CALFED
Environmental Water Account
3-year overview

EWA Science Panel Review
October 15-17, 2003

Jim White
California Department of Fish and Game

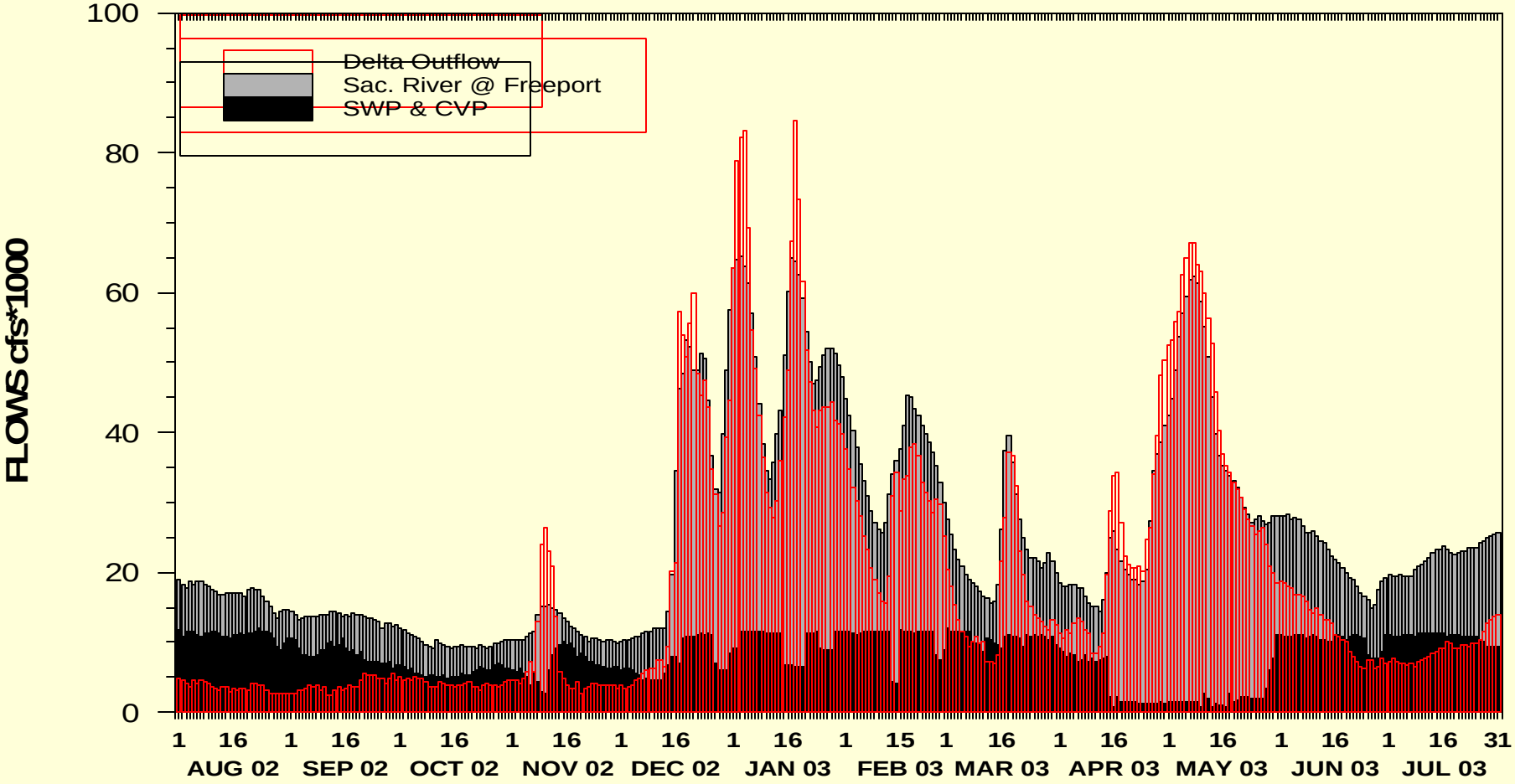
EWA overview

- EWA actions in 2002-2003
- Compare with first two years
- Lessons
- Adjustments
- Future

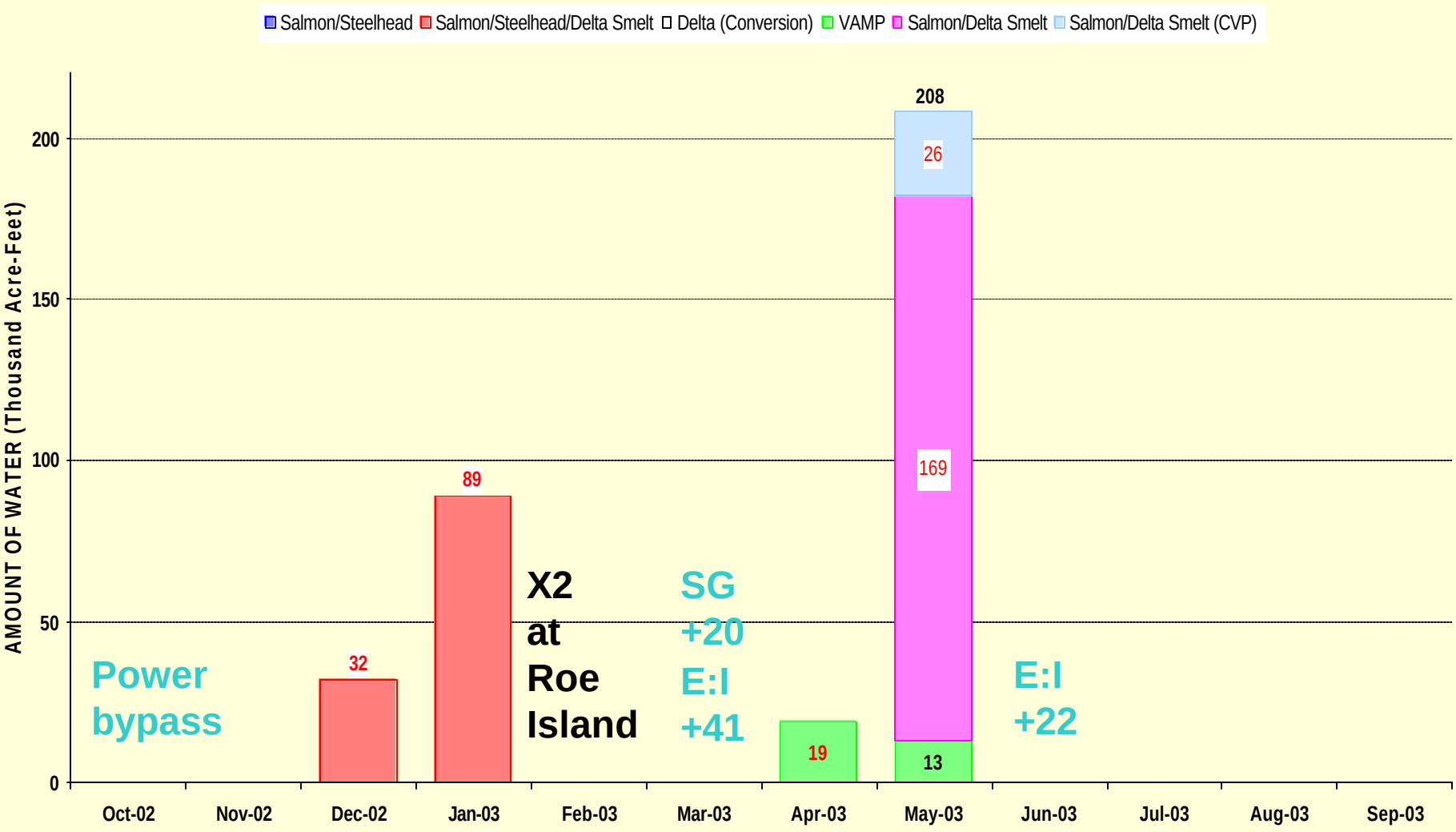
Water Year 2003 Hydrology

Sacramento-San Joaquin Delta Flows

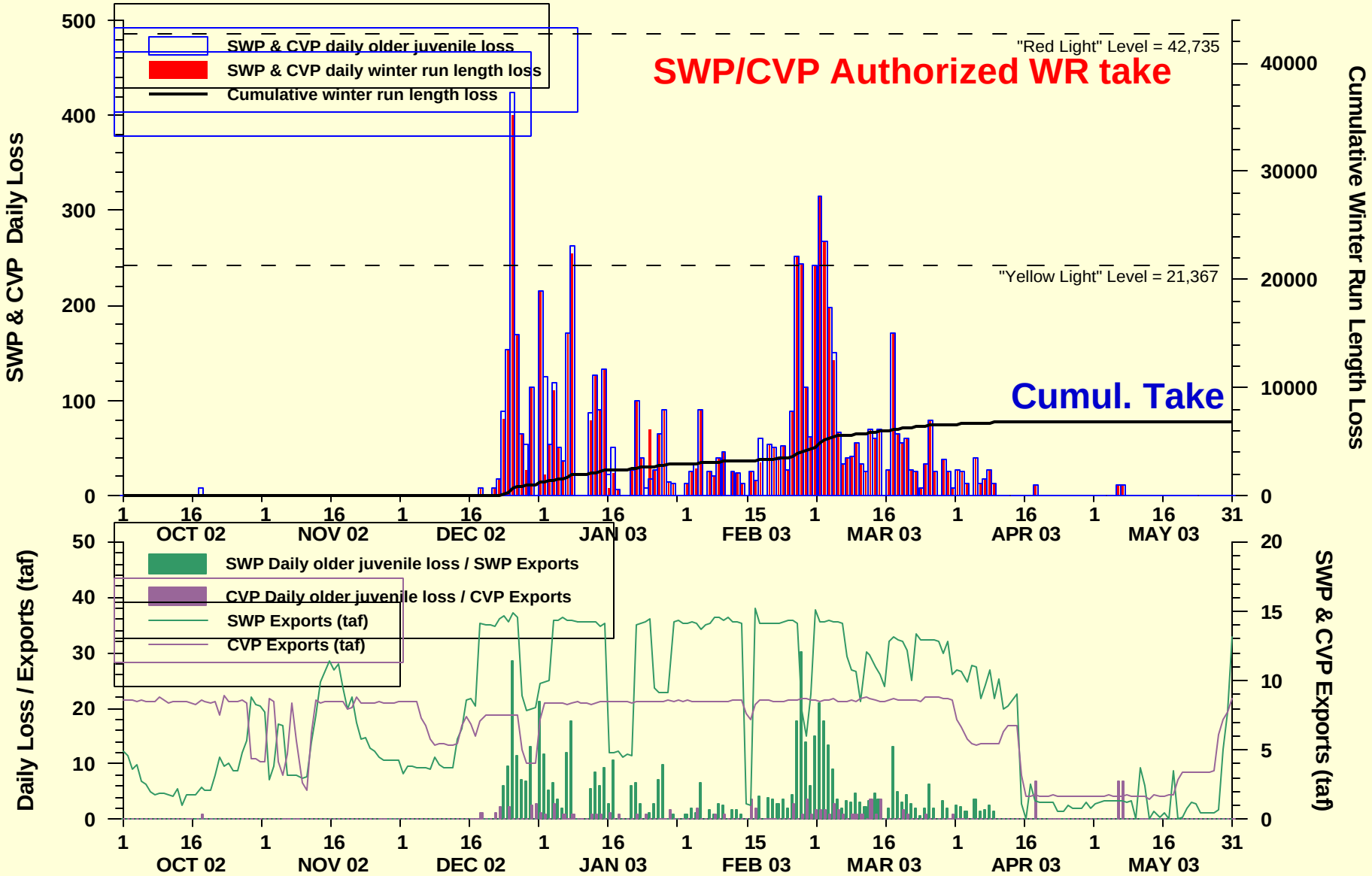
August 2002 through July 2003



EWA Expenditures in 2002 - 2003



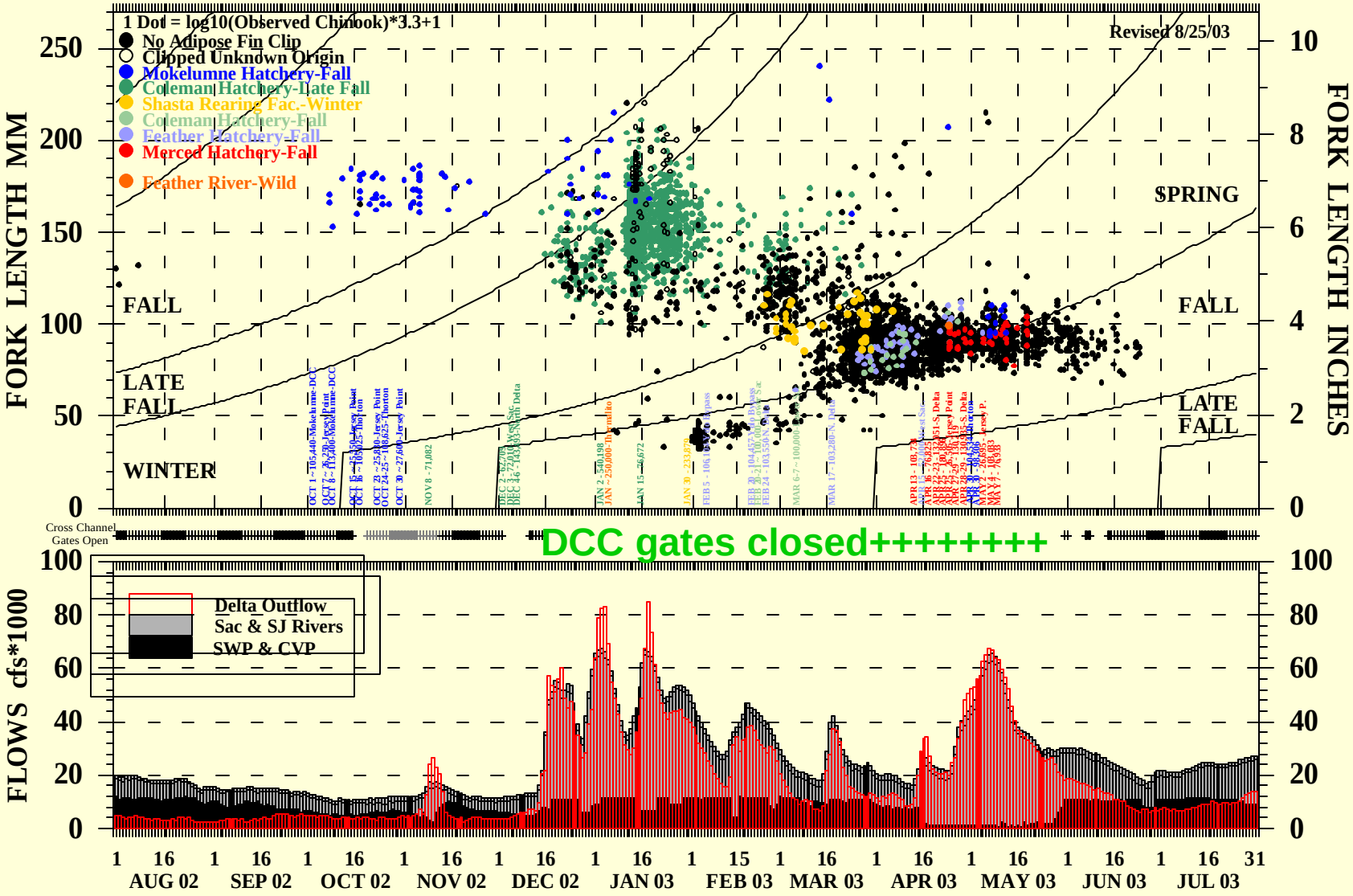
WINTER RUN & OLDER JUVENILE CHINOOK LOSS AT THE DELTA FISH FACILITIES 01 OCT 2002 THROUGH 31 MAY 2003



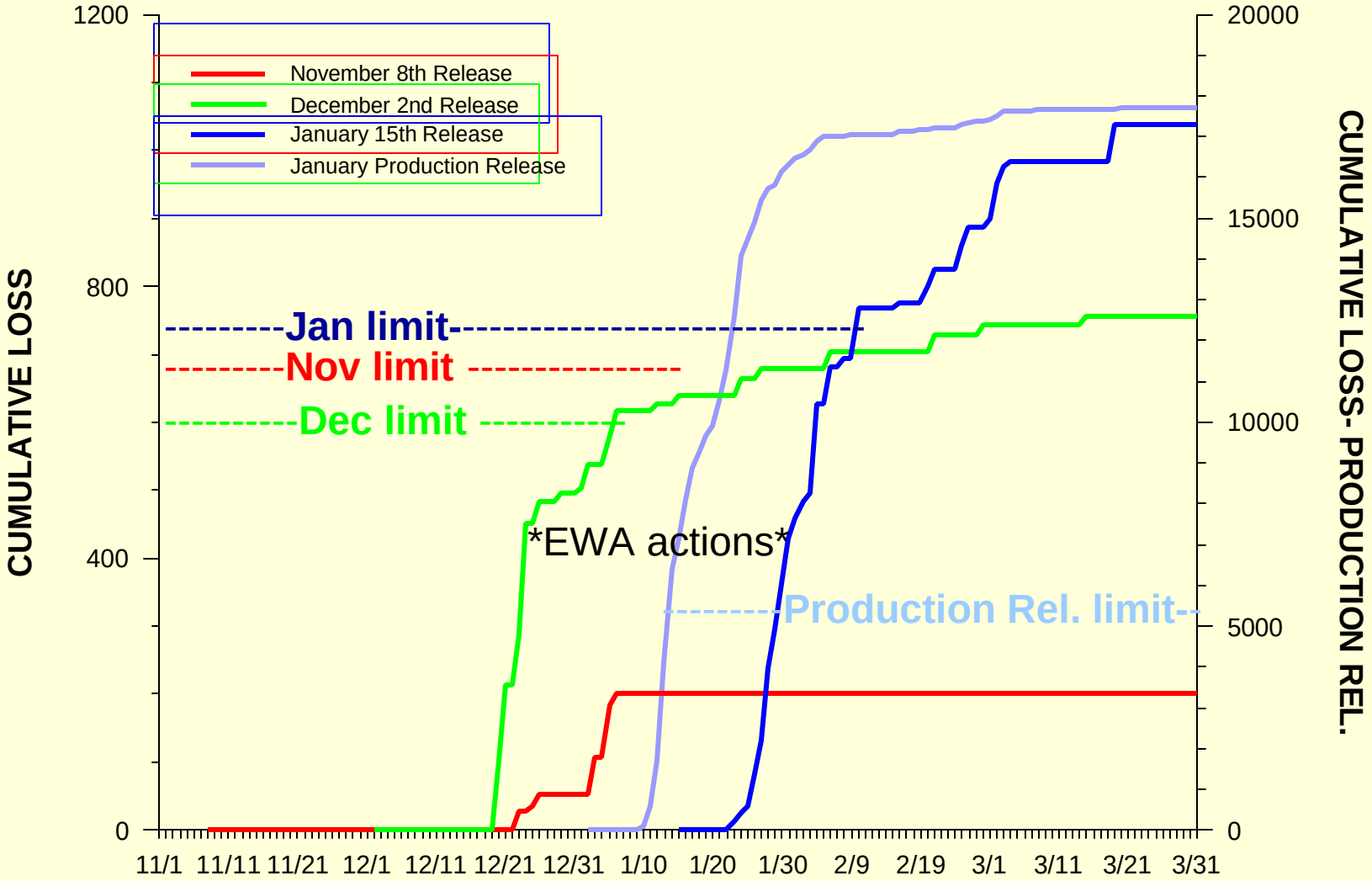
DWR-DES 05 JUN 2003

PRELIMINARY, SUBJECT TO REVISION

OBSERVED CHINOOK SALVAGE AT THE SWP & CVP DELTA FISH FACILITIES 8/1/02 THROUGH 7/31/03



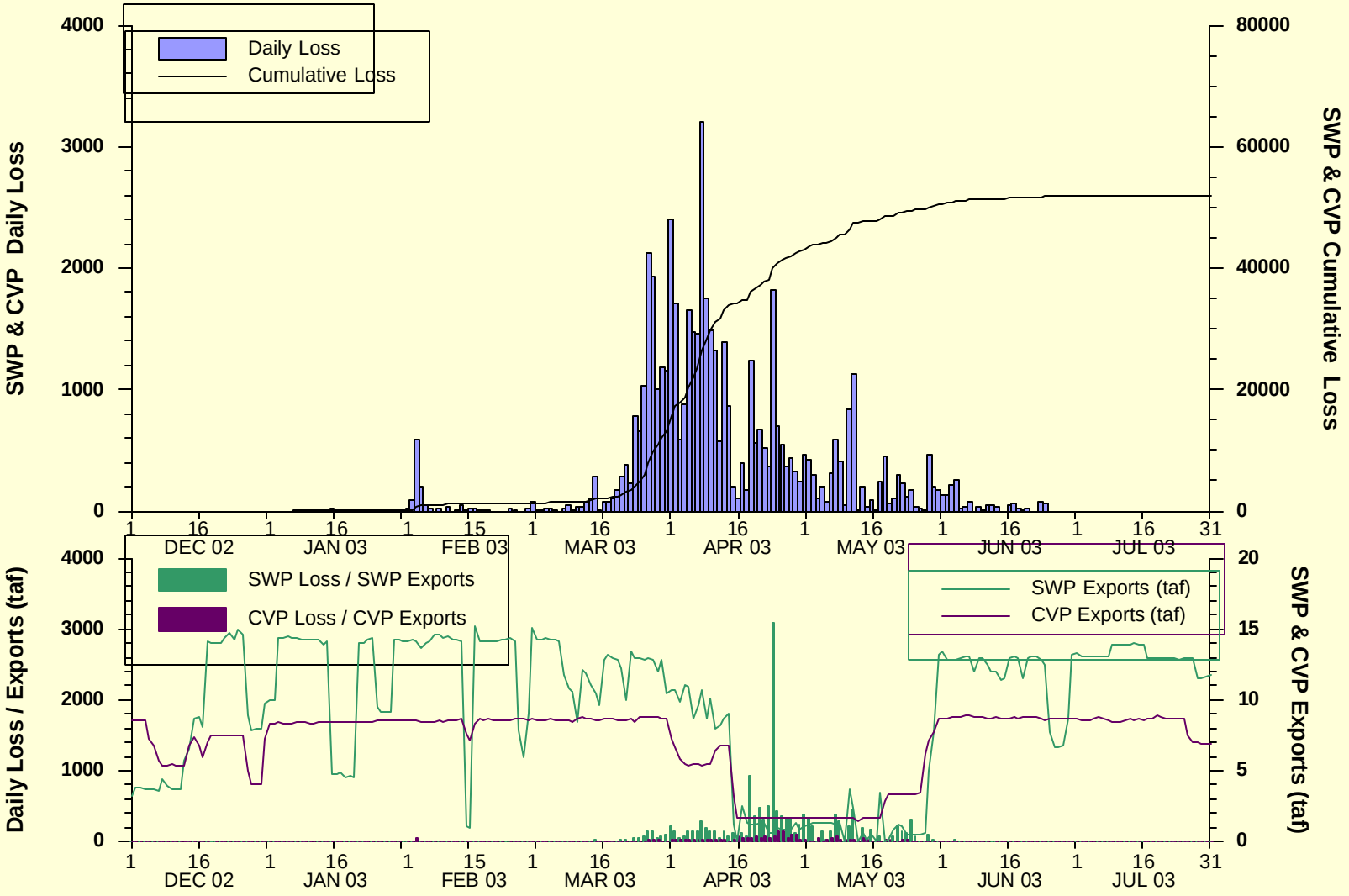
COLEMAN HATCHERY LATE-FALL CUMULATIVE LOSS AT THE DELTA FISH FACILITIES, NOVEMBER 2002-MARCH 2003



DWR-DES 30 APR 2003, Subject to Revision

Surrogates for Spring Run Chinook Yearlings

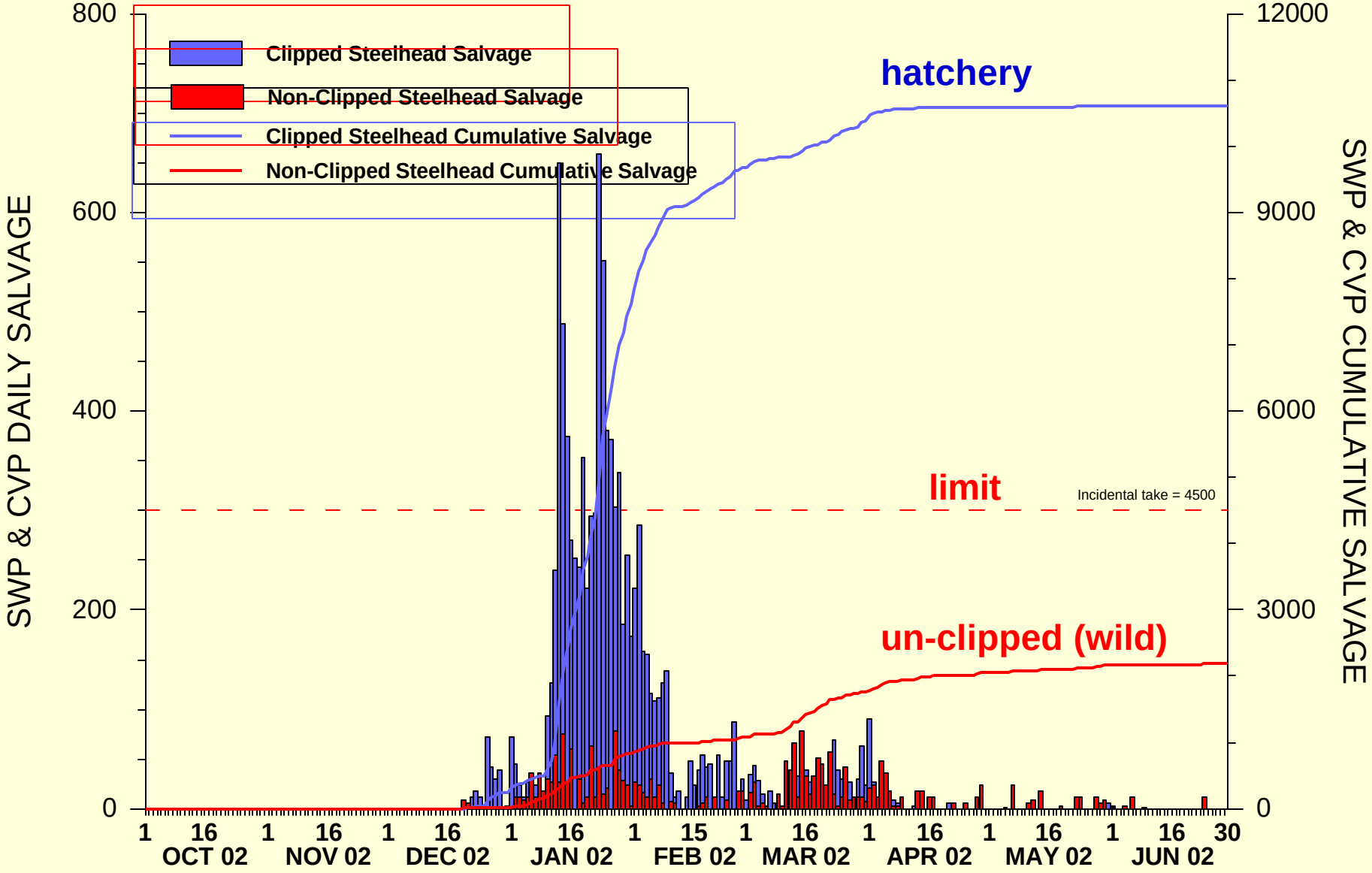
FRY/SMOLT CHINOOK LOSS AT THE DELTA FISH FACILITIES
01 DEC 2002 THROUGH 31 JUL 2003



DWR-DES 02 SEP 2003

PRELIMINARY, SUBJECT TO REVISION

STEELHEAD SALVAGE AT THE DELTA FISH FACILITIES
01 OCT 2002 THROUGH 30 JUN 2003



DWR-DES 24 SEP 2003

PRELIMINARY, SUBJECT TO REVISION

Adjustments in EWA decision making

- Modified salmon catch criteria for river and Delta sampling
  - “Older juvenile” salmon – fall and winter months
  - Fry/smolts –winter and spring months
- Consolidated two decision trees into one
- Export reductions mostly based on data from fish facilities

Decision making

- Consider loss relative to take limits
- WR take limit accounts for annual variation in spawning population size
- Winter run take is less of a concern for now, less EWA allocated specifically for juvenile winter run
- 2003 SWP/CVP loss of hatchery winter run highest percentage ever. Better survival or bigger impact?

Decision making

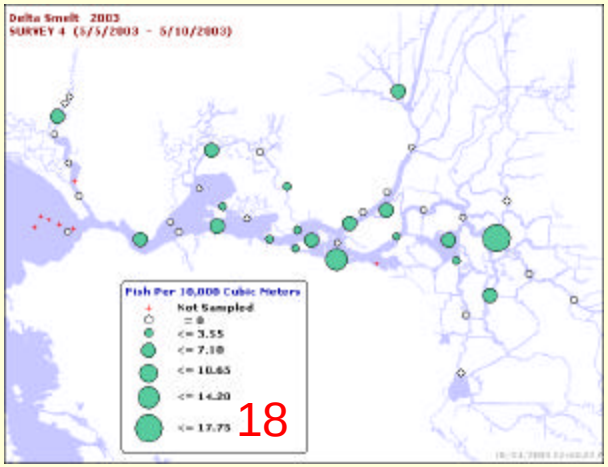
- Spring run Chinook abundance also has increased
- Tracking migration in Sacramento River and Delta is difficult
- Need better run identification to differentiate migrating spring run Chinook from winter run Chinook in the Delta
- Loss of most spring run surrogate groups higher in 2003 than in prior years.
- Use of surrogates being re-examined and revised

Delta smelt

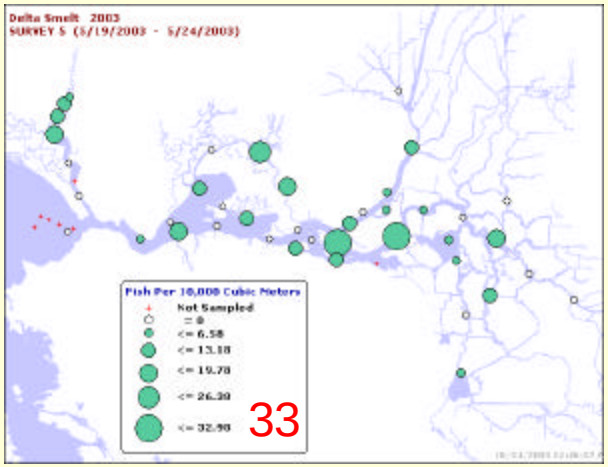
- Concern level was high due to low mid-water trawl index in fall 2002
- Reduce losses of adults prior to spawning
- VAMP and modified post-Vamp shoulder in second half of May

Delta smelt YOY distribution

Near end of VAMP period

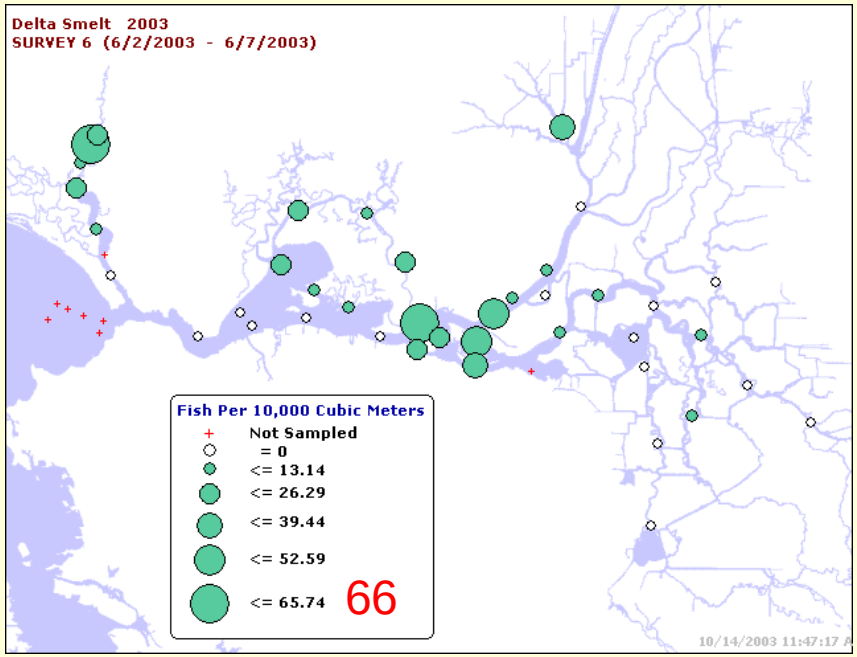


During post-VAMP "shoulder"



2003

After VAMP "shoulder" - Beginning of June



SWP/CVP delta smelt salvage

Month	2000-2001	2001-2002	2002-2003	Reconsultation Level++	
				↑ Normal	↓ Normal
December	192	1,129	2,776	733	8,052
January	181	5,231	9,561	5,379	13,354
February	3,870	280	1,494	7,188	10,910
March	3,772	225	483	6,979	5,386
April	520	372	492	2,378	12,354
May	13,170	47,361	16,309	9,769	55,277
June	2,418	11,926	10,096	10,709	47,245
Total	26,124	66,526	41,211		

* source: USBR Central Valley Operations website, www.mp.usbr.gov/cvo/html/fishrpt.html

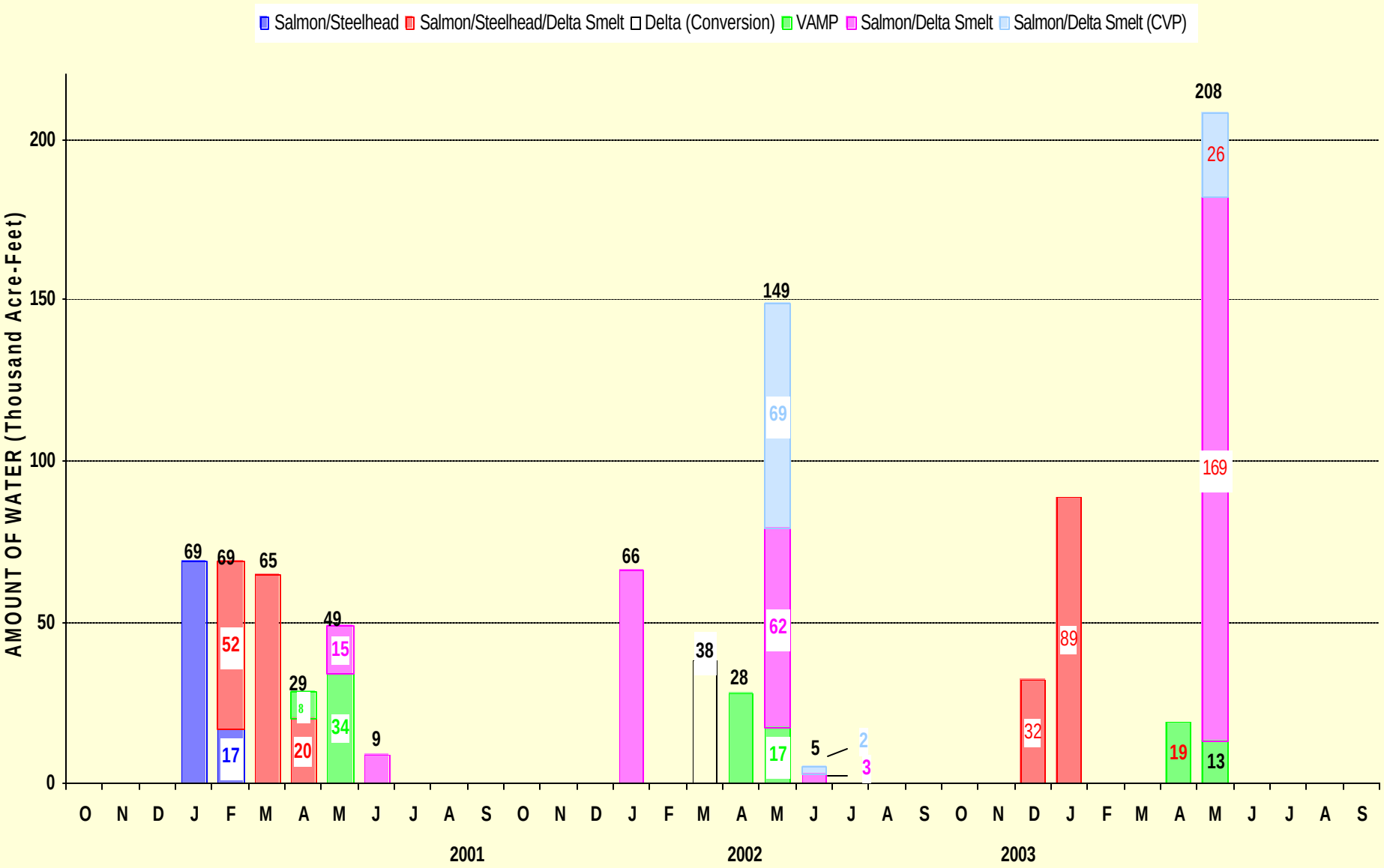
++ source: USFWS 1995 Biological Opinion on the Long-Term Operation of the Central Valley Project (CVP) and the State Water Project (SWP)

Is delta smelt strategy effective?

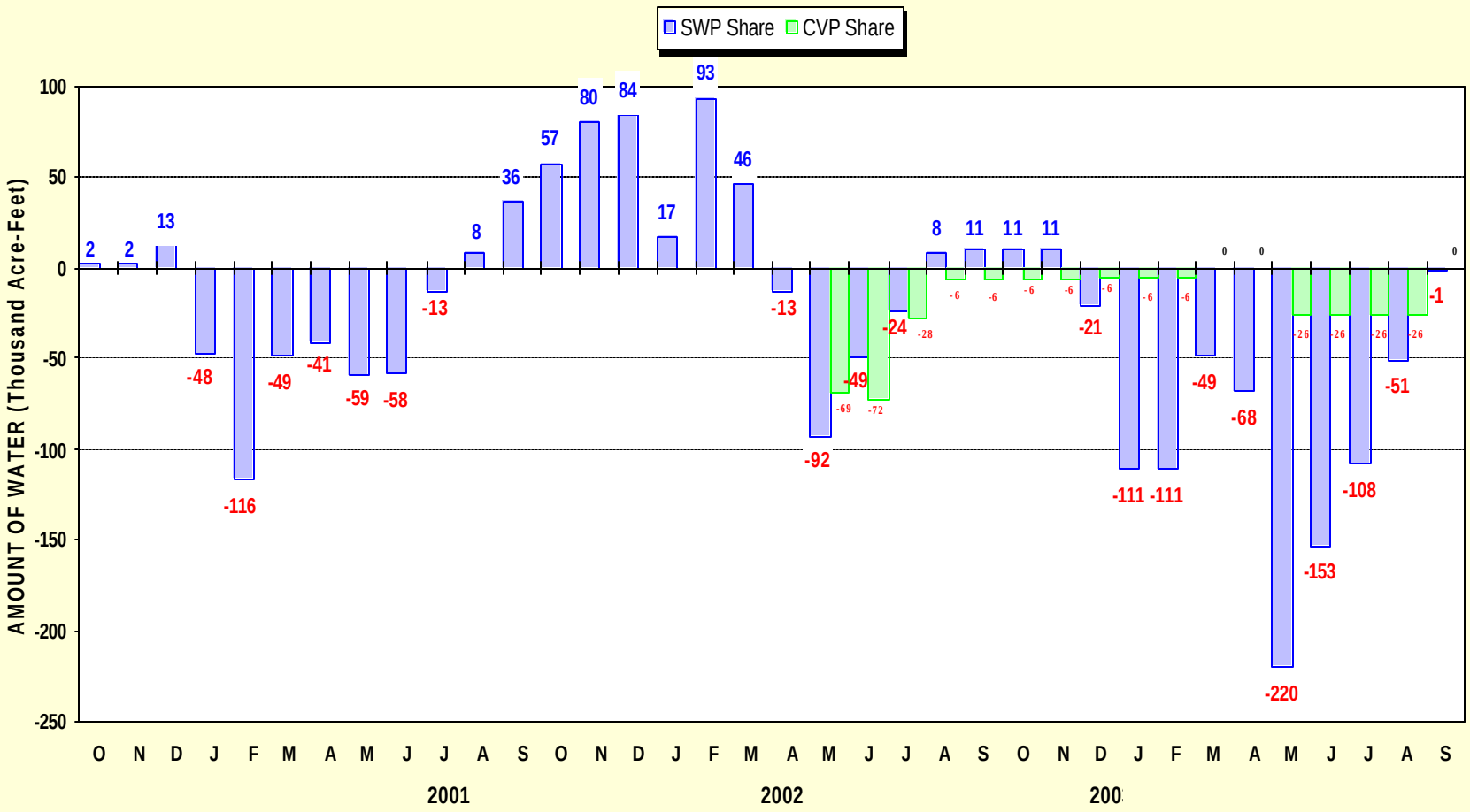
- Decision process is working
- Appears that aggressive May actions have minimized or avoided historical June-July problems
- Population effects discussion to follow later in the day

Multi-year comparison

EWA Expenditures from October 2000 through September 2003



Cumulative EWA Balance In San Luis Reservoir



Observations

- Hydrology is highly variable
- Hydrology may affect:
  - project operations
  - utility of EWA “variable asset” tools
  - fish behavior
  - need for added fish protection
  - cost of EWA actions

Observations

- Winter season needs and actions have varied among years
- Spring actions have been more consistent but costs vary substantially
- Each year is different - EWA is preferable to fixed prescriptive requirements to benefit fish in the Delta

Observations

- EWA benefits have been quantified using existing information
- Most EWA actions affect more than just a single target species
- Unclear how to compare benefits of EWA actions with alternative uses of EWA
- Unclear how to compare EWA benefits with benefits of other protection/restoration actions which have not been described quantitatively

Observations

- Determining relative EWA benefits to fish populations
  - depends on resolving numerous biological uncertainties.
- Gains in biological understanding will require a systematic approach and substantial investment.
  - Recognize that knowledge gains are achieved slowly.

Observations

- EWA-related commitment to Delta water supply reliability has been achieved

- Economic implications of improved reliability have not been evaluated or described.

Expectation for the future

- Impacts of water management upstream and in the Delta will increase in the future
- Baseline regulatory protection is diminished by changed CVPIA b(2) policy
- EWA costs of augmenting baseline regulatory protections will increase

Planning for the future

- EWA as originally designed cannot continue to achieve its multiple goals

- More information on current activities intended to address future needs for EWA
  - next speaker
  - later in the agenda

END