CALFED Bay-Delta Program
Water Supply Opportunities

Evaluation of Refined Alternatives

Alternative 1

- Increase Banks PP Capacity
- Modify Export-Inflow Ratio Standard
  - Assumption A: Existing WQCP E-I Ratios
  - Assumption B: Reduced Nov - Jun E-I Ratios
- With and Without 4.75 MAF Storage

Alternative 1

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Assumption A (Emphasis on Water Supply)												
E/I Ratio	65%	35%-45%	35% of Delta Inflow				65% of Delta Inflow					
Assumption B (Emphasis on Ecosystem Protection)												
E/I Ratio	50%	25%	25% of Delta Inflow				65% of Delta Inflow				50%	

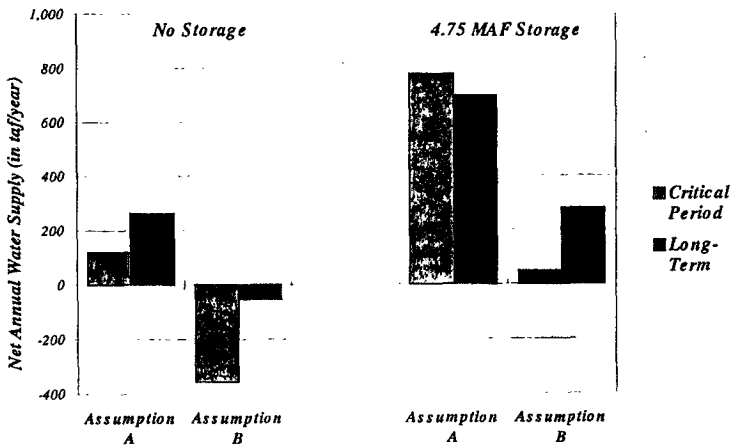
Alternative 1

Average Annual Water Supply
Compared to No Action
(in 1,000 acre-feet per year)

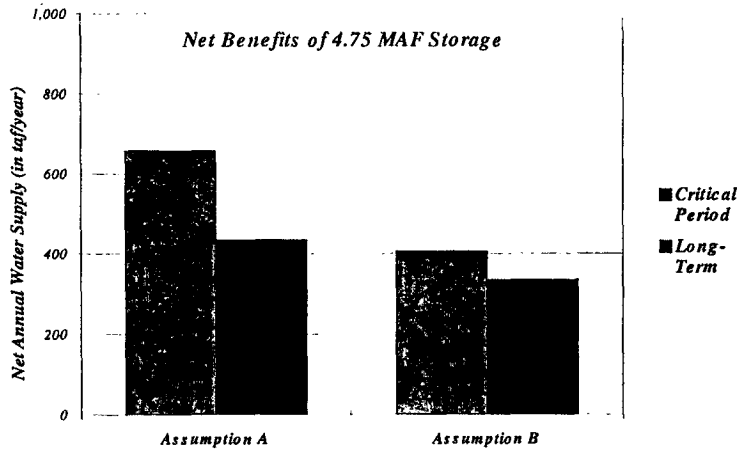
	Critical Period	*Long-Term*
No Storage		
Assumption A	*120*	*262*
Assumption B	*-357*	*-54*
4.75 MAF Storage		
Assumption A	*777*	*696*
Assumption B	*48*	*280*

D-009945
D-009945

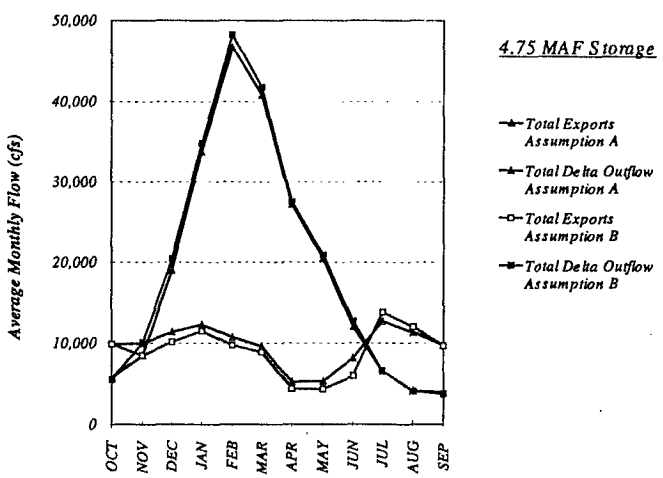
Alternative 1



Alternative 1



Alternative 1



Alternative 2

- Increase Banks PP Capacity
- Modify Export-Inflow Ratio Standard
  - Assumption A: Existing WQCP E-I Ratios
  - Assumption B: Reduced Nov - Jun E-I Ratios
- Modify Delta Outflow Standard
  - Assumption A: X3 Requirement
  - Assumption B: Existing WQCP X2 Requirement
- With and Without 4.75 MAF Storage

D-009946
D-009946

Alternative 2

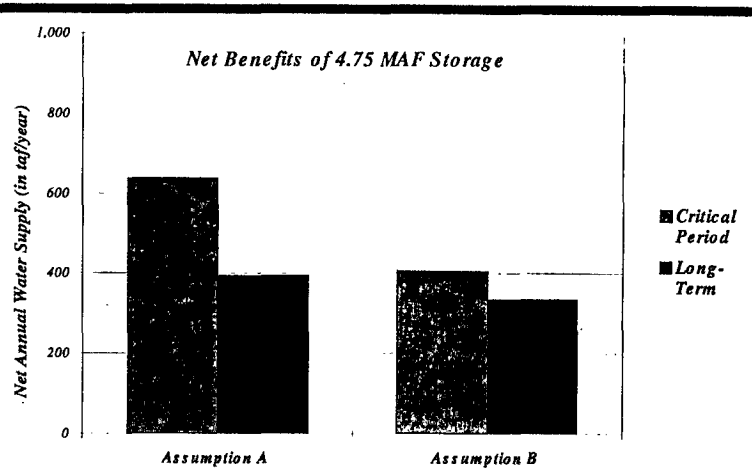
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Assumption A (Emphasis on Water Supply)												
E/I Ratio	65%	35%-45%	35% of Delta Inflow				65% of Delta Inflow					
Delta Outflow		X3 Requirement										
Assumption B (Emphasis on Ecosystem Protection)												
E/I Ratio	50%	25%	25% of Delta Inflow				65% of Delta Inflow				50%	
Delta Outflow		X2 Requirement										

Alternative 2

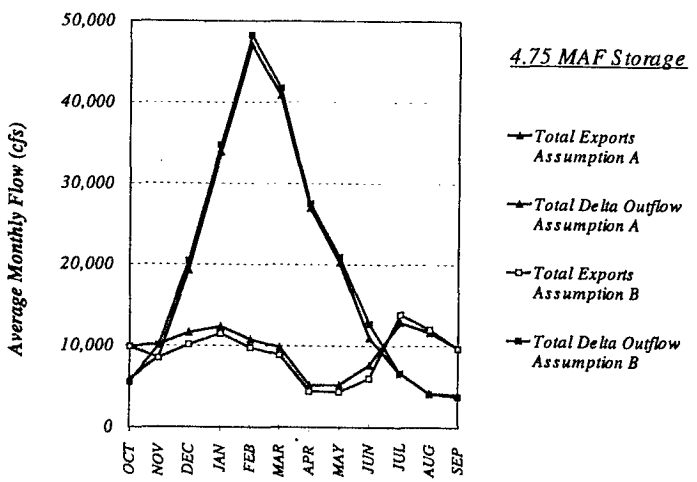
Average Annual Water Supply
Compared to No Action
(in 1,000 acre-feet per year)

	Critical Period	Long-Term
No Storage		
Assumption A	283	336
Assumption B	-357	-54
4.75 MAF Storage		
Assumption A	920	730
Assumption B	48	280

Alternative 2



Alternative 2



D-009947
D-009947

Alternative 3

- Isolated Facility (5,000 to 15,000 cfs)
- Exclude IF Flow from E-I Ratio Standard
- Add Rio Vista Minimum Flow for Jul - Aug
- Limit IF Diversions in May to 5,000 cfs
- Modify Delta Outflow Standard
  - Assumption A: X3 Requirement
  - Assumption B: Existing WQCP X2 Requirement
- With and Without 4.95 MAF Storage

Alternative 3

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Assumption A (Emphasis on Water Supply)												
E/I Ratio [1]	65%	35%-45%	35% of Delta Inflow				65% of Delta Inflow					
Delta Outflow		X3 Requirement										
Rio Vista							3 Kcfs			3-4 Kcfs	3.5 - 4.5 Kcfs	
Max IF Diversion					5 Kcfs							
Assumption B (Emphasis on Ecosystem Protection)												
E/I Ratio [1]	65%	35%-45%	35% of Delta Inflow				65% of Delta Inflow					
Delta Outflow		X2 Requirement										
Rio Vista							3 Kcfs			3-4 Kcfs	3.5 - 4.5 Kcfs	
Max IF Diversion					5 Kcfs							

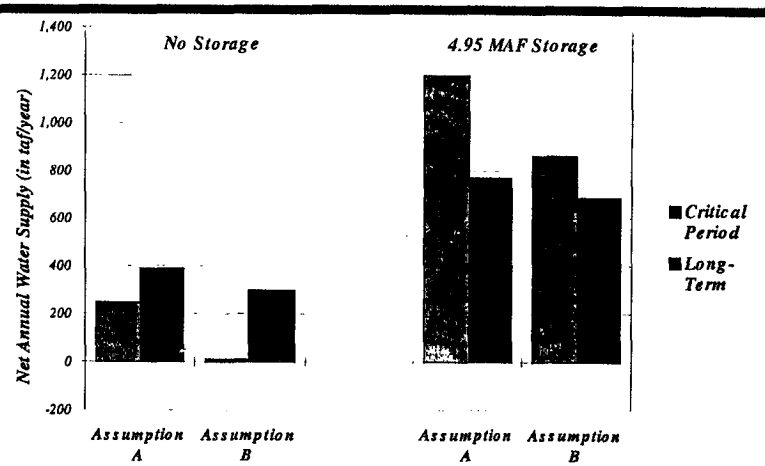
Notes:
[1] Isolated Facility Flow Excluded from E-I Ratio Computations.

Alternative 3
5,000 cfs Isolated Facility

Average Annual Water Supply
Compared to No Action
(in 1,000 acre-feet per year)

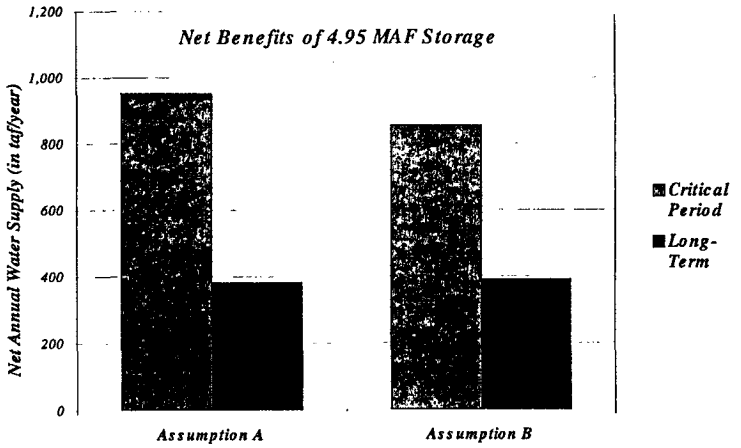
	Critical Period	Long-Term
No Storage		
Assumption A	247	389
Assumption B	10	298
4.95 MAF Storage		
Assumption A	1,199	771
Assumption B	864	688

Alternative 3
5,000 cfs Isolated Facility

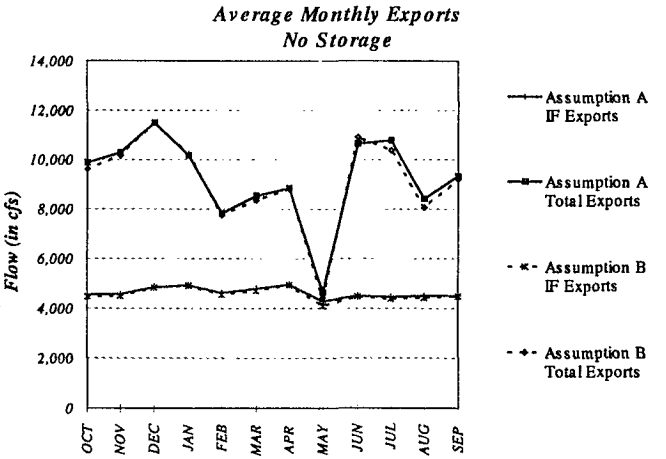


D-009948
D-009948

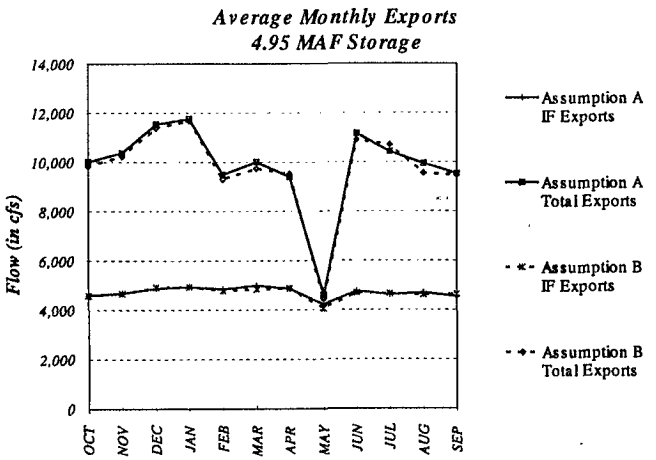
Alternative 3
5,000 cfs Isolated Facility



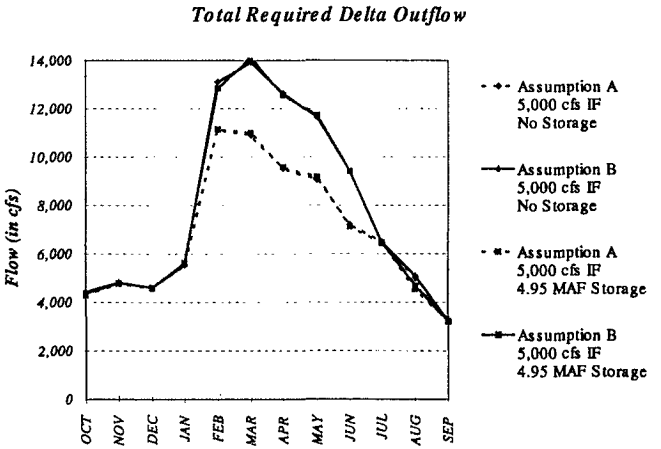
Alternative 3
5,000 cfs Isolated Facility



Alternative 3
5,000 cfs Isolated Facility



Alternative 3
5,000 cfs Isolated Facility

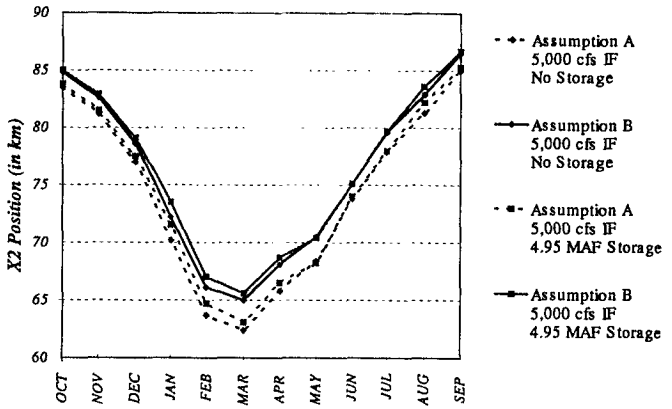


D-009949

D-009949

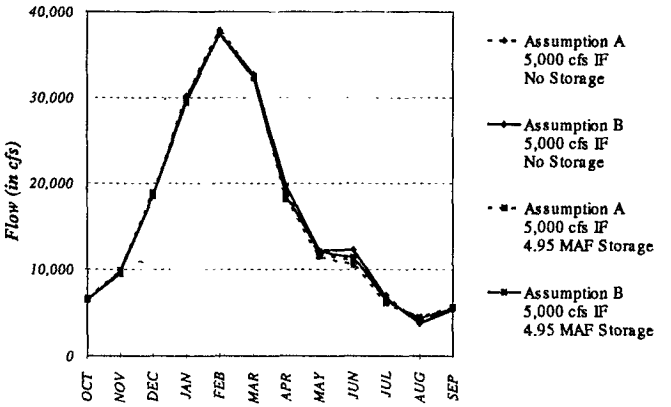
Alternative 3
5,000 cfs Isolated Facility

X2 Position



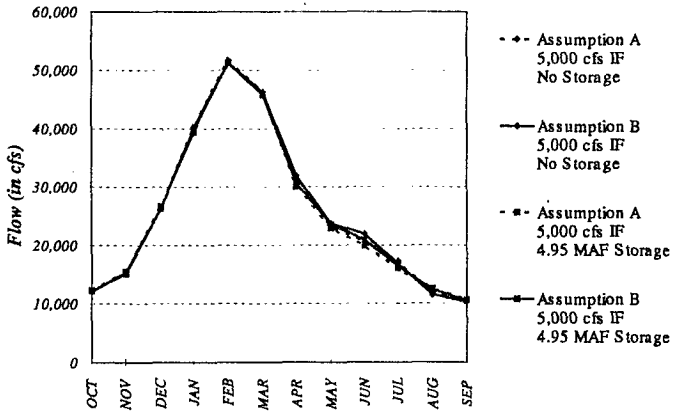
Alternative 3
5,000 cfs Isolated Facility

Sacramento River Flow at Rio Vista



Alternative 3
5,000 cfs Isolated Facility

Total Delta Inflow



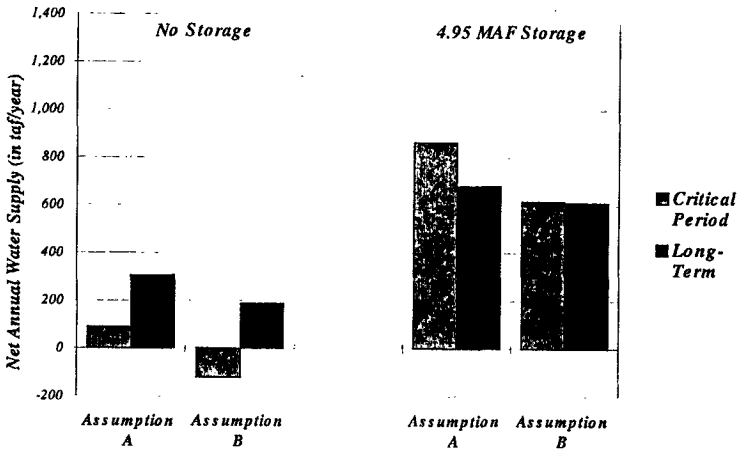
Alternative 3
15,000 cfs Isolated Facility

Average Annual Water Supply
Compared to No Action
(in 1,000 acre-feet per year)

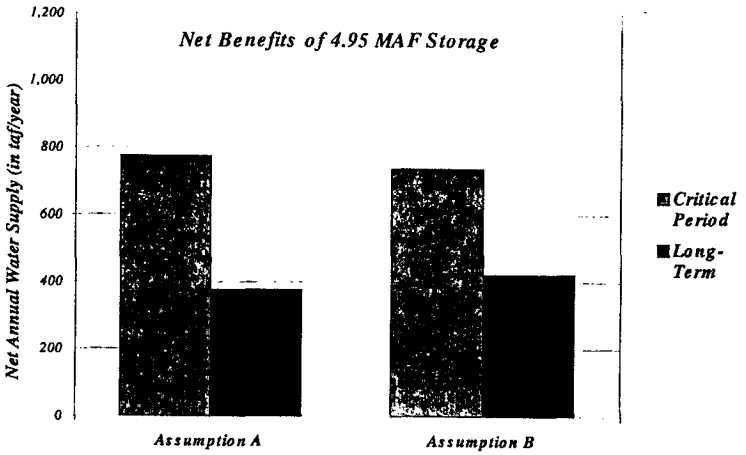
	Critical Period	Long-Term
No Storage		
Assumption A	89	304
Assumption B	-121	189
4.95 MAF Storage		
Assumption A	864	681
Assumption B	616	611

D-009950
D-009950

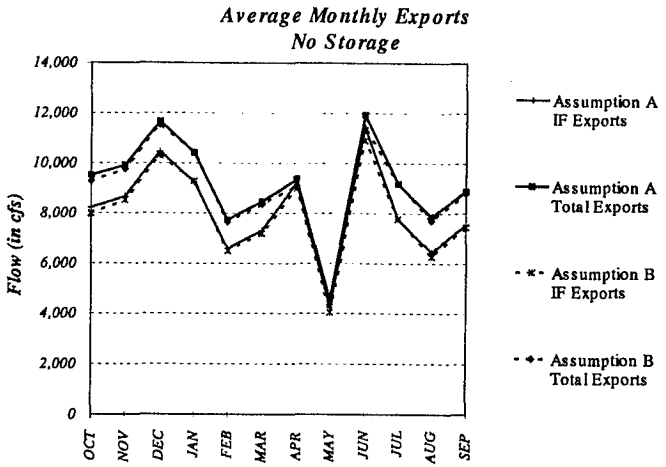
Alternative 3
15,000 cfs Isolated Facility



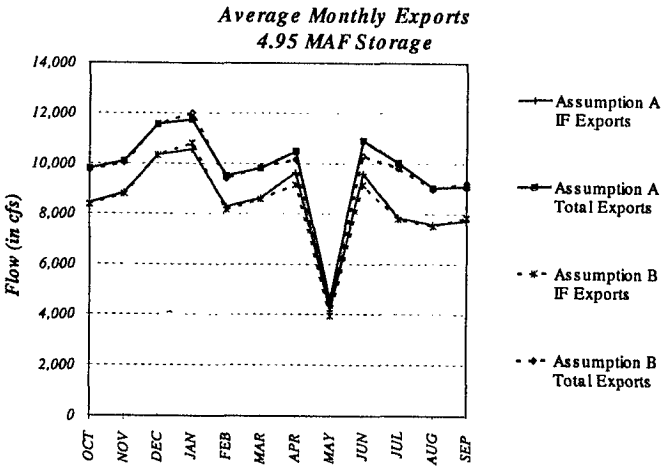
Alternative 3
15,000 cfs Isolated Facility



Alternative 3
15,000 cfs Isolated Facility



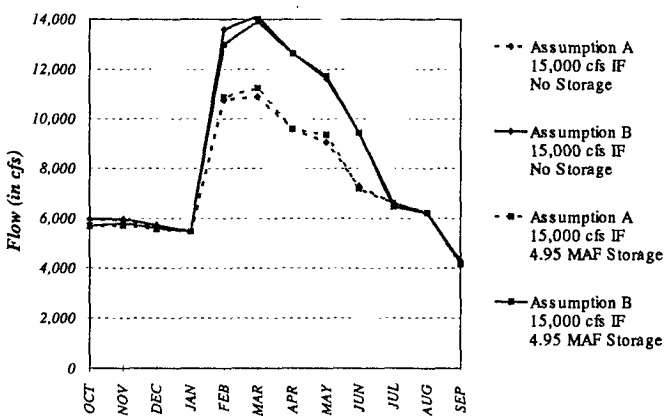
Alternative 3
15,000 cfs Isolated Facility



D-009951
D-009951

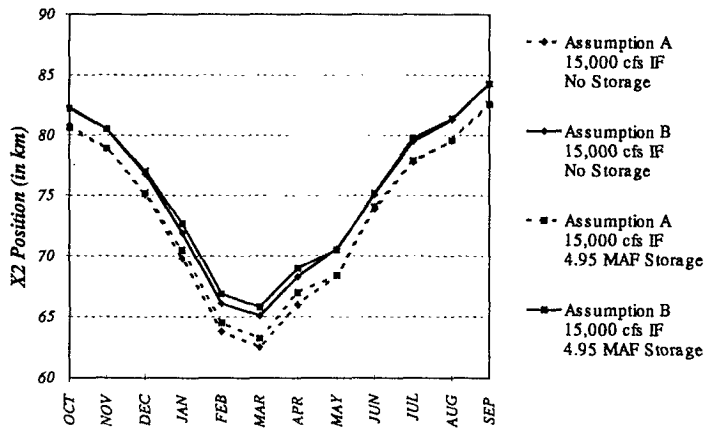
Alternative 3
15,000 cfs Isolated Facility

Total Required Delta Outflow



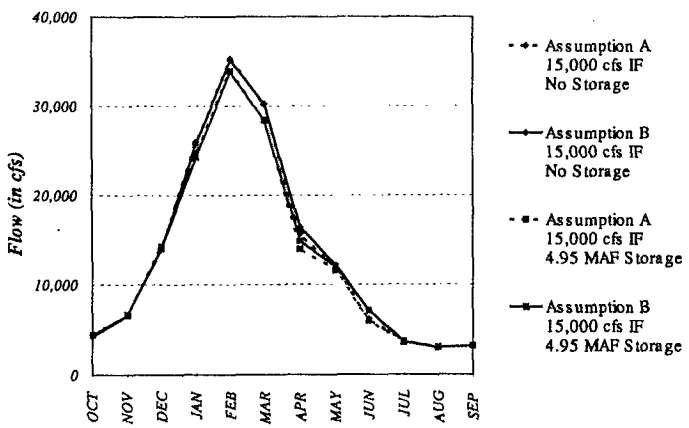
Alternative 3
15,000 cfs Isolated Facility

X2 Position



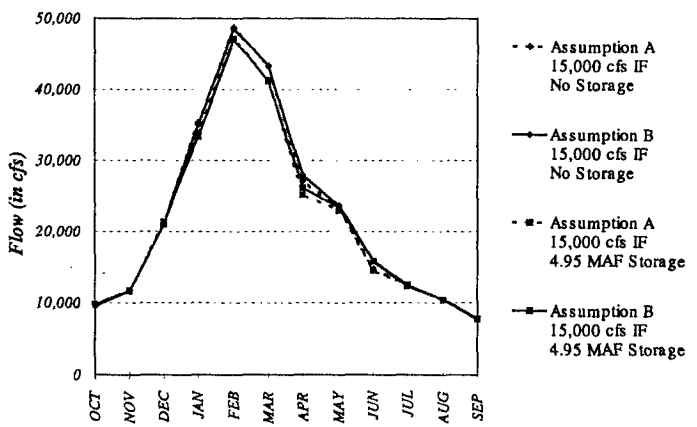
Alternative 3
15,000 cfs Isolated Facility

Sacramento River Flow at Rio Vista



Alternative 3
15,000 cfs Isolated Facility

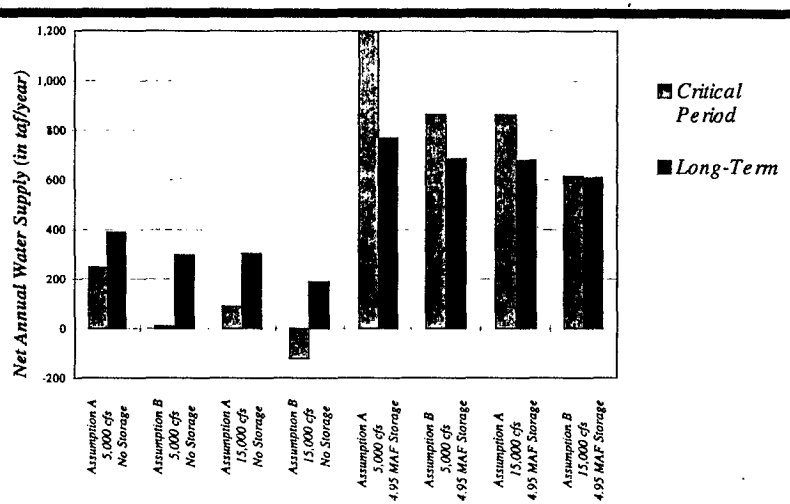
Total Delta Inflow



D-009952

D-009952

Alternative 3



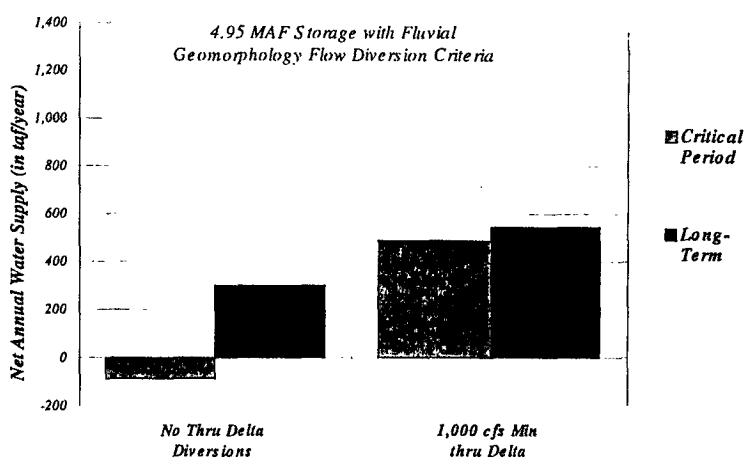
Alternative 3
1,000 cfs thru Delta vs No thru Delta

Average Annual Water Supply
Compared to No Action
(in 1,000 acre-feet per year)

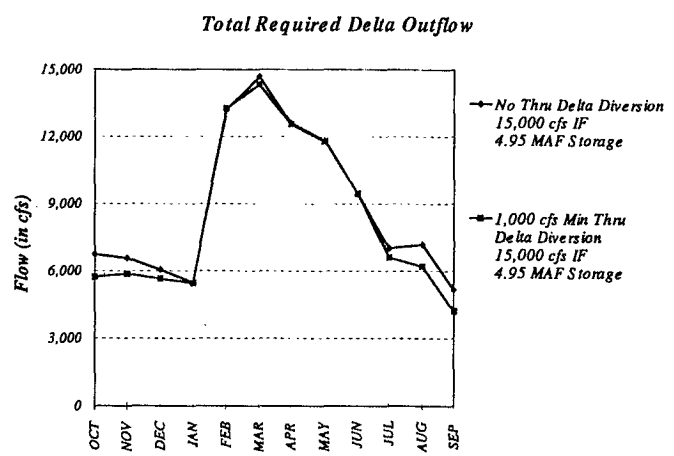
	Critical Period	Long-Term
4.95 MAF Storage [1]		
No Thru Delta Diversions	-86	299
1,000 cfs min. thru Delta	487	544

[1] *Includes Fluvial Geomorphology Flow Criteria for diversions to Storage.*

Alternative 3
1,000 cfs thru Delta vs No thru Delta

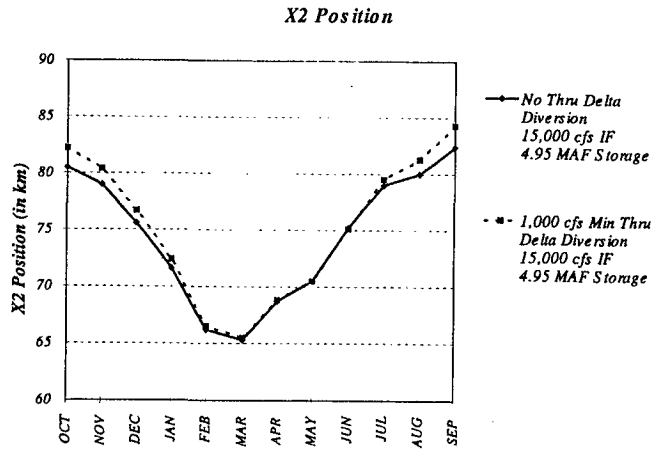


Alternative 3
1,000 cfs thru Delta vs No thru Delta

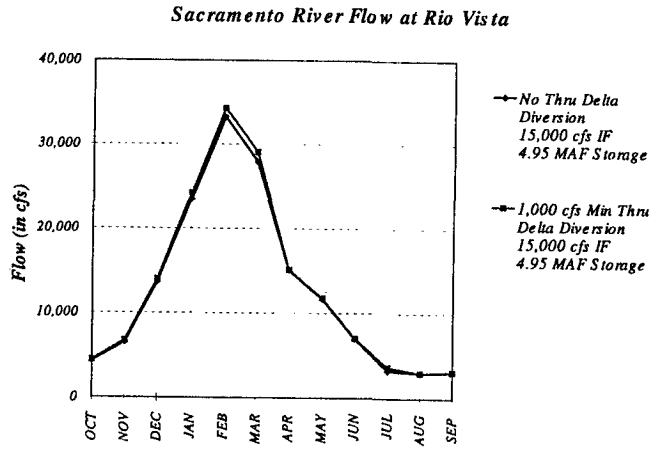


D-009953
D-009953

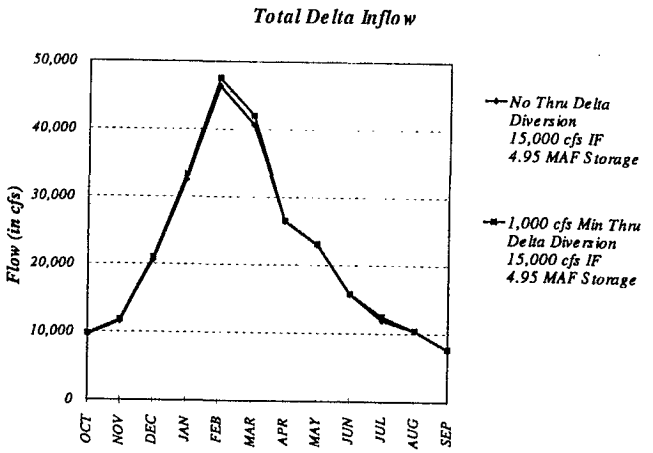
Alternative 3
1,000 cfs thru Delta vs No thru Delta



Alternative 3
1,000 cfs thru Delta vs No thru Delta



Alternative 3
1,000 cfs thru Delta vs No thru Delta



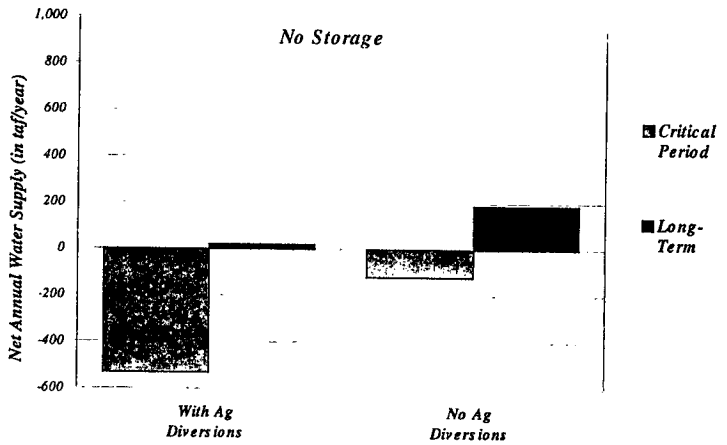
Alternative 3
With and without Delta Ag Diversions

Average Annual Water Supply
Compared to No Action
(in 1,000 acre-feet per year)

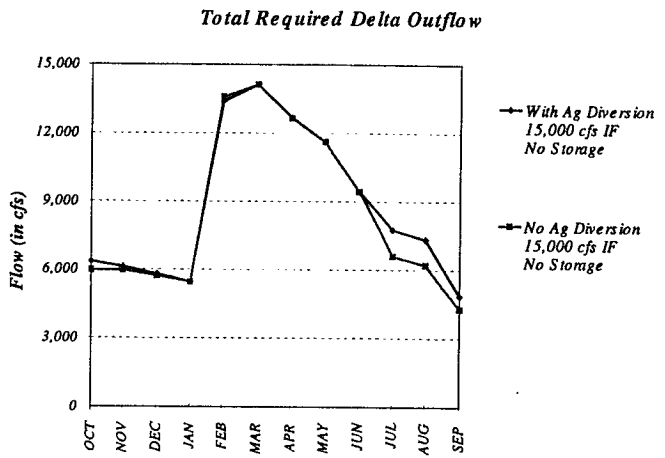
	Critical Period	Long-Term
No Storage		
With Delta Ag Diversions	-531	21
No Delta Ag Diversions	-121	189

D-009954
D-009954

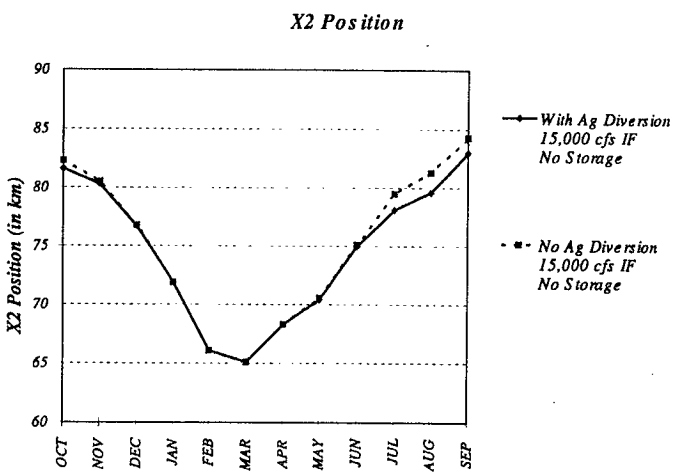
Alternative 3
With and without Delta Ag Diversions



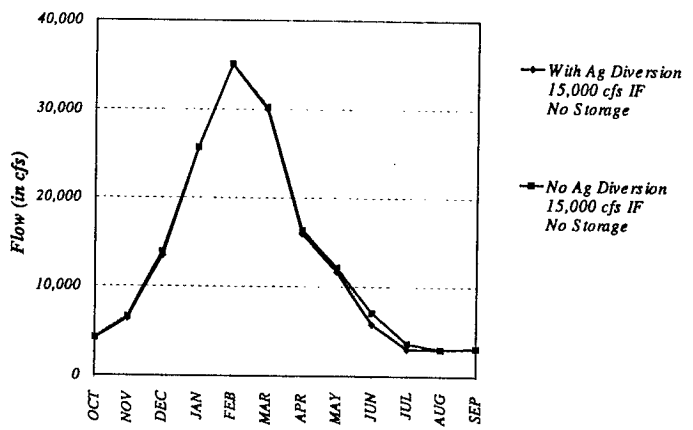
Alternative 3
With and without Delta Ag Diversions



Alternative 3
With and without Delta Ag Diversions

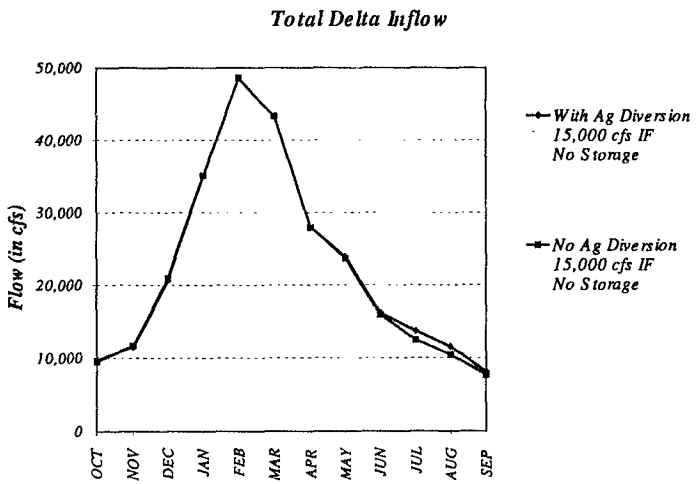


Alternative 3
With and without Delta Ag Diversions

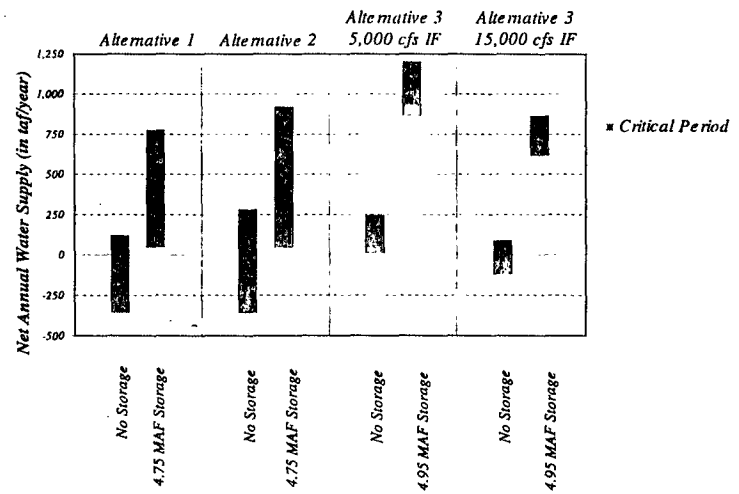


D-009955
D-009955

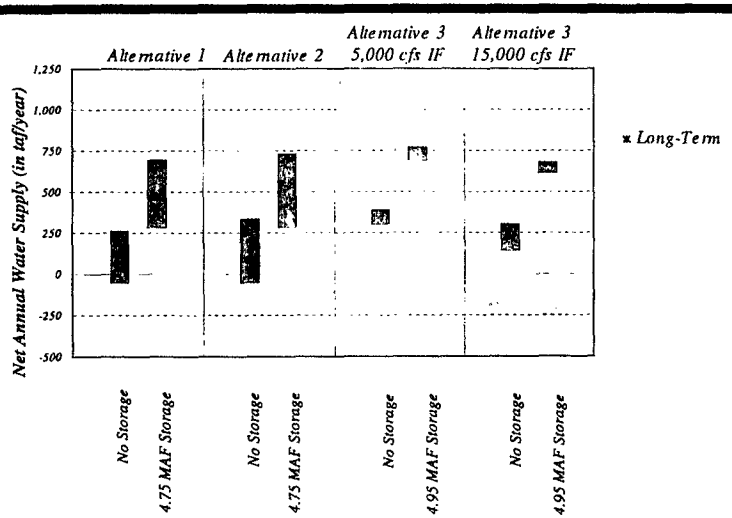
Alternative 3
With and without Delta Ag Diversions



Comparison of Alternatives 1 - 3
Critical Period Water Supply Benefits



Comparison of Alternatives 1 - 3
Long-Term Period Water Supply Benefits



D-009956
D-009956