

IMPACTS ON LOWER AMERICAN RIVER SALMONIDS AND RECOMMENDATIONS ASSOCIATED WITH FOLSOM RESERVOIR OPERATIONS TO MEET DELTA WATER QUALITY OBJECTIVES AND DEMANDS



State Water Resources Control
Board Public Workshop On
Consideration of Potential
Amendments or Revisions of the
Water Quality Control Plan for
the San Francisco Bay/
Sacramento-San Joaquin Delta
Estuary

*City-County Office of Metropolitan Water Planning
660 J Street, Suite 260
Sacramento, CA 95814*

January 2005

Water Forum Agreement Stakeholders

◆ Water Interests

- ◆ Arden-Cordova Water Service
- ◆ Carmichael Water District
- ◆ California-American Water Company
- ◆ Citrus Heights Water District
- ◆ City of Folsom
- ◆ City of Roseville
- ◆ Clay Water District
- ◆ Del Paso Manor Water District
- ◆ El Dorado County Water Agency
- ◆ El Dorado Irrigation District
- ◆ Fair Oaks Water District
- ◆ Florin County Water District
- ◆ Galt Irrigation District
- ◆ Georgetown Divide Public Utility District
- ◆ Natomas Mutual Water Company
- ◆ Omochumne-Hartnell Water District
- ◆ Orange Vale Water Company
- ◆ Placer County Water Agency
- ◆ Rancho Murieta Community Services District
- ◆ Regional Water Authority
- ◆ Rio Linda/Elverta Community Water District
- ◆ Sacramento County Farm Bureau
- ◆ Sacramento Suburban Water District
- ◆ San Juan Water District

◆ Business Interests

- ◆ Associated General Contractors
- ◆ Building Industry Association
- ◆ Sacramento Association of Realtors
- ◆ Sacramento Metro Chamber of Commerce
- ◆ Sacramento-Sierra Building and Construction Trades Council

◆ Environmental Interests

- ◆ Environmental Council of Sacramento
- ◆ Friends of the River
- ◆ Save the American River Association
- ◆ Sierra Club-Mother Lode Chapter

◆ Public Interests

- ◆ City of Sacramento
- ◆ County of Sacramento
- ◆ League of Women Voters of Sacramento
- ◆ Sacramento County Alliance of Neighborhoods
- ◆ Sacramento County Taxpayers League
- ◆ Sacramento Municipal Utility District

Water Forum Agreement Coequal Objectives



- ◆ ***Provide a reliable and safe water supply for the region's economic health and planned development to the year 2030; and***
- ◆ ***Preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River.***

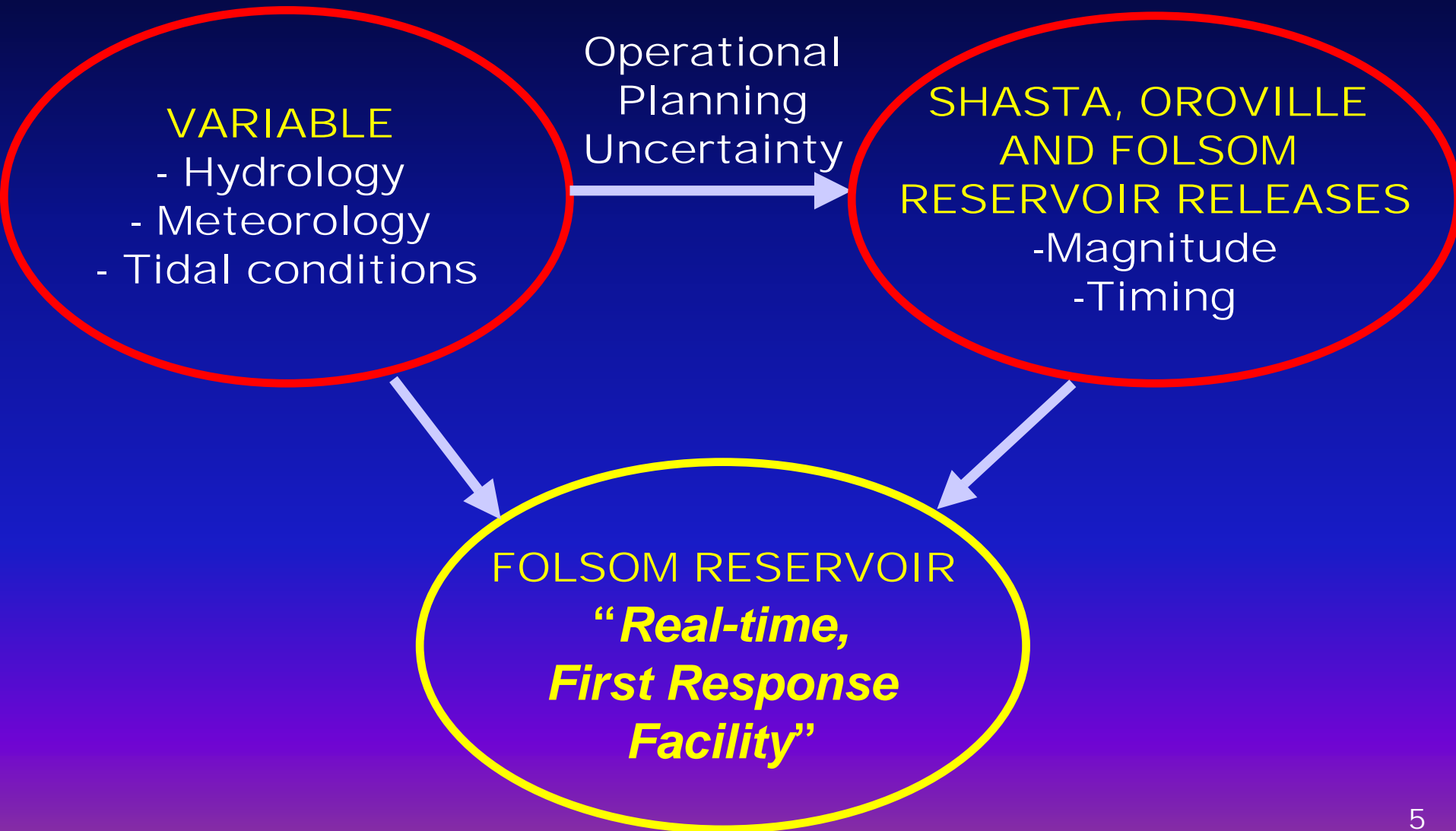
Water Forum Presentation

Delta Water Quality Objective Compliance



- ◆ **Describe documented impacts**
 - ◆ Nimbus Dam release logs
 - ◆ American River Operations Group (AROG) minutes
- ◆ **Recommend lower American River interim flow fluctuation objectives to minimize or avoid impacts**
- ◆ **Provide Delta water quality compliance recommendations to minimize or avoid impacts on lower American River fish resources**

Delta Water Quality Compliance (Delta Outflow and X2)



Folsom Reservoir

"Real-time, First Response Facility"

Lower American River

- ◆ **Chinook salmon and steelhead**
- ◆ **Flow fluctuations**
 - ◆ Redd dewatering and isolation
 - ◆ Fry stranding
 - ◆ Juvenile isolation
- ◆ **Folsom Reservoir storage**
 - ◆ Coldwater pool availability – LAR water temperatures
 - ◆ Juvenile steelhead over-summer rearing
 - ◆ Chinook salmon spawning
 - ◆ Chinook salmon spawning habitat availability



Lower American River "Documented" Impacts



- ◆ Impacts described in agency reports or AROG minutes
- ◆ USBR Nimbus Dam release logs

FOLSOM LAKE OPERATIONS - NIMBUS RELEASE LOG

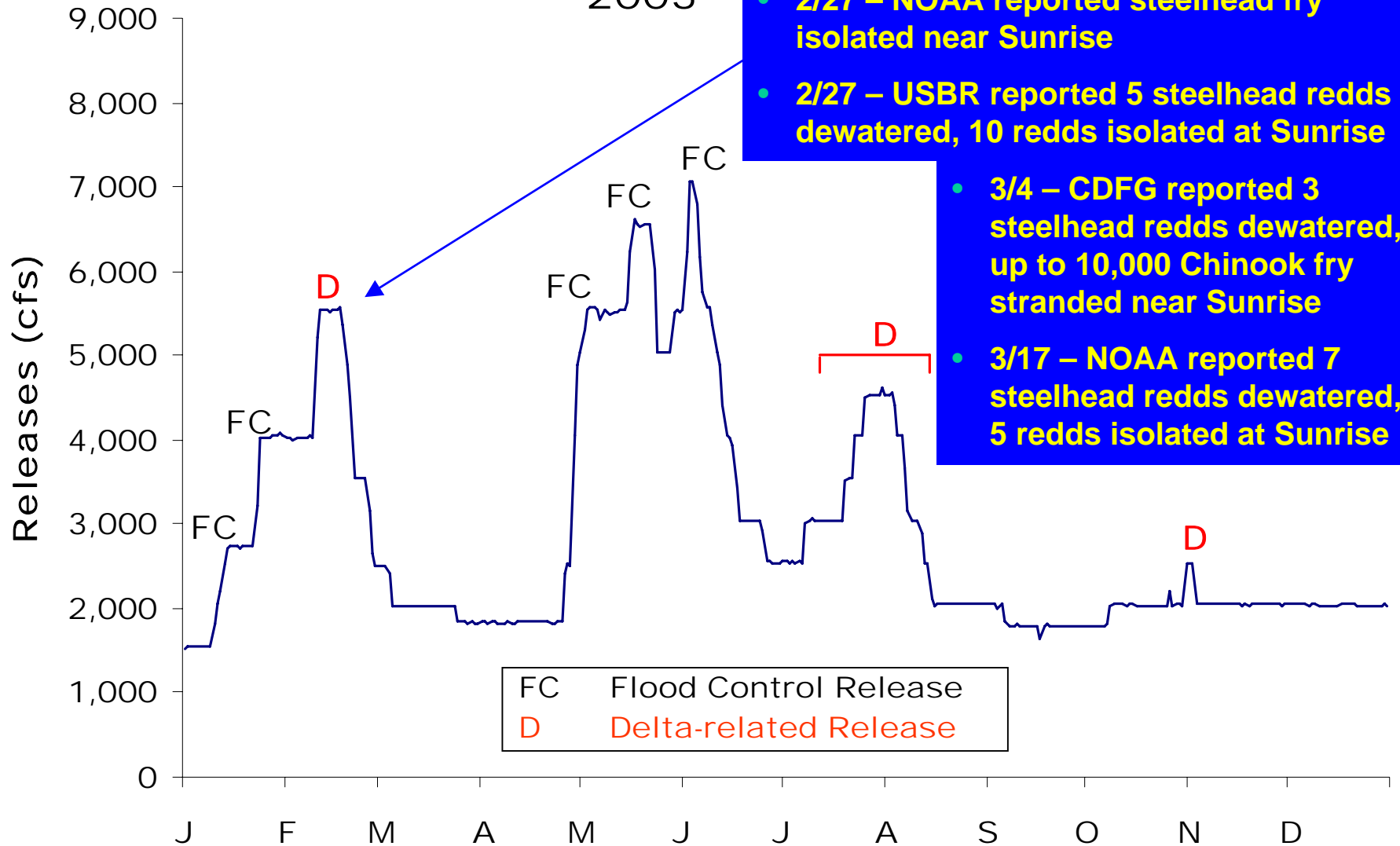
DATE	TIME OF CHANGE	INC OR DEC	FLOW IN CFS	COMMENT/OR REASON
01/23/03	1200-1800	Inc	4,000	Flood/Power Operations
02/10/03	0001	Inc	5,000	For Roe Island WQ standard & to reduce encroachment under SAFCA diagram (5000 cfs is nominal Nimbus PP Capacity)
02/10/03	1600	Inc	5,500	Roe island X@ standard/SAFCA encroachment.
02/18/03	1200	Dec	5,200	Conserve storage

- ◆ 2001-2004 information was examined for Delta-related releases and subsequent "documented" impacts

Lower American River

"Documented" Impacts

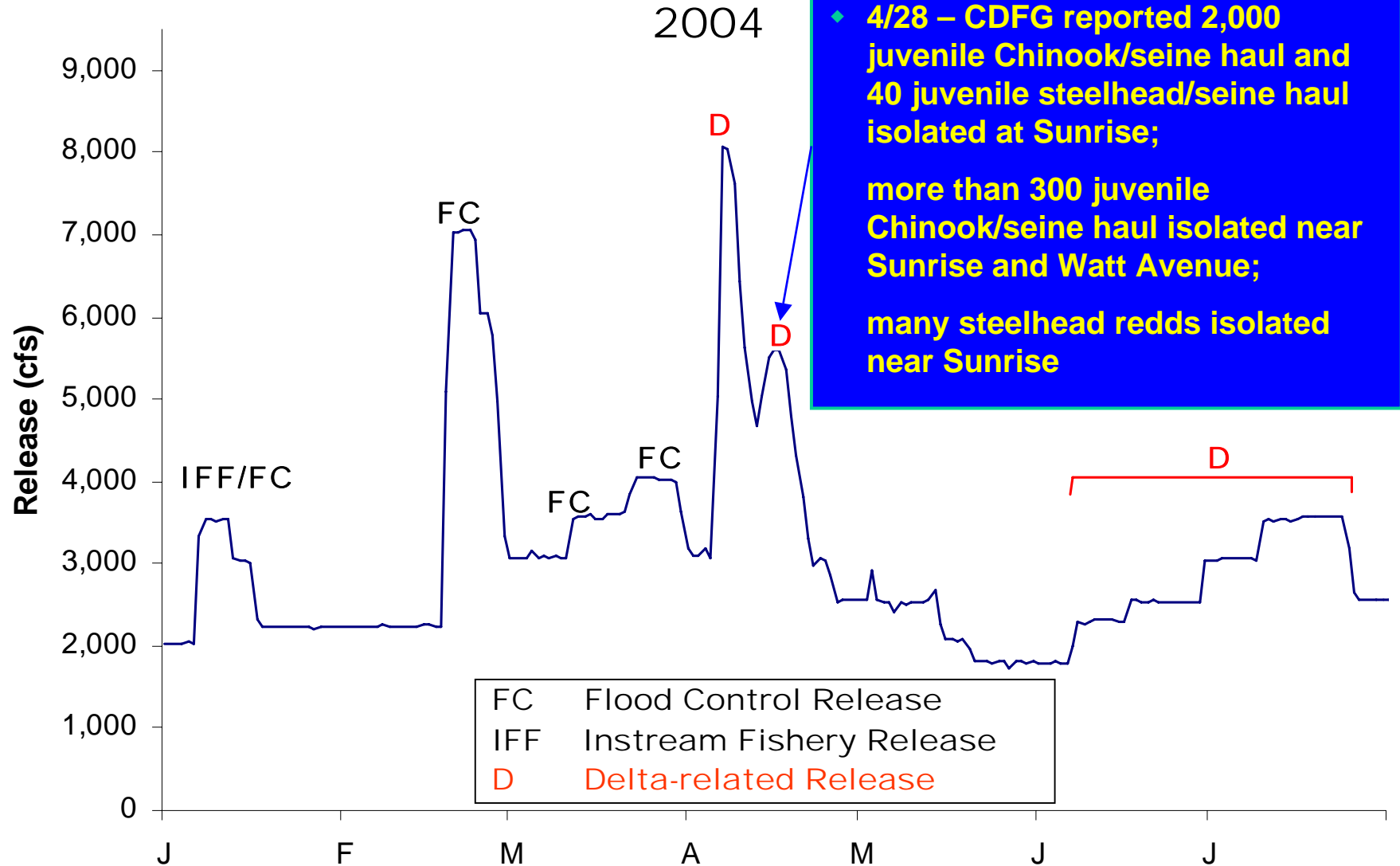
2003



- 2/27 – NOAA reported steelhead fry isolated near Sunrise
- 2/27 – USBR reported 5 steelhead redds dewatered, 10 redds isolated at Sunrise
- 3/4 – CDFG reported 3 steelhead redds dewatered, up to 10,000 Chinook fry stranded near Sunrise
- 3/17 – NOAA reported 7 steelhead redds dewatered, 5 redds isolated at Sunrise

Lower American River

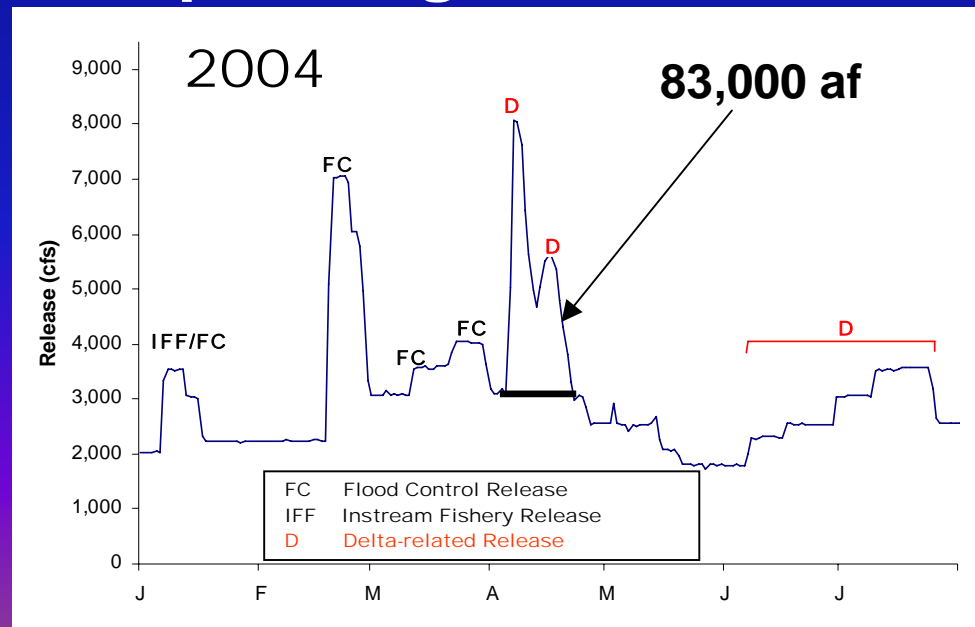
"Documented" Impacts



Folsom Reservoir

"Real-time, First Response Facility"

- ◆ Folsom Reservoir storage
 - ◆ Coldwater pool availability – LAR water temperatures
 - ◆ Juvenile steelhead over-summer rearing
 - ◆ Chinook salmon spawning
 - ◆ Chinook salmon spawning habitat availability



Delta Outflow and X2 Compliance Adaptive Management Recommendation

If increased releases from Nimbus Dam are anticipated, then consider a 3-step compliance implementation strategy:

- 1. Management agencies (i.e., NOAA Fisheries, USFWS, and CDFG) determine whether:**
 - LAR salmonids will be at risk; and, if so, whether**
 - EWA or CVPIA Section 3406 (b)(2) water assets can be used to avoid anticipated impacts**

Delta Outflow and X2 Compliance Adaptive Management Recommendation

3-step compliance implementation strategy:

2. CVP/SWP operators determine if alternative compliance strategies are feasible:

- Utilize EWA or (b)(2) water assets to mitigate for water foregone by CVP/SWP contractors caused by operational planning uncertainty associated with reservoir to Delta travel times
- Reduce Delta exports following a runoff event to achieve early compliance
- Increase Delta inflow from Folsom Reservoir releases following a runoff event to achieve early compliance

Delta Outflow and X2 Compliance Adaptive Management Recommendation

3-step compliance implementation strategy:

- 3. If alternative compliance strategies are not feasible:**
 - **Data Assessment Team (DAT) and Operations and Fish Forum (OFF) develop operational recommendations for the Water Operations Management Team (WOMT)**
 - e.g., temporarily modify compliance requirements
 - **WOMT presents temporary compliance requirement modifications to the SWRCB Executive Director**
 - **If the Executive Director does not object within 10 days, these temporary requirement modifications go into effect**

IMPACTS ON LOWER AMERICAN RIVER SALMONIDS AND RECOMMENDATIONS ASSOCIATED WITH FOLSOM RESERVOIR OPERATIONS TO MEET DELTA WATER QUALITY OBJECTIVES AND DEMANDS



State Water Resources Control
Board Public Workshop On
Consideration of Potential
Amendments or Revisions of the
Water Quality Control Plan for
the San Francisco Bay/
Sacramento-San Joaquin Delta
Estuary

*City-County Office of Metropolitan Water Planning
660 J Street, Suite 260
Sacramento, CA 95814*

January 2005

