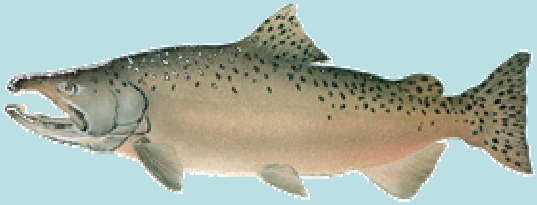
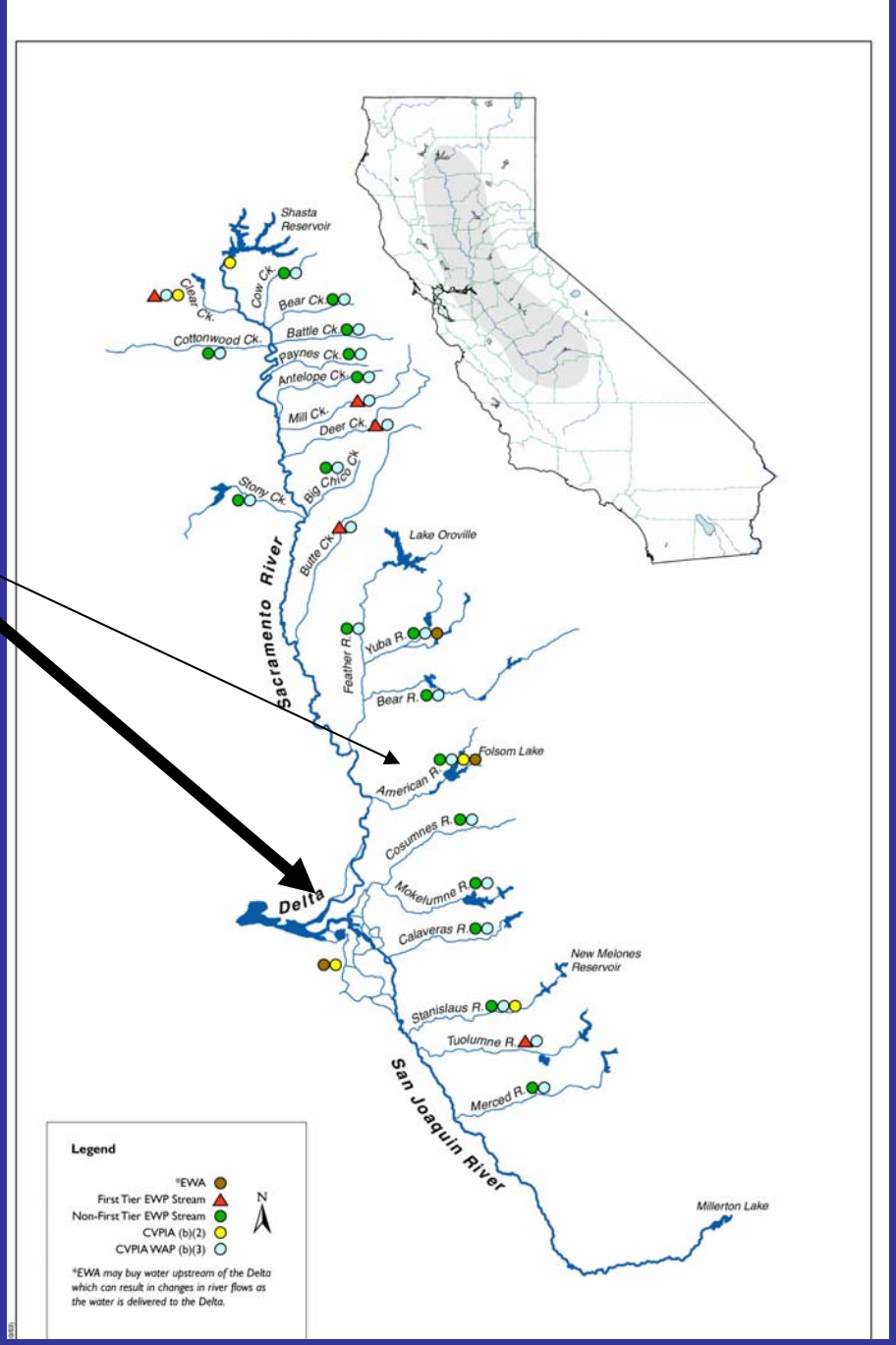
EWA Fish Actions in WY 2005 and WY 2006



Nick Hindman
Water Operations Division
USFWS Sacramento
November 28, 2006

EWA fish actions
in 2005
and 2006



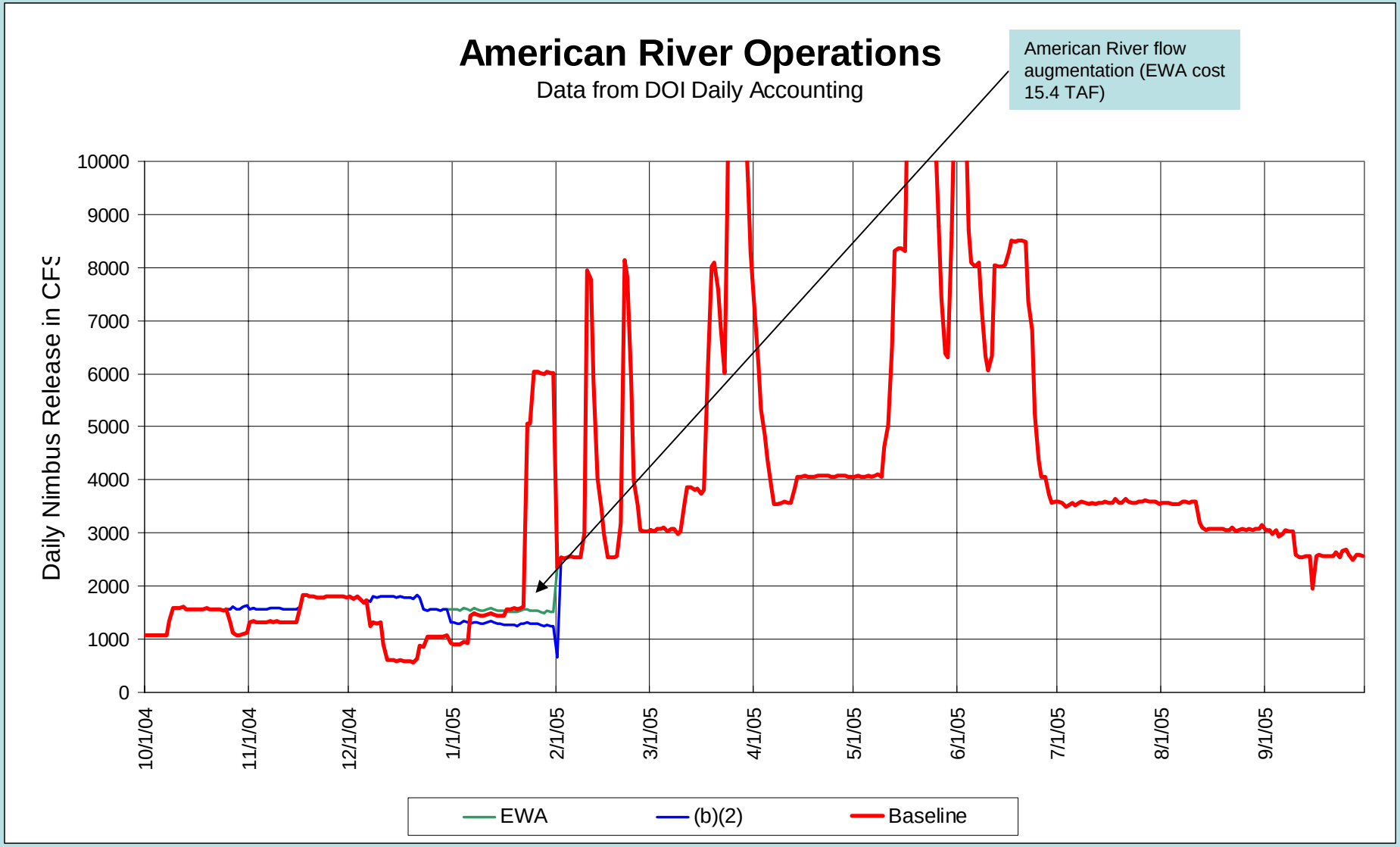
Environmental Water Account (EWA)

Technical basis of actions:

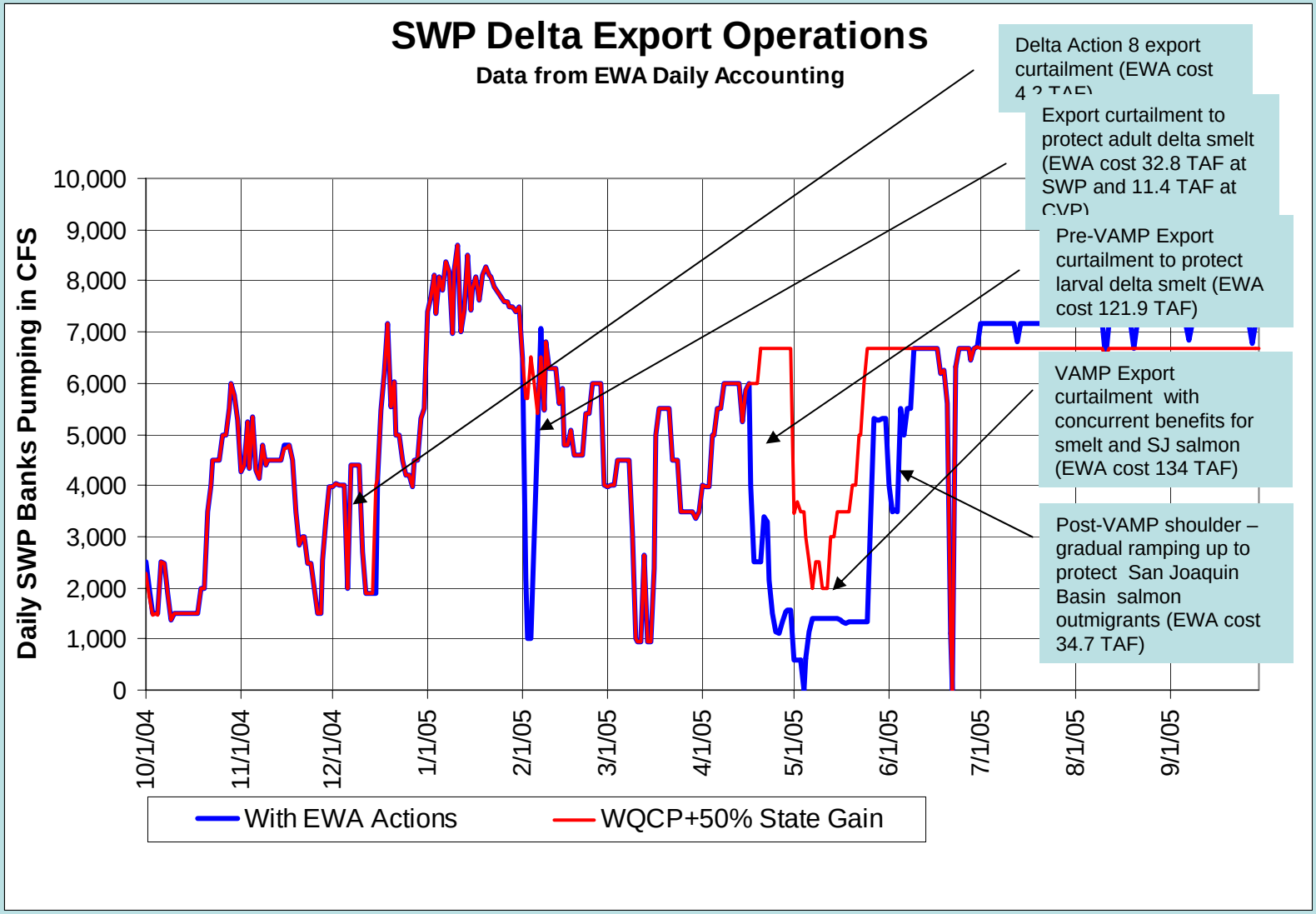
- Published literature, agency reports, IEP investigations, etc.
- Delta Smelt Risk Assessment Matrix (DSRAM) and salmon decision trees, based on real-time monitoring
- EWA fish actions are monitored, evaluated, and may be modified based on the best science available
- Annual external scientific reviews with EWA Technical Review Panel

WY 2005 hydrologic year type

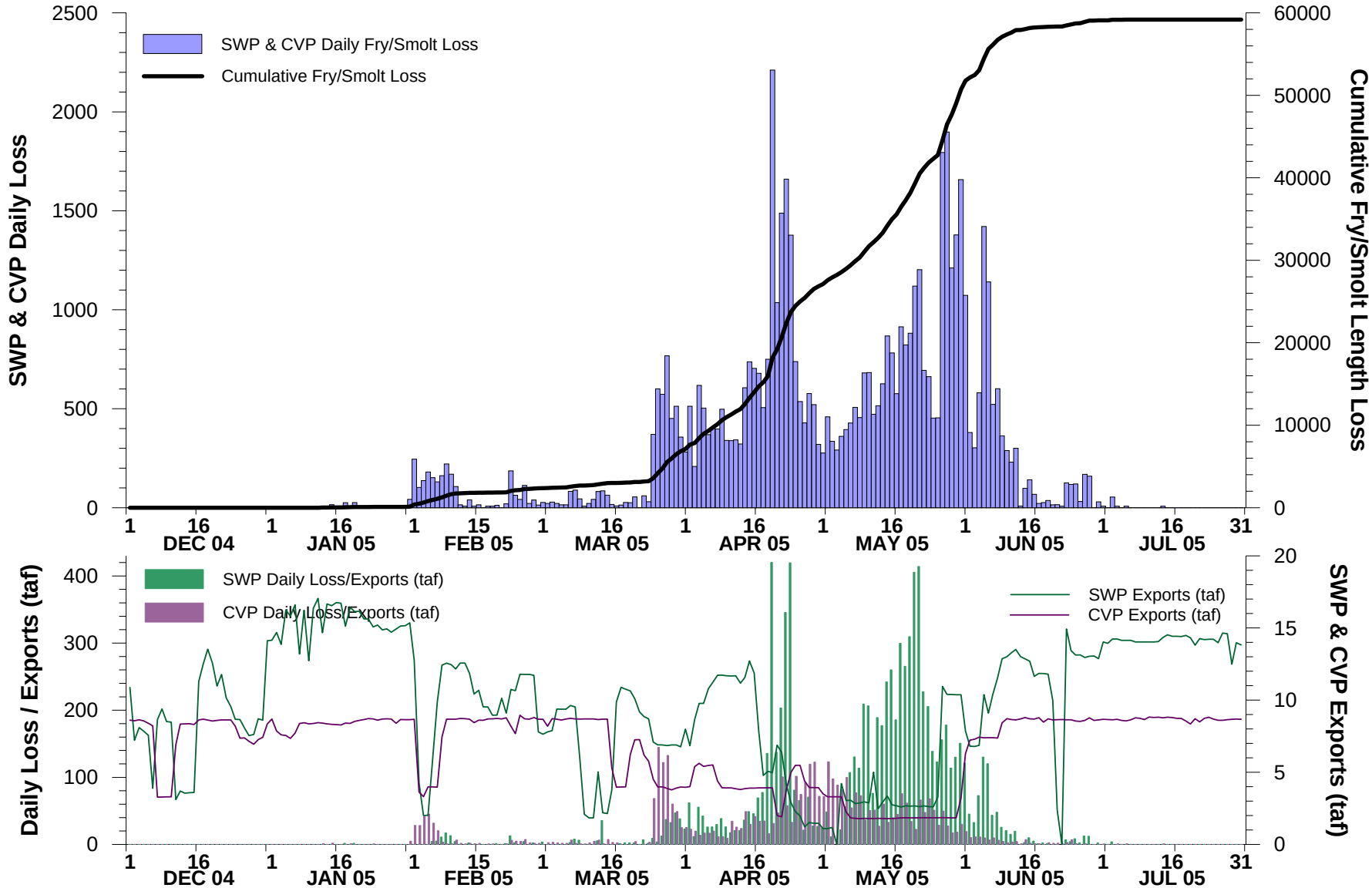
- Sacramento Valley Index (40-30-30) – Above Normal
- San Joaquin Valley Index (60-20-20) - Wet


American River Operations
Data from DOI Daily Accounting
American River flow augmentation (EWA cost 15.4 TAF)
Daily Nimbus Release in CFS
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
10/1/04
11/1/04
12/1/04
1/1/05
2/1/05
3/1/05
4/1/05
5/1/05
6/1/05
7/1/05
8/1/05
9/1/05
EWA
(b)(2)
Baseline

Water Year 2005



FRY / SMOLT CHINOOK LOSS AT THE DELTA FISH FACILITIES
01 DEC 2004 THROUGH 31 JUL 2005

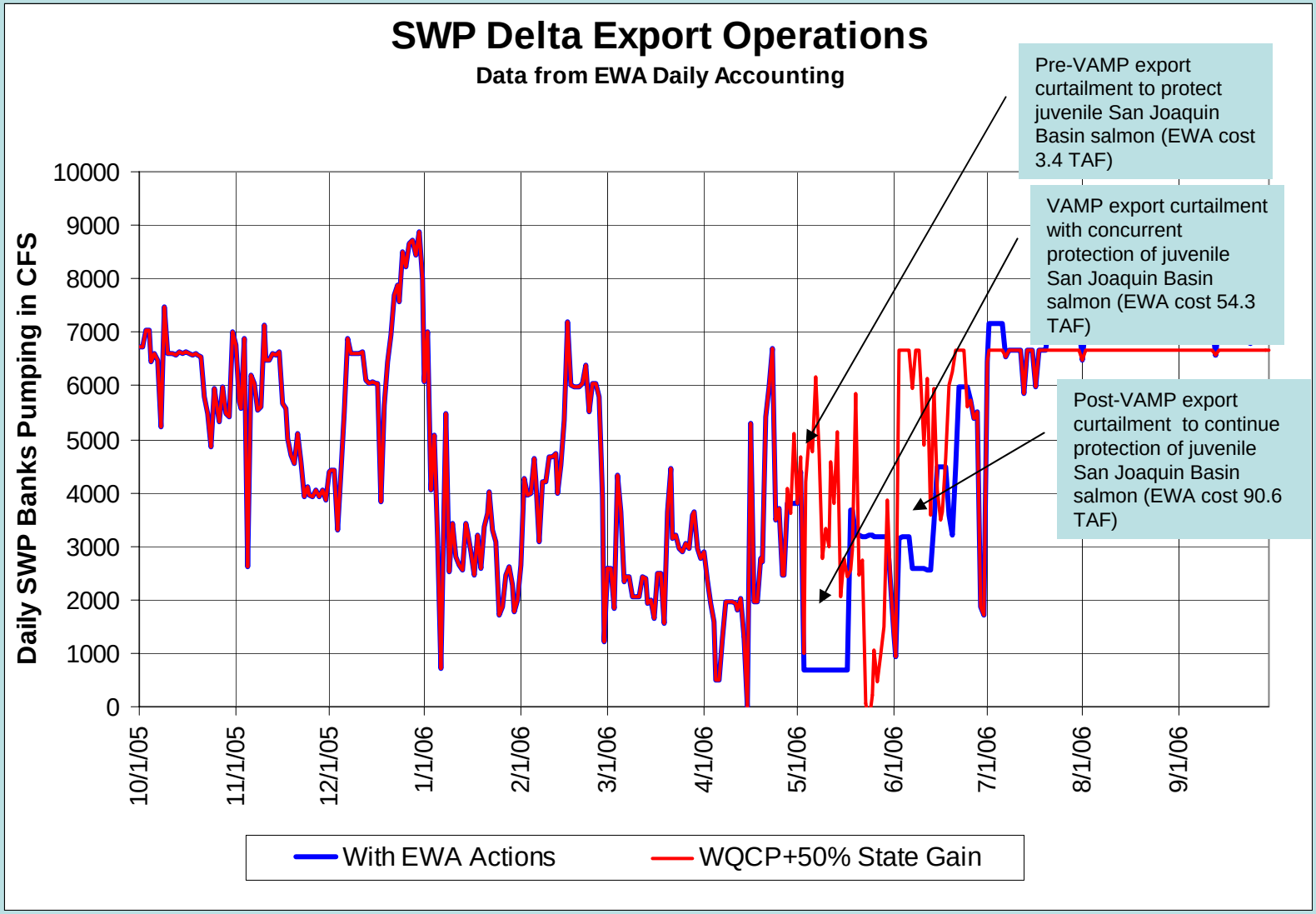


DWR-DES 02 NOV 2005
Preliminary, subject to revision

WY 2006 hydrologic year type

- Sacramento Valley Index (40-30-30) – Wet
- San Joaquin Valley Index (60-20-20) - Wet

Water Year 2006



DRAFT 8-9-06

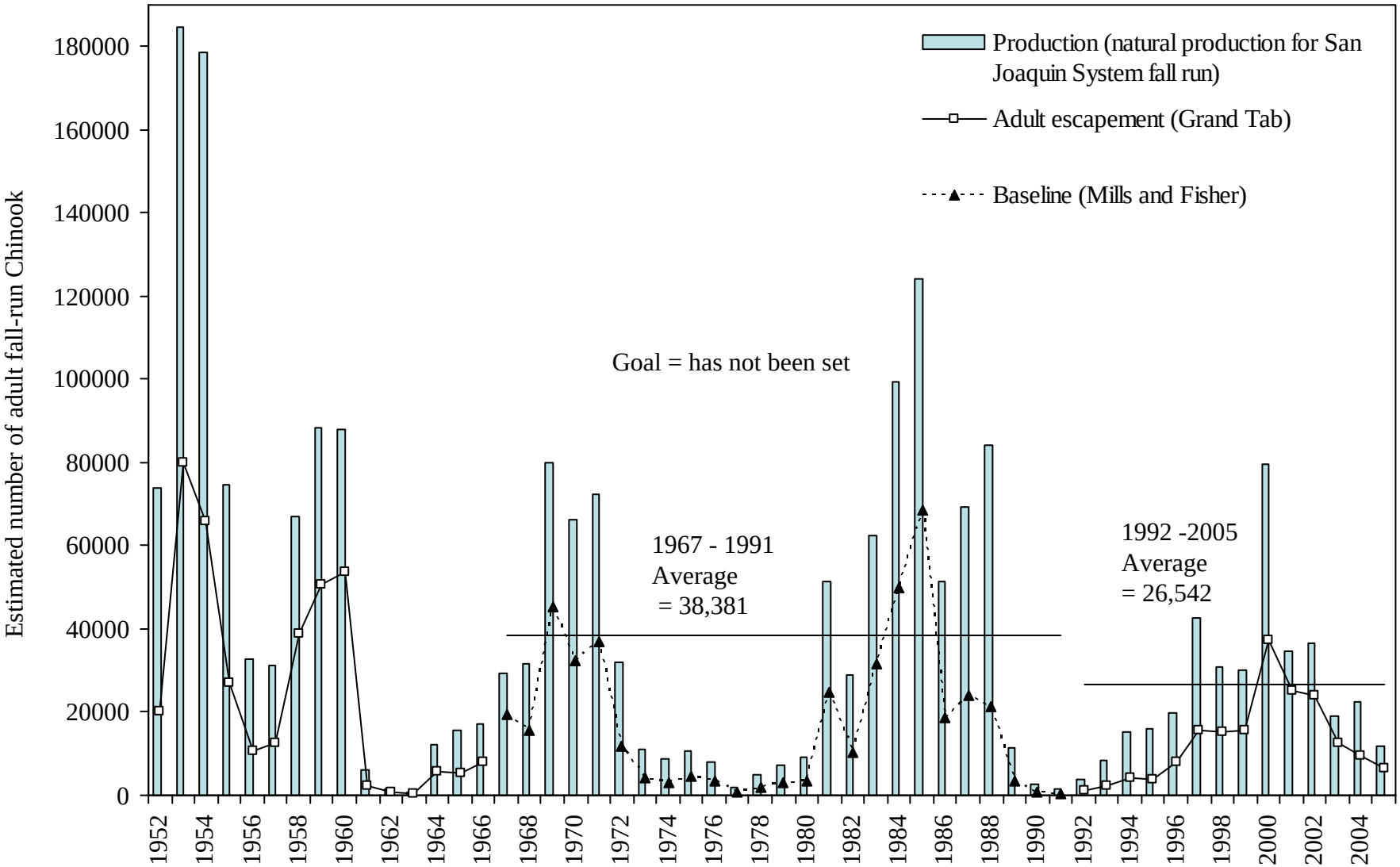
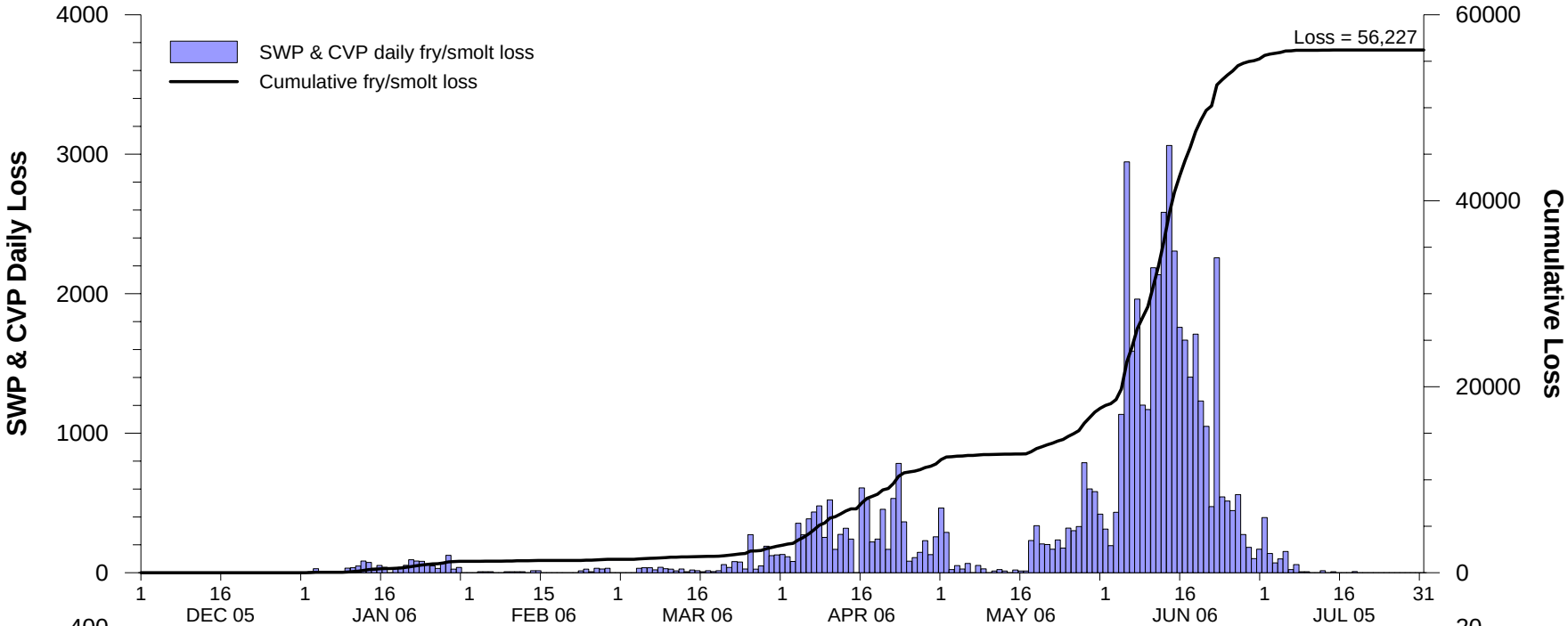
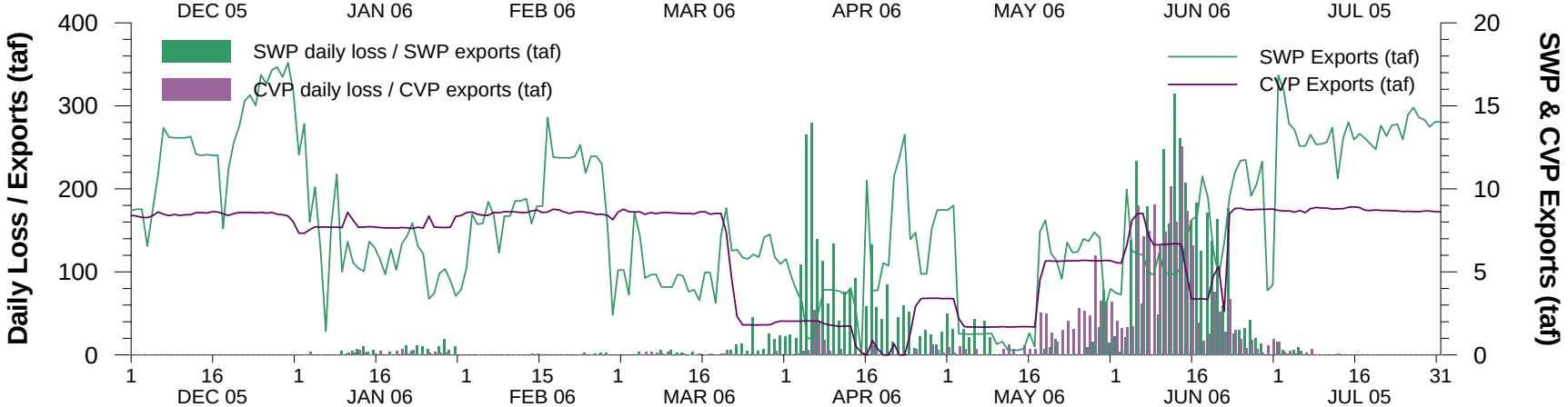


Figure 37. Estimated yearly natural production, and in river escapements of San Joaquin System adult fall-run Chinook salmon. The San Joaquin System is the sum of the Stanislaus, Tuolumne, and Merced Rivers. 1952 - 1966, and 1992 - 2005 numbers are from CDFG Grand Tab (January 31, 2006). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994).

FRY/SMOLT CHINOOK LOSS AT THE DELTA FISH FACILITIES
01 DEC 2005 THROUGH 31 JUL 2006

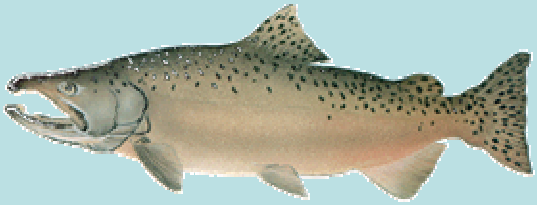




DWR-DES 08 AUG 2006
Preliminary, subject to revision

- Questions?

CVPIA Section 3406 (b)(2) Actions in WY 2005 and WY 2006



Nick Hindman
Water Operations Division
USFWS Sacramento
November 28, 2006

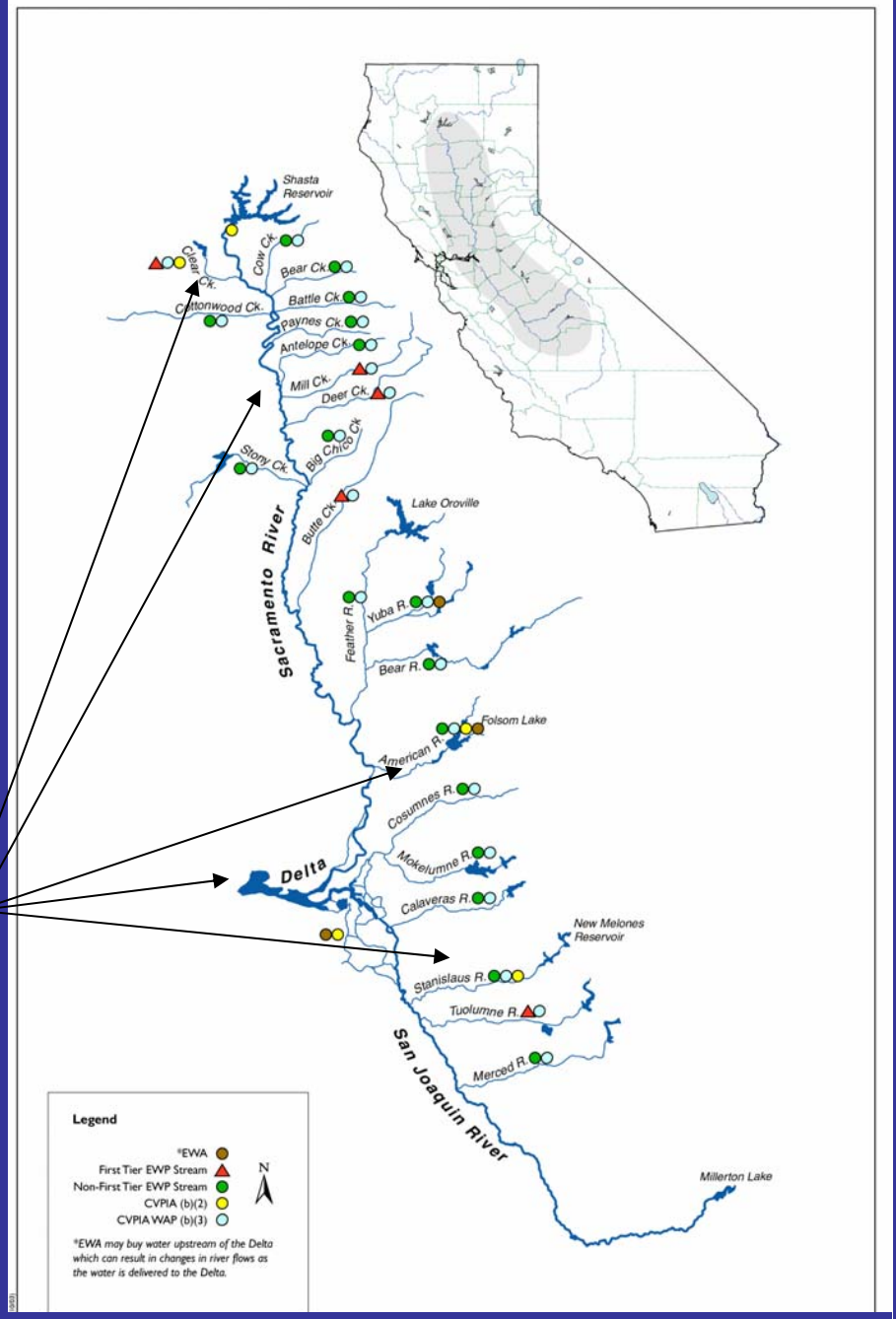
CVPIA Section 3406 (b)(2) water

- **Purpose:** A Central Valley Project Improvement Act (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:** USFWS and USBR, in coordination with CDFG, CDWR, and NOAA fisheries.

B2 water
Primarily CVP controlled streams and Delta Actions.



(b)(2) Process

- B2IT – (b)(2) Interagency Team
  - Members – USBR, USFWS, NOAA Fisheries, DWR and DFG
  - Meets weekly or bi-weekly as needed to review CVP operations, produce forecasts of operations, review (b)(2) daily accounting and resolve issues at a technical level.

- Forecasts are produced monthly with (b)(1) and (b)(2) action placeholders.

CVPIA Section 3406 (b)(2) water

Technical basis:

- (b)(2) fish actions are based on AFRP documents, published literature, 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 science available.

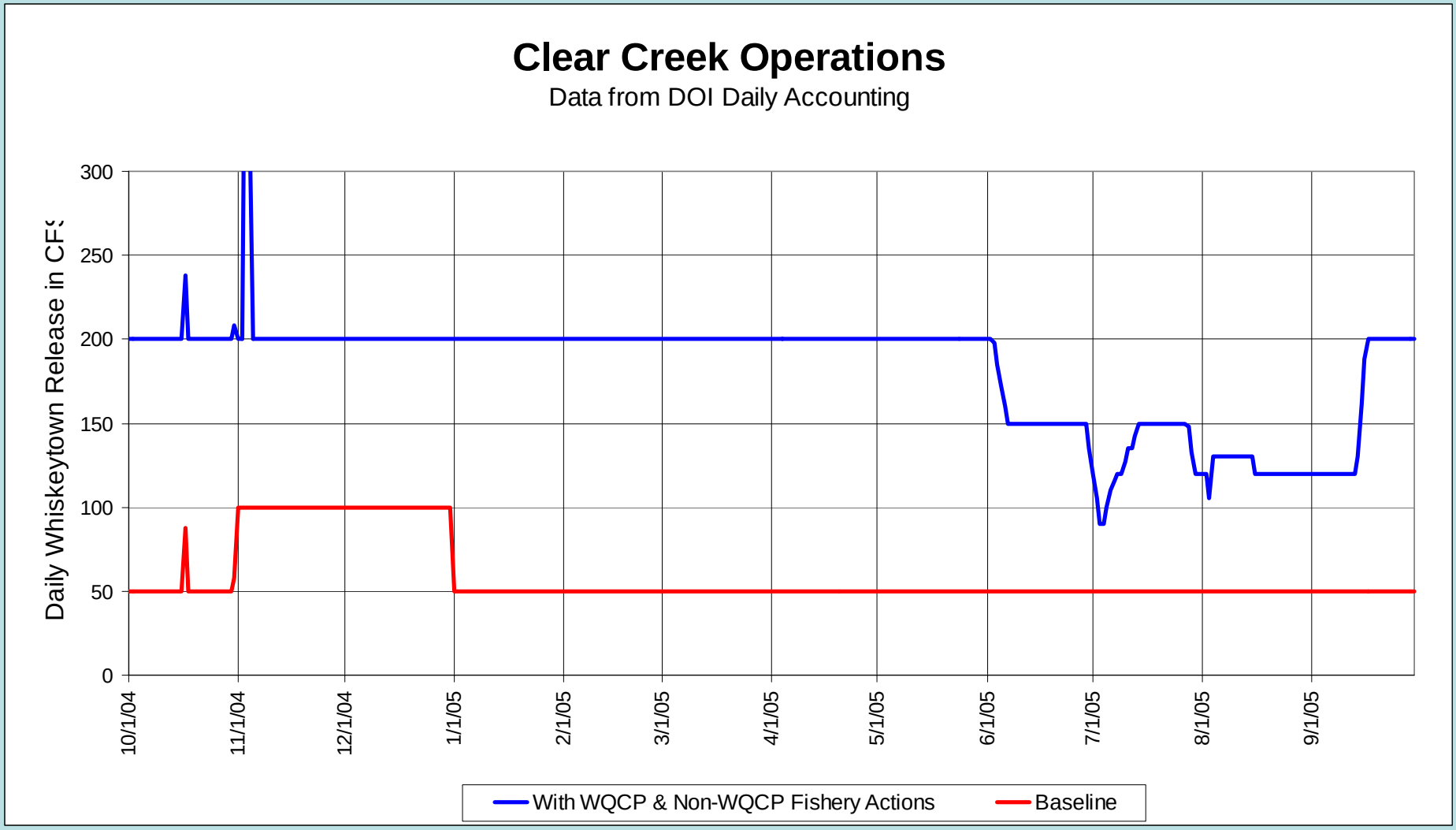
CVPIA Section 3406 (b)(2) water

Typical (b)(2) actions:

- Augment 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 (Nov – June) in the Delta. Target species include winter-run Chinook, spring-run Chinook, fall-run Chinook, steelhead, and Delta smelt.
- B2 is also used to help meet WQCP objectives and post-1992 ESA requirements.

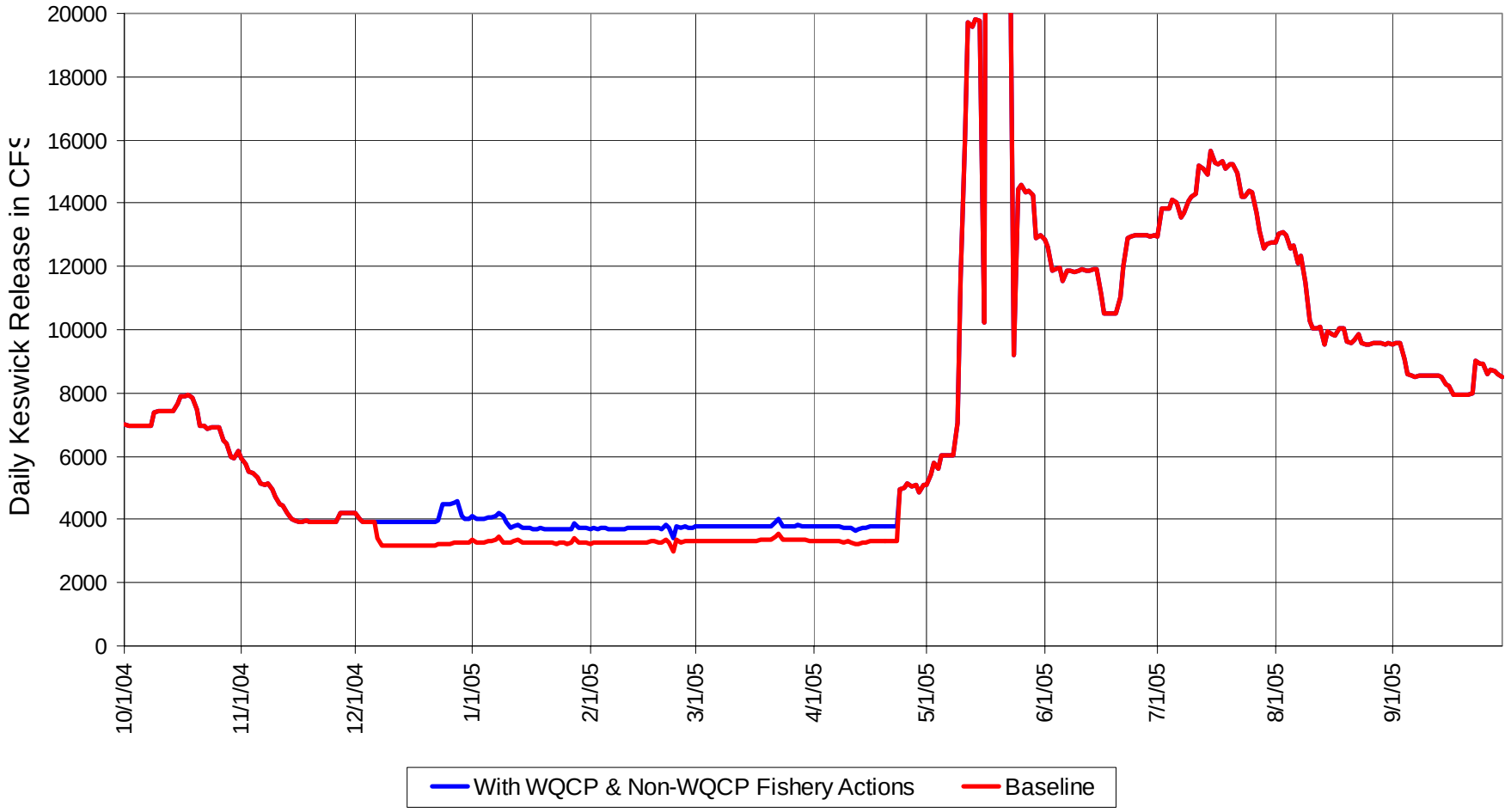
Water Year 2005
CVPIA §3406(b)(2) Actions

October 1, 2004 through September 30, 2005


Clear Creek Operations
Data from DOI Daily Accounting
Daily Whiskeytown Release in CFS
300
250
200
150
100
50
0
10/1/04
11/1/04
12/1/04
1/1/05
2/1/05
3/1/05
4/1/05
5/1/05
6/1/05
7/1/05
8/1/05
9/1/05
With WQCP & Non-WQCP Fishery Actions
Baseline

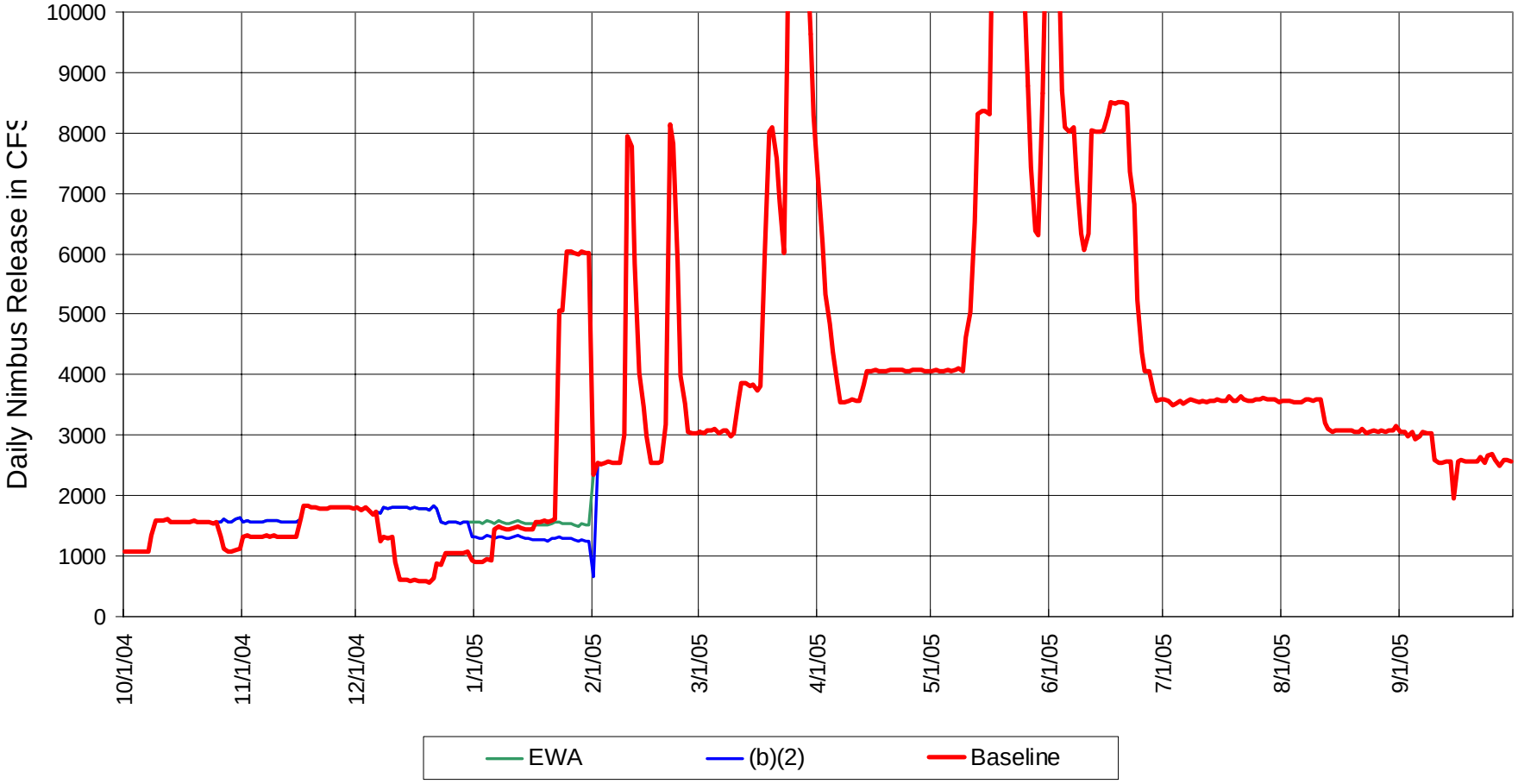
Sacramento River Operations

Data from DOI Daily Accounting



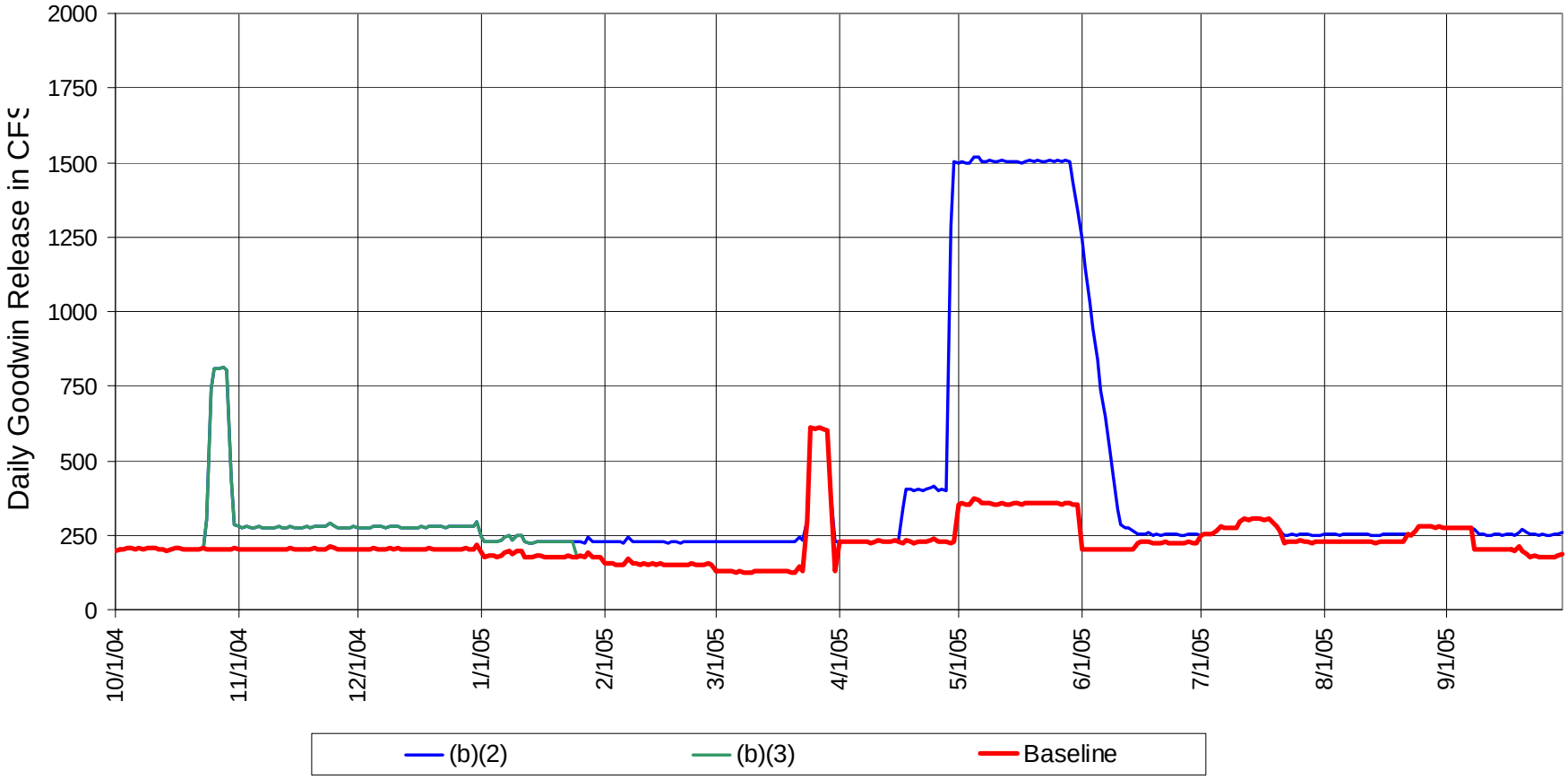
American River Operations

Data from DOI Daily Accounting



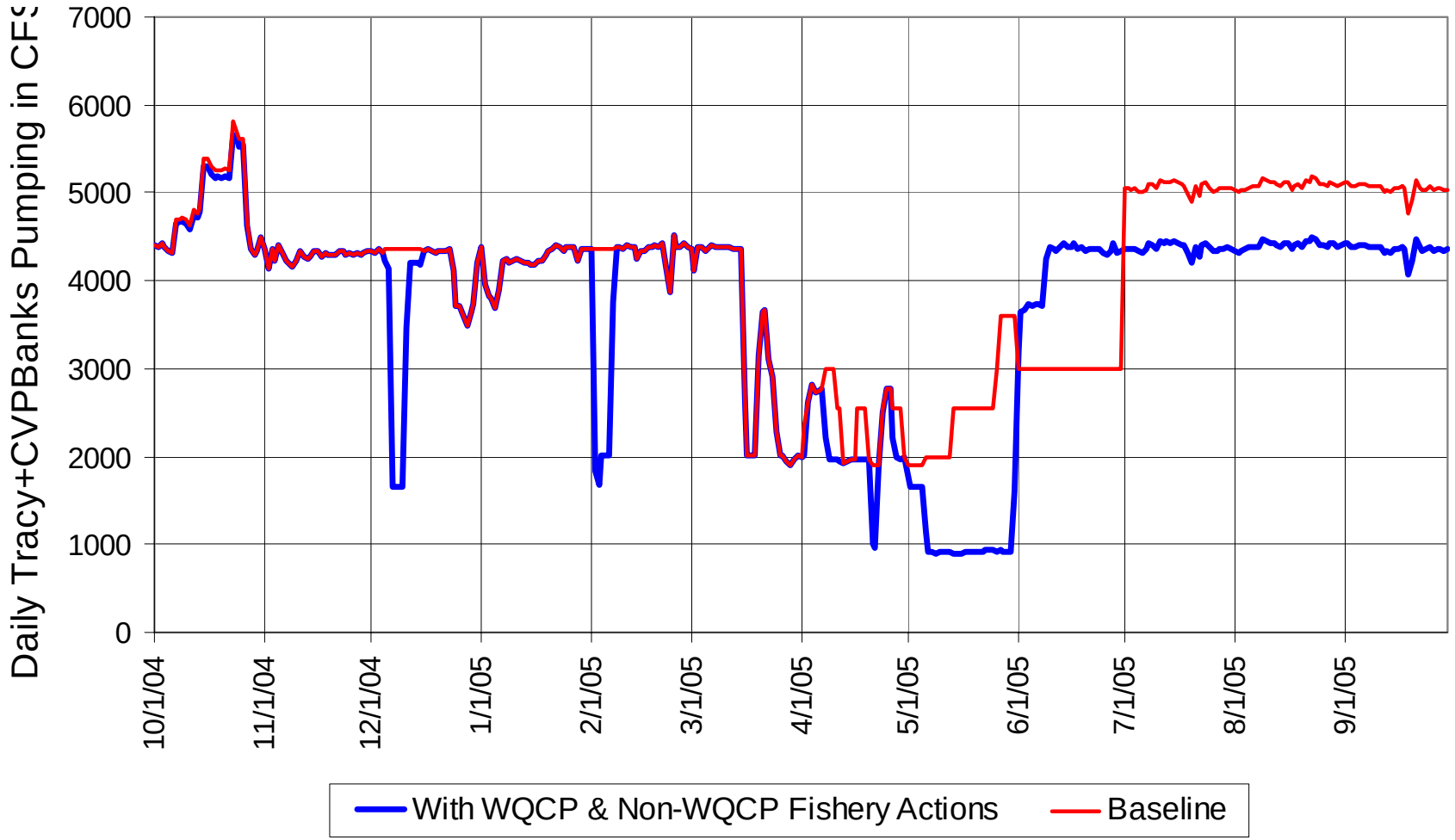
Stanislaus River Operations

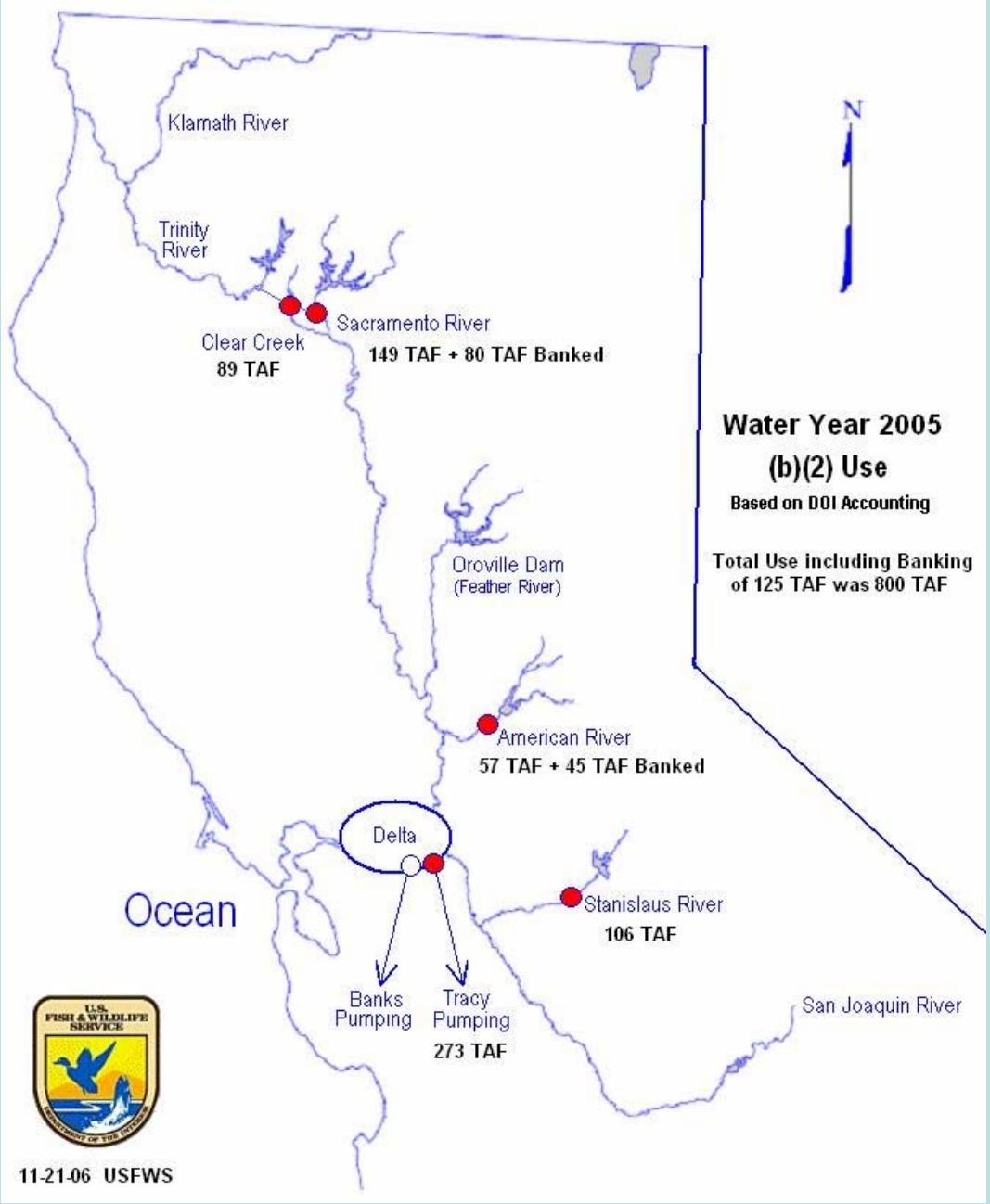
Data from DOI Daily Accounting



CVP Delta Export Operations

Data from DOI Daily Accounting

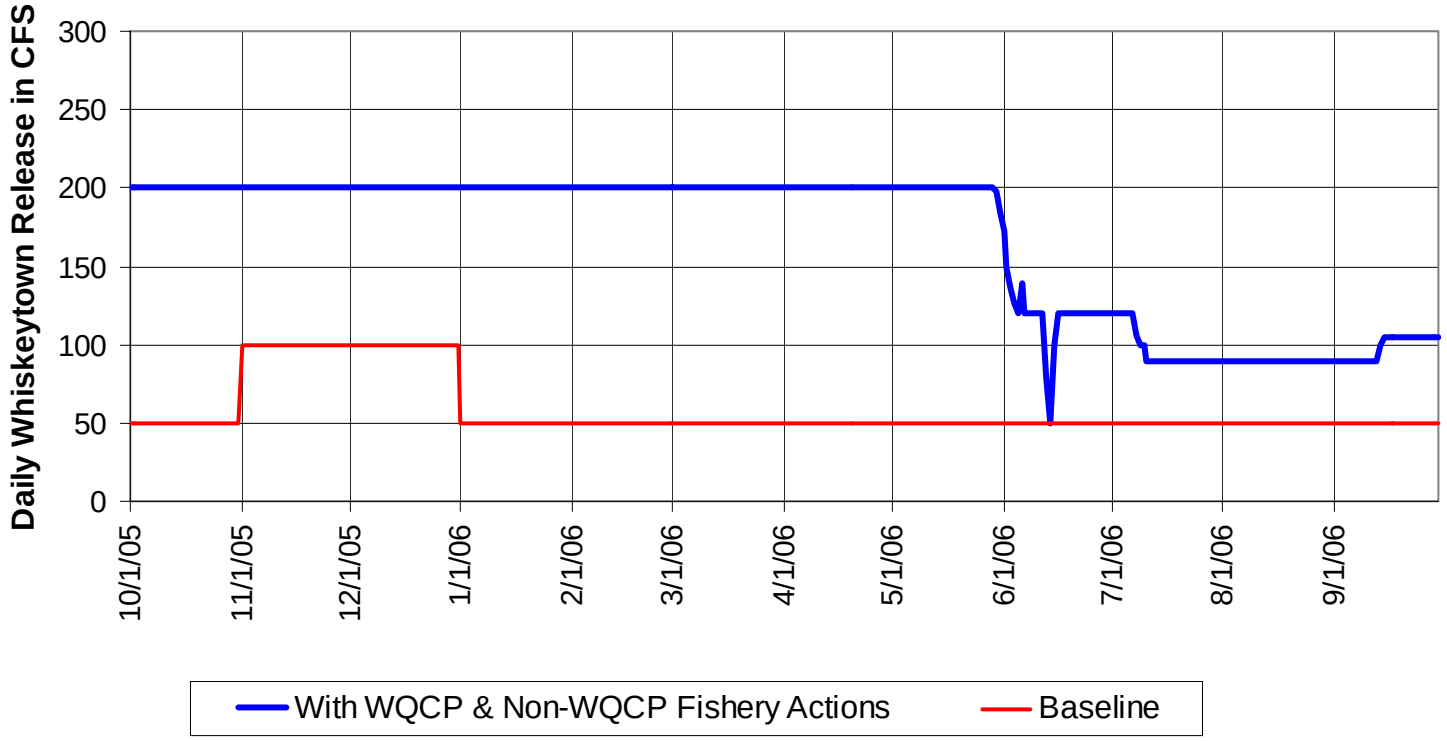



Klamath River
Trinity River
Clear Creek
89 TAF
Sacramento River
149 TAF + 80 TAF Banked
N
Water Year 2005
(b)(2) Use
Based on DOI Accounting
Total Use including Banking of 125 TAF was 800 TAF
Oroville Dam
(Feather River)
American River
57 TAF + 45 TAF Banked
Delta
Ocean
Stanislaus River
106 TAF
Banks Pumping
Tracy Pumping
273 TAF
San Joaquin River
U.S. FISH & WILDLIFE SERVICE
11-21-06 USFWS

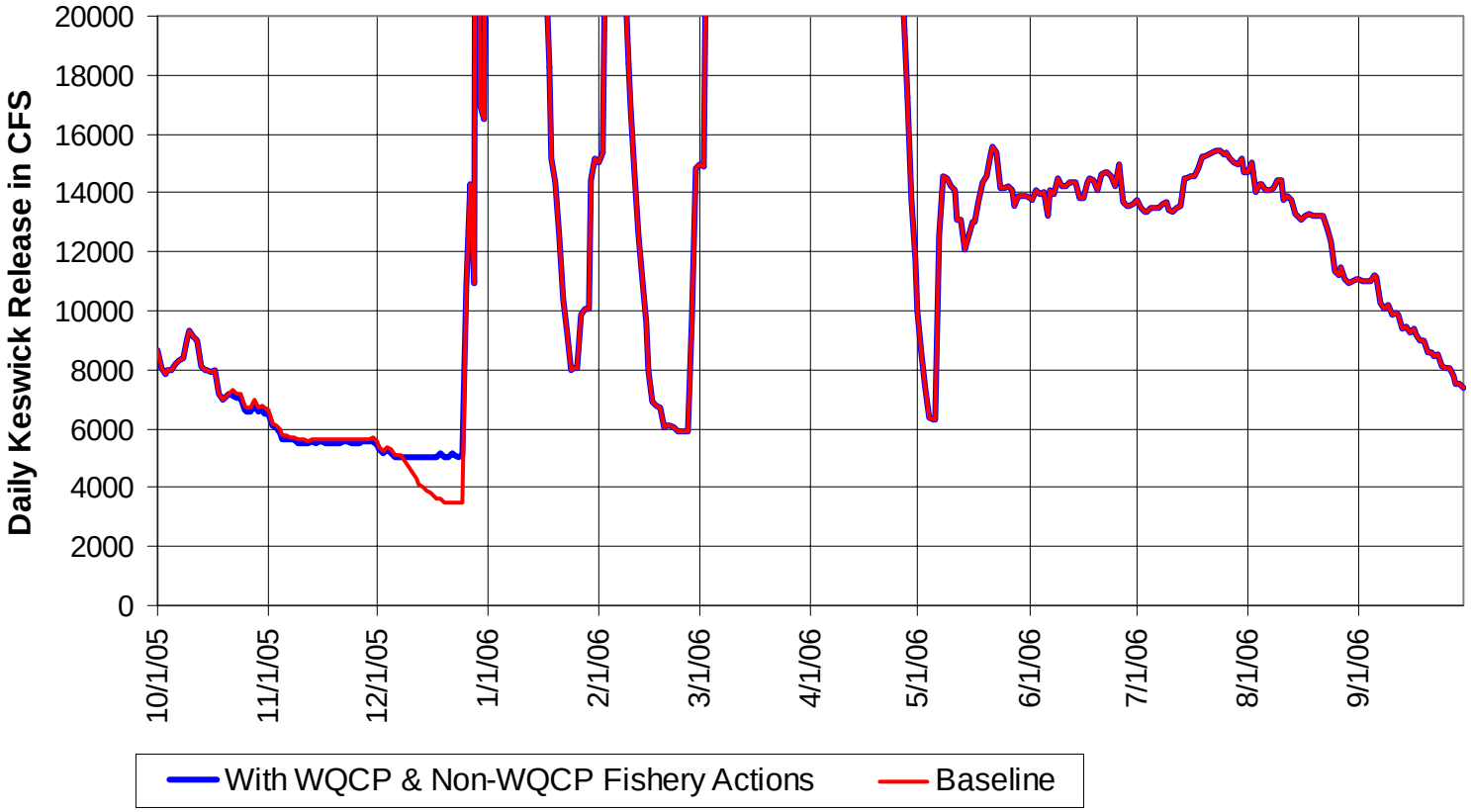
Water Year 2006
CVPIA §3406(b)(2) Actions

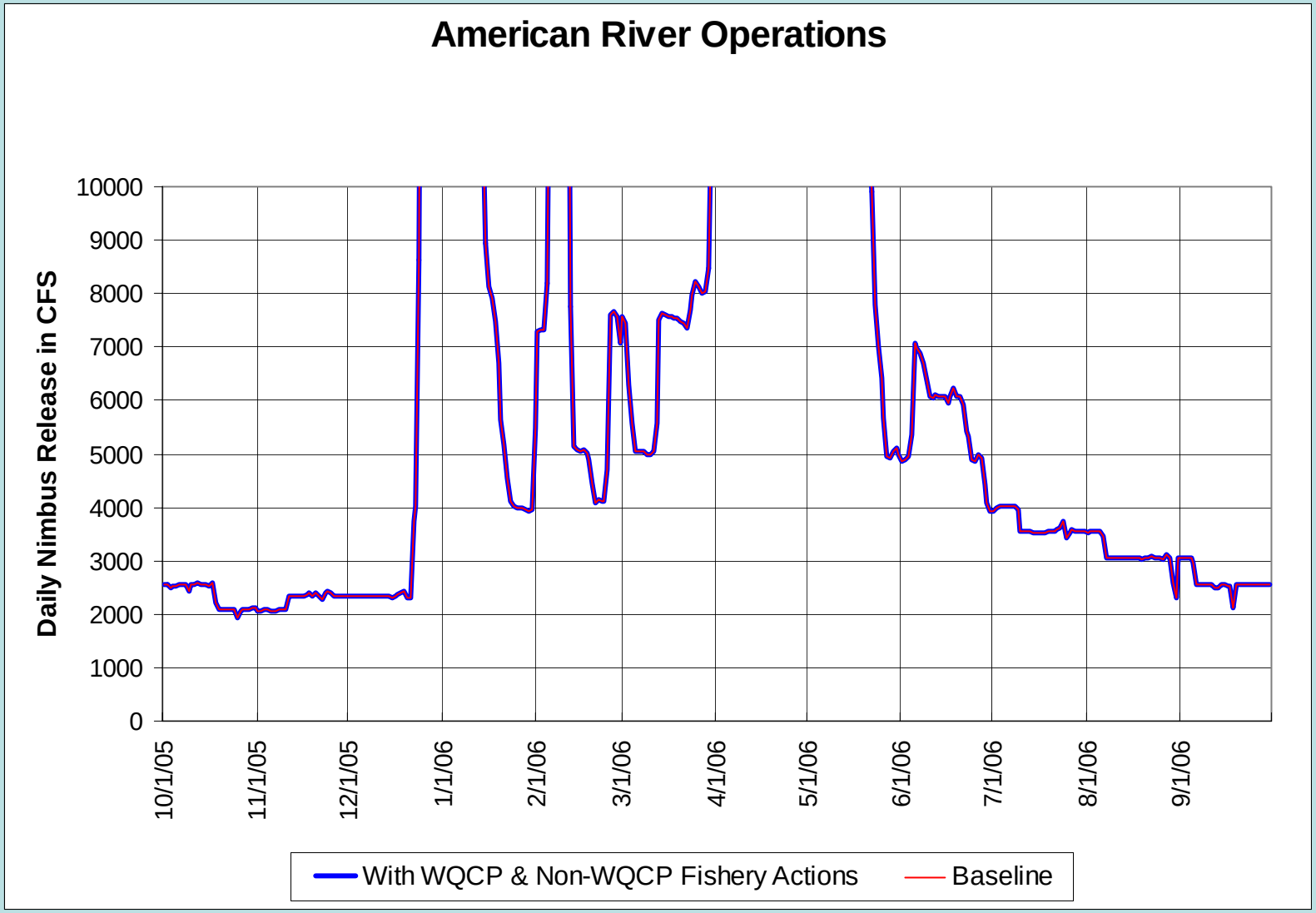
October 1, 2005 through September 30, 2006

Clear Creek Operations

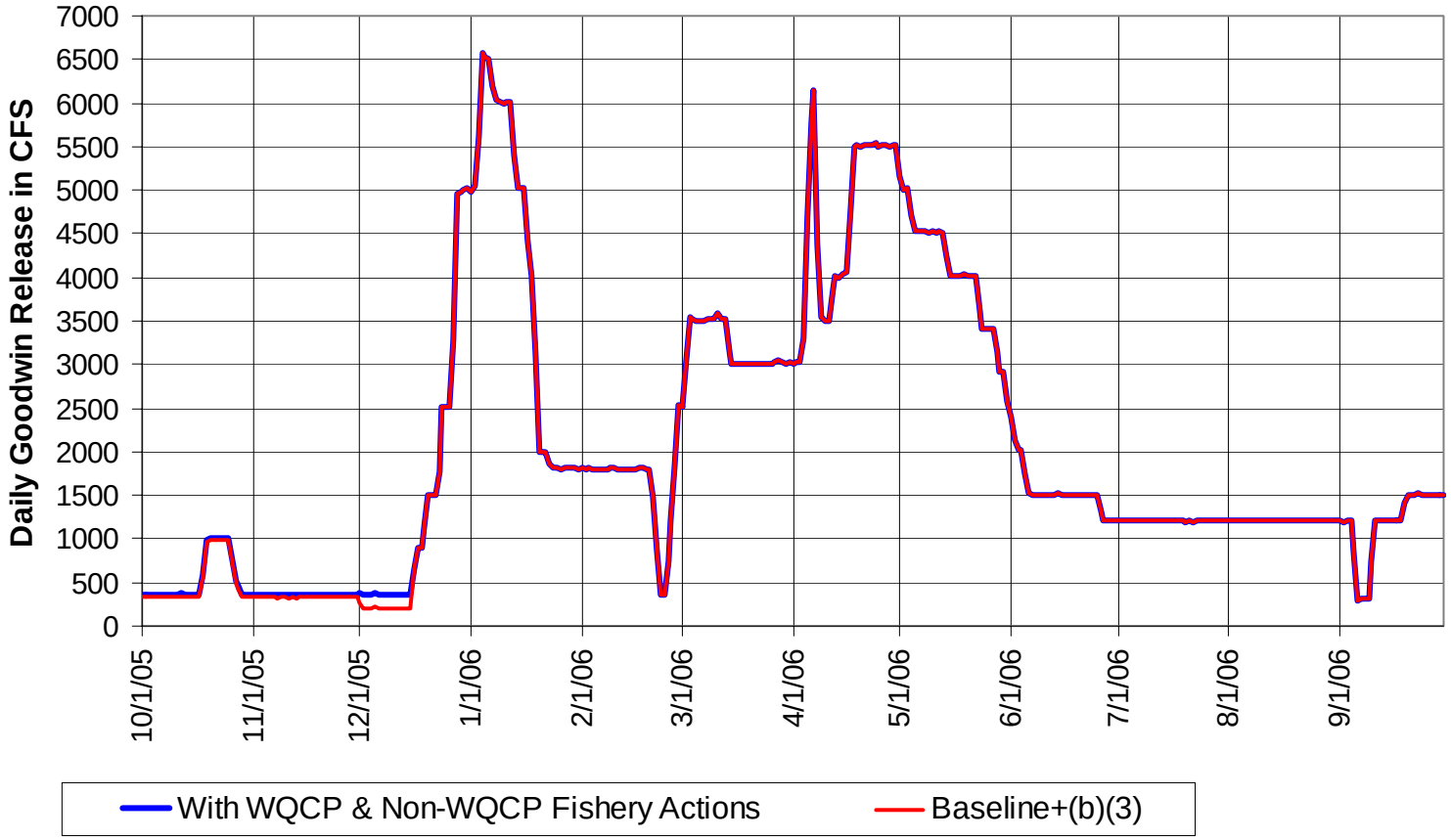


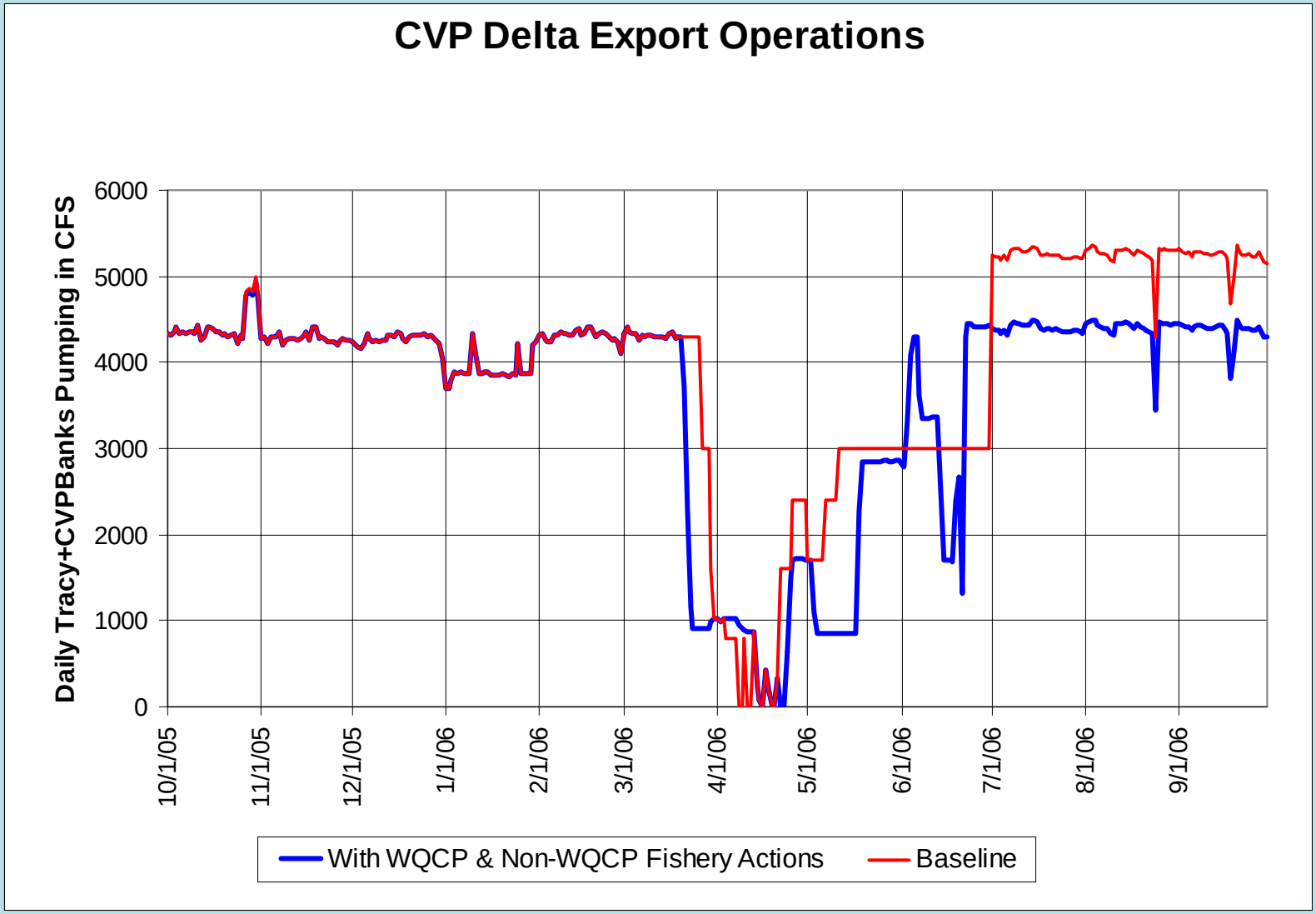
Sacramento River Operations

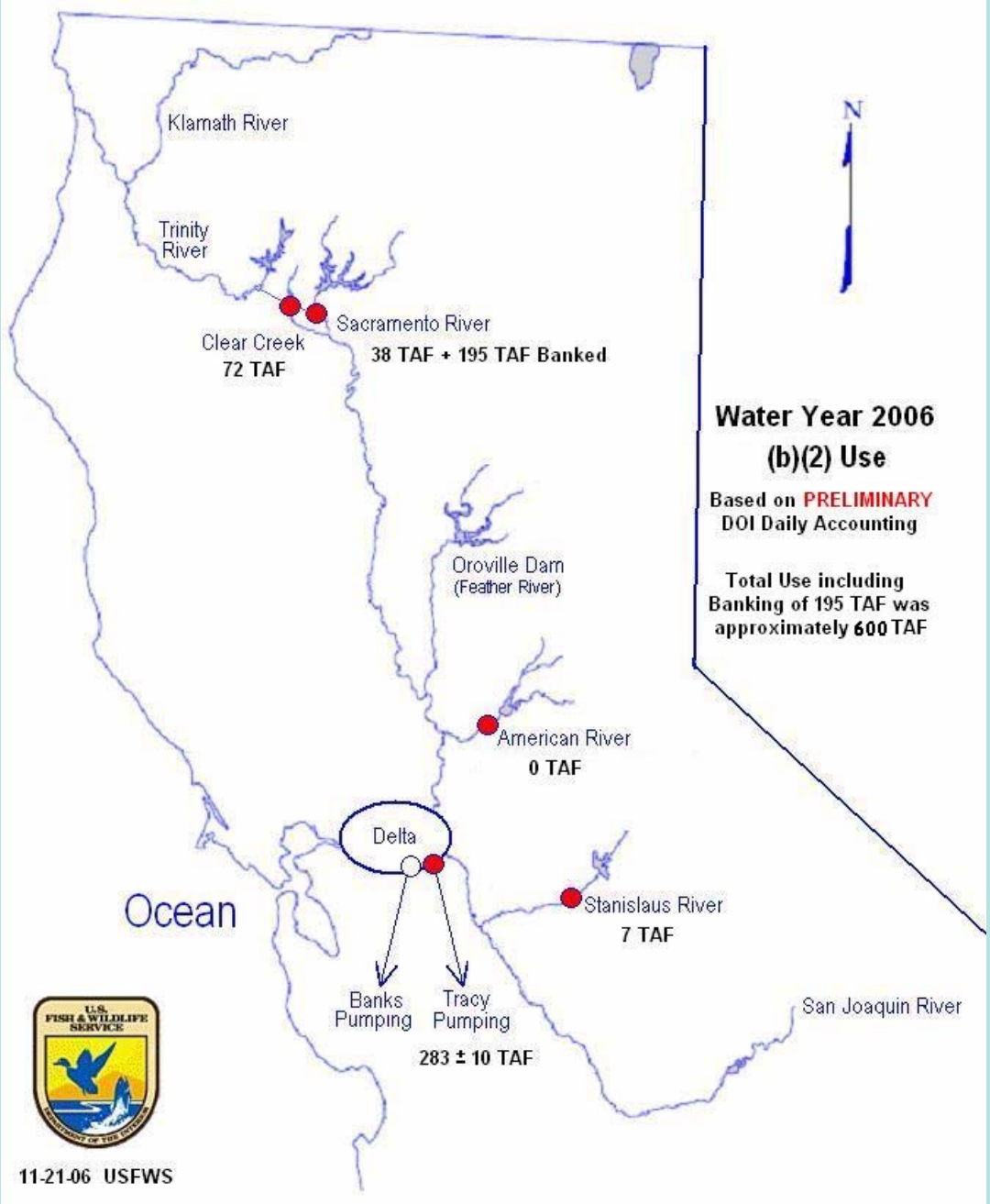



American River Operations
Daily Nimbus Release in CFS
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
10/1/05
11/1/05
12/1/05
1/1/06
2/1/06
3/1/06
4/1/06
5/1/06
6/1/06
7/1/06
8/1/06
9/1/06
With WQCP & Non-WQCP Fishery Actions
Baseline

Stanislaus River Operations




CVP Delta Export Operations
Daily Tracy+CVPBanks Pumping in CFS
6000
5000
4000
3000
2000
1000
0
10/1/05
11/1/05
12/1/05
1/1/06
2/1/06
3/1/06
4/1/06
5/1/06
6/1/06
7/1/06
8/1/06
9/1/06
With WQCP & Non-WQCP Fishery Actions
Baseline


Klamath River
Trinity River
Clear Creek
72 TAF
Sacramento River
38 TAF + 195 TAF Banked
Oroville Dam
(Feather River)
American River
0 TAF
Delta
Ocean
Stanislaus River
7 TAF
Banks Pumping
Tracy Pumping
283 ± 10 TAF
San Joaquin River
N
Water Year 2006
(b)(2) Use
Based on PRELIMINARY
DOI Daily Accounting
Total Use including
Banking of 195 TAF was
approximately 600 TAF
U.S. FISH & WILDLIFE SERVICE
11-21-06 USFWS

- Questions?