



Seepage and Conveyance Technical Feedback Group  
Thursday April 26, 2012, 1:30 – 4:30 p.m.  
San Luis Canal Company  
11704 Henry Miller Avenue, Dos Palos, CA  
Draft Meeting Notes

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### **Attendees:**

Shelly Abajian	Office of Senator Dianne Feinstein
Ron Cunha	Nickel Family LLC/San Juan Ranch
Steve Chedester	San Joaquin River Exchange Contractors
Sarge Green	California State University, Fresno
Katrina Harrison	Bureau of Reclamation
Brian Heywood	CDM Smith
Reggie Hill	Lower San Joaquin Levee District
Chase Hurley	San Luis Canal Company
Katie Lichty	Circlepoint
Bill Luce	Friant Water Authority
Mari Martin	SJR Resource Management Coalition (RMC)
Patti Ransdell	Circlepoint
Dan Royer	Wolfsen, Inc
Monty Schmitt (phone)	Natural Resources Defense Council
Brent Stearns	Nickel Family LLC/San Juan Ranch
Peter Vorster (phone)	The Bay Institute
Chris White	Central California Irrigation District

### **Introductions, Meeting Objectives and Agenda**

Patti Ransdell, facilitator, opened the meeting with introductions and defined the purpose of the meeting which was to revise the Seepage and Conveyance Technical Feedback Group (SCTFG) charter, solicit input on peer review of the Seepage Management Plan (SMP), review the Financial Assistance (Agreements) section of the Seepage Project Handbook (SPH), and provide an update to the group on current seepage projects.

### **Seepage and Conveyance Technical Feedback Group Charter Revisions**

Brian Heywood led the group in a brainstorming session on revisions to the charter. He went over the current objectives and focuses of the charter and asked the group for input on any new objectives or topics.

The group was provided with hard copies of the current charter. Comments can be emailed to Brian Heywood.

- There was a question about the word “conveyance” in the group name and whether levee stability will be addressed in this group. The group is concentrating on seepage issues, but also how they relate to conveyance. Levee issues will be left to another group, or may come up in this group in the future. For the short- and mid-term, the focus is on seepage.

*Action Item: It was suggested that the term “conveyance” should be clarified in the charter to refer to seepage related conveyance.*

### **Seepage Management Plan Peer Review**

Katrina Harrison asked the group for input on questions for the peer review panel for the SMP. She walked the group through a draft process of peer review and invited the group to provide feedback for improving it. Katrina reviewed the schedule for the peer review process.

- There was a question about whether the peer review process will slow down the project implementation. Seepage project implementation will continue concurrently with the SMP review.
- There was a question about the contracting process for peer reviewers. Peer reviewers would be contracting with CDM Smith and not with the Bureau of Reclamation.
- There was a schedule clarification question. It was clarified that there will be a meeting with this group in September (tentatively) to go through findings. Official dates will be scheduled at a later date.
- There was a question about if it would also be appropriate to have peer reviewers review the SPH. The group did not come to a conclusion.
- An attendee asked if the objective of the peer review group was only to inform Reclamation or to inform the SCTFG as well. Findings will be brought back to Reclamation and the SCTFG group.

Katrina reviewed a few of the key topics on the SMP to identify areas that the peer reviewers should be looking into including the approach to increase flows while avoiding impacts and the seepage management conceptual model.

- There was a question regarding whether the conceptual model was intended to cover all scenarios regarding river levels.
- There was discussion about how it is difficult for models to incorporate the highly variable irrigation patterns.

Katrina reviewed the SMP topics and the group switched to the PDF file of peer review questions to offer comments and suggestions. Additional questions suggested by the group are listed below:

- Is one type of agricultural practice more favorable than another based on historical land use?
- There was a question about ways to define potential seepage impacts/pathways based on the location of historic sloughs.
- During the review of the questions from Appendix C, “Historic Groundwater Levels and Surface Water Flow”, there was a question on if surface water drains/canals could be a useful subject for

the peer reviewers to look into. The group did not think this was a problem. No additional peer review questions were recommended.

- During the review of the questions from Appendix D, “Sediment Texture and Other Data”, there was a question about if we have maps of historic underground streams and sand channels that convey water. These sand channels may be locations where the water could seep out of the river. This data is available in the form of historic maps and aerial photos.

*Action Items: Include data and maps of historic underground streams and sand channels in the SMP Appendix D, and incorporate into Areas of Potential Seepage Impact*

*Action Item: Add “Are historic sloughs and sand channels important to analyze to understand potential locations of seepage impacts, and if so, how should the SJRRP include this in the SMP?” to the peer review questions.*

- It was recommended that the title for Appendix D “Sediment Texture and Other Data” should be changed to “Soil Texture and Other Data.”

*Action Item: Change the title for Appendix D from “Sediment Texture and Other Data” to “Soil Texture and Other Data.”*

- During the review of the questions from Appendix E, “Operations”, it was noted that some farmers would prefer backhoe pits vs. hand auger testing.
- Also in Appendix E Question 14, it was noted that there could be other considerations (e.g., Firebaugh) that warrant inclusion as a “protective issue.” Language should be changed to “be protective of agriculture and other uses” or something similar.
- There were questions about if the triggers are clearly explained and defined and if there are additional triggers that could be considered.
- There was a question on whether the SMP is clear about how the San Joaquin River Restoration Program (SJRRP) defines and determines the factor that causes this trigger.
- There was a question about the differentiation between irrigation and river response. Is the plan clear on how Reclamation determines the cause of the trigger (evidence and process)?

*Action Item: Change the language in Appendix E to “be protective of agriculture and other uses”.*

*Action Item: Add “Are there other triggers for a site visit Reclamation should add to the SMP?” to the list of peer review questions*

*Action Item: Add “What is the best process and evidence to use to determine the cause of a groundwater rise (whether this is a river response or responding to irrigation or another factor), if not already in use in the SMP?” to the list of peer review questions.*

Katrina solicited input on Question 14 (in Appendix E- “Operations”) regarding the flow bench analysis. The thought is that later there will be USGS groundwater model that could be used to predict groundwater rise from an increase in flow in the river.

*Action Item: Add “How should the SJRRP best account for irrigation events in groundwater modeling, if it is necessary to account for irrigation events in groundwater modeling? If so, what types of irrigation events should be accounted for?” to the list of peer review questions.*

- There was a discussion about flood irrigation and how it is impacted by soil variability.
- There was a question about how the SJRRP can best adjust flows around construction activities and levee operations and maintenance (O&M). Issues can change from year to year. Regular communication with Reclamation and the flood protection district will be needed.
- There was a question about if the predictive method is too conservative or too liberal. Is travel time taken into account in flow management responses?

*Action Item: Add “What is the best approach to predict future groundwater levels for flow bench evaluations, if the one used in the SMP is not adequate? Keep in mind that a ¼ mile grid size, MODFLOW-based model is currently available.” to the list of peer review questions.*

*Action Item: Add “How should the SJRRP best take travel time into account in flow changes and management responses to seepage triggers, if the current methods are not the best?” to the list of peer review questions.*

- There was a question regarding Appendix F, “Monitoring Well Network Plan and Other Seepage –Related Monitoring”, and if the methods are sufficient and the best technology is being used to obtain real time data collection?
- There was a question about using electrical conductivity (EC) data from monitoring wells. Is there an opportunity to use adjacent EC sensors in conjunction with Monitoring wells to get more real time information?
- During the review of Appendix G, “Development of Salinity Thresholds”, there was a question about flexibility in groundwater thresholds for root zones depending on crop types.

*Action Item: Add “How should the SJRRP best balance best available technology and cost efficiency in the groundwater monitoring program? Add “Are more real-time telemetered stations needed?” to the list of peer-review questions.*

The group reviewed Appendix H, “Development of the Groundwater Level Thresholds”, and the group transitioned to the threshold graphic to review this topic.

The group finished reviewing the SMP peer review questions with no further input. Katrina reviewed the deliverable that the peer review panel will be responsible for, which is a single report to Reclamation and SCTFG that answers the questions outlined in the SMP Peer Review questions handout and provides an explanation for the findings.

Katrina reviewed the proposed candidates for the peer review panel. Katrina also asked for suggestions on other selection criteria and specific names of other potential candidates.

- Local, historical knowledge was suggested as selection criteria (i.e., a farmer with a historical background of the area and local knowledge).

Katrina reviewed the qualifications of the current candidates, including:

- Al Blair, Ph.D., P.E. – Consultant
- Charles M. Burt, Ph.D., P.E., CID – Cal Poly ITRC
- Steven Deverel, Ph.D. – HydroFocus
- Thomas Harter, Ph.D. – UC Davis
- Jack Keller, Ph.D. – Keller-Bliesner Engineering
- Joel Kimmelshue, Ph.D. – NewFields
- Albert Steele, P.G., C.H. – Consultant

Additional names suggested by the group included:

- Bill Weir
- Florence Cassel-Sharma, Fresno State, Center for Irrigation Technology
- Mark Roberson
- Ike McElvaney, Los Banos

The group has until May 11 to respond with comments to either Katrina or Brian.

There was a discussion about how many people should be on the peer review panel. The group agreed that three, five, or seven would be best.

- There was a question about whether Reclamation has standards for peer review panels and panelists.
- It was suggested that a field visit be conducted for the peer reviewers.

### **Seepage Project Handbook**

Katrina led the group in a discussion of the Agreements (Financial Assistance) section of the SPH. Katrina began by reviewing the multiple types of agreements to allow for flexibility.

- It was suggested that the language should be adjusted under financial assistance to include not only districts and landowners, but also other eligible entities.

*Action Item: Add “other eligible entities” in addition to districts and landowners under the financial assistance section of the Seepage Project Handbook*

Katrina explained to the group the process of the financial assistance agreements, roles and responsibilities, and terms of agreements.

There was a question about how a financial assistance agreement works if Reclamation owns the project. There was a discussion about the roles and responsibilities in relation to ownership with these projects.

- Some meeting attendees expressed that a project built with Reclamation's funding but owned by a district is less desirable. Districts are more interested in a cooperative agreement, for example, building, operating and conducting O&M on a project funded and owned by Reclamation. Katrina will speak to her colleagues about ownership issues.
- There was a discussion about where the water from interceptor drains will go and how this relates to agreements between Reclamation and the district.
- There was discussion regarding capital cost sharing for a seepage project that might improve conditions over the baseline.

*Action item: Katrina will speak to her colleagues about ownership issues.*

- There was a discussion about pumping during interim restoration flows.
- There was a question about what would happen if flood flows have subsided but pumping is required to dry up saturated soil to threshold levels.

Katrina showed the restoration flow hydrograph and showed the flows for this year as a dry water year type.

- There was a question about the criteria for determining flood flows vs. Restoration flows. Are there new impacts relative to restoration? Reclamation is doing more work on defining what those specific requirements would be. Katrina asked for further input on this topic.

Written comments for the financial assistance section of the SPH are due May 18, 2012.

### **Current Seepage Projects**

Brian Heywood provided the group with an update on the current seepage projects underway, and the March 1, 2012, Reach 3 and 4A landowners meeting for priority parcels. Brian also reviewed how these parcels were prioritized. Site visits will be scheduled soon with other interested landowners. Interested landowners should contact Reclamation to set these up.

- There was a question about when is the project type for a site decided. The answer is that it takes about six months to do the site evaluation. The process for selecting the project type includes writing up a report with all information and preliminary designs for potential projects. Then a meeting with the landowner would determine the project based on evaluation criteria.

Completion of a seepage project is expected to take 1-2 years. A project could be completed in 13 months on an aggressive schedule. There are currently six projects that have been started.

- Central California Irrigation District (CCID) is interested in assisting in speeding up the project evaluation process by providing technical knowledge regarding the data and installing lines and working with landowners. They also feel it could be a more efficient use of tax payer dollars.

Reclamation is required to follow federal processes to determine what the best project is for a site .

*Action Item: Katrina will pursue the idea of working more closely with CCID to expedite the process.*

### **Next Steps and Follow-through**

The Full SPH will be posted to restoresjr.net by close of business on April 27, 2012.

Feedback or any additional peer review questions should be emailed to Reclamation by May 11, 2012.

Feedback on the entire SPH (including the Agreements section) is due by May 18, 2012.

The next meeting date is to be determined. It was suggested that a July meeting after the peer reviewers have been selected would be possible so that the reviewers could meet the group and see how it operates.

### ***SMP Peer Review Action Items:***

*Action Item: Provide data and maps of historic underground streams and sand channels.*

*Action Item: Change the title for Appendix D from “Sediment Texture and Other Data” to “Soil Texture and Other Data.”*

*Action Item: Add “How should the SJRRP best balance best available technology and cost efficiency in the groundwater monitoring program? Add “Are more real-time telemetered stations needed?” to the list of peer-review questions.*

*Action Item: Add “What is the best approach to predict future groundwater levels for flow bench evaluations, if the one used in the SMP is not adequate? Keep in mind that a ¼ mile grid size MODFLOW-based model is currently available.” to the list of peer review questions.*

*Action Item: Add “How should the SJRRP best take travel time into account in flow changes and management responses to seepage triggers, if the current methods are not the best?” to the list of peer review questions.*

*Action Item: Add “Are there other triggers for a site visit Reclamation add to the SMP?” to the list of peer review questions.*

*Action Item: Add “What is the best process and evidence to use to determine the cause of a groundwater rise (whether this is a river response or responding to irrigation or another factor), if not already in use in the SMP?” to the list of peer review questions.*

*Action Item: Add “How should the SJRRP best account for irrigation events in groundwater modeling, if it is necessary to account for irrigation events in groundwater modeling? If so, what types of irrigation events should be accounted for?” to the list of peer review questions.*

*Action Item: Send Bill Luce the list of the peer reviewer names.*

*Action Item: The peer review team will attend some site visits*

***Other Action Items:***

*Action Item: Katrina will pursue the idea of working more closely with Irrigation Districts to expedite the process*

*Action Item: Add “other eligible entities” in addition to districts and landowners under the financial assistance section of the Seepage Project Handbook*

**Parking Lot Topics**

- There are no new topics to add to the parking lot list