RECOMMENDATIONS OF THE SAN JOAQUIN RIVER GROUP AUTHORITY

SAN JOAQUIN RIVER FLOWS
AIRPORT WAY BRIDGE, VERNALIS
FEBRUARY—APRIL 14 AND MAY 16—JUNE

Questions Presented

- Should the SWRCB amend the flow objectives for the San Joaquin River at Airport Way Bridge, Vernalis, for February through April 14 and May 16 through June in the Water Quality Objectives for Fish and Wildlife Beneficial uses (Table 3 of the 1995 Plan)? How should the objectives be modified and what are the scientific and legal arguments in support of and against modification?
- Should the SWRCB change the methodology of determining the applicable San Joaquin River flow objectives that currently are determined by reference to the required Delta Outflow objective? How should the methodology for determining required flows be modified and what are the scientific and legal arguments in support of and against modification?

February - April 14 and May 16 - June Flows

- Lack of Sound Science
- Based on Erroneous Assumptions
- No Impacts to Salmon or Endangered Species
- San Joaquin River's Contribution to Delta Outflow

Lack of Sound Science

- SJR flows are identical to the flows in the Delta smelt biological opinion
- SJR flows are just a fixed percentage of the required Delta outflows
- SJR flows are highly influenced by Sacramento River conditions

Year Type	Feb-June Flows (cfs)*	April-May Pulse Flows (cfs)*
C	710-1,140	3,110-3,540
D	1,420-2,280	4,020-4,880
BN	1,420-2,280	4,620-5,480
AN	2,130-3,420	5,730-7,020
W	2,130-3,420	7,330-8,620

San Joaquin River Flow as a Percentage of Delta Outflow

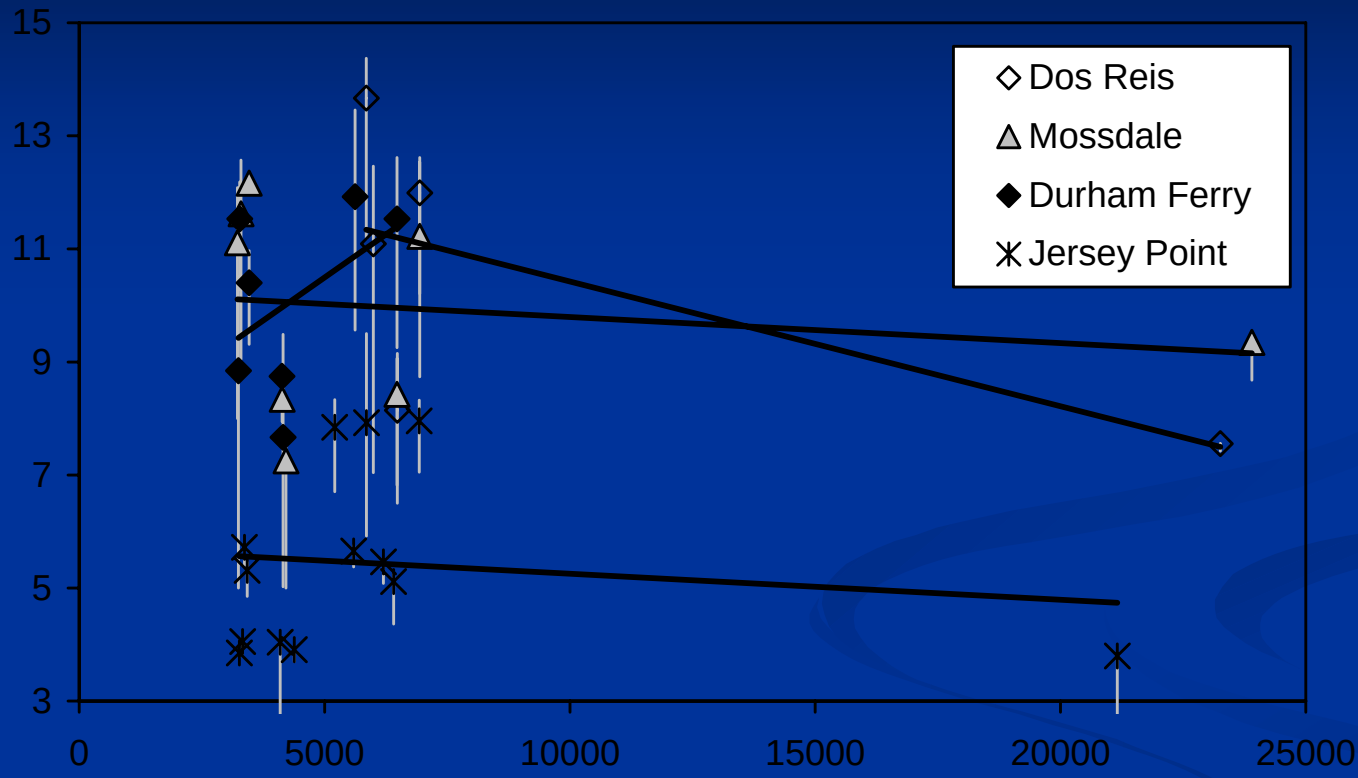
Water Year Type	% of Delta outflow	Min. Delta outflow (7,100 cfs)	X2 at Chipps Island (11,400 cfs)
C	10%	710	1,140
D	20%	1,420	2,280
BN	20%	1,420	2,280
AN	30%	2,130	3,420
W	30%	2,130	3,420

	Sacramento Valley			San Joaquin Valley		
WY	**WYsum**	**Index**	**Yr-type**	**WYsum**	**Index**	**Yr-type**
1984	22.35	10.00	W	7.13	3.69	AN
1985	11.04	6.47	D	3.60	2.40	D
1986	25.83	9.96	W	9.50	4.31	W
1987	9.27	5.86	D	2.08	1.86	C
1988	9.23	4.65	C	2.48	1.48	C
1989	14.82	6.13	D	3.56	1.96	C
1990	9.26	4.81	C	2.46	1.51	C
1991	8.44	4.21	C	3.20	1.96	C
1992	8.87	4.06	C	2.58	1.56	C
1993	22.21	8.54	AN	8.38	4.20	W
1994	7.81	5.02	C	2.54	2.05	C
1995	34.55	12.89	W	12.32	5.95	W
1996	22.29	10.26	W	7.22	4.12	W
1997	25.42	10.82	W	9.51	4.13	W
1998	31.40	13.31	W	10.43	5.65	W
1999	21.19	9.80	W	5.91	3.59	AN
2000	18.90	8.94	AN	5.90	3.38	AN
2001	9.81	5.76	D	3.18	2.20	D
2002	14.60	6.35	D	4.06	2.34	D
2003	19.18	8.18	AN	4.88	2.82	BN
2004	16.05	7.50	BN	3.80	2.21	D

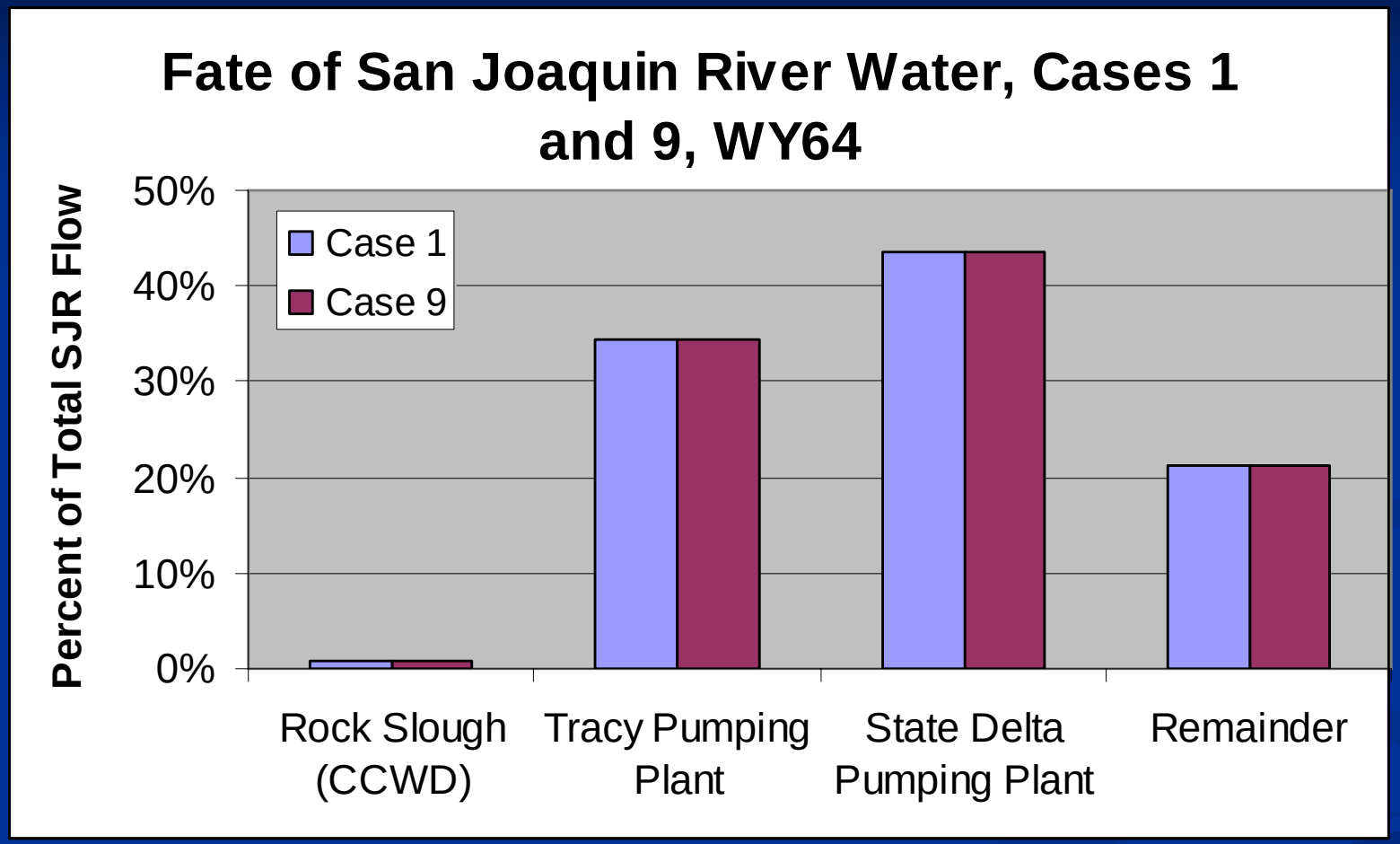
- The Sacramento River Basin is primarily a *rain-fed system*, whereas the San Joaquin River Basin is a *snow-fed system*. This results in a significantly different runoff pattern which was recognized in the development and adoption of a separate index, the 60-20-20 index, for the San Joaquin system.
- The unimpaired and impaired flows for the Sacramento River Basin are *substantially greater* than for the San Joaquin River Basin.
- A substantial portion of the Sacramento River flows to the Delta for *export*, whereas most of the San Joaquin River *is used within the basin or is exported out of the basin*.
- Water is *imported* into the Sacramento River Basin from the Trinity River, whereas water is *exported* out of the San Joaquin Basin.

Salmon and Endangered Species

- No correlation between San Joaquin River flow and Delta survival
- San Joaquin River contributes little to Delta outflow
- OCAP BO concluded no jeopardy



San Joaquin River Group

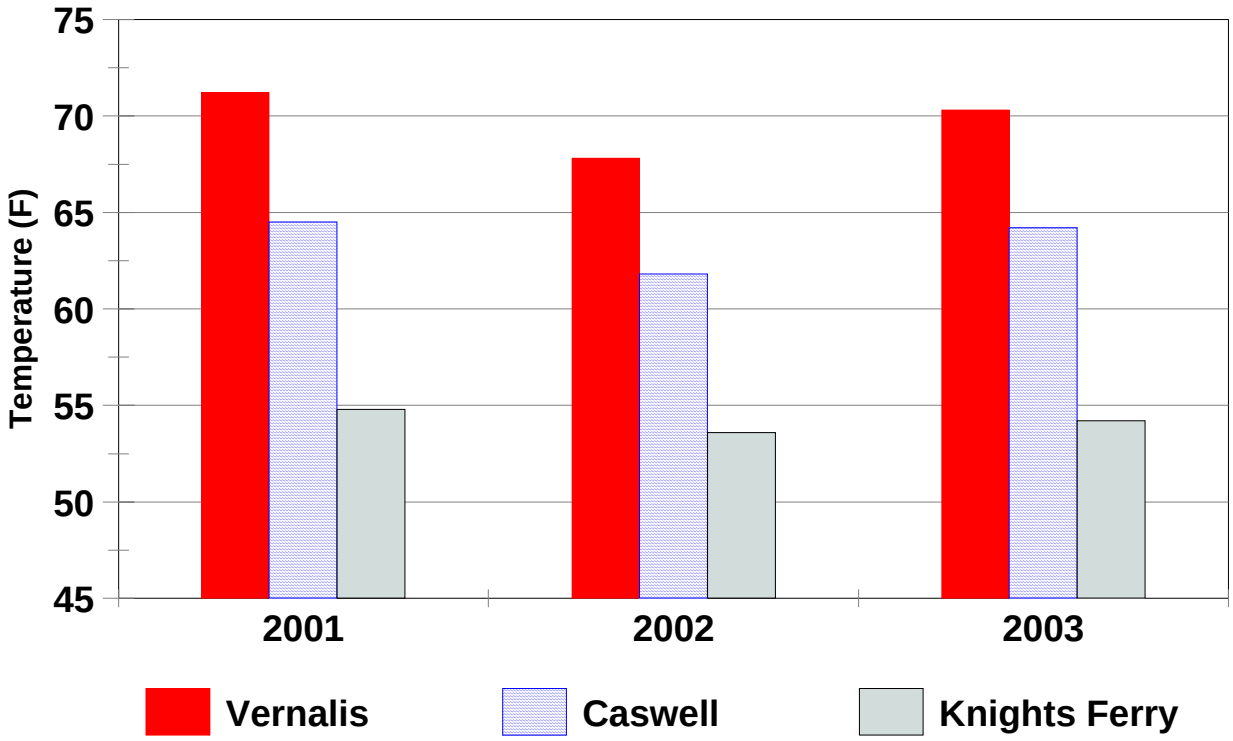

Fate of San Joaquin River Water, Cases 1 and 9, WY64
Percent of Total SJR Flow
50%
40%
30%
20%
10%
0%
Case 1
Case 9
Rock Slough (CCWD)
Tracy Pumping Plant
State Delta Pumping Plant
Remainder

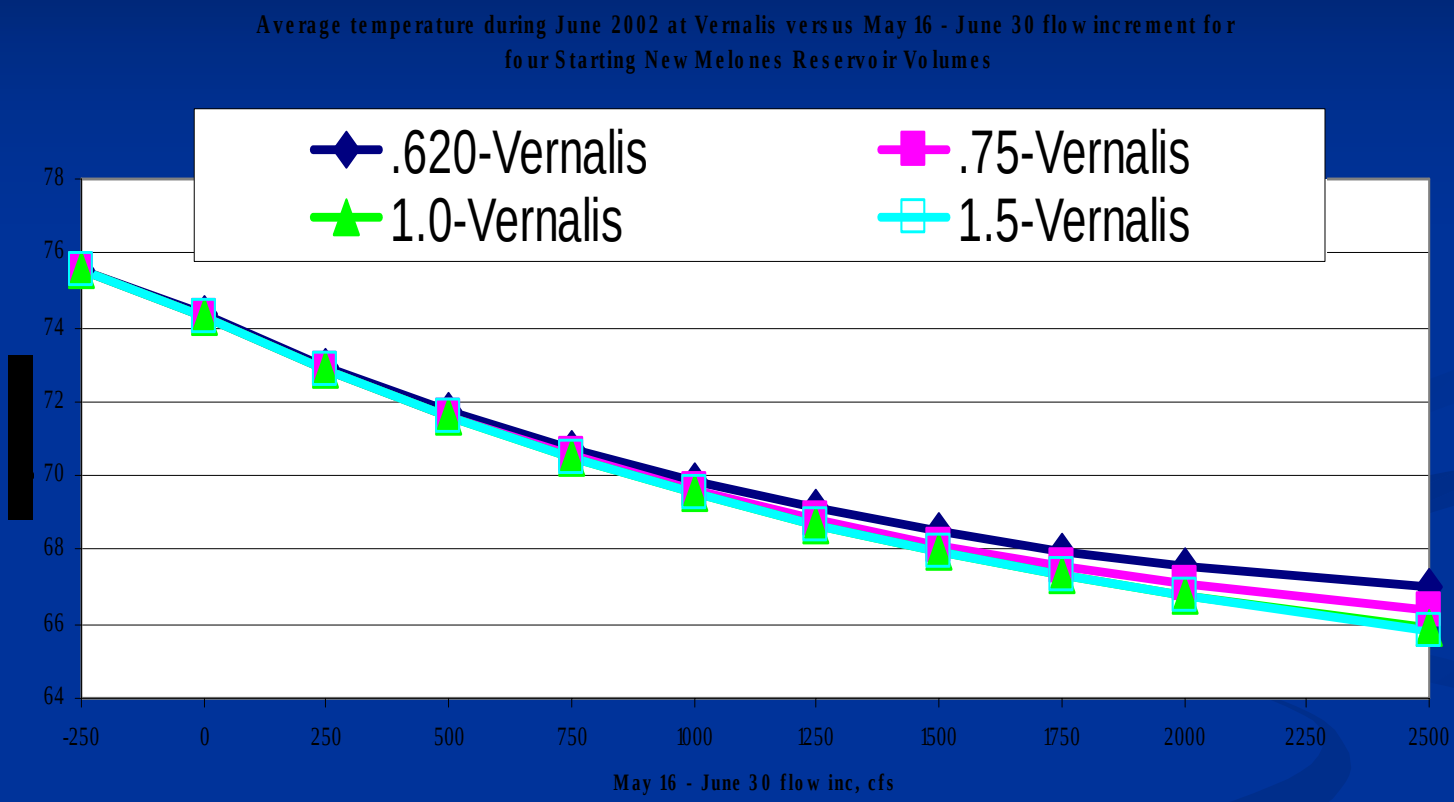
May 16 to June Flows

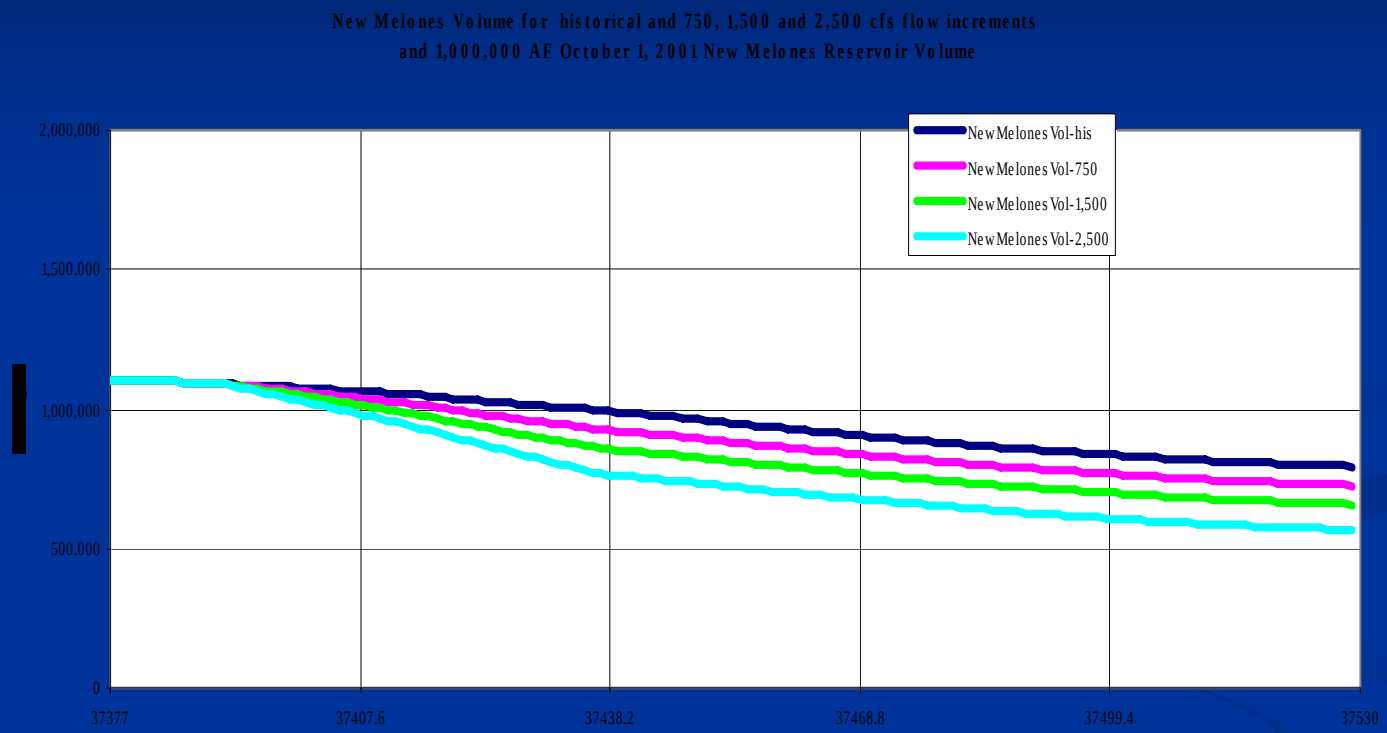
- Temperature
  - Use of reservoir releases to control San Joaquin River temperature is a waste and unreasonable use of water
  - Stanislaus River studies
  - VAMP monitoring

Stanislaus and San Joaquin Temperature

(May 15 - May 31)



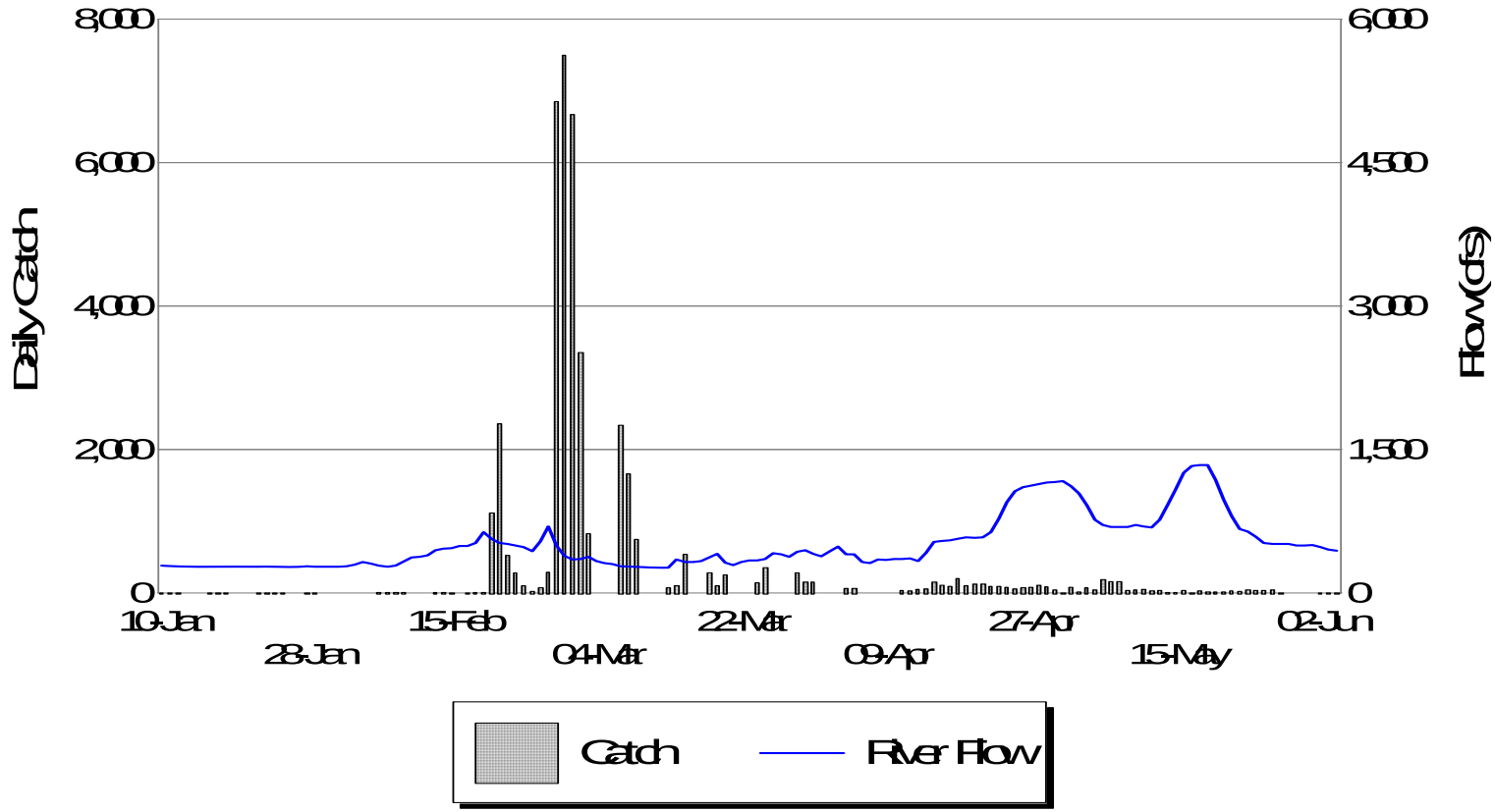

Average temperature during June 2002 at Vernalis versus May 16 - June 30 flow increment for four Starting New Melones Reservoir Volumes
.620-Vernalis
.75-Vernalis
1.0-Vernalis
1.5-Vernalis
78
76
74
72
70
68
66
64
-250
0
250
500
750
1000
1250
1500
1750
2000
2250
2500
May 16 - June 30 flow inc, cfs

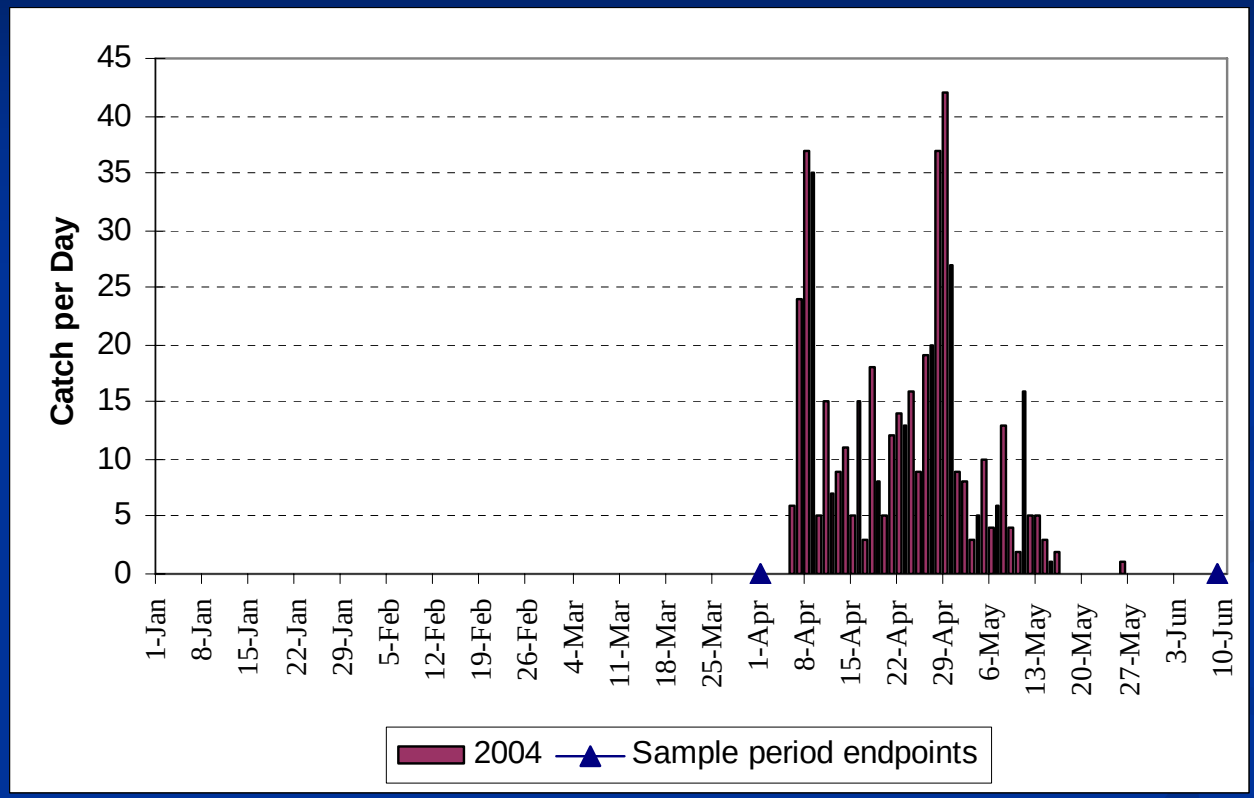

New Melones Volume for historical and 750, 1,500 and 2,500 cfs flow increments
and 1,000,000 AF October 1, 2001 New Melones Reservoir Volume
2,000,000
1,500,000
1,000,000
500,000
0
37377
37407.6
37438.2
37468.8
37499.4
37530
New Melones Vol-his
New Melones Vol-750
New Melones Vol-1,500
New Melones Vol-2,500

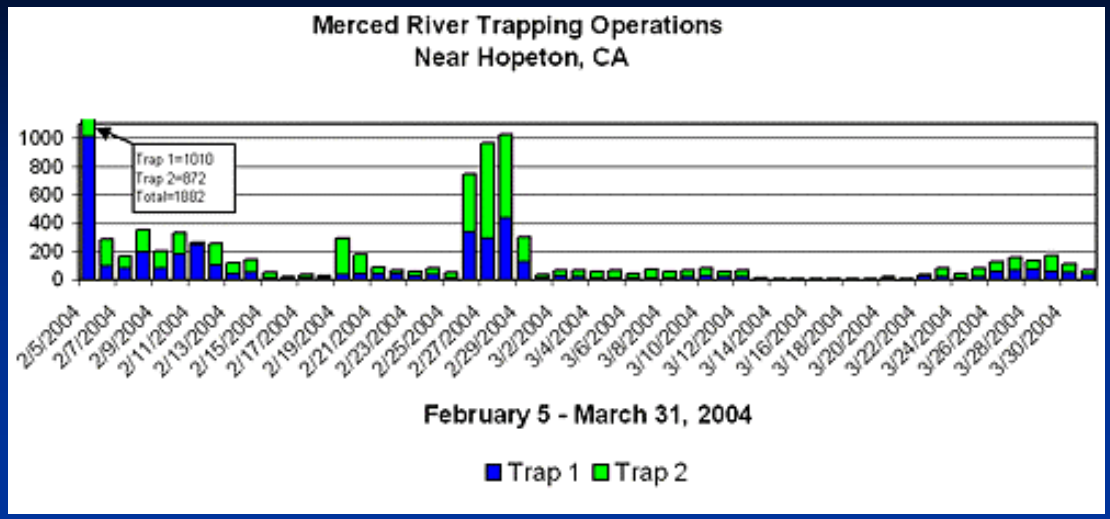
May 16 to June Flows

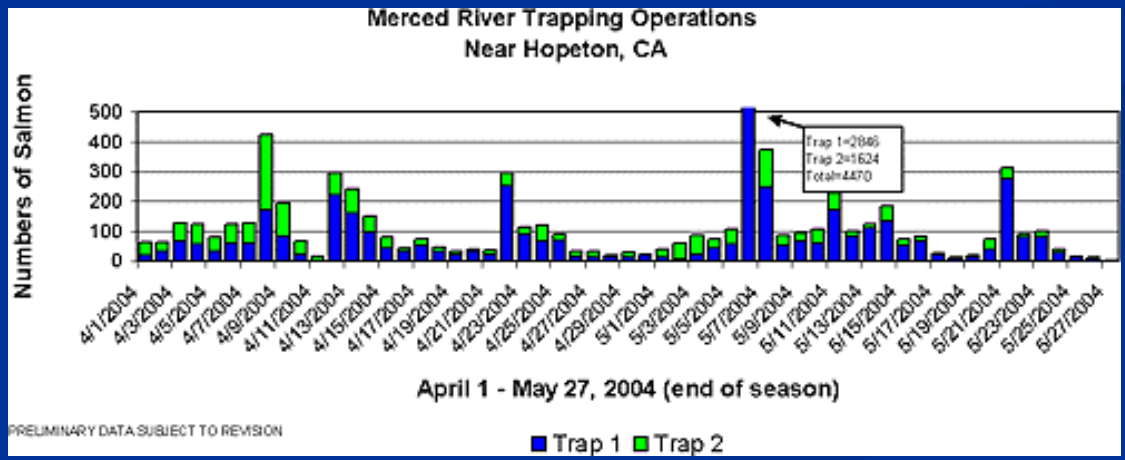
- Most Salmon Smolts Have Left the System by late May
  - Tributary rotary screw trap
  - Mossdale trawl
  - SWP and CVP salvage

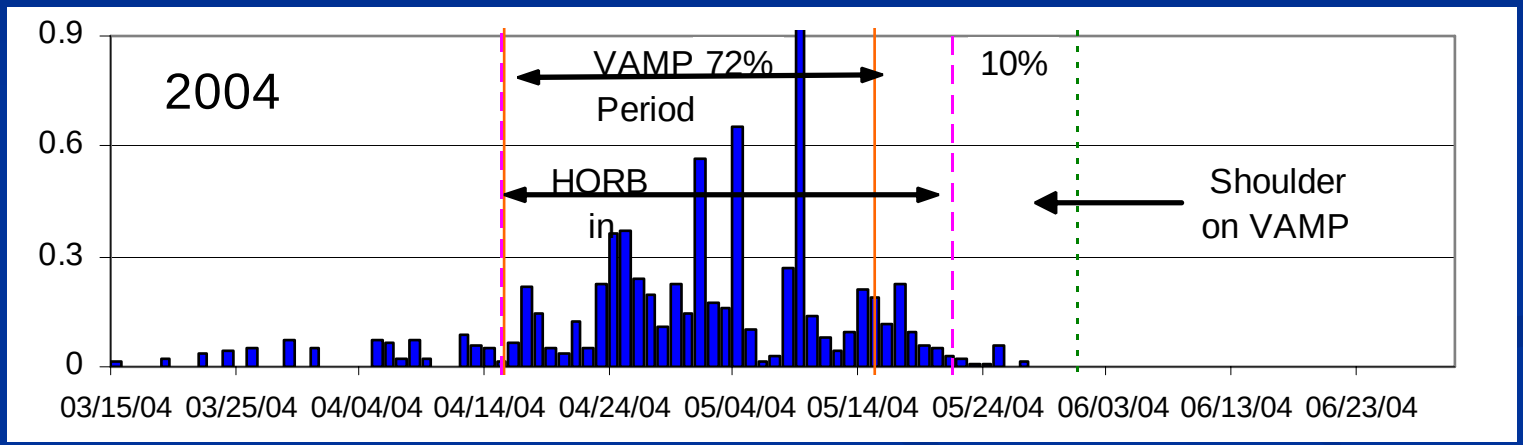
Daily 2004 Flow at Rl Pand Chinook Catch at Caswell

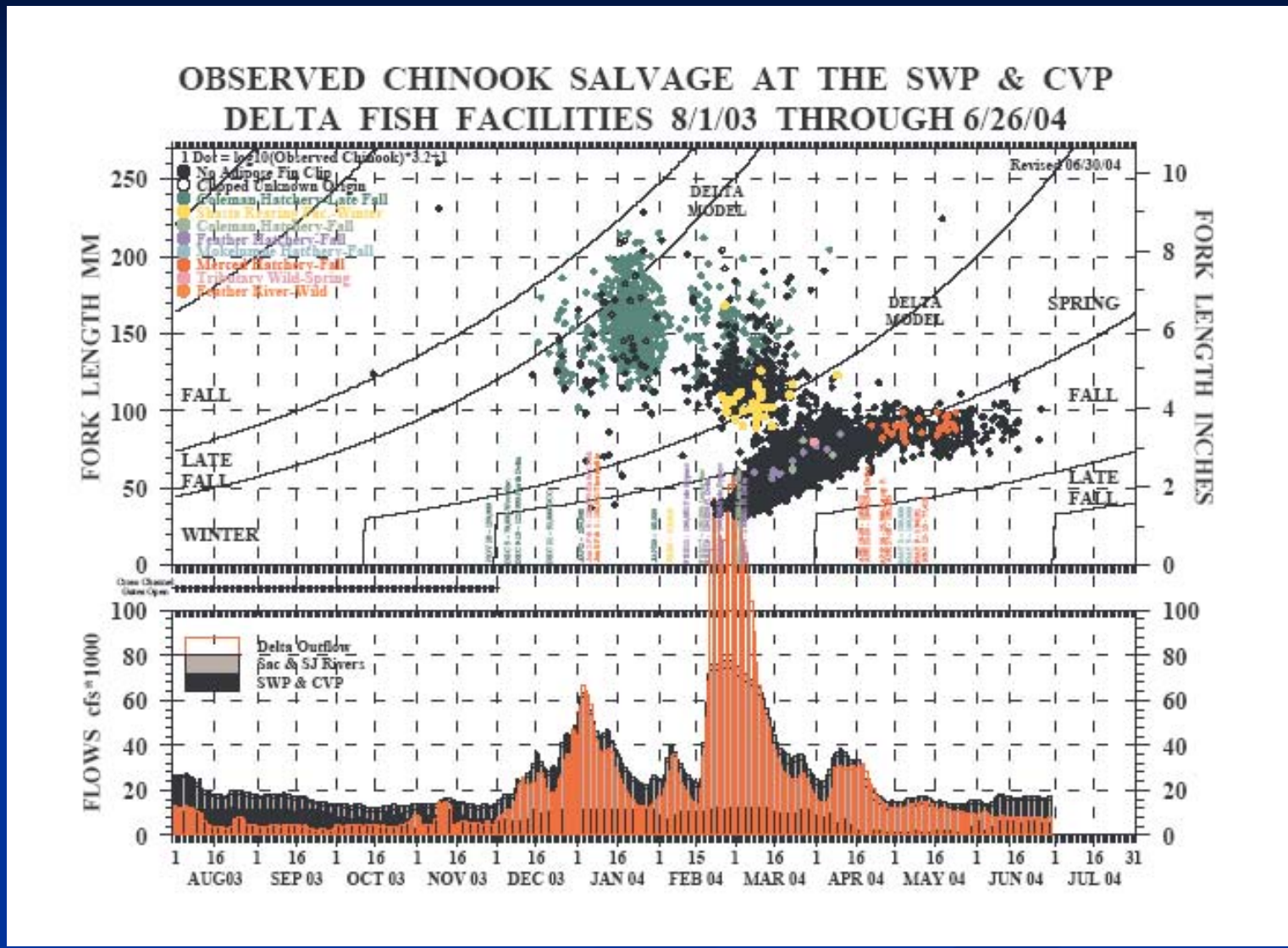



Catch per Day
45
40
35
30
25
20
15
10
5
0
1-Jan
8-Jan
15-Jan
22-Jan
29-Jan
5-Feb
12-Feb
19-Feb
26-Feb
4-Mar
11-Mar
18-Mar
25-Mar
1-Apr
8-Apr
15-Apr
22-Apr
29-Apr
6-May
13-May
20-May
27-May
3-Jun
10-Jun
2004
Sample period endpoints


Merced River Trapping Operations
Near Hopeton, CA
Trap 1=1010
Trap 2=872
Total=1882
February 5 - March 31, 2004
Trap 1
Trap 2


Merced River Trapping Operations
Near Hopeton, CA
Numbers of Salmon
Trap 1=2846
Trap 2=1624
Total=4470
April 1 - May 27, 2004 (end of season)
PRELIMINARY DATA SUBJECT TO REVISION
Trap 1
Trap 2


0.9
0.6
0.3
0
2004
VAMP 72%
Period
10%
HORB
in
Shoulder
on VAMP
03/15/04
03/25/04
04/04/04
04/14/04
04/24/04
05/04/04
05/14/04
05/24/04
06/03/04
06/13/04
06/23/04


OBSERVED CHINOOK SALVAGE AT THE SWP & CVP
DELTA FISH FACILITIES 8/1/03 THROUGH 6/26/04
1 Dot = log10(Observed Chinook)*3.2+1
No Adipose Fin Clip
Clipped Unknown Origin
Coleman Hatchery-Late Fall
Coleman Hatchery-Fall
Feather Hatchery-Fall
Mokelumne Hatchery-Fall
Mercer Hatchery-Fall
Tributary Wild-Spring
Feather River-Wild
Revised 06/30/04
DELTA MODEL
DELTA MODEL
SPRING
FALL
LATE FALL
WINTER
FALL
LATE FALL
FORK LENGTH MM
FORK LENGTH INCHES
FLOWS cfs*1000
Delta Outflow
Sac & SJ Rivers
SWP & CVP
AUG03
SEP 03
OCT 03
NOV 03
DEC 03
JAN 04
FEB 04
MAR 04
APR 04
MAY 04
JUN 04
JUL 04

Proposed Vernalis Flow Objective

SJRBI	Vernalis Flow Objective (cfs)	
	NM Index < 2,500 TAF	NM Index > 2,500 TAF
1 — W	2000	2500
2 — AN	2000	2500
3 — BN	1250	1750
4 — D	1250	1750
5 — C	700	1000