
Status of WMS/EWA Asset Evaluation

CALFED Policy
November 17, 1999



E-007501

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WMDT Goals

- Evaluate a range of water Management tools
- Develop a Water Management Strategy for Stage 1 including the framework for the EWA



Two Primary Scenarios

- Scenario 1A: Beginning of Stage 1
- Scenario 1B: End of Stage 1
- Both use same general methodology:
 - Ecosystem gets b(2) and E/I Relaxations
 - Water Users get Remaining Assets.



1A: Assets

- Ecosystem gets b(2) and E/I Relaxations
- Water Users Assets:
 - Increased Banks Pumping Capacity (7,100 cfs)
 - Joint Point of Diversion
 - Intertie between DMC and California Aqueduct



1 B: Assets

- Ecosystem gets b(2) and E/I Relaxations
- Water Users Assets:
 - Increased Banks Pumping Capacity (10,300 cfs)
 - Joint Point of Diversion
 - Intertie between DMC and California Aqueduct
 - Groundwater Storage (500 TAF)
 - In-Delta Storage (120 TAF)
 - Shasta Dam 6.5 ft Expansion (290 TAF)



Schedule

- Draft WMS/EWA Framework.....Nov 30
- CT Asset Evaluation Technical Briefing.....Dec 3
- Evaluations and Draft Framework to WMDT....Dec 7
- WMS/EWA Framework to Policy.....Dec 15



EARLY STAGE 1 ASSETS	ASSET APPLICATION
INCREASED BANKS PUMPING CAPACITY	<ul style="list-style-type: none"> ◆ Increase pumping capacity to 6,600 cfs Nov – March + 1/3 SJR. ◆ Increase pumping capacity to 7,100 cfs July - Sept
ACCESS TO SURPLUS PROJECT CAPACITY	<ul style="list-style-type: none"> ◆ Access to San Luis Reservoir and non-project capacity
MARKETS (WILLING SELLER)	<ul style="list-style-type: none"> ◆ Purchase of water for multiple purposes ◆ Purchase of in-Delta water ◆ Purchase PG&E reoperation water ◆ Source shifting
IMPROVED TRACY FF SCREENS	<ul style="list-style-type: none"> ◆ Screens operate to reduce entrainment
ERP	<ul style="list-style-type: none"> ◆ Acquired water (100TAF) for enhanced instream flow conditions used for in-Delta purposes
JOINT POINT OF DIVERSION	<ul style="list-style-type: none"> ◆ Implement JPOD
REGULATORY FLEXIBILITY	<ul style="list-style-type: none"> ◆ Change the application of the E/I ratio
GROUNDWATER STORAGE	<ul style="list-style-type: none"> ◆ Kern Water Bank ◆ Semitropic ◆ Options
DEMAND SHIFTING	<ul style="list-style-type: none"> ◆ Core Peak: shift demand to alternative source
RIGHT TO BORROW SURPLUS CAPACITY AND SURPLUS WATER	<ul style="list-style-type: none"> ◆ Borrow surplus capacity from project and non-project reservoirs
RESERVOIR REOPERATION	<ul style="list-style-type: none"> ◆ Coordinate/optimize operation of reservoirs to increase overall system flexibility
ACQUISITION OF DELTA ISLANDS	<ul style="list-style-type: none"> ◆ Reduce application and subsequent run-off/seepage of pesticides
MANAGE DISCHARGE FROM DELTA ISLANDS	<ul style="list-style-type: none"> ◆ Relocate/reroute Delta agricultural drains or hold water for discharge on outgoing tides or for high flow periods to manage salinity, selenium, TDS
CONTROL ALGAL GROWTH IN CCF	<ul style="list-style-type: none"> ◆ Needs definition
INTERTIE	<ul style="list-style-type: none"> ◆ 400 cfs capacity
BLENDING	<ul style="list-style-type: none"> ◆ Use available supplies to reduce diversions at some periods and blend with higher quality water to improve water quality
CROP SHIFTING	<ul style="list-style-type: none"> ◆ Shift to less water intensive crops during certain time periods

LATE STAGE 1 ASSETS	ASSET APPLICATION
INCREASED BANKS PUMPING CAPACITY	<ul style="list-style-type: none"> ◆ Increase pumping to 8,500 cfs ◆ Increase pumping to 10,300 cfs
JOINT POINT OF DIVERSION	<ul style="list-style-type: none"> ◆ Implement JPOD
EFFICIENCY	<ul style="list-style-type: none"> ◆ Statewide ULFT Program ◆ Other ag/urban reclamation, recycling, efficiency programs
GROUNDWATER SUBSTITUTION PROJECTS	<ul style="list-style-type: none"> ◆ <u>Southern Sacramento County ?</u> ◆ <u>East San Joaquin Basin?</u> ◆ <u>Gravelly Ford?</u> ◆ <u>Madera Ranch?</u>
GROUNDWATER STORAGE	<ul style="list-style-type: none"> ◆ Butte Basin Drought Water Bank? ◆ Yolo County? ◆ West Central Basin?
BLENDING	<ul style="list-style-type: none"> ◆ Use available supplies to reduce diversions at some periods and blend with higher quality water to improve water quality
IN-DELTA STORAGE	<ul style="list-style-type: none"> ◆ Use of Web and Bacon Islands (120 TAF each - no direct connect to CCF)
SHASTA DAM EXPANSION	<ul style="list-style-type: none"> ◆ Raise Shasta Dam to increase storage capacity 290,000 AF
INTERTIE	<ul style="list-style-type: none"> ◆ 400 cfs capacity
SHIFTING REFUGE SUPPLIES	<p>Investigate the following:</p> <ul style="list-style-type: none"> ◆ Diversify sources of water for refuges ◆ Borrow acquired refuge water for EWA ◆ Increase conveyance efficiency ◆ Use refuges as small-scale storage projects
ALTER FLOOD CONTROL DIAGRAMS	<ul style="list-style-type: none"> ◆ May be limited to small scale efforts on the San Joaquin and Stanislaus Rivers ◆ Pursue other small-scale projects in Stage 1 in addition to above efforts
FLEXING EXISTING STANDARDS	<ul style="list-style-type: none"> ◆ Potential/ability varies depending on regulatory process, standard and environmental conditions

Recommendations for FY 2000 Ecosystem Restoration Expenditures

	Interim Science Panel	Ecosystem Roundtable	CALFED
Projects	20 projects \$15.4 million	\$14.6-20 million	23 projects \$14.9 million
Science & Monitoring	\$7-10 million	\$3-8.4 million	\$7.4 million
Environmental Water	\$4-7 million	\$0-6 million for water \$0.5 for study	\$1 million
South Delta Planning	\$0	\$0	\$1 million
Special Support	\$5 million	\$4 million	\$4 million
General Oversight and Fund Reserve			\$1.7 million

Recommendations for FY 2000 Ecosystem Restoration Expenditures

	Interim Science Panel	Ecosystem Roundtable	CALFED
<p>Projects</p> <p>99B192 McCormick Williamson Tract Phase II, Rest. Planning Design \$355,000 99B193 McCormick Williamson Tract Phase II, Monitoring Program \$556,200 99B116 Canal Ranch Habitat Restoration Phase II \$131,980 99B165 Liberty Island Acquisition and Restoration Phase II (Liberty Island acquisition and restoration only) \$2,623,043 99C100 Last Chance Creek \$980,000 99C105 Panoche/Silver Creek Watershed Mgmt Action Plan \$848,000 99C108 Cottonwood Creek Watershed Monitoring and Assessment Phase II \$350,000 99C140 Sonoma Creek Watershed Conservancy Phase II (1 year) \$489,923 99B126 Floodplain Acquisition and Planning(Site Specific Management Planning portion only) \$519,000 99B152 A Mechanistic Approach to Riparian Restoration \$233,666 99B166 Dev. Ecologically Based Hydrologic Models and Water Mgmt Strategies in the San Joaquin Basin \$295,925 99B145 Culture of Delta Smelt Phase II \$431,606 99F105 Biological Assessment of Green Sturgeon Phase II \$205,013 99D124 Dissolved Organic Carbon Release - Delta Wetlands Phase II \$1,000,000 (balance of \$1,740,040 to be made available from subsequent funding) 99B153 Merced River Corridor Restoration Project Phase III \$229,000 99B102 Tuolumne River Bobcat Flat Floodplain Acquisition \$1,641,941 99D100 Real Time Water Quality Management \$652,330 99E109 Treating Ballast Water Discharges at Existing Municipal Wastewater Treatment Plants \$118,460 99E110 Determining the biological, Physical and Chemical Characteristics of Ballast Water Arriving in SF Bay \$ 375,750 99E118 <i>Arundo donax</i> Eradication and Coordination \$818,045 99A101 Sacramento River Small Diversion Fish Screen Program \$312,700 99A110 City of Redding Water Utility Fish Screen Rehabilitation \$495,400 99A119 Maxwell Irrigation District Tuttle Pump Relocation \$427,900</p>	<p>20 projects \$15.4 million</p>	<p>\$14.6-20 million</p>	<p>23 projects \$14.9 million</p>

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Science & Monitoring Scientific Review and Revision to Strategic Plan and Implementation Plan, Prefeasibility Studies on Demonstration Streams \$1,750,000 Peer Review of Proposals, projects, monitoring plans and project data \$1,500,000 Expand Web site development and accessibility to data, Expand GIS mapping, and expand Regional and 1/4ly Reporting for existing projects \$650,000 Ecosystem Science Conference & other Science Workshops \$250,000 Data Management \$1,000,000 Supplemental monitoring of existing projects \$1,750,000 Regional monitoring \$500,000	\$7-10 million	\$3-8.4 million	\$7.4 million
Environmental Water	\$4-7 million	\$0-6 million for water \$0.5 for study	\$1 million
South Delta Planning	\$0	\$0	\$1 million
Special Support	\$5 million	\$4 million	\$4 million
General Oversight and Fund Reserve			\$1.7 million

CALFED BAY-DELTA PROGRAM

FY 2000 Preliminary Federal Funding Allocation - Non Ecosystem

	OPTION 1	OPTION 2
Delta Improvements	10.5 million	6 million
South Delta Improvements		
Tracy Fish Facility planning and design	6 million	6 million
Water quality planning and pilot projects	2 million	
Environmental documentation	1 million	
North Delta Improvements (Regional Plan, Environmental Documentation, Suisun Marsh, Risk Assessment)	1.5 million	
Other Water Management Actions	14.5 million	19 million
2000 Operations contingency	10 million	10 million
Outcomes of Water Management Development Team	?	?
Conservation and recycling planning and pilot projects	2 million	4.5 million
ISI: Groundwater pilot projects	2.15 million	4.15 million
Transfers	.35 million	.35 million
CALFED planning and management	5 million	5 million

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