

APPENDIX E. OPTION 2 HYDROLOGIC/HYDRODYNAMIC MODEL RESULTS

Table E-1. Summary Output for the Implementation of Conservation Strategy: Option 2

Delta flows ¹	Base		Option 2A				Option 2B			
	Annual Average ² (1)	Dry period ³ (2)	Annual Average ² (3)	Dry period ³ (4)	Change (3)-(1)	Change (4)-(2)	Annual Average ² (5)	Dry period ³ (6)	Change (5)-(1)	Change (6)-(2)
Sacramento River @ Hood	16,229	8,269	16,109	8,454	-120	185	16,200	8,243	-29	-27
San Joaquin River @ Vernalis	3,027	1,362	3,033	1,371	6	9	3,027	1,335	1	-26
Sacramento River @ Rio Vista	13,812	5,164	13,889	5,160	78	-4	13,383	4,111	-428	-1,054
Delta Outflow	14,991	5,154	17,783	6,163	2,791	1,010	18,404	6,266	3,413	1,113
SWP/CVP Exports	5,902	3,572	3,135	2,761	-2,767	-812	2,548	2,417	-3,354	-1,156
QWEST (cfs)	1,620	-12	5,386	1,386	3,767	1,398	6,968	3,005	5,348	3,017
Old and Middle River (cfs)	-5,842	-4,635	-2,793	-3,735	3,049	900	-2,161	-3,403	3,681	1,232
Water quality ⁴	Annual Average ⁵ (1)	Dry period ³ (2)	Annual Average ⁵ (3)	Dry period ³ (4)	Change (3)-(1)	Change (4)-(2)	Annual Average ⁵ (5)	Dry period ³ (6)	Change (5)-(1)	Change (6)-(2)
X2 (km)	76	82	73	81	-3	-1	72	80	-4	-2
EC Exports ⁶	488		304		-183		298		-190	
EC at Emmaton	1,128		852		-276		964		-164	
EC at Jersey Point	1,074		695		-378		750		-323	
EC at Collinsville	3,816		2,825		-991		2,992		-824	
EC at Old River, Hwy 4	488		630		143		677		189	
Particle Transport and Fate ⁷	Average ⁸ (1)		Average ⁸ (2)		Change (2)-(1)		Average ⁸ (3)		Change (3)-(1)	
Insertion on Old River @ Quimby Island	57		4		-53		1		-55	
Insertion on Middle River @ Mildred Island	59		99		40		99		40	
Insertion on San Joaquin River near Big Break	9		1		-8		0		-9	
Insertion on Sacramento River near Cache Slough	13		3		-10		1		-12	
Insertion on San Joaquin River near Head of Old River	47		20		-27		22		-25	

Table E-1. Summary Output for the Implementation of Conservation Strategy: Option 2

NOTES:

1. Units in TAF unless mentioned otherwise
2. Annual average, 1921-2003
3. Dry period, 1928-1934
4. Units in EC, $\mu\text{MHOS/cm}$ unless mentioned otherwise
5. For EC parameter values represent 16-year monthly Period Averaged; for X2 values represent annual average, 1921-2003
6. Base: EC is blended between EC at Banks and EC at Tracy; Options 2A and 2B: EC at the Victoria Canal siphon
7. Percentage of particles entering SWP and CVP pumping stations in Baseline and entering the Victoria Canal siphon in Option 2
8. Average of 1977, 1981 and 1990 releases of % cumulative particles ended up in exports at the end of 40 days

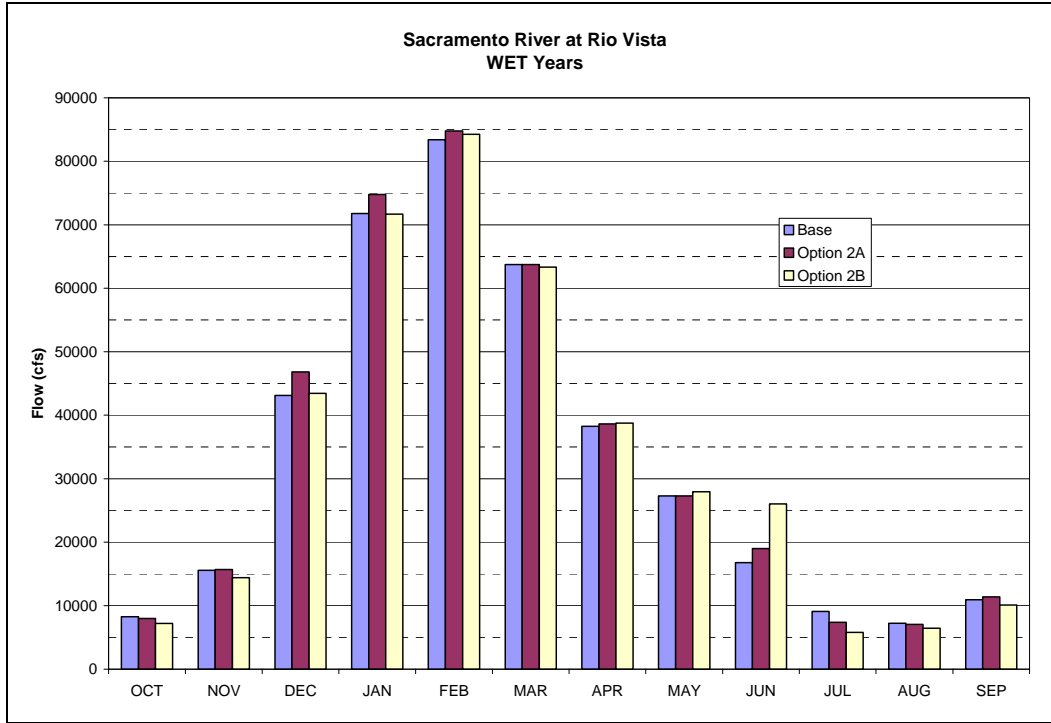


Figure E-1a. Sacramento River at Rio Vista Wet Year Average Flows

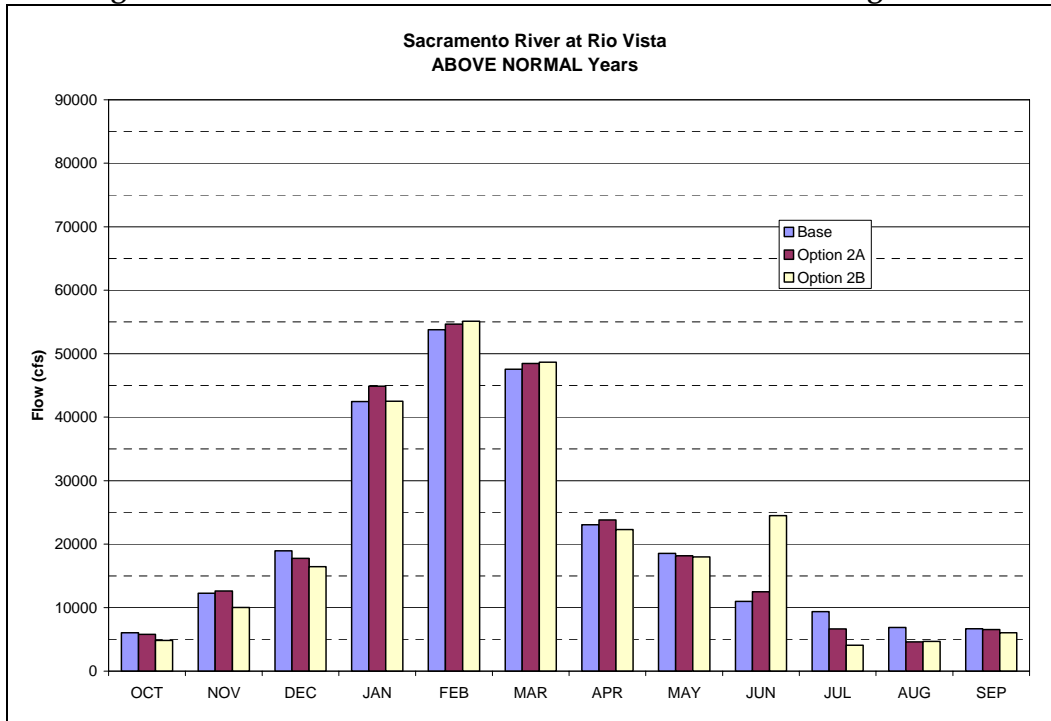
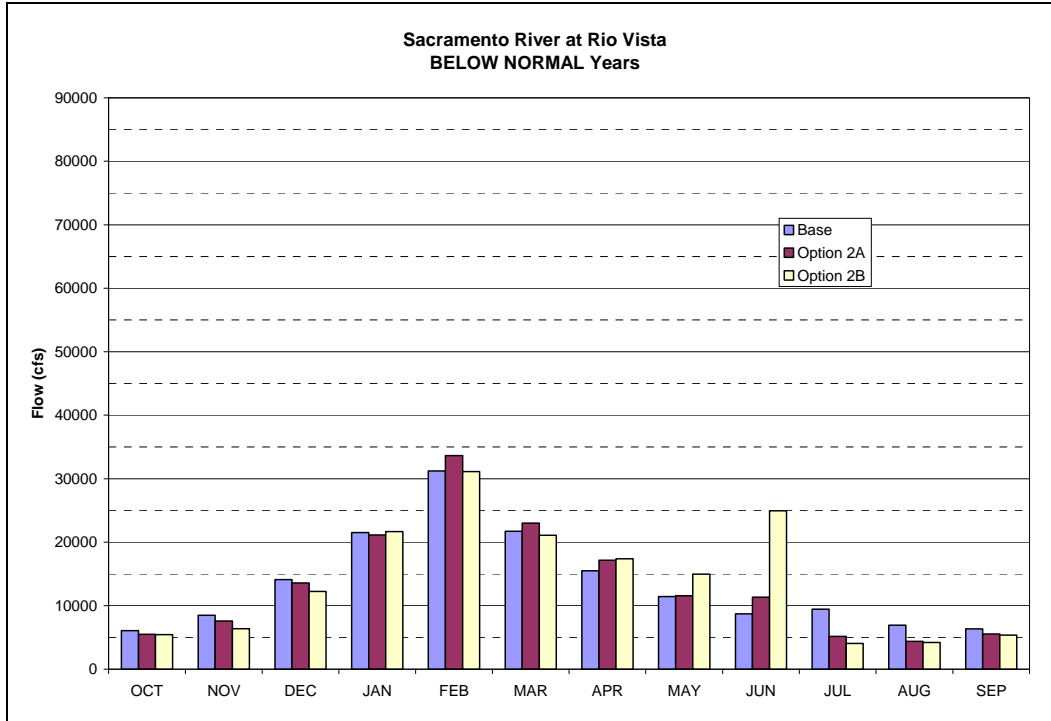


Figure E-1b. Sacramento River at Rio Vista Above Normal Year Average Flows

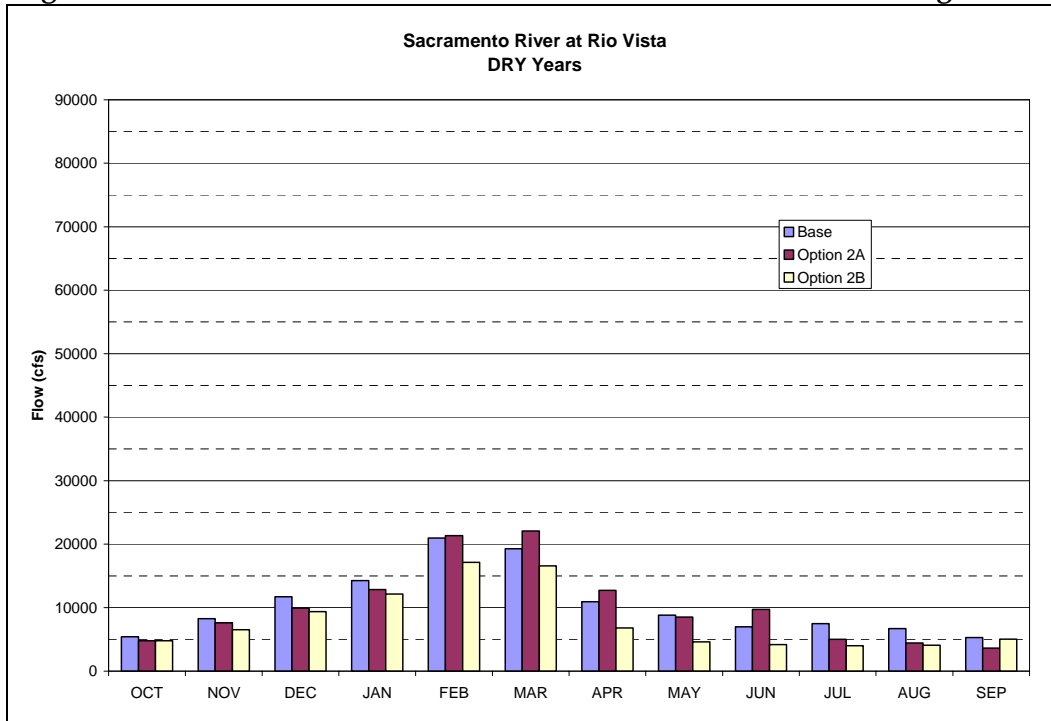
1
2
3

4
5
6
7
8



1
2
3

Figure E-1c. Sacramento River at Rio Vista Below Normal Year Average Flows



4
5
6
7

Figure E-1d. Sacramento River at Rio Vista Dry Year Average Flows

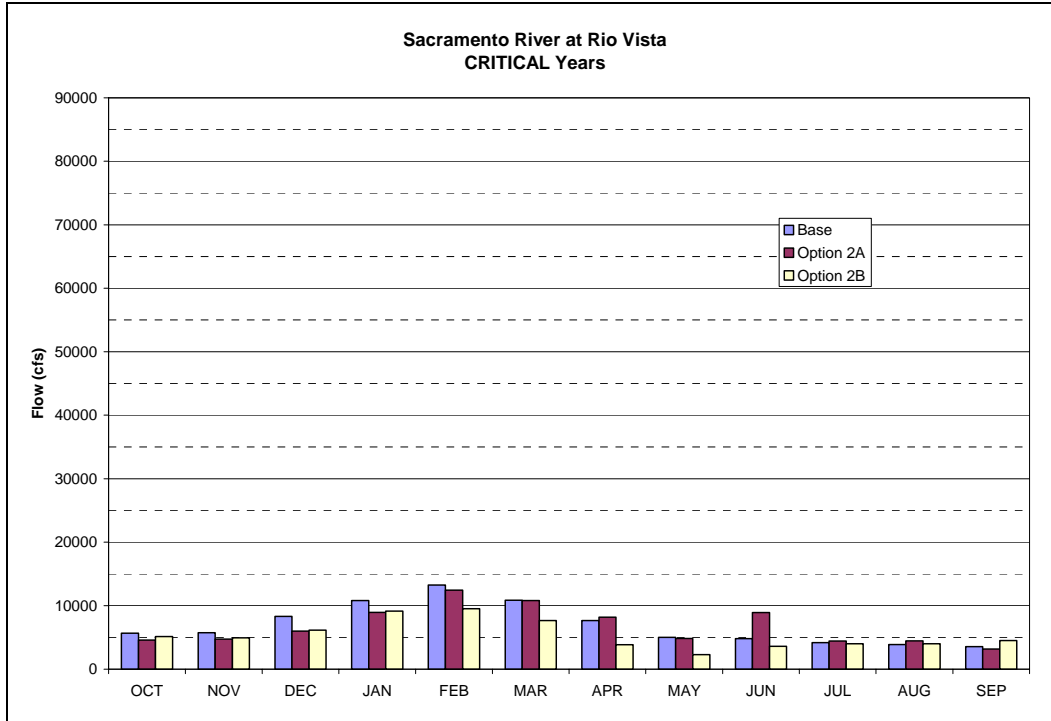


Figure E-1e. Sacramento River at Rio Vista Critical Year Average Flows

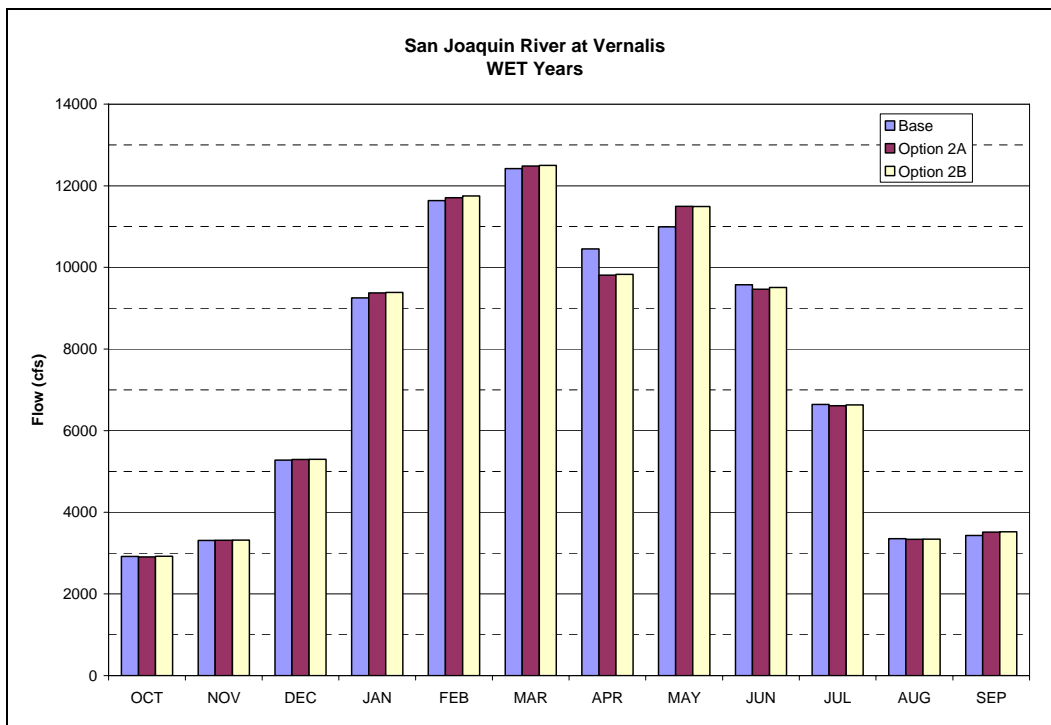


Figure E-2a. San Joaquin River at Vernalis Wet Year Average Flows

1
2
3
4

5
6
7
8

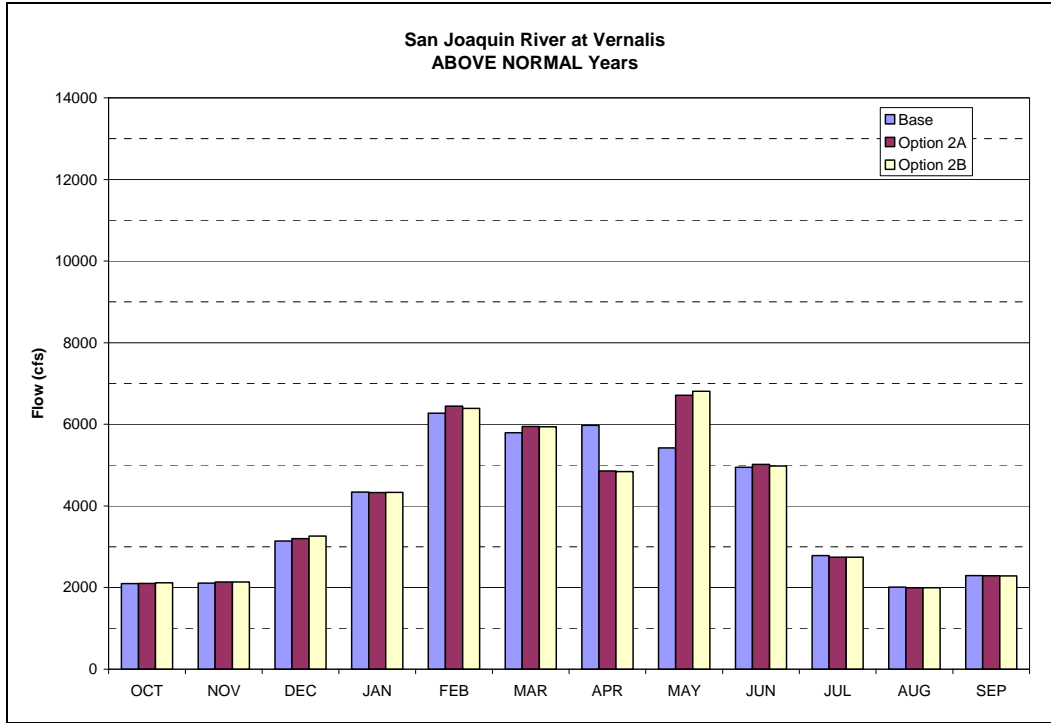


Figure E-2b. San Joaquin River at Vernalis Above Normal Year Average Flows

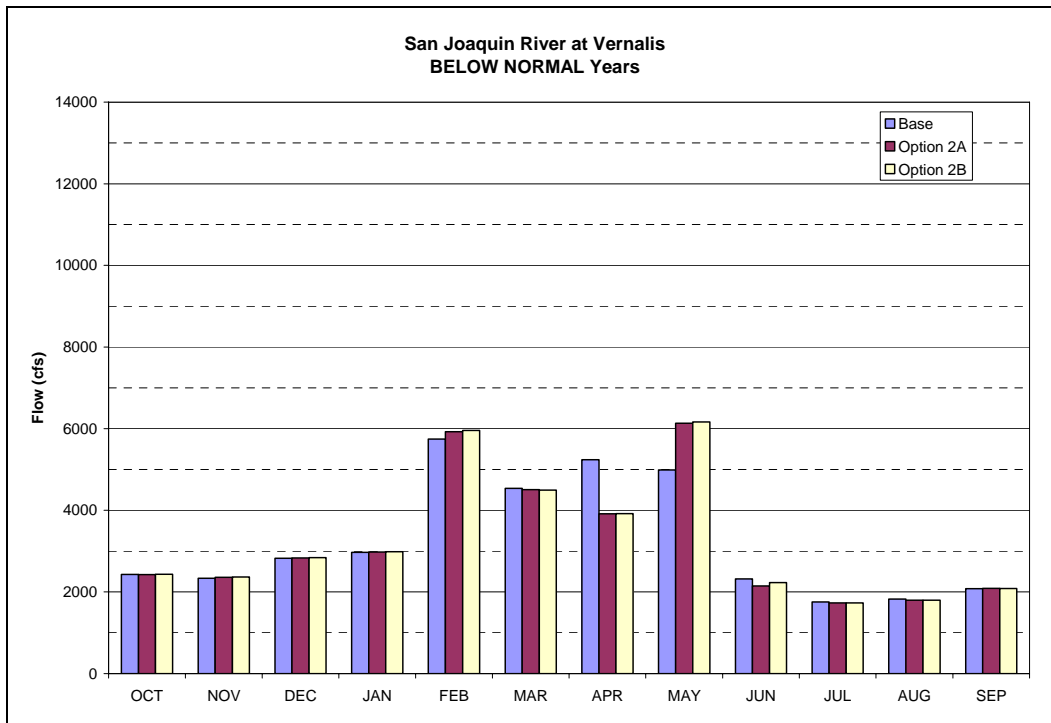


Figure E-2c. San Joaquin River at Vernalis Below Normal Year Average Flows

1
2
3
4

5
6
7
8

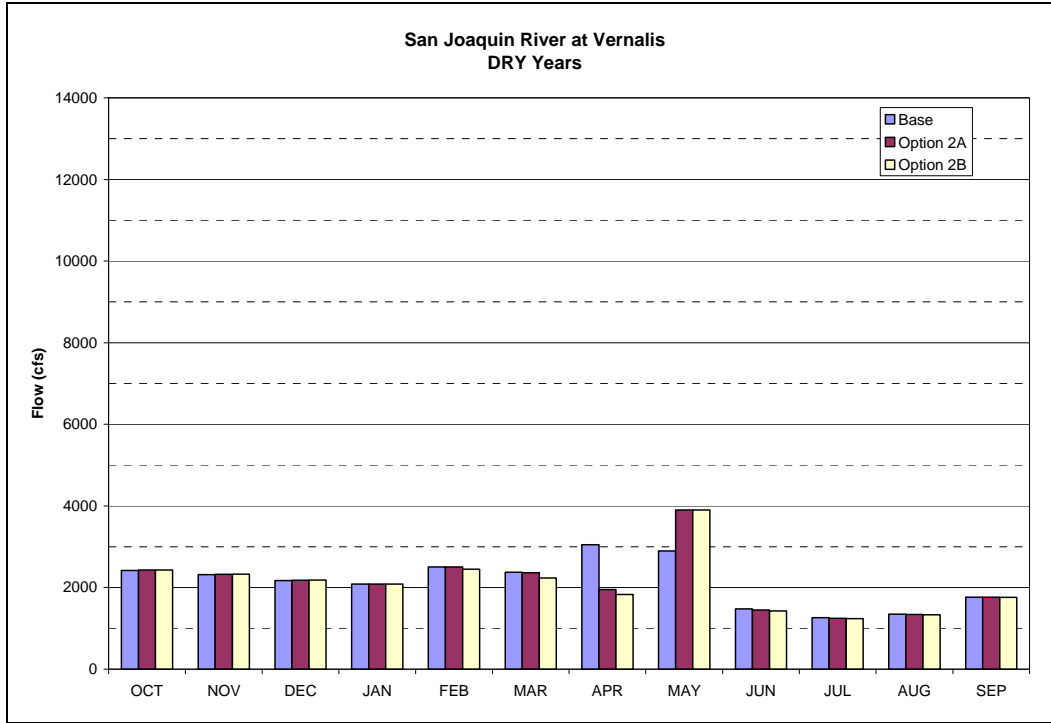


Figure E-2d. San Joaquin River at Vernalis Dry Year Average Flows

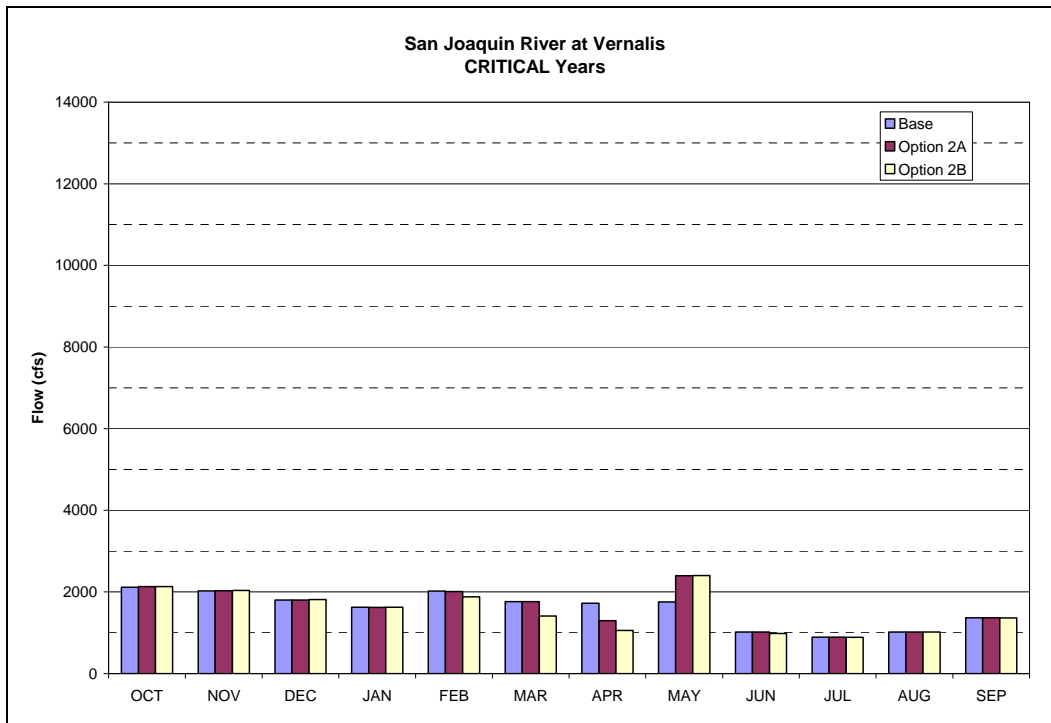


Figure E-2e. San Joaquin River at Vernalis Critical Year Average Flows

1
2
3
4

5
6
7
8

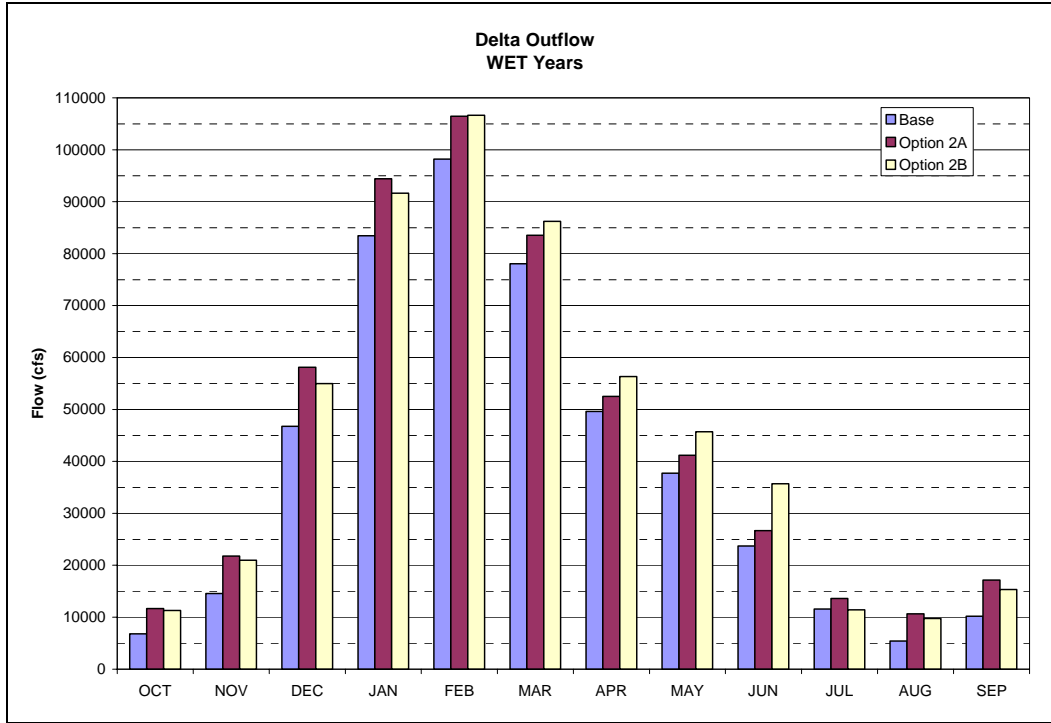


Figure E-3a. Delta Outflow Wet Year Average Flows

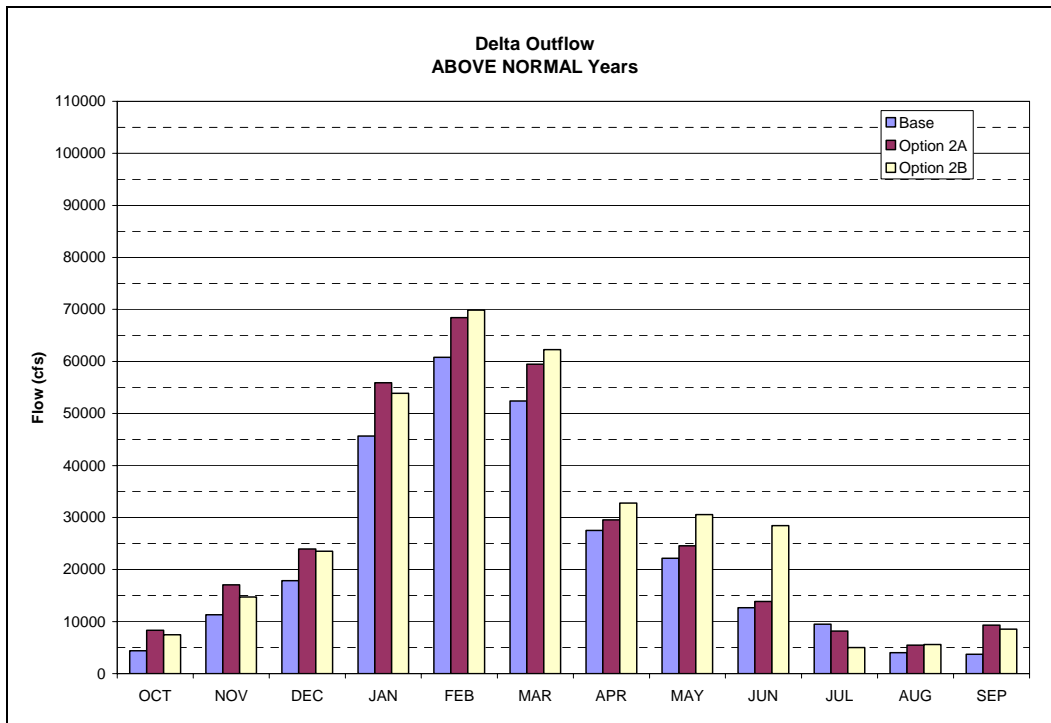


Figure E-3b. Delta Outflow Above Normal Year Average Flows

1
2
3
4

5
6
7
8

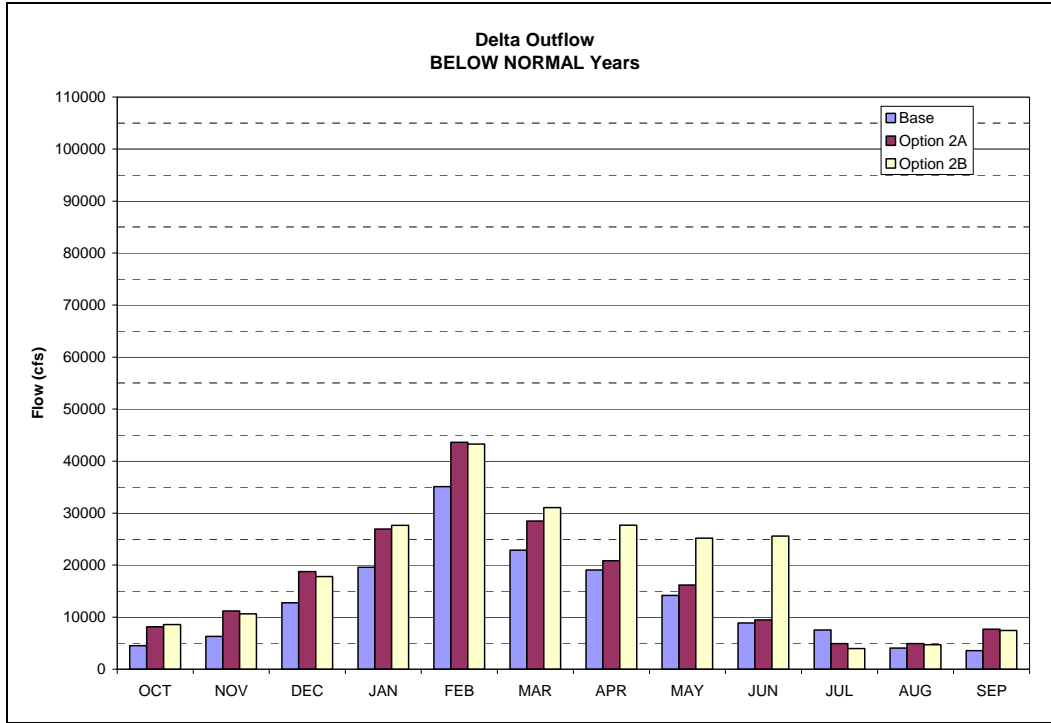


Figure E-3c. Delta Outflow Below Normal Year Average Flows

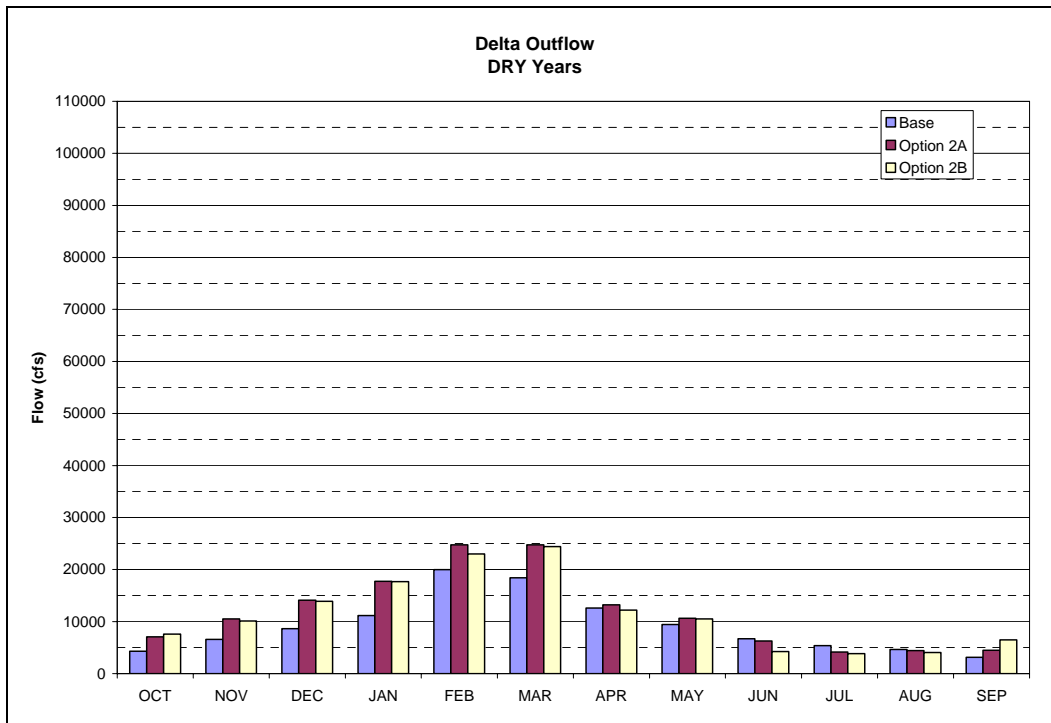


Figure E-3d. Delta Outflow Dry Year Average Flows

1
2
3
4

5
6
7
8

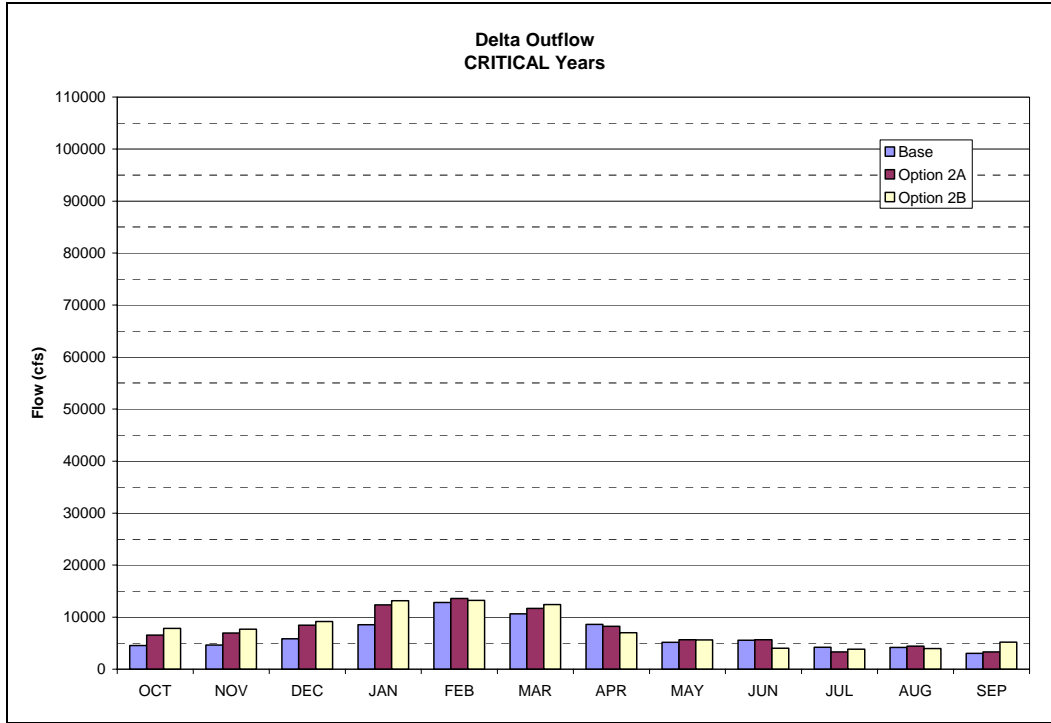


Figure E-3e. Delta Outflow Critical Year Average Flows

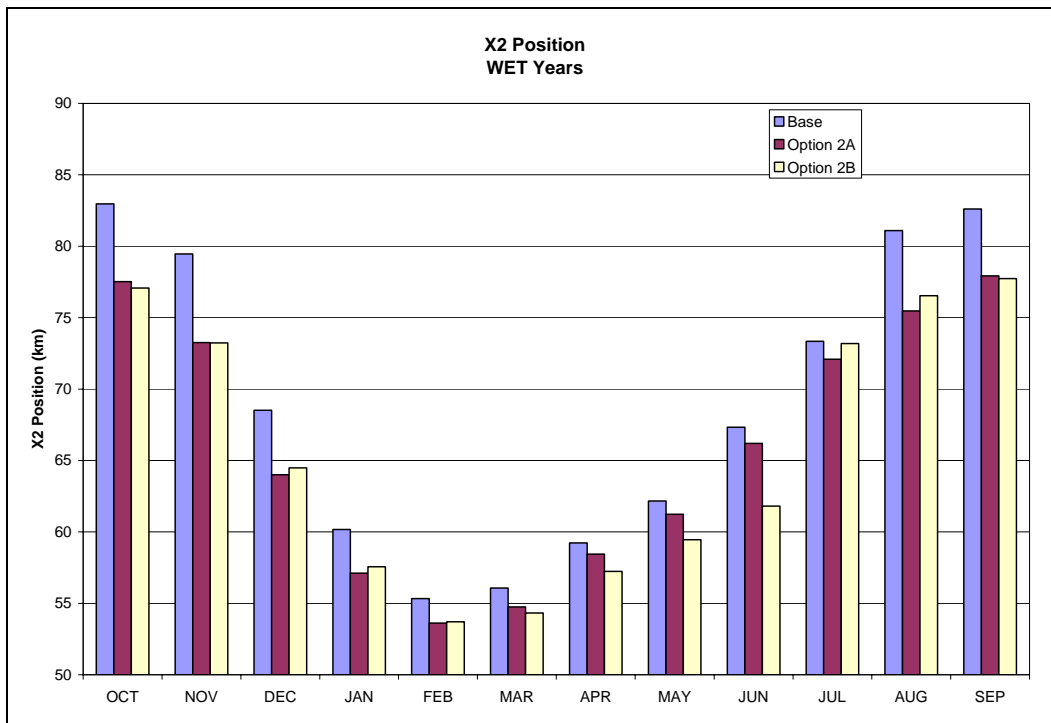


Figure E-4a. X2 Wet Year Average Distance

1
2
3
4

5
6
7
8

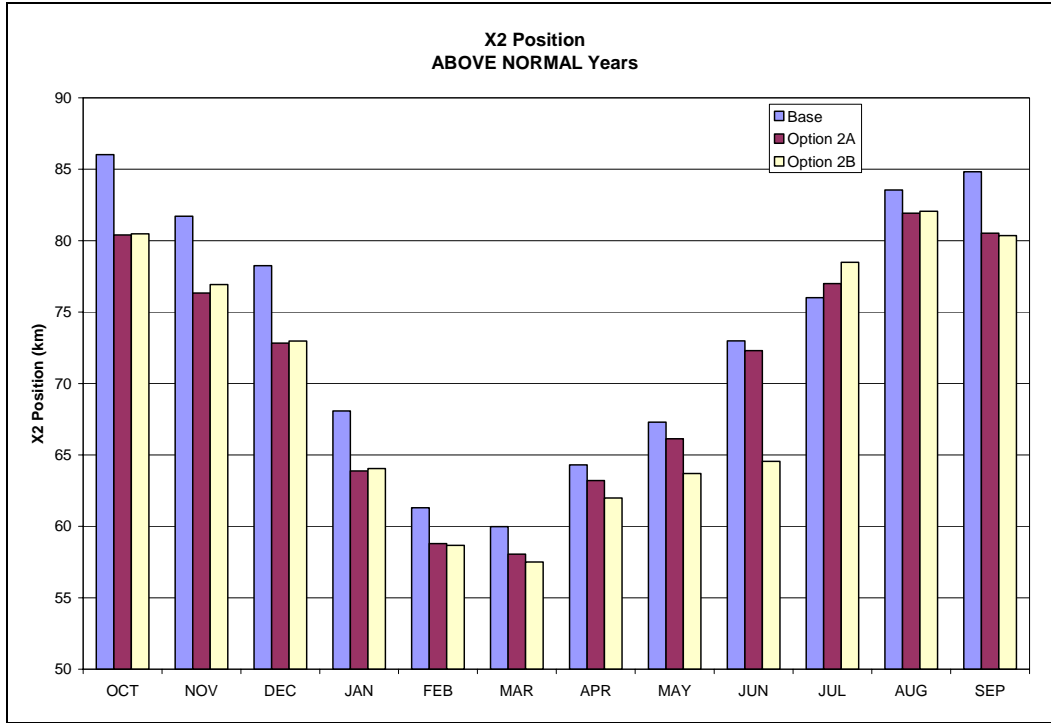


Figure E-4b. X2 Above Normal Year Average Distance

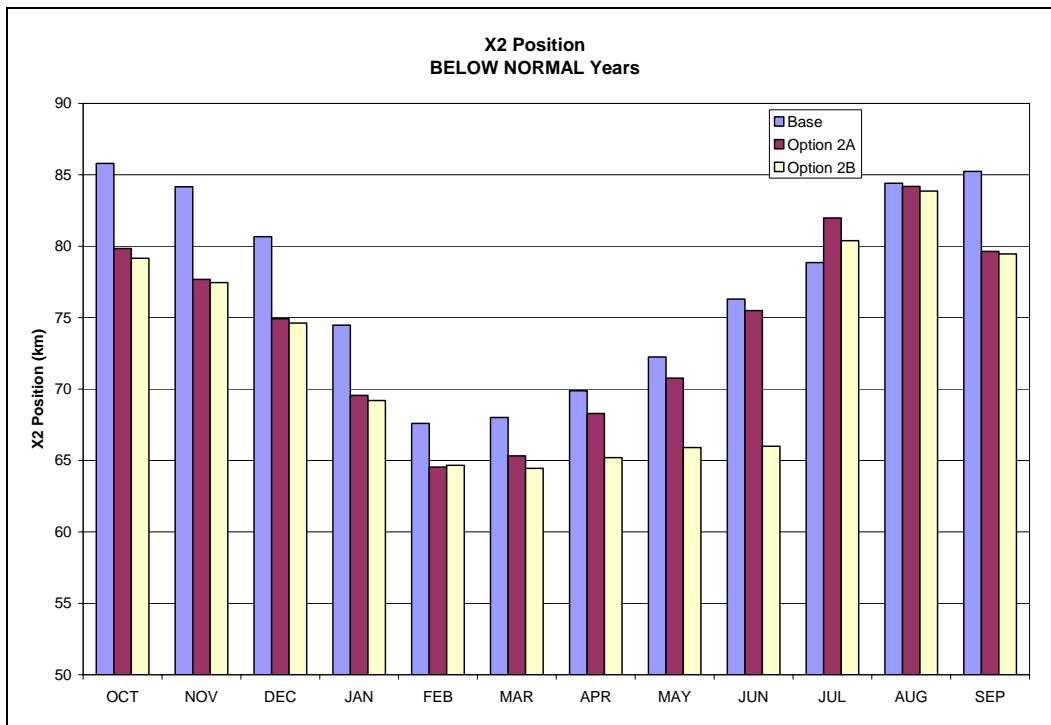


Figure E-4c. X2 Below Normal Year Average Distance

1
2
3
4

5
6
7
8

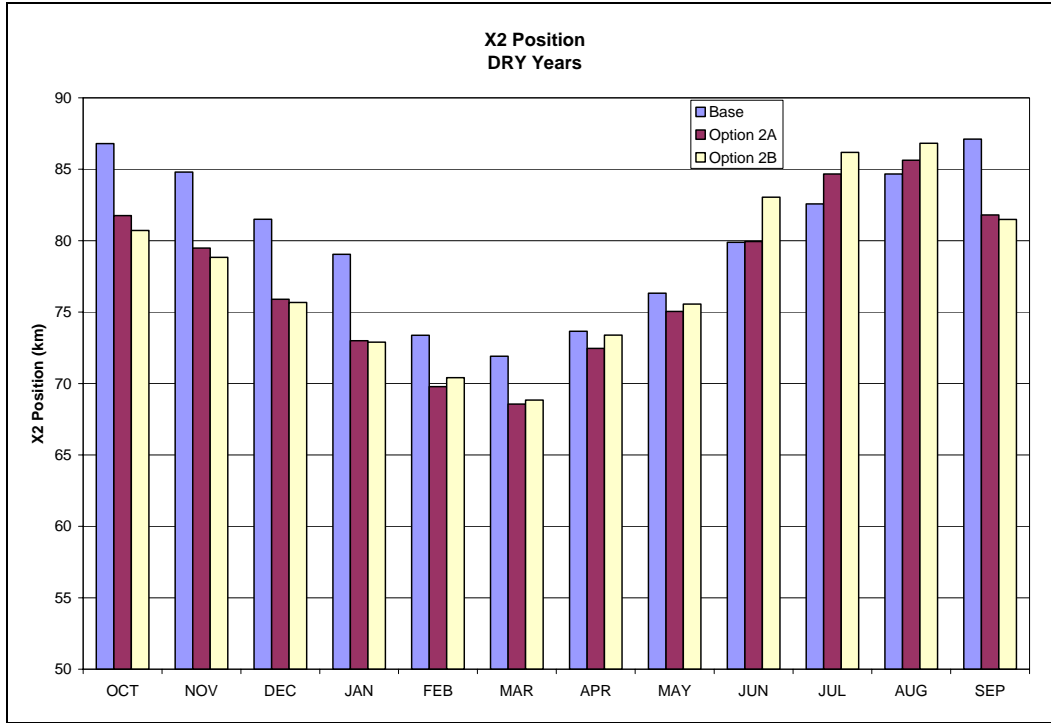


Figure E-4d. X2 Dry Year Average Distance

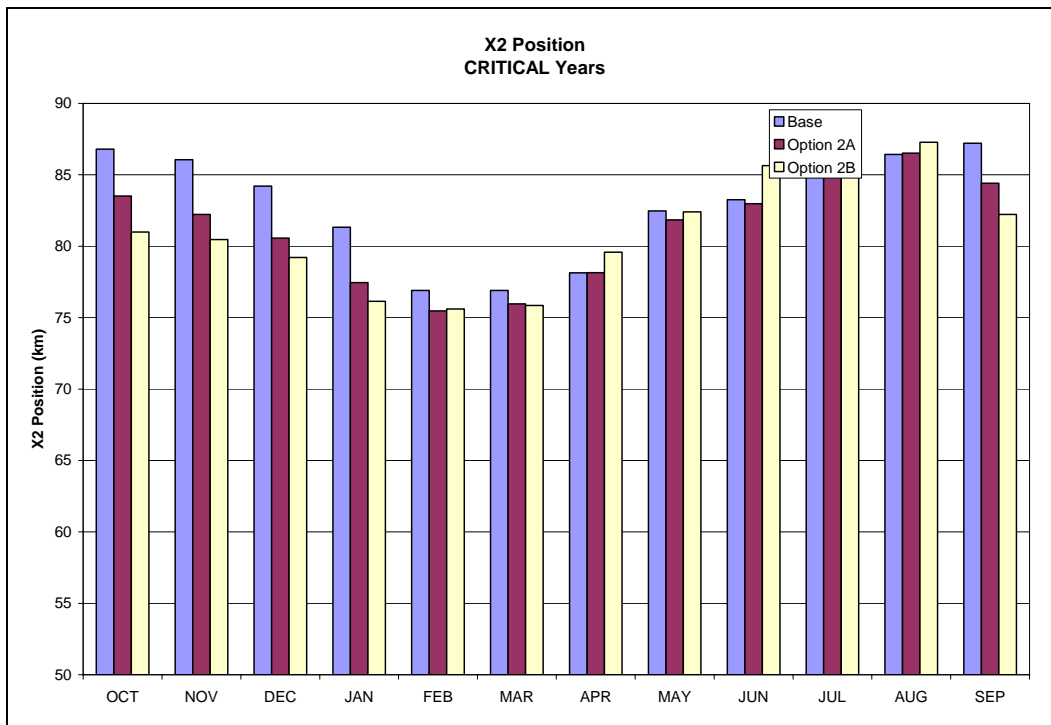


Figure E-4e. X2 Critical Year Average Distance

1
2
3
4

5
6
7
8

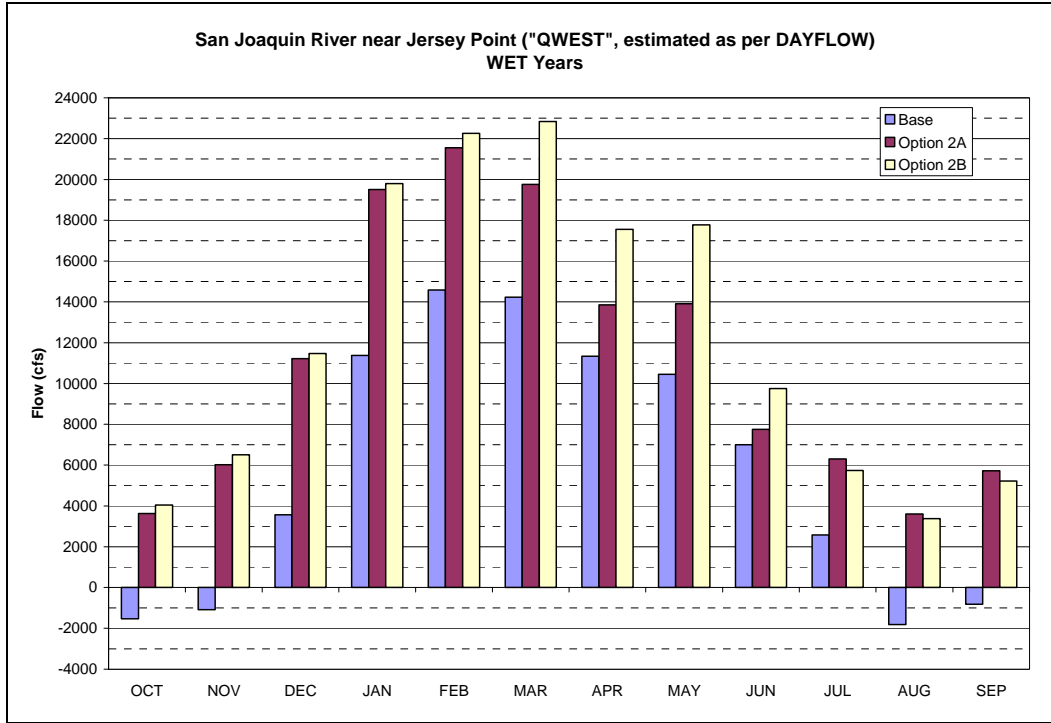


Figure E-5a. QWEST Wet Year Average Flows

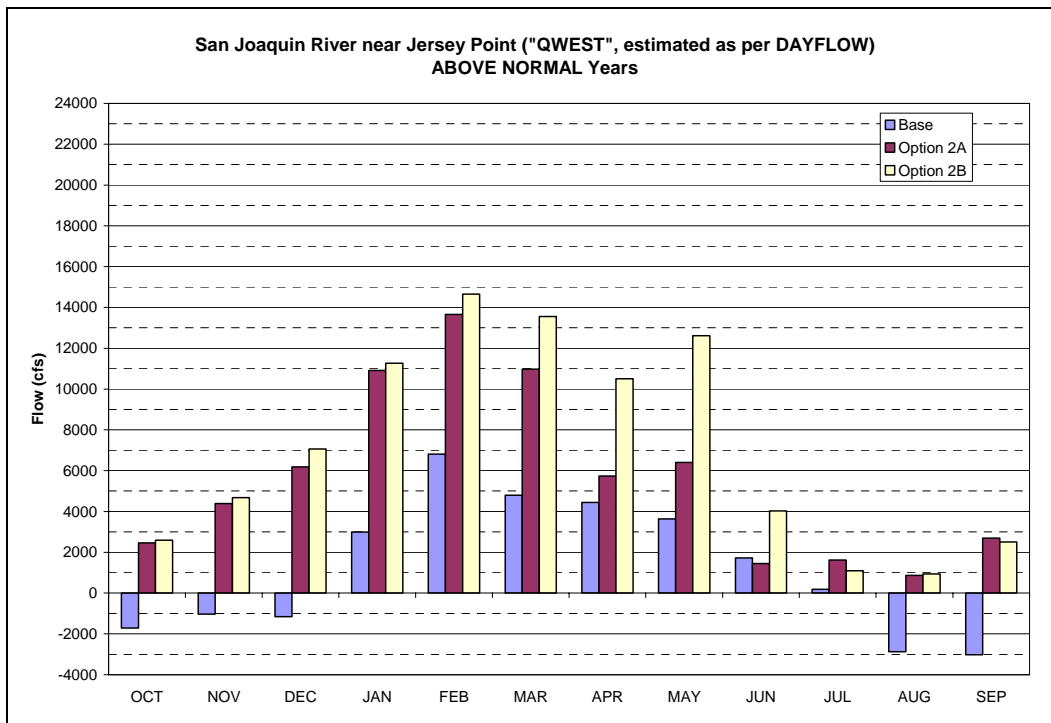


Figure E-5b. QWEST Above Normal Year Average Flows

1
2
3
4

5
6
7
8

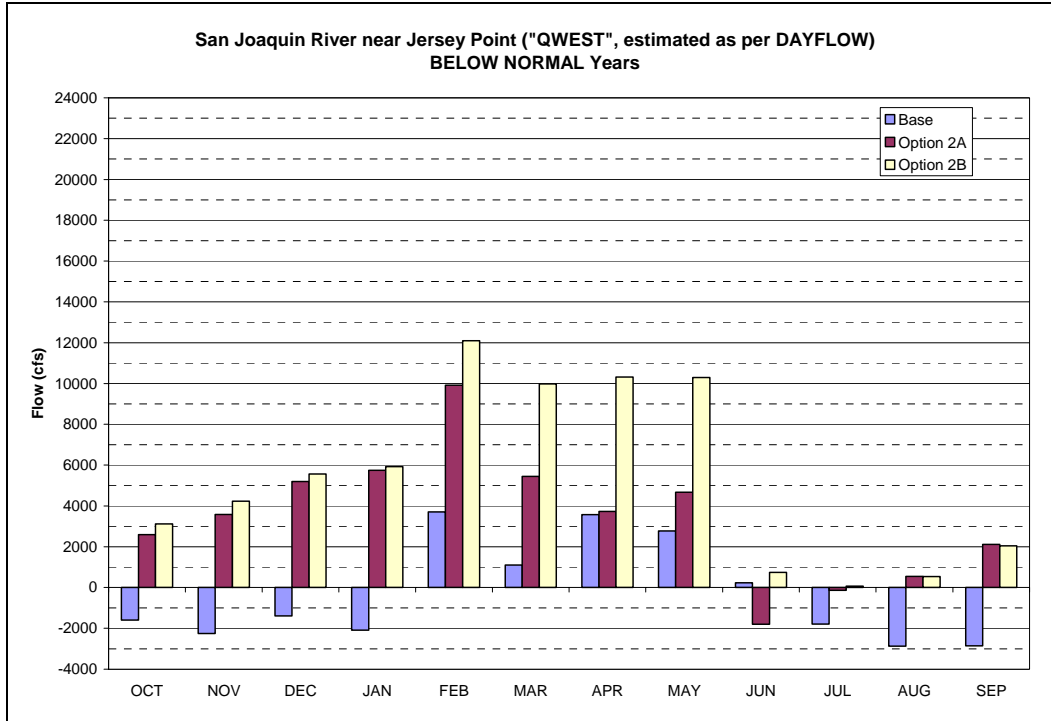


Figure E-5c. QWEST Below Normal Year Average Flows

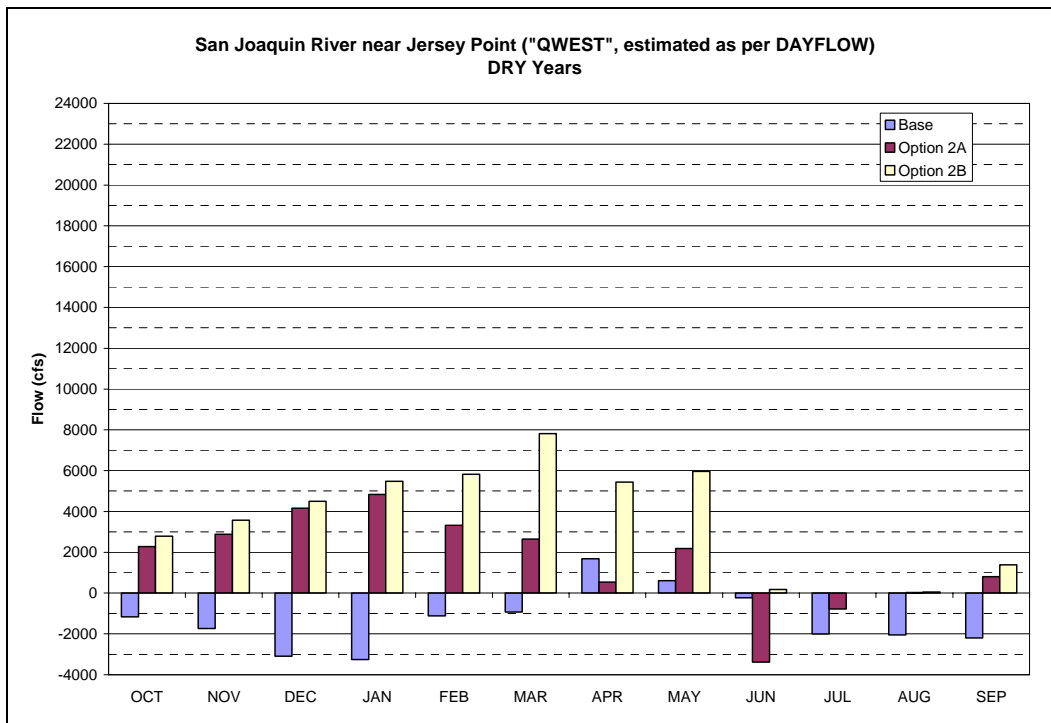


Figure E-5d. QWEST Dry Year Average Flows

1
2
3
4

5
6
7
8

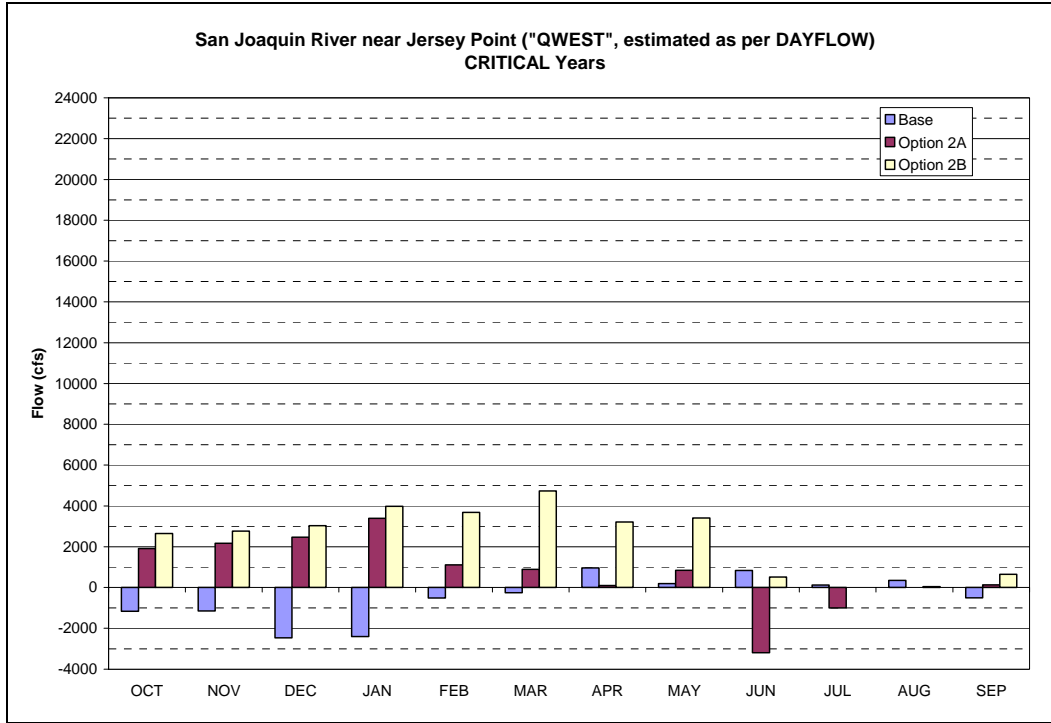


Figure E-5e. QWEST Critical Year Average Flows

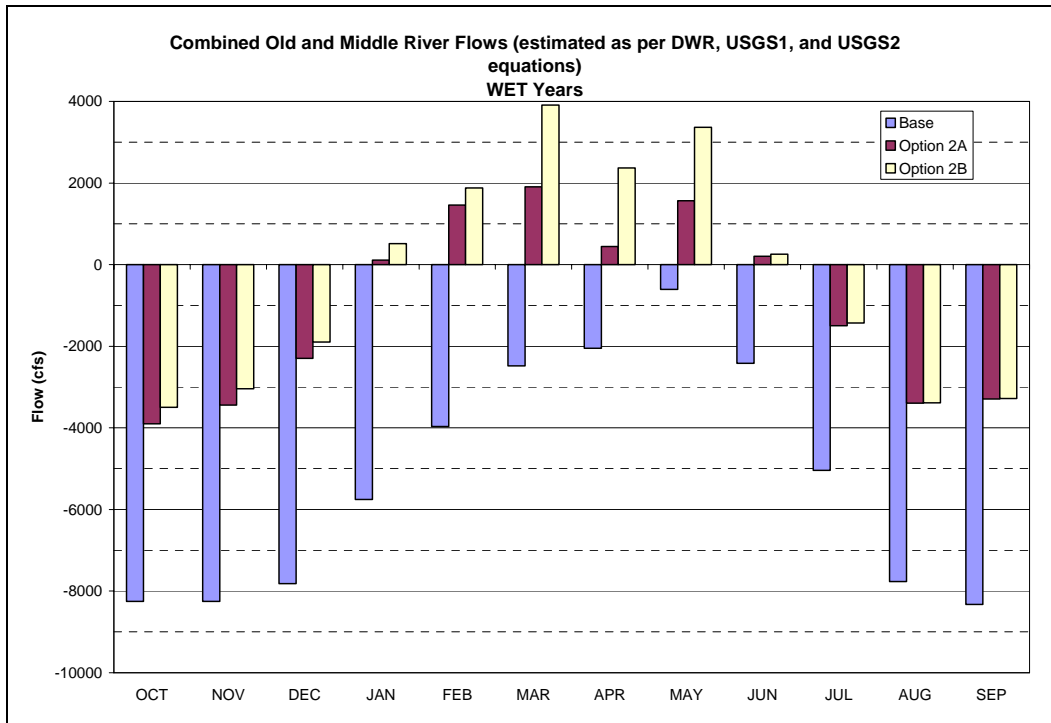


Figure E-6a. Combined Old and Middle River Wet Year Average Flows

1
2
3
4

5
6
7
8

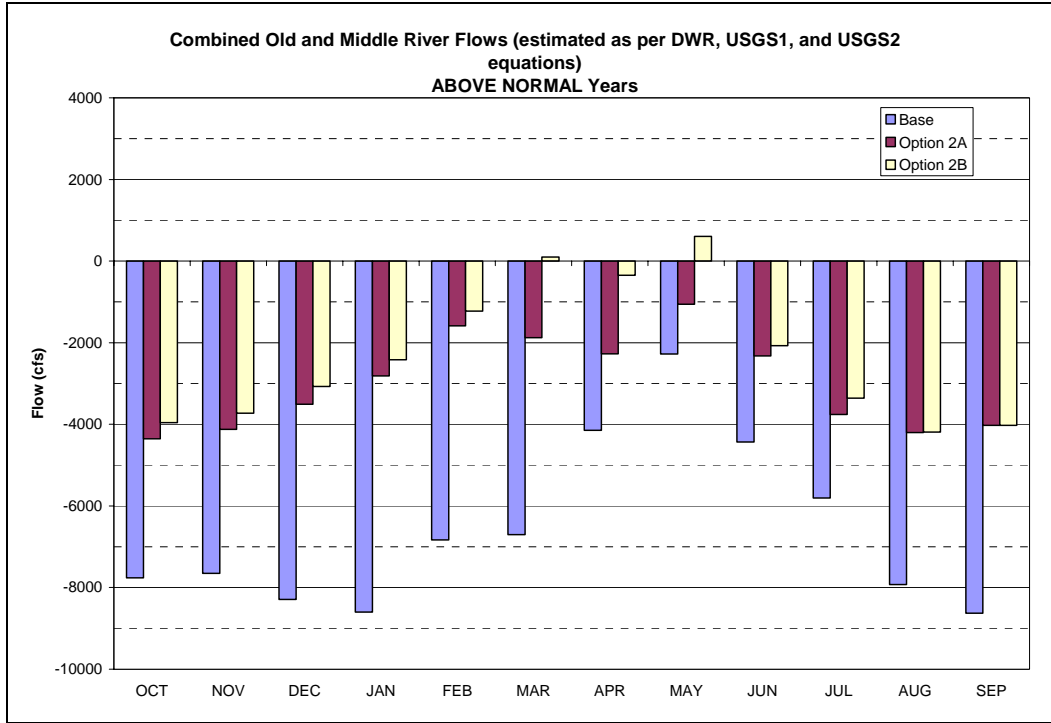


Figure E-6b. Combined Old and Middle River Above Normal Year Average Flows

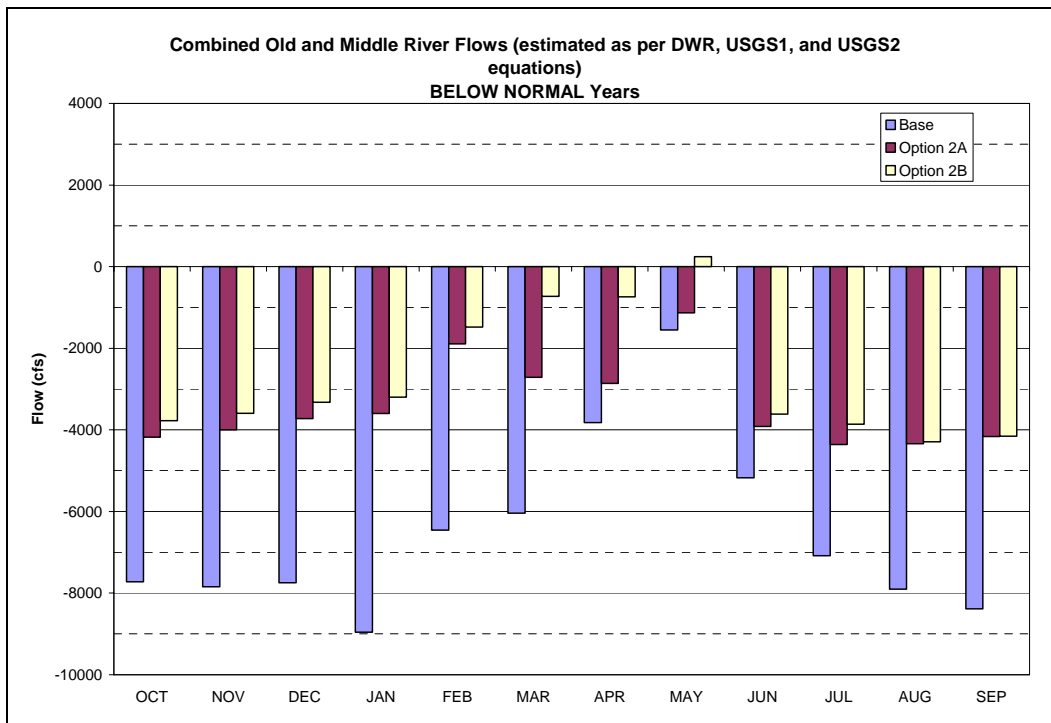


Figure E-6c. Combined Old and Middle River Below Normal Year Average Flows

1
2
3
4

5
6
7
8

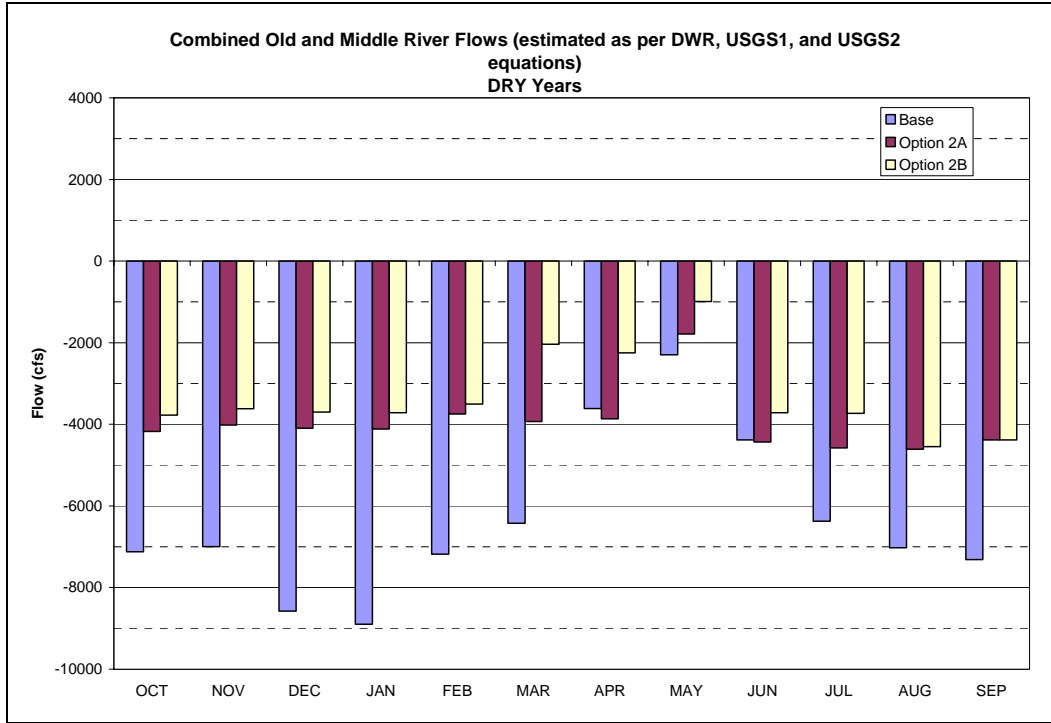


Figure E-6d. Combined Old and Middle River Dry Year Average Flows

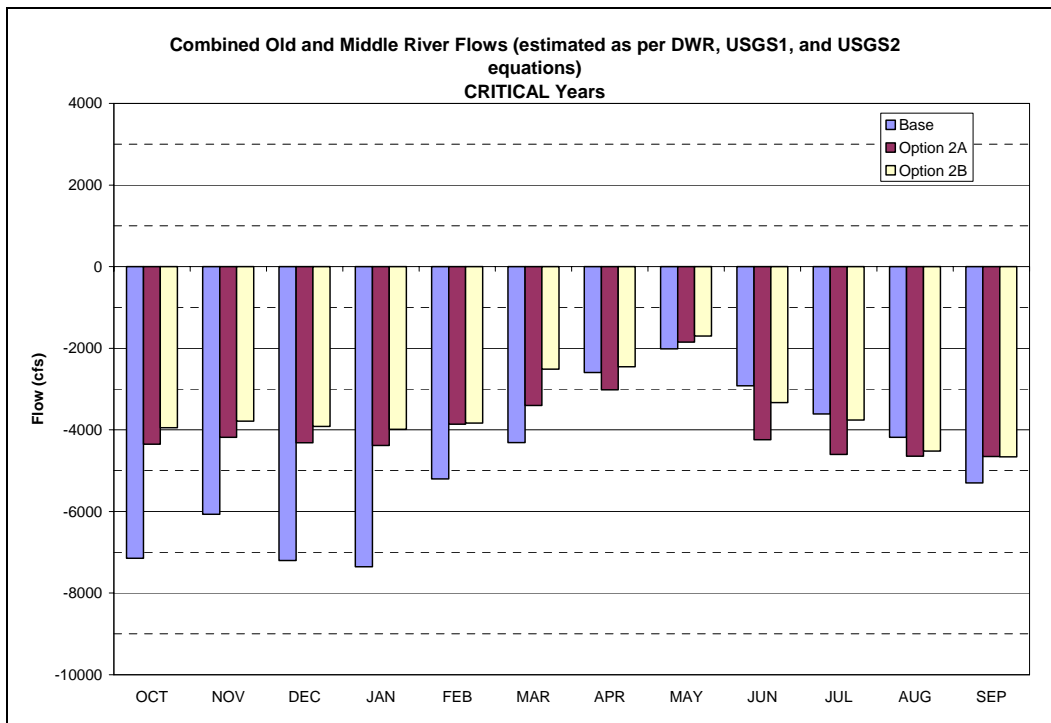
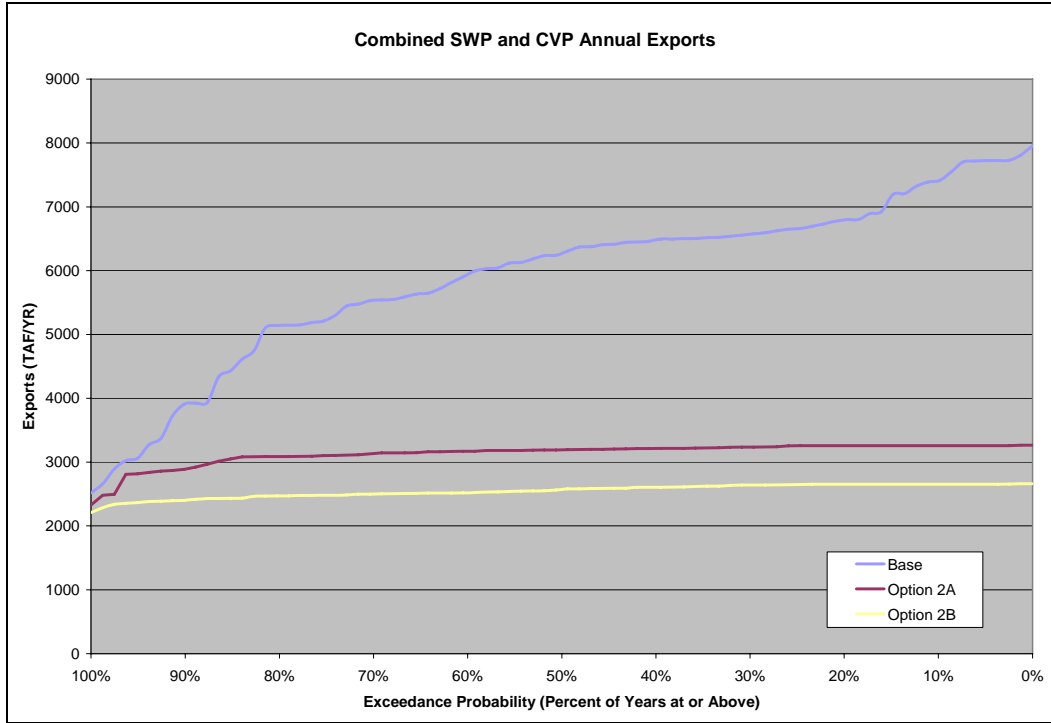


Figure E-6e. Combined Old and Middle River Critical Year Average Flows

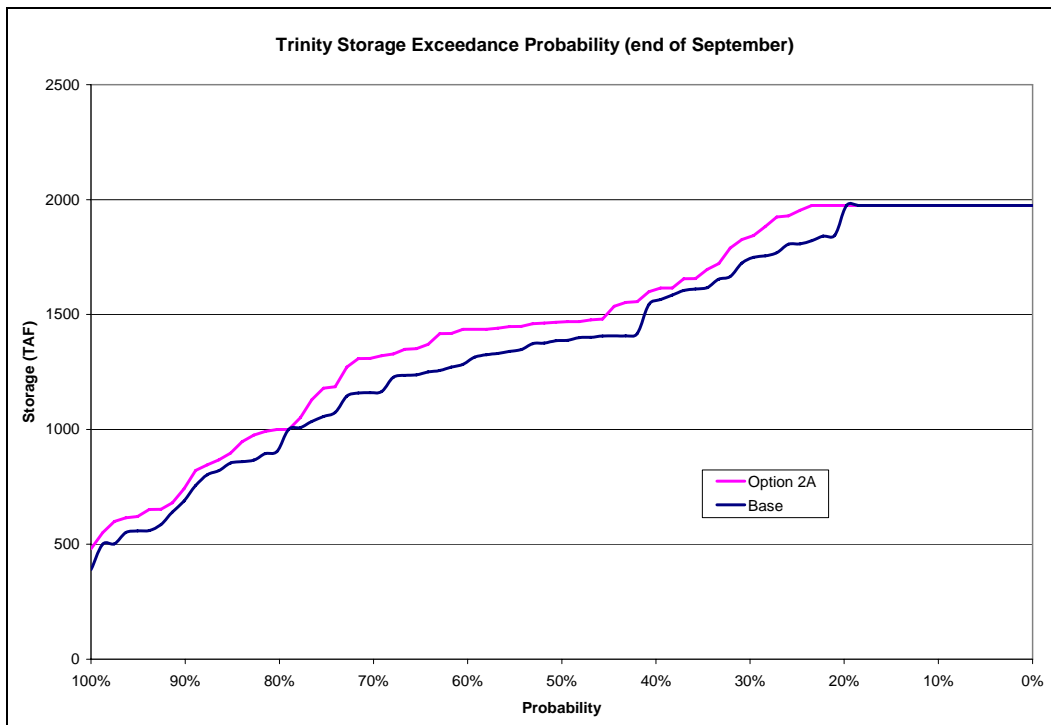
1
2
3
4

5
6
7
8



1
2
3
4

Figure E-7. Water Supply Frequency: Combined SWP and CVP Annual Delta Exports



5
6
7
8

Figure E-8a. Option 2A CVP Northern Delta Storage Frequency: Trinity

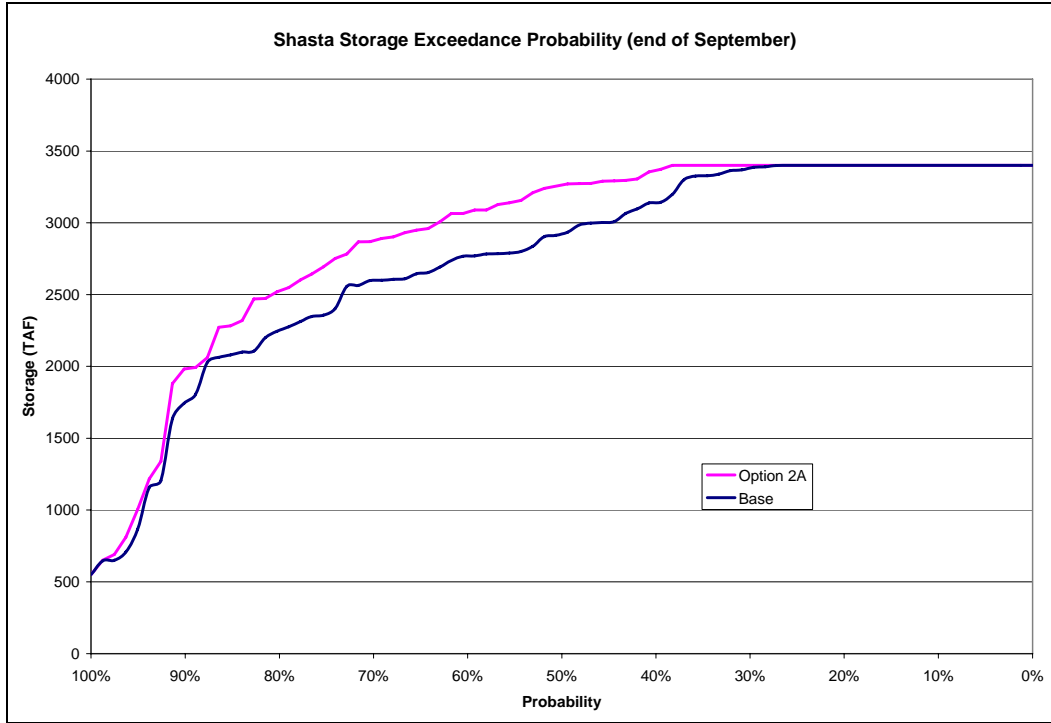


Figure E-8b. Option 2A CVP Northern Delta Storage Frequency: Shasta

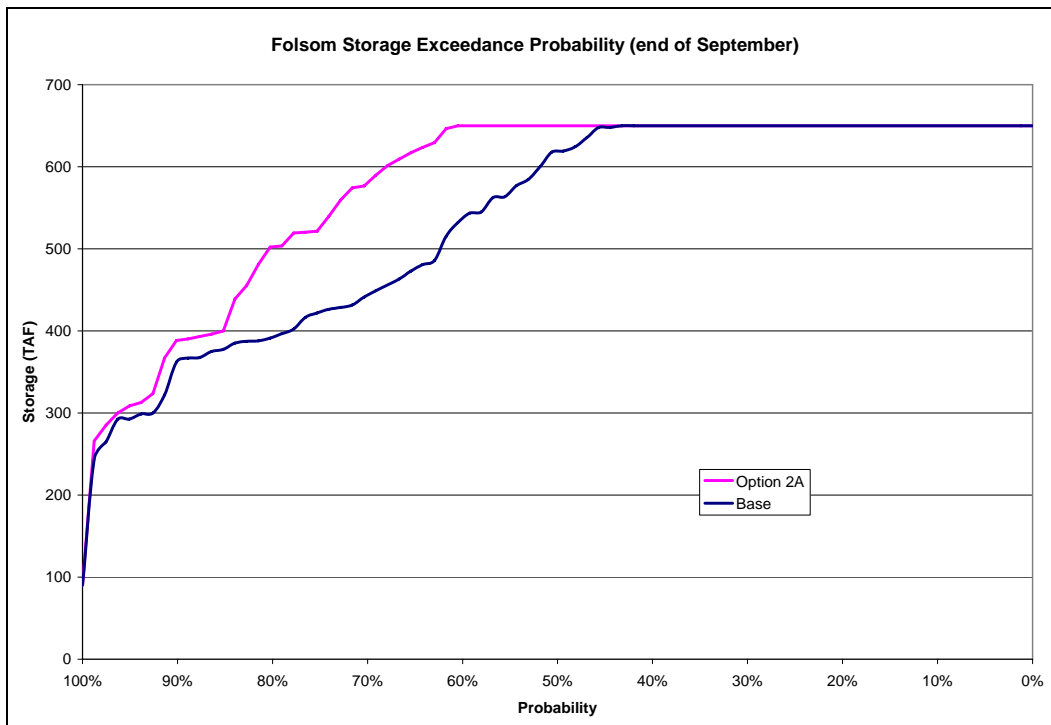
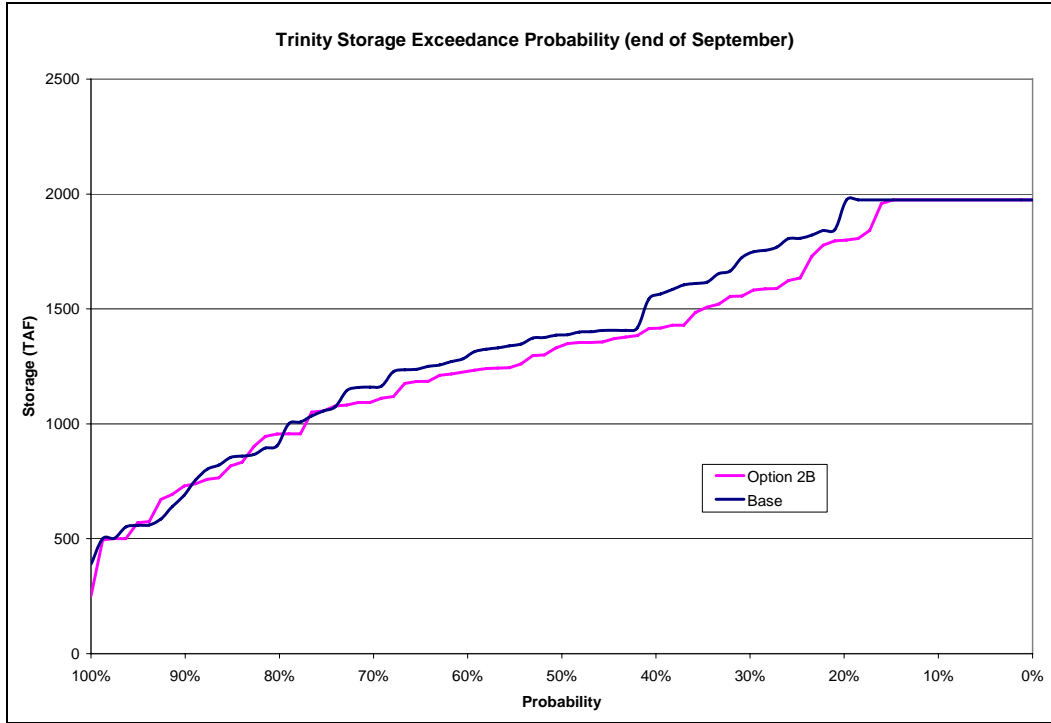


Figure E-8c. Option 2A CVP Northern Delta Storage Frequency: Folsom

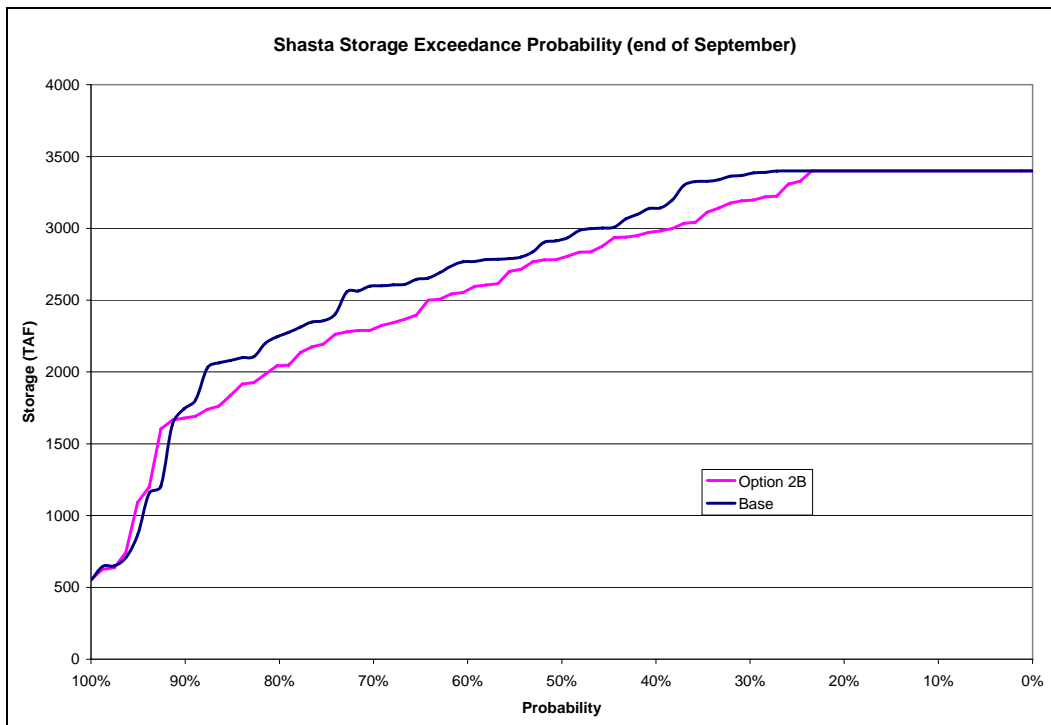
1
2
3
4

5
6
7
8



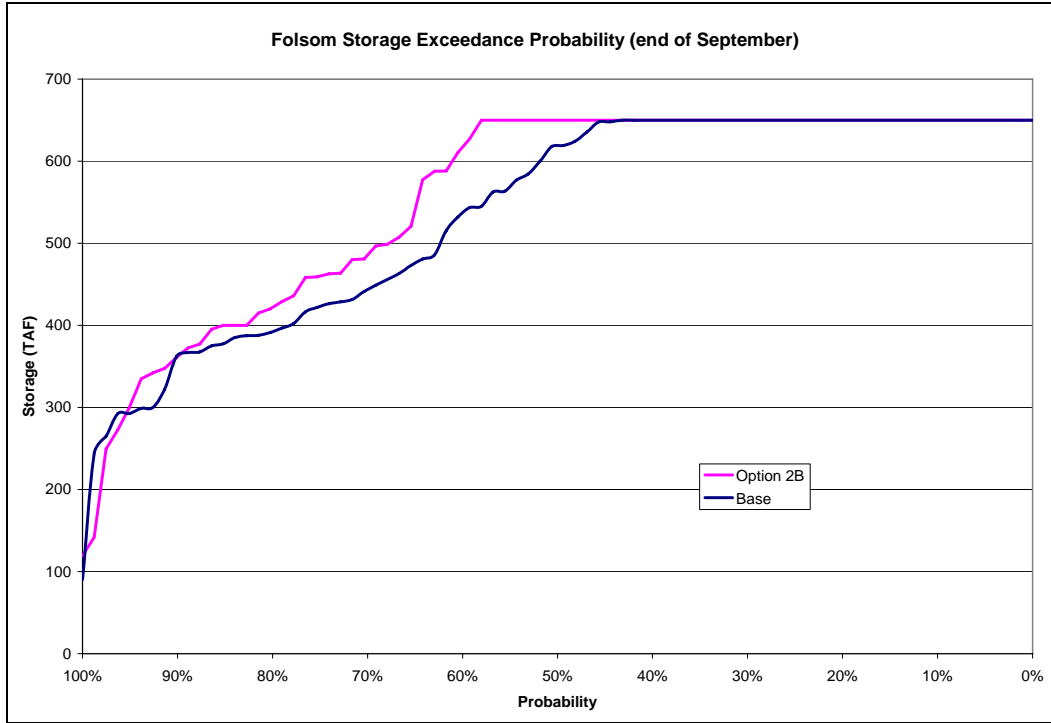
1
2
3
4

Figure E-9a. Option 2B CVP Northern Delta Storage Frequency: Trinity



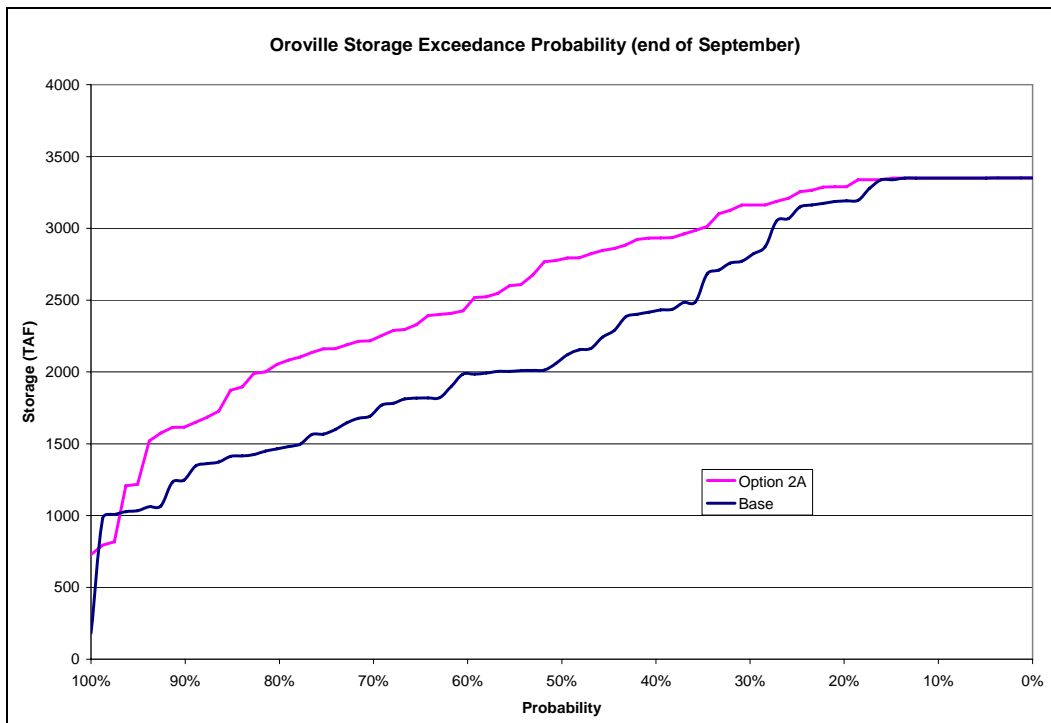
5
6
7
8

Figure E-9b. Option 2B CVP Northern Delta Storage Frequency: Shasta



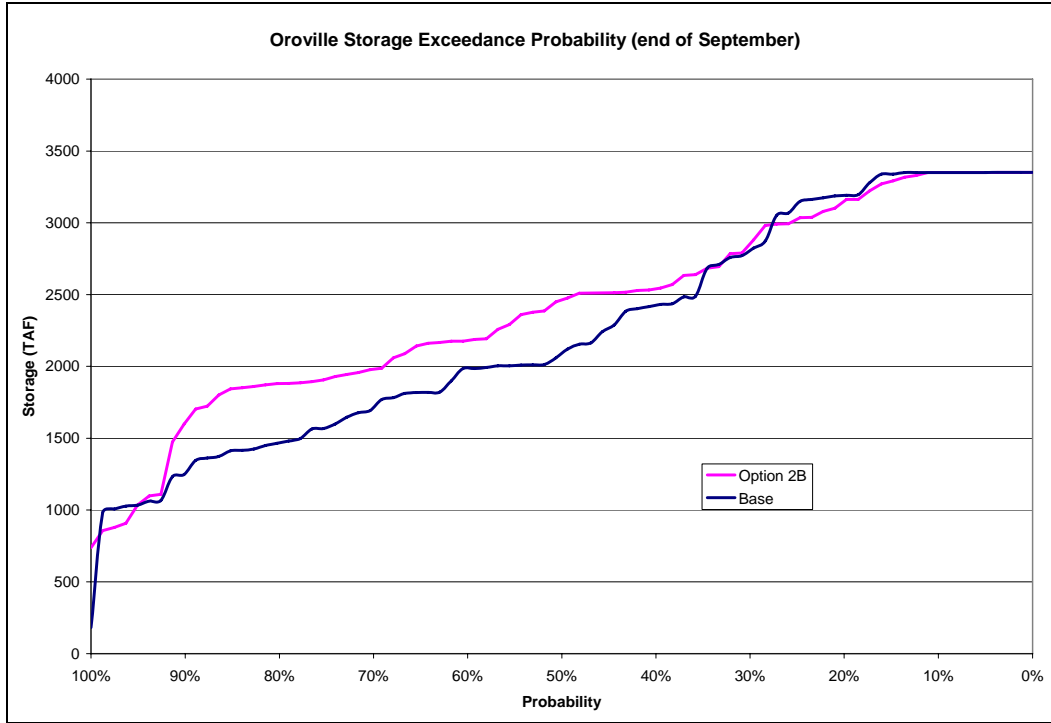
1
2
3
4

Figure E-9c. Option 2B CVP Northern Delta Storage Frequency: Folsom



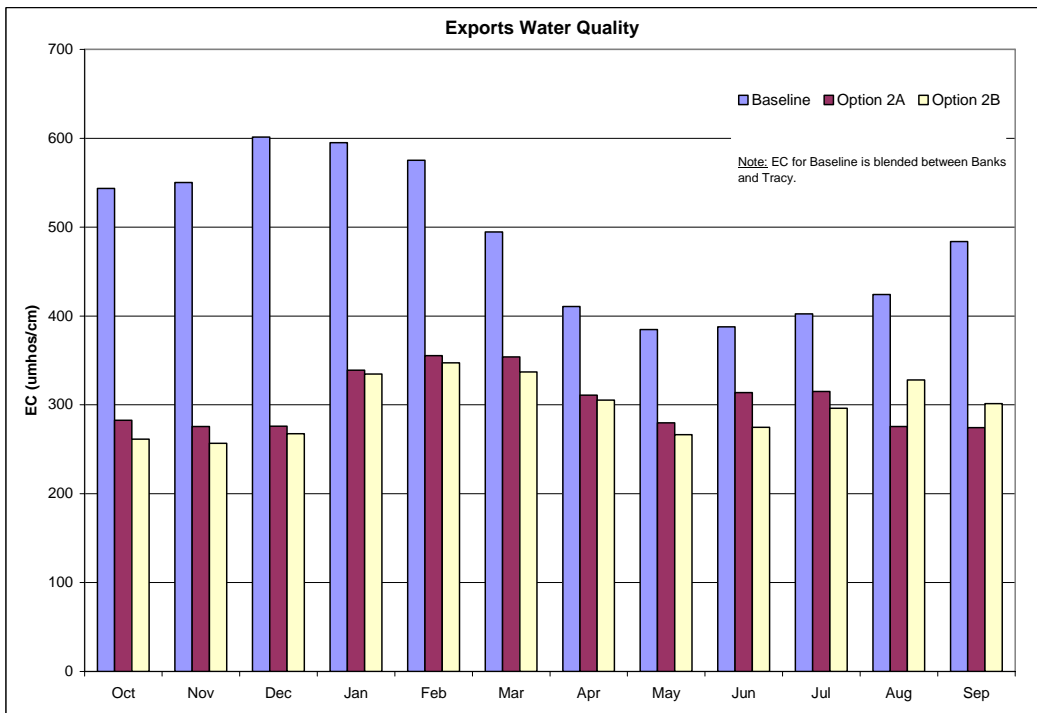
5
6
7
8

Figure E-10. Option 2A SWP Northern Delta Storage Frequency: Oroville



1
2
3
4

Figure E-11. Option 2B SWP Northern Delta Storage Frequency: Oroville



5
6
7
8

Figure E-12. Export Water Quality Annual Average, 1975-1991

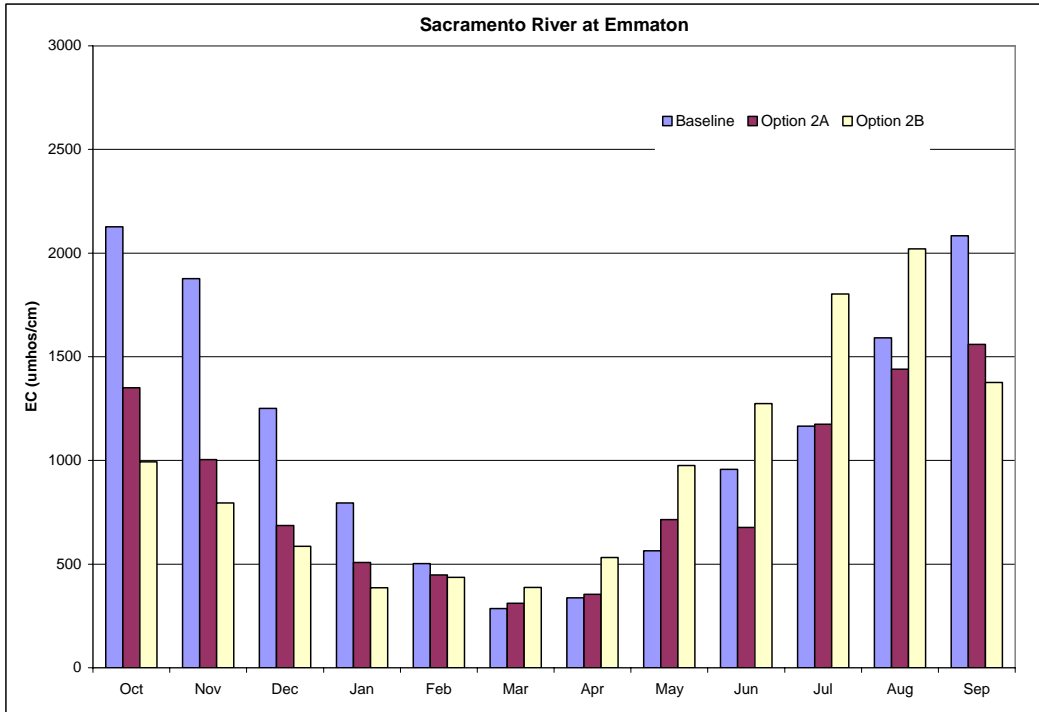


Figure E-13. In Delta Water Quality Annual Average, 1975-1991: Sacramento River at Emmaton

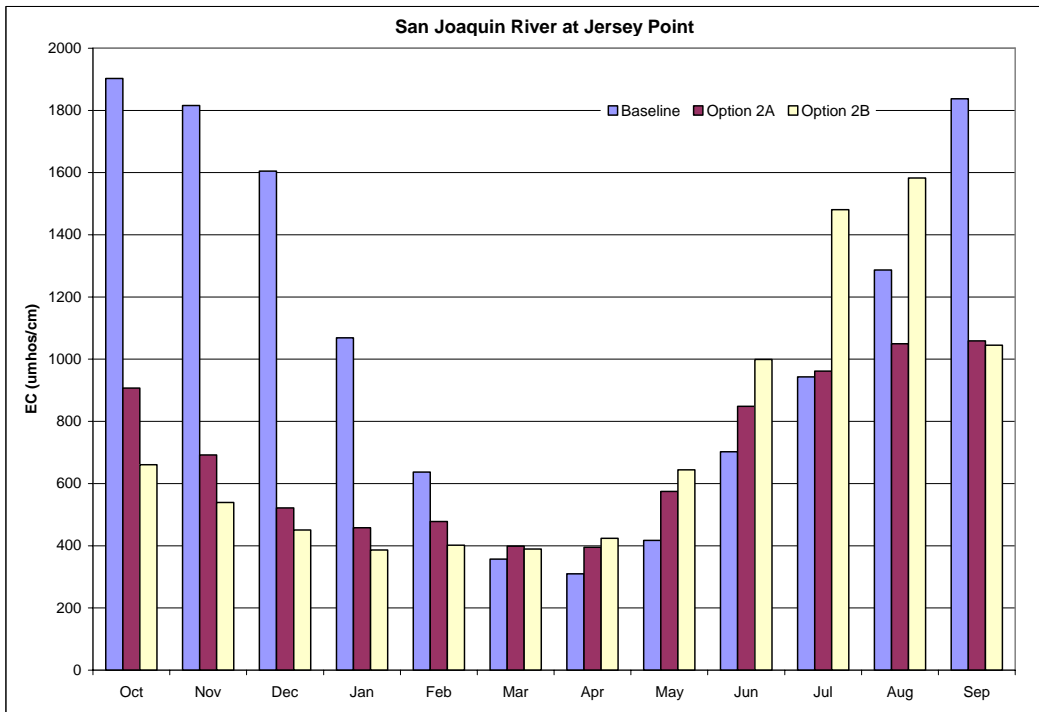
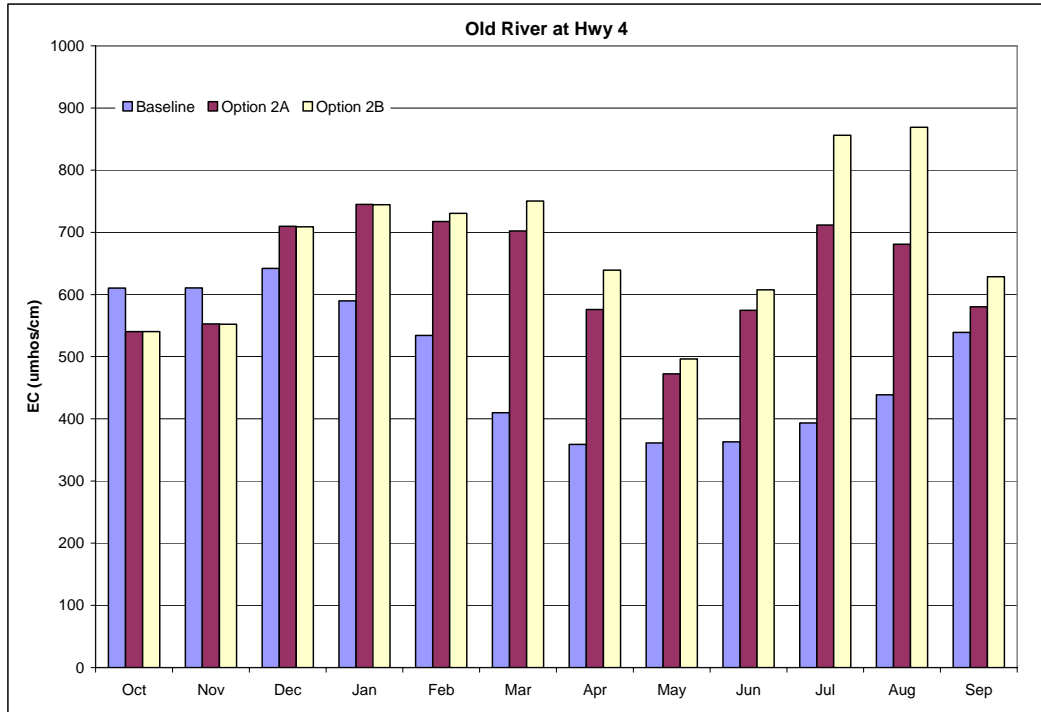


Figure E-14. In Delta Water Quality Annual Average, 1975-1991: San Joaquin River at Jersey Point

1
2
3
4
5

6
7
8
9



1
2
3
4
5

Figure E-15. In Delta Water Quality Annual Average, 1975-1991: Old River at Hwy 4

1

Table E-2. Option 2A Cumulative Particle Fate - September 1977

Old River Sep 1977 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	1.7	0.4	4.0	0.9	5.0	1.4	5.6	2.0	6.7	3.0
PAST_CHIPPS	0.0	0.0	0.0	0.2	0.1	3.2	0.3	4.3	1.7	15.0
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
EXPORTS*	53.1	0.0	67.5	0.0	75.3	0.0	79.9	0.0	84.3	4.9
CENTRAL	45.2	99.6	28.5	98.9	19.6	95.4	14.2	93.7	7.3	77.0
Middle River Sep 1977 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	0.4	0.2	1.2	0.6	1.7	0.8	2.8	0.8	3.4	0.8
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*	32.3	0.0	63.5	35.1	80.8	87.7	88.5	92.7	93.3	98.8
CENTRAL	67.3	99.8	35.3	64.3	17.5	11.5	8.7	6.5	3.3	0.4
San Joaquin River d/s of Dutch Slough Sep 1977 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	0.0	0.0	0.1	0.0	0.1	0.0	0.3	0.2	0.7	0.6
PAST_CHIPPS	17.0	22.6	17.9	19.7	37.4	39.0	34.8	36.9	48.9	53.9
TO_SUISUN	0.1	0.2	0.0	0.1	0.3	0.2	0.0	0.2	0.2	0.3
EXPORTS*	0.0	0.0	0.5	0.0	2.1	0.0	4.5	0.0	11.0	2.6
CENTRAL	82.9	77.2	81.5	80.2	60.1	60.8	60.4	62.7	39.2	42.6
Sacramento River Sep 1977 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2B	Base	Option 2A	Base	Option 2B	Base	Option 2A
DIVERSION_AG	0.1	0.0	0.2	0.1	0.3	0.2	0.7	0.4	1.2	0.7
PAST_CHIPPS	0.3	1.1	1.1	2.9	9.0	14.2	10.0	16.4	20.6	34.7
TO_SUISUN	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.1
EXPORTS*	0.0	0.0	0.9	0.0	4.6	0.0	9.6	0.0	20.2	5.7
CENTRAL	99.6	98.8	97.8	97.0	85.8	85.6	79.7	83.2	57.7	58.8
San Joaquin River u/s of HOR Sep 1977 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	7.1	4.0	7.9	7.4	9.8	10.7	11.2	13.9	13.6	18.1
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*	30.3	0.0	32.4	0.0	33.5	0.0	46.5	0.0	67.1	25.7
CENTRAL	62.6	96.0	59.7	92.6	56.7	89.3	42.3	86.1	19.3	56.2

2

* In Baseline Exports is the sum of particles entering SWP and CVP. In the Option 2 it is the particles entering Siphon.

1

Table E-3. Option 2A Cumulative Particle Fate - January 1981

Old River Sep 1981 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0
PAST_CHIPPS	0.2	3.8	0.2	26.8	0.2	42.0	0.3	64.2	0.3	75.8
TO_SUISUN	0.0	0.9	0.0	2.5	0.0	4.0	0.0	4.8	0.0	6.4
EXPORTS*	90.4	0.0	95.1	0.0	97.6	0.0	98.0	0.0	98.7	3.4
CENTRAL	9.4	95.3	4.7	70.7	2.2	54.0	1.5	31.0	0.8	14.4
Middle River Sep 1981 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*	82.2	0.0	97.2	45.7	99.7	86.3	99.8	94.1	99.9	100.0
CENTRAL	17.8	100.0	2.8	54.3	0.3	13.7	0.2	5.9	0.1	0.0
San Joaquin River d/s of Dutch Slough Sep 1981 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAST_CHIPPS	35.1	70.1	51.5	86.8	54.9	89.6	57.4	91.4	58.4	91.8
TO_SUISUN	4.6	5.4	6.6	6.7	7.1	7.3	7.3	7.4	7.6	7.5
EXPORTS*	1.7	0.0	8.5	0.0	16.7	0.0	23.2	0.0	28.8	0.1
CENTRAL	58.6	24.5	33.4	6.5	21.3	3.1	12.1	1.2	5.2	0.6
Sacramento River Sep 1981 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAST_CHIPPS	46.1	71.6	57.4	85.4	60.4	88.1	62.4	90.5	62.6	91.1
TO_SUISUN	4.8	6.1	6.3	6.6	6.6	6.7	6.9	6.9	6.9	7.2
EXPORTS*	2.4	0.0	10.2	0.0	16.9	0.0	22.2	0.0	27.0	0.8
CENTRAL	46.7	22.3	26.1	8.0	16.1	5.2	8.5	2.6	3.5	0.9
San Joaquin River u/s of HOR Sep 1981 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
PAST_CHIPPS	0.0	0.0	0.0	2.9	0.0	10.8	0.0	29.1	0.0	45.9
TO_SUISUN	0.0	0.0	0.0	0.2	0.0	1.0	0.0	2.3	0.0	3.7
EXPORTS*	65.1	0.0	70.4	2.5	86.3	6.2	93.5	6.2	96.1	21.0
CENTRAL	34.9	100.0	29.6	94.4	13.7	82.0	6.5	62.4	3.9	29.2

2

*In Baseline Exports is the sum of particles entering SWP and CVP. In the Option 2 it is the particles entering Siphon.

1

Table E-4. Option 2A Cumulative Particle Fate - March 1990

	Old River Sep 1990 Release - Cumulative particles (%)									
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	0.4	0.4	0.6	0.4	1.8	0.5	2.2	0.7	3.3	1.1
PAST_CHIPPS	0.0	0.5	0.1	2.0	0.9	12.6	0.8	15.0	1.6	25.4
TO_SUISUN	0.0	0.1	0.0	0.6	0.2	2.5	0.5	4.8	0.8	8.1
EXPORTS*	52.9	0.0	71.9	0.0	79.9	0.0	84.0	0.0	85.3	3.1
CENTRAL	46.7	99.0	27.4	97.0	17.2	84.4	12.5	79.5	9.0	62.3
	Middle River Sep 1990 Release - Cumulative particles (%)									
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	0.2	0.1	0.6	0.1	1.2	0.2	2.0	0.7	2.6	1.1
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*	24.6	0.0	61.0	36.2	77.6	81.5	85.0	87.3	87.4	98.5
CENTRAL	75.2	99.9	38.4	63.7	21.2	18.3	13.0	12.0	9.9	0.4
	San Joaquin River d/s of Dutch Slough Sep 1990 Release - Cumulative particles (%)									
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	0.0	0.1	0.0	0.1	0.0	0.1	0.2	0.2	0.5	0.2
PAST_CHIPPS	31.6	39.0	35.3	46.6	51.8	64.0	47.2	59.1	56.5	65.4
TO_SUISUN	6.3	5.6	9.8	9.6	12.2	12.3	13.7	14.3	15.8	16.4
EXPORTS*	0.0	0.0	0.4	0.0	1.1	0.0	2.6	0.0	3.7	1.3
CENTRAL	62.1	55.3	54.5	43.7	34.9	23.6	36.3	26.4	23.5	16.7
	Sacramento River Sep 1990 Release - Cumulative particles (%)									
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.5	0.2
PAST_CHIPPS	20.6	25.9	26.0	34.2	39.3	52.7	36.7	49.3	47.7	56.0
TO_SUISUN	4.2	3.9	7.4	7.9	10.0	10.9	11.5	13.7	14.1	16.7
EXPORTS*	0.0	0.0	1.2	0.0	3.7	0.0	6.9	0.0	7.6	2.4
CENTRAL	75.2	70.1	65.4	57.8	46.9	36.3	44.8	36.9	30.1	24.7
	San Joaquin River u/s of HOR Sep 1990 Release - Cumulative particles (%)									
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A	Base	Option 2A
DIVERSION_AG	14.3	9.5	19.4	14.9	20.1	16.7	20.1	18.5	22.1	21.5
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3	0.0	2.0
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
EXPORTS*	51.1	0.0	54.6	0.0	54.9	0.0	54.9	0.0	55.2	13.6
CENTRAL	34.6	90.5	26.0	85.1	25.0	83.0	25.0	81.2	22.7	62.1

2

* In Baseline Exports is the sum of particles entering SWP and CVP. In the Option 2 it is the particles entering Siphon.

3

1

Table E-5. Option 2B Cumulative Particle Fate - September 1977

Old River Sep 1977 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	1.7	0.5	4.0	0.8	5.0	1.1	5.6	2.2	6.7	3.5
PAST_CHIPPS	0.0	0.1	0.0	0.5	0.1	5.9	0.3	7.8	1.7	23.4
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
EXPORTS*	53.1	0.0	67.5	0.0	75.3	0.0	79.9	0.0	84.3	3.1
CENTRAL	45.2	99.4	28.5	98.7	19.6	92.9	14.2	90.0	7.3	70.0
Middle River Sep 1977 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	0.4	0.5	1.2	0.9	1.7	1.0	2.8	1.0	3.4	1.2
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*	32.3	0.0	63.5	36.2	80.8	86.3	88.5	92.0	93.3	98.1
CENTRAL	67.3	99.5	35.3	62.9	17.5	12.7	8.7	7.0	3.3	0.7
San Joaquin River d/s of Dutch Slough Sep 1977 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	0.0	0.2	0.1	0.3	0.1	0.3	0.3	0.3	0.7	0.5
PAST_CHIPPS	17.0	28.5	17.9	29.9	37.4	55.1	34.8	56.8	48.9	73.5
TO_SUISUN	0.1	0.2	0.0	0.0	0.3	0.3	0.0	0.0	0.2	0.2
EXPORTS*	0.0	0.0	0.5	0.0	2.1	0.0	4.5	0.0	11.0	0.6
CENTRAL	82.9	71.1	81.5	69.8	60.1	44.3	60.4	42.9	39.2	25.2
Sacramento River Sep 1977 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	0.1	0.1	0.2	0.1	0.3	0.1	0.7	0.3	1.2	0.4
PAST_CHIPPS	0.3	2.2	1.1	7.7	9.0	26.4	10.0	28.2	20.6	49.6
TO_SUISUN	0.0	0.1	0.0	0.0	0.3	0.2	0.0	0.3	0.3	0.5
EXPORTS*	0.0	0.0	0.9	0.0	4.6	0.0	9.6	0.0	20.2	2.9
CENTRAL	99.6	97.6	97.8	92.2	85.8	73.3	79.7	71.2	57.7	46.6
San Joaquin River u/s of HOR Sep 1977 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	7.1	4.2	7.9	8.3	9.8	11.5	11.2	14.8	13.6	19.2
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*	30.3	0.0	32.4	0.0	33.5	0.0	46.5	0.0	67.1	24.8
CENTRAL	62.6	95.8	59.7	91.7	56.7	88.5	42.3	85.2	19.3	56.0

2

* In Baseline Exports is the sum of particles entering SWP and CVP. In the Option 2 it is the particles entering Siphon.

1

Table E-6. Option 2B Cumulative Particle Fate - January 1981

Old River Sep 1981 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0
PAST_CHIPPS	0.2	3.8	0.2	30.3	0.2	48.2	0.3	72.0	0.3	82.2
TO_SUISUN	0.0	0.7	0.0	2.9	0.0	5.1	0.0	6.7	0.0	7.6
EXPORTS*	90.4	0.0	95.1	0.0	97.6	0.0	98.0	0.1	98.7	0.3
CENTRAL	9.4	95.5	4.7	66.8	2.2	46.7	1.5	21.2	0.8	9.9
Middle River Sep 1981 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*	82.2	0.0	97.2	44.7	99.7	86.5	99.8	94.2	99.9	99.8
CENTRAL	17.8	100.0	2.8	55.3	0.3	13.5	0.2	5.8	0.1	0.2
San Joaquin River d/s of Dutch Slough Sep 1981 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAST_CHIPPS	35.1	73.6	51.5	88.1	54.9	89.8	57.4	90.3	58.4	90.2
TO_SUISUN	4.6	7.7	6.6	9.2	7.1	9.4	7.3	9.5	7.6	9.6
EXPORTS*	1.7	0.0	8.5	0.0	16.7	0.0	23.2	0.0	28.8	0.0
CENTRAL	58.6	18.7	33.4	2.7	21.3	0.8	12.1	0.2	5.2	0.2
Sacramento River Sep 1981 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PAST_CHIPPS	46.1	56.1	57.4	83.2	60.4	86.3	62.4	89.1	62.6	89.7
TO_SUISUN	4.8	5.6	6.3	8.3	6.6	8.9	6.9	8.9	6.9	9.0
EXPORTS*	2.4	0.0	10.2	0.0	16.9	0.0	22.2	0.0	27.0	0.0
CENTRAL	46.7	38.3	26.1	8.5	16.1	4.8	8.5	2.0	3.5	1.3
San Joaquin River u/s of HOR Sep 1981 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
PAST_CHIPPS	0.0	0.0	0.0	2.8	0.0	13.7	0.0	39.3	0.0	52.5
TO_SUISUN	0.0	0.0	0.0	0.5	0.0	1.8	0.0	3.2	0.0	4.4
EXPORTS*	65.1	0.0	70.4	2.0	86.3	5.9	93.5	5.9	96.1	19.3
CENTRAL	34.9	100.0	29.6	94.7	13.7	78.6	6.5	51.6	3.9	23.5

2

* In Baseline Exports is the sum of particles entering SWP and CVP. In the Option 2 it is the particles entering Siphon.

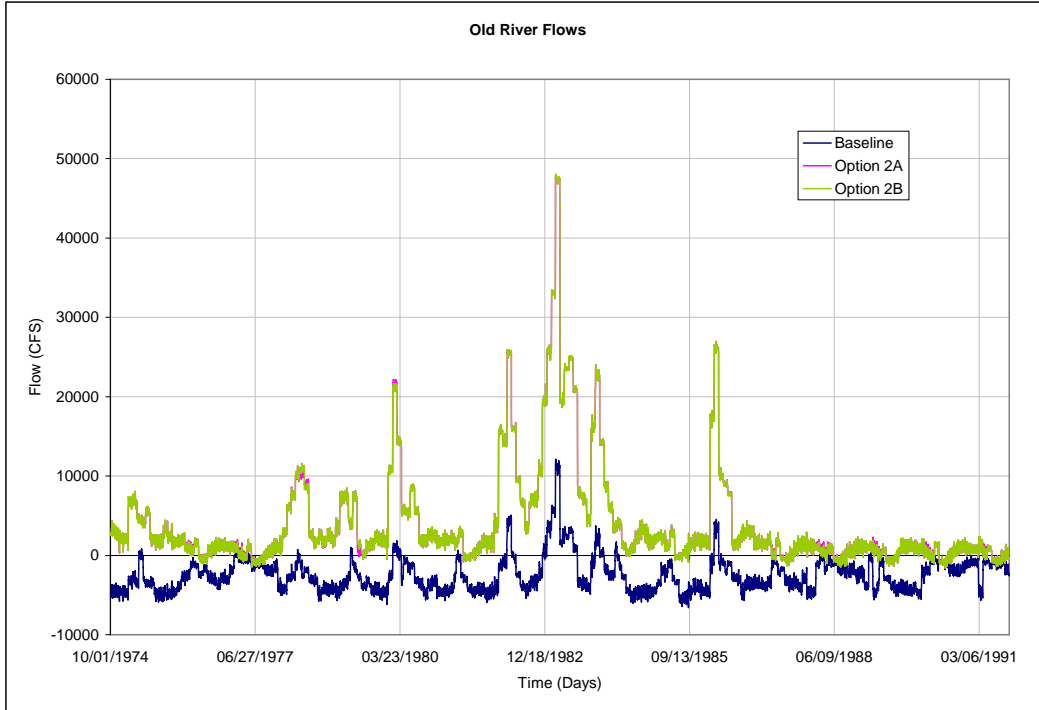
1

Table D-7. Option 2B Cumulative Particle Fate - March 1990

Old River Sep 1990 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	0.4	0.4	0.6	0.6	1.8	0.7	2.2	1.1	3.3	3.7
PAST_CHIPPS	0.0	0.8	0.1	3.6	0.9	15.6	0.8	17.0	1.6	26.2
TO_SUISUN	0.0	0.0	0.0	1.1	0.2	2.6	0.5	4.6	0.8	8.3
EXPORTS*	52.9	0.0	71.9	0.0	79.9	0.0	84.0	0.0	85.3	0.0
CENTRAL	46.7	98.8	27.4	94.7	17.2	81.1	12.5	77.3	9.0	61.8
Middle River Sep 1990 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	0.2	0.1	0.6	0.8	1.2	1.3	2.0	1.5	2.6	1.5
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*	24.6	0.0	61.0	35.9	77.6	82.7	85.0	88.5	87.4	98.4
CENTRAL	75.2	99.9	38.4	63.3	21.2	16.0	13.0	10.0	9.9	0.1
San Joaquin River d/s of Dutch Slough Sep 1990 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.5	0.0
PAST_CHIPPS	31.6	54.4	35.3	62.1	51.8	76.5	47.2	72.4	56.5	76.2
TO_SUISUN	6.3	6.8	9.8	11.8	12.2	13.4	13.7	14.7	15.8	16.1
EXPORTS*	0.0	0.0	0.4	0.0	1.1	0.0	2.6	0.0	3.7	0.0
CENTRAL	62.1	38.8	54.5	26.1	34.9	10.1	36.3	12.9	23.5	7.7
Sacramento River Sep 1990 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.5	0.2
PAST_CHIPPS	20.6	25.1	26.0	43.2	39.3	65.2	36.7	62.5	47.7	66.5
TO_SUISUN	4.2	2.4	7.4	7.3	10.0	10.5	11.5	13.1	14.1	15.8
EXPORTS*	0.0	0.0	1.2	0.0	3.7	0.0	6.9	0.0	7.6	0.1
CENTRAL	75.2	72.5	65.4	49.5	46.9	24.3	44.8	24.4	30.1	17.4
San Joaquin River u/s of HOR Sep 1990 Release - Cumulative particles (%)										
	7 Days		14 Days		21 Days		28 Days		40 Days	
	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B	Base	Option 2B
DIVERSION_AG	14.3	14.4	19.4	23.6	20.1	26.9	20.1	28.7	22.1	34.4
PAST_CHIPPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TO_SUISUN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EXPORTS*	51.1	0.0	54.6	0.0	54.9	0.0	54.9	0.0	55.2	21.8
CENTRAL	34.6	85.6	26.0	76.4	25.0	73.1	25.0	71.3	22.7	43.8

2

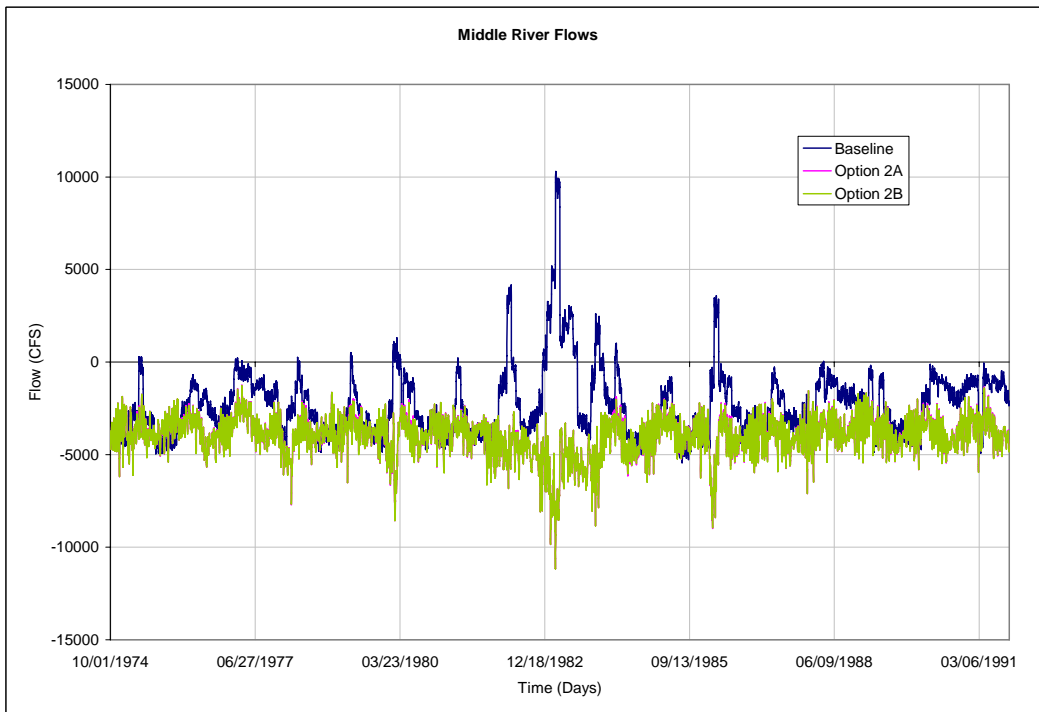
* In Baseline Exports is the sum of particles entering SWP and CVP. In the Option 2 it is the particles entering Siphon.



1

2

Figure E-16. DSM2 Simulated Daily Averaged Old River Flows

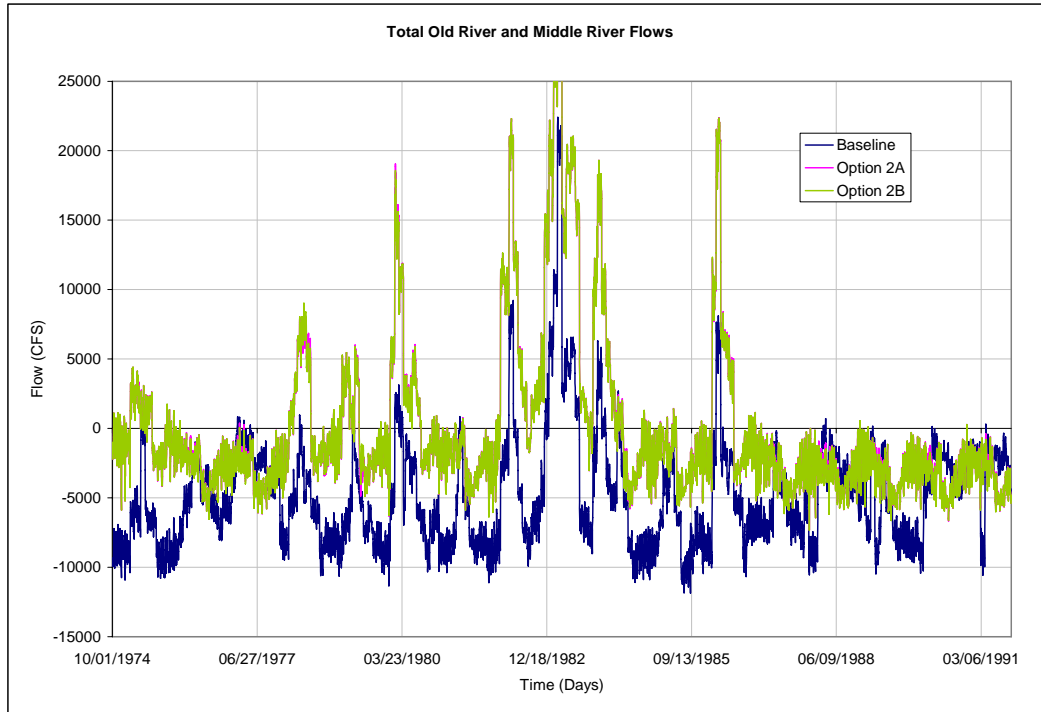


3

4

Figure E-17. DSM2 Simulated Daily Averaged Middle River Flows

5



1

2

Figure E-18. DSM2 Simulated Daily Averaged Combined Old and Middle River Flows

3