San Joaquin River Restoration Program

Water Management Technical Feedback Meeting

Visalia, CA

March 16, 2018
Agenda

• Introductions
• 2017 In Review
• 2018 Outlook
• Water Management Goal Project Status
• Stakeholder Feedback
• Break
• Lecture Series: SCCAO Water Supply
• 2018 Meeting Schedule
• Adjourn
2017 IN REVIEW
2017 Hydrology

- 4.395 MAF – 2nd wettest year since 1900
- 240% of average runoff, 220% of average snowpack
- Higher proportion of rain:snow
- High snow levels due to warm storms
- Airborne Snow Observatory data used in 2017 to guide blending of DWR & NWS forecasts.
- Since early June, held in-house projection to 4.406 MAF
2017 Restoration Year Type

Jan 20 Allocation:
Wet restoration year type

3,134 TAF

(20/80 blend of DWR/NWS)

2017: 673.4 TAF / 556.5 TAF
2017 Restoration Schedule

• Wet restoration year type
  – 673 TAF Friant Dam release / 557 TAF @ GRF
  – 150-300 cfs limit below Sack Dam in Spring & Summer
  – 189 TAF scheduled / 367 TAF Unreleased Restoration Flows (URFs)
  – Of the 189 TAF scheduled Restoration Flows, 97 TAF of those were flood flows.
2017 Restoration Schedule

• URFs
  – 364.967 TAF Gross Tier 1 (346.719 TAF Net)
  – $20/AF – no refunds for undelivered water
  – Not fully schedulable, tied to default hydrograph
  – Deliver by end of Uncontrolled Season
  – 2.491 TAF Gross for last minute URF Exchange

• Flood flows through July 21
  – Issue of Flood flows not meeting RA Recommendation at Sack Dam
    (0 cfs below Sack Dam)
  – Highlighted need for greater clarity in Restoration Flow Guidelines pertaining to flood flows
2017 Restoration Schedule

- Fall Pulse released two periods
  - 1,256 AF as early September pulse (within Flexible Flow Period)
  - Remainder of Fall pulse moved to February (outside of Flexible Flow Period, applied Water Supply Test)
  - 2,491 AF at end of year put into URF Exchange
Gravelly Ford Accounting

- Holding Contracts less than Exhibit B for over 2 months after flood flows
- Inconsistency/Discrepancy with Settlement / Restoration Flow Guidelines on how to account
- Feedback sought from Settling Parties and RA
- Implemented interim procedure for accounting, use GRF flows, but adjust for “residual flood flows”
2018 OUTLOOK
2018 Allocation

- **January 20:** 20/80 blending and 75% exceedance produced **741 TAF** Natural River Forecast
  - Dry
  - 171.178 TAF at Gravelly Ford

- **February 16:** 30/70 blending and 90% exceedance produced **525 TAF** Natural River Forecast
  - Critical-High
  - 70.919 TAF at Gravelly Ford

- **March 16:** 40/60 blending and 75% exceedance produced **928 TAF** Natural River Forecast
  - Dry
  - ~ 195 TAF at Gravelly Ford
2018 Forecasting Efforts

• Joint Forecasting
  – SJRRP and SCCAO meeting weekly to review data, blend DWR and NWS forecasts, and direct scientific efforts
  – Apprentice training
  – Staff supporting other efforts (DWR, ARS, ASO)

• NASA ASO
  – First flight March 4-5 for portion of watershed
  – Funding constrained, difficulty of getting $ to NASA
  – Early April and May fights planned to coincide with snow course sampling
2018 Forecasting Efforts

- **Agricultural Research Service**
  - iSnoBal model to track snowpack between ASO flights
  - Biweekly reports
  - Model driven by high-resolution forecast to melt and accumulate snow between ASO flights
  - Model development proceeding well

- **Univ of Colorado Boulder / NASA**
  - Satellite based snow-cover product
  - Monthly reports (perhaps biweekly in future)
  - Seeking integration with NASA ASO, ARS iSnoBal
WATER MANAGEMENT GOAL
PROJECT STATUS
Madera Canal Projects

Low Flow Valve
• Valve installed in August 2017
• Valve Testing completed February 2018

Madera Canal Capacity Restoration
• Selected measures to proceed as separate projects
  – CWD Improvements
  – Fresno River Diversion
FKC Capacity Restoration

• Original project formulation infeasible with authorized funding
• Working with Friant Contractors to reformulate alternatives and focus on subsidence area
• Seeking additional authorizations and funding sources to implement a more comprehensive solution
Groundwater Financial Assistance

**Tulare ID - Cordeniz Basin**
- 80-acre basin
- Groundbreaking: December 2015
- Complete: Summer 2019

**Shafter-Wasco ID - Madera Avenue Intertie**
- 270-acre recharge basin at Kimberlina Rd.
- Recharge ponds complete
- Flood water turned out into them in 2017
Groundwater Financial Assistance

Porterville ID - In-Lieu Project
• Connects two service areas (2,170 acres) to surface supplies from the Wood-Central Ditch and Friant-Kern Canal
• Construction started August 2017

Pixley ID - Joint Groundwater Bank
• 560-acre bank; 4.5 mile pipeline; new FKC turnout
• FONSI signed December 28, 2017
• Initiation of construction pending CEQA litigation
Recapture & Recirculation

2017 Recapture – 26,000 AF
• 17,000 AF at Patterson and Banta-Carbona Irrigation District facilities
• 9,000 AF at Mendota Pool

R&R Plan
• Delta Recapture pilot plan, Draft 2017
• Recirculation Chapter update – workshop tentatively planned for summer 2018
LONG-TERM RECAPTURE AND RECIRCULATION OF RESTORATION FLOWS EIS/R
Overview

• Administrative Draft EIS/R Review
• Alternatives Under Consideration
• Baselines Evaluated in the EIS/R
• Preliminary Findings
  – Resource Areas Potentially Affected by Operations
  – Resource Areas Potentially Affected by Construction
• Next Steps and Schedule
• Administrative Draft EIS/R will be shared with Settling Parties and Cooperating Agencies for review and input

• Feedback received will be incorporated into the Public Draft EIS/R scheduled for completion later this year
EIS/R Alternatives

• Alternative 1 - No Action/No Project
• Alternative 2 – Continue Existing Temporary Recirculation Actions
• Alternative 3 – Maximize Use of Existing Facilities
• Alternative 4 – Expand Existing Facilities
• Alternative 5 – Construct New Facilities
Baselines Evaluated in the EIS/R

• Existing Conditions – reflects conditions at the time of the CEQA NOI which includes:
  – Elements of the Settlement evaluated at a project level in the PEIS/R that are currently underway
  – Unreleased Restoration Flows that have ranged annually from zero to the full Restoration Allocation
  – Restoration Flows below Sack Dam at 300 cfs
  – Recapture in the Restoration Area and at the Delta Pumps
  – Recirculation of recaptured Restoration Flows
Baselines Evaluated in the EIS/R

• No Action/No Project Alternative – reflects reasonably foreseeable future conditions in the absence of this project which includes:
  – All elements of the Settlement evaluated at a project level in the PEIS/R under Alternative C1
  – Unconstrained release of Restoration Flows
  – Recapture in the Restoration Area and at the Delta Pumps
  – Other elements of the SJRRP that have made substantial progress towards implementation
• Long-term operations-related impacts evaluated under all of the alternatives

• Resources with long-term effects identified include:
  - Air Quality
  - Bio Resources – Fisheries
  - Bio Resources – Veg. & Wild.
  - Climate Change
  - Groundwater
  - Hydrology – Surface Water
  - Hydrology – Water Quality
  - Land Use and Ag Resources
  - Noise
  - Recreation
  - Utilities and Service Systems
Preliminary Findings – Construction Effects

• Short-term construction-related impacts limited to Alts 4 & 5

• Resources with construction impacts requiring mitigation include:
  • Air Quality
  • Bio Resources – Fisheries
  • Bio Resources – Veg. & Wild.
  • Climate Change
  • Cultural Resources
  • Geo and Soils
  • Land Use and Ag Resources
  • Noise
  • Paleontological Resources
  • Hazardous Materials
  • Traffic and Transportation
  • Utilities and Service Systems
  • Visual Resources
Next Steps and Schedule

November 2015
Scoping Report

March 2016
Initial Alternatives Report

September 2017
Project Description Memo

September 2017
Kickoff EIS/R

Winter 2017/2018
Evaluate Alternatives

March/April 2018
Settling Party & Coop Agency Review EIS/R

Summer 2018
Draft EIS/R

We Are Here

Stakeholder Outreach

Preliminary Draft, Subject to Revision 28
STAKEHOLDER FEEDBACK
BREAK
LECTURE SERIES
NEXT MEETINGS
## Next Meetings

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2018</td>
<td>Visalia</td>
</tr>
<tr>
<td>Summer 2018 workshop</td>
<td>TBD</td>
</tr>
<tr>
<td>September 2018</td>
<td>Sacramento</td>
</tr>
</tbody>
</table>