Water Management Technical Feedback Meeting

January 22, 2014
Reno, NV

Agenda Overview

- Introductions
- SJRRP Background & Update
- *Lecture Series*: Investment Strategy Update
- Paragraph 16 Projects
- Part III
- Next Meeting Dates

Introductions

Comments on Meeting Notes

San Joaquin River Restoration Program

Friant Dam and Millerton Reservoir

- Completed in 1942
- Authorized for:
  - Water Supply
  - Flood Control
- Storage Capacity:
  520,500 Acre-feet
- Average Inflow:
  1.8 Million Acre-feet
- Average Deliveries:
  1.4 Million Acre-feet

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SAN JOAQUIN RIVER RESTORATION PROGRAM

Friant Dam Releases

- San Joaquin River *(8,000 cfs)*
- Friant-Kern Canal *(5,000 cfs)*
- Madera Canal *(1,250 cfs)*

SAN JOAQUIN RIVER RESTORATION PROGRAM

Settlement History

1942 - Friant Dam completed

1988 - Lawsuit filed challenging renewal of Friant Contracts

2004 - Federal Judge rules Reclamation violated California Fish and Game Code Section 5937

2005 - Settlement negotiations reinitiated

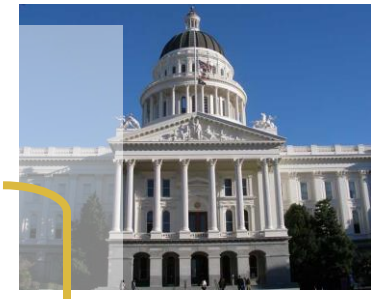
2006 - Settlement reached; Implementation begins

2009 - Federal legislation enacted (Public Law 111-11); Interim Flow releases begin October 1

Settling Parties & Implementing Agencies

Settling Parties

- NRDC Coalition
  - 14 organizations
- Friant Water Authority
  - 29 water agencies
- Federal Government
  - Department of the Interior
    - Bureau of Reclamation
    - Fish and Wildlife Service
  - Department of Commerce
    - National Marine Fisheries Service
- State of California
  - Department of Water Resources
  - Department of Fish and Wildlife
- Restoration Administrator



Implementing Agencies

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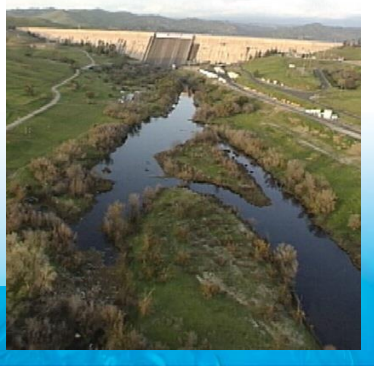
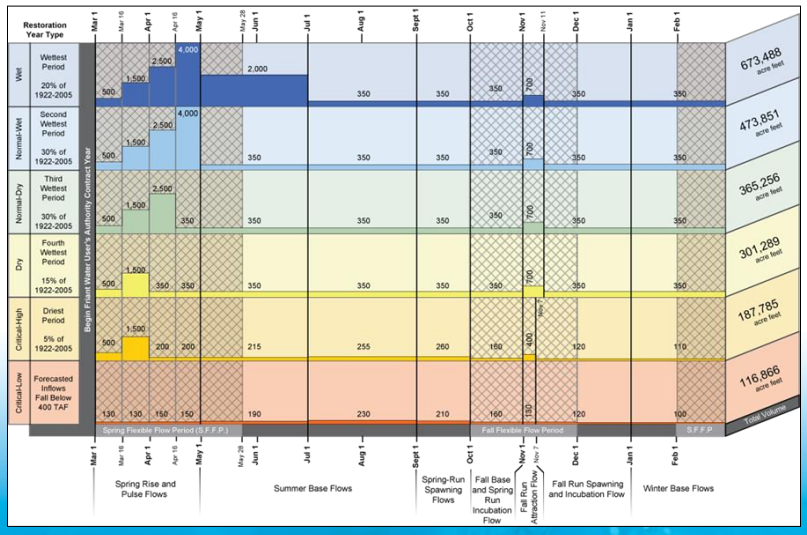
Settlement Goals

- Restoration Goal
  - To restore and maintain fish populations in "good condition" in the main stem of the San Joaquin River below Friant Dam to the confluence of the Merced River, including naturally reproducing and self-sustaining populations of salmon and other fish.
- Water Management Goal
  - To reduce or avoid adverse water supply impacts to all of the Friant Division long-term contractors that may result from the Interim Flows and Restoration Flows provided for in the Settlement.



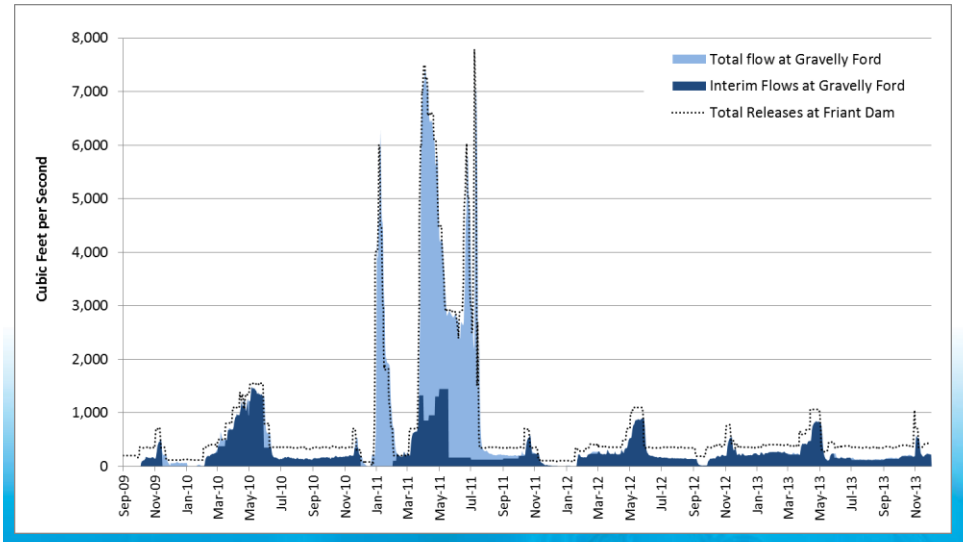
SAN JOAQUIN RIVER RESTORATION PROGRAM

Settlement Exhibit B Hydrographs

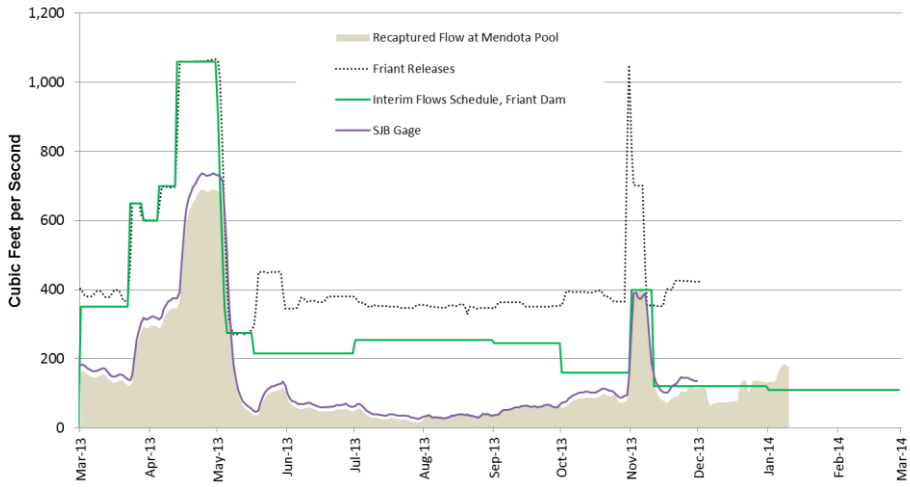


SAN JOAQUIN RIVER RESTORATION PROGRAM

Interim Flows (2009-2013)



Interim Flows – 2013



Restoration Flows

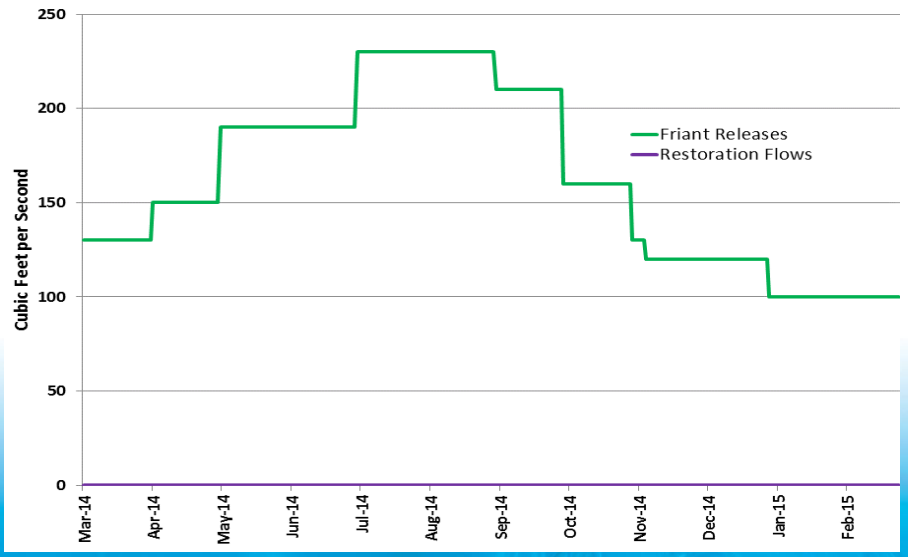
- Commenced January 1, 2014
- What's new
  - Unexpected Seepage Water
  - Unreleased Restoration Flows
  - Restoration Flows Guidelines
    - Evaluate allocation methodology
    - Gravelly Ford protocols
    - Riparian recruitment flows

Restoration Allocation (Option 1D)

- Unimpaired runoff less than 1,831 TAF (50 year average), use 90% forecast to determine the pattern year type
- Unimpaired runoff more than 1,831 TAF, use 50% forecast to determine the pattern year type

Unimpaired Runoff to Lake Millerton (TAF)	Pattern Year Type	February (percentile)	March (percentile)	April (percentile)	May (percentile)
Below 400	Critical-Low	90	90	90	90
400 to 670	Critical-High	90	90	90	90
670 to 930	Dry	90	90	75	75
930 to 1,450	Normal-Dry	90	90	75	75
1,450 to 2,500	Normal-Wet	75	75	50	50
Above 2,500	Wet	50	50	50	50

Restoration Flows - 2014



Water Management Goal

- Water Accounting and Recovery Activities
  - Restoration Flow Guidelines
  - Recovered Water Account implementation
  - Recapture and re-circulate SJRRP Flows
- Physical Projects in Planning
  - Friant-Kern Canal Capacity Restoration
  - Madera Canal Capacity Restoration
  - Friant-Kern Canal Reverse Flow
  - Financial assistance for groundwater banks

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Water Management Goal Summary

Contract Year	2010	2011	2012	2013*
Recaptured (acre-feet)	52,000	35,740	103,000	95,000
RWA Delivered (acre-feet)	0	101,073	380,844	0
Part III – Local Groundwater Banking ($millions)	$0	$0	$0	$14.3

Lecture Series: Investment Strategy Update

Investment Strategy Purpose and Objectives

- Provide information for the Recapture and Recirculation Plan

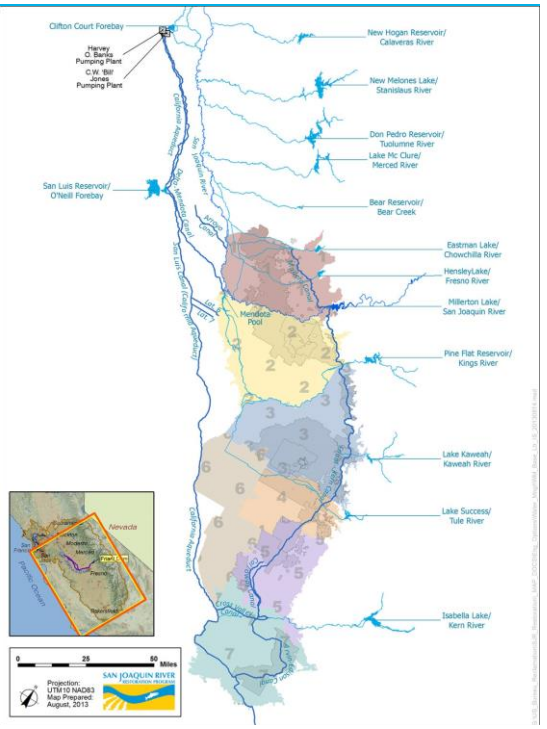
  "*the Plan shall include provisions for funding necessary measures to implement the Plan*"

  – Identify, evaluate, and rank structural projects that could help achieve the Water Management Goal

  – Support decisions to provide Federal funding for WMG projects when opportunities occur

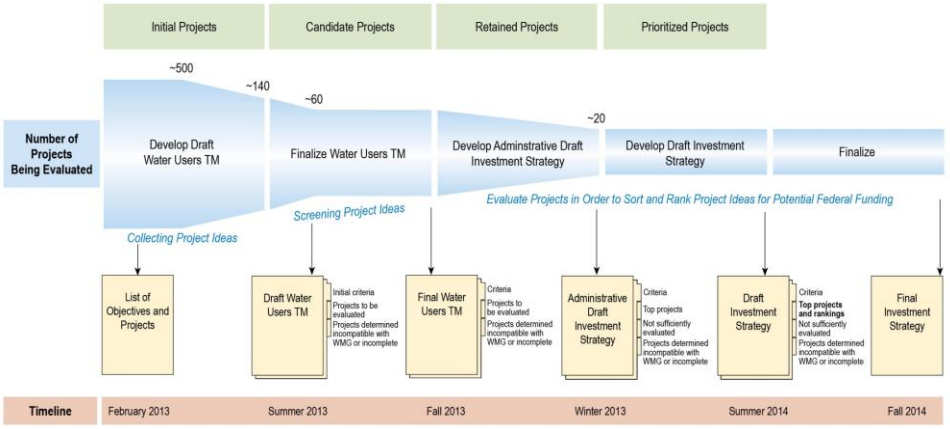
SAN JOAQUIN RIVER RESTORATION PROGRAM

Investment Strategy Study Area



SAN JOAQUIN RIVER RESTORATION PROGRAM

Investment Strategy Approach



Water Users TM

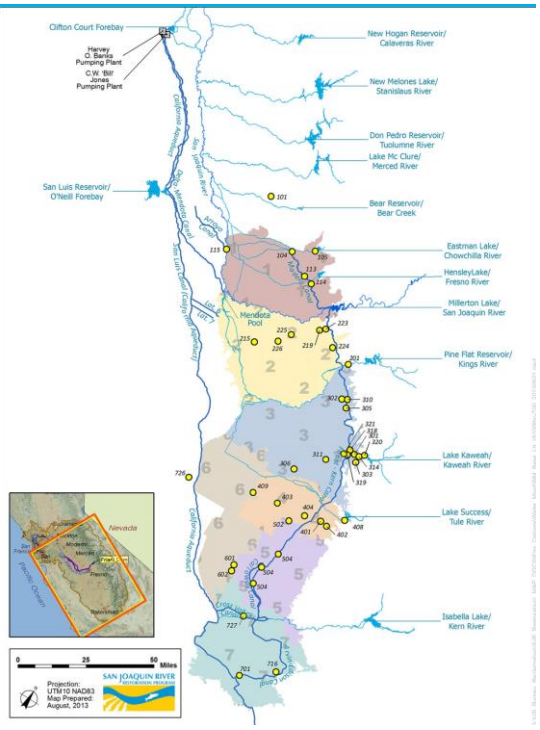
Screening Criteria Applied to Initial and Candidate Projects

- Ability to contribute to Water Management Goal
- Identified Friant Division proponent
- Scale or size of expected benefits
- Water user opinions of relative effectiveness
- Clarity of project definition
- Duplicate project entry

Retained Projects

Local Projects

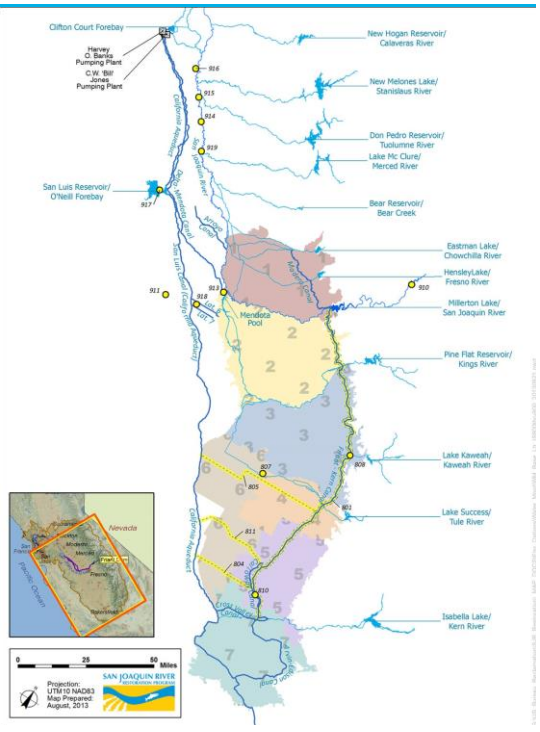
- Generally in-district projects within WMAs
- Enhance Friant water supply management
- Support recirculation
- Develop local water supplies



Retained Projects

Regional Projects

- Recapture flows from the San Joaquin River
- Facilitate regional recirculation
- Improve Friant-Kern Canal capacity
- Develop regional water supplies



Evaluation of Retained Projects

Administrative Draft Investment Strategy

Evaluation of Retained Projects

- Refine project descriptions for Retained Projects and determine technical evaluations
- Conduct technical evaluations
  - Operations / yield estimates
  - Preliminary cost estimates
  - Key implementation factors (environmental, institutional, etc.)
- Compare & Rank Retained Projects
  - Administrative Draft Investment Strategy Report

Evaluation Criteria

I. Project performance and cost
- Yield (af/yr, long-term average)
- RWA balance reduction (af/yr, long-term average)
- Total cost (capital and O&M)
- Non-federal cost-share ($)
- Overall cost-effectiveness ($/af)
- Federal cost of RWA benefit ($/af)

Evaluation Criteria (continued)

II. Implementation Factors
- Environmental Compliance Requirements
- Permitting Requirements
- Water Rights
- Institutional
- Land Acquisition
- Timeframe for Implementation

III. Project Definition (level of confidence)
- Facilities & Costs
- Yield & RWA Reduction Approach
- Finance

Evaluation Criteria (continued)

IV. Other Potential Benefits

- Groundwater Overdraft Reduction
- Hydropower
- Flood Damage Reduction
- Recreation
- Ecosystem
- Water Quality

Project Evaluations – Spreadsheet

Project Prioritization Scenarios

- Scenario 1 - Cost-Effectiveness Only
- Scenario 2 - Cost-Effectiveness & Implementation Complexity
- Scenario 3 - Cost-Effectiveness & Completeness of Project Definition
- Scenario 4 - Composite Weighted Score (for all Four Criteria)

Project Comparisons – Spreadsheet

Admin Draft Investment Strategy Report

- Describe process and results of initial evaluations
- Identify top 20+/- projects to be carried forward for Appraisal Level review
- Schedule:
  - Projects Information Send to Proponents – 1/22/2014
  - Comments Due – 1/31/2014
  - Review Version Admin Draft Report – 2/21/2014
  - Comments Due – 3/7/2014
  - Final Admin Draft Report – 4/4/2014

Next Steps
Evaluate Priority Projects

- Appraisal level designs and cost estimates
- Project implementation schedule and budget requirements for major project phases
  - Planning / NEPA / CEQA
  - Design
  - Permitting
  - Acquisitions
  - Agreements
  - Construction
- Prepare Draft Investment Strategy Report

Paragraph 16(b) - Recovered Water Account

Summary

Allocated	680,443 af
Delivered	481,917 af
Available	**198,526 af**

Paragraph 16(a) – Recapture & Recirculation

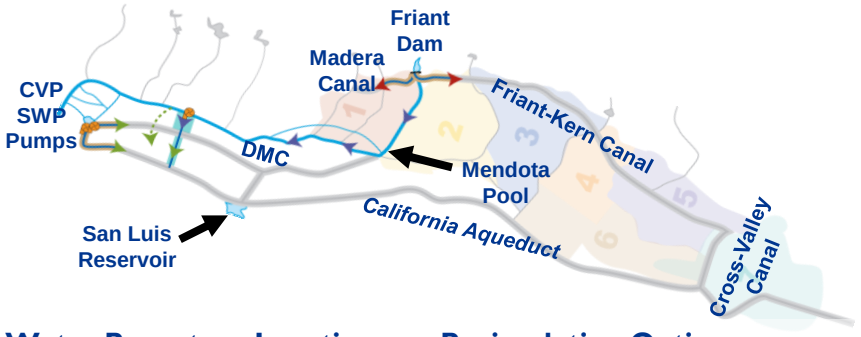
Settlement, Paragraph 16(a)

- A plan for recirculation, recapture, reuse, exchange or transfer of the Interim Flows and Restoration Flows for the purpose of reducing or avoiding impacts to water deliveries to all of the Friant Division long-term contractors caused by the Interim Flows and Restoration Flows.

Recapture and Recirculation Plan

- Recirculation Chapter drafted with Friant Contractor input
- Critical Path: Recapture Chapter and associated operations agreements
- Draft plan scheduled for March 2014
- Final plan scheduled for May 2014

Recapture and Recirculation



Water Recapture Locations:
- In Delta
- Along San Joaquin River at existing pumping plants
- New pumping plant along the river (considered in PEIS/R)

Recirculation Options:
- Exchanges
- Direct Deliveries (AEWSD/SWID)
- Sales

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Recaptured Water (2010-2013)

Contract Year	2010	2011	2012	2013*
Recaptured (acre-feet)	52,000	35,740	103,000	95,000

2013 Recirculation

- Total Projected = 95 TAF
  - To-Date Recaptured = 73 TAF
  - To-Date Recirculated = 39 TAF

Data: January 17, 2014

2012 Recapture & Recirculation Review

- District interviews completed late September 2013
- Feedback identified challenges and achievements in 2012
- Report will identify recommendations
- Report to be completed January 2014
- Expected to review 2014 next

Settlement Act, Part III

Friant-Kern Canal Capacity Restoration

- Restore Design Maximum Flow Capacity and current design standards from MP 29.14 to MP 71.3
- Design-level ~60%; 90% scheduled April 2014
  - Identify affected bridges from HEC-RAS model
  - programmatic agreement for cultural resources compliance estimated Summer 2014

Madera Canal Capacity Restoration

- Originally combined with Friant Kern Canal Restoration
- Identify, design and construct select canal repair demonstration projects
- Information and results will be used for the Feasibility Study

Part III Groundwater Banking

- Awarded $14.3 million of $50 million to:
  - Pixley ID
  - Shafter-Wasco ID
  - Tulare ID
  - Porterville ID
- 760,000 af yield over 30-year project life cycles
- 493,000 af reduction in RWA
- Kicking-off projects and moving forward on environmental compliance in 2014.

Public Comment / Next Meetings

Next SJRRP Water Management Technical Feedback Meetings

Day	Date	Location
Friday	April 18, 2014	Visalia
Friday	July 11, 2014	San Francisco
Friday	September 19, 2014	Visalia
Friday	November 21, 2014	Visalia