Seepage and Conveyance Technical Feedback Group
Friday, January 31, 2014, 1 p.m. – 4 p.m.
San Joaquin River Exchange Contractors Water Authority Office
541 H Street, Los Banos, CA 93653
Meeting Summary

Attendees

Shelly Abajian	Office of Senator Dianne Feinstein
Eric Abrahamsen	Provost and Pritchard
Shawn Coburn	Coburn Ranch
Mike Day	Provost and Pritchard
Larry Harris	Wolfsen
Katrina Harrison	Bureau of Reclamation
Brian Heywood	CDM Smith
Tom Johnson	Restoration Administrator
Anusha Kayshap	CDM Smith
Katie Lichty	Circlepoint
Clifton Lollar	Kings River Water Association
Len Marino	Central Valley Flood Protection Board
Mari Martin	RMC
Patti Ransdell	Circlepoint
Will Teixeira	Teixeira & Sons
Mark Tompkins (phone)	Newfields
Rebecca Victorine (phone)	Bureau of Reclamation
Peter Vorster (phone)	The Bay Institute
Joann White	San Joaquin River Exchange Contractors Water Authority

Introductions, Meeting Objectives and Agenda

Patti Ransdell, facilitator, opened the Seepage and Conveyance Technical Feedback Group (SCTFG) meeting with introductions, reviewed the agenda, and discussed the purpose of the SCTFG. The purpose of this meeting is to gain feedback on draft seepage project designs and discuss potential design considerations.

Restoration Flow Schedule

Katrina Harrison, Bureau of Reclamation, gave a short overview of the San Joaquin River Restoration Program (SJRRP) Restoration Administrator's (RA) Restoration flow schedule for Water Year (WY) 2014. WY 2014 is currently classified as a "Critical Low" meaning there will be no flow releases for the SJRRP. There are currently no flows below Sack Dam due to seepage thresholds at the Eastside Bypass (ESPB). Riparian flows will continue to be supplied.

Seepage Management Update

Katrina Harrison discussed the goals and objectives of Seepage Management and provided a brief update on the revisions to the Seepage Management Plan (SMP).

An attendee asked about the status of revisions to thresholds and established baseline conditions per discussions at the SCTFG meeting held in April 2013. Thresholds have been revised per peer review recommendations; these revised thresholds will be made public in the revised SMP to be released later this year. Seepage projects are being designed based on the revised thresholds. The study of baseline (i.e., historical, pre-SJRRP) conditions is ongoing.

Seepage Project Status

Brian Heywood, CDM Smith, provided an update on the status of seepage projects and an overview of the seepage project process and prioritization approach.

Site Evaluations

Eric Abrahamsen, Provost and Pritchard, provided an overview of the site evaluation process. He described the purpose of the site evaluations and the data evaluated.

An attendee asked about why the projects are being designed to a flow of 4,500 cubic feet per second (cfs) as opposed to 4,000 cfs (the maximum flow shown in the Settlement hydrographs). The maximum flow in the default wet-year hydrograph is 4,000 cfs. The RA can call on buffer flows, up to an additional 10%, increasing the maximum flow to 4,400 cfs. The Settlement agreement states that the designs for the Reach 2B and 4B projects allow for capacity up to 4,500 cfs. The SJRRP has chosen to use the flow rate of 4,500 cfs as the design flow for seepage projects to be consistent with the Reach 2B and 4B projects.

An attendee asked if the duration of the Restoration flows is taken into account in the data evaluation. The duration is being considered. The design process uses a methodology that assumes steady state flow conditions to be conservative.

Preliminary Designs and Estimates

Mike Day, Provost and Pritchard, discussed the seepage project preliminary design process.

An attendee asked a question during the interceptor line preliminary design discussion about how flow in the drain is estimated. Reclamation's Drainage Manual is the basis for design calculations and the

estimate of drain flow. The equation includes factors such as depth of water in the channel, distance to the channel, and the hydraulic conductivity of the soil.

There was a question about what the expected normal operating condition of pipes is in an interceptor line. The pipes are designed to flow full during design flows of 4,500 cfs. The pipes will carry more water at about 7/8 full than when full.

An attendee asked what the typical distance between the drain pipe outlet into the sump and the floor of sump is. This distance varies by site.

There was a question about the set points for the pumps in the drain sumps. Electrodes will be used to measure the water level within the sump and signal the submersible pumps to activate when a pre-determined level is reached. The design includes two submersible pumps at each sump. The set-points will be set near the elevation of the drain pipe discharge into the sump and will be site specific.

An attendee asked about the example interceptor layout presented to the group. The attendee noted that the interceptor lines are located along both the San Joaquin River and the ESBP. The attendee asked if these lines were designed to pick up water from the ESBP. The drain is designed to collect seepage water from Restoration flows regardless of the channel (i.e., river vs. bypass). Due to channel configuration in the area of this example, Restoration flows can be present in both the San Joaquin River and ESBP channels simultaneously.

The assumptions used to develop the cost estimates were presented. Katrina Harrison invited the group to provide suggestions and/or recommendations on assumptions. An attendee generally agreed with the replacement frequencies presented. He felt that submersible pumps usually need to be replaced every 10 to 15 years. An attendee noted that PG&E is planning on an approximate 6% annual increase in rates through 2020.

There was a brief discussion on channel conveyance improvements. Reclamation is pursuing the removal of sand in the ESBP on the Merced National Wildlife Refuge. Sand deposits in this location cause a backwater effect into the ESBP. Other projects will be considered, but are difficult to scope out because they are very site specific. An attendee pointed out that sand will continue to deposit in this area in the future. Reclamation understands that sand removal will need to be considered as an ongoing maintenance project.

An attendee asked about the parcel prioritization and if the output of the site evaluation study was tied to the prioritization. The parcel prioritization occurred before the site evaluation to identify areas that should be evaluated first. Groundwater monitoring wells have been installed in the higher priority parcels where the landowners have given approval. The data collected from these monitoring wells are used in the site evaluation process to determine if the site has a potential seepage problem.

An attendee asked if parcel prioritization was based on 2010/11 flows. Parcel prioritization was done by comparing flow conditions in the SJRRP HEC-RAS hydraulic flow models and the ground surface elevations at each parcel/property. Other information about observed high groundwater conditions (e.g., during the high flows in 2010/11) is also considered in the prioritization process.

An attendee noted that the land south of Parcel Group (PG) 168 on the east side of the ESBP should be included as part of PG167. This portion was left out of the map presented by mistake; it is included in the site evaluation and preliminary design process.

Katrina Harrison discussed the potential options for operations and maintenance of interceptor lines.

An attendee asked about the potential to discharge drain water to the river or ESBP. If the landowner operates and maintains the lines, it is likely that the discharge permit would be held by the landowner.

It was clarified that the cost estimates include the potential for discharge of water to the river/bypass channel and to on-farm facilities (e.g., ditches, canals).

An attendee asked if the landowner could sell drain water collected during flood flow conditions. A discussion about this issue included several meeting attendees. There was no consensus about this topic. Reclamation will investigate this issue further.

Realty Actions

Katrina Harrison presented three types of realty actions as potential groundwater seepage mitigation: license agreements, easements, and land acquisition. She reviewed Reclamation's process for obtaining land value appraisals.

An attendee asked if there are any stipulations in the easement language regarding the amount and/or duration of Restoration flows. The current easement language takes a conservative approach and allows for Restoration flows to be conveyed year round. Ali Forsythe stated that it is not likely that there would be enough water available for that condition. However, Reclamation is making that assumption to be conservative during the appraisal valuation process.

There was a question about the SJRRP purchasing refuge water supply flows. Historically, Reclamation has not conveyed refuge water via the San Joaquin River or bypass because it was not viable. However, with the river wet year round in the future, Reclamation may choose to convey refuge water via the river/bypasses.

Parcel Prioritization Updates

Brian Heywood discussed the process to update the parcel prioritization.

There was a question if the prioritization would consider the groundwater gradient as opposed to the flat gradient that was used previously. Currently the plan is to continue with the flat groundwater gradient assumption. The actual groundwater gradients are considered in the site evaluation process.

Additional Questions

An attendee asked if setback levees were still being considered in Reach 4B. The Reach 4B project has not reached a decision on flow routing. Therefore, the decision on setback levees and/or levee realignment has not been made.

Action Items

- Reclamation agreed to look into the use of flood flows that may be collected by a seepage project.

Parking Lot Topics

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