



**Reach 4B, Eastside Bypass, and Mariposa Bypass
Channel and Structural Improvements Project
Landowner Meeting
Monday, October 3, 2011, 8:30 a.m. – 11:30 a.m.
San Luis Canal Company
11704 Henry Miller Avenue, Dos Palos
Meeting Notes**

Attendees:

Shelly Abajian	U.S. Senator Dianne Feinstein
Michelle Banonis	Bureau of Reclamation – Mid Pacific Region
Carrie Buckman	CDM (Consultant)
Steve Chedester	Exchange Contractors
Kent Collins	Bureau of Reclamation – Denver Technical Services Center
Brian Crook	CDM (Consultant)
S. Greg Farley	Department of Water Resources
Alicia Forsythe	Bureau of Reclamation – Mid Pacific Region
Margaret Gidding	Bureau of Reclamation – Mid Pacific Region
Shelley Haaf	California State Lands Commission
Reggie N. Hill	Lower San Joaquin Levee District
Chase Hurley	San Luis Canal Company
Lance Kiley	California State Lands Commission
Steve Lehman	California State Lands Commission
Mari Martin	RMC Landowner
Dan McNamara	Landowner
Leslie Mirise	National Marine Fisheries Service
Dave Mooney	Bureau of Reclamation – Mid Pacific Region
Craig Moyle	MWH (Consultant)
John Netto	United States Fish and Wildlife Service
Evan Page	California State Lands Commission
Norm Ponferrada	Bureau of Reclamation – Mid Pacific Region
Joe Porter	California State Lands Commission
Stacy Porter	CDM (Consultant)
Rhonda Reed	National Marine Fisheries Service
Paul Romero	California Department of Water Resources
Lynn Skinner	Landowner
Scott Skinner	Landowner
Brent Stearns	Nickel Family LLC San Juan Ranch

Introductions, Meeting Objectives and Agenda

Brian Crook, facilitator, opened the meeting with introductions and reviewed the agenda. The primary purpose of the meeting was to provide a brief overview of the Reach 4B Project alternatives development process, present the preliminary levee alignments for Reach 4B, and to describe the California State Lands Commission (CSLC) process for identifying Public Trust lands and to present the draft compilation plats for Reach 4B.

Reach 4B Project Powerpoint Presentation

General Program Update

- Michelle Banonis informed the group that the San Joaquin River Restoration Program (SJRRP) Program Environmental Impact Statement/Environmental Impact Report (EIS/R) comment period closed September 21, 2011. The team is in the process of going through the comments and addressing responses.
- The Final EIS/R with comment responses is anticipated to be released to the public in April 2012.
- Interim Flows for 2012 started Saturday. The flows are being held low and are not being allowed to pass Sack Dam because of groundwater levels. As the groundwater levels are re-evaluated, flows may be allowed to pass Sack Dam later this year. The SJRRP will not allow flows in the river unless the groundwater thresholds are being met.

Action Items from Previous Meetings

- There are two main action items from the previous landowner meeting; 1) Show how the Program EIS/R relates to the Reach 4B Project EIS/R, and 2) Explain the process for developing rearing habitat.
- Michelle is developing a diagram showing the overall process and how the Reach 4B Project fits in with the Program EIS/R. When the figure is complete, it will be distributed to the group or presented at the next meeting.
- The process for determining quantities of rearing habitat in Reach 4B will be addressed later in this presentation.

Field Activities and Access

- Craig Moyle gave an overview of upcoming field activities/surveys for the overall SJRRP including Reach 4B surveys (see handout; also available on the web site at www.restoresjr.net/activities/field/index.html).
- Upcoming surveys include fish barrier surveys by DWR, DFG boat surveys, and the Water Education Foundation Tour on November 2nd and 3rd.
- The group asked if the list contained the CSLC activities. Craig explained that the CSLC is finished in Reach 4B1, and is finalizing the schedule for field work in Reach 4B2. Craig will add these activities to the list.
- The group mentioned that DWR is completing borings all the way to Firebaugh as part of the Non-Urban Levee Evaluation Program. Paul Romero will provide this information to Craig, and Craig will add these field activities to the list.

Reach 4B Project Initial Concepts

Alternatives Development Process and Initial Concepts

- Carrie Buckman provided a brief overview of the alternatives development process and noted that the process was not intended to select a preferred alternative. The preferred alternative will not be selected until the Record of Decision (ROD) is signed and released to the public. The purpose of this process is to select a wide range of alternatives to move forward for further analysis in the Reach 4B Project EIS/R.
- Carrie then described the five initial alternatives for the Reach 4B Project and explained that they were preliminary and still under development.
- The initial alternatives include:
 - 1) All restoration (fish and flows) in San Joaquin River
 - 2) All restoration (fish and flows) in Bypass
 - 3) 475 cubic feet per second (cfs) in the San Joaquin River, with remaining flows in Bypass
 - 4 and 5) Split the pulse flows between the San Joaquin River and Bypass

Levee Alignments

- Kent Collins and Carrie explained the role of CDM, Reclamation's consultant for the Reach 4B Project, and Reclamation's Denver Technical Services Center (TSC) in the Reach 4B Project. CDM is responsible for the overall planning for the project, while working closely as a team with the TSC, who is responsible for pre-design. The TSC is collecting data, running models to analyze the data, and completing pre-design.
- Kent presented the preliminary levee options for Reach 4B and explained how the alignments were developed.
- Preliminary levee alignments were developed for Reach 4B to help develop costs and to identify potential benefits and impacts of levee setbacks.
- The process will consider impacts to agriculture, the economy, air quality, fish, habitat, and landowners.
- The levee alignments are very preliminary; they have been developed to allow the Reach 4B team to compare initial alternatives and to examine a wide range of levee alignment options.
- There are 4 different levee options that have currently been developed.
 - **Option A - The existing alignment.** This option would not change the existing alignment but would include improvements to ensure a continuous system, and restore the system to its original design capacity of 1,500 cfs.
 - **Option B** - This is what is referred to as the "**Minimum**" option. It is the minimum setback for flows up to 4,500 cfs that would still provide an acceptable amount of habitat. This is approximately 250 feet from the outside of each channel side.
 - **Option C** - This is referred to as the "**Intermediate**" option. This alignment is between the Minimum Option and the Maximum Option for comparison purposes. It includes at least 500 feet from each channel side.
 - **Option D** - This is the "**Maximum**" option. It incorporates many historical side channels because these increase fish habitat and allow for

floodplain connectivity. This would require excavation of historical side channels to make the channels accessible at lower flows and prevent stranding.

- Ali Forsythe noted that these alignments are preliminary and the SJRRP is presenting them in order to get feedback. Are there areas of land that have more seepage issues? Is there existing infrastructure that needs to be avoided? How can we avoid splitting fields? Where are the roads and how can we avoid them? The SJRRP team would like local information to help adjust these alignments to make the most sense to landowners and minimize impacts.
- The group commented that from a public standpoint, the levee alignments do not make sense under Option D because they would require spending money on a wide channel that would be right beside a Bypass. Additionally, this alignment would essentially remove all the agricultural lands in between the two channels.
- Ali noted that a combination of levee options may be used, not just one option. The levee alignments will likely be variable, with some wider areas and some more narrow areas. The channel must pass flows and provide habitat, but habitat is not likely required in every location so there is some flexibility for levee alignments.
- The group asked if Option C is 500 feet from either side of the channel, and how wide is Option D. Kent said that Option D varies based on the location of historical channels, but the widest part (from levee to levee) is about 1 to 2 miles.
- Kent reiterated that these alignments were created for comparison purposes and to allow creation of habitat and to pass flows. Some of the alignments may be impractical and we need landowner feedback to help finalize alignments.
- A geomorphologist at the TSC mapped out historical channel alignments to help create Option D. As the maps show, it's a very complex area. The goal was to recapture these channels for habitat and channel complexity.
- Many of the side channels no longer exist today, some have been turned into drains, others have been plowed over.
- The model excavates some of the historical channels and adds levees. So if option D were selected, excavation would be required.
- All of the levee alignments merge at the boundary of the National Wildlife Refuge to maintain a capacity of 10,000 cfs downstream in the Bypass.
- The group noted that they only saw three options, not four options. Kent clarified that the fourth option is really use of the existing levees but some improvements would be necessary. There are really 3 new setback options.
- The group asked what amount of freeboard was used in the designs. Kent answered that 3 feet of freeboard was used to determine the levee heights.
- Kent also noted that where the levees are narrower, the levee heights need to be greater.
- The Reach 4B team will consider many different factors to refine these four levee options.
- Levees will be designed based on velocity and depth at various flows, how much habitat is required for fish, the quality of habitat, and the duration that habitat would be available.

- The group commented that using the old river channel is the heart of prime farmland and if the Bypass is used instead, it will avoid a lot of impacts on production.
- The group asked how the levee options match up to the Reach 4B initial alternatives presented by Carrie and outlined in the handout. Carrie explained that the levee options have been matched up to the initial alternatives.
 - Alternative 1 includes 4,500 cfs in the San Joaquin River channel and would require at least Option B.
 - Alternatives 2 and 3 include a capacity of 475 cfs in the San Joaquin River, the existing channel cannot contain this. Levee setbacks would not be required but some clearing and grubbing would occur and some improvements to existing levees may be required.
- At a preliminary level, the levee options for each initial alternative are as follows:
 - **Alternative 1** – Levee Options B, C, and D
 - **Alternative 2** – Levee Option A
 - **Alternative 3** – Levee Options A and B
 - **Alternative 4** – Levee Options A, B, and C
 - **Alternative 5** – Levee Options A, B, and C
- Carrie noted that the final alignment could be a combination of levee options, not just one option.
- The group asked how a determination was made to add a full channel width on each side of the levee. Kent explained that the biologists have determined fry and juvenile require rearing habitat of at least one channel width.
- The group noted that flows could last well into the heat of summer, even July. The larger channel would take the flow, slow it down and spread it out over a larger area, and increase the temperature. Kent said they are aware this is an issue and will be analyzing those impacts, such as temperature, and depth, using models and calculations.
- The group commented that someone needs to make sure these alternatives are actually feasible. We should not waste half a billion dollars just to find out it is not feasible, the temperature is too high for example. Kent and Ali responded saying they are working with biologists to determine the minimum habitat requirements, what is feasible, and what the fish need.
- The group asked if there was a flow number associated with each levee option. Kent said yes. The flows are as follows:
 - **Levee Option A** = 1,500 cfs with 3 feet of freeboard
 - **Levee Option B** = 4,500 cfs with 3 feet of freeboard
 - **Levee Options C and D** = Minimum of 4,500 cfs with 3 feet of freeboard, but lower levee heights than Option B
- The flow is the same (4,500 cfs) for each setback levee option (B, C, and D) but heights and amount of habitat differ.
- The group asked about the purpose of side channels. Kent explained that flow in side channels is good habitat for fish and provides depth and temperature benefits. Side channels would need to be excavated or they could have shallow flow and dry spots that could strand fish.

- The group asked if there was a riparian zone in all options. Kent said yes.
- The group asked how fish would be kept in one channel and out of the other. Carrie responded that we are incorporating ways to deal with screening fish out of channels. We are refining the alternatives to see where we can screen fish and where it may not be feasible.
- The group asked if the old historical channels would be re-activated. Kent said yes, under Levee Option D.
- Levee Option D would only apply to the alternative that has all restoration in the San Joaquin River. So under this alternative, all fish and flows would be in the San Joaquin River. There would be no modifications to the Bypass under Levee Option D.
- When some alternatives split flows between the Bypass and the San Joaquin River, we may not need to raise levees.
- The group asked if there was enough water to do this. Ali replied that yes there is enough water but we still need to complete the analysis to determine if the temperature and depth and other factors are adequate for fish.
- Ali mentioned that on the Reach 2B project, the widest levee alignments couldn't be used because they didn't produce an adequate depth for an adequate period of time to benefit fish. The widest alignment for the Reach 4B Project (Option D) could be narrowed or even screened out if it doesn't meet fish needs.
- The group asked if historical flows that exceeded the flood system capacity were used to design the levees. Kent said that about 84 years of historical hydrology records were used. The data was run through the models to determine daily flows and the duration of the required depth and velocity.
- Kent presented some example slides showing how model results will help analyze water depths, velocities, and temperatures for each of the alternatives. This information will be used to determine habitat suitability for fish.
- The Reach 4B Project will use the fish criteria and models to determine habitat suitability and how long the higher habitat values would persist.
- The future work that is still needed for the Reach 4B Project includes completing 2D modeling runs, completing habitat suitability for each alternative, using daily flows to compute habitat duration, and completing sediment transport analysis for erosion and deposition.
- The group asked if all the fish criteria were based on salmon. Kent said yes they are. The group then asked what the Reach 4B team was doing for other fish species that could utilize the river. Kent and John Netto explained that the alternatives are being developed with a focus on addressing salmon needs, but that many of the salmon requirements would also benefit other native species. Carrie added that the project is maximizing habitat for salmon but the structural modifications in Reach 4B and the Bypass to allow fish passage include passage criteria for other native species.

Seepage

- Kent presented an overview on seepage management and examples of measures that could be incorporated into the Reach 4B Project to reduce seepage.
- The group noted that under Option D, seepage could take out all the land in between the San Joaquin River and Bypass because it is their understanding that

seepage in this area can travel over a mile. Kent said that in that case, we would incorporate seepage measures. Kent also discussed that groundwater moves slowly, and the flows may not be high enough for a long enough duration to travel that far. The Reach 4B team has a specialist at the TSC analyzing those potential impacts and identifying measures to avoid them.

- The group asked if Reclamation's TSC had talked to landowners about their experience with tile drains. Dave Mooney said that they had talked with several landowners in the Bypass who have had some experience with them. Generally they seemed to function for several years before reaching the end of their life span.

Feedback on Levee Alignments

- The group asked how they could provide comments on the levee options and initial alternatives.
- Ali and Michelle said comments can be provided through email, phone calls, or regular mail. They are open to having additional smaller group meetings or having one-on-one meetings, whatever landowners would prefer. Michelle's contact information is presented on the last slide of the PowerPoint presentation.
- Michelle and Kent will distribute the levee option maps electronically to the group so the group can review and provide comments.
- Ali said that the Reach 4B team needs to know where there are potential opportunities, where the existing infrastructure is, and where are the lands that cannot be touched.
- The group noted that the project has been going on for many years and that the SJRRP should already have much of this information.
- The group asked how much acreage would be removed under each initial alternative and levee option. Kent said that his TSC team could provide the total number of acreages removed under each option.
- The group noted that some landowners use GIS and may request the shapefiles.
- Ali again mentioned that we need feedback on the levee alignments and that the alignments are not final. The sooner we get feedback, the better.
- The group asked how the Report to Congress required in the Settlement would fall into the Reach 4B schedule. Ali responded that she believes it would be concurrent with or after a ROD. She noted that the report would require more detail than the Reach 4B Project EIS/R (such as cost) and may have to be a separate attachment. (Note: Ali verified the legislation states that the report is due to Congress no later than 90 days after the decision is made.)
- The group noted that they believed the intent of the report was that it be submitted to Congress before a commitment was made. Ali said she would have to look back through the legislation to double check.
- Carrie asked that all comments on levee alignments and initial alternatives be sent to Reclamation by the end of October.
- The group asked how schedules were aligning between the fish and the SJRRP projects. Ali said we are pulling the schedules together better. We had some stops and starts, but now they are better aligned.

Rearing Habitat

- John Netto (from the U.S. Fish and Wildlife Service) discussed the habitat requirements for salmon.
- Salmon need water deep enough to swim in and passage without barriers. Temperature can act as a barrier to passage. Salmon also need areas to rest.
- Rearing habitat is habitat where fish stay and grow.
- Floodplain habitat provides food and helps fish grow faster. It also provides cool water, dissipates energy, and slows nutrients and allows other organisms to take up those nutrients and eventually provide food for salmon.
- The main factors that contribute to good habitat for salmon are velocity, temperature, water quality, and duration.
- A variety of methods have been reviewed to determine habitat quantities. Generally, the habitat quantity is determined relative to the channel width.
- John presented three different methods for calculating habitat quantities.
- The SJRRP is working to create a model to help determine habitat quantities for existing designs, such as the initial alternatives for the Reach 4B Project.

State Lands Commission Update

- Steve Lehman presented an overview of the State Lands Commission process to identify Public Trust lands.
- The CSLC was created in 1938, originally the Office of Surveyor General, to sell land.
- The CSLC has jurisdiction over California's sovereign lands, which are submerged lands under navigable rivers and streams, and submerged lands under tidally influenced waters (3 mile limit in Pacific Ocean), and school lands.
- The origins of public trust lands go back to Roman times, but are generally based on English Common Law.
- Civil Code 830 defines State and private land ownership.
- Steve defined the different types of public trust lands and how they are identified.
- Steve reviewed the historical maps the CSLC are using to identify public trust lands and the low and high water lines of the San Joaquin River.
- Steve presented the compilation maps for Reach 4B1, which document historical conditions based on available references (see handout). These maps will be provided in electronic format upon request.
- The group asked when they would see the maps showing what the CSLC owns. Steve said those are currently in development for each parcel, are based on the historical information presented on the compilation plats, and are referred to as the "administrative maps."
- Steve asked the group if they had any better historical maps to please provide these to him and the CSLC as soon as possible.

Feedback from the Group

- Some meeting attendees indicated that they do not support this project.

- Some meeting attendees stated they were not aware that agricultural lands would be taken out of production to implement this project.
- The group asked the Reach 4B team to provide the number of acreages that would be affected under each initial alternative and levee alignment option.

Action Items

- Provide copies of CSLC compilation plats in electronic format upon request.
- Provide copies of preliminary draft levee alignments for Reach 4B in electronic format.
- Develop a graphic that shows the overall SJRRP timeline and how the Reach 4B Project is related to the overall SJRRP.
- Provide total number of acreages affected under each initial alternative and levee alignment option.
- Paul Romero to provide updated information to Craig on field activities.
- Craig to update field activities list with CSLC activities in Reach 4B.
- **Please provide all comments on the Reach 4B Project draft Initial Alternatives and preliminary levee alignments to Michelle Banonis by Monday, October 31st, 2011.**