

## Bair, Lucas/SAC

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**From:** Steve Pavich [steve.pavich@cardno.com]  
**Sent:** Tuesday, March 20, 2012 9:24 AM  
**To:** Sou, Sean; Yusuf, Fatuma/SAC; Bair, Lucas/SAC  
**Cc:** Herrin, Jeff; Carlson, Nik  
**Subject:** RE: NODOS - IMPLAN  
**Attachments:** NODOS FS\_Econ Data\_v13 (March 2012).xlsx

Hi Sean ,

I had to re-work some revised construction spending/payroll estimates as part of the RED analysis for the purposes of the Feasibility Study and wanted to share those results with you to make ensure consistency with the EIR. I also re-modeled the revised construction spending in the statewide model, which I specifically completed for the EIR last December. Attached is the Excel spreadsheet that contains the new results. The revised construction results are included in the following worksheets: "RED-Const Spending" (this is the local model results) and "RED-Construction Spending (State)" (this is the state model). The results are also included the first two summary worksheets. Please let me know if you have any questions.

Thanks,  
Steve

### **Steve Pavich**

Senior Project Economist

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**From:** Steve Pavich  
**Sent:** Tuesday, December 06, 2011 3:19 PM  
**To:** 'Sou, Sean'; 'Fatuma.Yusuf@CH2M.com'; [Stephen.Hatchett@CH2M.com](mailto:Stephen.Hatchett@CH2M.com)  
**Cc:** 'Herrin, Jeff'; Duane Paul  
**Subject:** NODOS - IMPLAN

Hi Sean,

I've completed the additional IMPLAN modeling for the NODOS project. The additional runs I completed covered the following:

- Construction analysis run through the statewide model
  - Same as the "local" analysis except using the state model
- Agricultural impacts for lands affected by the Project run through both the two-county (local) and statewide models
  - Permanent impacts cover lands underlying the reservoir and project facilities
  - Short-term impacts cover lands underlying temporary construction areas
  - For more details, see write-up by Amy Lyons, DWR GIS staff (Sean should have that e-mail)

I'm attaching here a summary Excel spreadsheet that includes all of the work I've completed for the Feasibility Study, which I augmented with the new model runs. The worksheets are labeled so you should be able to find what you're looking for – the second worksheet has the new modeling results for the EIR. I'm also attaching the supporting spreadsheet for the new AG analysis, as well as the RED summary that we discussed back at our meeting in October. I'm also sending by mail the IMPLAN models that I've been working with (I will send the CD directly to Fatuma).

Please let me know if you have any questions.

Thanks,  
Steve

***Steve Pavich***

Senior Project Economist  
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**NODOS Economic Analysis**

Report Tables  
(\$2010, \$1,000s)

**NED - RECREATION**

Alternative	Annual Benefit		Annualized Benefit (2023-2123)
	2025	2060	
<b>Average Conditions</b>			
Alt. A	\$4,376	\$4,376	\$4,376
Alt. B	\$4,340	\$4,340	\$4,340
Alt. C	\$4,529	\$4,529	\$4,529
<b>Dry Conditions</b>			
Alt. A	\$3,233	\$3,233	\$3,233
Alt. B	\$3,071	\$3,071	\$3,071
Alt. C	\$3,556	\$3,556	\$3,556

Steve Pavich:  
Relative to future NA

**NED - URBAN (M&I) WATER QUALITY**

Alternative	Annual Benefit		Annualized Benefit (2023-2123)
	2025	2060	
<b>Average Condition</b>			
Alt. A	\$14,957	\$18,766	\$16,765
Alt. B	\$16,170	\$20,719	\$18,330
Alt. C	\$19,409	\$25,252	\$22,183
<b>Dry Conditions</b>			
Alt. A	\$17,693	\$22,892	\$20,162
Alt. B	\$19,532	\$24,876	\$22,069
Alt. C	\$22,724	\$29,627	\$26,001

**NED - AGRICULTURAL WATER QUALITY**

Alternative	Annual Benefit		Annualized Benefit (2023-2123)
	2025	2060	
<b>Average Condition</b>			
Alt. A	\$1,115	\$1,193	\$1,152
Alt. B	\$1,228	\$1,302	\$1,263
Alt. C	\$1,444	\$1,810	\$1,618
<b>Dry Conditions</b>			
Alt. A	\$2,189	\$2,837	\$2,497
Alt. B	\$3,014	\$2,993	\$3,004
Alt. C	\$3,213	\$3,429	\$3,315

**NED - URBAN (M&I) WATER SUPPLIES**

Alternative	Annual Benefit		Annualized Benefit (2023-2123)
	2025	2060	
<b>Average Condition</b>			
Alt. A	\$80,305	\$213,193	\$143,395
Alt. B	\$82,383	\$217,575	\$146,567
Alt. C	\$88,241	\$223,434	\$152,426
<b>Dry Conditions</b>			
Alt. A	\$183,191	\$478,268	\$323,283
Alt. B	\$182,409	\$384,241	\$278,232
Alt. C	\$219,273	\$528,282	\$365,979

**RED - Construction Expenditures - Local Model (Average Annual Benefits over Construction Period)**

Alternative	Output		Labor Income		Employment		Indirect + Induced		
	Direct	Total	Direct	Total	Direct	Total	Output	Income	Jobs
Alternative A	\$357,947	\$436,647	\$19,940	\$44,554	95.9	626.1	\$78,701	\$24,614	530.2
Alternative B	\$338,385	\$417,475	\$20,520	\$45,253	98.7	631.7	\$79,090	\$24,733	533.0
Alternative C	\$388,739	\$475,777	\$22,220	\$49,441	106.9	693.3	\$87,038	\$27,221	586.4

**RED - Construction-Land Acquisition - Local Model (Single Year Benefits)**

Alternative	Output		Labor Income		Employment		Indirect + Induced		
	Direct	Total	Direct	Total	Direct	Total	Output	Income	Jobs
Alternative A	\$2,079	\$2,407	\$625	\$717	14.7	17.5	\$327	\$92	2.9
Alternative B	\$2,047	\$2,369	\$615	\$706	14.4	17.2	\$322	\$90	2.8
Alternative C	\$2,079	\$2,407	\$625	\$717	14.7	17.5	\$327	\$92	2.9

pavich:  
local share

**RED - O&M Expenditures - Local Model (Average Annual Benefits)**

Alternative	Output		Labor Income		Employment		Indirect + Induced		
	Direct	Total	Direct	Total	Direct	Total	Output	Income	Jobs
Alternative A	\$0	\$1,182	\$1,750	\$2,120	35.0	45.7	\$1,182	\$370	10.7
Alternative B	\$0	\$1,075	\$1,500	\$1,838	30.0	39.7	\$1,075	\$338	9.7
Alternative C	\$0	\$1,182	\$1,750	\$2,120	35.0	45.7	\$1,182	\$370	10.7

Steve Pavich:  
Direct =  
value of hydropower

**RED - Agriculture - State Model (Average Water Year, Average Annual Benefits)**

Alternative	Output		Labor Income		Employment		Indirect + Induced		
	Direct	Total	Direct	Total	Direct	Total	Output	Income	Jobs
Alternative A	-\$1,533	-\$1,923	-\$204	-\$381	-4.7	-9.9	-\$390	-\$177	-5.2
Alternative B	-\$1,508	-\$1,891	-\$199	-\$372	-4.6	-9.7	-\$383	-\$173	-5.1
Alternative C	-\$1,533	-\$1,923	-\$204	-\$381	-4.7	-9.9	-\$390	-\$177	-5.2

**RED - Recreation (Average Water Year, Average Annual Benefits)**

Alternative	Output		Labor Income		Employment		Indirect + Induced		
	Direct	Total	Direct	Total	Direct	Total	Output	Income	Jobs
Alternative A	\$1,600	\$1,948	\$487	\$588	20.1	22.9	\$348	\$101	2.8
Alternative B	\$1,587	\$1,933	\$483	\$583	19.9	22.7	\$345	\$100	2.8
Alternative C	\$1,657	\$2,017	\$504	\$608	20.8	23.7	\$360	\$105	2.9

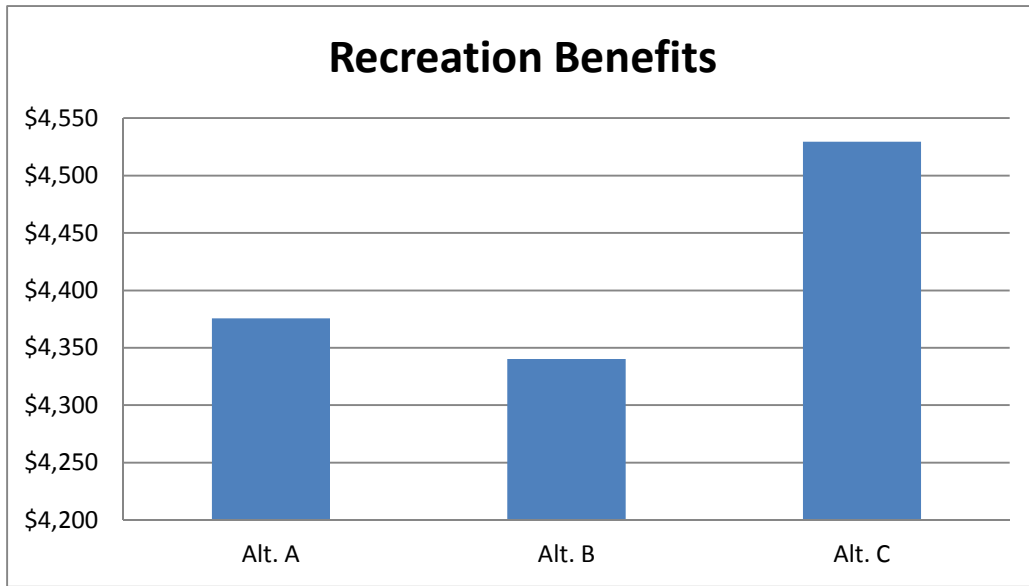
**RED - Hydropower (Average Water Year, Average Annual Benefits)**

Alternative	Output		Labor Income		Employment		Indirect + Induced		
	Direct	Total	Direct	Total	Direct	Total	Output	Income	Jobs
Alternative A	\$0	\$0	\$0	\$0	0.0	0.0	\$0	\$0	0.0
Alternative B	\$0	\$0	\$0	\$0	0.0	0.0	\$0	\$0	0.0
Alternative C	\$0	\$0	\$0	\$0	0.0	0.0	\$0	\$0	0.0

pavich:  
excluded from analysis;  
not modeled

NODOS Economic Analysis										
Report Tables (EIR Support)										
(\$2010, \$1,000s)										
<b>RED - Construction Expenditures - State Model (Average Annual Benefits over Construction Period)</b>										
Alternative	Output		Labor Income		Employment		Indirect + Induced			pavich: same as local model (= value of project)
	Direct	Total	Direct	Total	Direct	Total	Output	Income	Jobs	
Alternative A	\$357,947	\$773,816	\$19,940	\$153,782	95.9	2,270.5	\$415,869	\$133,842	2,174.5	
Alternative B	\$338,385	\$756,194	\$20,520	\$154,983	98.7	2,283.7	\$417,809	\$134,463	2,185.0	
Alternative C	\$388,739	\$848,621	\$22,220	\$170,226	106.9	2,511.7	\$459,882	\$148,006	2,404.8	
<b>RED - Construction-Land Acquisition - State Model (Single Year Benefits)</b>										
Alternative	Output		Labor Income		Employment		Indirect + Induced			pavich: greater than local model b/c state model captures all direct effects (no leakage)
	Direct	Total	Direct	Total	Direct	Total	Output	Income	Jobs	
Alternative A	\$8,696	\$15,449	\$2,779	\$4,922	45.3	86.2	\$6,753	\$2,143	40.9	
Alternative B	\$8,560	\$15,207	\$2,736	\$4,845	44.6	84.9	\$6,647	\$2,109	40.3	
Alternative C	\$8,696	\$15,449	\$2,779	\$4,922	45.3	86.2	\$6,753	\$2,143	40.9	
<b>RED - Agriculture-Perm - Local Model (Long-Term Average Annual Impacts)</b>										
Alternative	Output		Labor Income		Employment		Indirect + Induced			Steve Pavich: Land underlying reservoir
	Direct	Total	Direct	Total	Direct	Total	Output	Income	Jobs	
Alternative A	-\$1,533	-\$1,923	-\$204	-\$381	-4.7	-9.9	-\$390	-\$177	-5.2	
Alternative B	-\$1,508	-\$1,891	-\$199	-\$372	-4.6	-9.7	-\$383	-\$173	-5.1	
Alternative C	-\$1,533	-\$1,923	-\$204	-\$381	-4.7	-9.9	-\$390	-\$177	-5.2	
<b>RED - Agriculture-Temp - Local Model (Short-Term Average Annual Impacts)</b>										
Alternative	Output		Labor Income		Employment		Indirect + Induced			Steve Pavich: Land underlying project facilities
	Direct	Total	Direct	Total	Direct	Total	Output	Income	Jobs	
Alternative A	-\$7,094	-\$8,514	-\$636	-\$1,242	-44.0	-62.2	-\$1,421	-\$606	-18.3	
Alternative B	-\$7,094	-\$8,514	-\$636	-\$1,242	-44.0	-62.2	-\$1,421	-\$606	-18.3	
Alternative C	-\$7,094	-\$8,514	-\$636	-\$1,242	-44.0	-62.2	-\$1,421	-\$606	-18.3	
<b>RED - Agriculture-Perm - State Model (Long-Term Average Annual Impacts)</b>										
Alternative	Output		Labor Income		Employment		Indirect + Induced			Steve Pavich: Land underlying reservoir
	Direct	Total	Direct	Total	Direct	Total	Output	Income	Jobs	
Alternative A	-\$1,533	-\$2,910	-\$204	-\$667	-4.7	-15.0	-\$1,377	-\$463	-10.3	
Alternative B	-\$1,508	-\$2,864	-\$199	-\$653	-4.6	-14.7	-\$1,355	-\$454	-10.1	
Alternative C	-\$1,533	-\$2,910	-\$204	-\$667	-4.7	-15.0	-\$1,377	-\$463	-10.3	
<b>RED - Agriculture-Temp - State Model (Short-Term Average Annual Impacts)</b>										
Alternative	Output		Labor Income		Employment		Indirect + Induced			Steve Pavich: Land underlying project facilities
	Direct	Total	Direct	Total	Direct	Total	Output	Income	Jobs	
Alternative A	-\$7,094	-\$12,030	-\$636	-\$2,245	-44.0	-80.0	-\$4,937	-\$1,609	-36.0	
Alternative B	-\$7,094	-\$12,030	-\$636	-\$2,245	-44.0	-80.0	-\$4,937	-\$1,609	-36.0	
Alternative C	-\$7,094	-\$12,030	-\$636	-\$2,245	-44.0	-80.0	-\$4,937	-\$1,609	-36.0	

CHARTS







NODOS Economic Analysis				
Summary Tables (2025)				
** \$1,000s				
<b>RECREATION</b>				
		<i>Benefit</i>		
Alternative	Benefit Estimate (\$)	Difference from No Action (\$)	Difference from No Action (%)	
<b>Average Conditions (2025)</b>				
No Action	\$0	--	--	
Alt. A	\$4,376	\$4,376	#DIV/0!	
Alt. B	\$4,340	\$4,340	#DIV/0!	
Alt. C	\$4,529	\$4,529	#DIV/0!	
<b>Dry Conditions (2025)</b>				
No Action	\$0	--	--	
Alt. A	\$3,233	\$3,233	#DIV/0!	
Alt. B	\$3,071	\$3,071	#DIV/0!	
Alt. C	\$3,556	\$3,556	#DIV/0!	
<b>URBAN (M&amp;I) WATER QUALITY</b>				
		<i>Benefit (Avoid \$)</i>		
Alternative	Total Damages (\$)	Difference from No Action (\$)	Difference from No Action (%)	
<b>Average Conditions (2025)</b>				
No Action	-\$5,018,836	--	--	
Alt. A	-\$5,003,879	\$14,957	-0.3%	
Alt. B	-\$5,002,665	\$16,170	-0.3%	
Alt. C	-\$4,999,427	\$19,409	-0.4%	
<b>Dry Conditions (2025)</b>				
No Action	-\$5,102,215	--	--	
Alt. A	-\$5,084,522	\$17,693	-0.3%	
Alt. B	-\$5,082,684	\$19,532	-0.4%	
Alt. C	-\$5,079,491	\$22,724	-0.4%	
				Steve Pavich: For double-checking purposes
				ALL LCRBWQM
<b>AGRICULTURAL WATER QUALITY</b>				
		<i>Benefit (Avoid \$)</i>		
Alternative	Total Damages (\$)	Difference from No Action (\$)	Difference from No Action (%)	
<b>Average Conditions (2025)</b>				
No Action	-\$38,598	--	--	
Alt. A	-\$37,483	\$1,115	-2.9%	
Alt. B	-\$37,370	\$1,228	-3.2%	
Alt. C	-\$37,153	\$1,444	-3.7%	
<b>Dry Conditions (2025)</b>				
No Action	-\$45,319	--	--	
Alt. A	-\$43,130	\$2,189	-4.8%	
Alt. B	-\$42,305	\$3,014	-6.6%	
Alt. C	-\$42,106	\$3,213	-7.1%	
<b>URBAN (M&amp;I) WATER SUPPLIES</b>				
		<i>Benefit (Avoid \$)</i>		
Alternative	Total Costs (\$)	Difference from No Action (\$)	Difference from No Action (%)	
<b>Average Conditions (2025)</b>				
No Action	-\$1,681,546	--	--	
Alt. A	-\$1,601,241	\$80,305	-4.8%	
Alt. B	-\$1,599,163	\$82,383	-4.9%	
Alt. C	-\$1,593,305	\$88,241	-5.2%	
<b>Dry Conditions (2025)</b>				
No Action	-\$2,087,567	--	--	
Alt. A	-\$1,904,376	\$183,191	-8.8%	
Alt. B	-\$1,905,158	\$182,409	-8.7%	
Alt. C	-\$1,868,295	\$219,273	-10.5%	
<b>** NO SEPARATE RED ANALYSIS FOR 2025 vs. 2060</b>				
** Construction spending				
** Operations spending				
** Agricultural production				
** Recreation spending				
** Hydropower production				



NODOS Economic Analysis					
Summary Tables (2060)					
** \$1,000s					
<b>RECREATION</b>					
<i>Benefit</i>					
Alternative	Benefit Estimate (\$)	Difference from No Action (\$)	Difference from No Action (%)		
<b>Average Conditions (2060)</b>					
No Action	\$0	--	--		
Alt. A	\$4,376	\$4,376	#DIV/0!		
Alt. B	\$4,340	\$4,340	#DIV/0!		
Alt. C	\$4,529	\$4,529	#DIV/0!		
<b>Dry Conditions (2060)</b>					
No Action	\$0	--	--		
Alt. A	\$3,233	\$3,233	#DIV/0!		
Alt. B	\$3,071	\$3,071	#DIV/0!		
Alt. C	\$3,556	\$3,556	#DIV/0!		
<b>URBAN (M&amp;I) WATER QUALITY</b>					
<i>Benefit (Avoid \$)</i>					
Alternative	Total Damages (\$)	Difference from No Action (\$)	Difference from No Action (%)	Steve Pavich: For double-checking purposes	
<b>Average Conditions (2060)</b>					
No Action	-\$6,113,108	--	--	<i>ALL ICRBWQM</i>	
Alt. A	-\$6,094,343	\$18,766	-0.3%	-\$6,130,817	\$19,409
Alt. B	-\$6,092,390	\$20,719	-0.3%	-\$6,128,732	\$21,494
Alt. C	-\$6,087,856	\$25,252	-0.4%	-\$6,124,138	\$26,087
<b>Dry Conditions (2060)</b>					
No Action	-\$6,222,577	--	--	-\$6,266,670	
Alt. A	-\$6,199,685	\$22,892	-0.4%	-\$6,241,459	\$25,211
Alt. B	-\$6,197,701	\$24,876	-0.4%	-\$6,239,380	\$27,290
Alt. C	-\$6,192,950	\$29,627	-0.5%	-\$6,234,359	\$32,311
<b>AGRICULTURAL WATER QUALITY</b>					
<i>Benefit (Avoid \$)</i>					
Alternative	Total Damages (\$)	Difference from No Action (\$)	Difference from No Action (%)		
<b>Average Conditions (2060)</b>					
No Action	-\$37,117	--	--		
Alt. A	-\$35,925	\$1,193	-3.2%		
Alt. B	-\$35,816	\$1,302	-3.5%		
Alt. C	-\$35,308	\$1,810	-4.9%		
<b>Dry Conditions (2060)</b>					
No Action	-\$44,093	--	--		
Alt. A	-\$41,255	\$2,837	-6.4%		
Alt. B	-\$41,100	\$2,993	-6.8%		
Alt. C	-\$40,664	\$3,429	-7.8%		
<b>URBAN (M&amp;I) WATER SUPPLIES</b>					
<i>Benefit (Avoid \$)</i>					
Alternative	Total Costs (\$)	Difference from No Action (\$)	Difference from No Action (%)		
<b>Average Conditions (2060)</b>					
No Action	-\$6,250,178	--	--		
Alt. A	-\$6,036,985	\$213,193	-3.4%		
Alt. B	-\$6,032,603	\$217,575	-3.5%		
Alt. C	-\$6,026,744	\$223,434	-3.6%		
<b>Dry Conditions (2060)</b>					
No Action	-\$7,275,727	--	--		
Alt. A	-\$6,797,460	\$478,268	-6.6%		
Alt. B	-\$6,891,486	\$384,241	-5.3%		
Alt. C	-\$6,747,445	\$528,282	-7.3%		
<b>** NO SEPARATE RED ANALYSIS FOR 2025 vs. 2060</b>					
** Construction spending					
** Operations spending					
** Agricultural production					
** Recreation spending					
** Hydropower production					

	A	B	C	D	E	F	G	H	I	J
1	Recreation Use Estimates									
2										
3					Average Water Year			Dry Water Year		
4	Steve Pavich:	<u>MAX</u>	<u>% Breakdown</u>	<u>NA</u>	<u>Alt. A</u>	<u>Alt. B</u>	<u>Alt. C</u>	<u>Alt. A</u>	<u>Alt. B</u>	<u>Alt. C</u>
5	Total Visitor Days	400,000	100%	0	360,976	358,049	373,659	266,667	253,333	293,333
6	Activities:									
7	Shore fishing	34,800	8.7%	0	31,405	31,150	32,508	23,200	22,040	25,520
8	Boat fishing	18,000	4.5%	0	16,244	16,112	16,815	12,000	11,400	13,200
9	Picnicking	92,000	23.0%	0	83,024	82,351	85,941	61,333	58,267	67,467
10	Sightseeing	79,200	19.8%	0	71,473	70,894	73,984	52,800	50,160	58,080
11	Swimming / beach use	90,400	22.6%	0	81,580	80,919	84,447	60,267	57,253	66,293
12	Walking	11,600	2.9%	0	10,468	10,383	10,836	7,733	7,347	8,507
13	Bicycling/Motorcycling	5,200	1.3%	0	4,693	4,655	4,858	3,467	3,293	3,813
14	Off-road vehicle	400	0.1%	0	361	358	374	267	253	293
15	Horseback riding	1,600	0.4%	0	1,444	1,432	1,495	1,067	1,013	1,173
16	Boating / water-skiing	62,400	15.6%	0	56,312	55,856	58,291	41,600	39,520	45,760
17	Hunting	1,200	0.3%	0	1,083	1,074	1,121	800	760	880
18	Other	3,200	0.8%	0	2,888	2,864	2,989	2,133	2,027	2,347
19	<b>Total:</b>	<b>400,000</b>	<b>100.0%</b>	<b>0</b>	<b>360,976</b>	<b>358,049</b>	<b>373,659</b>	<b>266,667</b>	<b>253,333</b>	<b>293,333</b>
20										
21										
22		<b>% Total Value/Visits</b>		Steve Pavich:						
23	<u>Alternative</u>	<u>AVE</u>	<u>DRY</u>	from OPS spreadsheet						
24	NA	0.0%	0.0%							
25	Alt. A	90.2%	66.7%							
26	Alt. B	89.5%	63.3%							
27	Alt. C	93.4%	73.3%							



Recreation Tables (Other)										
Table XX (3.4)										
Estimated Average Annual Visits by Activity, and Value of Visitor Day Based on Local Reservoir Activity Patterns										
Recreation Activity	Max	Visitor Days (Average Water Year)				Value of Visitor Day		Total Maximum Value	Weight	Footnotes
		No Action	A	B	C	2004	2010			
Shore fishing	34,800	0	31,405	31,150	32,508	\$47.16	\$53.93	\$1,876,872	0.09	
Boat fishing	18,000	0	16,244	16,112	16,815	\$47.16	\$53.93	\$970,796	0.05	
Picnicking	92,000	0	83,024	82,351	85,941	\$41.46	\$47.41	\$4,362,132	0.23	
Sightseeing	79,200	0	71,473	70,894	73,984	\$36.84	\$42.13	\$3,336,771	0.20	
Swimming / beach use	90,400	0	81,580	80,919	84,447	\$42.68	\$48.81	\$4,412,396	0.23	swimming
Walking	11,600	0	10,468	10,383	10,836	\$30.84	\$35.27	\$409,123	0.03	hiking
Bicycling/Motorcycling	5,200	0	4,693	4,655	4,858	\$73.78	\$84.38	\$438,757	0.01	mountain biking
Off-road vehicle	400	0	361	358	374	\$22.92	\$26.21	\$10,485	0.00	
Horseback riding	1,600	0	1,444	1,432	1,495	\$18.12	\$20.72	\$33,156	0.00	
Boating / water-skiing	62,400	0	56,312	55,856	58,291	\$46.27	\$52.92	\$3,301,914	0.16	motorboating
Hunting	1,200	0	1,083	1,074	1,121	\$46.92	\$53.66	\$64,390	0.00	
Other	3,200	0	2,888	2,864	2,989	\$48.70	\$55.69	\$178,222	0.01	other recreation
<b>Total</b>	<b>400,000</b>	<b>0</b>	<b>360,976</b>	<b>358,049</b>	<b>373,659</b>	<b>\$42.40</b>	<b>\$48.49</b>	<b>\$19,395,013</b>	<b>1.00</b>	
	400,000	0	360,976	358,049	373,659					
Table XX (3.5)										
Estimated Storage and Surface Area for Sites Reservoir at Increasing Water Elevations										
Elevation (feet)	Storage (TAF)	Area (Acres)								
320	50	2,385								
340	112	3,826								
360	201	5,258								
380	321	6,514								
400	462	7,701								
420	631	9,122								
440	824	10,263								
460	1,040	11,318								
480	1,277	12,326								
500	1,534	13,251								
520	1,807	14,130								
TABLE XX (3.6)										
Share of Maximum Economic Value Obtained for Ranges of Surface Areas										
End-of-Month Surface Acreage	Percent of Maximum Recreation Value Obtained									
Above 10,000 acres	100%									
8,000 to 10,000	80%									
6,000 to 8,000	60%									
4,000 to 6,000	40%									
2,000 to 4,000	20%									
Less than 2,000	0%									
Table XX										
Estimated Percent of Total Value Realized by Alternative										
Alternative	% Total Value/Visits									
	Average	DRY								
No Action	0.0%	0.0%								
Alt. A	90.2%	66.7%								
Alt. B	89.5%	64.3%								
Alt. C	93.4%	73.3%								
Table XX										
Estimated Average Annual Visits by Activity										
Recreation Activity	No Action	Average Conditions			Dry Conditions					
		A	B	C	A	B	C			
Shore fishing	0	31,405	31,150	32,508	23,200	22,040	25,520			
Boat fishing	0	16,244	16,112	16,815	12,000	11,400	13,200			
Picnicking	0	83,024	82,351	85,941	61,333	58,267	67,467			
Sightseeing	0	71,473	70,894	73,984	52,800	50,160	58,080			
Swimming / beach use	0	81,580	80,919	84,447	60,267	57,253	66,293			
Walking	0	10,468	10,383	10,836	7,733	7,347	8,507			
Bicycling/Motorcycling	0	4,693	4,655	4,858	3,467	3,293	3,813			
Off-road vehicle	0	361	358	374	267	253	293			
Horseback riding	0	1,444	1,432	1,495	1,067	1,013	1,173			
Boating / water-skiing	0	56,312	55,856	58,291	41,600	39,520	45,760			
Hunting	0	1,083	1,074	1,121	800	760	880			
Other	0	2,888	2,864	2,989	2,133	2,027	2,347			
<b>Total</b>	<b>0</b>	<b>360,976</b>	<b>358,049</b>	<b>373,659</b>	<b>266,667</b>	<b>253,333</b>	<b>293,333</b>			
	0	360,976	358,049	373,659	266,667	253,333	293,333			
<b>% Non-Local:</b>	<b>24%</b>	<b>86,634</b>	<b>85,932</b>	<b>89,678</b>						

	A	B	C	D	E	F	G	H
1	<b>M&amp;I Water Supply</b>							
2	** LCPSIM (South Coast Region, SF Bay-South Region)							
3	** OMWEM (Sacramento River, SF-Bay-North, Central Coast, Tulare Lake,S. Lahontan Regions )							
4	** Excludes American River Service Area, etc... ("negligible" amount, excluded from analysis)							
5	** No difference between 2025/2060							
6	** Change relative to No Action							
7								
8	<b>Table XX: Change in M&amp;I Water Supply Allocation (TAF)</b>			<b>%</b>		<b>Total</b>		
9	<b>Alternative</b>	<b>Average</b>	<b>Dry</b>	<b>Ave</b>	<b>Dry</b>	<b>Ave</b>	<b>Dry</b>	
10	Alternative A	94	208	22.1%	36.9%	425	563	
11	Alternative B	96	191	22.4%	36.3%	429	526	
12	Alternative C	102	229	20.9%	35.9%	488	637	
13								
14								
15	<b>Table XX: M&amp;I Water Supply Allocation (TAF)</b>							
16	<b>Alternative</b>	<b>Average Annual Volume (TAF)</b>	<b>Difference from No Action</b>	<b>Difference from No Action (%)</b>				
17	<b>Average</b>							
18	No Action	2,501	--	--				
19	Alt. A	2,594	93	3.7%				
20	Alt. B	2,598	97	3.9%				
21	Alt. C	2,603	102	4.1%				
22	<b>Dry/Critical</b>							
23	No Action	1,957	--	--				
24	Alt. A	2,165	207	10.6%				
25	Alt. B	2,148	191	9.8%				
26	Alt. C	2,187	229	11.7%				
27								

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	<b>M&amp;I Water Supply</b>												
2	** LCPSIM (South Coast Region, SF Bay-South Region)												
3	** OMWEM (Sacramento River, SF-Bay-North, Central Coast, Tulare Lake,S. Lahontan Regions)												
4	** Excludes American River Service Area, etc... ("negligible" amount, excluded from analysis)												
5	** \$1,000s												
6	** 2010\$ (from 2007)	2007	1.0411										
7													
8	<b>NO ACTION</b>	<b>2025</b>		<b>2060</b>									
9	<b>Type of Cost</b>	<u>Average</u>	<u>Dry</u>	<u>Average</u>	<u>Dry</u>								
10	<b>Water Supply</b>												
11	<b>Urban</b>												
12	Urban - South Bay (LCPSIM)	\$206,685	\$205,976	\$667,984	\$697,435	--	--	--	--	#VALUE!	#VALUE!	#VALUE!	#VALUE!
13	Urban - South Coast (LCPSIM)	\$1,427,897	\$1,781,156	\$5,516,779	\$6,440,372	--	--	--	--	#VALUE!	#VALUE!	#VALUE!	#VALUE!
14	Urban - OMWEM regions	\$46,964	\$100,435	\$65,416	\$137,920	--	--	--	--	#VALUE!	#VALUE!	#VALUE!	#VALUE!
15	Urban - Other (not quantified)	\$0	\$0	\$0	\$0	--	--	--	--	#VALUE!	#VALUE!	#VALUE!	#VALUE!
16										#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
17													
18	<b>ALTERNATIVE A</b>	<b>2025</b>		<b>2060</b>									
19	<b>Type of Cost</b>	<u>Average</u>	<u>Dry</u>	<u>Average</u>	<u>Dry</u>								
20	<b>Water Supply</b>												
21	<b>Urban</b>												
22	Urban - South Bay (LCPSIM)	\$203,976	\$199,943	\$653,080	\$662,625	\$2,709	\$6,033	\$14,904	\$34,810	3.4%	3.3%	7.0%	7.3%
23	Urban - South Coast (LCPSIM)	\$1,360,188	\$1,630,450	\$5,331,315	\$6,031,028	\$67,709	\$150,706	\$185,464	\$409,344	84.3%	82.3%	87.0%	85.6%
24	Urban - OMWEM regions	\$37,077	\$73,983	\$52,591	\$103,806	\$9,887	\$26,453	\$12,825	\$34,114	12.3%	14.4%	6.0%	7.1%
25	Urban - Other (not quantified)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0.0%	0.0%	0.0%	0.0%
26						\$80,305	\$183,191	\$213,193	\$478,268	100.0%	100.0%	100.0%	100.0%
27													
28	<b>ALTERNATIVE B</b>	<b>2025</b>		<b>2060</b>									
29	<b>Type of Cost</b>	<u>Average</u>	<u>Dry</u>	<u>Average</u>	<u>Dry</u>								
30	<b>Water Supply</b>												
31	<b>Urban</b>												
32	Urban - South Bay (LCPSIM)	\$204,171	\$199,891	\$654,273	\$670,454	\$2,514	\$6,085	\$13,711	\$26,981	3.1%	3.3%	6.3%	7.0%
33	Urban - South Coast (LCPSIM)	\$1,357,389	\$1,629,152	\$5,324,834	\$6,113,700	\$70,508	\$152,004	\$191,945	\$326,672	85.6%	83.3%	88.2%	85.0%
34	Urban - OMWEM regions	\$37,603	\$76,115	\$53,497	\$107,333	\$9,361	\$24,321	\$11,919	\$30,588	11.4%	13.3%	5.5%	8.0%
35	Urban - Other (not quantified)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0.0%	0.0%	0.0%	0.0%
36						\$82,383	\$182,409	\$217,575	\$384,241	100.0%	100.0%	100.0%	100.0%
37													
38	<b>ALTERNATIVE C</b>	<b>2025</b>		<b>2060</b>									
39	<b>Type of Cost</b>	<u>Average</u>	<u>Dry</u>	<u>Average</u>	<u>Dry</u>								
40	<b>Water Supply</b>												
41	<b>Urban</b>												
42	Urban - South Bay (LCPSIM)	\$203,867	\$199,487	\$652,588	\$657,001	\$2,818	\$6,489	\$15,395	\$40,434	3.2%	3.0%	6.9%	7.7%
43	Urban - South Coast (LCPSIM)	\$1,353,550	\$1,598,130	\$5,323,221	\$5,991,232	\$74,347	\$183,026	\$193,557	\$449,140	84.3%	83.5%	86.6%	85.0%
44	Urban - OMWEM regions	\$35,888	\$70,677	\$50,934	\$99,212	\$11,076	\$29,758	\$14,481	\$38,708	12.6%	13.6%	6.5%	7.3%
45	Urban - Other (not quantified)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0.0%	0.0%	0.0%	0.0%
46						\$88,241	\$219,273	\$223,434	\$528,282	100.0%	100.0%	100.0%	100.0%

	A	B	C	D	E	F	G
1	<b>M&amp;I Water Quality</b>						
2	** LCRBWQM (South Coast Region) - excludes AG (see next worksheet)						
3	** BAWQM (SF-Bay Region)						
4	** Extrapolated values for South of Delta: SJ River, Central Coast, Tulare Lake, and S. Lahontan regions						
5	** Excludes Sacramento River region, etc...						
6	<b>** Incl. both M&amp;I and AG</b>						
7							
8	<b>Table XX: Change in Water Quality Allocation (TAF)</b>			<b>%</b>		<b>Total</b>	
9	<b>Alternative</b>	<b>Average</b>	<b>Dry</b>	<b>Ave</b>	<b>Dry</b>	<b>Ave</b>	<b>Dry</b>
10	Alternative A	128	117	30.1%	20.8%	425	563
11	Alternative B	136	119	31.7%	22.6%	429	526
12	Alternative C	165	169	33.8%	26.5%	488	637
13							
14							
15	<b>Table XX: Water Quality Allocation (TAF)</b>						
16	<b>Alternative</b>	<b>Average Annual Volume (TAF)</b>	<b>Difference from No Action</b>	<b>Difference from No Action (%)</b>			
17	<b>Average</b>						
18	No Action	0	--	--			
19	Alt. A	128	128	--			
20	Alt. B	136	136	--			
21	Alt. C	165	165	--			
22	<b>Dry/Critical</b>						
23	No Action	0	--	--			
24	Alt. A	117	117	--			
25	Alt. B	119	119	--			
26	Alt. C	169	169	--			
27							

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	<b>M&amp;I Water Quality</b>												
2	** LCRBWQM (South Coast Region) - excludes AG (see next worksheet)												
3	** BAWQM (SF-Bay Region)												
4	** Extrapolated values for South of Delta: SJ River, Cental Coast, Tulare Lake, and S. Lahontan regions												
5	** Excludes Sacramento River region, etc...												
6	** No total NA values for BAWQM and Urban-Other - only changes reported												
7	** No dry-year analysis for South-of-Delta (SOD) impacts												
8	** \$1,000s												
9	** 2010\$ (from 2006 and 2007)	2006	1.0717	2007	1.0411								
10													
11	<b>NO ACTION</b>	<b>2025</b>		<b>2060</b>									
12	<b>Type of Cost</b>	<b>Average</b>	<b>Dry</b>	<b>Average</b>	<b>Dry</b>								
13	<b>Water Quality</b>												
14	<b>Urban</b>												
15	Urban - South Coast (LCRBWQM)	\$5,018,836	\$5,102,215	\$6,113,108	\$6,222,577	--	--	--	--	#VALUE!	#VALUE!	#VALUE!	#VALUE!
16	Urban - South Bay (BAWQM)					--	--	--	--	#VALUE!	#VALUE!	#VALUE!	#VALUE!
17	Urban - Other (south of Delta)					--	--	--	--	#VALUE!	#VALUE!	#VALUE!	#VALUE!
18										#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
19													
20	<b>ALTERNATIVE A</b>	<b>2025</b>		<b>2060</b>									
21	<b>Type of Cost</b>	<b>Average</b>	<b>Dry</b>	<b>Average</b>	<b>Dry</b>								
22	<b>Water Quality</b>												
23	<b>Urban</b>												
24	Urban - South Coast (LCRBWQM)	\$5,009,540	\$5,085,845	\$6,101,688	\$6,201,394	\$9,296	\$16,370	\$11,421	\$21,183	62.1%	92.5%	60.9%	92.5%
25	Urban - South Bay (BAWQM)	-\$1,021	-\$1,324	-\$1,318	-\$1,709	\$1,021	\$1,324	\$1,318	\$1,709	6.8%	7.5%	7.0%	7.5%
26	Urban - Other (south of Delta)	-\$4,640		-\$6,027		\$4,640	\$0	\$6,027	\$0	31.0%	0.0%	32.1%	0.0%
27						\$14,957	\$17,693	\$18,766	\$22,892	100.0%	100.0%	100.0%	100.0%
28													
29	<b>ALTERNATIVE B</b>	<b>2025</b>		<b>2060</b>									
30	<b>Type of Cost</b>	<b>Average</b>	<b>Dry</b>	<b>Average</b>	<b>Dry</b>								
31	<b>Water Quality</b>												
32	<b>Urban</b>												
33	Urban - South Coast (LCRBWQM)	\$5,008,799	\$5,084,328	\$6,100,477	\$6,199,825	\$10,037	\$17,888	\$12,631	\$22,753	62.1%	91.6%	61.0%	91.5%
34	Urban - South Bay (BAWQM)	-\$1,105	-\$1,644	-\$1,426	-\$2,123	\$1,105	\$1,644	\$1,426	\$2,123	6.8%	8.4%	6.9%	8.5%
35	Urban - Other (south of Delta)	-\$5,028		-\$6,661		\$5,028	\$0	\$6,661	\$0	31.1%	0.0%	32.1%	0.0%
36						\$16,170	\$19,532	\$20,719	\$24,876	100.0%	100.0%	100.0%	100.0%
37													
38	<b>ALTERNATIVE C</b>	<b>2025</b>		<b>2060</b>									
39	<b>Type of Cost</b>	<b>Average</b>	<b>Dry</b>	<b>Average</b>	<b>Dry</b>								
40	<b>Water Quality</b>												
41	<b>Urban</b>												
42	Urban - South Coast (LCRBWQM)	\$5,006,780	\$5,081,361	\$6,097,691	\$6,195,364	\$12,056	\$20,855	\$15,417	\$27,214	62.1%	91.8%	61.1%	91.9%
43	Urban - South Bay (BAWQM)	-\$1,497	-\$1,869	-\$1,932	-\$2,414	\$1,497	\$1,869	\$1,932	\$2,414	7.7%	8.2%	7.7%	8.1%
44	Urban - Other (south of Delta)	-\$5,856		-\$7,903		\$5,856	\$0	\$7,903	\$0	30.2%	0.0%	31.3%	0.0%
45						\$19,409	\$22,724	\$25,252	\$29,627	100.0%	100.0%	100.0%	100.0%



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	<b>AG Water Quality</b>												
2	** Includes AG component of LCRBWQM (South Coast Region)												
3	** No total NA values for AG-salinity model - only changes reported												
4	** AG-salinity model: benefit = total value of water saved												
5	** \$1,000s												
6	** AG-salinity model in 2011\$ dollars												
7	** 2010\$ (from 2007) - LCRBWQM	2007	1.0411										
8	** 2010\$ (from 2011) - SWAP	2011	0.9910										
9													
10	<b>NO ACTION</b>	<b>2025</b>		<b>2060</b>									
11	<b>Type of Cost</b>	<b>Average</b>	<b>Dry</b>	<b>Average</b>	<b>Dry</b>								
12	<b>Water Quality</b>												
13	<b>Agriculture</b>												
14	AG - South Coast (LCRBWQM)	\$38,598	\$45,319	\$37,117	\$44,093	--	--	--	--	#VALUE!	#VALUE!	#VALUE!	#VALUE!
15	Central Valley (AG-salinity model)					--	--	--	--	#VALUE!	#VALUE!	#VALUE!	#VALUE!
16										#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
17													
18	<b>ALTERNATIVE A</b>	<b>2025</b>		<b>2060</b>									
19	<b>Type of Cost</b>	<b>Average</b>	<b>Dry</b>	<b>Average</b>	<b>Dry</b>								
20	<b>Water Quality</b>												
21	<b>Agriculture</b>												
22	AG - South Coast (LCRBWQM)	\$37,919	\$43,544	\$36,474	\$41,774	\$679	\$1,775	\$643	\$2,318	60.9%	81.1%	53.9%	81.7%
23	Central Valley (AG-salinity model)	-\$436	-\$414	-\$549	-\$519	\$436	\$414	\$549	\$519	39.1%	18.9%	46.1%	18.3%
24						\$1,115	\$2,189	\$1,193	\$2,837	100.0%	100.0%	100.0%	100.0%
25													
26	<b>ALTERNATIVE B</b>	<b>2025</b>		<b>2060</b>									
27	<b>Type of Cost</b>	<b>Average</b>	<b>Dry</b>	<b>Average</b>	<b>Dry</b>								
28	<b>Water Quality</b>												
29	<b>Agriculture</b>												
30	AG - South Coast (LCRBWQM)	\$37,813	\$42,777	\$36,342	\$41,678	\$785	\$2,542	\$776	\$2,414	63.9%	84.4%	59.6%	80.7%
31	Central Valley (AG-salinity model)	-\$443	-\$471	-\$526	-\$578	\$443	\$471	\$526	\$578	36.1%	15.6%	40.4%	19.3%
32						\$1,228	\$3,014	\$1,302	\$2,993	100.0%	100.0%	100.0%	100.0%
33													
34	<b>ALTERNATIVE C</b>	<b>2025</b>		<b>2060</b>									
35	<b>Type of Cost</b>	<b>Average</b>	<b>Dry</b>	<b>Average</b>	<b>Dry</b>								
36	<b>Water Quality</b>												
37	<b>Agriculture</b>												
38	AG - South Coast (LCRBWQM)	\$37,771	\$42,700	\$36,282	\$41,409	\$827	\$2,619	\$835	\$2,684	57.2%	81.5%	46.1%	78.3%
39	Central Valley (AG-salinity model)	-\$618	-\$594	-\$975	-\$745	\$618	\$594	\$975	\$745	42.8%	18.5%	53.9%	21.7%
40						\$1,444	\$3,213	\$1,810	\$3,429	100.0%	100.0%	100.0%	100.0%

**AG Water Quality**  
**AG salinity model results**  
 \*\* No difference 2025 vs. 2060  
 \*\* 20115 - SWAP

Steve Pavich:  
 physical quantity  
 (no difference in 2025/2060)

**Table X-7. Estimated savings in irrigation water for leaching, by salinity analysis area and alternative**

Benefit / Alternative	Grasslands	Westlands	Tulare	Kern	San Felipe
<b>Average Conditions</b>					
<b>Alternative A</b>					
Percent Savings in Applied Water	0.13%	0.10%	0.10%	0.12%	0.23%
Volume Saved (AF/Yr)	1,328	548	128	654	83
<b>Alternative B</b>					
Percent Savings in Applied Water	0.13%	0.10%	0.11%	0.13%	0.24%
Volume Saved (AF/Yr)	1,276	569	136	700	86
<b>Alternative C</b>					
Percent Savings in Applied Water	0.19%	0.14%	0.14%	0.17%	0.32%
Volume Saved (AF/Yr)	1,849	769	181	934	117
<b>Dry Conditions</b>					
<b>Alternative A</b>					
Percent Savings in Applied Water	0.13%	0.10%	0.10%	0.12%	0.23%
Volume Saved (AF/Yr)	1,148	303	96	505	41
<b>Alternative B</b>					
Percent Savings in Applied Water	0.13%	0.10%	0.11%	0.13%	0.24%
Volume Saved (AF/Yr)	1,101	307	102	535	41
<b>Alternative C</b>					
Percent Savings in Applied Water	0.19%	0.14%	0.14%	0.17%	0.32%
Volume Saved (AF/Yr)	1,598	423	136	727	57

**Table X-X. Estimated value of irrigation water savings, by salinity analysis area and alternative (\$1,000s, 2010 dollars)[2025]**

Alternative / Benefit	Grasslands	Westlands	Tulare	Kern	San Felipe	Grasslands	Westlands	Tulare	Kern	San Felipe	
<b>Average</b>											
<b>Alternative A</b>											
Value (\$/AF)	\$160.59	\$161	\$161	\$161	\$161						
Volume Saved (AF/Yr)	1,328	548	128	654	83						
Value of Water Saved (\$1,000s)	\$213.24	\$88.01	\$20.49	\$105.08	\$13.34	\$440.18	48.4%	20.0%	4.7%	23.9%	3.0%
<b>Alternative B</b>											
Value (\$/AF)	\$161.51	\$162	\$162	\$162	\$162						
Volume Saved (AF/Yr)	1,276	569	136	700	86						
Value of Water Saved (\$1,000s)	\$206.10	\$91.98	\$22.03	\$112.98	\$13.92	\$447.01	46.1%	20.6%	4.9%	25.3%	3.1%
<b>Alternative C</b>											
Value (\$/AF)	\$161.94	\$162	\$162	\$162	\$162						
Volume Saved (AF/Yr)	1,849	769	181	934	117						
Value of Water Saved (\$1,000s)	\$299.42	\$124.51	\$29.35	\$151.34	\$18.87	\$623.48	48.0%	20.0%	4.7%	24.3%	3.0%
<b>Dry</b>											
<b>Alternative A</b>											
Value (\$/AF)	\$199.40	\$199	\$199	\$199	\$199						
Volume Saved (AF/Yr)	1,148	303	96	505	41						
Value of Water Saved (\$1,000s)	\$228.91	\$60.45	\$19.22	\$100.69	\$8.22	\$417.48	54.8%	14.5%	4.6%	24.1%	2.0%
<b>Alternative B</b>											
Value (\$/AF)	\$227.98	\$228	\$228	\$228	\$228						
Volume Saved (AF/Yr)	1,101	307	102	535	41						
Value of Water Saved (\$1,000s)	\$251.10	\$70.09	\$23.15	\$121.89	\$9.35	\$475.59	52.8%	14.7%	4.9%	25.6%	2.0%
<b>Alternative C</b>											
Value (\$/AF)	\$203.75	\$204	\$204	\$204	\$204						
Volume Saved (AF/Yr)	1,598	423	136	727	57						
Value of Water Saved (\$1,000s)	\$325.60	\$86.28	\$27.80	\$148.10	\$11.58	\$599.36	54.3%	14.4%	4.6%	24.7%	1.9%

**Table X-X. Estimated value of irrigation water savings, by salinity analysis area and alternative (\$1,000s, 2010 dollars)[2060]**

Alternative / Benefit	Grasslands	Westlands	Tulare	Kern	San Felipe	Grasslands	Westlands	Tulare	Kern	San Felipe	
<b>Average</b>											
<b>Alternative A</b>											
Value (\$/AF)	\$202.23	\$202	\$202	\$202	\$202						
Volume Saved (AF/Yr)	1,328	548	128	654	83						
Value of Water Saved (\$1,000s)	\$268.54	\$110.84	\$25.81	\$132.33	\$16.81	\$554.32	48.4%	20.0%	4.7%	23.9%	3.0%
<b>Alternative B</b>											
Value (\$/AF)	\$191.88	\$192	\$192	\$192	\$192						
Volume Saved (AF/Yr)	1,276	569	136	700	86						
Value of Water Saved (\$1,000s)	\$244.85	\$109.27	\$26.17	\$134.22	\$16.53	\$531.05	46.1%	20.6%	4.9%	25.3%	3.1%
<b>Alternative C</b>											
Value (\$/AF)	\$255.44	\$255	\$255	\$255	\$255						
Volume Saved (AF/Yr)	1,849	769	181	934	117						
Value of Water Saved (\$1,000s)	\$472.28	\$196.39	\$46.29	\$238.71	\$29.77	\$983.44	48.0%	20.0%	4.7%	24.3%	3.0%
<b>Dry</b>											
<b>Alternative A</b>											
Value (\$/AF)	\$250.08	\$250	\$250	\$250	\$250						
Volume Saved (AF/Yr)	1,148	303	96	505	41						
Value of Water Saved (\$1,000s)	\$287.10	\$75.82	\$24.10	\$126.28	\$10.31	\$523.60	54.8%	14.5%	4.6%	24.1%	2.0%
<b>Alternative B</b>											
Value (\$/AF)	\$279.81	\$280	\$280	\$280	\$280						
Volume Saved (AF/Yr)	1,101	307	102	535	41						
Value of Water Saved (\$1,000s)	\$308.18	\$86.03	\$28.41	\$149.60	\$11.48	\$583.71	52.8%	14.7%	4.9%	25.6%	2.0%
<b>Alternative C</b>											
Value (\$/AF)	\$255.44	\$255	\$255	\$255	\$255						
Volume Saved (AF/Yr)	1,598	423	136	727	57						
Value of Water Saved (\$1,000s)	\$408.20	\$108.17	\$34.85	\$185.67	\$14.51	\$751.41	54.3%	14.4%	4.6%	24.7%	1.9%

**Table X-X. Estimated value of irrigation water savings (\$/AF, 2011 dollars)**

Alternative	Average Conditions		Dry/Critical Conditions	
	2025	2060	2025	2060
Alternative A	\$160.59	\$202.23	\$199.40	\$250.08
Alternative B	\$161.51	\$191.88	\$227.98	\$279.81
Alternative C	\$161.94	\$255.44	\$203.75	\$255.44

<b>RED - REC Spending</b>				
<i>** Local study area / model</i>				
<i>** Impacts relative to Future NA</i>				
<i>** Pasted values from IMPLAN reports</i>				
<b>Impact Summary</b>	<b>REC (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	20.1	\$486,510	\$791,210	\$1,600,275
Indirect Effect	1.4	\$60,198	\$98,609	\$198,649
Induced Effect	1.4	\$40,956	\$89,149	\$149,570
Total Effect	22.9	\$587,664	\$978,967	\$1,948,494
<b>Impact Summary</b>	<b>REC (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	19.9	\$482,565	\$784,794	\$1,587,298
Indirect Effect	1.4	\$59,709	\$97,809	\$197,038
Induced Effect	1.4	\$40,624	\$88,426	\$148,357
Total Effect	22.7	\$582,899	\$971,029	\$1,932,694
<b>Impact Summary</b>	<b>REC (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	20.8	\$503,604	\$819,009	\$1,656,500
Indirect Effect	1.5	\$62,313	\$102,073	\$205,628
Induced Effect	1.4	\$42,395	\$92,281	\$154,825
Total Effect	23.7	\$608,312	\$1,013,363	\$2,016,954

RED - Construction Spending		REVISED MARCH 2012					
<i>** Local study area / model</i>							
<i>** Impacts relative to Future NA</i>							
<i>** Pasted values from IMPLAN reports</i>							
<b>Impact Summary</b>		<b>PAYROLL (A)</b>					
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>			
Direct Effect	0.0	\$0	\$0	\$0			
Indirect Effect	0.0	\$0	\$0	\$0			
Induced Effect	29.7	\$884,339	\$1,916,391	\$3,219,428	<i>** All induced effects</i>		
Total Effect	29.7	\$884,339	\$1,916,391	\$3,219,428			
<b>Impact Summary</b>		<b>PAYROLL (B)</b>					
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>			
Direct Effect	0.0	\$0	\$0	\$0			
Indirect Effect	0.0	\$0	\$0	\$0			
Induced Effect	30.6	\$910,062	\$1,972,133	\$3,313,072	<i>** All induced effects</i>		
Total Effect	30.6	\$910,062	\$1,972,133	\$3,313,072			
<b>Impact Summary</b>		<b>PAYROLL (C)</b>					
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>			
Direct Effect	0.0	\$0	\$0	\$0			
Indirect Effect	0.0	\$0	\$0	\$0			
Induced Effect	33.1	\$985,457	\$2,135,517	\$3,587,547	<i>** All induced effects</i>		
Total Effect	33.1	\$985,457	\$2,135,517	\$3,587,547			
<b>Impact Summary</b>		<b>OTH CONST (A)</b>					
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>			
Direct Effect	0.0	\$0	\$0	\$0	<i>** Direct effect = total cost/employment/payroll</i>		
Indirect Effect	443.4	\$22,047,709	\$34,183,487	\$69,311,909			
Induced Effect	57.0	\$1,682,240	\$3,683,542	\$6,169,420			
Total Effect	500.5	\$23,729,949	\$37,867,029	\$75,481,329			
<b>Impact Summary</b>		<b>OTH CONST (B)</b>					
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>			
Direct Effect	0.0	\$0	\$0	\$0	<i>** Direct effect = total cost/employment/payroll</i>		
Indirect Effect	445.2	\$22,133,987	\$34,317,255	\$69,583,143			
Induced Effect	57.3	\$1,688,823	\$3,697,956	\$6,193,562			
Total Effect	502.4	\$23,822,810	\$38,015,212	\$75,776,706			
<b>Impact Summary</b>		<b>OTH CONST (C)</b>					
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>			
Direct Effect	0.0	\$0	\$0	\$0	<i>** Direct effect = total cost/employment/payroll</i>		
Indirect Effect	490.2	\$24,375,337	\$37,792,317	\$76,629,328			
Induced Effect	63.1	\$1,859,837	\$4,072,421	\$6,820,739			
Total Effect	553.3	\$26,235,175	\$41,864,739	\$83,450,067			
<b>Impact Summary</b>		<b>NET CONST (A)</b>					
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>			
Direct Effect (Outside Model)	95.9	\$19,940,000	--	\$357,946,710	<i>** Direct effect = total cost/employment/payroll</i>		
Indirect Effect	443.4	\$22,047,709	\$34,183,487	\$69,311,909			
Induced Effect	86.7	\$2,566,579	\$5,599,932	\$9,388,848			
Total Effect (w/o outside model)	530.2	\$24,614,288	\$39,783,420	\$78,700,757			
Total Effect (w/ outside model)	626.1	\$44,554,288	--	\$436,647,467			
<b>Impact Summary</b>		<b>NET CONST (B)</b>					
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>			
Direct Effect (Outside Model)	98.7	\$20,520,000	--	\$388,384,920	<i>** Direct effect = total cost/employment/payroll</i>		
Indirect Effect	445.2	\$22,133,987	\$34,317,255	\$69,583,143			
Induced Effect	87.8	\$2,598,885	\$5,670,090	\$9,506,635			
Total Effect (w/o outside model)	533.0	\$24,732,872	\$39,987,345	\$79,089,778			
Total Effect (w/ outside model)	631.7	\$45,252,872	--	\$417,474,698			
<b>Impact Summary</b>		<b>NET CONST (C)</b>					
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>			
Direct Effect (Outside Model)	106.9	\$22,220,000	--	\$388,739,160	<i>** Direct effect = total cost/employment/payroll</i>		
Indirect Effect	490.2	\$24,375,337	\$37,792,317	\$76,629,328			
Induced Effect	96.2	\$2,845,295	\$6,207,938	\$10,408,287			
Total Effect (w/o outside model)	586.4	\$27,220,632	\$44,000,255	\$87,037,615			
Total Effect (w/ outside model)	693.3	\$49,440,632	--	\$475,776,775			

<b>RED - Land Acquisition</b>				
<i>** Local study area / model</i>				
<i>** Impacts relative to Future NA</i>				
<i>** Pasted values from IMPLAN reports</i>				
<b>Impact Summary</b>	<b>LAND-RE (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	5.8	\$173,232	\$841,630	\$1,103,053
Indirect Effect	0.4	\$17,131	\$31,777	\$58,571
Induced Effect	0.5	\$14,608	\$32,045	\$53,642
Total Effect	6.8	\$204,970	\$905,451	\$1,215,266
<b>Impact Summary</b>	<b>LAND-RE (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	5.7	\$170,525	\$828,479	\$1,085,818
Indirect Effect	0.4	\$16,863	\$31,284	\$57,656
Induced Effect	0.5	\$14,380	\$31,544	\$52,804
Total Effect	6.7	\$201,768	\$891,304	\$1,196,277
<b>Impact Summary</b>	<b>LAND-RE (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	5.8	\$173,232	\$841,630	\$1,103,053
Indirect Effect	0.4	\$17,131	\$31,777	\$58,571
Induced Effect	0.5	\$14,608	\$32,045	\$53,642
Total Effect	6.8	\$204,970	\$905,451	\$1,215,266
<b>Impact Summary</b>	<b>LAND-LEGAL (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	8.8	\$451,711	\$574,932	\$976,372
Indirect Effect	0.7	\$23,235	\$41,909	\$79,196
Induced Effect	1.3	\$36,933	\$81,359	\$136,027
Total Effect	10.7	\$511,879	\$698,200	\$1,191,596
<b>Impact Summary</b>	<b>LAND-LEGAL (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	8.7	\$444,653	\$565,948	\$961,116
Indirect Effect	0.7	\$22,872	\$41,254	\$77,959
Induced Effect	1.2	\$36,356	\$80,088	\$133,902
Total Effect	10.6	\$503,881	\$687,290	\$1,172,977
<b>Impact Summary</b>	<b>LAND-LEGAL (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	8.8	\$451,711	\$574,932	\$976,372
Indirect Effect	0.7	\$23,235	\$41,909	\$79,196
Induced Effect	1.3	\$36,933	\$81,359	\$136,027
Total Effect	10.7	\$511,879	\$698,200	\$1,191,596
<b>Impact Summary</b>	<b>NET LAND AQ (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	14.7	\$624,943	\$1,416,564	\$2,079,425
Indirect Effect	1.1	\$40,366	\$73,686	\$137,767
Induced Effect	1.8	\$51,541	\$113,404	\$189,669
Total Effect	17.5	\$716,849	\$1,603,654	\$2,406,862
<b>Impact Summary</b>	<b>NET LAND AQ (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	14.4	\$615,178	\$1,394,427	\$2,046,934
Indirect Effect	1.1	\$39,735	\$72,535	\$135,615
Induced Effect	1.7	\$50,736	\$111,632	\$186,706
Total Effect	17.2	\$705,649	\$1,578,594	\$2,369,254
<b>Impact Summary</b>	<b>NET LAND AQ (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	14.7	\$624,943	\$1,416,564	\$2,079,425
Indirect Effect	1.1	\$40,366	\$73,686	\$137,767
Induced Effect	1.8	\$51,541	\$113,404	\$189,669
Total Effect	17.5	\$716,849	\$1,603,654	\$2,406,862

RED - Operations Spending				
** Local study area / model				
** Impacts relative to Future NA				
** Pasted values from IMPLAN reports				
<b>Impact Summary</b> <b>OP PAYROLL (A)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	0.0	\$0	\$0	\$0
Indirect Effect	0.0	\$0	\$0	\$0
Induced Effect	4.3	\$129,354	\$280,315	\$470,913
Total Effect	4.3	\$129,354	\$280,315	\$470,913
** all induced effects				
<b>Impact Summary</b> <b>OP PAYROLL (B)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	0.0	\$0	\$0	\$0
Indirect Effect	0.0	\$0	\$0	\$0
Induced Effect	3.7	\$110,875	\$240,270	\$403,639
Total Effect	3.7	\$110,875	\$240,270	\$403,639
** all induced effects				
<b>Impact Summary</b> <b>OP PAYROLL (C)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	0.0	\$0	\$0	\$0
Indirect Effect	0.0	\$0	\$0	\$0
Induced Effect	4.3	\$129,354	\$280,315	\$470,913
Total Effect	4.3	\$129,354	\$280,315	\$470,913
** all induced effects				
<b>Impact Summary</b> <b>OP SPEND (A)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	0.0	\$0	\$0	\$0
Indirect Effect	5.5	\$211,249	\$348,918	\$613,104
Induced Effect	0.5	\$15,956	\$34,825	\$58,383
Total Effect	6.0	\$227,206	\$383,743	\$671,487
** Direct effect = power value/employment/payroll				
<b>Impact Summary</b> <b>OP SPEND (B)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	0.0	\$0	\$0	\$0
Indirect Effect	5.2	\$198,741	\$300,033	\$576,800
Induced Effect	0.5	\$15,011	\$32,763	\$54,926
Total Effect	5.7	\$213,752	\$332,797	\$631,726
** Direct effect = power value/employment/payroll				
<b>Impact Summary</b> <b>OP SPEND (C)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	0.0	\$0	\$0	\$0
Indirect Effect	5.5	\$211,249	\$348,918	\$613,104
Induced Effect	0.5	\$15,956	\$34,825	\$58,383
Total Effect	6.0	\$227,206	\$383,743	\$671,487
** Direct effect = power value/employment/payroll				
<b>Impact Summary</b> <b>OP REC (A)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	0.0	\$0	\$0	\$0
Indirect Effect	0.3	\$12,146	\$49,109	\$36,323
Induced Effect	0.0	\$923	\$2,020	\$3,384
Total Effect	0.3	\$13,070	\$51,129	\$39,707
** No direct effect				
<b>Impact Summary</b> <b>OP REC (B)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	0.0	\$0	\$0	\$0
Indirect Effect	0.3	\$12,146	\$49,109	\$36,323
Induced Effect	0.0	\$923	\$2,020	\$3,384
Total Effect	0.3	\$13,070	\$51,129	\$39,707
** No direct effect				
<b>Impact Summary</b> <b>OP REC (C)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	0.0	\$0	\$0	\$0
Indirect Effect	0.3	\$12,146	\$49,109	\$36,323
Induced Effect	0.0	\$923	\$2,020	\$3,384
Total Effect	0.3	\$13,070	\$51,129	\$39,707
** No direct effect				
<b>Impact Summary</b> <b>NET OPS (A)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect (outside model)	35.0	\$1,750,000	-	\$0
Indirect Effect	5.8	\$223,396	\$338,018	\$649,427
Induced Effect	4.9	\$146,234	\$317,159	\$532,679
Total Effect (w/o outside model)	10.7	\$369,630	\$655,177	\$1,182,106
Total Effect (w/ outside model)	45.7	\$2,119,630	-	\$1,182,106
** Direct effect = power value/employment/payroll				
<b>Impact Summary</b> <b>NET OPS (B)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect (outside model)	30.0	\$1,500,000	-	\$0
Indirect Effect	5.5	\$210,887	\$319,134	\$613,123
Induced Effect	4.3	\$126,810	\$276,952	\$461,949
Total Effect (w/o outside model)	9.7	\$337,697	\$596,186	\$1,075,072
Total Effect (w/ outside model)	39.7	\$1,837,697	-	\$1,075,072
** Direct effect = power value/employment/payroll				
<b>Impact Summary</b> <b>NET OPS (C)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect (outside model)	35.0	\$1,750,000	-	\$0
Indirect Effect	5.8	\$223,396	\$338,018	\$649,427
Induced Effect	4.9	\$146,234	\$317,159	\$532,679
Total Effect (w/o outside model)	10.7	\$369,630	\$655,177	\$1,182,106
Total Effect (w/ outside model)	45.7	\$2,119,630	-	\$1,182,106
** Direct effect = power value/employment/payroll				

## **RED—Hydropower Generation**

*\*\* Statewide study area / model*

*\*\* Impacts relative to Future NA*

*\*\* Pasted values from IMPLAN reports*

### **Impact Summary-**

#### **Hydro (A)**

<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect				
Indirect Effect				
Induced Effect				
Total Effect				

### **Impact Summary-**

#### **Hydro (B)**

<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect				
Indirect Effect				
Induced Effect				
Total Effect				

### **Impact Summary-**

#### **Hydro (C)**

<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect				
Indirect Effect				
Induced Effect				
Total Effect				

<b>RED - AG Production (Local-Reservoir-Permanent)</b>				
<i>** Local study area / model</i>				
<i>** Impacts relative to Existing Conditions</i>				
<i>** Pasted values from IMPLAN reports</i>				
<b>Impact Summary</b>	<b>AG PROD (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-4.7	-\$204,473	-\$597,014	-\$1,533,479
Indirect Effect	-4.3	-\$149,648	-\$175,706	-\$290,443
Induced Effect	-0.9	-\$27,096	-\$59,386	-\$99,437
Total Effect	-9.9	-\$381,217	-\$832,108	-\$1,923,360
<b>Impact Summary</b>	<b>AG PROD (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-4.6	-\$199,071	-\$582,996	-\$1,508,268
Indirect Effect	-4.2	-\$146,640	-\$172,894	-\$286,107
Induced Effect	-0.9	-\$26,453	-\$57,977	-\$97,078
Total Effect	-9.7	-\$372,165	-\$813,866	-\$1,891,453
<b>Impact Summary</b>	<b>AG PROD (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-4.7	-\$204,473	-\$597,014	-\$1,533,479
Indirect Effect	-4.3	-\$149,648	-\$175,706	-\$290,443
Induced Effect	-0.9	-\$27,096	-\$59,386	-\$99,437
Total Effect	-9.9	-\$381,217	-\$832,108	-\$1,923,360
<b>Impact Summary</b>	<b>AG-NET (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-4.7	-\$204,473	-\$597,014	-\$1,533,479
Indirect Effect	-4.3	-\$149,648	-\$175,706	-\$290,443
Induced Effect	-0.9	-\$27,096	-\$59,386	-\$99,437
Total Effect	-9.9	-\$381,217	-\$832,108	-\$1,923,360
<b>Impact Summary</b>	<b>AG-NET (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-4.6	-\$199,071	-\$582,996	-\$1,508,268
Indirect Effect	-4.2	-\$146,640	-\$172,894	-\$286,107
Induced Effect	-0.9	-\$26,453	-\$57,977	-\$97,078
Total Effect	-9.7	-\$372,165	-\$813,866	-\$1,891,453
<b>Impact Summary</b>	<b>AG-NET (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-4.7	-\$204,473	-\$597,014	-\$1,533,479
Indirect Effect	-4.3	-\$149,648	-\$175,706	-\$290,443
Induced Effect	-0.9	-\$27,096	-\$59,386	-\$99,437
Total Effect	-9.9	-\$381,217	-\$832,108	-\$1,923,360



<b>RED - AG Production (Local-Reservoir-Temporary)</b>				
<i>** Local study area / model</i>				
<i>** Impacts relative to Existing Conditions</i>				
<i>** Pasted values from IMPLAN reports</i>				
<b>Impact Summary</b>	<b>AG PROD (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-44.0	-\$636,038	<del>-\$3,458,920</del>	-\$7,093,784
Indirect Effect	-15.3	-\$517,255	<del>-\$662,122</del>	-\$1,095,442
Induced Effect	-3.0	-\$88,559	<del>-\$194,309</del>	-\$325,249
Total Effect	-62.2	-\$1,241,852	<del>-\$4,315,344</del>	-\$8,514,475
<b>Impact Summary</b>	<b>AG PROD (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-44.0	-\$636,038	<del>-\$3,458,920</del>	-\$7,093,784
Indirect Effect	-15.3	-\$517,255	<del>-\$662,122</del>	-\$1,095,442
Induced Effect	-3.0	-\$88,559	<del>-\$194,309</del>	-\$325,249
Total Effect	-62.2	-\$1,241,852	<del>-\$4,315,344</del>	-\$8,514,475
<b>Impact Summary</b>	<b>AG PROD (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-44.0	-\$636,038	<del>-\$3,458,920</del>	-\$7,093,784
Indirect Effect	-15.3	-\$517,255	<del>-\$662,122</del>	-\$1,095,442
Induced Effect	-3.0	-\$88,559	<del>-\$194,309</del>	-\$325,249
Total Effect	-62.2	-\$1,241,852	<del>-\$4,315,344</del>	-\$8,514,475
<b>Impact Summary</b>	<b>AG-NET (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-44.0	-\$636,038	<del>-\$3,458,920</del>	-\$7,093,784
Indirect Effect	-15.3	-\$517,255	<del>-\$662,122</del>	-\$1,095,442
Induced Effect	-3.0	-\$88,559	<del>-\$194,309</del>	-\$325,249
Total Effect	-62.2	-\$1,241,852	<del>-\$4,315,344</del>	-\$8,514,475
<b>Impact Summary</b>	<b>AG-NET (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-44.0	-\$636,038	<del>-\$3,458,920</del>	-\$7,093,784
Indirect Effect	-15.3	-\$517,255	<del>-\$662,122</del>	-\$1,095,442
Induced Effect	-3.0	-\$88,559	<del>-\$194,309</del>	-\$325,249
Total Effect	-62.2	-\$1,241,852	<del>-\$4,315,344</del>	-\$8,514,475
<b>Impact Summary</b>	<b>AG-NET (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-44.0	-\$636,038	<del>-\$3,458,920</del>	-\$7,093,784
Indirect Effect	-15.3	-\$517,255	<del>-\$662,122</del>	-\$1,095,442
Induced Effect	-3.0	-\$88,559	<del>-\$194,309</del>	-\$325,249
Total Effect	-62.2	-\$1,241,852	<del>-\$4,315,344</del>	-\$8,514,475

<b>RED - AG Production (State-Reservoir-Permanent)</b>				
** Statewide study area / model				
** Impacts relative to Existing Conditions				
** Pasted values from IMPLAN reports				
<b>Impact Summary</b>				
<b>AG PROD (A)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-4.7	-\$204,473	-\$597,014	-\$1,533,479
Indirect Effect	-6.9	-\$292,250	-\$433,306	-\$833,745
Induced Effect	-3.4	-\$170,563	-\$308,167	-\$543,105
Total Effect	-15.0	-\$667,286	-\$1,338,487	-\$2,910,329
<b>Impact Summary</b>				
<b>AG PROD (B)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-4.6	-\$199,071	-\$582,996	-\$1,508,268
Indirect Effect	-6.8	-\$287,342	-\$427,642	-\$823,684
Induced Effect	-3.3	-\$166,994	-\$301,719	-\$531,741
Total Effect	-14.7	-\$653,406	-\$1,312,357	-\$2,863,693
<b>Impact Summary</b>				
<b>AG PROD (C)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-4.7	-\$204,473	-\$597,014	-\$1,533,479
Indirect Effect	-6.9	-\$292,250	-\$433,306	-\$833,745
Induced Effect	-3.4	-\$170,563	-\$308,167	-\$543,105
Total Effect	-15.0	-\$667,286	-\$1,338,487	-\$2,910,329
<b>Impact Summary</b>				
<b>AG-NET (A)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-4.7	-\$204,473	-\$597,014	-\$1,533,479
Indirect Effect	-6.9	-\$292,250	-\$433,306	-\$833,745
Induced Effect	-3.4	-\$170,563	-\$308,167	-\$543,105
Total Effect	-15.0	-\$667,286	-\$1,338,487	-\$2,910,329
<b>Impact Summary</b>				
<b>AG-NET (B)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-4.6	-\$199,071	-\$582,996	-\$1,508,268
Indirect Effect	-6.8	-\$287,342	-\$427,642	-\$823,684
Induced Effect	-3.3	-\$166,994	-\$301,719	-\$531,741
Total Effect	-14.7	-\$653,406	-\$1,312,357	-\$2,863,693
<b>Impact Summary</b>				
<b>AG-NET (C)</b>				
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-4.7	-\$204,473	-\$597,014	-\$1,533,479
Indirect Effect	-6.9	-\$292,250	-\$433,306	-\$833,745
Induced Effect	-3.4	-\$170,563	-\$308,167	-\$543,105
Total Effect	-15.0	-\$667,286	-\$1,338,487	-\$2,910,329

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link'd to local model for  
direct effects

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direct effects

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direct effects

<b>RED - AG Production (State-Reservoir-Temporary)</b>				
<i>** Statewide study area / model</i>				
<i>** Impacts relative to Existing Conditions</i>				
<i>** Pasted values from IMPLAN reports</i>				
<b>Impact Summary</b>	<b>AG PROD (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-44.0	-\$636,038	-\$3,458,920	-\$7,093,784
Indirect Effect	-24.8	-\$1,046,836	-\$1,675,820	-\$3,146,967
Induced Effect	-11.2	-\$562,032	-\$1,015,544	-\$1,789,595
Total Effect	-80.0	-\$2,244,905	-\$6,150,284	-\$12,030,346
<b>Impact Summary</b>	<b>AG PROD (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-44.0	-\$636,038	-\$3,458,920	-\$7,093,784
Indirect Effect	-24.8	-\$1,046,836	-\$1,675,820	-\$3,146,967
Induced Effect	-11.2	-\$562,032	-\$1,015,544	-\$1,789,595
Total Effect	-80.0	-\$2,244,905	-\$6,150,284	-\$12,030,346
<b>Impact Summary</b>	<b>AG PROD (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-44.0	-\$636,038	-\$3,458,920	-\$7,093,784
Indirect Effect	-24.8	-\$1,046,836	-\$1,675,820	-\$3,146,967
Induced Effect	-11.2	-\$562,032	-\$1,015,544	-\$1,789,595
Total Effect	-80.0	-\$2,244,905	-\$6,150,284	-\$12,030,346
<b>Impact Summary</b>	<b>AG-NET (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-44.0	-\$636,038	-\$3,458,920	-\$7,093,784
Indirect Effect	-24.8	-\$1,046,836	-\$1,675,820	-\$3,146,967
Induced Effect	-11.2	-\$562,032	-\$1,015,544	-\$1,789,595
Total Effect	-80.0	-\$2,244,905	-\$6,150,284	-\$12,030,346
<b>Impact Summary</b>	<b>AG-NET (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-44.0	-\$636,038	-\$3,458,920	-\$7,093,784
Indirect Effect	-24.8	-\$1,046,836	-\$1,675,820	-\$3,146,967
Induced Effect	-11.2	-\$562,032	-\$1,015,544	-\$1,789,595
Total Effect	-80.0	-\$2,244,905	-\$6,150,284	-\$12,030,346
<b>Impact Summary</b>	<b>AG-NET (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	-44.0	-\$636,038	-\$3,458,920	-\$7,093,784
Indirect Effect	-24.8	-\$1,046,836	-\$1,675,820	-\$3,146,967
Induced Effect	-11.2	-\$562,032	-\$1,015,544	-\$1,789,595
Total Effect	-80.0	-\$2,244,905	-\$6,150,284	-\$12,030,346

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link'd to local model for  
direct effects

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direct effects

RED - Construction Spending (State)		REVISED MARCH 2012			
** Statewide study area / model					
** Impacts relative to Future NA					
** Pasted values from IMPLAN reports					
Impact Summary		PAYROLL (A)			
ImpactType	Employment	LaborIncome	TotalValueAdded	Output	
Direct Effect	0.0	\$0	\$0	\$0	
Indirect Effect	0.0	\$0	\$0	\$0	
Induced Effect	77.4	\$3,895,436	\$7,032,760	\$12,405,073	** All induced effects
Total Effect	77.4	\$3,895,436	\$7,032,760	\$12,405,073	
Impact Summary		PAYROLL (B)			
ImpactType	Employment	LaborIncome	TotalValueAdded	Output	
Direct Effect	0.0	\$0	\$0	\$0	
Indirect Effect	0.0	\$0	\$0	\$0	
Induced Effect	79.6	\$4,008,744	\$7,237,323	\$12,765,901	** All induced effects
Total Effect	79.6	\$4,008,744	\$7,237,323	\$12,765,901	
Impact Summary		PAYROLL (C)			
ImpactType	Employment	LaborIncome	TotalValueAdded	Output	
Direct Effect	0.0	\$0	\$0	\$0	
Indirect Effect	0.0	\$0	\$0	\$0	
Induced Effect	86.2	\$4,340,852	\$7,836,906	\$13,823,505	** All induced effects
Total Effect	86.2	\$4,340,852	\$7,836,906	\$13,823,505	
Impact Summary		OTH CONST (A)			
ImpactType	Employment	LaborIncome	TotalValueAdded	Output	
Direct Effect	0.0	\$0	\$0	\$0	** Direct effect = total cost/employment/payroll
Indirect Effect	1,461.5	\$98,034,332	\$144,425,245	\$301,845,753	
Induced Effect	635.6	\$31,911,880	\$57,637,187	\$101,618,192	
Total Effect	2,097.1	\$129,946,212	\$202,062,432	\$403,463,945	
Impact Summary		OTH CONST (B)			
ImpactType	Employment	LaborIncome	TotalValueAdded	Output	
Direct Effect	0.0	\$0	\$0	\$0	** Direct effect = total cost/employment/payroll
Indirect Effect	1,467.3	\$98,417,966	\$144,990,417	\$303,026,951	
Induced Effect	638.1	\$32,036,762	\$57,862,743	\$102,015,860	
Total Effect	2,105.3	\$130,454,728	\$202,853,159	\$405,042,811	
Impact Summary		OTH CONST (C)			
ImpactType	Employment	LaborIncome	TotalValueAdded	Output	
Direct Effect	0.0	\$0	\$0	\$0	** Direct effect = total cost/employment/payroll
Indirect Effect	1,615.8	\$108,384,043	\$159,672,550	\$333,712,306	
Induced Effect	702.7	\$35,280,889	\$63,722,076	\$112,346,255	
Total Effect	2,318.5	\$143,664,932	\$223,394,627	\$446,058,560	
Impact Summary		NET CONST (A)			
ImpactType	Employment	LaborIncome	TotalValueAdded	Output	
Direct Effect (Outside Model)	95.9	\$19,940,000	--	\$357,946,710	** Direct effect = total cost/employment/payroll
Indirect Effect	1,461.5	\$98,034,332	\$144,425,245	\$301,845,753	
Induced Effect	713.0	\$35,807,316	\$64,669,947	\$114,023,265	
Total Effect (w/o outside model)	2,174.5	\$133,841,648	\$209,095,192	\$415,869,018	
Total Effect (w/ outside model)	2,270.5	\$153,781,648	--	\$773,815,728	
Impact Summary		NET CONST (B)			
ImpactType	Employment	LaborIncome	TotalValueAdded	Output	
Direct Effect (Outside Model)	98.7	\$20,520,000	--	\$338,384,920	** Direct effect = total cost/employment/payroll
Indirect Effect	1,467.3	\$98,417,966	\$144,990,417	\$303,026,951	
Induced Effect	717.7	\$36,045,505	\$65,100,065	\$114,781,761	
Total Effect (w/o outside model)	2,185.0	\$134,463,471	\$210,090,482	\$417,808,713	
Total Effect (w/ outside model)	2,283.7	\$154,983,471	--	\$756,193,633	
Impact Summary		NET CONST (C)			
ImpactType	Employment	LaborIncome	TotalValueAdded	Output	
Direct Effect (Outside Model)	106.9	\$22,220,000	--	\$388,739,160	** Direct effect = total cost/employment/payroll
Indirect Effect	1,615.8	\$108,384,043	\$159,672,550	\$333,712,306	
Induced Effect	789.0	\$39,621,741	\$71,558,982	\$126,169,760	
Total Effect (w/o outside model)	2,404.8	\$148,005,784	\$231,231,533	\$459,882,065	
Total Effect (w/ outside model)	2,511.7	\$170,225,784	--	\$848,621,225	

<b>RED - Land Acquisition (State)</b>				
<i>** Statewide study area / model</i>				
<i>** Impacts relative to Future NA</i>				
<i>** Pasted values from IMPLAN reports</i>				
<b>Impact Summary</b>	<b>LAND-RE (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	23.7	\$733,064	\$3,415,795	\$4,476,794
Indirect Effect	6.9	\$370,528	\$706,785	\$1,163,084
Induced Effect	7.2	\$358,681	\$648,260	\$1,142,059
Total Effect	37.7	\$1,462,273	\$4,770,839	\$6,781,937
<b>Impact Summary</b>	<b>LAND-RE (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	23.3	\$721,610	\$3,362,423	\$4,406,845
Indirect Effect	6.8	\$364,738	\$695,741	\$1,144,910
Induced Effect	7.1	\$353,077	\$638,130	\$1,124,214
Total Effect	37.1	\$1,439,425	\$4,696,295	\$6,675,969
<b>Impact Summary</b>	<b>LAND-RE (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	23.7	\$733,064	\$3,415,795	\$4,476,794
Indirect Effect	6.9	\$370,528	\$706,785	\$1,163,084
Induced Effect	7.2	\$358,681	\$648,260	\$1,142,059
Total Effect	37.7	\$1,462,273	\$4,770,839	\$6,781,937
<b>Impact Summary</b>	<b>LAND-LEGAL (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	21.6	\$2,046,271	\$2,642,718	\$4,219,071
Indirect Effect	10.0	\$564,318	\$1,016,774	\$1,743,701
Induced Effect	16.9	\$849,221	\$1,534,019	\$2,704,155
Total Effect	48.5	\$3,459,810	\$5,193,511	\$8,666,927
<b>Impact Summary</b>	<b>LAND-LEGAL (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	21.3	\$2,014,298	\$2,601,425	\$4,153,148
Indirect Effect	9.8	\$555,501	\$1,000,887	\$1,716,456
Induced Effect	16.7	\$835,952	\$1,510,050	\$2,661,902
Total Effect	47.7	\$3,405,750	\$5,112,363	\$8,531,506
<b>Impact Summary</b>	<b>LAND-LEGAL (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	21.6	\$2,046,271	\$2,642,718	\$4,219,071
Indirect Effect	10.0	\$564,318	\$1,016,774	\$1,743,701
Induced Effect	16.9	\$849,221	\$1,534,019	\$2,704,155
Total Effect	48.5	\$3,459,810	\$5,193,511	\$8,666,927
<b>Impact Summary</b>	<b>NET LAND AQ (A)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	45.3	\$2,779,334	\$6,058,513	\$8,695,865
Indirect Effect	16.8	\$934,846	\$1,723,559	\$2,906,785
Induced Effect	24.1	\$1,207,902	\$2,182,279	\$3,846,213
Total Effect	86.2	\$4,922,083	\$9,964,351	\$15,448,864
<b>Impact Summary</b>	<b>NET LAND AQ (B)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	44.6	\$2,735,907	\$5,963,848	\$8,559,993
Indirect Effect	16.6	\$920,239	\$1,696,628	\$2,861,367
Induced Effect	23.7	\$1,189,029	\$2,148,181	\$3,786,116
Total Effect	84.9	\$4,845,175	\$9,808,657	\$15,207,475
<b>Impact Summary</b>	<b>NET LAND AQ (C)</b>			
<b>ImpactType</b>	<b>Employment</b>	<b>LaborIncome</b>	<b>TotalValueAdded</b>	<b>Output</b>
Direct Effect	45.3	\$2,779,334	\$6,058,513	\$8,695,865
Indirect Effect	16.8	\$934,846	\$1,723,559	\$2,906,785
Induced Effect	24.1	\$1,207,902	\$2,182,279	\$3,846,213
Total Effect	86.2	\$4,922,083	\$9,964,351	\$15,448,864

<b>GDP Price Deflator</b>				
	From	To	GDP Deflator Adjustment	
	2004 \$'s	2010 \$'s	1.14362	
	2005 \$'s	2010 \$'s	1.10670	
	2006 \$'s	2010 \$'s	1.07172	
	2007 \$'s	2010 \$'s	1.04107	
	2008 \$'s	2010 \$'s	1.01873	
	2009 \$'s	2010 \$'s	1.00951	
	2010 \$'s	2010 \$'s	1.00000	
	2011 \$'s	2010 \$'s	0.99098	
	Category	Item	Model	\$ Basis for Model
	Costs			2007 \$'s
	Water Supply	Urban (SC and SB)	LCPSIM	2007 \$'s
	Water Supply	Other Urban	OMWEM	2007 \$'s
	Water Supply	Agricultural	SWAP	2011 \$'s
	Water Supply	Refuges	Transfer Prices	2007 \$'s
	Water Quality	Urban (SC and SB, TDS)	LCRBWQM	2007 \$'s
	Water Quality	Other Urban (TDS)	SBWQM	2006 \$'s
	Fisheries	Upstream	Transfer Prices	2007 \$'s
	Fisheries	Delta	Transfer Prices	2007 \$'s
	Hydropower	System (Net)	LT-Gen, SWP_Power and NODOS_Power	2007 \$'s

