

CALFED OPS GROUP OPERATIONS BRIEFING

May 24, 2000



DELIVERY COMPARISON TO DATE	1999	2000
North Bay Aqueduct	8 TAF	10 TAF
South Bay Aqueduct	23 TAF	51 TAF
California Aqueduct		
Delta Field Division	1 TAF	1 TAF
San Luis Field Division (transfers)	0 TAF	0 TAF
San Joaquin Field Division	392 TAF	464 TAF
Southern Field Division	222 TAF	550 TAF

CURRENT SWP/CVP OPERATIONAL STATUS

DATA AS OF
May 23, 2000

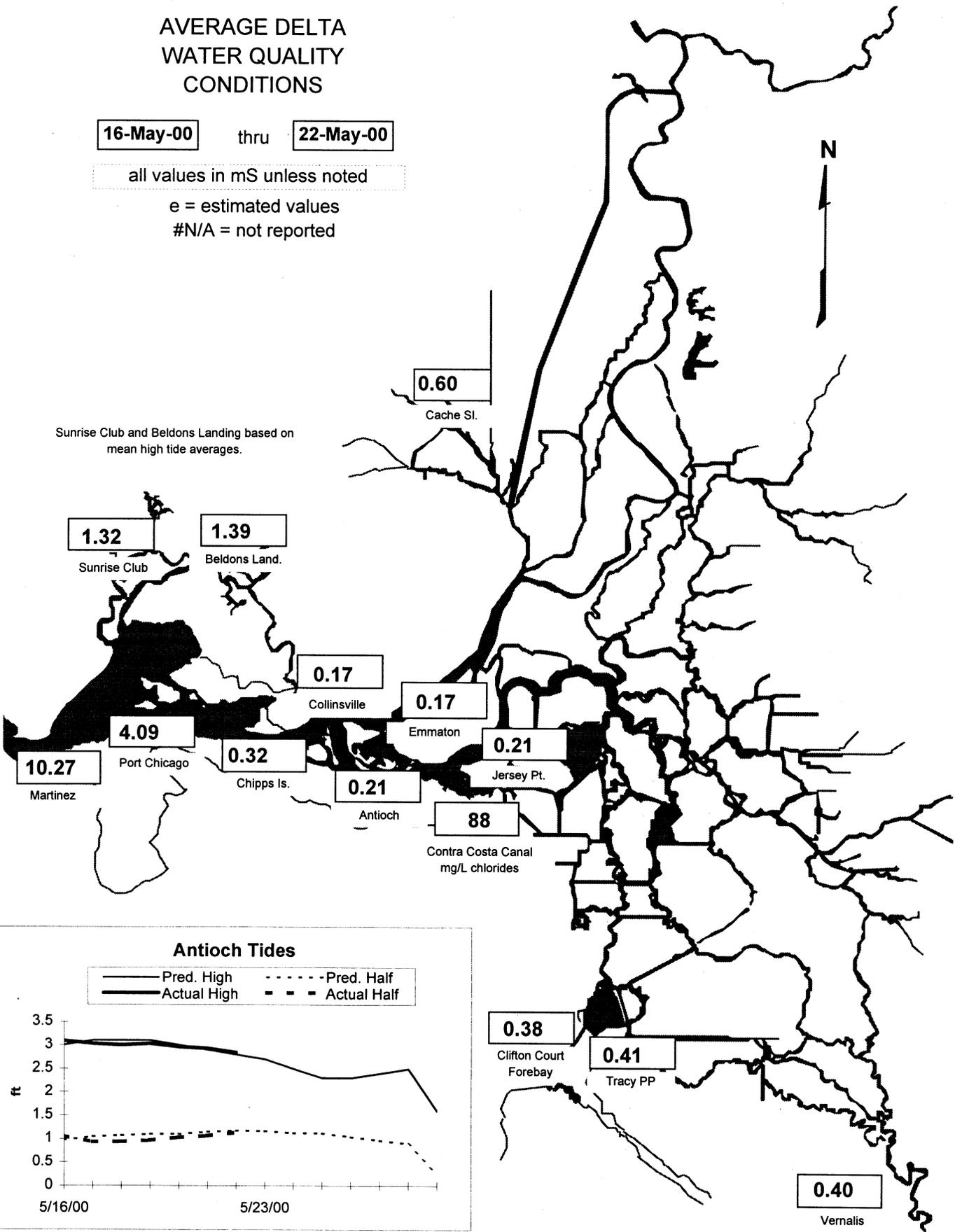
AVERAGE DELTA WATER QUALITY CONDITIONS

16-May-00 thru 22-May-00

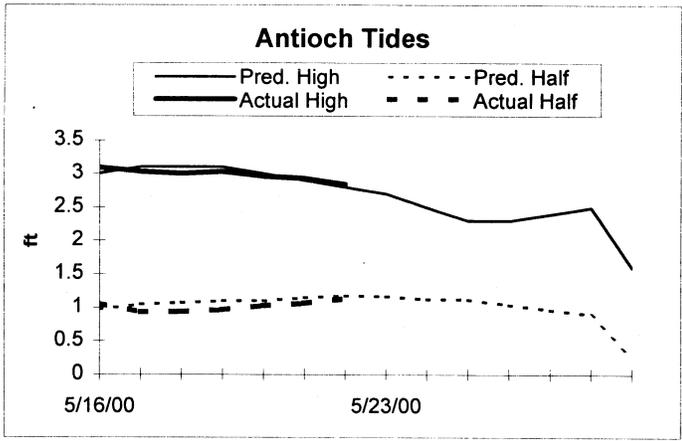
all values in mS unless noted

e = estimated values

#N/A = not reported



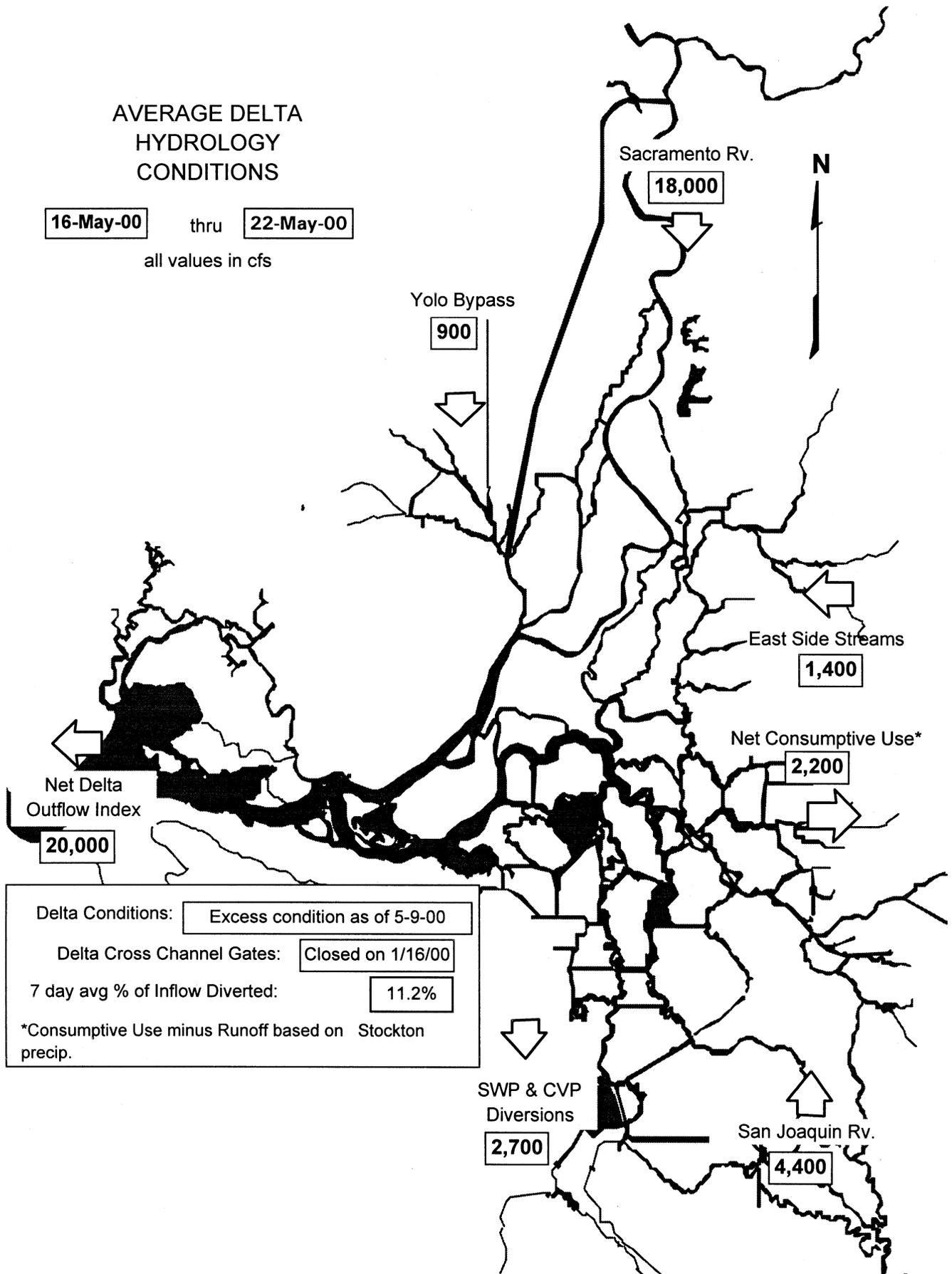
Sunrise Club and Beldons Landing based on mean high tide averages.



**AVERAGE DELTA
HYDROLOGY
CONDITIONS**

16-May-00 thru **22-May-00**

all values in cfs



Delta Conditions: Excess condition as of 5-9-00
 Delta Cross Channel Gates: Closed on 1/16/00
 7 day avg % of Inflow Diverted: 11.2%
 *Consumptive Use minus Runoff based on Stockton precip.

DRAFT

Bay-Delta Standards

DRAFT

Contained in D-1641 and the Winter-Run and Delta Smelt Biological Opinions

CRITERIA	Apr 2000	May 2000	Jun 2000	
FLOW/OPERATIONAL				
<ul style="list-style-type: none"> Fish and Wildlife SWP/CVP Export Limits Export/Inflow Ratio Minimum Outflow - mon. - 7 day avg. Habitat Protection Outflow, X2 River Flows: <ul style="list-style-type: none"> @ Rio Vista - min. mon. avg. - 7 day average Salmon Migration @ Vernalis: Base -min. mon. avg. - 7 day average Pulse objective - mon. avg. Delta Cross Channel Gates 	greater of 1,500 cfs or 100% of the 3-day avg. flow at Vernalis 			
	35 % of Delta Inflow			
	Port Chicago for 20 days, Chipps Island for 30		3-day running avg. of 29,200 cfs, Port Chicago for 9 days, Chipps Island for 30 days or ** Projected requirement (assuming triggering) based on latest projection for May 8RI at 50%.	**Chipps Island for -17 days or 11,400 cfs, 7100 cfs for the rest of June
	5,000 cfs for Wet year			
	2280 cfs		3420 cfs	
	1824 cfs		2736 cfs	
	5480 cfs		gates may close 4 consec. days ea. wk. (May 21 - June 15)	
	Closed		May be closed up to 14 days per CALFED Op's	
	WATER QUALITY STANDARDS			
	<ul style="list-style-type: none"> Municipal and Industrial All Export Locations Contra Costa Canal 	Cl <= 250 mg/l		
Cl <= 150 mg/l for 240 days for Wet Year Type				
<ul style="list-style-type: none"> Agriculture Western/Interior Delta Southern Delta 	Max. 14-day average EC mmhos/cm: 0.45 mS/cm for Wet year			
	30 day running avg. EC <= 1.0 mS/cm	30 day running avg. EC <= 0.7 mS/cm	30 day running avg. EC <= 0.7 mS/cm	
<ul style="list-style-type: none"> Fish and Wildlife San Joaquin River Salinity Suisun Marsh Salinity 	14-day avg; 0.44 EC			
	11.0 mhtEC			

Water Year Classification: (May 1 forecast)

SRI (40-30-30 @ 50%) =9.2 MAF(Wet)

SJV (60-20-20 @75%) =3.7 MAF(Above Normal)

**2000 Operations Plan Update
for the
Water Operations Management Team**

May 23, 2000

Current Conditions and Operational Status

- San Luis Reservoir storage is projected to drop about 71 TAF this week. Currently tracking along 50% exceedence line.
- Delta smelt salvage for May is 14,181 (as of May 22).

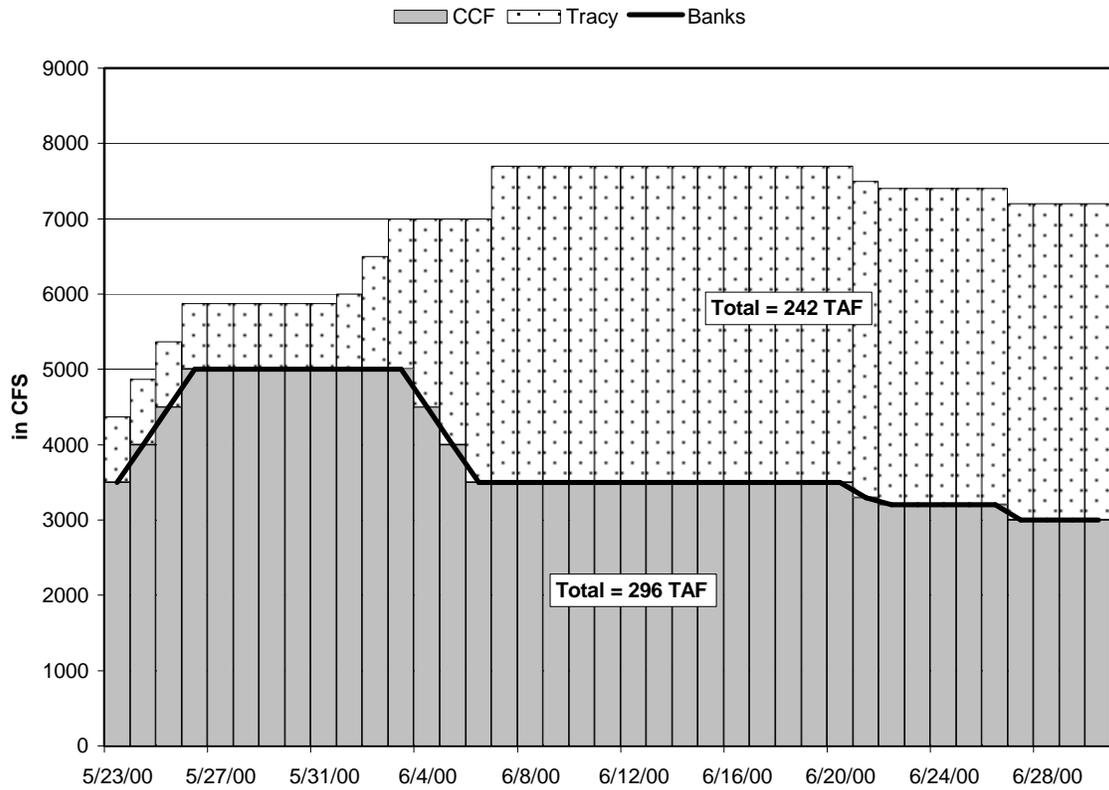
Actions planned for the rest of May and June

- Meet the Chipps Island X2 standard for the rest of May.
June requirement is expect to be 21 days at Chipps.
- Manage exports to the 35% E/I ratio for the rest of May.
CVP will remain at one unit until the beginning of June.
SWP will gradually increase exports over the rest of the month to 5,000 cfs.
- June exports will be limited by the 35% E/I ratio.
Reserve 35 TAF of b(2) export curtailment for June.
 - Used to ramp CVP exports.Combined pumping will be about 8,000 cfs, split fairly evenly between projects.

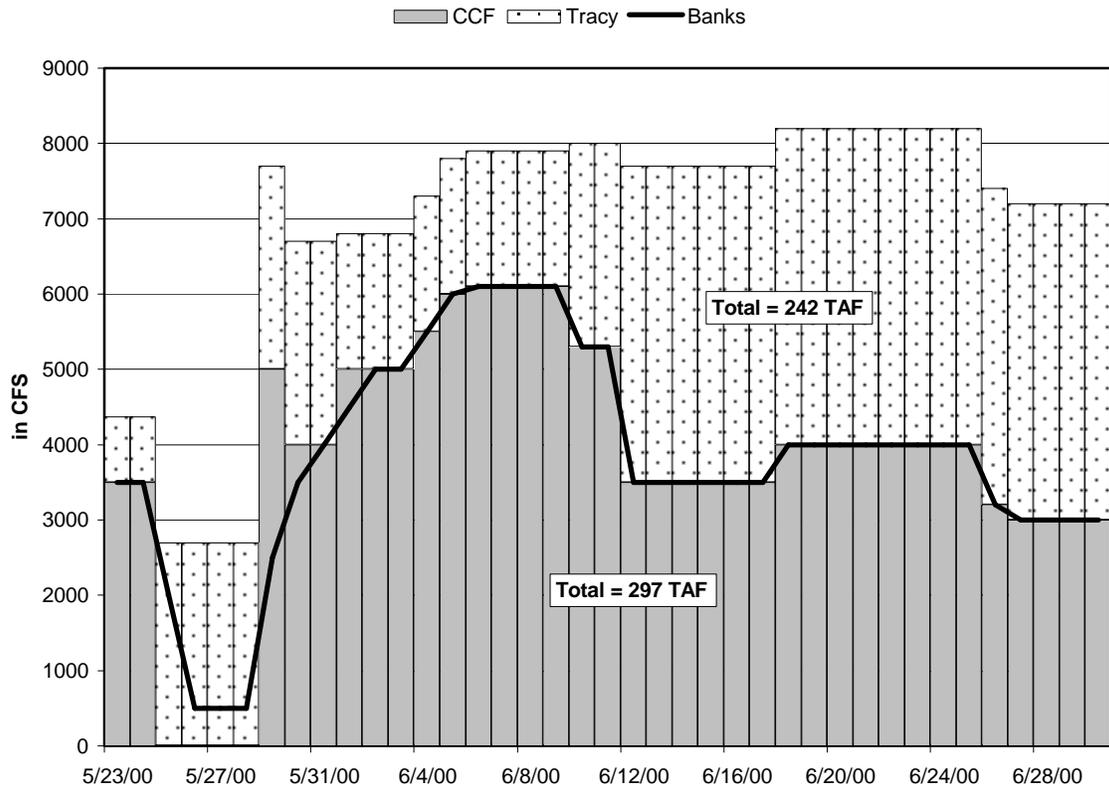
Operational considerations

- Although the forecast shows San Luis storage above 300 TAF for the low point, it does not consider impacts due to:
 - Higher demands resulting from hot summer conditions.
 - Export reductions because of delta smelt take.
 - Unanticipated outages (summer export flexibility is being used to recover pumping lost to fishery actions).
- While the San Luis Reservoir low point may not be an issue this year, the rate at which the reservoir will be drawn down is still an issue.

5/22/00 Plan of Delta Exports



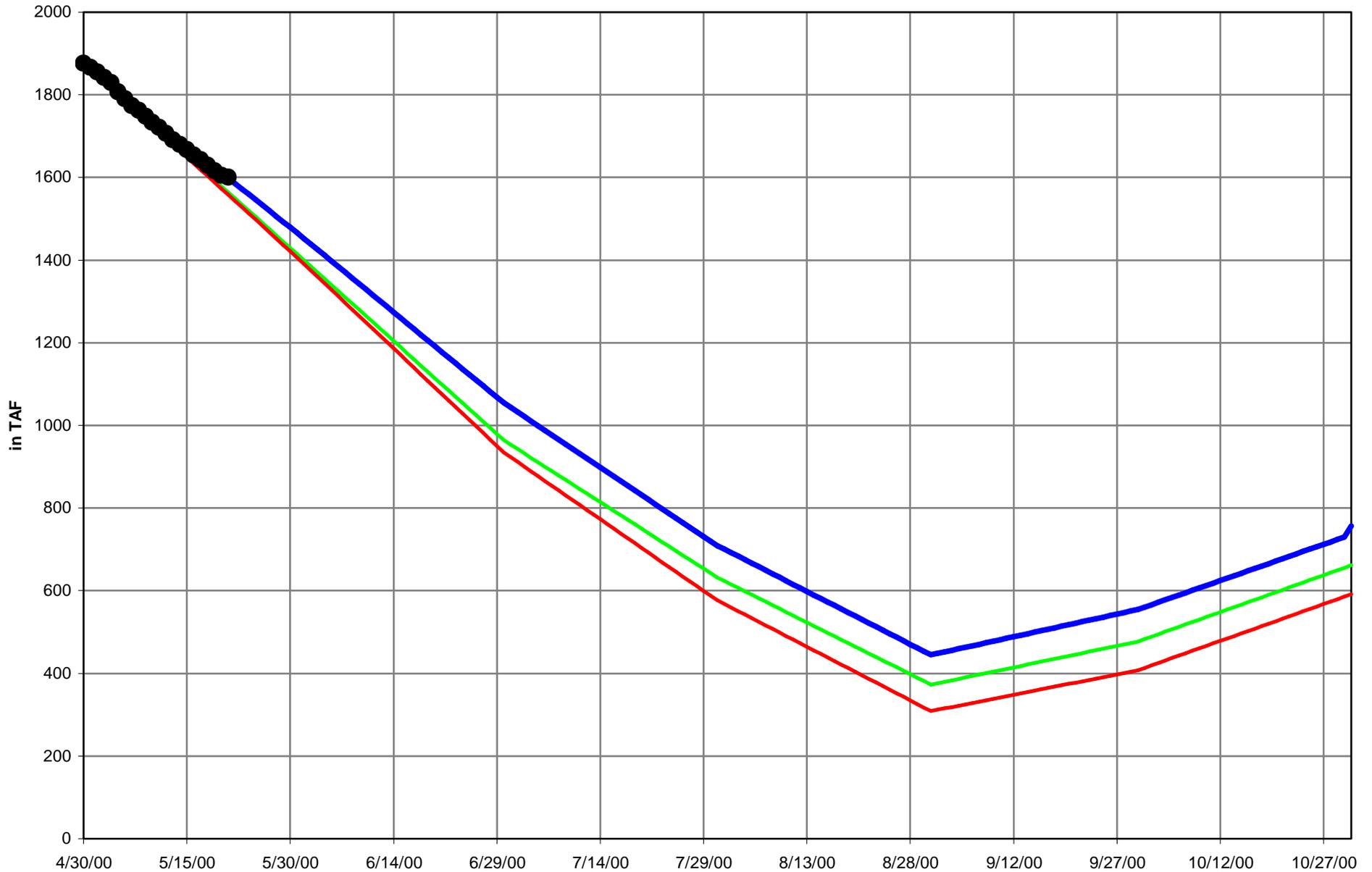
5/24/00 Plan of Delta Exports



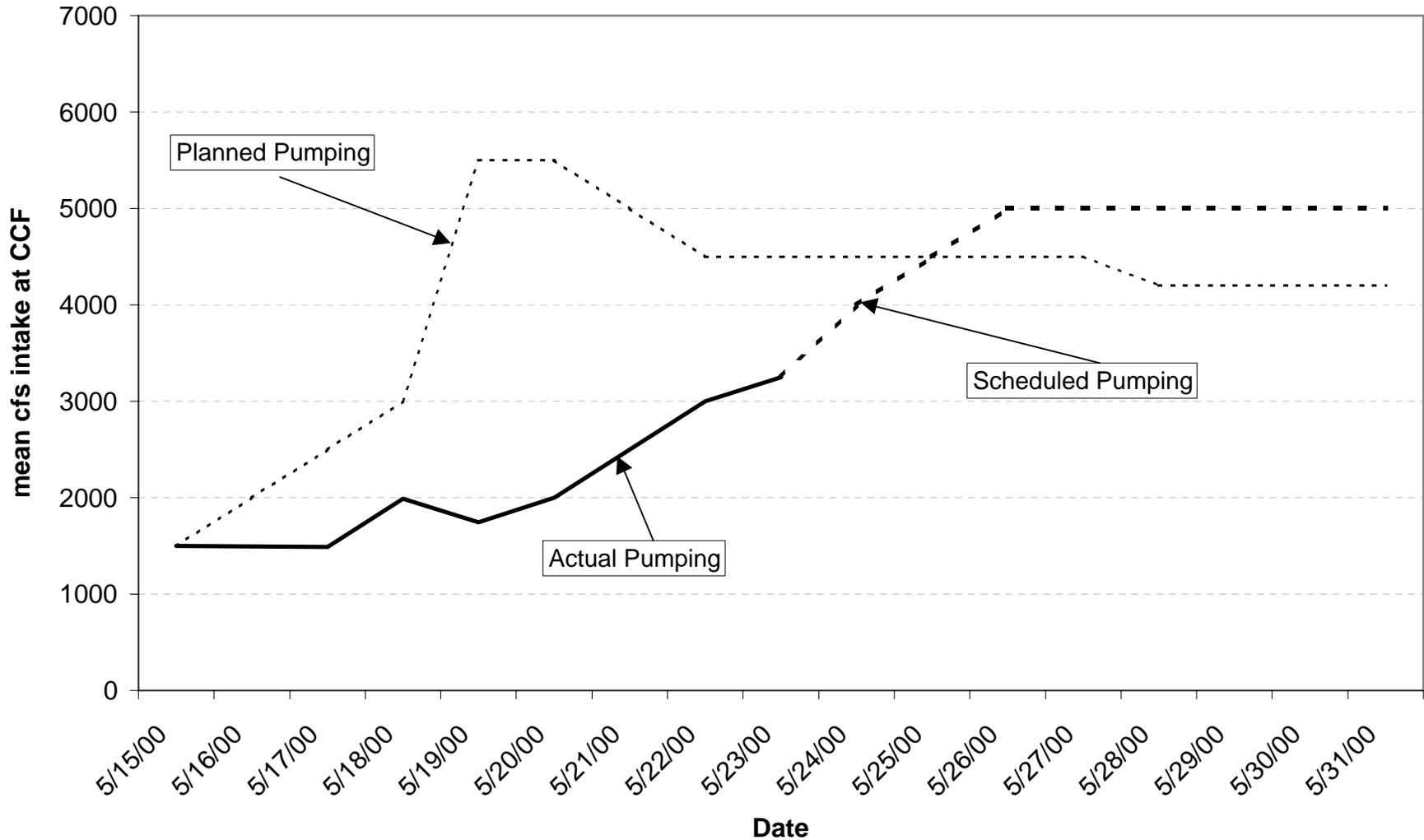
Forecasted Combined San Luis Storage

Hydrology: Based on May 1 Snow Survey Forecast

50% Excd. 90% Excd. 99% Excd. Actual Storage



SWP end of May exports



Year 2000 CVP and SWP Water Supply Impact and Recovery Plan

	Based on May 1 - 50% Exceedence Hydrology							90% Exceedence				Impact Summary
	Apr	May 1-15	May 16-31	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan-01	
SWP												
b(2) - WQCP												
SWP Export Impacts (b(2) 2000)	-6 ¹	-8 ¹	-30 ⁴									-44
SWP delta smelt B.O. Export Impacts	-22 ²	-24 ²										-46
SWP Export Makeup (b(2) 2000)			7 ⁴		31 ⁵	6 ⁵						44
SWP delta smelt B.O. Export Makeup						15 ⁶	21 ⁶					36
Oroville Storage Changes	28 ³	19 ³			-11	-15	-21					0
Net Impacts												-10
SWP Export from AFRP					?	?	?		?			?
Negotiated 1999 SWP Makeup								35 ⁷	35 ⁷			70
CVP												
b(2) - WQCP												
Cum. CVP Storage Changes (Oct - Jan)												-6
CVP Flow Impacts (Feb.-Sep)	-9	-90	-3	-19	-57	-13						-220
CVP Export Impacts	-93	-118	-30	-4	-4	-4						-348
Sub total												-574
WQCP - Base												
Cum. CVP Storage Changes (Oct - Jan)												0
CVP Flow Impacts (Feb.-Sep)	-228	-57	56	61	43	5						-120
CVP Export Impacts		-11	63	32	-42	-98						-107
Sub total												-227
Grand Total												-801
CVP Water Supply Augmentation Actions												
Potential Use for JPOD												0
Water Purchases south of the Delta				63			10					73

¹ Impacts for dropping SWP exports from the delta smelt biological opinion objective to actual export.

² Impacts for dropping SWP exports from 50% of Vernalis base flow to the delta smelt biological opinion objective.

³ Most of the reduced SWP exports were backed into Oroville. Approximately 13 TAF of impact (10 TAF B.O., 3 TAF b(2)) occurred during a period of surplus flows, (May 9 - 15), and were not backed upstream.

⁴ An additional ~30 TAF of surplus flows are being lost due to curtailments for delta smelt in the latter part of May. ~ 7 TAF can be made up by SWP exporting greater than its share of E/I at the end of May under excess conditions.

⁵ b(2) surplus water impacts are made up in July (20 TAF) and August (6 TAF) using 500 cfs increase at Banks supported by CVP releases, ***(these CVP releases are not included in the CVP impact table)***. b(2) impacts backed upstream during pulse flow (~11 TAF) are released and pumped in July using capacity that had been reserved for CVC pumping at Banks. Displaced CVC water may be pumped in the fall.

⁶ Delta smelt B.O. impacts that were backed upstream into Oroville during the pulse flow are released and pumped in August (15 TAF) and September (21 TAF) using the 500 cfs increase at Banks. There is not an opportunity to recover ~10 TAF of delta smelt B.O. surplus water lost May 9-15.

⁷ Additional SWP export supported by CVP upstream releases in October and November. The 70 TAF was negotiated between DOI and DWR for 1999 make up.

Special Note: CVP b(2) impact summary is for the period Oct. '99 through Sept. '00.

Projected Delta Operations and Conditions.

Case: Includes b(2) and Delta Smelt BO Actions

Hydrology:	50% Exceedence						90% Exceedence					
	May-00		Jun-00	Jul-00	Aug-00	Sep-00	Oct-00	Nov-00	Dec-00	Jan-01	Feb-01	Mar-01
	1-15	16-31										
E/I Ratio	6%	17%	33%	47%	56%	62%	57%	54%	65%	65%	45%	35%
Delta Outflow	22,533 cfs	17,055 cfs	11,479 cfs	8,000 cfs	4,959 cfs	3,496 cfs	4,000 cfs	4,504 cfs	4,504 cfs	5,107 cfs	7,259 cfs	8,558 cfs
Tracy Export	864 cfs	866 cfs	3,613 cfs	4,472 cfs	4,472 cfs	4,285 cfs	4,066 cfs	4,033 cfs	4,115 cfs	4,066 cfs	2,917 cfs	2,440 cfs
CVP @ Banks	0 cfs	0 cfs	0 cfs	244 cfs	423 cfs	437 cfs	0 cfs	0 cfs	0 cfs	0 cfs	0 cfs	0 cfs
Banks Export	1,167 cfs	3,422 cfs	4,151 cfs	6,766 cfs	6,603 cfs	6,605 cfs	4,570 cfs	3,059 cfs	5,042 cfs	4,342 cfs	2,917 cfs	2,440 cfs
Total Export	2,031 cfs	4,288 cfs	7,764 cfs	11,482 cfs	11,498 cfs	11,327 cfs	8,636 cfs	7,092 cfs	9,156 cfs	8,408 cfs	5,834 cfs	4,879 cfs
Sac @ Freeport	20,700 cfs		19,600 cfs	21,946 cfs	18,942 cfs	15,953 cfs	13,100 cfs	11,200 cfs	12,400 cfs	11,200 cfs	10,700 cfs	11,400 cfs
SJ @ Vernalis	5,766 cfs	4,137 cfs	3,310 cfs	2,000 cfs	18,100 cfs	2,010 cfs	1,550 cfs	1,360 cfs	1,390 cfs	1,420 cfs	1,850 cfs	2,020 cfs
Oroville Storage	---	3,280 TAF	3,020 TAF	2,514 TAF	2,105 TAF	1,927 TAF	1,690 TAF	1,630 TAF	1,566 TAF	1,670 TAF	1,819 TAF	2,023 TAF
Oroville Release	3,600 cfs		6,336 cfs	9,210 cfs	7,577 cfs	4,842 cfs	4,233 cfs	2,450 cfs	3,252 cfs	1,250 cfs	1,250 cfs	1,050 cfs
Shasta Storage	---	4,320 TAF	4,146 TAF	3,645 TAF	3,290 TAF	3,166 TAF	3,031 TAF	2,976 TAF	2,971 TAF	3,083 TAF	3,274 TAF	3,600 TAF
Keswick Release	11,360 cfs		10,915 cfs	14,544 cfs	11,598 cfs	7,333 cfs	6,000 cfs	5,000 cfs	4,500 cfs	3,600 cfs	3,600 cfs	3,600 cfs
Folsom Storage	---	717 TAF	710 TAF	645 TAF	577 TAF	523 TAF	421 TAF	329 TAF	260 TAF	232 TAF	253 TAF	334 TAF
Nimbus Release	3,700 cfs		2,558 cfs	2,567 cfs	2,571 cfs	2,270 cfs	2,252 cfs	2,250 cfs	2,000 cfs	1,500 cfs	1,500 cfs	1,500 cfs
CVP SL Storage	---	642 TAF	492 TAF	291 TAF	133 TAF	197 TAF	272 TAF	363 TAF	557 TAF	731 TAF	784 TAF	752 TAF
SWP SL Storage	---	820 TAF	574 TAF	484 TAF	420 TAF	491 TAF	545 TAF	511 TAF	562 TAF	620 TAF	571 TAF	601 TAF

Based on CVP's ap9050b2.xls