

SAN JOAQUIN RIVER REGION

Weighting

	Hydrology*	w/ storage				w/o storage		
		Alt 1	Alt 2	Alt 3	PRA	Alt 1	Alt 2	Alt 3
4	- Reservoirs	pos (s)	pos (s)	pos (m)	pos (m)	pos (s)	pos (s)	pos (m)
3	- Rivers	pos (m)	pos (m)	pos (m)	pos (m)	pos (m)	pos (m)	pos (m)
Fish & Wildlife								
2	- Anadro. species	pos (m)	pos (s)	pos (L)	pos (L)	pos (m)	pos (s)	pos (L)
2	- Bird abund.	pos (s)	pos (s)	pos (s)	pos (s)	pos (s)	pos (s)	pos (s)
1	Construction	neg (m)	neg (m)	neg (L)	neg (L)	neg (s)	neg (s)	neg (m)
SUMMARY		+4	+3	+5	+5	+4	+4	+6
WEIGHTED		+14	+12	+17	+17	+15	+13	+18
NEW RESERVOIR CAP.		+5	+5	+5	+5	-	-	-
		+19	+17	+22	+22	+15	+13	+18

* Hydrology Impacts

(% change relative to N.A. May-Sept period)

	San Luis	Newton Pedro	SJR
(703) Alt 1 & 2, w/o storage	+1.0%	+0.03%	+10.5%
(706) Alt 1 & 2, w/ storage	+0.5%	+0.03%	+10.5%
Alt 3 w/o storage			
(714) - 5k	+10.1%	+0.03%	+10.5%
(708) - 10k	+10.5%	+0.03%	+10.5%
(716) - 15k	+10.5%	+0.03%	+10.5%
Alt 3 w/ storage			
(715) - 5k	+9.8%	+0.08%	+10.5%
(709) - 10k	+10.4%	+0.03%	+10.4%
(717) - 15k	+10.2%	+0.10%	+10.5%

Alt 1 Alt 2 Alt 3 +19 +17 +22 +22

Sacto River Region

evaluate potential for reservoir drawdown lake in the summer keep lake levels higher, longer

weighting

Hydrology
 4 - Reservoirs (existing) w/ storage
 3 - Rivers w/o storage
 2 - Anadromous species
 2 - Bird abundance

pos	pos	pos	pos	pos	pos
(s)	(s)	(s)	(s)	(s)	(s)
neg	neg	neg	neg	neg	neg
(m)	(m)	(m)	(m)	(m)	(m)

pos	pos	pos	pos	pos	pos
(m)	(s)	(l)	(l)	(m)	(l)
pos	pos	pos	pos	pos	pos
(m)	(m)	(m)	(m)	(m)	(m)

neg	neg	neg	neg	neg	neg
(m)	(m)	(m)	(m)	(m)	(m)
pos	pos	pos	pos	pos	pos
(m)	(m)	(m)	(m)	(m)	(m)

pos	pos	pos	pos	pos	pos
(m)	(s)	(l)	(l)	(m)	(l)
pos	pos	pos	pos	pos	pos
(m)	(m)	(m)	(m)	(m)	(m)

pos	pos	pos	pos	pos	pos
(m)	(s)	(l)	(l)	(m)	(l)
pos	pos	pos	pos	pos	pos
(m)	(m)	(m)	(m)	(m)	(m)

pos	pos	pos	pos	pos	pos
(m)	(s)	(l)	(l)	(m)	(l)
pos	pos	pos	pos	pos	pos
(m)	(m)	(m)	(m)	(m)	(m)

pos	pos	pos	pos	pos	pos
(m)	(s)	(l)	(l)	(m)	(l)
pos	pos	pos	pos	pos	pos
(m)	(m)	(m)	(m)	(m)	(m)

pos	pos	pos	pos	pos	pos
(m)	(s)	(l)	(l)	(m)	(l)
pos	pos	pos	pos	pos	pos
(m)	(m)	(m)	(m)	(m)	(m)

Adjusted Alt = 18 + 16 + 14 = 48

(703)	Alt 1+2 w/o storage	-0.10%	-0.44%	-0.85%	+0.20%	+2.53%	+1.4%
(706)	Alt 1+2 w/ storage	-0.10%	+2.95%	-1.18%	+26.7%	+7.9%	-27.1%
(704)	Alt 3 w/o storage	-0.63%	-3.4%	-0.9%	+1.5%	+2.5%	+8.8%
(705)	Alt 3 w/ storage	-0.9%	+1.8%	-2.6%	+3.2%	+10.1%	-25.4%
(704)	-10K	-1.22%	+1.4%	-3.0%	+3.27%	+10.9%	-25.5%
(717)	-15K	-1.4%	+0.9%	-3.3%	+3.35%	+12.1%	-24.3%

DELTA REGION

		w/ storage			w/o storage		
		Alt. 1	Alt 2	Alt 3	Alt. 1	Alt 2	Alt 3
Fish & Wildlife							
2	- Anadromous Species	pos (m)	pos (s)	pos (L)	pos (m)	pos (s)	pos (L)
2	- Bird abundance	pos (L)	pos (L)	pos (L)	pos (L)	pos (L)	pos (L)
Construction							
2	- Delta waterways	neg (h)	neg (h)	neg (h)	neg (m)	neg (m)	neg (m)
SUMMARY		+2	+1	+3	+3	+2	+4
WEIGHTED		+4	+2	+6	+6	+4	+8
NEW STORAGE		+3	+3	+3	-	-	-
		+7	+5	+9	+6	+4	+8

BAY REGION

		w/ storage			w/o storage		
		Alt. 1	Alt 2	Alt 3	Alt. 1	Alt 2	Alt 3
Fish & Wildlife							
	- Anadromous	pos (m)	pos (s)	pos (L)	pos (m)	pos (s)	pos (L)
	- Bird Abundance	pos (m)	pos (m)	pos (m)	pos (m)	pos (m)	pos (m)
SUMMARY		+4	+3	+5	+4	+3	+5

Preferred Alt

Delta Region = 7 + 5 + 9 + 21

Bay Region = 4 + 3 + 5 = 12

A few changes from Wegge.

RECREATIONAL RESOURCES

The CALFED Program is expected to provide an overall increase in both recreation opportunities and the quality of recreation experiences.

Ability to enjoy "the great outdoors" is a much cherished value to many people, one which some think essential. Wildlife viewing, fishing, hunting, and water-based recreation such as swimming, motor boating, windsurfing, and windsurfing are popular throughout the state, and particularly in the Bay-Delta regions.

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From	To
Co.	Co.
Phone #	Dept.
Fax #	Fax #

From: Chuck
To: Joan

~~It will include enhancement of recreational resources as part of specific project development.~~

Recreation is a multi-million dollar industry in the state. The demand for recreation resources in California is expected to increase with future population growth. Increasing demand for ~~finite recreational resources~~ is expected to ~~result in a decrease in recreational opportunities~~ and deterioration of the quality of recreational experiences.

X
put additional pressure on limited recreation resource and potentially contribute to it

~~Under the Preferred Program Alternative, recreational resources would benefit from increased open enhanced or restored wetland or wildlife habitat, improved water quality, more protection against flooding, and increased fish and waterfowl populations.~~

Many program elements will either directly or indirectly benefit recreational experiences. Ecosystem Restoration and Levee System Integrity Programs will result in increased open space and habitat improvements which will result in increases in fish and wildlife populations. This will provide increased recreational opportunities and improvements in fishing, hunting, and wildlife viewing. The Water Quality Program will provide direct improvements for recreation and indirect benefits to fish, wildlife, and habitat. Water Use Efficiency may provide water supplies for habitat or fish recovery. Overall, the CALFED program could create more recreation-related jobs than under the no action alternative.

X

increase use and

There may be tradeoffs or changes in the type of recreational use in a given area. For example, habitat restoration activities in the Delta may restrict speeds and access for motorized boating in some areas, but provide increased opportunities for non-motorized boating like canoeing or kayaking. Any new or expanded reservoir facilities could adversely affect onstream recreation activities, but provide new open water recreation opportunities. Some existing recreation sites may be temporarily or permanently altered. Mitigation strategies have been developed which, when implemented, are expected to reduce potential adverse impacts to a less than significant level.

Potential Beneficial Impacts

- ◆ Increased open space for hiking, wildlife viewing, hunting and fishing.
- ◆ Increased fish and wildlife populations and habitat areas. Increased sport fishing and hunting opportunities.
- ◆ Increased opportunities for non motorized boating.
- ◆ New open water recreation opportunities with construction of surface storage.
- ◆ New recreation opportunities along new conveyance facilities and shorelines.
- ◆ Improved delta water quality for boating, swimming and fishing.
- ◆ Increase in recreation employment and revenue.

Recreation Resources

Potential Adverse Impacts (& Associated Mitigation Strategies)

Mitigation Strategies

Temporary closure of recreation areas during construction (1,2,3,6,7,8,9,10,15,16,17).

Increased speed zone restrictions or prohibition of motorized boating in some areas (1,2,3,6,8,9,17).

More stringent regulation of boat discharges (1,9,11).

Temporary or permanent changes in boating access and navigation (1,2,3,4,5,6,7,8,9,17).

Permanent closure of some recreation facilities (1,2,9,11,15,17).

Increases in boat traffic in some areas because of speed and access restrictions (1,2,3,4,5,6,7,8,9,17).

X

Decrease in recreation ~~use days~~ ^{opportunities} because of speed and access restrictions (1,2,3,4,5,6,7,8,9,17).

WUE could decrease flooded lands suitable for wildlife, hunting and fishing (1,9,10,11,14).

X

Release of reservoir cold water could reduce water contact recreation (1,9,15,16,17).

New or expanded reservoirs could displace fish and wildlife (9,14)

New or expanded reservoirs could result in a loss of terrestrial and on stream reservoir recreation (1,9,14,15,17).

New or expanded reservoirs could increase use in adjoining recreation areas resulting in degradation (1,9,14,15,17).

X

Changes in reservoir levels can reduce access to recreation facilities and decrease recreation ~~use days~~ ^{opportunities} (1,9,10,11,12,13,17).

1. Incorporate project level recreation improvements and enhancements.
2. Maintain boating access to prime areas.
3. Identify and mark alternate boating routes.
4. Construct portage facilities.
5. Construct boat locks.
6. Provide public information regarding alternate access.
7. Avoid construction during peak use seasons and times.
8. Post warning signs and buoys in channels.
9. Work with local interests to protect and enhance recreation resources.
10. Provide in-kind recreation facilities.
11. Relocate or construct new recreation facilities and infrastructure.
12. Maintain reservoir levels as high as possible during recreation season.
13. Minimize water level fluctuation and establish minimum pool levels.
14. Purchase trail rights-of-way or recreational easements.
15. Provide or improve vehicle access and parking for recreation areas.
16. Provide access to waterfront areas and island edges.
17. Create new day use boating and camping areas.