Comments Noted or Addressed in Revised Draft Report

Comments received from United States Bureau of Reclamation, City of Tracy, Central Valley Clean Water Association, Ecologic Engineering, San Joaquin River Group Authority

Matrix #	Author	Comment	Comment Responses
7	United States Bureau of Reclamation	"Cropping patterns in general are most likely driven by economic factors, and not water quality factors."	Comment Noted
8	United States Bureau of Reclamation	"The information in Section 3.13.2 is base on a two year study with limited sample size (1-3)."	Comment Noted
12	United States Bureau of Reclamation	"On page 67, the last sentence of the third paragraph, 'If the salt concentration ... full crop productivity' is repeated in the following paragraph."	Pg. 67, Par. 3, change made in Report.
13	City of Tracy	"The City wholeheartedly supports reconsideration of the applicable salinity objectives based on more recent science and studies."	Comment Noted
16	Central Valley Clean Water Association	CVCWA resubmitted their comments made to the State Water Board on the Draft Report put together by Dr. Glenn Hoffman	
19	Central Valley Clean Water Association	The climate conditions at Riverside including daily, minimum, and maximum temperature, and relative humidity are more strenuous, which result in lower salt tolerance for crops than would result in the climate of the southern Delta.	This information is presented in the Draft Report (See Section 3.10.2)
23	Central Valley Clean Water Association	"Currently, the report focuses on the summer irrigation season of beans. The report should be expanded to also consider what are reasonable water quality objectives for winter irrigation of alfalfa."	This is covered in current report
28	Ecologic Engineering	"Page 6 Section 2.2.2 Sodicity -- The second sentence is erroneous as written, and the first sentence does not apply to sodicity. Sodicity is a measure of exchangeable sodium in a soil relative to the entire cation exchange capacity of a soil, as opposed to salinity which is a measure of salt content."	Page 6 Section 2.2.2: Language was clarified in Study Report.
29	Ecologic Engineering	"Page 6 Section 2.2.2 Sodicity -- Further, sodic soils are characterized by an exchangeable sodium percentage greater than 15 percent."	Page 6 Section 2.2.2: Staff discussed sodic soils in the context of SAR vallues. While ESP is an acceptable indicator of sodicity, it was not covered in the scope of this Report
30	Ecologic Engineering	"Page 6 Section 2.2.2 Sodicity -- [The context of SAR] needs to be provided to interpret Table 2.0 water quality data, since the table does not report soil sodicity."	Page 6 Section 2.2.2: Interpretation of SAR values in Table 2.0 has been provided based on standard thresholds from the USDA Handbook
31	Ecologic Engineering	"Page 6 Section 2.2.2 Sodicity -- There are two forms sodium affected soils, typical Sodic soils which require cation replacement and Saline Sodic which may only require removal of soluble salts."	Comment Noted

32	Ecologic Engineering	"Page 11 4th and 5th line -- Hydrologic group does not describe characteristics of a fully saturated soil, rather it is based on physical factors that affect hydraulic properties of a soil. The Ksat is hydraulic conductivity under saturated soil conditions."	Page 11, 2nd Paragraph:Clarifying language added to Staff Report
33	Ecologic Engineering	"Pages 13 - 16 Table 2.1. -- Ksat values exceed typical ranges of these soils, even for surface horizons."	Pages 13 - 16 Table 2.1: Staff made the necessary changes. Model results are not affected by these changes. The Units previously given in the draft Report were meant to be um/s, and were incorrectly called in/hr. Right conversion from um/s to in/hr has been made. Previous figures in the report have been multiplied by a factor 0.1417
35	Ecologic Engineering	"Page 28 first paragraph -- The percentages are somewhat confusing, please clarify using total acres (i.e. not reduced for mixed cropping) planted to beans in each decade."	Page 28 first paragraph: Issued addressed in revised Report
37	Ecologic Engineering	"Page 34 Section 3.3.2 -- Many of the soils in the irrigation use area naturally have low permeability in the subsoil and are susceptible to poor drainage. Further, much of the area on the west side of the river requires artificial drainage to minimize salt build up in the root zone as well as prevent water logging the soil. Thus, soil salinity in the area is related to the quality of irrigation water, the San Joaquin River, and the need for subsurface drainage. Moreover, widespread use of San Joaquin River water and subsurface drainage has likely resulted in lower soil salinity in the use area."	Comment Noted/Minor
38	Ecologic Engineering	"Page 34 Section 3.3.2 -- In addition to being problematic, sodic soils are indicative of soil conditions susceptible to extreme salinization, either naturally or anthropogenically induced. Their presence in the use are indicates the need for a higher level of salt management, including the potential that irrigation water could have too low of salinity. It should be noted that sodic soils generally develop where drainage is limited and evapotranspiration exceeds water applied, and sodicity can occur even with very low sodium content and SAR waters."	Comment Noted/Minor
39	Ecologic Engineering	"Page 40 Section 3.4.2 -- Soil survey reference needs to be checked, as it appears the 2002 Stanislaus County, Western Part Soil Survey was also used."	Page 40 Section 3.4.2: Issued addressed in revised Report
40	Ecologic Engineering	"Page 40 Section 3.4.2 -- Based on Figure 3.9a, it appears that the 1964 Soil Survey was not used for this determination."	Page 40 Section 3.4.2: Comment is correct. Staff did not use the 1964 Soil Survey. Staff's assessment found that it was more appropriate to use both the 1992 and 2002 surveys over the 1964 survey.
42	Ecologic Engineering	"Page 40 Section 3.4.2 -- It is unlikely that the extent of shrink swell potential in the use area was overestimated. Shrink-swell potential is a factor of total clay content and clay mineralogy. Neither of which is anticipated to change significantly within a single soil series, such as the Capay. Further, the Capay is classified as a Vertisol, a soil order defined by shrink-swell processes."	Minor/Comment Noted

44	Ecologic Engineering	"Page 42 Table 3.5 -- Check Ksat values presented."	Page 42 Table 3.5: Staff made the necessary changes. Model results are not affected by these changes. The Units previously given in the draft Report were meant to be um/s, and were incorrectly called in/hr. Right conversion from um/s to in/hr has been made. Previous figures in the report have been multiplied by a factor 0.1417
46	Ecologic Engineering	"Page 50 Section 3.6.2 -- The area irrigated by furrow irrigation is not shown in Table 3.7. However, based on the preponderance of gravity irrigation and the types of crops grown, furrow irrigation is widespread across the use area."	Minor or Comment Noted
47	Ecologic Engineering	"Page 53 Section 3.10.2 -- It should be noted that during May and June, crop salinity stress is potentially greater in Patterson than in Riverside. This would likely have a considerable effect on early stage growth of bean; However, little is known about salt tolerance of bean throughout the growing season."	Page 53 Section 3.10.2, last paragraph: Report was revised accordingly.
48	Ecologic Engineering	"Page 58 Section 3.11.2 -- The WATSUIT model was developed by the USDA salinity lab and is public domain available at http://www.ars.usda.gov/services/software/download.htm?softwareid=107"	Page 58 Section 3.11.2: Report revised accordingly
49	Ecologic Engineering	"It should be noted that the dissolution of salts in the soil will increase the salinity of drainage waters discharged back to the San Joaquin River."	Comment Noted
52	Ecologic Engineering	"Page 64 Section 3.13.2 -- What basis is there for the higher (0.7 dS/m) and lower (0.5 dS/m) salinity irrigation water in calculating the leaching fraction?"	Page 64 Section 3.13.2, third paragraph: This has was addressed in the Report.
53	Ecologic Engineering	"Page 64 Section 3.13.2 -- Unless Hoffman reviewed the calculated leaching fractions for the LSJR and discussed them in his 2010 Report, the last sentence should be modified to present the range of Lr's in the South Delta, which are similar to those found for the LSJR."	Page 64 Section 3.13.2, last paragraph: Comment noted and Report revised accordingly.
54	Ecologic Engineering	"Section 4 -- Nothing new or site specific is added to this section beyond the Hoffman Report."	Comment Noted
67	San Joaquin River Group Authority	Page 1, Paragraph 1, final sentence: Neither Turlock or Modesto IDs have any rights to the San Joaquin River and would not be using water from the SJR. They should be removed from the sentence.	Page 1, Paragraph 1, final sentence: Comment addressed. IDs were omitted from Report
68	San Joaquin River Group Authority	Page 1, Paragraph 3, fourth sentence: It is unclear what dairies and feedlots mean. Does this include the dairy milk barns and corrals or the reuse areas as well? This should be explained as the reuse areas could be significant areas.	Minor
69	San Joaquin River Group Authority	Page 1, Paragraph 3, fifth sentence: Normally river descriptions are from upstream to downstream. Suggest the two river names be reversed here and throughout the document.	On pages i, iii, iv, 2,5,83,120122 and 123: Comment noted and revisions made throughout the Report
71	San Joaquin River Group Authority	Page 5, Paragraph 1, final sentence: This sentence should be referenced as (Ayers and Westcot, 1985).	Page 5, Paragraph 1, final sentence: Comment addressed in revised Report
72	San Joaquin River Group Authority	Page 5, Paragraph 3, second sentence: The words “of units” should be taken out.	Page 5, Paragraph 3, second sentence: Comment addressed in revised Report

73	San Joaquin River Group Authority	Page 5, Paragraph 3, final sentence: The units of millimho per centimeter are not outdated. The units of dS/m are being used to be consistent with the international SI units.	Page 5, Paragraph 3, final sentence:Comment addressed in revised Report. Staff deleted "an outdated unit of measure for electrical conductivity".
75	San Joaquin River Group Authority	Page 6, Second Paragraph, first sentence. Recommend that you strike the words “on soil sodicity”.	Page 6, Second Paragraph, first sentence:Comment addressed in revised Report; issued revised from prior comments
77	San Joaquin River Group Authority	Page 10, Final Paragraph. Suggest that you break this into two separate paragraphs as they are two distinctly different thoughts. The break should occur after the third sentence.	
82	San Joaquin River Group Authority	Page 34, Fourth Paragraph, final sentence. It is unclear what this sentence means. A sodic soil is not likely to impact water quality as the only way sodium would leave the sodic soils is by reclamation with a calcium source and the sodium would then go to groundwater, not to surface water. This sentence should be stricken from the report.	Page 34, Fourth Paragraph, final sentence: Comment addressed in revised Report. Staff deleted sentence from Report.
83	San Joaquin River Group Authority	Page 40, Figure 3.8. Although not prominent, this figure is very illustrative. What it says is that present irrigation and leaching practices along with present water quality are good enough to allow moderately sensitive crops to be grown extensively on saline soils in the LSJR area. This should be a strong indicator that present water quality is not impacting yields or these crops would not be grown on saline lands which would only complicate a water quality problem.	Comment noted
84	San Joaquin River Group Authority	Page 50, Second Paragraph, Second Sentence. The second sentence implies that wheat and barley are irrigated by furrow. This is not true; it is flood or basin irrigation. Have you ever tried to harvest wheat or barley with a combine in a furrow irrigated field? The bumps and jarring would destroy a combine and at close to $1 million each, I don’t think they would risk this equipment to furrows.	Page 50, Second Paragraph, Second Sentence: Comment addressed in revised Report
85	San Joaquin River Group Authority	Page 51, Final Paragraph. The word “Chlorine” is used twice in the paragraph and it should be “chloride”.	Comment addressed in revised Report
86	San Joaquin River Group Authority	Page 52, First Full Paragraph. We are unsure what this paragraph is suppose to say and recommend that it be eliminated from the report.	Page 52, First Full Paragraph: This sentence is a continuation of text from pg. 51 and further elaborates on Table 3.8. It should not be eliminated from the Report.
87	San Joaquin River Group Authority	Page 67, Last Line in the Third Paragraph and the First Line in the Fourth Paragraph. These two sentences read exactly the same. Should one come out?	Page 67, Last Line in the Third Paragraph and the First Line in the Fourth Paragraph: Comment addressed in revised Report
88	San Joaquin River Group Authority	Page 73, Second Paragraph, Third Sentence. It implies that not having the 5% estimated salt dissolution in the model is a negative. In fact it is not. If you assume a 5% estimated salt dissolution, you can also figure approximately the same level of salt extracted by the plant (crop) that is also not accounted for in a steady state model. Both of these would likely cancel each other out.	Comment noted
91	San Joaquin River Group Authority	Page 89, First Paragraph, Line 10: Westcott should be “Westcot”.	Page 89, First Paragraph, Line 10: Comment addressed in revised Report