

# More self-conscious integration of the EWA with other environmental water programs

- **Coordination:** discussion of what to do
- **Integration:** planning and deciding jointly what to do (Independent Science Board, September 2004)

USF&WS Presentation

EWA Technical Review Panel

November 9, 2004

# Coordination and integration of the EWA with other environmental water programs

Overview of the four environmental water programs in the Central Valley:

- Calfed Environmental Water Account (EWA)
- Calfed - ERP Environmental Water Program (EWP)
- CVPIA Section 3406 (b)(2) water
- CVPIA Section 3406 (b)(3) Water Acquisition Program (WAP)
- Coordination and integration among the four programs
- Do additional opportunities exist for use of the EWA upstream?

# Coordination and integration of the EWA with other environmental water programs

- Pursuant to the Calfed Record of Decision in 2000, (b)(3) WAP to implement VAMP, and (b)(2) water are Tier 1 assets:

*Tier 1 definition: Baseline level of protection provided by existing regulation and operational flexibility; includes the biological opinions on Winter-run salmon and delta smelt, 1995 WQCP, and 800 TAF of (b)(2) water).*

- Pursuant to CALFED Record of Decision EWA and EWP are Tier 2 assets:

*Tier 2 definition: Assets in the EWA combined with the benefits of the ERP.”*

# Coordination and integration of the EWA with other environmental water programs

Each program has:

- Separate and distinct purpose
- Separate authority and funding source
- Own set of priorities and constraints
- Distinct objectives on different streams and/or in the Delta

## **WATER FOR FISH AND WILDLIFE RESOURCES**



**EWA  
Bay-Delta  
fish protection**



**EWP water for  
salmon restoration**

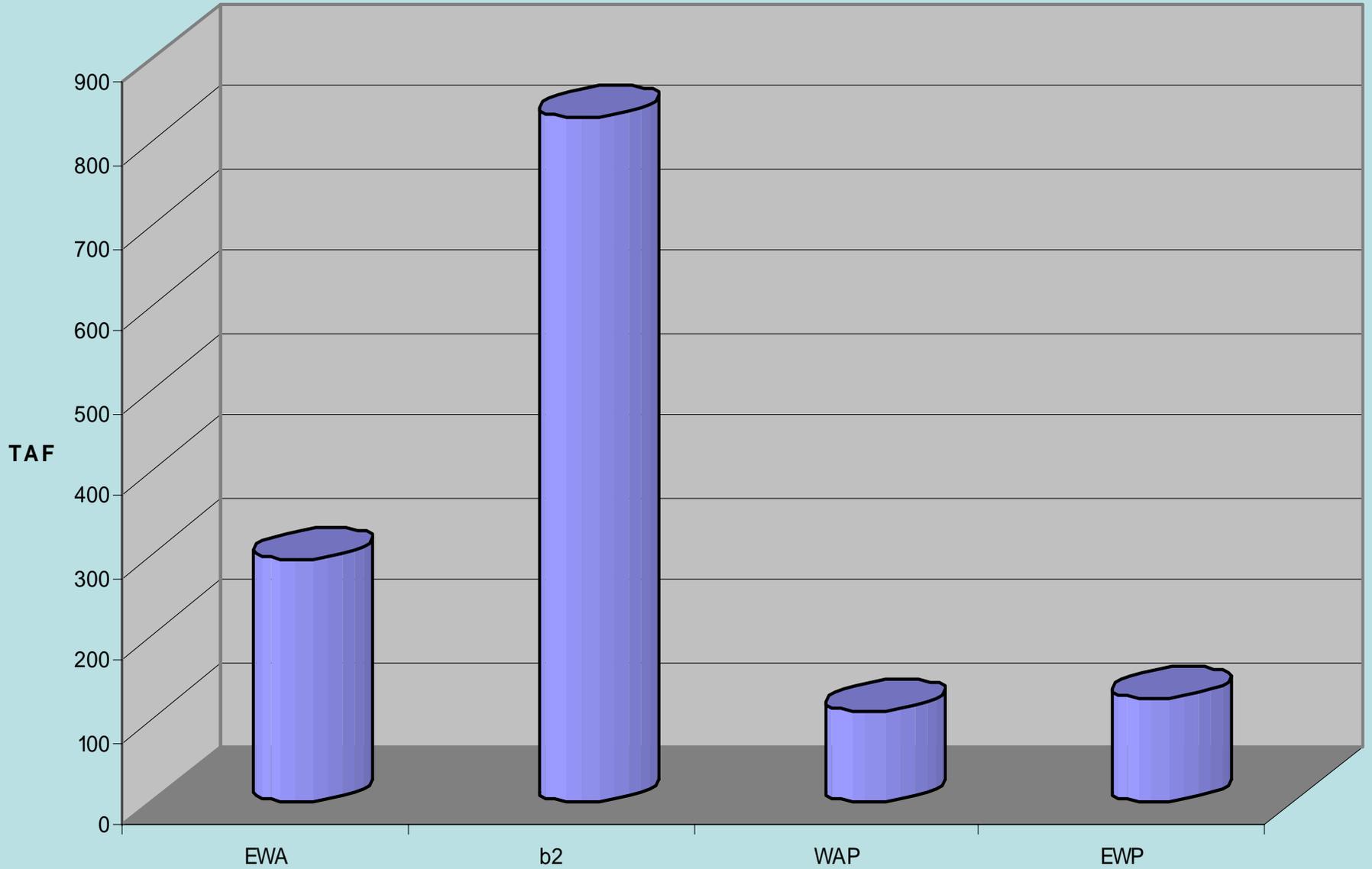


**3406(b)(2)  
Dedicate & Manage  
800,000 AF**



**3406(b)(3)  
Water acquisition  
for fish & wildlife**

# Central Valley Environmental Water Programs



# Environmental Water Account (EWA)

- **Purpose:** A cooperative Calfed program to provide protection to the fish of the Bay-Delta estuary beyond the regulatory baseline through environmentally beneficial changes in SWP/CVP operations at no uncompensated water cost to the project's water users.
- **Authority/funding:** EWA has been funded directly from Proposition 204 and Proposition 50 funds. EWA purchases surface water and groundwater from willing sellers both north and south of the Delta.
- **EWA Agencies:** CDWR, CDFG, FWS, NOAA Fisheries, USBR

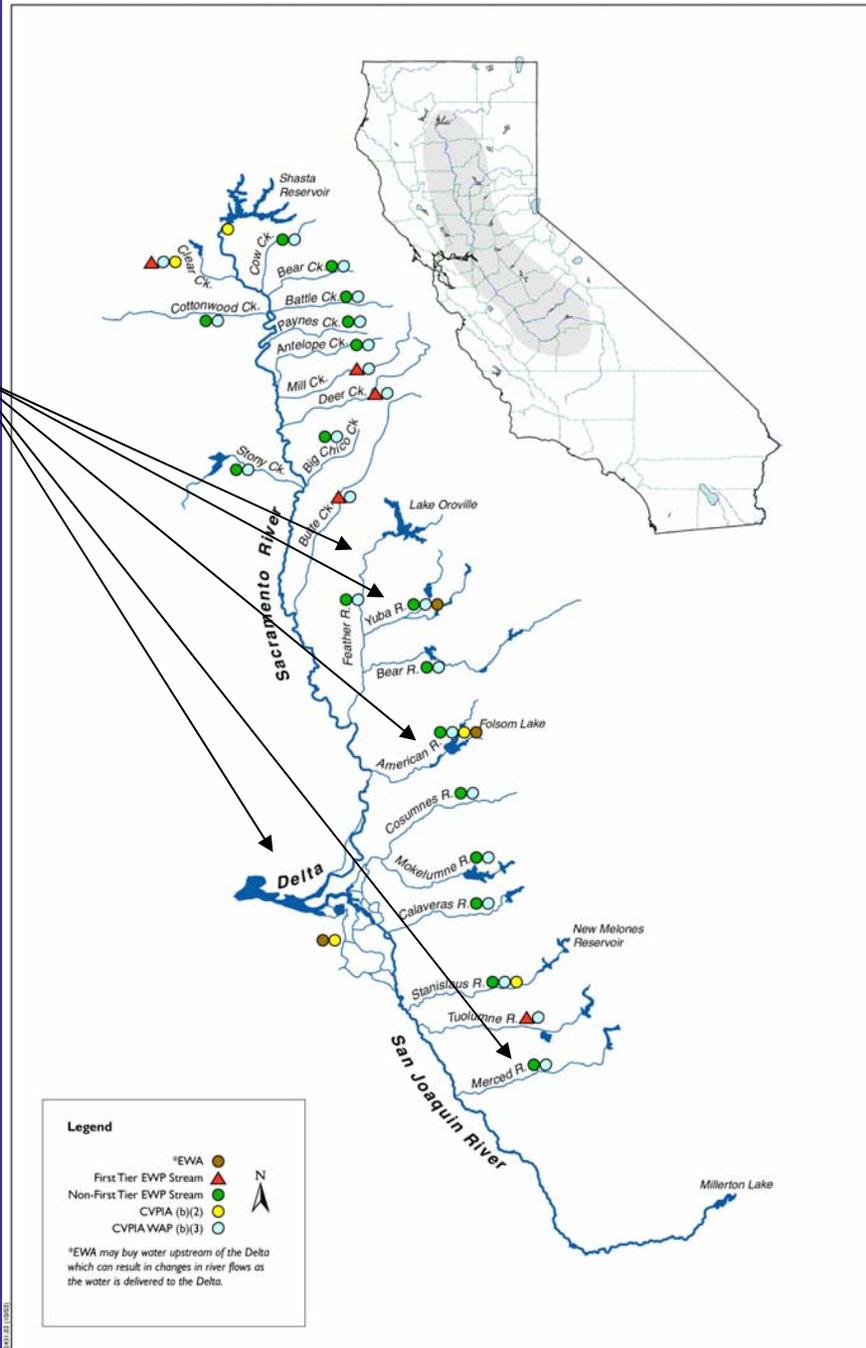
# Environmental Water Account (EWA)

## Technical basis:

- Published literature, CDFG reports, IEP investigations, etc.
- Three “Tiers” of assets, including Biological Opinions for delta smelt and listed salmonids
- Delta smelt (DSRAM) and salmon decision trees, based on real-time monitoring
- EWA fish actions are monitored, evaluated, and may be modified based on the best science available
- Annual external scientific reviews with EWA Technical Review Panel

# EWA

Larger systems with available water from willing sellers. Mostly Delta Actions.



08/11/10

# Environmental Water Program (EWP)

## Purpose

- A Calfed program focused on acquiring water from willing sellers on streams tributary to the Sacramento and San Joaquin systems to assist in carrying out the flow related goals of the Ecosystem Restoration Program (ERP).

## Objectives:

- To improve salmon spawning and juvenile survival
- To restore critical instream and channel-forming flows
- To provide flows and habitat conditions for fish protection and recovery

**Authority/funding:** Calfed program funded through ERP

**ERP Implementing Agencies:** USFWS, CDFG, NOAA Fisheries, coordinated with CDWR and USBR as needed

# Environmental Water Program (EWP)

## Technical Basis:

All actions designed to test hypotheses regarding water management in a manner that:

- Facilitates learning through adaptive management
- Includes appropriate monitoring
- Will be peer reviewed by an external scientific panel prior to approval

# Environmental Water Program (EWP)

EWP currently working on priority tributaries to develop locally supported objectives and proposals for increased flows.

## **Tier 1 streams:**

1. Clear Creek
2. Mill Creek
3. Deer Creek
4. Butte Creek
5. Tuolumne River

# Environmental Water Program (EWP)

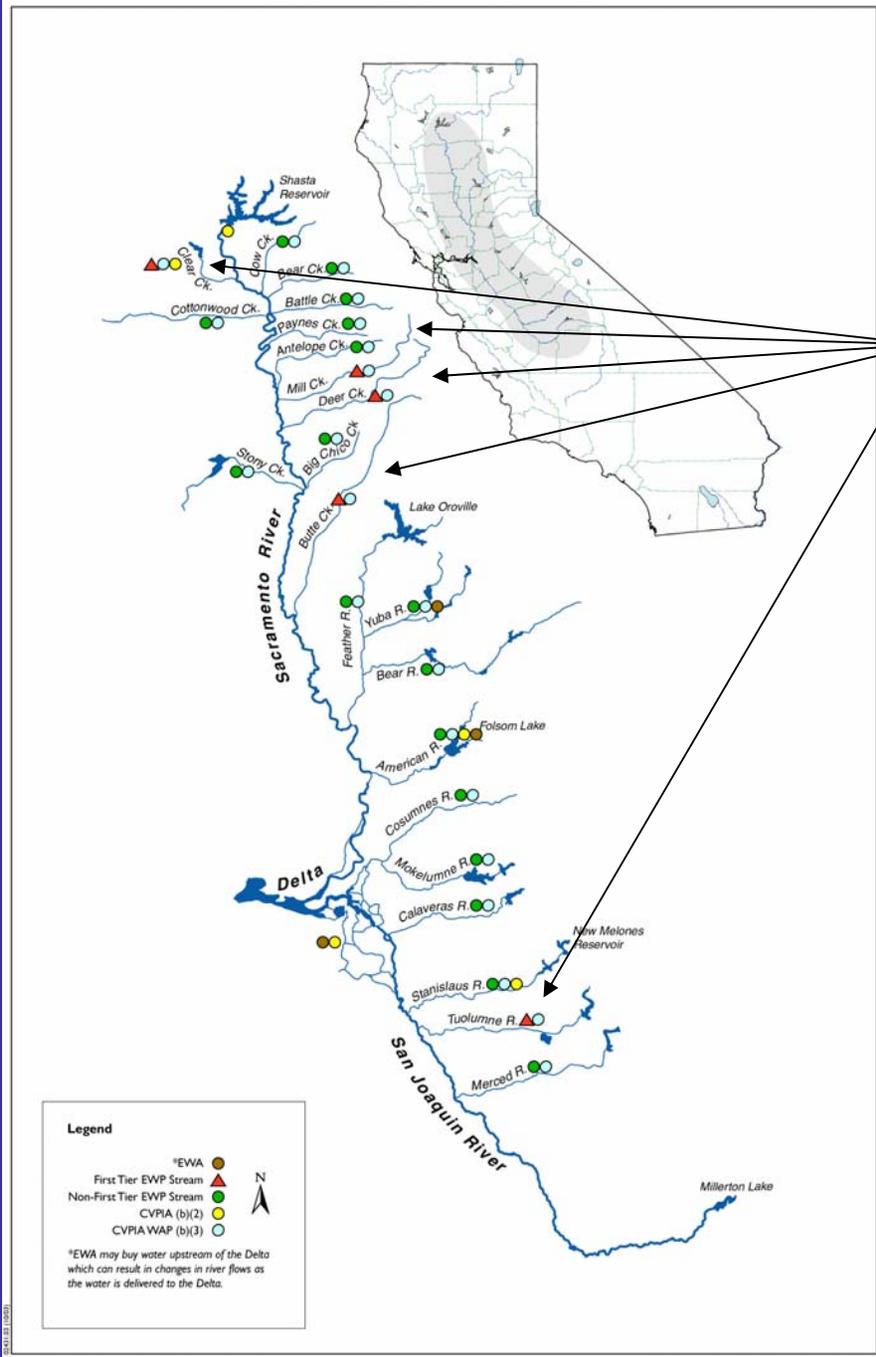
## **Tier 2 streams:**

1. Battle Creek
2. Big Chico Creek
3. Calaveras River
4. Stanislaus River
5. Yuba River

## **Tier 3 streams:**

1. Antelope Creek
2. Cow Creek

EWP  
 Smaller streams  
 with at-risk species  
 present. Tier 1  
 streams shown.



# CVPIA Section 3406 (b)(2) water

- **Purpose:** A CVPIA program that dedicates and manages 800,000 AF annually of CVP water for the primary purpose of fish, wildlife, and habitat restoration; to assist meeting the WQCP, and to help meet post-1992 ESA obligations.
- **Authority:** Authorized by CVPIA in 1992. (b)(2) water is managed pursuant to conditions specified by the USFWS after consultation with USBR and CDWR, and in cooperation with CDFG.
- **(b)(2) Agencies:** FWS and USBR, in coordination with CDFG, CDWR, and NOAA fisheries.

# CVPIA Section 3406 (b)(2) water

## Technical basis:

- The rationale and scientific basis for (b)(2) actions is based on AFRP documents, published literature, and IEP and DFG reports.
- CVPIA's mandate to double natural production of anadromous fish.
- CVPIA's instructions to "...provide flows of suitable quality, quantity, and timing to protect all life stages of anadromous fish..."
- (b)(2) fish actions are monitored, evaluated, and modified based on the best available science.

# CVPIA Section 3406 (b)(2) water

## Technical basis:

### AFRP Summary of flow-related limiting factors

- Inadequate timing and/or magnitude of flow to provide suitable conditions for one or more life stages.
- Water temperatures that exceed tolerances of one or more life stage
- Direct and indirect impacts of CVP and SWP Delta pumping

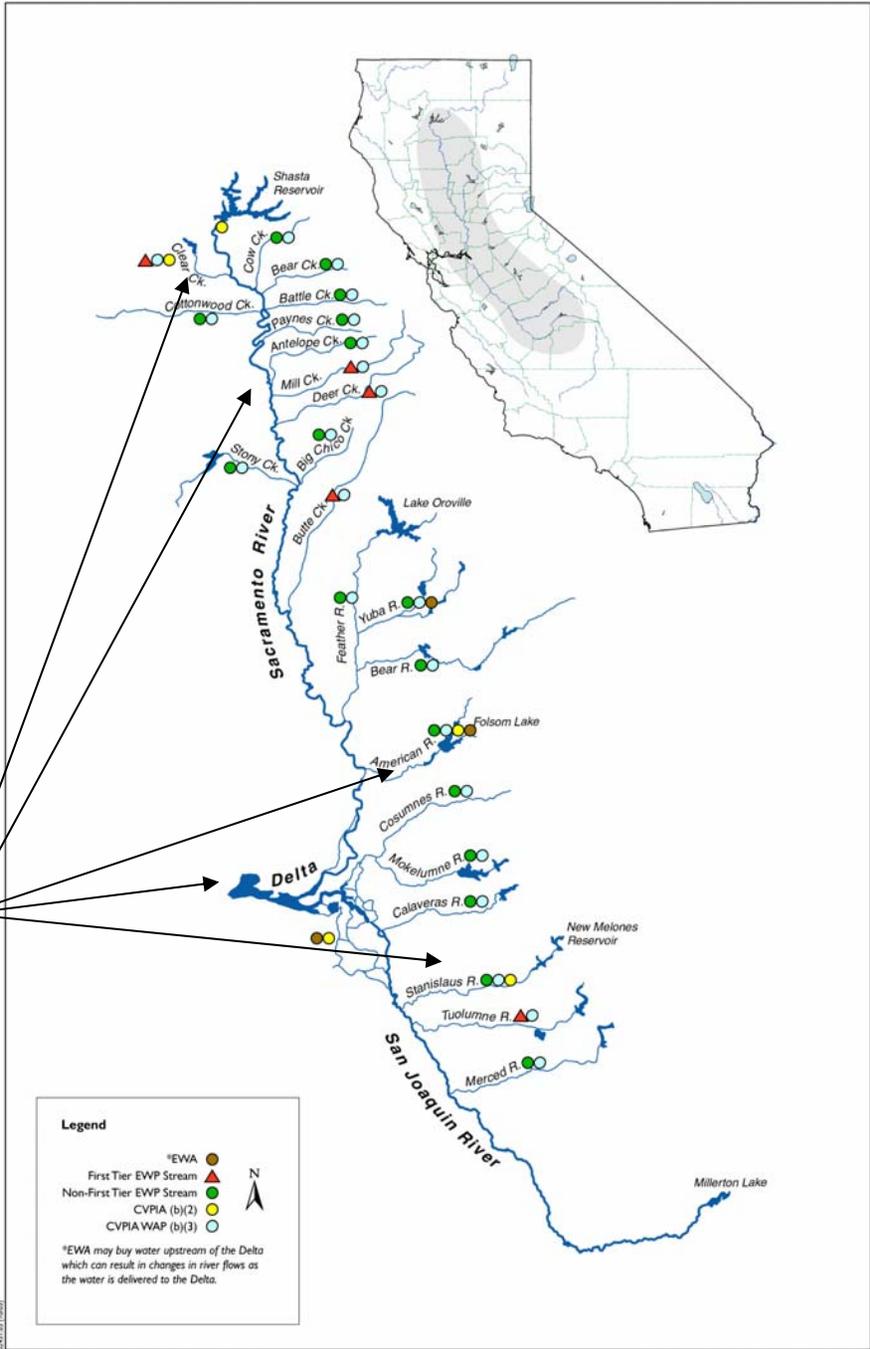
# CVPIA Section 3406 (b)(2) water

## Technical basis:

### AFRP (b)(2) flow-related habitat objectives

- Improve flows in CVP-controlled streams using (b)(2) water
- Clear Creek (year round)
- Sacramento River (Oct – Apr 15)
- American River (Oct – May)
- Stanislaus River (Oct – June)
- Protect fish and improve habitat conditions in the Delta by closing DCC gates and reducing CVP exports (Nov – June)

**B2 water**  
**CVP controlled**  
**streams only.**  
**Upstream and Delta**  
**Actions.**



# CVPIA Section 3406 (b)(3)

## Water Acquisition Program (WAP)

**Purpose:** A CVPIA program intended to acquire water to supplement (b)(2) and to acquire water for wildlife refuges (which we won't be discussing today). Water acquisitions for streamflow augmentation contribute to the AFRP flow objectives.

- **Authority/funding:** CVPIA authorized the Restoration Fund for this and other CVPIA actions.
- **WAP Agencies:** FWS and USBR, in coordination with CDFG, CDWR, and NOAA fisheries.

# CVPIA Section 3406 (b)(3) Water Acquisition Program (WAP)

## Technical basis:

- The rationale and scientific basis for (b)(3) actions is based on AFRP documents, published literature, and IEP and DFG reports.
- CVPIA's mandate to double natural production of anadromous fish.
- CVPIA's instructions to "...provide flows of suitable quality, quantity, and timing to protect all life stages of anadromous fish..."
- WAP fish actions are monitored and evaluated (e.g., VAMP)

# CVPIA Section 3406 (b)(3)

## Water Acquisition Program (WAP) Technical Basis

# Doubling Goals and 1996 Guidelines for Allocation of Acquired Water

3-Xa-2

WORKING PAPER

Table 3-Xa-1. Escapement, harvest, and restoration goals for chinook salmon.

Race and river*	Escapement	Instre
All races combined	280,000	58
Fall run	220,000	46
Late fall run	15,000	
Winter run	23,000	
Spring run	13,000	
Sacramento River		
Fall run	77,000	
Late fall run	14,000	
Winter run	23,000	
Spring run	11,000	
Clear Creek	1,600	
Cow Creek	1,400	
Cottonwood Creek	1,600	
Battle Creek		
Fall run	18,000	
Late fall run	1,000	
Paynes Creek	90	
Antelope Creek	190	
Mill Creek		
Fall run	1,100	
Spring run	800	
Deer Creek		
Fall run	410	
Spring run	1,300	
Miscellaneous creeks	300	
Butte Creek		
Fall run	420	
Spring run	360	
Big Chico Creek	240	
Feather River	49,000	
Yuba River	13,000	

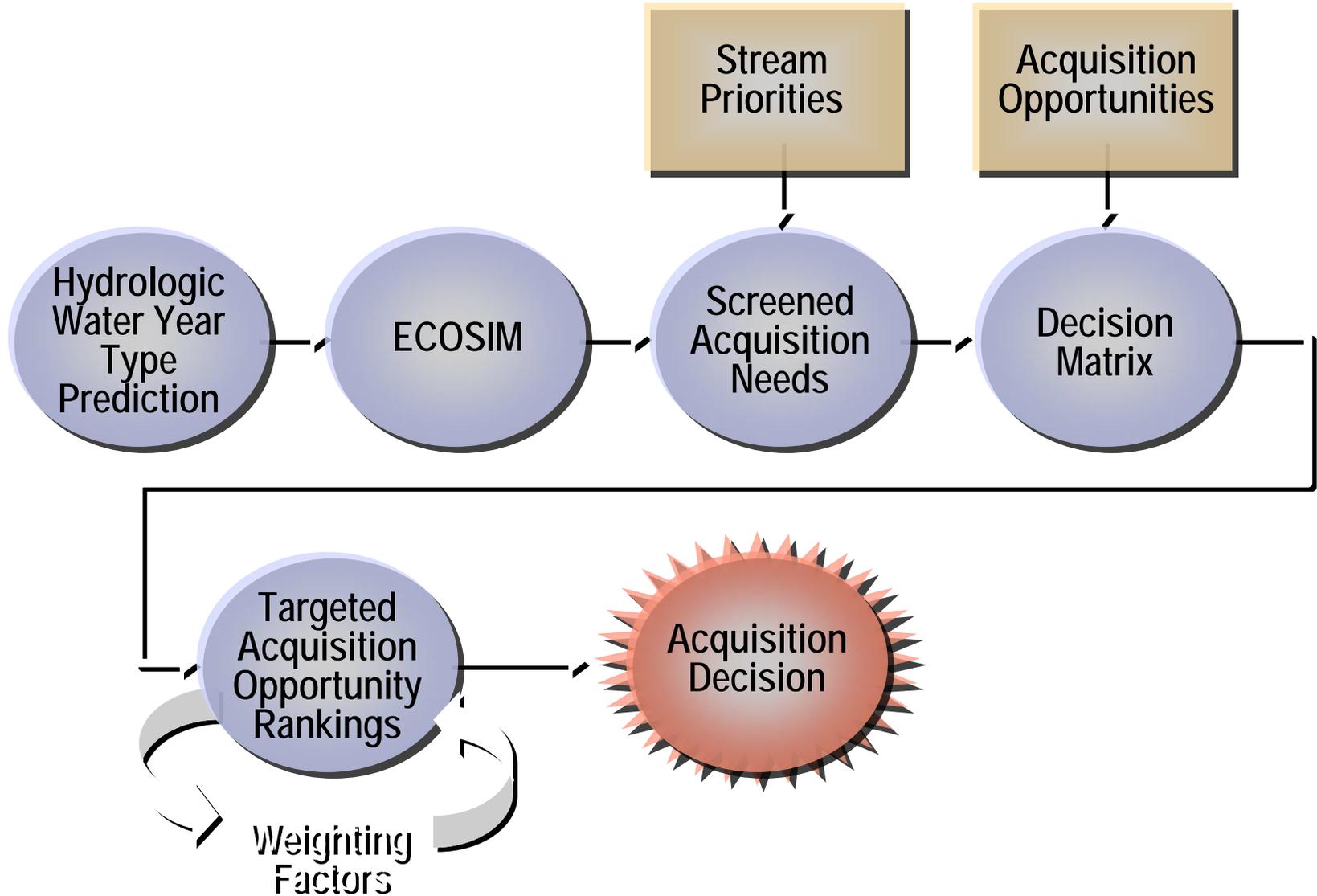
### Draft Guidelines for Allocation of Water Acquired Pursuant to Section 3406 (b)(3) of the Central Valley Project Improvement Act

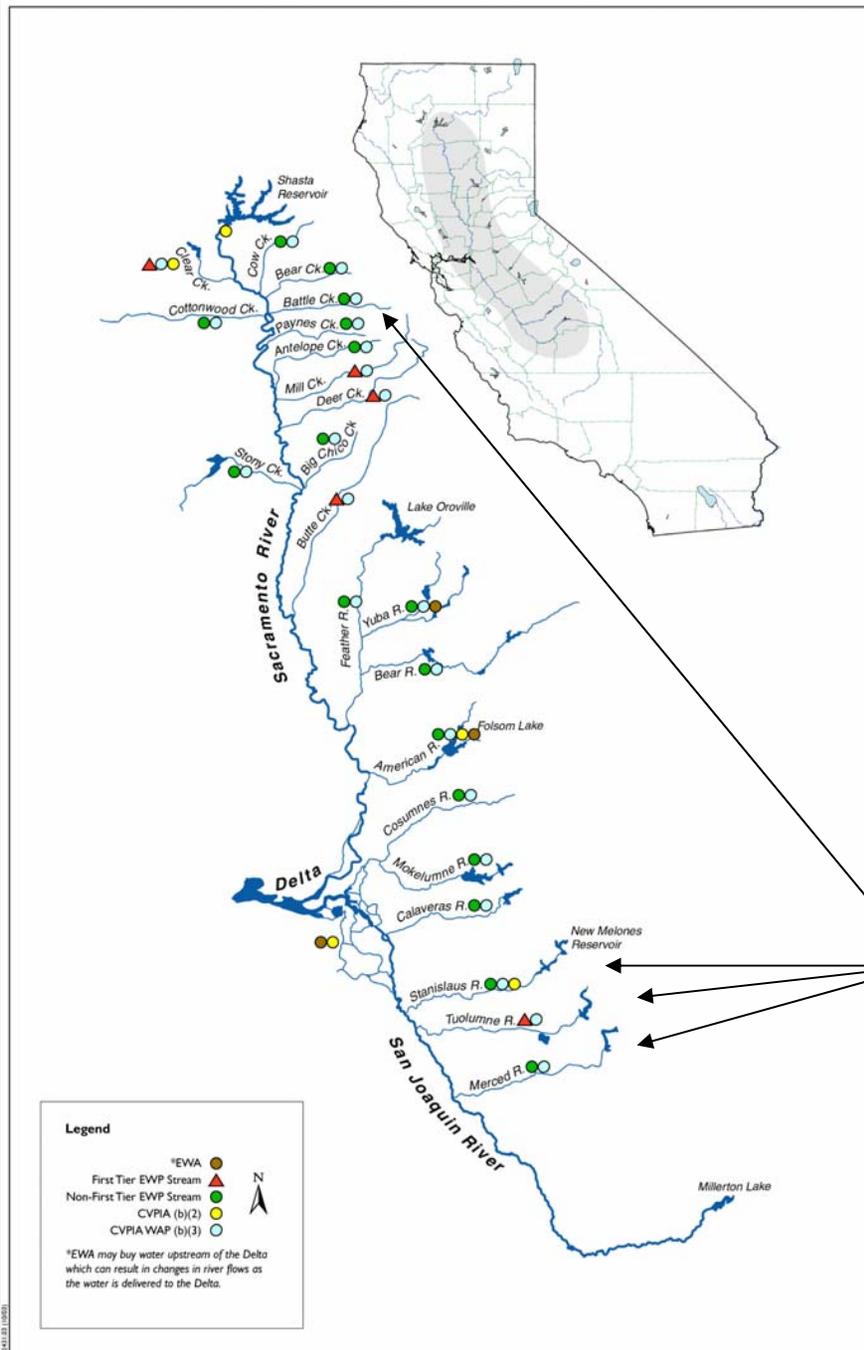
A Tool for Use in Developing an Implementation Plan for the Water Acquisition Program and in Developing a New Alternative for the Programmatic Environmental Impact Statement



Prepared for distribution at a public workshop by the Anadromous Fish Restoration Program of the United States Fish and Wildlife Service.

# Decision support system for water acquisition

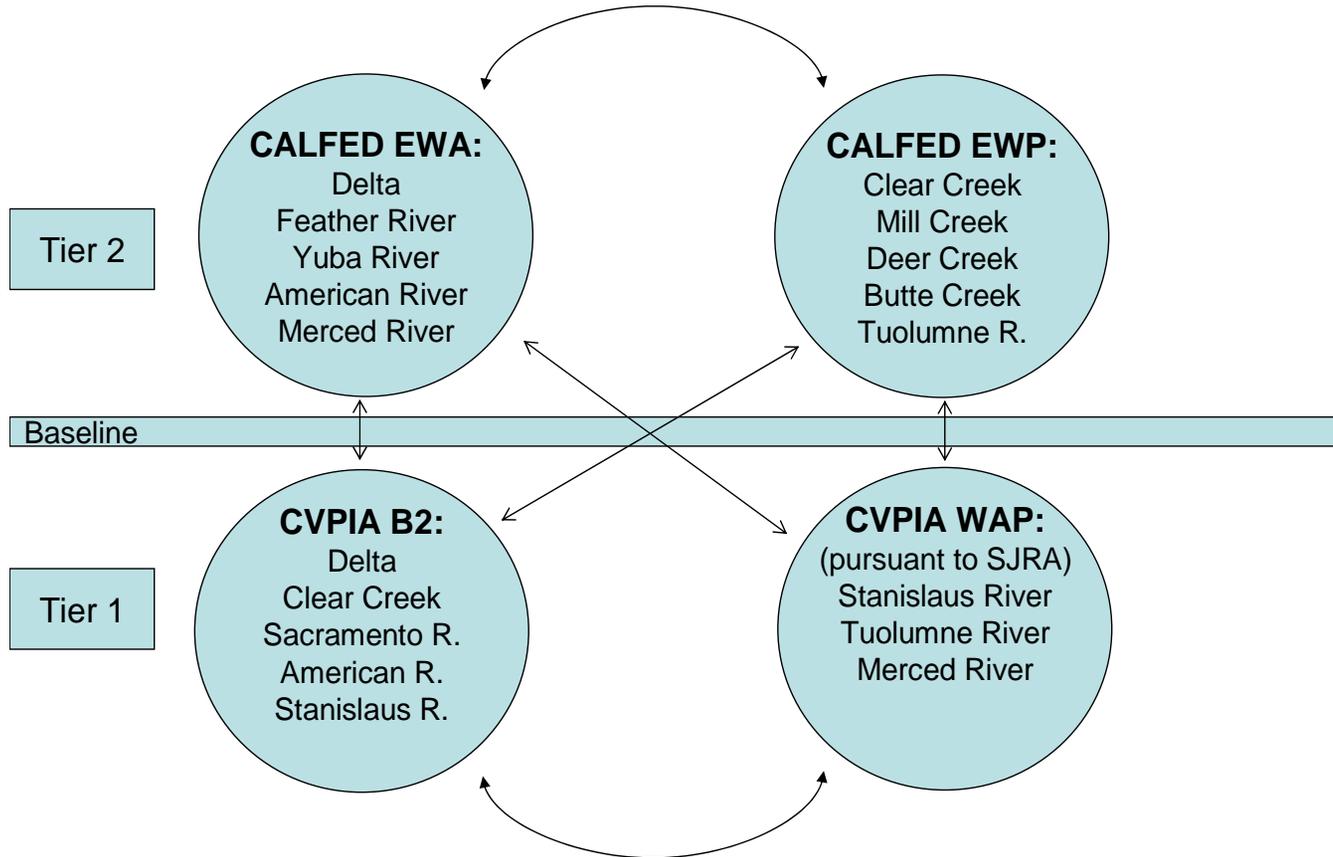




WAP  
 San Joaquin  
 tributary  
 augmentation in  
 spring and fall,  
 and Battle Cr.  
 foregone  
 power.

2011.01.10.2011

**Figure 1. Environmental Water Management Portfolio  
Draft Conceptual Model**



# Environmental Water Account (EWA)

## Coordination and integration:

- Coordinated and integrated with (b)(2) and WAP during VAMP releases and export reductions 2001-2004
- Coordinated and integrated with WAP on Merced River in the fall of 2001
- Coordinated and integrated with (b)(2) releases on the American River
- Coordinated with SWP operations on the Feather River
- Coordination and integration through weekly meetings of EWAT, B2IT, DAT, WOMT, and other interested parties

# Environmental Water Program (EWP)

## Coordination and integration:

- Outreach and coordination with EWAT, B2IT and WAP
- ERPIAMs, Restoration Subcommittee, ERP Science Board
- EWP Core Team – FWS, DFG, NOAA-F, meets with BOR, DWR(EWAT), and other interested parties
- Related Program Review of Proposals
- Increase EWP participation in coordination teams as the program develops.

# Section 3406 (b)(2) water

## Coordination and integration:

- Coordinated and integrated with EWA and WAP during VAMP releases and export reductions 2001–2004
- Coordinated and integrated with EWA releases on American River
- Coordinated and integrated with WAP on the Stanislaus River in the fall of each year
- Coordinated and integrated with CVP operations on the Sacramento, American, Stanislaus Rivers, Clear Creek, and the Tracy pumping plant
- Potential coordination with EWP on Clear Creek
- Coordination and integration through weekly meetings of B2IT, EWAT, DAT, WOMT, and other interested parties

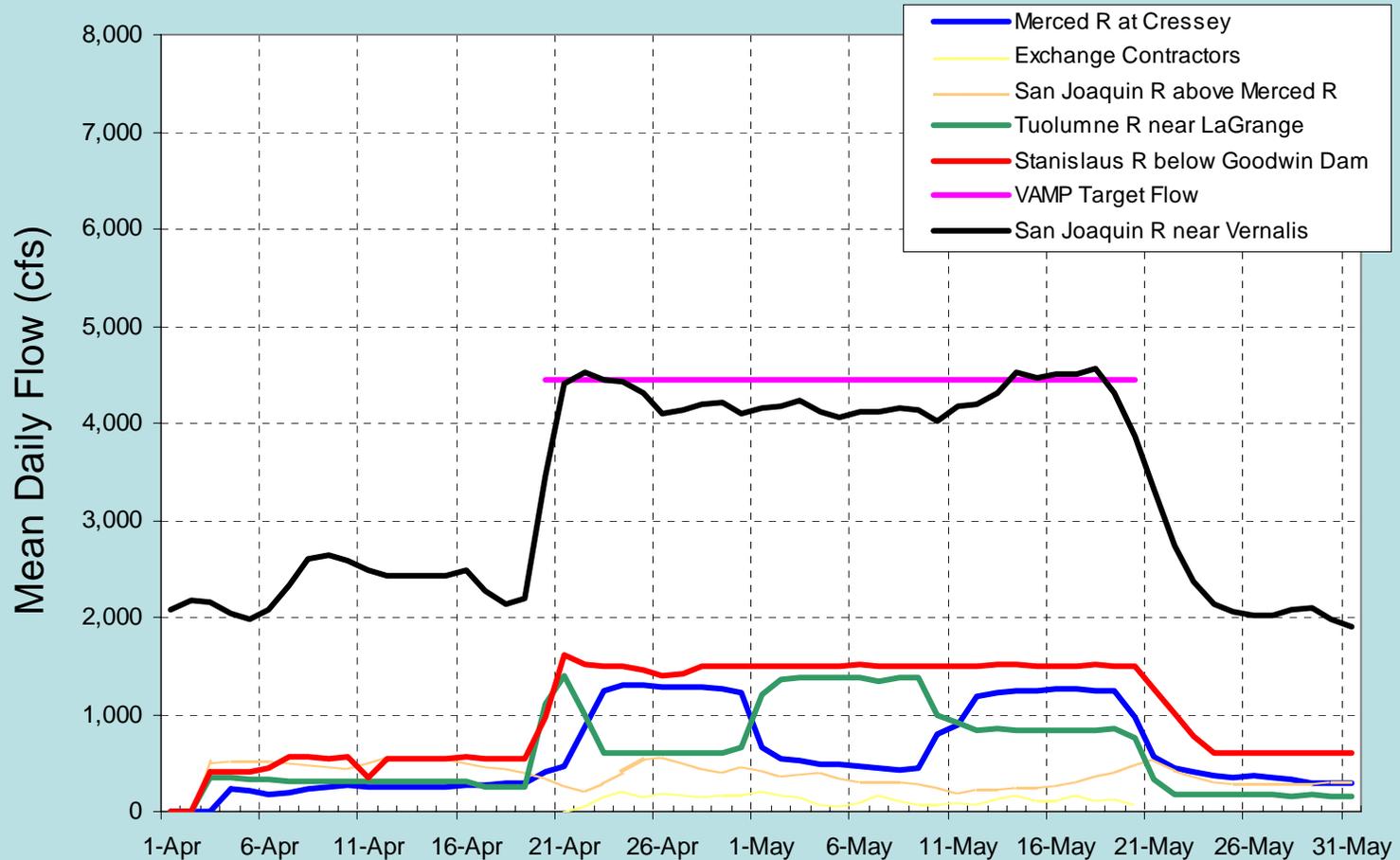
# Section 3406 (b)(3)

## Water Acquisition Program (WAP)

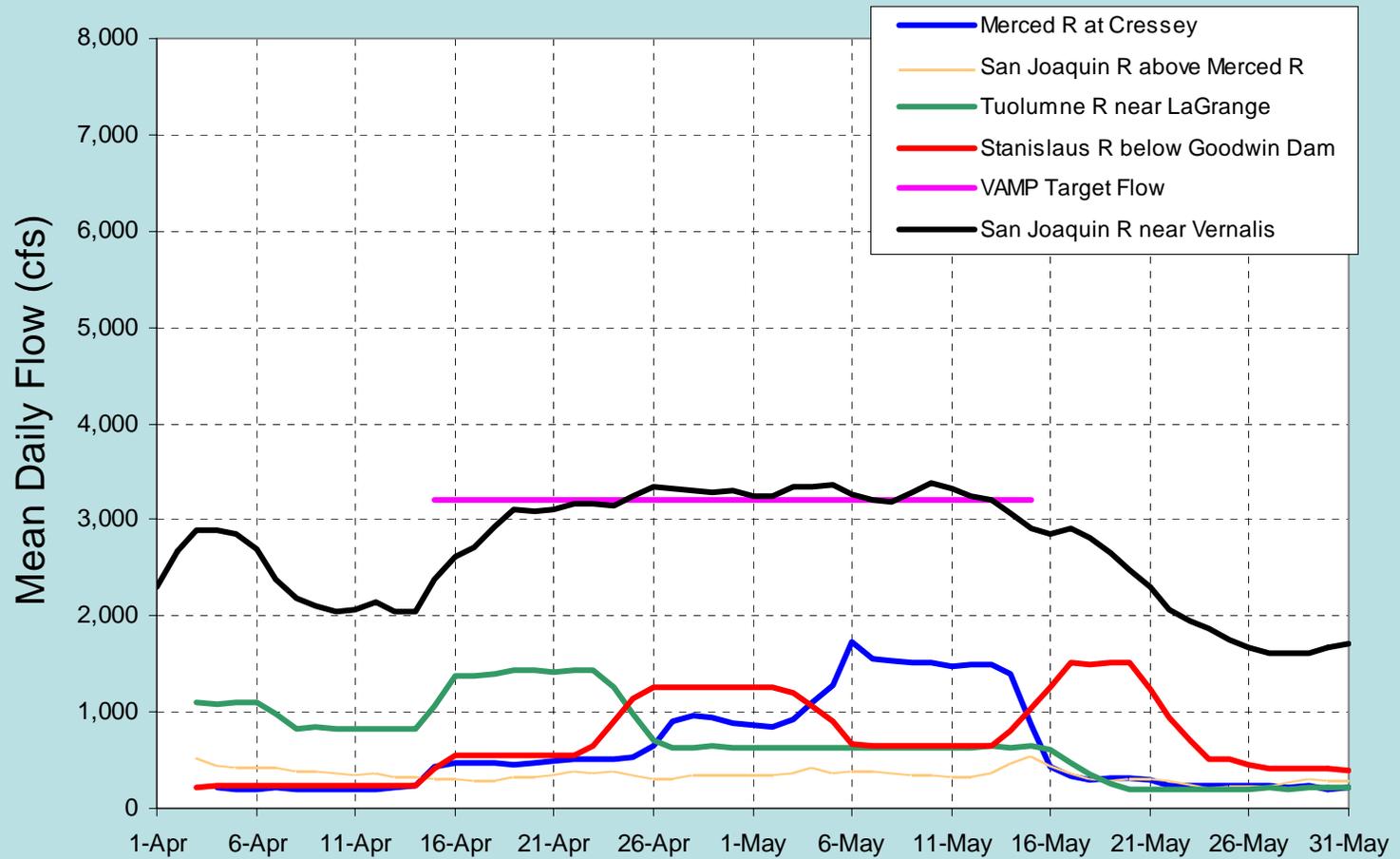
### Coordination and integration:

- Coordinated and integrated with EWA and (b)(2) during VAMP releases and export reductions 2001-2004
- Coordinated and integrated with EWA releases on Merced River in 2001
- Coordinated and integrated with (b)(2) and CVP operations on the Stanislaus River
- Coordination with EWP
- Coordination with Level 4 Refuge water supply
- Coordination and integration through meetings of B2IT, SJRG, VAMP, WOMT, and other interested parties

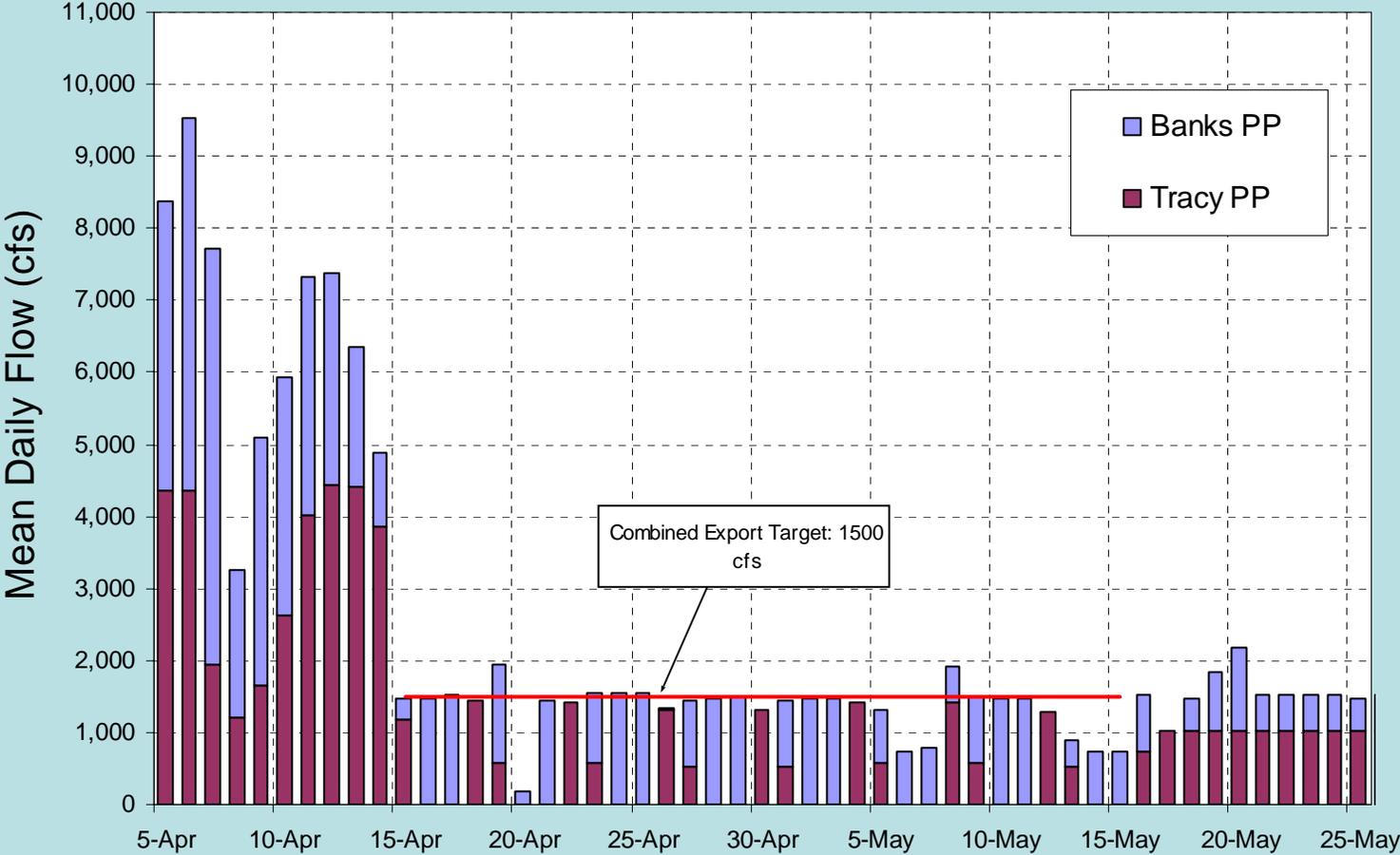
# VAMP 2001 --- San Joaquin River near Vernalis With Lagged Contributions from Primary Sources



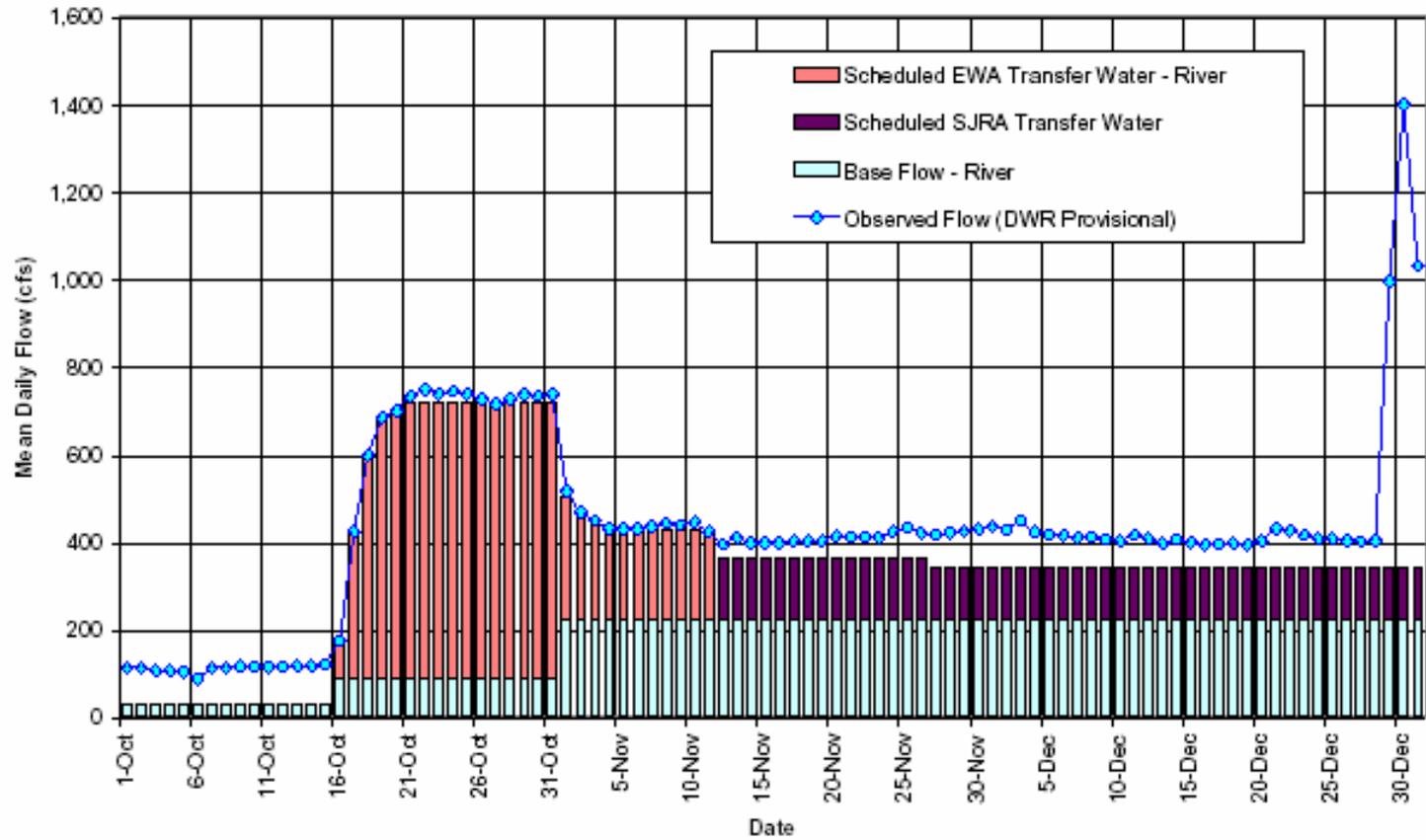
## VAMP 2004 --- San Joaquin River near Vernalis With Lagged Contributions from Primary Sources



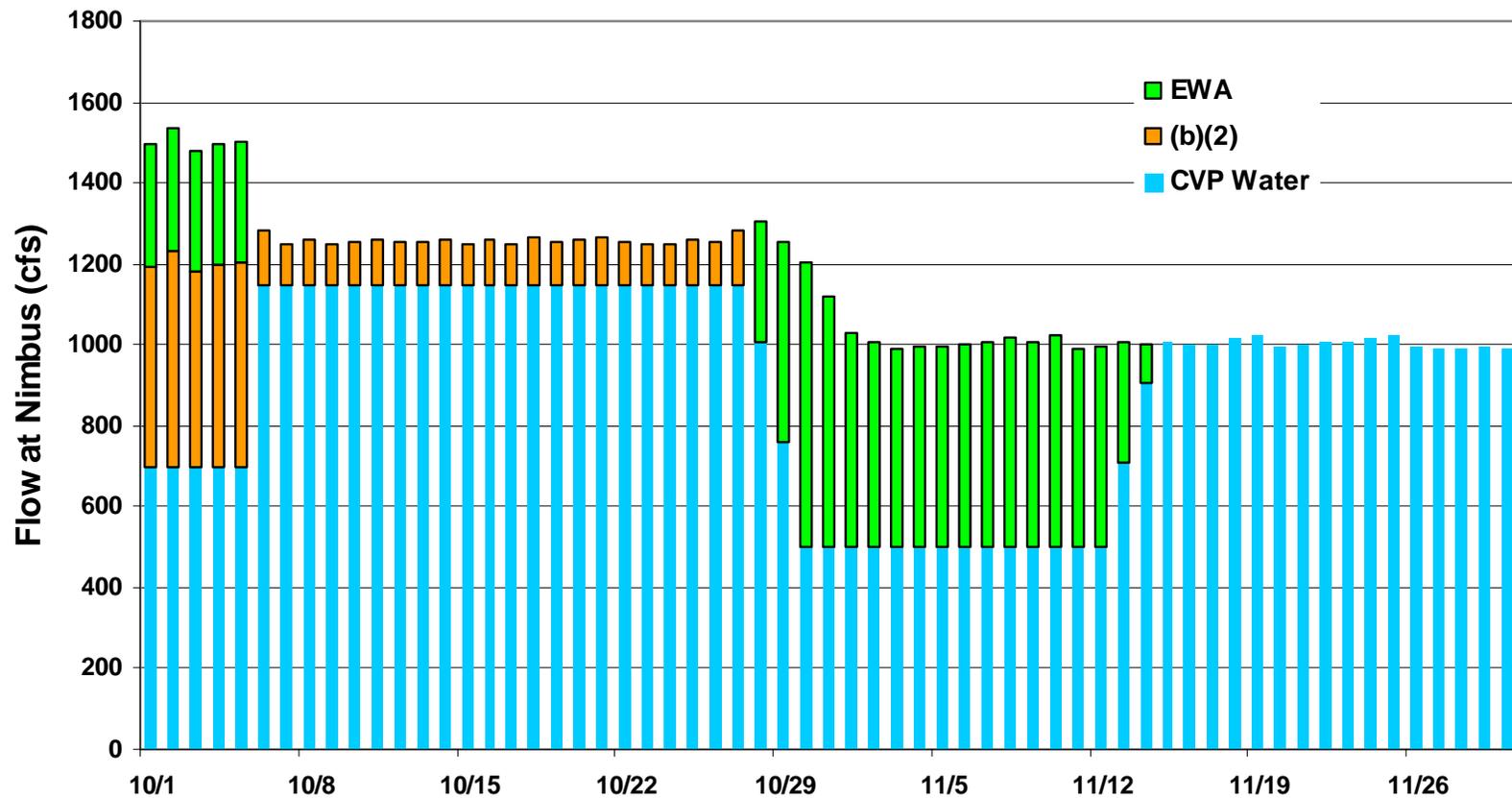
# 2004 VAMP Federal and State Exports



### SJRA and EWA Fall 2001 Water Transfer Merced River Flow at Cressey

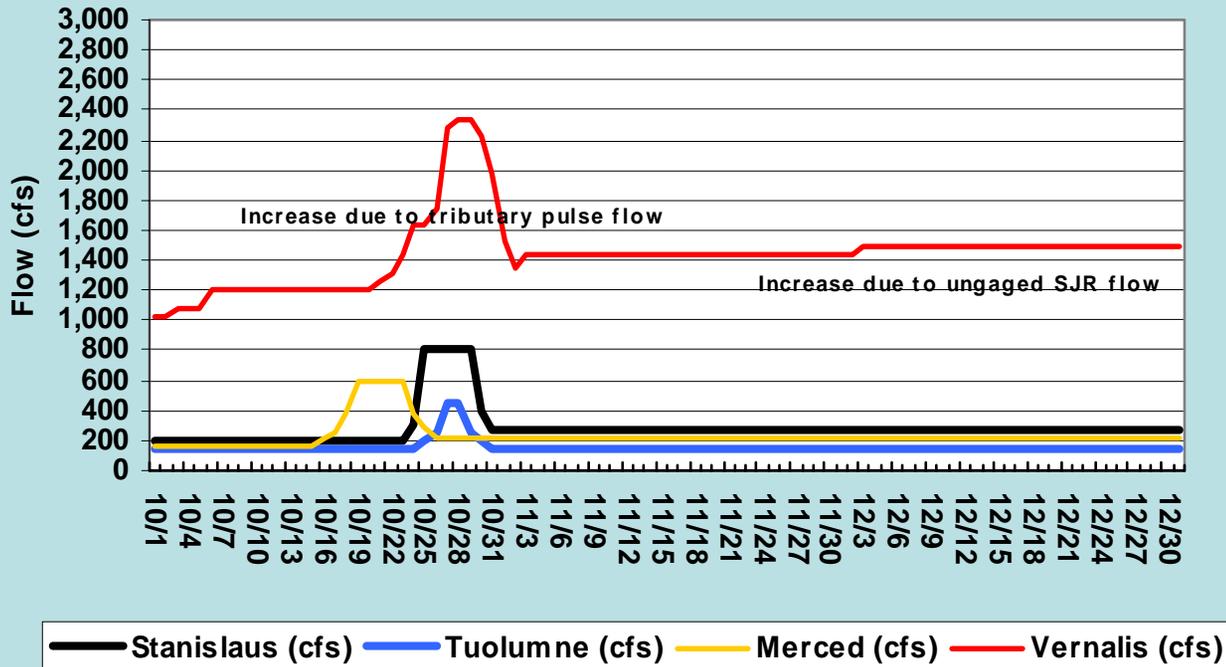


### EWA on the American River, Fall 2001

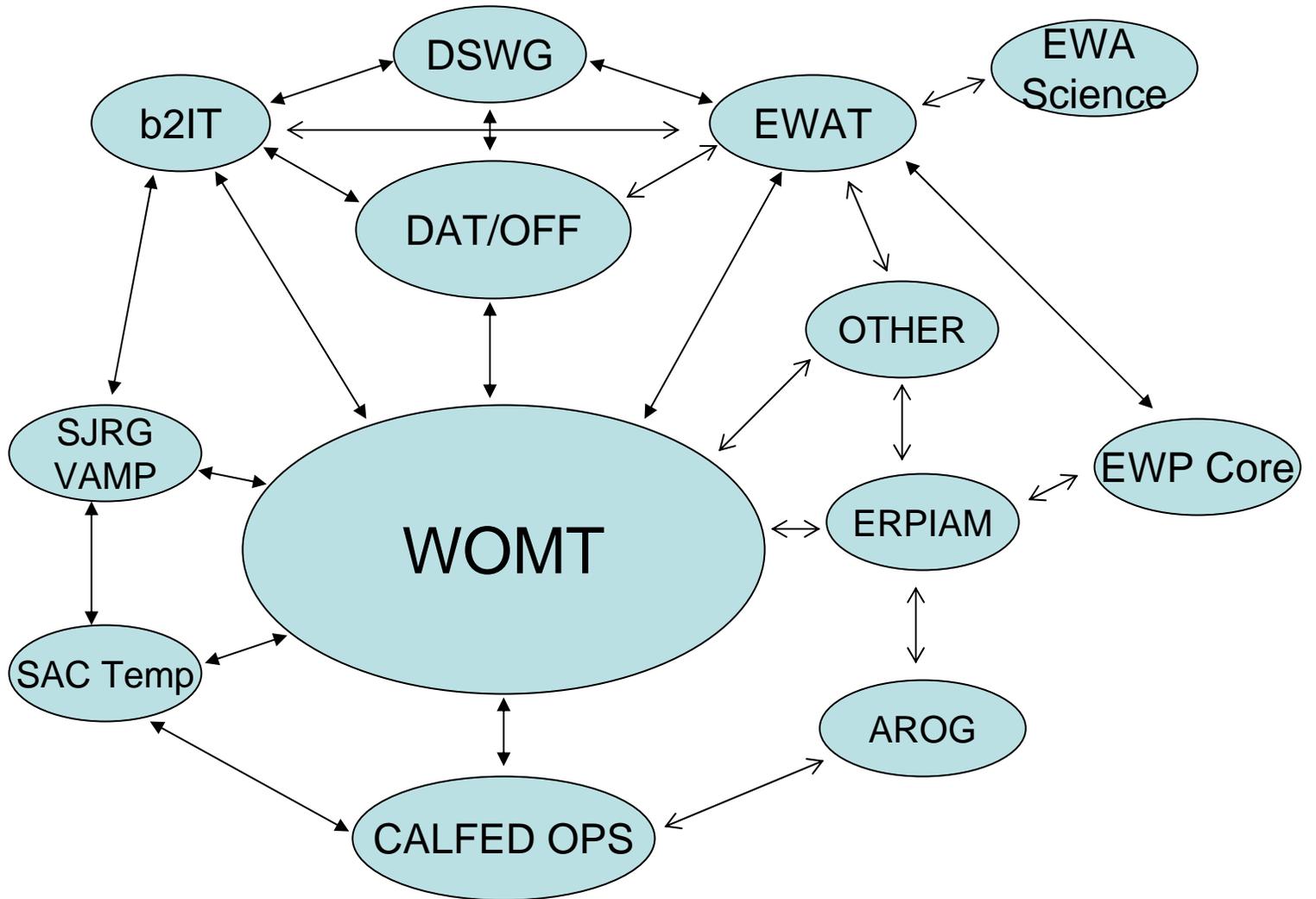


# San Joaquin River Fall Flow Schedule -- 2004

Draft 10/19/04



# Coordination and Integration Process



### EWA

Larger systems with available water from willing sellers. Mostly Delta Actions.

### EWP

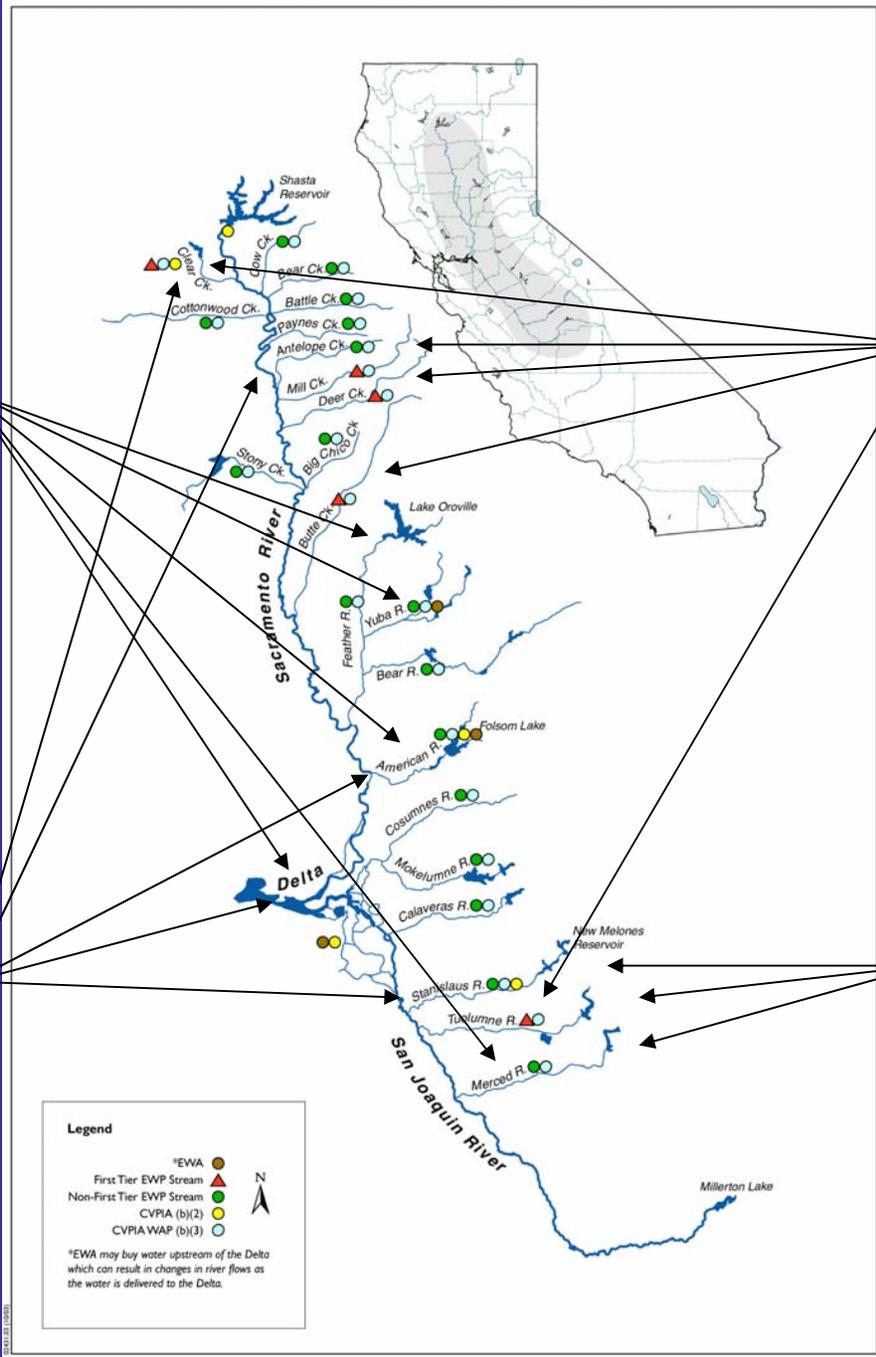
Smaller streams with at-risk species present. Tier 1 streams shown.

### B2 water

CVP controlled streams only. Upstream and Delta Actions.

### WAP

San Joaquin tributary augmentation in spring and fall.



**Legend**

- \*EWA
- First Tier EWP Stream
- Non-First Tier EWP Stream
- CVPIA (b)(2)
- CVPIA WAP (b)(3)

\*EWA may buy water upstream of the Delta which can result in changes in river flows as the water is delivered to the Delta.

# Do additional opportunities exist to use EWA assets upstream of the Delta?

## **Considerations:**

- Fish flow needs on each stream
- Other environmental water programs already being implemented on each stream
- Is additional water needed
- Coordination opportunities with EWP, WAP, and (b)(2)

# Do additional opportunities exist to use EWA assets upstream of the Delta?

## **Considerations:**

- Are there willing sellers on the stream and how much water is available
- Can the water be released on a schedule that provides instream benefits for fish and also be exported into San Luis Reservoir
- Delta inflow, project demands, balanced vs. excess conditions, DOI, and E/I standard
- Status of EWA resources/budget

# Summary

1. Each coordination and integration opportunity is unique
2. The EWA Team will continue to coordinate and integrate fish actions with (b)(2), VAMP, and the Calfed ERP
3. The EWA Team will continue to look for upstream opportunities to use EWA
4. The EWA Team remains committed to pursuing coordination and integration opportunities with the other Calfed programs
5. The EWA contributes to a multi-objective, long-term water management strategy for restoration of the Bay-Delta system

# Acknowledgements

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