

San Joaquin River Restoration Program

Water Management Group
Technical Feedback Meeting

November 7, 2008



Agenda

- Introductions / Purpose of Meeting
- Overview of Water Management Provisions in the Settlement & Progress Review
 - Paragraph 16(a)
 - Paragraph 16(b)
- Recovered Water Account (RWA)
- Next Steps



Two Goals of the Settlement

- 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.



Water Management Provisions of the Settlement

- Paragraph 16a:
Develop and implement a plan to recirculate, recapture, reuse, exchange or transfer Interim and Restoration flows to reduce water supply impacts to Friant Districts
- Paragraph 16b:
Implement a Recovered Water Account that will make wet year water at Friant Dam available to impacted long-term Friant water users at \$10/af



Paragraph 16a

Development of 16(a) Components of Program Alternatives

"Develop and implement a plan to recirculate, recapture, reuse, exchange or transfer Interim and Restoration flows to reduce water supply impacts to Friant Districts"



Steps to Developing Recapture Plan

- Identify river and Delta pumping and exchange opportunities, based on water quality and canal capacity constraints
- CVP/SWP response assessment
 - Identify how projects would respond to restoration flows with existing institutional agreements
- Develop Other Recapture Strategies



Institutional Agreements Affect Recapture & Recirculation Opportunities

- Vernalis Adaptive Management Plan (VAMP)
- Coordinated Operations Agreement (COA)
- Operations Control and Plan (OCAP)
- Cross Valley Canal Capacity Share Agreement



Potential Recapture Strategies

- No Delta Action by Federal Government
 - No changes to any existing institutional agreements
- Direct Recapture of Restoration Flows
 - Potential pumping plant on lower San Joaquin River
 - Potential water exchanges along lower San Joaquin River
 - Restoration Flows become SOD water transfers
- Integrate Restoration Flows into CVP Supply and Friant demands into CVP Delta Operations



Paragraph 16b

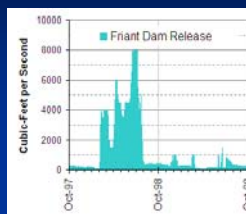
Development of 16(b) Component of Program Alternatives

"Implement a Recovered Water Account that will make wet year water at Friant Dam available to impacted long-term Friant water users at \$10/af"

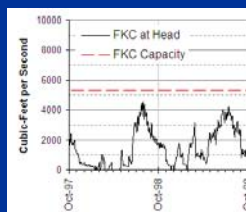


Opportunities Occur when Water and Canal Capacity are Available

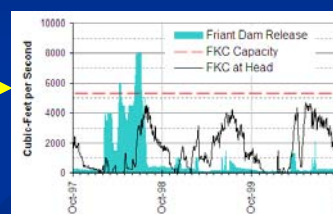
Available water



Available capacity



Opportunities?

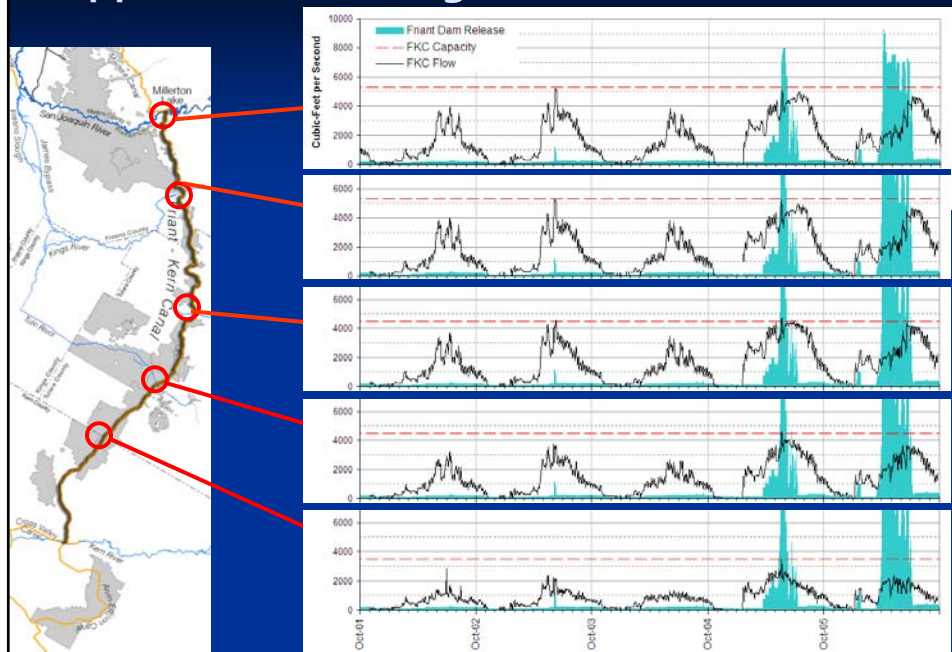


Assumptions

- Available water: Historical flood releases minus Restoration Flows
- Available capacity: Historical deliveries within existing, corrected and upgraded FK capacity



Opportunities along the Friant-Kern Canal



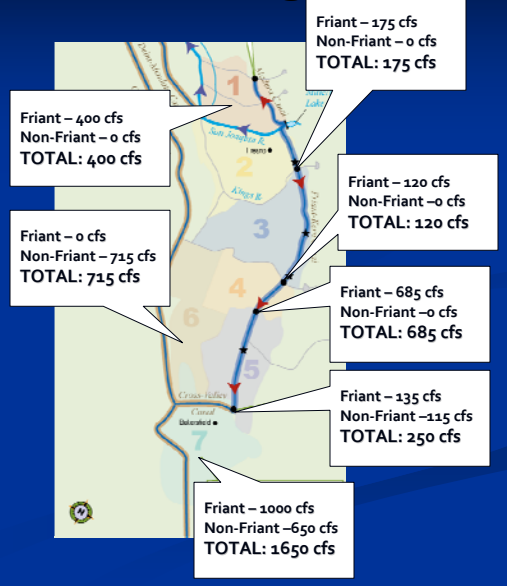
Analysis of 16(b) potential

- Three canal capacities were evaluated
 - Existing FKC
 - Restored FKC (Design capacity)
 - Expanded FKC (Design capacity plus 1,000 cfs)
- Identified recharge (or delivery) capacity needed to take full advantage of the conveyance capacity of each reach of the canal (range of capacity)
- Estimated the potential average annual delivery of 16(b) water supplies



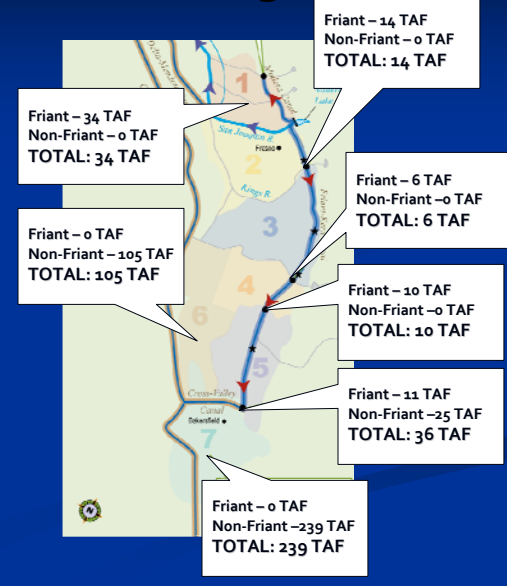
Recharge Rates of Potential Groundwater Banking Projects

SJRRP Water Management Areas		Direct (cfs)	In-Lieu (cfs)	TOTAL (cfs)
1	Friant	375	25	400
	Non-Friant	0	0	
2	Friant	130	45	175
	Non-Friant	0	0	
3	Friant	110	10	120
	Non-Friant	0	0	
4	Friant	95	590	685
	Non-Friant	0	0	
5	Friant	100	35	250
	Non-Friant	100	15	
6	Friant	0	0	715
	Non-Friant	250	465	
7	Friant	0	1000	1650
	Non-Friant	650	0	
TOTAL	Friant	810	1705	3,995
	Non-Friant	1000	480	



Storage Capacity of Potential Groundwater Banking Projects

SJRRP Water Management Areas		Available Storage Volume Direct (TAF)	TOTAL (TAF)
1	Friant	34	34
	Non-Friant	0	
2	Friant	14	14
	Non-Friant	0	
3	Friant	6	6
	Non-Friant	0	
4	Friant	10	10
	Non-Friant	0	
5	Friant	11	36
	Non-Friant	25	
6	Friant	0	105
	Non-Friant	105	
7	Friant	0	239
	Non-Friant	239	
TOTAL	Friant	75	444
	Non-Friant	369	



16(b) Component of Water Management Strategies

- All program alternatives will include a common 16(b) component
 - Opportunities will be based on additional delivery capability to identified banking and local conveyance projects
- Friant-Kern & Madera Canals Capacity Correction Assessment is currently underway
 - Preliminary Engineering Design Report
 - Environmental Assessment
 - Plan of Study
 - Feasibility Study
 - Final Environmental Impact Statement/Report



Next Steps

- Conducting water supply analysis on 16(b) actions with Restoration releases
- Evaluate recapture strategies



Recovered Water Account (RWA)

"Implement a Recovered Water Account that will make wet year water at Friant Dam available to impacted long-term Friant water users at \$10/af"



Recovered Water Account

- Accounting tool to allow Reclamation to sell wet year water at \$10/af
- Must account for impacts to Friant Division long-term contractors from Interim and Restoration Flows
- Offset impacts by deliveries under 16a or 16b, or to projects funded by Title III or other sources to reduce delivery impacts



Basic Elements of RWA Process

- Quantify RWA Credits (impacts)
- Quantify offsets from 16a and 16b deliveries
- Quantify supplies from projects funded by Title III or other sources
- Allocation of Net RWA Credit to Individual Long-Term Contractors



How to Quantify Total Impacts?

- Alternatives to estimate annual impact
 - Non-flood releases made according to Restoration Flow schedule
 - Daily, parallel accounting process with & without Restoration (shadow environment)
 - Annual, back-casting process using known hydrology and baseline model results
- Allocation of annual impact to Class 1 and Class 2
- Allocation of Class 2 impacts among Friant contractors



Next Scheduled Meeting...

Water Management Goal

- December 8 (Monday), 12-2:00, Visalia



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