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CVP WATER ASSOCIATION
Summary Overview of FY98 CVPIA Annual Work Plan

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E-029388

Reference/ Project #	Program Description	FY 1998 Program Likely	Contingent	Total	Program Accomplishment thru (date)	percent	Est FY 98 Expenditures Total	pay/benefits	contracts	overhead	other
3406(b)(1)	Anadromous Fish Restoration Program										
Proj A-1	McAmis property acquisition and restoration on upper Butte Creek. Project involves acquisition and restoration by University Foundation (CSU-Chico) of 90 acres along 0.8 miles of Butte Creek.	125,000		125,000							
Proj A-2	L&L and Gaumer easment acquisition. Project involves a riparian easment acquisition located on Deer Creek.	117,000		117,000							
Proj A-3	Restore degraded riparian habitat sections on lower Mill Creek. Project involves a restoration partnership with a private landowner along Mill Creek.	60,000		60,000							
Proj A-4	Stanislaus River Channel Restoration, Willms site. Project involves rebuilding a 0.4 mile reach affected by aggregate mining.	1,038,000		1,038,000							
Proj A-5	Tuolumne River mining reach restoration. Project involves restoration of native riparian vegetation.	1,311,000		1,311,000							
Proj A-6	Replenish and cleanse gravel in areas of the Mokelumne River. Project involves the placement of approximately 5,000 cubic yards of gravel at 6 or more spawning sites.	80,000		80,000							
Proj A-7	Acquisition of Millar Farms Inc., Glenn County. Project involves a riparian easement of 122 acres to improve watershed results on the upper Sacramento River.	167,000		167,000							
Proj C-1	Rebuild bish ladder and screen on Gorill Dam on Butte Creek. Project involves upgrading existing fish ladder and screen.	688,000		688,000							
Proj C-2	Complete initial engineering for rebuilding fish ladders at Wildcat Diversion Dam on North Fork Battle Creek and Inskip Diversion Dam, South Fork Battle Creek.	637,000		637,000							
Proj C-3	Modify Daguerre Point Dam fish ladder on the Yuba River. Projec involves selection of a preferred alternative including a preliminary EA, and final design of the concept.	360,000		360,000							
Proj D-1	Juvenile salmon and steelhead emigration monitoring at Knights Landing. Project involves monitoring the timing, abundance, and disposition of juvenile chinook salmon and steelhead emigrating into the lower Sacramento Rv and Delta.	41,000		41,000							
Proj D-2	CWT tagging of all late-fall production from Coleman NFH. Proje involves marking all late-fall-run chinook salmon pro- duction realeased at Coleman (est 1M) so that unmarked winter run fish are not confused with true winter run juveniles.	56,000		56,000							

CENTRAL VALLEY PROJECT
WATER ASSOCIATION
1521 "I" STREET
SACRAMENTO, CA 95814

E-029388

Reference/ Project #	Program Description	FY 1998 Program Likely	Contingent	Total	Program Accomplishment thru (date)	percent	Est FY 98 Expenditures Total	pay/benefits	contracts	overhead	other
Proj D-3	Use of otoliths to evaluate the role of Delta rearing in the life history of Central Valley Chinook Salmon and Steelhead. Project is a pilot study of the use of otoliths.	13,000		13,000							
Proj D-4	Fall-run chinook salmon hatchery smolt mark-recapture survival experiment. The exact study to be completed in 1998 has not yet been identified.	100,000		100,000							
Proj D-5	Late fall run hatchery smolt Delta mark-recapture survival experiment. Project involves evaluating the benefits of lower export/inflow ratios for juvenile chinook salmon migrating through the Delta during the Fall.	36,000		36,000							
Proj D-6	Indexing fall run smolt survival in the Delta. Project involves a midle-May release of a Control group of fall-run chinook salmon smolt at Port Chicago or Benicia for purposes of estimating Delta survival.	40,000		40,000							
Proj D-7	Stanislaus River--Juvenile salmon RST monitoring. Project involves continuation of work started in 1994 to estimate the number and size of juvenile salmon emigrating from the river.	135,000		135,000							
Proj D-8	Evaluate small intermittent tributaries to the upper mainstem Sacramento River to determine if they serve as rearing habitat for Sacramento River chinook salmon.	95,000		95,000							
Proj D-9	In stream flow studies--Sacramento, American, and Merced Rivers. Project involves the development of information to reduce flow fluctuations to optimize anadromous salmonid habitat for spawning and rearing.	650,000		650,000							
Proj D-10	Butte Creek spring-run chinook juvenile life history evaluation. Project involves the collection and marking of juvenile spring-run chinook to better understand their contribution to the fishery.	86,000		86,000							
Proj D-11	Upper Sacramento River wild fish (chinook salmon) tagging. Project assesses the feasibility of capturing, holding, and successfull marking naturally produced fall-run chinook salmon.	48,000		48,000							
Proj D-12	Expanded winter-run carcass survey, upper mainstem Sacramen River. Project involves collecting carcasses of winter-run chinook salmon to estimate escapement and to collect tissue samples for baseline genetic monitoring.	21,000		21,000							
Proj D-13	Winter-run chinook salmon genetic monitoring. Project involves conintuation of genetic alaysis of the natural population of endangered winter-run chinook salmon.	200,000		200,000							
Proj D-14	Battle Creek surveys and monitoring. Project involves carcass surveys and video monitoring to assess the numbers of adult winter and spring-run chinook in Battle Creek.	40,000		40,000							
Proj F-1	Continue development of a comprehensive Deer Creek watershe management strategy.	160,000		160,000							

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2

E-029389

E-029389

Reference/ Project #	Program Description	FY 1998 Program Likely	Contingent	Total	Program Accomplishment thru (date)	percent	Est FY 98 Expenditures Total	pay/benefits	contracts	overhead	other
Proj F-2	Continue development of Butte Creek Watershed Conservancy management strategy.	191,000		191,000							
Proj F-3	Continue to develop a regional conservation plan for the Battle Creek watershed to restore naturally spawning populations of winter and spring-run chinook salmon and steelhead.	10,000		10,000							
Cont A-1	Peek riparian easement acquisition on Deer Creek.		506,000	506,000							
Cont A-2	Porter riparian easement acquisition on Deer Creek.		423,000	423,000							
Cont A-3	Soski riparian easement acquisition on Deer Creek		1,315,000	1,315,000							
Cont A-4	Packard Island riparian easement acquisition (309 acres).		936,000	936,000							
Cont A-5	Stone riparian easement acquisition-Glenn County (70 acres).		187,000	187,000							
Cont A-6	Flynn riparian easement acquisition Glenn County (80 acres).		800,000	800,000							
Cont A-7	Identify and evaluate opportunities for benefits of restoring riparian and side-channel habitats to improve salmonid habitat conditions in the Yuba River.		40,000	40,000							
Cont A-8	Feeney/Ken Lerch Ranch riparian easement acquisition-Glenn County (192 acres).		447,000	447,000							
Cont D-1	Summer American Shad Trawling at Sacramento and Chipps Island between July 1 and Dugust 30.		25,000	25,000							
Cont D-2	Expanded juvenile chinook salmon and steelhead monitoring at Red Bluff Diversion Dam.		132,000	132,000							
Cont D-3	Identification of green sturgeon spawning sites and evaluation of the availability, adequacy and use of habitat by adult sturgeon.		50,000	50,000							
Cont D-4	Tag (CWT) one million fall-run chinook salmon to determine disease survival contribution to the population.		160,000	160,000							
Cont D-5	Upper Sacramento River wild fish (chinook salmon) tagging.		44,000	44,000							
Cont F-1	Develop a comprehensive Big Chico Creek watershed management survey.		277,000	277,000							
	Total Sect 3406 (b)(1) AFRP	6,505,000	5,342,000	11,847,000			8,250,000		6,505,000		1,745,000

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3406(b)(1)	Other Central Valley Project Mitigation			
Proj 1	Gabbro Soils. Implementation and protection of Pine Hill Ecological Reserve, El Dorado County, 5 listed plant species.	500,000		500,000
Proj 2	Riparian Brush Rabbit and Riparian Woodrat. Monitor species in Caswell State Park and develop a restoration plan for Christman Island.	25,000		25,000
Proj 3	Red-legged frog. Contribute to multi-party acquisition of private	75,000		75,000

3

E-029390

E-029390

Reference/ Project #	Program Description	FY 1998 Program Likely	Contingent	Total	Program Accomplishment thru (date)	percent	Est FY 98 Expenditures Total	pay/benefits	contracts	overhead	other
	property, Weber Creek, El Dorado County.										
Proj 4	San Joaquin Kit Fox. Contribute towards acquisition of Wells Fargo property (51,000 acres) in Stanislaus and Merced Counties.	215,000		215,000							
Proj 5	Bakersfield Cactus. Contribute to acquisition of 30 acres in Kern County.	40,000		40,000							
Proj 6	Fresno kangaroo rat. Survey species within the Kerman and Alkali Sink Ecological Reserve.	10,000		10,000							
Cont 1	Vernal Pools. Acquisition of high priority vernal pool habitat.		100,000	100,000							
Cont 2	Palmate-bracted Bird's Beak. Establish easements or acquire property at the Springtown Alkali Sink.		70,000	70,000							
Cont 3	Giant garter snake. Contribute to acquisition and restoration of riparian corridor along the Consumnes River.		50,000	50,000							
Cont 3	Oil nestraw. Establish conservation easement on Naval Petro Reserve.		40,000	40,000							
	Total Sect 3406 (b)(1) OTHER	865,000	260,000	1,125,000			1,000,000	125,000	865,000		10,000
3406(b)(1)	San Joaquin River Riparian Habitat Restoration Project	700,000	0	700,000			700,000	100,000	580,000		20,000
3406(b)(2)	Dedicated Project Yield										
1	Develop a water management plan	250,000		250,000							
2	Identification of acquired water needs	550,000		550,000							
3	Model evaluations	500,000		500,000							
4	Develop rule curves	150,000		150,000							
5	Develop interim flow objectives	100,000		100,000							
6	Develop a Coordinated Operating Agreement (COA)	100,000		100,000							
7	Develop an updated Operations Criteria and Plan (OCAP)	150,000		150,000							
8	Develop Rules and Regulations	100,000		100,000							
9	Environmental Compliance	150,000		150,000							
		2,050,000	0	2,050,000			250,000	100,000	100,000	25,000	25,000
3406(b)(2)	New Melones Long Term Plan										
A-1	Temperature modeling and monitoring	50,000		50,000							
A-2	Examine potential for temperature control	15,000		15,000							
A-3	Long-term operation plan process	80,000		80,000							
A-4	Examine conjunctive use opportunities	50,000		50,000							
		195,000	0	195,000			200,200	77,000	28,000	94,000	1,200
3406(b)(3) 3406(d)(2)	Water Acquisition Program										
A-1	Acquire 50,000 af to meet 1998 Level 4 Refuge supply	3,000,000		3,000,000							
A-2	Permanent acquisition of Level 4 water supply	4,410,000		4,410,000							
B-1	Temp acquisition of water in San Joaquin Rv watershed	3,300,000		3,300,000							
B-2	Planning related to long-term water purchase opportunities	700,000		700,000							

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4

E-029391

E—029391

Reference/ Project #	Program Description	FY 1998 Program Likely	Contingent	Total	Program Accomplishment thru (date)	percent	Est FY 98 Expenditures Total	pay/benefits	contracts	overhead	other
AB-1	Outreach and Communication Plan-Implementation	250,000		250,000							
AB-2	Long-term planning related activities	50,000		50,000							
	Total	11,710,000	0	11,710,000			**********	300,000	11,710,000	127,000	8,500
3406(b)(4)	Tracy Pumping Plant Mitigation Program										
AB-1	Hydraulic field evaluations	80,000		80,000							
AB-2	Computerization of Tracy Hydraulic Data	50,000		50,000							
AB-3	Quality Assurance, taxonomic refinement, fish samples	30,000		30,000							
AB-4	Development of new fish holding lab	100,000		100,000							
AB-5	Evaluation of holding tanks on louevered fish survival	50,000		50,000							
AB-6	Assessment of fish survival during transportation	50,000		50,000							
AB-7	Pilot study with on-site fish friendly pump	120,000		120,000							
AB-8	Chemical monitoring and assessment of water & sediment	115,000		115,000							
AB-9	Experiments with a Wedgewire overlay on louvers	60,000		60,000							
AB-10	Analysis of post March 1996 louver efficiency data	47,000		47,000							
AB-11	Laboratory physical model and bioengineering study	250,000		250,000							
AB-12	Analysis of hydraulic & physical factors in the South Delta influencing fish salvage	60,000		60,000							
AB-13	Mathematical modeling of fish louvering efficiency	30,000		30,000							
AB-14	Survival and conditions of salvaged fish exposed to pre-stocking acclimation in a predator free environment	25,000		25,000							
AB-15	Assessment of TFCF operational flexibility related to fish life history aspects	20,000		20,000							
AB-16	Assessment & report--proposed on-site Tracy experimental fish facility	100,000		100,000							
AB-17	Assessment and recommendations for research and solutions of debris loading problems at the TFCF	90,000		90,000							
	Total	1,277,000	0	1,277,000			4,280,000	1,170,000	370,000		2,740,000
3406(b)(5)	Contra Costa Pumping Plant Mitigation Program										
A/B-1	Complete design of Rock Slough Intake fish screens	464,000		464,000							
A/B-2	Obtain permits and purchase land	250,000		250,000							
A/B-3	Award contract and begin construction	1,200,000		1,200,000							
	Total	3,988,000	0	3,988,000			2,250,000	330,000	1,670,000		250,000
3406(b)(6)	Shasta Temperature Control Device	8,800,000	0	8,800,000			2,650,000	479,000	2,065,000	57,000	49,000
3406(b)(10)	Red Bluff Diversion Dam Fish Passage Program										
B-1	Hydrologic modeling with scale models	10,000		10,000							
B-2	Exploration and modifications of existing ladders	60,000		60,000							
C-1	Study of possible water delivery systems	40,000		40,000							
E-1	Formulate long-term solution to fish passage problem	180,000		180,000							
E-2	Complete NEPA; Select preferred alternative	100,000		100,000							
	Total	390,000	0	390,000			390,000	112,000	183,600	65,000	29,400
3406(b)(10)	Red Bluff DD--Research Pumping Plant Program										
A-1	Conduct fish passage experiments of pumps	275,000		275,000							
A-2	Conduct seasonal and diel fish entrainment observations	200,000		200,000							
A-3	Record species, numbers and sizes of fish migrating downstream Sacramento Rv adjacent to the RBDRPP	200,000		200,000							
B-1	Index predator fish at key sites (Sac Rv) near the RBRPP	15,000		15,000							
B-2	Determine predator-prey interactions--salmon and predators	120,000		120,000							

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5

E-029392

E-029392

E-029393

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Reference/ Project #	Program Description	FY 1998 Program Likely	Contingent	Total	Program Accomplishment thru (date)	percent	Est FY 98 Expenditures Total	pay/benefits	contracts	overhead	other
B-3	Behavior of squawfish near RBRPP w/gates raised/lowered	140,000		140,000							
C-1	Assess salmon movement and behavior near the RBRPP	120,000		120,000							
D-1	Experimental baffling structures downstream of fish screens	110,000		110,000							
D-2	Monitoring devices on pumps to assess mechanical functions	95,000		95,000							
D-3	Physical changes to inlets to reduce harmful hydraulics	90,000		90,000							
D-4	Tests to assess effects of debris fouling of fish screens	75,000		75,000							
		1,440,000	0	1,440,000			1,472,000	395,000	785,000	233,000	59,000
3406(b)(11)	Keswick Fish Trap Modification										
	Modification contract	479,000	0	479,000			600,000	60,000	479,000	36,000	25,000
3406(b)(11)	Coleman National Fish Hatchery										
A-1	Pump station in Coleman canal	100,000		100,000							
A-2	Two sand filters	2,800,000		2,800,000							
A-3	Completion of 54" pipeline	700,000		700,000							
A-4	One air compressor	400,000		400,000							
A-5	One ozone contactor/stripper cable	1,300,000		1,300,000							
A-6	Assess efficacy of water disinfection system	160,000		160,000							
	Total	5,460,000	0	5,460,000			6,415,000	62,000	6,230,000	5,000	118,000
3406(b)(12)	Clear Creek Restoration										
A-1	Design & Construct a fish passage facility	760,000		760,000							
B-1	Restore degraded stream channel (the "shute")	350,000		350,000							
B-2	Spawning gravel below Whiskeytown & Saeltzer Dams	150,000		150,000							
B-4	Restore fish habitat in lower Clear Creek	90,000		90,000							
D-1	Assist WSRCD in implementing erosion control measures	150,000		150,000							
	Total	1,500,000	0	1,500,000			1,500,000	90,000	1,356,000	54,000	0
3406(b)(13)	Spawning Gravel/Riparian Habitat										
A-2	23,000 tons spawning gravel-Sacramento River (Shea)	350,000		350,000							
A3-	16,000 tons spawning gravel-Sacramento Rv (Tobiasson)	250,000		250,000							
A-4	Monitor use of gravel placed at Salt Creek (Sacto Rv)	75,000		75,000							
B-1	Continue pilot gravel project-American River	175,000		175,000							
C-1	Re-configure stream channel at Willms-Stanislaus River	150,000		150,000							
	Total	1,000,000	0	1,000,000			1,000,000	143,000	750,000	25,000	82,000
3406(b)(16)	Comprehensive Assessment & Monitoring Program										
A-1	Implement data management program through IEP	80,000		80,000							
A-2	Develop pilot marking program Valley-wide	800,000		800,000							
A-3	Long-term angler survey	500,000		500,000							
A-4	Supplement adult salmon counts in CV streams	200,000		200,000							
A-5	Prepare annual report by contractor	150,000		150,000							
B-1	Long-term screw trapping program-Merced, Tuolumne	550,000		550,000							
B-2	Develop a fish screen evaluation program	200,000		200,000							
	Total	2,480,000	0	2,480,000			2,480,000	100,000	2,380,000	0	0
3406(b)(17)	Anderson-Cottonwood Irrigation District Fish Passage										
B-1	Investigate alternatives for improving upstream passage	250,000		250,000							
B-2	Assess fish passage at ACID north ladder	25,000		25,000							
B-3	Assess fish passage at ACID using radiotelemetry	50,000		50,000							
B-4	Initiate preferred alternative of (B1) above	925,000		925,000							

E-029393

Reference/ Project #	Program Description	FY 1998 Program Likely	Contingent	Total	Program Accomplishment thru (date)	percent	Est FY 98 Expenditures Total	pay/benefits	contracts	overhead	other
	Total	1,250,000	0	1,250,000			1,250,000	160,000	1,057,000	3,000	30,000
3406(b)(20)	Hamilton City Pumping Plant Fish Facility-GCID										
A-1	Initiate construction on new fish screens	2,575,000		2,575,000							
A-2	Purchase and delivery of sheet piling	600,000		600,000							
A-3	Complete mitigation and monitoring plan	47,000		47,000							
A-4	Initiate measures for fish screen extension construction	115,000		115,000							
A-5	Complete the EIR/EIS and ROD/NOD	115,000		115,000							
A-6	Task order and final design of fish screen extension	175,000		175,000							
		3,627,000	0	3,627,000			3,627,000	440,000	2,647,000	490,000	50,000
3406(b)(21)	Anadromous Fish Screen Program (AFSP)										
1	Reclamation District 108-Sacramento River	3,800,000		3,800,000							
2	Reclamation District 1004-Sacramento River	0		0							
3	Gorrill Land Co.-Butte Creek	100,000		100,000							
4	Adams Dam-Butte Creek	508,000		508,000							
5	City of Sacramento-Sacramento River	0		0							
6	Natomas Mutual Water Co-Sacramento River	250,000		250,000							
		4,658,000	0	4,658,000			5,000,000	400,000	4,543,000	57,000	0
3406(b)(22)	Agricultural-Waterfowl Incentive Program										
A-1	Announce implementation of program/solicit proposals	7,000		7,000							
A-2	Review proposals & select lands for participation	874,000		874,000							
A-3	Coordinate flood-up, duration and release of water	5,000		5,000							
A-4	Monthly monitoring of enrolled agricultural fields	10,000		10,000							
		896,000	0	896,000			1,000,000	110,000	874,000	4,000	12,000
3406(d)(1-5)	Long-term Conveyance of Refuge Water										
IA-1	Sacramento NWR-Complete NEPA/CEQA	50,000		50,000							
IB-1	Sacramento NWR-design data collection	50,000		50,000							
IC-1	Sacramento NWR-construction	6,300,000		6,300,000							
ID-1	Sacramento NWR-acquire right of way	400,000		400,000							
IE-1	Sacramento NWR-biological assessments & opinion	100,000		100,000							
IF-1	Sacramento NWR-obtain permits	0		0							
IG-1	Sacramento NWR-public involvement site specific constr	25,000		25,000							
IH-1	Sacramento NWR-construction methods review	99,000		99,000							
IIA-1	Mendota WA-complete NEPA/CEQA	300,000		300,000							
IIA-1	Mendota WA-design data collection	50,000		50,000							
IIA-1	Mendota WA-public involvement site specific construction	25,000		25,000							
IIA-1	Mendota WA-biological assessments & opinion for ESA	100,000		100,000							
IIA-1	Mendota WA-Value analysis of feasibility cost estimates	25,000		25,000							
		7,524,000	0	7,524,000			9,403,000	749,000	7,984,000	420,000	250,000
3406(d)(1-5)	Refuge Water Supply Program										
A-1	Partially fund Select conveyance contracts	no est		0							
A-2	Administer tech services contract for inter-agency prog (ICP)	no est		0							
A-3	Negotiate long-term contracts w/FWS, DFG and GWD	no est		0							
		0	0	0			2,000,000	72,441	1,881,123	46,436	0
3406(d)(1-5)	San Joaquin Basin Action Plan (conveyance facilities)										
A-1	Cottonwood Rd Lateral	1,224,000		1,224,000							

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E-029394

E—029394

7

Reference/ Project #	Program Description	FY 1998 Program Likely	Contingent	Total	Program Accomplishment thru (date)	percent	Est FY 98 Expenditures Total	pay/benefits	contracts	overhead	other
A-2	Design of Orleans Canal	816,000		816,000							
A-3	Design of O'Banion Bypass	332,000		332,000							
A-4	Design headworks for Spillway Ditch	100,000		100,000							
A-5	Construction oversight "J" Pumping Plant and Pipeline	325,000		325,000							
A-6	Replace headworks of Spillway Ditch	708,000		708,000							
A-7	Improve GWD facilities	910,000		910,000							
A-8	Improve San Luis Canal Co. facilities	165,000		165,000							
		4,580,000	0	4,580,000			4,870,000	1,470,303	2,324,000	955,697	120,000
3406(g)	Ecological/Water System Operations Models										
A-1	Update CVGSM data	20,000		20,000							
A-2	Provide documentation of Hydrologic Models	30,000		30,000							
A-3	Develop graphical user interface for SANJASM model	150,000		150,000							
A-4	Develop daily operations model	120,000		120,000							
A-5	Participate in the Bay-Delta Modeling Forum	30,000		30,000							
B-1	Develop Whiskeytown Curtains Temperature model	10,000		10,000							
B-2	Perform Whiskeytown velocity measurements	0		0							
C-1	Participate in Kern area groundwater model analysis	5,000		5,000							
D-1	Develop Sacramento River chinook salmon population model	0		0							
E-2	Evaluate wetland and natural channel models	0		0							
E-3	Develop 3-D estuarine hydrodynamic and salt trasport model	60,000		60,000							
		425,000	0	425,000			500,000	350,000	100,000	50,000	0
3408(h)	Land Retirement Program										
1	Conduct appraisals on 12,563 acres of potential acquisition	125,000		125,000							
2	HAZMAT environmental site assessment	30,000		30,000							
3	NEPA documentation for land acquisition	80,000		80,000							
4	Land purchase/acquisition	3,100,000		3,100,000							
5	Groundwater model development (WESTSIM)	20,000		20,000							
6	Restoration activities of acquired lands	80,000		80,000							
7	Continue Interim Program	0		0							
8	Initiate three to five year demonstration program	100,000		100,000							
		3,535,000	0	3,535,000			4,000,000	320,000	395,000	161,000	3,124,000
		75,334,000	5,602,000	80,936,000			**********	7,714,744	57,861,723	2,908,133	8,748,100

CENTRAL VALLEY PROJECT
WATER ASSOCIATION
1521 "I" STREET
SACRAMENTO, CA 95814

DRAFT

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