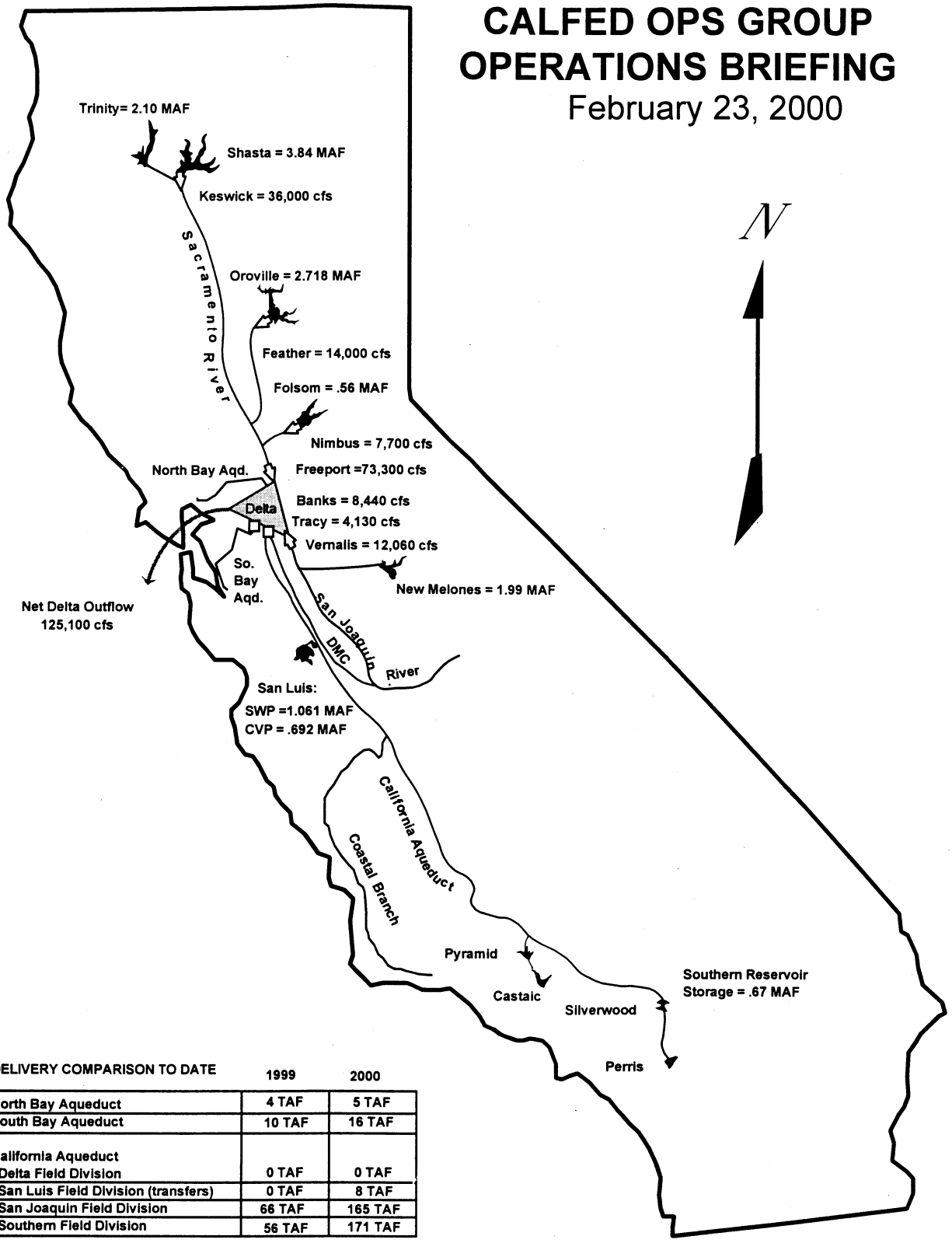
CALFED OPS GROUP OPERATIONS BRIEFING

February 23, 2000



DELIVERY COMPARISON TO DATE

	1999	2000
North Bay Aqueduct	4 TAF	5 TAF
South Bay Aqueduct	10 TAF	16 TAF
California Aqueduct		
Delta Field Division	0 TAF	0 TAF
San Luis Field Division (transfers)	0 TAF	8 TAF
San Joaquin Field Division	66 TAF	165 TAF
Southern Field Division	56 TAF	171 TAF

CURRENT SWP/CVP OPERATIONAL STATUS

DATA AS OF
February 22, 2000

O&M, OSC

Year 2000 CVP and SWP Operations Plan

	50% Exceedence Hydrology										50% Exceedence Hydrology			
	Feb	Mar	Apr 1-14	Apr 15-31	May 1-15	May 16-31	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
E/I Ratio	23%	29%	30%	8%	10%	12%	34%	47%	55%	62%	54%	59%	62%	49%
Delta Outflow (NDO)	38,243 cfs	25,567 cfs	18,550 cfs	24,640 cfs	17,180 cfs	14,870 cfs	7,798 cfs	8,000 cfs	4,992 cfs	3,496 cfs	4,504 cfs	4,504 cfs	6,144 cfs	10,622 cfs
Exports														
Tracy Export	3,788 cfs	3,825 cfs	4,200 cfs	1,125 cfs	1,125 cfs	1,125 cfs	3,832 cfs	4,472 cfs	4,472 cfs	4,285 cfs	4,310 cfs	4,201 cfs	4,196 cfs	4,196 cfs
Tracy @ Banks	1,043 cfs	2,114 cfs	336 cfs	0 cfs	0 cfs	0 cfs	0 cfs	423 cfs	423 cfs	437 cfs	0 cfs	0 cfs	0 cfs	0 cfs
Banks Export	6,102 cfs	5,513 cfs	3,964 cfs	1,125 cfs	1,125 cfs	1,125 cfs	2,319 cfs	6,548 cfs	6,548 cfs	6,533 cfs	3,985 cfs	4,605 cfs	6,684 cfs	6,684 cfs
Total Export	**10,933 cfs**	**11,453 cfs**	**8,500 cfs**	**2,250 cfs**	**2,250 cfs**	**2,250 cfs**	**6,151 cfs**	**11,443 cfs**	**11,443 cfs**	**11,255 cfs**	**8,295 cfs**	**8,806 cfs**	**10,880 cfs**	**10,880 cfs**
River Flows														
Sac @ Freeport	44,700 cfs	31,500 cfs	22,500 cfs	22,500 cfs	15,400 cfs	15,400 cfs	15,700 cfs	22,400 cfs	19,200 cfs	16,600 cfs	13,200 cfs	13,000 cfs	15,800 cfs	19,300 cfs
SJ @ Vernalis	4,580 cfs	5,190 cfs	5,861 cfs	5,700 cfs	5,700 cfs	3,391 cfs	1,760 cfs	1,730 cfs	1,590 cfs	1,380 cfs	1,630 cfs	1,340 cfs	1,370 cfs	1,410 cfs
Reservoir Operations														
Oroville Storage	2,655 TAF	2,960 TAF		3,250 TAF		3,352 TAF	3,235 TAF	2,773 TAF	2,339 TAF	2,138 TAF	2,008 TAF	2,010 TAF	2,112 TAF	2,312 TAF
Oroville Release	1,750 cfs	1,750 cfs		2,000 cfs		2,000 cfs	2,668 cfs	8,179 cfs	7,800 cfs	5,095 cfs	3,200 cfs	2,450 cfs	1,750 cfs	1,750 cfs
Shasta Storage	3,753 TAF	4,201 TAF		4,389 TAF		4,391 TAF	4,165 TAF	3,623 TAF	3,196 TAF	2,988 TAF	2,906 TAF	2,950 TAF	3,082 TAF	3,437 TAF
Keswick Release	16,123 cfs	7,186 cfs		8,000 cfs		8,500 cfs	10,000 cfs	14,000 cfs	11,710 cfs	7,754 cfs	5,521 cfs	4,500 cfs	4,250 cfs	4,000 cfs
Folsom Storage	571 TAF	675 TAF		805 TAF		958 TAF	924 TAF	767 TAF	693 TAF	628 TAF	570 TAF	525 TAF	508 TAF	529 TAF
Nimbus Release	5,200 cfs	4,724 cfs		3,222 cfs		3,250 cfs	3,888 cfs	4,151 cfs	2,814 cfs	2,552 cfs	2,250 cfs	2,305 cfs	2,150 cfs	2,150 cfs
CVP SL Storage	774 TAF	931 TAF		893 TAF		658 TAF	456 TAF	264 TAF	105 TAF	170 TAF	264 TAF	366 TAF	561 TAF	732 TAF
SWP SL Storage	1,035 TAF	1,065 TAF		946 TAF		714 TAF	429 TAF	360 TAF	333 TAF	488 TAF	523 TAF	624 TAF	871 TAF	1,145 TAF
SWP Allocation:	100%													
CVP Allocation:	60%													

Forecast assumes State Water Project Cooperation with b(2) Implementation

Department of Water Resources
February 22, 2000

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Year 2000 CVP and SWP Water Supply Impact and Recovery Plan

	50% Exceedence												50% Exceedence				Impact Summary
	Dec-99	Jan	Feb	Mar	Apr 1 -14	Apr 15-30	May 1-15	May 16-31	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan-01	
SWP Export Impacts	-181 [1]					-37 [2]	-27 [3]	-83 [4]									-328
SWP Export Makeup			181 [11]						16 [5]	52 [6]	16 [7]	25 [8]					290
SWP Export from AFRP										15 [6]	4 [7]	7 [8]	52				78
Oroville Storage Changes							22	23	23	-14	-7	5	-52				0
Interruptible Water Impacts		-83 [13]	-67 [13]														-150
b(2) - WQCP																	
CVP Export Impacts	-95 [9]	-55		-35 [10]		-27 [2]	-27 [3]	-79 [4]	-22								-340
CVP Export @ Banks PP.			60 [12]							-4	-4	-4					48
CVP Storage Changes	-46	40	2	-4	-6	-6	2	3	-19	-32	-13	-40					-119
WQCP - Base																	
CVP Export Impacts	1					-61	-30	19	71								0
CVP Export @ Banks PP.										-67	-67	-67					-201
CVP Storage Changes				5	1	0	14	14	-42	-42	57	9					16
CVP Water Supply Augmentation Actions																	
Use of JPOD				130	10												140
Water Purchases south of the Delta						40	2	2	4	4	4	4	4	4	4		72

[1] Reduced exports to improve water quality while DCC gates remained closed to protect spring-run yearlings.

[2] 26 TAF for dropping exports to delta smelt biological opinion objective; 11 TAF for dropping exports to VAMP objective.

[3] 16 TAF for dropping exports to delta smelt biological opinion objective; 11 TAF for dropping exports to VAMP objective.

[4] Export reduction to extend VAMP export level for an additional 16 days.

[5] The additional pumping resulted from additional releases from Nimbus (21 TAF).

[6] The additional pumping resulted from additional releases from Keswick (40 TAF), Clear Creek (6 TAF), New Melones (10), and Oroville (15 TAF). 22 TAF of the 71 TAF released upstream were moved through the Delta using the additional 500 CFS at Banks.

[7] The additional pumping resulted from additional releases from Keswick (16 TAF) and Oroville (4 TAF). 20 TAF of the 20 TAF released from upstream were moved through the Delta using the additional 500 CFS at Banks.

[8] The additional pumping resulted from additional releases from Keswick (27 TAF) and Oroville (7 TAF). 22 TAF of the 34 TAF released from upstream were moved through the Delta using the additional 500 CFS at Banks.

[9] Reduced exports to protect spring-run yearlings.

[10] Five-day curtailment.

[11] Additional pumping supported by supply water to the Delta.

[12] Additional pumping for Cross Valley Canal.

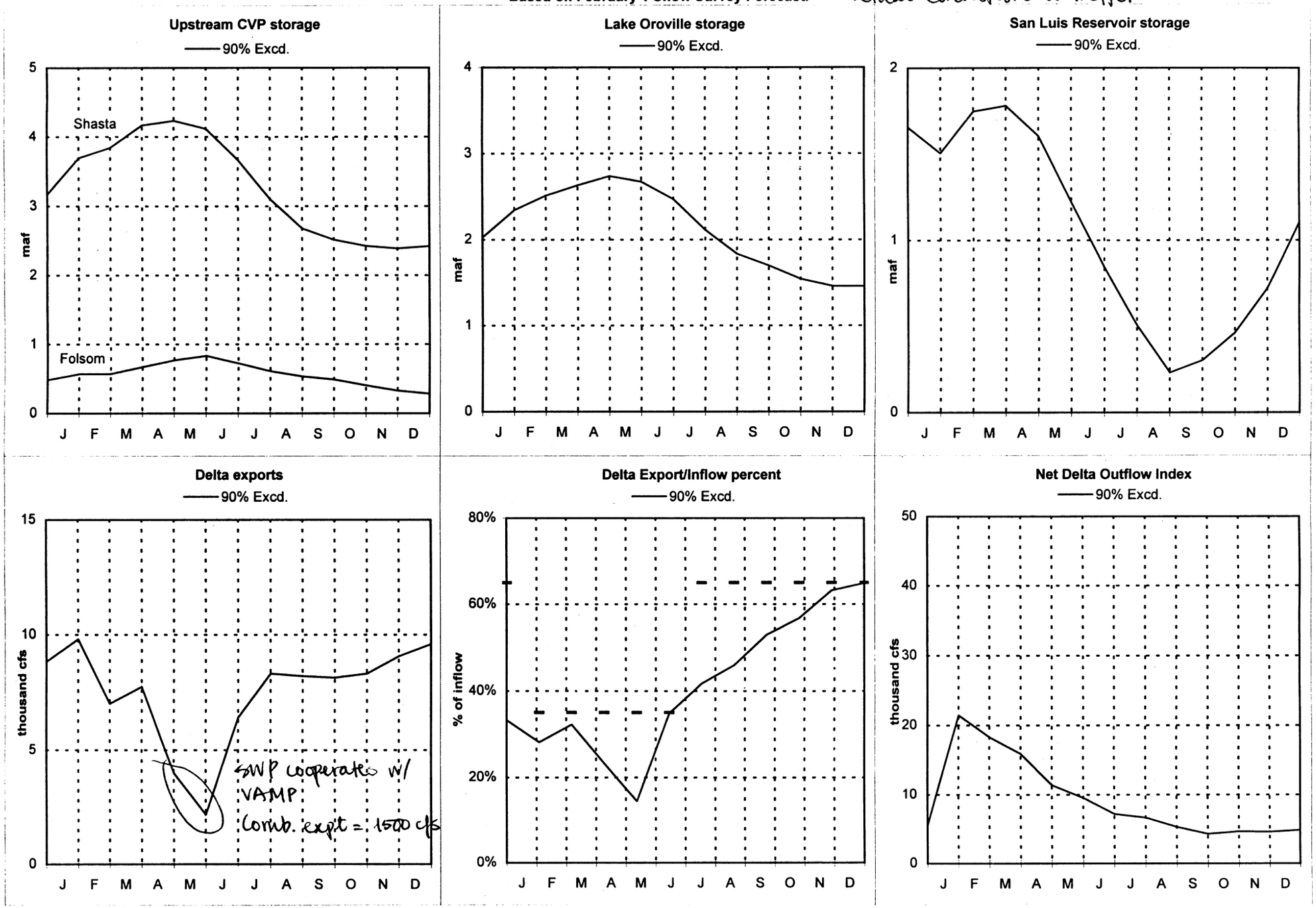
[13] Interruptible Water impacts due to delayed filling of San Luis Reservoir.

Analysis based upon USBR Feb 1 50% Exceedence Hydrology Study

Department of Water Resources
February 22, 2000

SWP & CVP CY 2000 Forecasted Operations.

Based on February 1 Snow Survey Forecast. Actual Condition is wetter



Based on 02/15/00 SWP & 2/10/00 CVP operations studies. Flows are monthly averages.

DRAFT

Bay-Delta Standards

DRAFT

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

CRITERIA	Feb 2000	Mar 2000	Apr 2000
FLOW/OPERATIONAL			
• Fish and Wildlife			1,500 cfs or 100% of 3-day avg. Vernalis flow
Export/Inflow Ratio	35%	35%	35%
Minimum Outflow - mon.			
- 7 day avg.			
Striped Bass Survival			
Habitat Protection Outflow, X2	Chipps Island for 28 days	* Port Chicago for 28 days, Chipps Island for 31 days	* Port Chicago for 23 days, Chipps Island for 30 days
River Flows:		* Projected requirement based on 25% exceedence 8RI's from February 1 forecast	
@ Rio Vista - min. mon. avg.	1000 cfs	1000 cfs until March 15 / 2,000 cfs	2000 cfs
- 7 day average	2000 cfs	2,000 cfs until March 15 / 3,000 cfs	3000 cfs
Salmon Migration			
@ Vernalis: Base -min. mon. avg.	3,420	3420 cfs	3420 cfs
- 7 day average	2,736	2736 cfs	2736 cfs
Pulse objective			7020 cfs
Delta Cross Channel Gates	Closed		
WATER QUALITY STANDARDS			
• Municipal and Industrial			
All Export Locations	Cl <= 250 mg/l	Cl <= 250 mg/l	Cl <= 250 mg/l
Contra Costa Canal	Cl <= 150 mg/l for 190 days for Above Normal Year Type		
• Agriculture			
Western/Interior Delta			max.14-day average EC 0.45 mS/cm
Southern Delta	30 day running avg. EC <= 1.0 mS/cm		30 day running avg. EC <= 0.7 mS/cm
• Fish and Wildlife			
San Joaquin River Salinity			14-day avg.; 0.44 EC
Suisun Marsh Salinity	8.0 mhtEC	8.0 mhtEC	11.0 mhtEC

Water Year Classification: Above Normal (Based on forecast, 2/1/2000)

SRI (40-30-30 @ 50%) = 7.9 MAF

SJV (60-20-20 @75%) =2.3 MAF

Preliminary, Subject to Revision.

DEC. standards2000 xls 2/23/00

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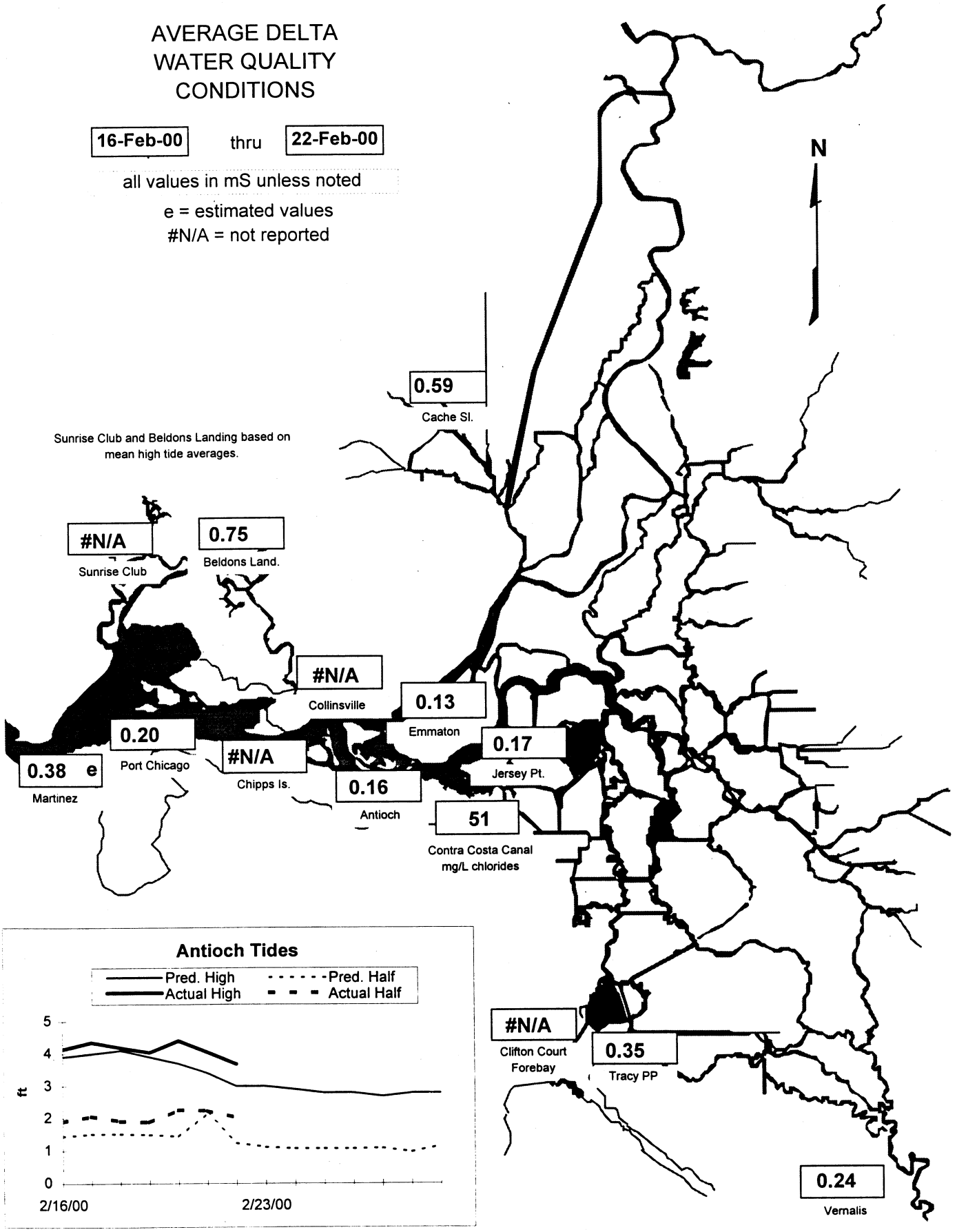
AVERAGE DELTA WATER QUALITY CONDITIONS

16-Feb-00 thru 22-Feb-00

all values in mS unless noted

e = estimated values

#N/A = not reported



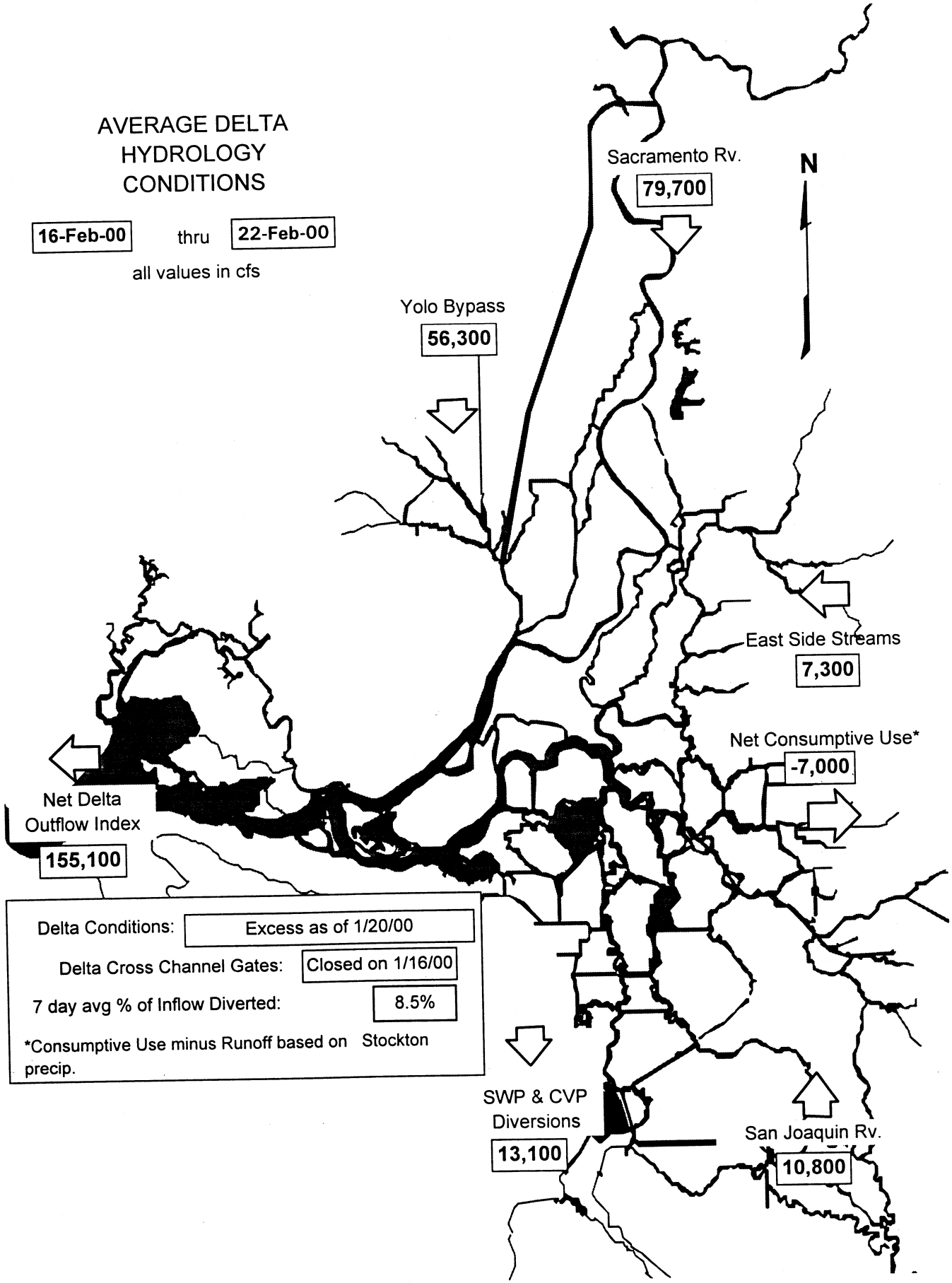
2/23/00 9:15 AM, DEC-OCO-O&M

PRELIMINARY DATA

AVERAGE DELTA HYDROLOGY CONDITIONS

16-Feb-00 thru 22-Feb-00

all values in cfs



Delta Conditions:	Excess as of 1/20/00
Delta Cross Channel Gates:	Closed on 1/16/00
7 day avg % of Inflow Diverted:	8.5%

*Consumptive Use minus Runoff based on Stockton precip.

2/23/00 9:15 AM DEC-OCO-O&M

PRELIMINARY DATA