4A has been significantly impacted due to the artificially high water elevation needed to push even low flows out of reach 4A and into the East Side Bypass. The water surface is artificially high from the San Slough Control Structure all the way south to about Highway 152.

Question: What are the impacts to the adjacent land from groundwater being raised by Interim Flows?

Answer: There are several potential impacts which would affect the plant growth and production.

1) Lack of oxygen. If soil saturation is sufficient, and waters become depleted of oxygen, roots can die quickly, within hours depending upon several factors.
2) Root Pruning. The fine roots which are very important for nutrient uptake, growth and yield are damaged or killed. This may lead to nutrient deficiencies.
3) N2 fixation. N-fixing bacteria live in nodules which can slough off during saturated conditions, reducing N fixation.
4) Since the roots are damaged, re-growth is compromised, and some plants may be killed.
5) These effects are exacerbated under some conditions, such as with elevated temperatures and high BOD, tight soils or high EC.
6) Stage of growth, variety and other factors may affect the extent of damage. Depth of water table is likely a major variable.

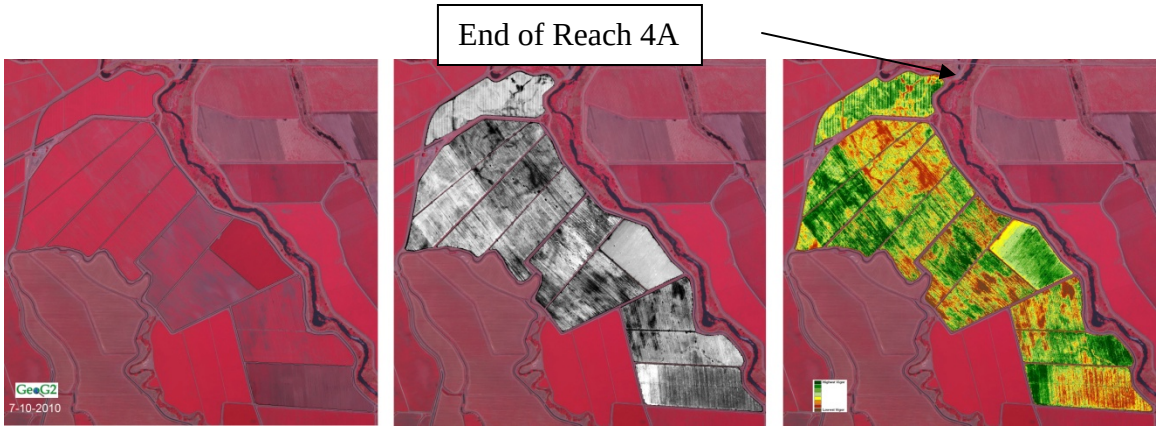
7) Length of time of saturation, the layering, the structure as well as the texture of the soil will determine the extent of the damage.
8) Disease issues such as phytopthora can be major issue under saturated soil conditions.
9) High humidity near the soil surface, due to saturated soils, creates conditions for diseases, such as sclerotinia, and leaf diseases, and slow the drying of the soil (leading to compaction during harvest), and delays drying of the crop, causing windrow damage.

The background groundwater quality within the affected wells is as follows:

Ob Well No.	EC- Nov. 2009	Ob Well No.	EC- Nov. 2009
110	2150	154	1377
118	1303	156	989
119	4510	157	680
120	4090	159	910
121	3010	161	1818
126	1846	164	1899
127	1193	165	1588
128	1411	167	2020
129	1078	182	1566
133	1628	183	1084
134	2670	184	902
135	2100	186	1748
136	1708	188	782
141	1882	189	1360
142	3380	331	1148
143	1308		
145	2530		
146	1468		
147	937		
152	750		
153	943		

CCID looked at selected fields near the end of Reach 4A to see if crop damages are occurring where the river water surface has been within 1.8 feet of the farmed land

surface for a significant period this spring, and is still within 4 feet. Visually, large portions of the tomato fields irrigated by drip and owned by Nickel are damaged. In addition, the landowner's consultant provided the imagery of the SJR River area with the false color IR, gray scale NDVI, and the 8 class colorized NDVI, areas in Red representing poor vegetation and the green is dense vegetation.



The areas showing poor vegetation are also within the areas near where shallow observation wells measure shallow groundwater due to Interim Flows. We believe these impacts are present throughout Reach 4A and portions of Reach 3.

Question: How could this have happened, how did the existing seepage management plan fail to protect these lands?
Answer: The seepage management plan did not operate as intended.

The program has been notified several times this spring of potential seepage impacts to surrounding groundwater from interim flows. Attached is such a communication to the program from CCID on April 29, 2010, in which the program was advised to reduce interim flows and perform the site visits to lands adjacent to the wells to assess impacts as prescribed by the seepage management plan. In response the program actually did reduce interim flows in Reaches 3 and 4A from about 750 cfs to about 350 cfs for two weeks in mid-May, after which the Interim Flows were raised again to 750 cfs for a short duration. To the best of CCID's knowledge, the program never performed assessments at the sites.

In addition, the program never has referenced the river stage elevations at key points to the adjacent ground and groundwater levels which would be necessary to detect potential for river seepage damages as are seen within Reach 4A.

Attachment

April 29, 2010 Communications with SJRRP about Seepage Impacts

From: Phillips, Jason R [mailto:JPhillips@usbr.gov]
Sent: Thursday, April 29, 2010 5:03 PM
To: Christopher White; Mooney, David M
Cc: Jackson, Michael P.; Buelna, Antonio M.; Deflitch, Douglas A; Salazar, Edward; Steve Chedester; Chris White; Chase Hurley; Reggie Hill; Harrison, Katrina E; Randy Houk; Faulkenberry, Kevin; Gasdick, Alicia E; Larry Freeman; Joann White; Tracey Rosin; TMBerliner@duanemorris.com; Paul Minasian; John Relvas; James L. Nickel; James O'Banion; Morris, Scott A.; Monty Schmitt; Rod Meade; Ron Jacobsma
Subject: RE: Interim Flow Seepage Impact Analysis

Thank you Chris for this additional analysis and highlighting the potential issue in reach 3. We will review your information for consideration in our seepage management analysis. Reclamation has recently performed multiple site visits in reach 3 downstream of Mendota Dam in response to landowner calls to the seepage hotline.

Also, I've included representatives of the Settling Parties on this e-mail to keep them up to speed on this issue as it is having an effect on the Settlement flows.

Thanks,
Jason

Jason Phillips
U.S. Bureau of Reclamation
SJRRP Program Manager
(916) 978-5456
jphillips@usbr.gov

From: Christopher White [cwhite@ccidwater.org]
Sent: Thursday, April 29, 2010 2:26 PM
To: Christopher White; Mooney, David M
Cc: Jackson, Michael P.; Buelna, Antonio M.; Deflitch, Douglas A; Salazar, Edward; Steve Chedester; Chris White; Chase Hurley; Reggie Hill; Harrison, Katrina E; Randy Houk; Phillips, Jason R; Faulkenberry, Kevin; Gasdick, Alicia E; Larry Freeman; Joann White; Tracey Rosin; TMBerliner@duanemorris.com; Paul Minasian; John Relvas; James L. Nickel; James O'Banion; Morris, Scott A.
Subject: Interim Flow Seepage Impact Analysis

David,

We have re-measured the depth to groundwater in the CCID observation wells and continue to identify areas of high potential for crop damage due to interim flows.

Area North of Firebaugh:
For background, the section the CCID is situated within 3 miles of the river and north of the City of Firebaugh is comprised of approximately 15,000 acres. There are a wide variety of annual crops grown within the area. Alfalfa is a year round crop which has a

high potential for damage from rising groundwater. This specific area presently has about 5700 acres of alfalfa being grown. The other crops such as cotton (3500 acres), tomatoes (2000 acres), corn (1800 acres), melons, etc. will be planted soon of have just been planted. The other crops would be potentially damaged by rising groundwater caused by interim flows since most of the shallow groundwater is relatively highly saline. There are about 400 acres of permanent crops (orchard) within the area and about 400 acres of wheat which is soon to be harvested.

Water Quality:
The following is the latest water quality measurements taken from the groundwater within the CCID shallow observation wells in this area.

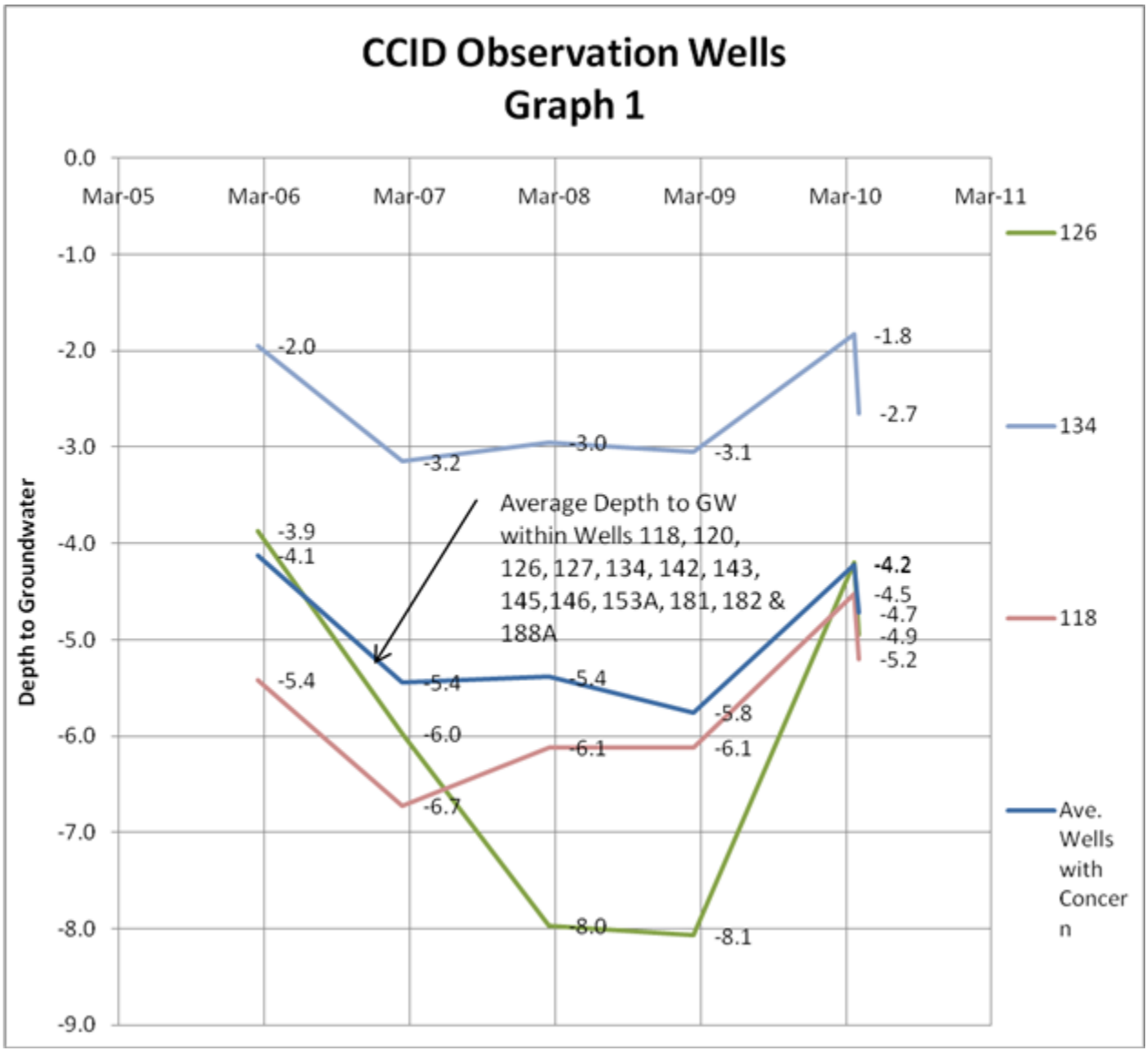
SHALLOW
OBSERVATION
WELLS
Water Quality

Ob Well No.	EC- Nov. 2009	Ob Well No.	EC- Nov. 2009
110	2150	154	1377
118	1303	156	989
119	4510	157	680
120	4090	159	910
121	3010	161	1818
126	1846	164	1899
127	1193	165	1588
128	1411	167	2020
129	1078	182	1566
133	1628	183	1084
134	2670	184	902
135	2100	186	1748
136	1708	188	782
141	1882	189	1360
142	3380	331	1148
143	1308		
145	2530		
146	1468		
147	937		
152	750		
153	943		

Depth to Groundwater:

CCID has about 56 shallow observation wells within the area which we have been monitoring. Of these it appears that groundwater with 21 wells are being impacted by interim flows. The groundwater at 13 of the sites has risen to the level that could damage the crops grown.

Graph 1 shows hydrographs for Wells 126, 134, and 118 and the hydrograph of the average depth to groundwater of the wells of present concern.

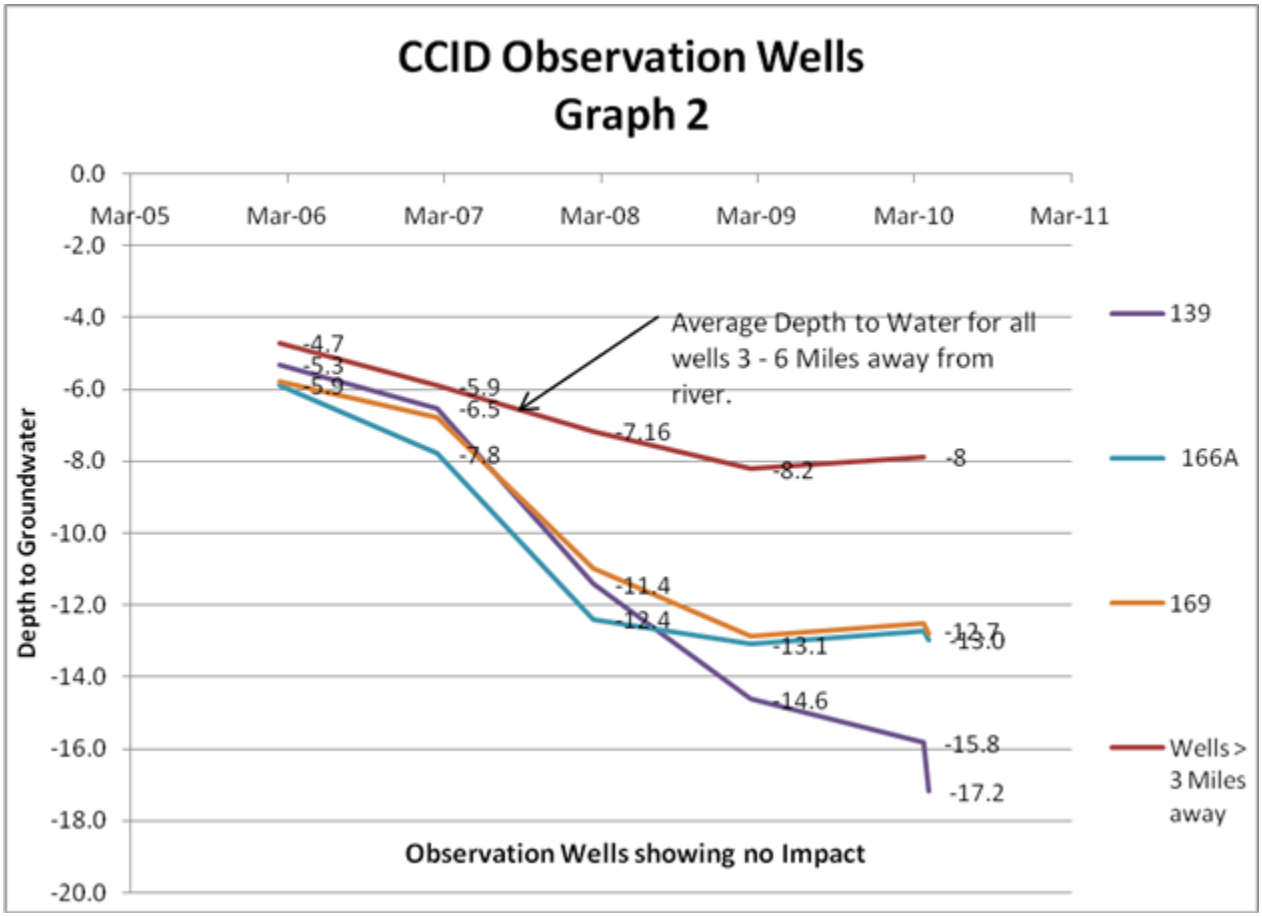


The chart shows that the interim flows have caused shallow groundwater in these areas to the levels from of March of 2006 when the river was in extreme flood stage (4500 cfs from Pine Flat Reservoir).

Question – How do we know that the levels are not simply from the rainfall this spring?

Answer – The groundwater impacts are primarily from Interim Flows.

1. The rainfall this spring is not significantly higher in this area than the March 2009.
2. Only the groundwater in specific areas within 3 miles of the river is impacted. If these were rainfall related we would expect regional, across the board, impacts.
3. Almost none of the wells located 3 to 6 miles away from the river show any such impacts.
4. The hydrographs from continuous recorders within 3 CCID wells show direct correlation to the measured river stage within the SJR.

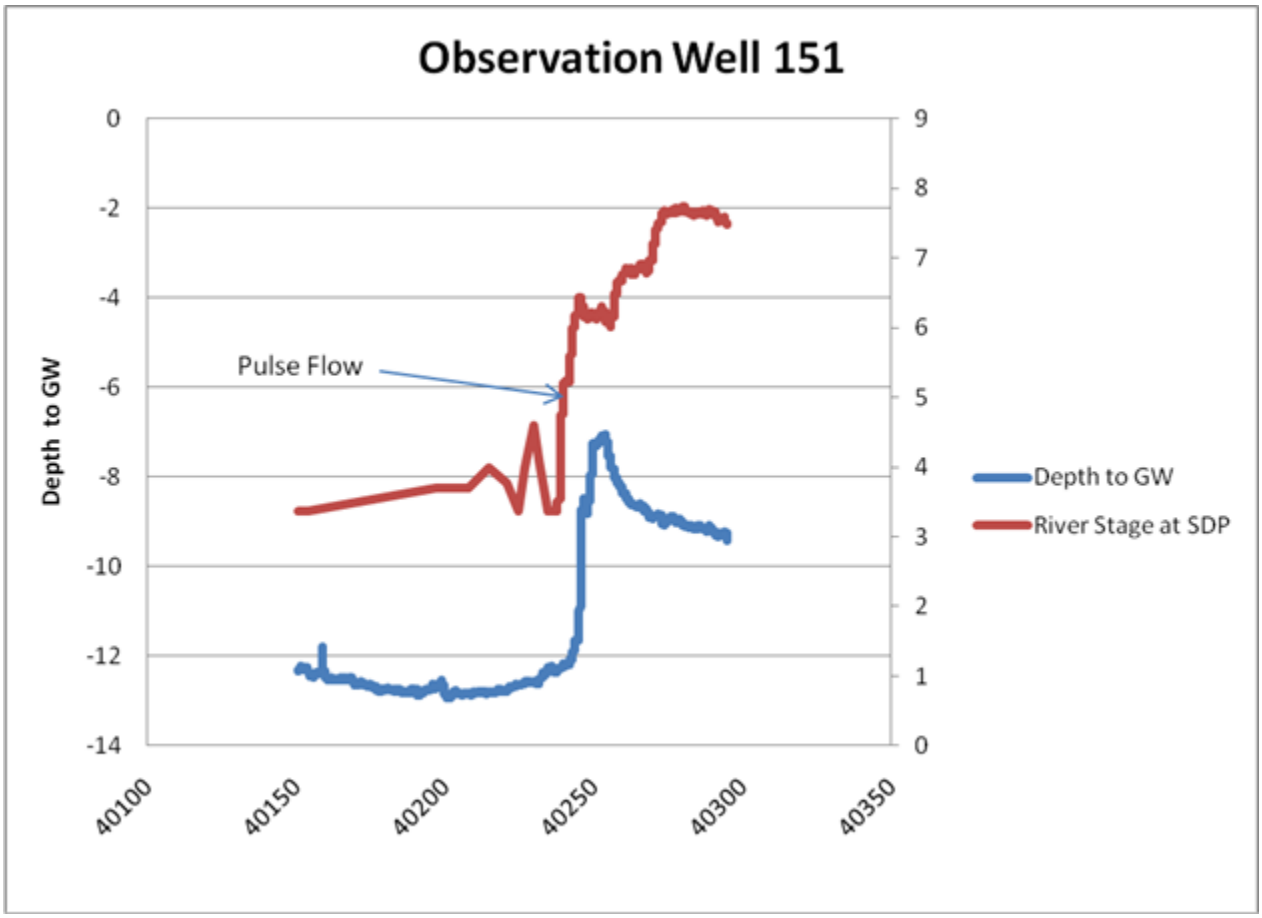


Question – What site conditions are present in areas where these impacts are occurring? What's causing these impacts?

Answer – The San Joaquin River in reaches 3 and 4A is situated on a ridge. On the west side, drainage flows away from the river from east to west. The local landowners have long maintained that while the old Sloughs are no longer directed connected to the river

act as underground conduits (sand stringers). The location of many of the wells where impacts are encountered are near the old Poso and Santa Rita Sloughs. These sloughs are presently used to convey irrigation tailwater from the area. The irrigation season has not really started yet due to the weather. Gauge measurements of slough flow show equal or less in 2010 then 2009 eliminating tailwater or rainfall runoff as a factor. In other areas such as Nickel, the lands are adjacent to the river and lower in elevation.

The following graph shows how the groundwater surface in observation Well 151 reacted to new interim flows in the river. The graph is similar for all three wells where CCID maintains continuous recorders in the area.



One site just Downstream of Mendota Dam. In addition, groundwater within our monitoring well #364, located adjacent to Almond orchards downstream of the Mendota Dam has risen from 8.6' deep in March to 5.5'. This is a high potential to damage the almond crop.

Conclusion: The Interim Flows are already having significant impacts on the groundwater within Reaches 3 and 4. CCID is advising that interim flow levels below Mendota Dam should not be increased and probably reduced because of seepage impacts.

The seepage site assessments called for in the Seepage Monitoring and Management Plan needs to be accomplished at each of the sites to assess crop impacts and to help in determining if a flow reduction to the last safe flow level is needed. We will assist the program to complete these as soon as possible.

1. Careful attention to increases in Reach 3. As San Luis Canal Company increases irrigation deliveries the total flow in reach 3 will escalate if Interim flows are not reduced by a like amount.
2. Another indicator that flows should be reduced. The groundwater situation in the area is likely to get much worse since interim flows have already filled up the soil profile, and now irrigation of alfalfa (and most crops in general) is about to begin. There is no space for deep percolation from the irrigation. In the past when flood flows were present the rainfall precluded irrigation. Now with the artificial hydrographs for interim flows, river pulse flows will be present for the next month which is forecast to be warm and requiring irrigation.

Christopher L. White, PE
General Manager
Central California Irrigation District
Post Office Box 1231
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Attachment 4

Attachment 4

Drought & Pumping Impacts Could Hit Valley's Eastside

Tulare County - The drought that has punished the west side of the Valley this summer could spread to the east side this coming season if the combination of predictions of another dry year and adverse court rulings translates into a much reduced supply of water being sent south of the Delta. And, it could mean more pumping of groundwater.

That's the message from a number of eastside water agencies who are preparing for the worst while hoping for the best. They want to spread the word.

"The orange growers of Tulare County have to understand that we have a major stake in the health of the Delta," says Dan Vink, general manager of the Lower Tule Irrigation District, a Friant contractor. "We are the first exporters out of the Delta" even though all of Friant water supply comes from the San Joaquin River – well south of the Delta.

Vink says other beneficiaries of Friant water, like the cities of Fresno, Lindsay and Orange Cove, are in the same boat. "There will be significant cost to fix the Delta and all of the users will have to step up to the plate."

About half of Tulare County's overall delivered water supply doesn't come from this county's back yard rivers and nearby runoff. It comes from Fresno and Merced's back yard – the upper San Joaquin River – diverted at Friant Dam into the 150-mile Friant-Kern Canal.

It is that supply that greens up the Valley's eastside dominated by small farms and permanent plantings of citrus, grapes, nut trees and the world's largest dairy milk shed. Depending on weather, the feds bring in a million to 3 million acre feet a year into the Tulare Lake Basin. The state brings in around 1 million to 2 million acre feet depending on northern California weather.

Meanwhile, rivers like the Kaweah bring an average of 300,000 to 400,000 acre feet of water down the hill each year and the Tule's flow is much less than that. Kings River brings in a much larger flow. But add up the federal and state surface water that comes into the greater basin, it is typically more than half the water delivered. These numbers show – without delivery of surface water – we are in a world of hurt.

To give you an idea of how much Tulare County farms and communities depend on Friant canal water, consider that 15 of the member water districts in the 20 member Friant Water Authority group hail from Tulare County.

Meanwhile, in a dry year, we pump more water state water, figures show. In 2001– a dry year – the basin used nearly 7 million acre feet of groundwater in a year when less than 3 million acre feet of surface water was delivered. In a wet year, only 2.7 million acre feet was pumped from the ground.

Altogether, Friant delivers water to about a million acres of farmland on the Valley's eastside. Without it, much of the orange belt would simply be a dust bowl.

It was back in the late 1940s that irrigation pumps on the Valley's eastside went dry along the foothill citrus belt due to over pumping and falling water tables. That prompted the call for more imported water to help maintain and build a stronger farm based economy in the South Valley. The plan has clearly worked, creating the nation's richest ag region. But the plan was set up with a caveat.

Friant Water Users General Manager Ron Jacobsma explains that farmers who hold the water rights to San Joaquin River water in the Mendota/Los Banos area agreed back in the '50s not to exercise it as long as they got the same amount of water – about 800,000 acre feet a year from northern California shipped south of the Delta. These are the so-called "exchange contractors." "For the past 50 years there was never a thought this arrangement would be a problem," says Jacobsma. But today, two years of drought and very low water reservoir levels around the state has set the stage for a possible worst-case scenario. Add to that the regulatory drought – environmental lawsuits and a federal judge's potential rulings to further reduce pumping of water south of the Delta to protect the fish. Last December, the judge's ruling curtailed pumping of water by about 30 percent statewide, affecting residents all over California.

Now environmental problems and a decline in fisheries in the fragile Delta region exacerbated by two years of drought have set in motion a possible suspension to this agreement if supplies that were "exchanged" in the past aren't there.

To be clear, Jacobsma says he does not expect this scenario to play out but admits for the first time "it's a possibility."

Lots of Pumping this Summer

The Valley's Westside has seen the face of drought this year and it isn't pretty. Thousands of acres of crops were left to rot in the fields this summer after the Bureau of Reclamation cut water deliveries to the Westlands Water District. Westlands farmer Mark Borba says farmers tried to save their trees this summer by aggressive water pumping and a neighbor of his says his water table dropped 200 feet.

"We know this is not sustainable" says Borba. But with about 100,000 acres of permanent crops, trees and vines now planted in the district – farmers used every drop to save those trees and their crop when possible. The area's towns have seen a farm worker exodus as hundreds were laid off from formerly permanent positions this summer. Concerned about their water table, Westlands is doing a groundwater study to see how much was lifted out of aquifers this summer. The betting is a lot more than last year's 300,000 acre feet.

Now, predictions that the federal government can deliver from zero to just 10 percent of its water allocation next year are turning a bad situation in Westlands into a nightmare.
Borba says both Westlands and the exchange contractors are dependent on the San Luis Reservoir for their water supply – water that comes from the Delta that is pumped into storage near Los Banos. The carryover of water in this reservoir mirrors the situation in the upper part of the state. Supply in San Luis Reservoir is just 13 percent of capacity (30 percent of normal for this time of year) and Oroville to the north is expected to be at its lowest level in history.
Helping to drive concerns that Friant water may be in jeopardy this coming year are rulings by Judge Oliver Wanger in the past year that cut water pumping south of the Delta to protect the endangered Delta smelt fishery. The judge's ruling last December cut water supplies by 30 percent this year.

This past week, environmentalists asked Judge Wanger to cancel existing water contracts because they don't reflect the dire straits of the smelt in the Delta. If Wanger agrees, that could mean less water coming first to Westlands and Friant that would be next in line if the supply dwindles more.

Wanger is set to rule on a second endangered fish species – the salmon that has been in a decline in the Delta and all over the West Coast as well. An adverse ruling to save this fish could potentially curtail more water moving south.

The water issue is important not just for Tulare County but the entire state that depends on the intricate web of water reservoirs and canals to deliver water from the wetter north to the more arid but populated southern part of the state. Further, California's share of Colorado River that buffeted the state during previous droughts has now been permanently curtailed as that region too suffers from persistent drought.

Without surface water delivered to Tulare County farms, the area's water table is likely to fall fast and furious.

Local walnut grower Tony Langiano says he is having to dig deeper to get his irrigation water. "The water level has dropped 23 percent in the past two years," Langiano tells the Farm Bureau newspaper, dropping to over 121 feet when it was 52 feet in 1987.

Farmers won't hesitate to run their pumps if the supply isn't delivered by the ditch company. The trees won't wait for an explanation. And our area's water level could plunge fast like in Westlands if everyone is pumping water from the underground pool of water.

Local reservoirs like Lake Success and Lake Kaweah will get replenished, but right now they are at just 7 percent of capacity – basically a puddle of water maintained to keep the fish alive. But even as they fill up with a new supply – the volume can't touch the supply of imported water coming into the basin along with state water that comes into the Tulare Lake area as well as the federal supply. Now, both the federal and state supply is in jeopardy because each faces the same restrictions on moving water south of the Delta.

That's why farmers and farm workers were up in Sacramento this past summer lobbying hard for a comprehensive water bond that would help fix the Delta as well as add new water storage on the upper San Joaquin River. This was the fourth time in recent memory that legislators failed to come up with a water bond compromise. The latest effort again failed to generate an agreement that could have been on this November's ballot.

Water Bond/Recirculation Issue

Friant and other water agencies point out the bond is needed to store and move water – not just for business, farms and drinking water for all Californians – they need these new facilities to store and move water for fish and wildlife. A larger San Joaquin River reservoir will mean that we can store big winter rains to replenish the groundwater later, rather than let hundreds of thousands of acre feet head out to sea because the reservoir is too small to handle it.
Friant's Jacobsma confirms the idea that it will likely ask its members and others who depend on the Delta to contribute to the cost of fixing it. "We are asking the state and federal government to participate" and we want a seat at the table too. That will require money.

Besides the loss of some water in dry years to the exchange contractors, Friant, as a requirement of the river settlement process, wants to "recirculate" water it sends down the river to restore the river habitat and to help salmon and bring that water back to the district. That could mean 200,000 acre feet of water annually that it needs to recover, says Jacobsma. Friant's firm supply is just about 800,000 acre feet. If the Delta is not fixed, there will be no way to recirculate that water. The settlement agreement is set to go into effect in 2009.

Jacobsma says in the long run, the Valley and the state need an isolated peripheral canal to move water south around the Delta without harming the fish.

Others believe farmers can save far more water than they do today and suggest putting money into a new Sierra dam doesn't make sense but restoring historic Tulare Lake for groundwater storage does. But moving water by gravity from the Sierra to the eastside orchards has some logic to it while it isn't clear how you move water from a big groundwater bank around Corcoran. Instead, eastside districts have invested in groundwater banks closer to where the water is put to use.

Source: Valley Voice, September 2008