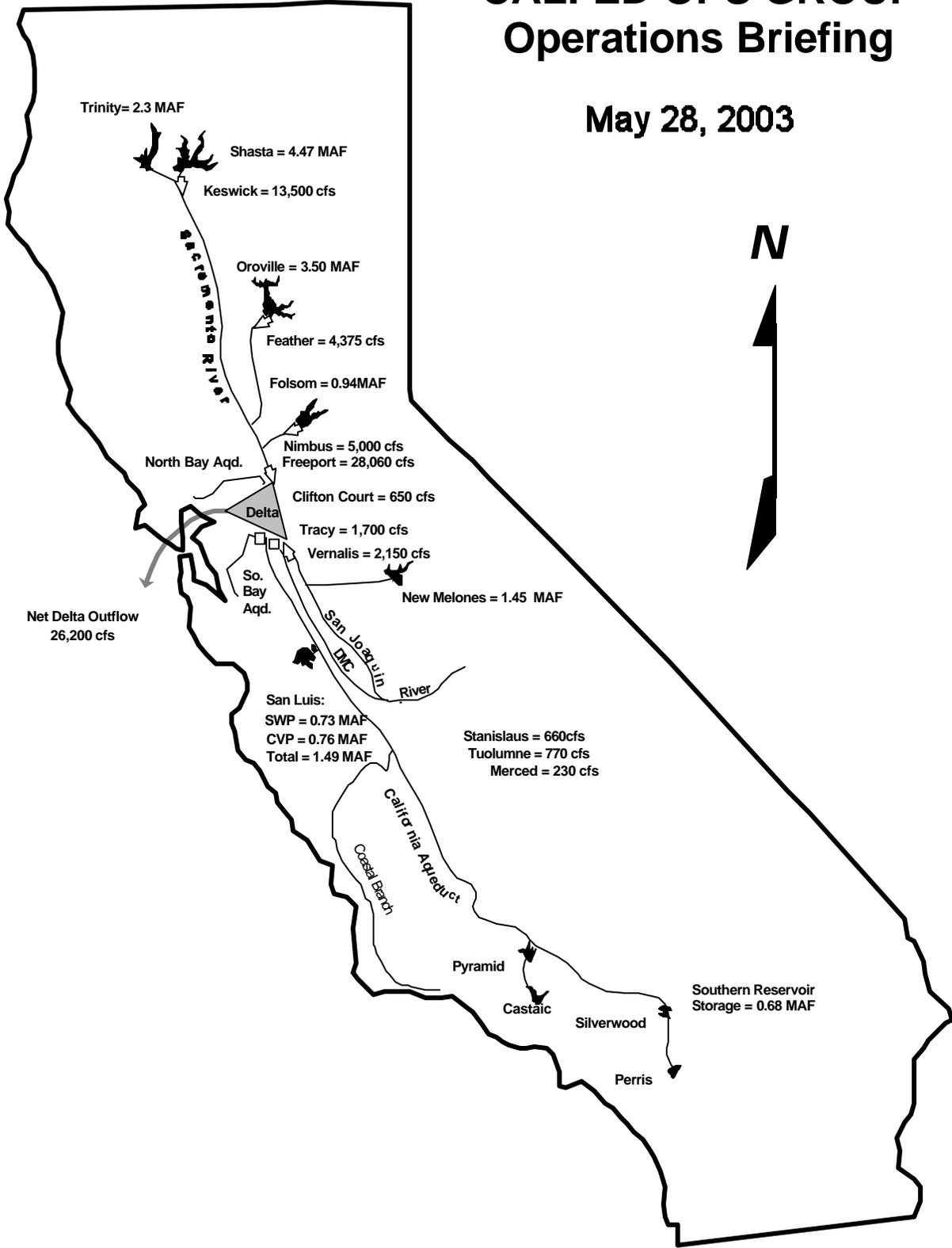


CALFED OPS GROUP Operations Briefing

May 28, 2003



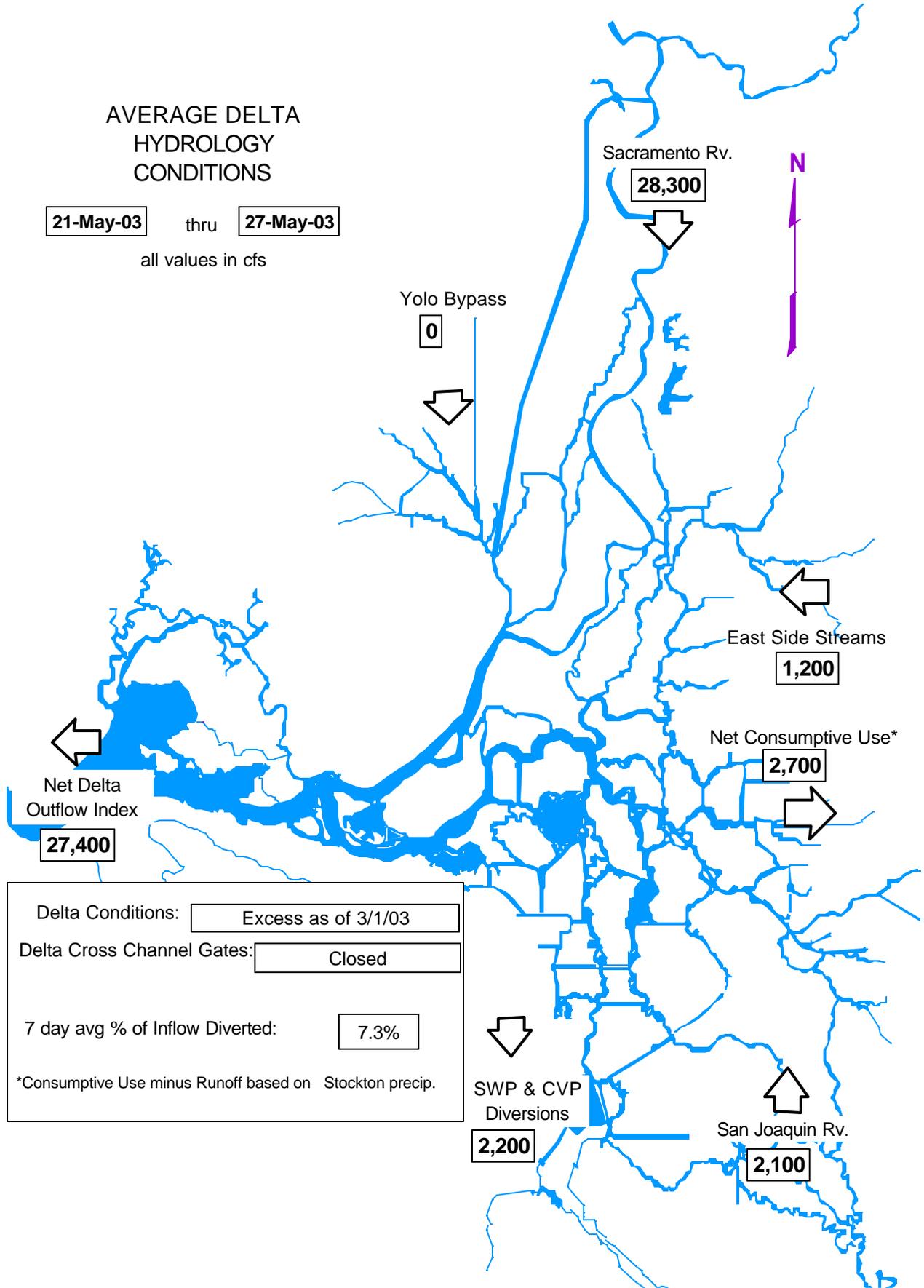
Net Delta Outflow
26,200 cfs



AVERAGE DELTA HYDROLOGY CONDITIONS

21-May-03 thru **27-May-03**

all values in cfs



Delta Conditions:	Excess as of 3/1/03
Delta Cross Channel Gates:	Closed
7 day avg % of Inflow Diverted:	7.3%
*Consumptive Use minus Runoff based on Stockton precip.	

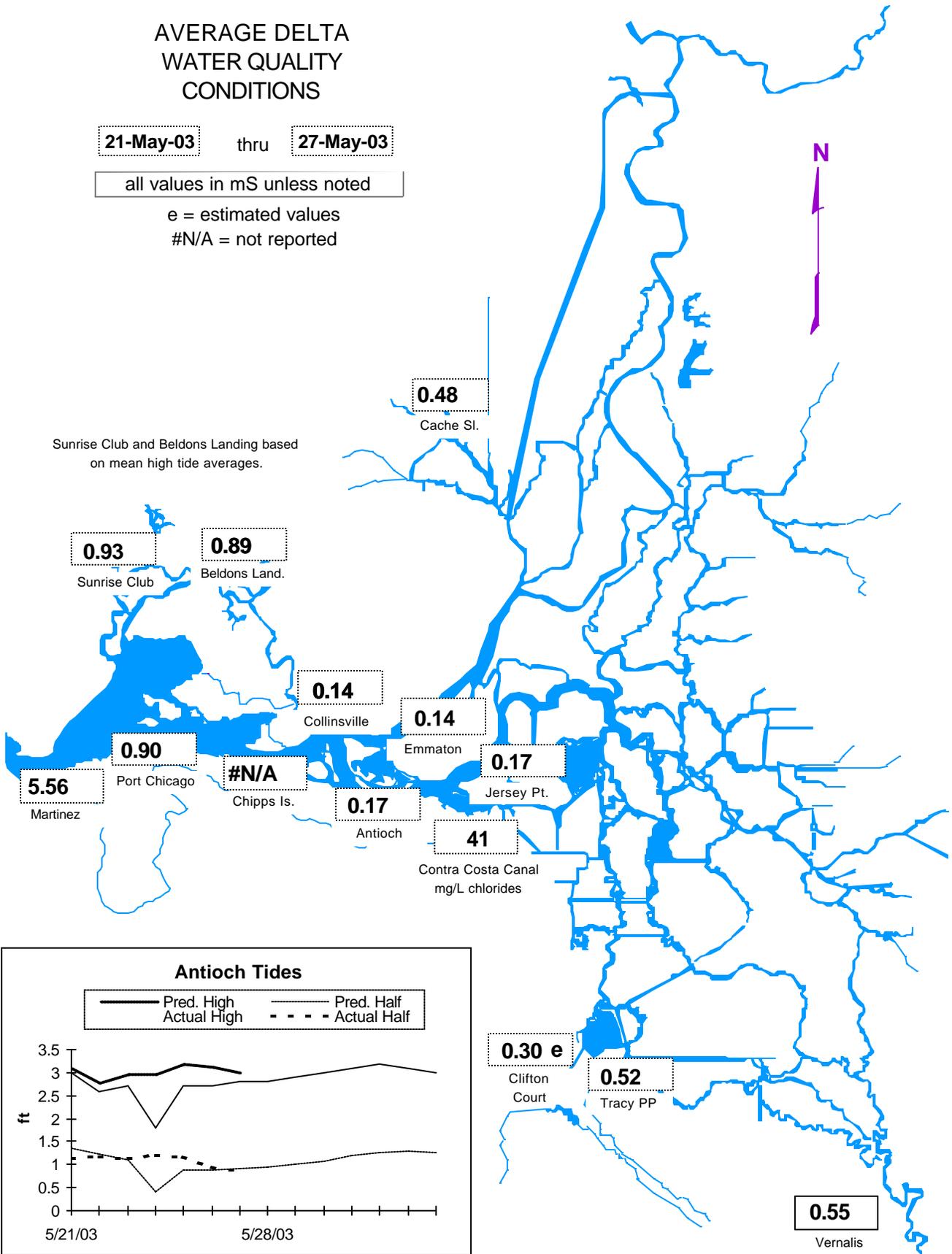
AVERAGE DELTA WATER QUALITY CONDITIONS

21-May-03 thru **27-May-03**

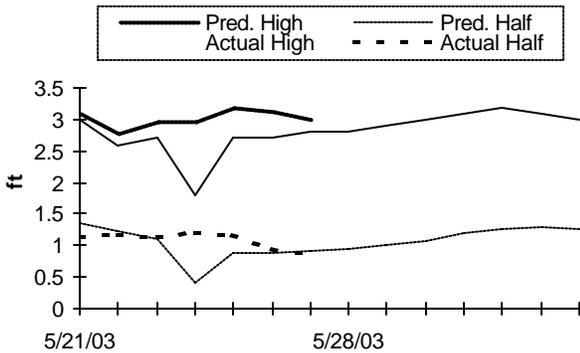
all values in mS unless noted

e = estimated values
#N/A = not reported

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



Antioch Tides



DRAFT

Bay-Delta Standards

Contained in D-1641

DRAFT

CRITERIA	May 03	Jun03	Jul 03
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FLOW/OPERATIONAL

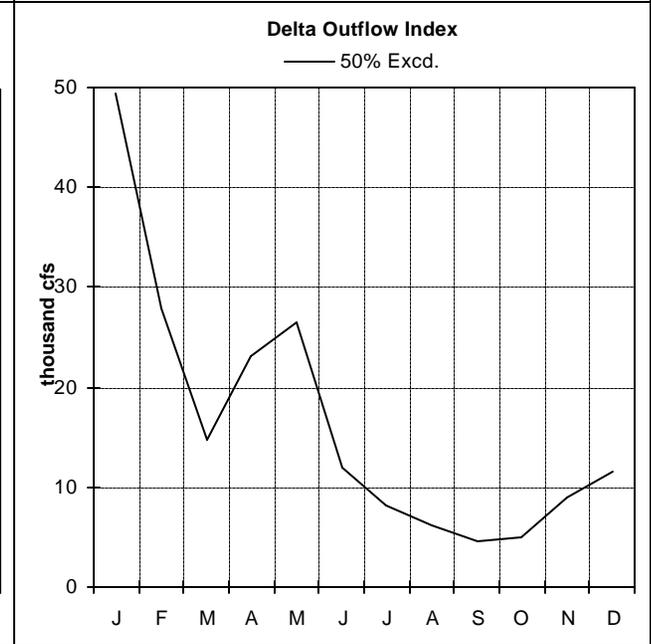
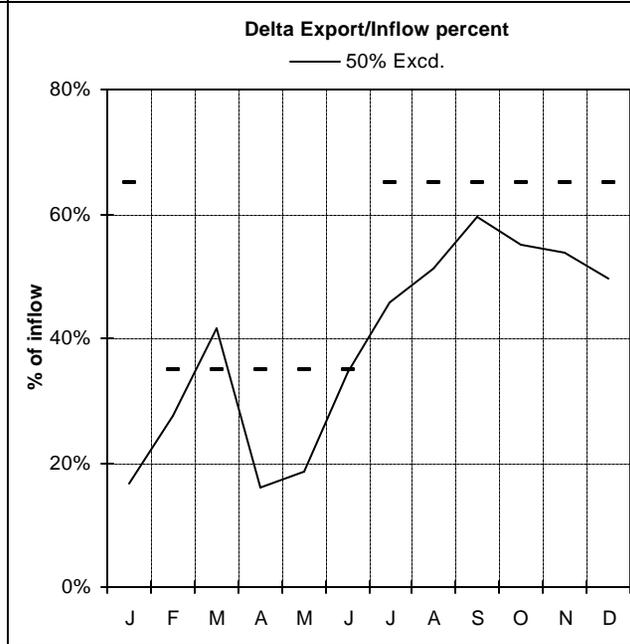
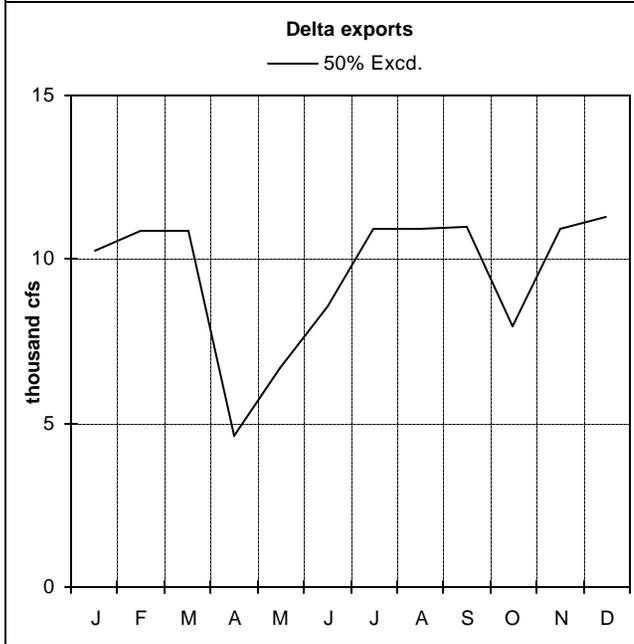
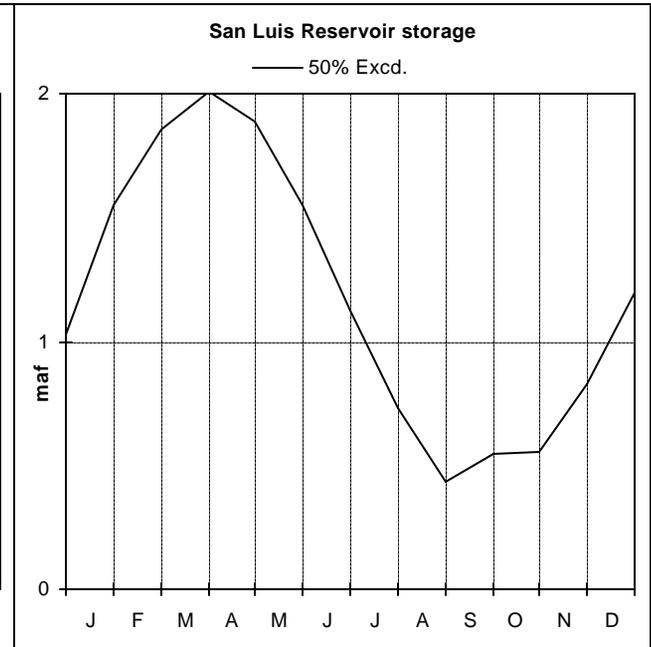
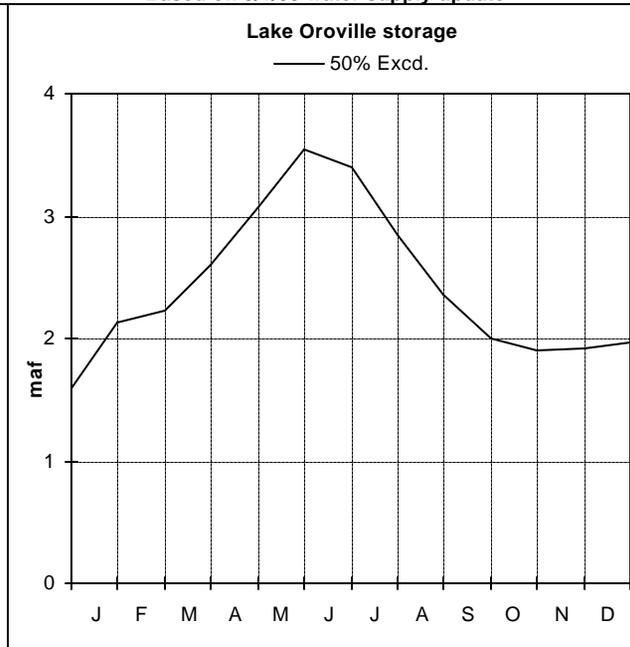
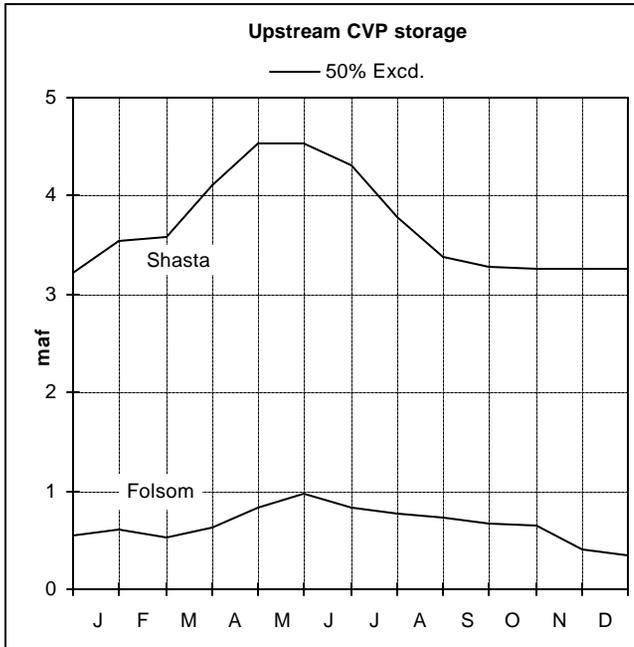
<ul style="list-style-type: none"> Fish and Wildlife SWP/CVP Export Limits Export/Inflow Ratio Minimum Outflow - mon. - 7 day avg. Habitat Protection Outflow, X2 River Flows: @ Rio Vista - min. mon. avg. - 7 day average @ Vernalis: Base -min. mon. avg. - 7 day average Pulse objective Delta Cross Channel Gates 	<p>greater of 1,500 cfs or 100% of 3-day avg. Vernalis flow.</p>		
	35 % of Delta Inflow		65% of Delta Inflow
			8000 cfs
			6400 cfs
	7,100cfs - 29,200 cfs		
	Chippis Island for 29		
		2280 cfs	
		1824 cfs	
	3200 cfs		
	Closed	May 21 - June 15 close 14 days per CALFED Op's	

WATER QUALITY STANDARDS

<ul style="list-style-type: none"> Municipal and Industrial All Export Locations Contra Costa Canal 		CI <= 250 mg/l	
		CI <= 150 mg/l for 190 days for Above Normal 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	
		30-day running average EC <= 0.7 mS	
<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%) = 8.0 (AN)	May 8RI: 3.260 MAF
SJV (60-20-20 @75%) =2.7 (BN)	

Based on 5/1/03 water supply update



WY 2002/2003 EWA Accounting Summary

Based upon May 1 - 50% Exceedance Hydrology

Assumptions: SWP Allocation - 90%; NOD Purchases - 69.9 TAF; SOD Purchases - 145 TAF

EWA NOD and SOD Storage																	
1	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
NOD ⁰	27 ^{*3}	1.7 ³	0.7 ³	5 ⁵						65 ⁶							72
SOD	37 ⁴																0

EWA Asset Acquisition in SWP San Luis ¹																	
2	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
E/I Relaxation							35										35
EWA share of SWP gain							19										19
Project Pumping to reduce EWA debt																	0
JPOD using excess flows																	0
JPOD using NOD storage																	0
Xfer NOD - Sacramento River ²											19 ^{5,6}		1 ^{5,6}				20
Xfer NOD - San Joaquin River ²																	0
SOD SWP Surface/GW Purchases							7 ⁴		30 ⁴	36 ⁷	36 ⁷	36 ⁷	36 ⁷				182
Exchange of EWA assets																	0
Groundwater pumping SOD																	0
Exchange from CVP to SWP in SL																	0
Total Monthly EWA Assets		0	0	0	0	0	62	0	30	36	55	36	38	0	0	0	256

EWA Asset Acquisition in CVP San Luis																	
3	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
E/I Relaxation																	0
Project Pumping to reduce EWA debt							6										6
JPOD using excess flows																	0
JPOD using NOD storage												19 ^{5,6}	17 ^{5,6}				36
Xfer NOD - Sacramento River ²				0.5 ³													1
Xfer NOD - San Joaquin River ²																	0
SOD CVP Surface/GW purchases																	0
Exchange of EWA assets																	0
Groundwater pumping																	0
Exchange from SWP to CVP in SL																	0
Total Monthly EWA Assets	0	0	0	1	0	0	6	0	0	0	0	19	17	0	0	0	42

EWA Expenditures at the Export Pumps																	
4	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
SWP export cuts				-32 ⁸	-89 ⁹			-19 ¹⁰	-184 ¹¹								-324
CVP export cuts									-36 ¹¹								-36
Total Expenditures	0	0	0	-32	-89	0	0	-19	-219	0	-360						

EWA End-of-Month Incremental Storage Changes																	
5	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
SWP in SL (without Source Shift)	11	0	0	-32	-89	0	62	-19	-154	36	55	36	38	0	0	0	-57
CVP in SL	-6	0	0	1	0	0	6	0	-36	0	0	19	17	0	0	0	0
NOD Storage ¹²	24	2	1	0	-2	0	0	-20	0	65	-23	-23	-23	0	0	0	0
Groundwater SOD	37	0	0	0	-37	0	0	0	0	0	0	0	0	0	0	0	0
Total Incremental Storage Changes	66	2	1	-32	-128	0	67	-39	-190	101	32	32	32	0	0	0	-57

EWA End-of-Month Storage Balance at Various Sites																	
6	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
SWP in SL (without Source Shift)	11	11	11	-21	-111	-111	-49	-68	-222	-185	-131	-94	-57	-57	-57	-57	
CVP SL	-6	-6	-6	-6	-6	-6	0	0	-36	-36	-36	-17	0	0	0	0	
NOD Storage	24	26	27	26	25	25	25	5	5	70	47	23	0	0	0	0	
Groundwater SOD	37	37	37	37	0	0	0	0	0	0	0	0	0	0	0	0	
EWA Asset Balance	66	68	68	37	-91	-91	-24	-63	-253	-151	-120	-88	-57	-57	-57	-57	

San Luis Reservoir Storage Conditions																	
7	C/O	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Total Storage (base case) ¹³		645	783	1037	1554	1856	2003	1877	1571	1079	701	439	486	516	624	803	
Encroachment																	
Total Storage (EWA case)		650	788	1010	1438	1739	1954	1809	1314	857	534	327	429	460	567	746	
MWD Source Shifting																	
Storage (with MWD source shifting)		650	788	1010	1438	1739	1954	1809	1314	857	534	327	429	460	567	746	

⁰ 2002 NOD Purchases = 135(YCWA) + 10(SGA). 2003 NOD Purchases = 185(YCWA) + 10(OWID). YCWA has firm 55 TAF; exercised an option for an additional amount - 10 TAF.

^{*} The SWP was able to back 20 TAF of water for the EWA into Lake Oroville between September 14 and October 6, 2002 (which includes a 20% carriage water loss). SOD equivalent = 16 TAF (not a 1:1 Exchange).

¹ Aqueduct conveyance and evaporation losses are not included.

² Carriage water loss applies to water transfers from the Sacramento River; a 10% conveyance loss applies to water transfers from the San Joaquin River. A carriage water loss of 20% was applied to the 2002 water transfers.

³ 2002 SGA Transfer (CVP place of use). ⁴ 2002 KCWA Transfer (SWP place of use)

⁵ 2003 OWID Transfer (Joint place of use) ⁶ 2003 YCWA Transfer (Joint place of use) ⁷ 2003 SOD Transfers (SWP place of use) - 125 TAF from KCWA; 20 TAF from SCVWD

⁸ About 32 TAF was expended for the December portion of the 12/27-1/2/03 curtailment.

⁹ Of this amount, approximately 9.5 TAF was expended for the 1/1-1/2/03 portion of the 12/31/02-1/2/03 curtailment; about 60 TAF was expended for the 1/15-1/20/03 curtailment; about 20 TAF was expended for the 1/25-1/28/03 curtailment.

¹⁰ The VAMP cost is estimated to be about 32 TAF for the SWP and is based upon the 4/30 estimate of base flows.

¹¹ The placeholder for VAMP shoulders is based upon the proposed recommendation by the Management Agencies as of 5/13/03.

¹² The CVP released the following for instream benefits: 4.645 TAF of water (which is the San Juan portion of the SGA) between 12/20-12/29/02 from Folsom Reservoir. The SWP may have released the 20 TAF of EWA water stored in Oroville for flood control purposes.

¹³ Based upon the 5/1/2003 DWR's 50% allocation study and the 5/21/2003 USBR's 50% B2 forecast "May50B2".