

Letter	Number	Comment	Response
20130222_TAC	1	Observation wells – We agree with the PRP recommendation to increase the number of monitoring wells, but suggest implementing this increase to more directly address problem areas as opposed to achieving the proposed 1 well per mile density.	The Program agrees with the TAC on this recommendation.
20130222_TAC	2	Soil salinity – We agree with the PRP that “a soil salinity monitoring and mapping program that works to document changes in the root zone salinity levels over time and particularly those areas where water table levels are thought to be influenced by Restoration flows” should be developed, but we also encourage the Program to consider including soil salinity in their revisions to the historical baseline (discussed in more detail in following sections) used to develop seepage thresholds.	The Program already has a soil salinity monitoring program that works to document changes in the root zone salinity levels over time, particularly those areas where water table levels are thought to be influenced by Restoration flows. The Program will continue to work on better mapping and representation of this information. Using soil salinity in revisions to the groundwater baseline will require additional explanation or discussion.
20130222_TAC	3	Cropping Patterns and Productivity – We agree with the PRP recommendation to use imagery and other data (current and historical) to better quantify crop impacts directly related to Restoration flows.	Additional imagery has been added to the Seepage Management Plan.
20130222_TAC	4	Resolution of Monitoring: We agree with the PRP recommendation for a system to better manage hydrologic data. We also suggest that as Program staff evaluate this recommendation they consider integrating all of the relevant seepage management data (e.g. HEC-RAS surface water modeling calibration data and output, groundwater well level data, agricultural threshold factors, etc.) in a format where users can quickly review and understand the data underlying any seepage threshold calculation.	The Program is currently working to develop a web-based database, graphing, and mapping system to distribute Program information.
20130222_TAC	5	Travel Times and Flow Attenuation: We agree with the PRP’s request for clarification on the use of HEC-RAS to predict surface water hydraulics, and the TAC has requested available HEC-RAS output and calibration data from Program staff to help us better understand the uncertainties and sensitivities surrounding the use of this data in determining seepage management thresholds.	The Flow Bench Evaluation template has been updated to better discuss the HEC-RAS data. The Program has sent the TAC the HEC-RAS output and report documenting the model.
20130222_TAC	6	Groundwater Level Prediction: We agree with the PRP’s conclusion that the assumption of a 1 foot increase in river water surface corresponding to a 1 foot rise in nearby observation well level is too conservative, and we suggest that Program staff analyze available groundwater data to develop river – groundwater stage relationships before adding wells as suggested by the PRP. New well installation and groundwater data collection should be prioritized for areas where data gaps exist and where	The Program agrees that new well installation and groundwater data collection should be prioritized for areas where data gaps exist and where seepage management thresholds are most restrictive to the release of Interim and Restoration flows.

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		seepage management thresholds are most restrictive to the release of Interim and Restoration flows.	
20130222_TAC	7	Crop Root Zones: We agree with the PRP recommendation to use effective rooting depth instead of maximum rooting depth, but we suggest that Program staff develop a plan to use site-specific restrictive soil conditions to determine rooting depths as opposed to the unrestricted soil conditions recommended by the PRP.	Using site-specific restrictive soil conditions requires extensive site-specific monitoring and/or digging up of plants on every field. This is subject to landowner approval. The program will incorporate site-specific information as it becomes available.
20130222_TAC	8	Irrigation Buffer: We agree with the PRP recommendation to eliminate use of the irrigation buffer in determining the seepage threshold. In addition, we agree with the PRP's recommendation to use remote sensing to better quantify seepage from Restoration flows (as opposed to pre-existing seepage). The more precisely the Program understands the relationship between Restoration flows and seepage conditions, the more it will be able to maximize implementation of Interim and Restoration flows.	The irrigation buffer has been removed. The Program has used remote sensing (aerial imagery) to verify observed surface ponding from 2011 flood flows, leading to better understanding of the relationship between Restoration flows and seepage conditions.
20130222_TAC	9	The PRP response to this question in their report and at the 2/8/13 Seepage and Conveyance Technical Feedback Meeting was not entirely clear to the TAC. We agree that historical (i.e. pre-SJRRP flows) groundwater levels should be "used as the threshold when the computed threshold is deeper than historical groundwater levels," as recommended by the PRP, but we suggest that this section of the report be revised to more clearly define the concept of historical groundwater level and to more directly recommend how this level should be determined.	This comment is for the Peer Review Panel. The Program has discussed this with the peer review panel and is also unsure. The Seepage and Conveyance Technical Feedback group meeting will begin discussion of how to establish a groundwater baseline.
20130222_TAC	10	Climate change: We agree with the PRP that climate change should be considered in the SMP. The long term success of releasing Restoration flows will be affected by the SMP's treatment of climate change. However, in addition to the PRP's recommendations for mostly descriptive inclusion of climate change in the SMP, we recommend that the Program include a "climate baseline" that incorporates climatic conditions at the time of the settlement (in addition to those captured by historical groundwater and flow conditions) to ensure that future Restoration flows are not minimized by future seepage conditions that have been exacerbated by a changing climate.	The SJRRP Program EIS/R specifically took climate change into consideration for the implementation of the entire program on both a project- and program-level. This discussion included an analysis related to climate change considerations for all SJRRP actions, including those related to the Physical Monitoring and Management Plan, of which, the Seepage Management Plan is a part.
20130222_TAC	11	Subsidence: In addition to the PRP recommendations pertaining to subsidence, we suggest that a topographic baseline (similar to the climate baseline described above) be added to the historical baseline so that future seepage	The Program's current terrain models are based on 2008 LiDAR. This provides a topographic baseline. Subsidence information will be included in the Seepage Management Plan as appropriate as it becomes available.

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20130222_TAC	12	<p>conditions exacerbated by subsidence do not limit Restoration flows.</p> <p>We agree with the PRP that the Program has taken a very conservative approach to protect the ability to continue agricultural operations as would have been possible under climate, flow, subsidence, and seepage conditions prior to Restoration flows. To this end, we suggest that the program complete the analysis initiated and presented by Katrina Harrison at the 2/8/13 Seepage and Conveyance Technical Feedback Meeting using 2012 as a representative historical baseline condition to demonstrate how seepage management flow restrictions would change with new seepage management thresholds. In addition, where data is available, we suggest comparing pre-SJRRP groundwater conditions for each water year type to assess the validity of using 2012 as the baseline.</p>	<p>The Program has completed the 2012 analysis. 2012 was a Dry year preceeded by a Wet year and thus may be a reasonable representation of somewhat average historical conditions, possibly skewed to deeper groundwater thresholds due to the Dry water year type.</p>
20130225_Nickel	1	<p>We are very concerned about your idea to raise the ground water thresholds in the Reach of 4A as a way to increase restoration flows in that reach of the San Joaquin River. Clearly your desire to do this is because you have not been able to construct the mitigation measures to present seepage damages (tile drainage system) in a timely manner. Our reasons for being concerned are as follows:</p>	<p>The Program is continuing to move forwards with seepage projects (which include interceptor lines, shallow groundwater pumping, slurry walls, drainage ditches, and easements to name a few) adjacent to the Eastside Bypass and in Reach 4A of the San Joaquin River. Program staff met with Nickel Family LLC on November 8, 2012 to discuss seepage projects on properties not already protected, and is planning additional monitoring for the property. The purpose of changing groundwater level thresholds at this time is to better represent thresholds in areas with historically shallow groundwater levels. If groundwater levels are shallow, crop roots may become restricted by the water table, limiting the root zone depth. The historical groundwater level method is a way to provide site-specific information . It also acknowledges that the Program is not responsible for improving groundwater conditions under fields from pre-Program conditions.</p>
20130225_Nickel	2	<p>Unfortunately, ground water levels were not established prior to the initiation of the river restoration flows. During the past year we were able to see some ground water levels absent river flows, but, you have not placed monitoring wells in all sections that could be impacted by river flows. The ground water levels can vary within less than a one mile stretch, and can be impacted by a number of factors, including adjacent canals and cropping patters.</p>	<p>While it may be physically impossible to install wells in all locations that could possibly be impacted by river flows, the Program has installed wells in all locations requested by landowners due to seepage concerns. Cost, time and physical limitations limit the density of wells. Well installations planned for 2013 are at the Program's request in order to obtain robust groundwater level information for design of seepage projects. The Program's monitoring well network is adequate enough, based on information from landowners and the Program's analysis, to identify possible</p>

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20130225_Nickel	3	<p>A buffer zone above the capillary rise needs to be maintained to accommodate crop irrigation. A furrow irrigation can raise the ground water level at least one or two feet at the time is it applied. Furthermore, the capillary rise will vary by soil type, and, as you have seen there are a wide variety of soil types along Each 4A. Your own presentation acknowledges that more empirical data is needed to establish what a reasonable amount of protection s needed.</p>	<p>groundwater level rise above thresholds due to Interim Flows. The Program’s approach is to release Interim Flows such that groundwater levels remain below thresholds in the key areas with the highest potential for groundwater seepage impacts.</p> <ol style="list-style-type: none"> <li>1) Irrigation Buffer (“a buffer zone above the capillary rise”): The peer review panel recommended eliminating the irrigation buffer, stating that “It is likely not necessary to provide an irrigation buffer component to the overall depth of unsaturated soil required for crop growth above the water table.” Additionally, the peer review panel clarifies that “The irrigation buffer is not intended to prevent the temporary several-foot rise of the water table, but rather to allow the water table to recede by allowing for drainage.”</li> <li>2) Capillary Fringe: The Program agrees with the scientific fact that the capillary rise varies by soil type. The peer review panel suggested additional empirical information to inform the capillary fringe buffer, which provides salt protection. The peer review panel also indicate based on literature that “there is potential to allow elevated salinity levels in the lower reaches of the [soil] profile provided the quality of the irrigation water is comparable to the DMC.”</li> </ol>
20130225_Nickel	4	<p>If you make a mistake in setting the thresholds, the financial impact upon the landowners is immense. It is difficult to determine the amount of the damages in an objective manner, and there is no mechanism In place to compensate the landowners. The only current way to be compensated for damages is going to Claims Court in Washington DC&lt; which is time consuming and costly. To subject the landowners to this is inconsistent with legislation.</p>	<p>The Program recognizes the potential financial impact to landowners if thresholds are inadequately set. However, landowners are encouraged to call the Seepage Hotline if they observe seepage or have seepage concerns not caught by the Program’s thresholds. The Program responds in an average of 2 days with a site visit, and if immediate impacts are noted on the Hotline Call, may immediately reduce flows. The Program is committed to establishing groundwater elevation thresholds to determine when impacts to agricultural lands or levee stability are imminent, and releasing Interim Flows consistent with the Seepage Management Plan which includes these thresholds. Furthermore, the Program will reduce Interim Flows to the extent necessary to address any material adverse impacts to third parties from groundwater seepage caused by Interim Flows. The Program is also committed to an evaluation of mitigation measures for those impacts associated with the release of Interim Flows (such as the</p>

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			potential for groundwater seepage) that are determined to be significant, and as noted in the response to comment 20130225_Nickel - 1, is currently working to implement these mitigation measures. We recognize the federal process for reimbursement on claims can be burdensome, however, the Federal Tort Claims Act is a designated process to receive compensation provided there is an affirmative showing of injury as a result of a federal action. Additionally, the SJRRP has compensated landowners for claims in the past and will continue to coordinate with landowners to avoid impacts to lands related to seepage in order to reduce or avoid the filing of tort claims.
20130225_Nickel	5	Rather than spend your energy on raising the ground water thresholds, we suggest that you spend your time on stalling the necessary mitigation measures, which you were supposed to do before any flows were allowed down the river.	Please see the response to comment 20130225_Nickel – 1.
20130228_TBI-NRDC	1	We support Reclamation’s commitment to re-examine the thresholds over the next several months using 2012 information and incorporating the recommendations of the PRP where possible to determine if some restoration releases can be made beyond Sack Dam starting this spring. Reclamation should make this re-evaluation a priority action in the seepage management process in order to release flows consistent with the settlement agreement and legislation.	The Program has re-examined thresholds using 2012 information.
20130228_TBI-NRDC	2	Reclamation needs to give strong consideration to the PRP observations and conclusions regarding the overly conservative nature of some of the operational practices and assumptions and the need to fully examine pre-project conditions including pre-project cropping patterns and productivity. The PRP summary of Chapter 5 observed:	The Program has implemented this in two steps. The first, interim step, included in the March 26, 2013 Seepage Management Plan, revises thresholds based on 2012 data and the SMP text based on the peer review comments. The second step, to be completed in 2013 and possibly early 2014, will more fully evaluate a baseline groundwater condition to “fully examine pre-project conditions”, which may include pre-project cropping patterns and productivity. The study will be scoped at public Seepage and Conveyance Technical Feedback Group meetings.
20130228_TBI-NRDC	3	We agree that “all pre-project data, including wet year data must be used” and that “Pre-project cropping patterns need to be identified so that growers have historical guidance on what could have been planted in a given year-type without the impact of restoration flows” (P. 54)	Comment noted.
20130228_TBI-NRDC	4	Some of the potentially overly conservative assumptions that the PRP noted which should be reviewed include: 1. Operational assumption of a 1-1 relationship of river	Comment noted. 1) The 1-1 relationship is still in place as no better method has been suggested.

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		<p>stage and observation well (P.22) <i>“The current practice of assuming a 1 ft increase in the River bed water surface (WSEL) equating to a 1 ft rise in a nearby observation well is overly conservative”</i></p> <p>2. The use of irrigation buffers (p. 27)</p> <p>3. The inconsistent use of effective and maximum root depth for different crops (p. 26) and the need to use the “effective” root zone for determining groundwater-level thresholds.</p> <p>4. The need to use site-specific information including noting where there are restricted soils and if it is appropriate to use unrestricted rooting depth information.</p> <p>5. Some historical water level maps may represent an overly conservative level (P.46).</p>	<p>2) Irrigation buffers have been removed.</p> <p>3) Root zones have been changed to effective root zones.</p> <p>4) Site-specific information will be included as it is appropriate and available. Restricted soils are included as part of the historical groundwater method for setting thresholds.</p> <p>5) Groundwater level maps have been redone per the peer review panel recommendations to use kriging.</p>
20130228_TBI-NRDC	5	<p>We agree with the PRP emphasis on using geographically specific information where-ever possible and as noted on P. 59 “more specific geographic assessment criteria should be integrated into the site evaluation activity to better support the project prioritization process”. We also support the recommendations in Chapters 1 and 5 to improve the monitoring network and data collection, use remote sensing and improve the reporting of the decision-making.</p>	<p>The Program will use site-specific information when available and appropriate. Site-specific information is already incorporated into the project prioritization process. Ground surface elevations on each individual parcel are used to prioritize seepage projects. This is further informed by landowner and water district anecdotal information.</p>
20130228_TBI-NRDC	6	<p>As noted in Chapter 4 the SJRRP must address the ongoing subsidence issue and its potential impact on seepage issues and that the “SJRRP should not be expected to solve or mitigate subsidence impacts on their own” (P.52).</p>	<p>Comment noted. Subsidence information will be included in the Seepage Management Plan as appropriate information becomes available (i.e. subsidence rates).</p>
20130228_TBI-NRDC	7	<p>In conclusion the SJRRP should focus on determining the incremental seepage impacts resulting from the release of restoration flows and the operational practices and projects to mitigate those impacts. We recognize the challenge of differentiating between those impacts and pre-project impacts from shallow water tables exacerbated by flood flows and irrigation practices as well as impacts caused by the recent subsidence that might impair the ability of riverside parcels to support deep-rooted and salt-sensitive crops (P. 52). The PRP report recommendations will help Reclamation address these challenges and will help in the selection and design of seepage mitigation projects.</p>	<p>Comment noted.</p>
20130228_TBI-NRDC	8	<p>The expertise of the PRP should be called upon again as appropriate to review and assist Reclamation’s efforts to proceed as rapidly as possible to maximize restoration flows while avoiding material adverse impacts with a</p>	<p>Comment noted.</p>

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20130301_RMC	1	<p>combination of cost-effective seepage projects and refined thresholds and operational practices.</p> <p>The process by Reclamation to revise the thresholds in Monitoring Wells in which there is only recent (2012) groundwater data available will result in thresholds that are too high and result in significant crop damages from San Joaquin River Restoration flows. Looking at the depth to groundwater data for the recent (2012) season, which is the only data of record for many of the new wells in the reach 4a and 4b areas, the threshold is currently below the deepest level that the groundwater achieved in the entire 2012 season. So an adjustment upward seems appropriate. However we disagree strongly with the process laid out on slide 79 of the February 8, 2013 power point presentation given and the Seepage and Conveyance Technical Feedback group meeting. In particular step 6 which would have us set the threshold as the highest remaining groundwater level of record, after the direct flood irrigation and precipitation events are removed. In the attached example given by the program, the proposed threshold would be moved from 6 feet (considered protective to row crops under normal circumstances) to 4 feet.</p> <p>Raising the threshold to 4 feet will result in significant crop damage at the site selected as the example on the Richie Iest Property. The threshold, based on the data in the hydrograph on Page 80 (see attached) should be no shallower than 5 feet.</p>	<p>The threshold methodology as included in the March 26, 2013 Seepage Management Plan no longer takes the highest remaining groundwater level of record.</p>
20130301_RMC	2	<p>The fatal flaw in developing the 4 foot number, is only removing data corresponding to direct (daily) irrigation and precipitation events. That flaw, will result in the restoration program seeping water into fields that are already trying to drain irrigation season and precipitation water. Without the restorations program, the baseline groundwater level is 5 feet below ground which is very shallow even for most row crops, especially for alfalfa. The data shows that once irrigation starts the profile fills approximately 1 foot (shown as the depth between irrigation events) until after the irrigation season. The 1 foot is the additional groundwater elevation is needed to create enough slope across the field to allow irrigation and precipitation water to drain the field.</p> <p>Damage to the crop will occur with the proposed thresholds</p>	<p>The threshold methodology has been modified. As included in the March 26, 2013 Seepage Management Plan, it now takes the lowest groundwater level from January and February 2013, which allows crops to drain over the winter before the irrigation season begins. In the example well discussed at the February 8, 2013 SCTFG meeting, the threshold is now at 4.7 feet below the ground surface.</p>

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		<p>because the restoration program will pre-fill the soil profile up to the 4 foot deep level prior to the irrigation season as the fields naturally try to drain off the river seepage water. Then when irrigation season starts the groundwater will raise to a new lowest level of 3 feet in order to now drain both accumulated seepage water and irrigation water combined. 3 feet will no doubt destroy the ability to farm these parcels.</p> <p>Again, 5 feet in the example given is the appropriate protective level not 4 feet.</p>	
20130301_RMC	3	<p>There seems to be quite a bit of pressure to change threshold somewhat because of the groundwater in the lower reaches of the River are shallow than was though when the original 6' deep threshold were set in the Richie lest well as an example.</p>	<p>The purpose of changing groundwater level thresholds at this time is to better represent thresholds in areas with historically shallow groundwater levels. If groundwater levels are shallow, crop roots may become restricted by the water table, limiting the root zone depth. The historical groundwater level method is a way to provide site-specific information, acknowledging that the Program is not responsible for improving groundwater conditions under fields from pre-Program conditions.</p>
20130301_RMC	4	<p>We are very concerned about your idea to raise the ground water thresholds in the Reach of 4A as a way to increase restoration flows in that Reach of the San Joaquin River. Clearly your desire to do this is because you have not been able to construct the mitigation measures to prevent seepage damages (tile drainage system) in a timely manner.</p>	<p>The Program is continuing to move forwards with seepage projects (which include interceptor lines, shallow groundwater pumping, slurry walls, drainage ditches, and easements to name a few) adjacent to the Eastside Bypass and in Reach 4A of the San Joaquin River. In fact, Program staff has met with twelve landowners in the past year to initiate targeted design monitoring activities. The Program is nearly complete with three site evaluations for the properties that could be most impacted by groundwater seepage, and anticipates working with these landowners to choose a seepage project this year. Construction could begin in 2014.</p>
20130301_RMC	5	<p>Our reasons for being concerned are as follows:  1. Unfortunately, ground water levels were not established prior to the initiation of the river restoration flows. During the past year we were able to see some ground water levels absent river flows, but, you have not placed monitoring wells in all sections that could be impacted by the river flows. The ground water levels can vary within less than a one mile stretch, and can be impacted by a number of factors, including adjacent canals and cropping patterns.</p>	<p>While it may be physically impossible to install wells in all locations that could possibly be impacted by river flows, the Program has installed wells in all locations requested by landowners due to seepage concerns. Cost, time and physical limitations limit the density of wells. Well installations planned for 2013 are at the Program's request in order to obtain robust groundwater level information for design of seepage projects. The Program's monitoring well network is adequate enough, based on information from landowners and the Program's analysis, to identify possible groundwater level rise above thresholds due to Interim Flows. The Program's approach is to release Interim Flows</p>

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20130301_RMC	6	<p>2. A buffer zone above the capillary rise needs to be maintained to accommodate crop irrigation. A furrow irrigation can raise the ground water level at least one or two feet at the time it is applied. Furthermore, the capillary rise will vary by soil type, and, as you have seen, there are a wide variety of soil types along Reach 4A. Your own presentation acknowledges that more empirical data is needed to establish what a reasonable amount of protection is needed.</p>	<p>such that groundwater levels remain below thresholds in the key areas with the highest potential for groundwater seepage impacts.</p> <ol style="list-style-type: none"> <li>1) Irrigation Buffer (“a buffer zone above the capillary rise”): The peer review panel recommended eliminating the irrigation buffer, stating that “It is likely not necessary to provide an irrigation buffer component to the overall depth of unsaturated soil required for crop growth above the water table.” Additionally, the peer review panel clarifies that “The irrigation buffer is not intended to prevent the temporary several-foot rise of the water table, but rather to allow the water table to recede by allowing for drainage.”</li> <li>2) Capillary Fringe: The Program agrees with the scientific fact that the capillary rise varies by soil type. The peer review panel suggested additional empirical information to inform the capillary fringe buffer, which provides salt protection. The peer review panel also indicate based on literature that “there is potential to allow elevated salinity levels in the lower reaches of the [soil] profile provided the quality of the irrigation water is comparable to the DMC.”</li> </ol>
20130301_RMC	7	<p>3. If you make a mistake in setting the thresholds the financial impact upon the landowners is immense. It is difficult to determine the amount of the damages in an objective manner, and there is no mechanism in place to compensate the landowners. The only current way to be compensated for damages is going to Claims Court in Washington DC, which is time consuming and costly. To subject the landowners to this is inconsistent with the legislation.</p>	<p>The Program recognizes the potential financial impact to landowners if thresholds are inadequately set. However, landowners are encouraged to call the Seepage Hotline if they observe seepage or have seepage concerns not caught by the Program’s thresholds. The Program responds in an average of 2 days with a site visit, and if immediate impacts are noted on the Hotline Call, may immediately reduce flows. The Program is committed to establishing groundwater elevation thresholds to determine when impacts to agricultural lands or levee stability are imminent, and releasing Interim Flows consistent with the Seepage Management Plan which includes these thresholds. (Temporary Transfer of Water and Change Pursuant to Water Code Sections 1725 and 1707 in the Matter of Permits 11885, 11886 and 11887) Furthermore, the Program will reduce Interim Flows to the extent necessary to address any material adverse impacts to third parties from groundwater seepage caused by Interim Flows. The Program is also committed to an evaluation of mitigation measures for those impacts associated with the</p>

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			release of Interim Flows (such as the potential for groundwater seepage) that are determined to be significant, and as noted in the response to comment 20130225_Nickel - 1, is currently working to implement these mitigation measures. (Public Law 111-11, 10004(h)(3) and 10004.(h)(1)(c))
20130301_RMC	8	In addition , due to continued subsidence in the area is is extremely doubtful that even setting the damaging 4 foot threshold levels that any restoration flows would be allowed to escape Reach 4. The program will find that reach 4 have subsided a couple feet since your last survey relative to reach 5, and that the initial flows will run water in the adjacent field as high as (4'-2') 2' deep which will drown all the adjacent crop land.	Subsidence is a significant concern, especially as it is centered in the area that has the highest potential to be impacted by groundwater seepage. Were it not for the SJRRP, Reclamation would not have discovered the increasing and alarming rate of subsidence. Reclamation is not the direct or proximate cause of subsidence adjacent to the Restoration Area. It may be reasonably noted by inference that the result of this subsidence is due to increased and continued groundwater pumping/overdraft within the area, unrelated to Reclamation's implementation of the SJRRP and in fact, helped by Reclamation's release of Interim Flows which provide recharge. Reclamation is continuing to work to design and adjust to the currently changing land subsidence and to amend designs and planning accordingly in response to this information as it becomes available. The Program is currently working on environmental compliance for sand removal in the Eastside Bypass, which should improve subsidence and sedimentation related flow constructions.
20130301_RMC	9	Rather than to spend your energy on raising the ground water thresholds, we suggest that you spend your time on installing the necessary mitigation measures, which you were supposed to do before may flows were allowed down the river.	The Program is continuing to move forwards with seepage projects (which include interceptor lines, shallow groundwater pumping, slurry walls, drainage ditches, and easements to name a few) adjacent to the Eastside Bypass and in Reach 4A of the San Joaquin River. In fact, Program staff has met with twelve landowners in the past year to initiate targeted design monitoring activities. The Program is nearly complete with three site evaluations for the properties that could be most impacted by groundwater seepage, and anticipates working with these landowners to choose a seepage project this year. Construction could begin in 2014.
20130301_SJRECWA	1	Comment letter 20130301_SJRECWA is identical to 20130301_RMC.	Refer to 20130301_RMC for comments/responses.
20130301_SLCC	1	The canal has concerns relating to ground water elevations rising to thresholds that will harm its shareholders crops if such a methodology is used.	Comment noted. Please note that the threshold methodology has been changed to allow for drainage prior to irrigation season.
20130301_SLCC	2	We realize that the bureau would like to move forward with	The Program is continuing to work with landowners to

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		sending interim flows downstream of Sack Dam into Reach 4a. We agree that such flows should be a part of your restoration program but it can't be at the expense of downstream third parties such as the canal company and its shareholders. Our point of view still remains the same as it relates to the fact that mitigation projects be built in lieu of changing the current ground water threshold methodology.	implement seepage projects. The purpose of changing thresholds at this time is to take into consideration additional data gained by having no flow in Reaches 4 or 5 from the Restoration Program in 2012. This provides an estimate of the historical pre-project (i.e. without flow) groundwater levels in the area. Also please see responses to 20130301_RMC – 3 and 4.
20130301_SLCC	3	We also would like to reference the attached comments from the San Joaquin River Resource Management Coalition (RMC).	Refer to 20130301_RMC for comments/responses.