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To: Delta Protection Commission

From: Margit Aramburu, Executive Director

Subject: "Category III" Projects Tentatively Proposed for Funding by $10 Million Dollars Provided by Metropolitan Water District

As noted in the agenda description for Item 13, attached for your information is a list of projects which may be funded this grant cycle, the first of three such cycles. This material was reviewed at the April 20, 1995 CALFED meeting.

CATEGORY III MEASURES

IMPLEMENTATION SUBCOMMITTEE
IDENTIFICATION OF POTENTIAL MEASURES

1. APPROACH USED TO IDENTIFY POTENTIAL CATEGORY III MEASURES
2. DOCUMENTATION OF CATEGORY III MEASURES
3. THREE-TIERED PROCESS FOR IDENTIFYING NEAR-TERM (95-96) MEASURES
4. REMAINING ISSUES TO BE FURTHER EXAMINED

CATEGORY III MEASURES

IMPLEMENTATION SUBCOMMITTEE
IDENTIFICATION OF POTENTIAL MEASURES

1. APPROACH USED TO IDENTIFY POTENTIAL CATEGORY III MEASURES

- Review of Existing Reports
- Meetings and Telephone Conversations
- Open Request for Proposals
- Circulation of Draft Potential Near-Term Measures Report

CATEGORY III MEASURES

IMPLEMENTATION SUBCOMMITTEE
IDENTIFICATION OF POTENTIAL MEASURES

2. DOCUMENTATION OF CATEGORY III MEASURES

- Development of Category III Database
- Draft Potential Near-Term Measures Report

CATEGORY III MEASURES

IMPLEMENTATION SUBCOMMITTEE
IDENTIFICATION OF POTENTIAL MEASURES

3. THREE-TIERED PROCESS FOR IDENTIFYING NEAR-TERM (95-96) MEASURES

- Sufficient Information to Evaluate Proposal?
- Fully or Partially Implementable in 95-96?
- Potential Cost Sharing Available?

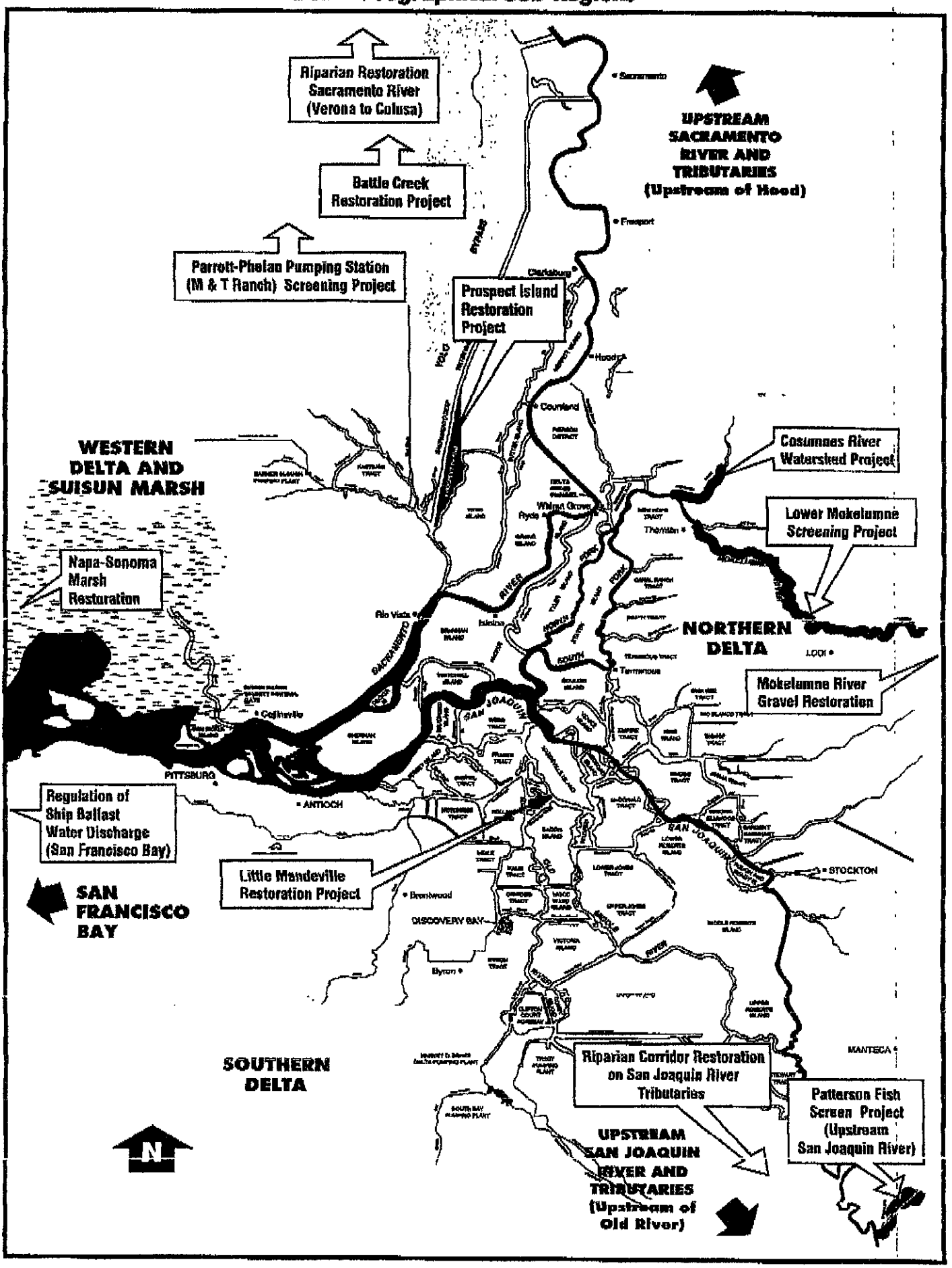
CATEGORY III MEASURES

IMPLEMENTATION SUBCOMMITTEE
IDENTIFICATION OF POTENTIAL MEASURES

4. **REMAINING ISSUES TO BE FURTHER EXAMINED**

- Measure Feasibility
- Biological Evaluation
- Cost Sharing Evaluation

CATEGORY III
POTENTIAL NEAR-TERM MEASURES
Delta Geographical Sub-Regions



CATEGORY III
POTENTIAL NEAR-TERM MEASURES

PROJECT NAME/DESCRIPTION	SPECIES BENEFITED	PROPONENT	LOCATION	IMPLEMENTATION TIMING	TOTAL MEASURE COST
FACTOR 1 - SCREENING OF UNSCREENED DIVERSION					
Patterson Fish Screen Project					
The purpose of this action is to improve the downstream survival of fall-run chinook salmon smolts in the San Joaquin River by installing a positive barrier fish screen to protect migrating fish. This fish screen is eligible for partial (up to 50%) funding through Section 3406(b)(21) of the CVPIA.	Fall-run chinook salmon, Sacramento splittail.	CDFG	Upper San Joaquin River	1995	$2,000,000
				1996	—
				1997	—
				O&M (Annual)	Unknown
Parrott-Phelan Pumping Station (M & T Ranch) Project					
The purpose of this action is to restore Big Chico Creek salmon and steelhead populations. The operation of the unscreened M&T Pumps, located on Big Chico Creek, are a severe impediment to protecting and restoring spring-run chinook. During many years, these pumps actually cause streamflow reversals during the critical downstream migration period and a 100% loss of downstream migrants occurs. Further, adult spring chinook migrating up the Sacramento River have difficulty locating the mouth of Big Chico Creek when flows are reversed. The preferred solution is to relocate the station to the mainstream of the Sacramento River and to install and operate a positive barrier fish screen. This project is eligible for partial (up to 50%) funding through Section 3406(b)(21) of the CVPIA	Winter, spring, fall and late-fall runs of salmon and steelhead trout, waterfowl.	CDFG	Upper Sacramento River	1995	$2,500,000
				1996	—
				1997	—
				O&M (Annual)	Landowners
Lower Mokelumne Screening Project					
In the lower Mokelumne there have been as many as 91 pumps which divert water for farming and ranching. The majority of these pump intakes are unscreened and the intake pipes are often located along the river bank where juvenile salmonids migrate. The peak diversions coincide with the period of juvenile salmon and steelhead outmigration. This project would screen all unscreened diversions and improve those diversion canal screens which need improvement.	Salmonids.	EBMUD	Northern Delta Lower Mokelumne River	1995	—
				1996	—
				1997	—
				O&M (Annual)	$1,000,000
TOTAL FACTOR 1 COSTS				Capital	$4,500,000
				O&M (Annual)	$1,000,000

CATEGORY III
POTENTIAL NEAR-TERM MEASURES

PROJECT NAME/DESCRIPTION	SPECIES BENEFITED	PROPONENT	LOCATION	IMPLEMENTATION TIMING	TOTAL MEASURE COST
FACTOR 2 - WASTE DISCHARGES					
Extension of the Biologically Integrated Orchard Systems (BIOS) Project					
The BIOS project is designed as a three-year information and technology transfer pollution prevention program for eliminating use of diazinon and reducing other pesticides used in California almond production. The proposed Category III measure seeks funding to expand the BIOS program to all major almond growing regions adjacent to the San Joaquin and Sacramento rivers.	Potentially all species.	USEPA	Butte, Glenn, Colusa, Yolo, San Joaquin, Stanislaus, Merced, and Madera counties.	1995	$800,000
				1996	$540,000
				1997	$560,000
				O&M (Annual)	—
TOTAL FACTOR 2 COSTS				Capital	$2,000,000
				O&M (Annual)	
FACTOR 7 - LOSS OF RIPARIAN, WETLAND, AND ESTUARINE HABITATS					
Napa - Sonoma/Marsh Restoration					
Restore abandoned salt ponds to fish and wildlife habitat (mostly tidal restoration). Replace 48" pipe and slide gate with 2-48" pipes (or comparable) fitted with combination screw flap gates on both sides.	Delta smelt.	CDFG	San Francisco Bay	1995	$150,000
				1996	—
				1997	—
				O&M (Annual)	$1,500
Prospect Island Restoration					
The proposal is to cost share in the restoration of 1,228 acres of tidal wetland/aquatic habitat. The land is currently in agricultural use. To restore the property to tidal habitat, the levees would be breached in two locations. Prior to breaching the levees, islands would be created by using materials on-site. Interior levees and islands would be stabilized using biotechnical techniques.	Delta smelt, Sacramento splittail and salmon.	COE/DWR	Northern Delta	1995	$5,400,000
				1996	$4,600,000
				1997	—
				O&M (Annual)	$90,000
				Monitoring (Annual)	$150,000-$300,000

CATEGORY III
POTENTIAL NEAR-TERM MEASURES

PROJECT NAME/DESCRIPTION	SPECIES BENEFITED	PROPONENT	LOCATION	IMPLEMENTATION TIMING	TOTAL MEASURE COST
FACTOR 7 - LOSS OF RIPARIAN, WETLAND, AND ESTUARINE HABITATS (Continued)					
Riparian Corridor Restoration on Flood-Damaged San Joaquin Tributaries					
Acquire about 6,000 acres of recently overflowed crop lands and manage them as riparian strips and seasonal wetlands to intercept and immobilize sediment and sediment-bound pesticides from San Joaquin River tributaries which now reach and degrade shallow-water-low-salinity Delta channels.	Potentially all species. species.	DWR	Upstream San Joaquin River	1995 1996 1997 O&M (Annual)	Project-level costs have not been evaluated
Battle Creek Restoration Proposal					
Restore anadromous fish production to approximately 40 miles of upper Battle Creek (above Coleman Hatchery) by purchasing portions of the power project or its power potential and return a sufficient portion of the total natural runoff to the stream channel to produce healthy self-sustaining populations of anadromous fish. In general, less than half the natural flow is proposed for return to the channel. Historically, Battle Creek produced large populations of chinook salmon, including spring-run chinook and some number of winter-run chinook and steelhead. Currently, upper Battle Creek is incapable of sustaining the production of chinook salmon and steelhead primarily due to the cumulative removal of over 95 percent of the base flow of the stream via a complex network of unscreened canals for hydroelectric power production operated by Pacific Gas and Electric Company.	Increase survival of spring-run and winter-run chinook salmon and steelhead.	CDFG	Upper Sacramento River	1995 1996 1997 O&M (Annual)	$3,500,000 $4,800,000 $1,200,000 Unknown

CATEGORY III
POTENTIAL NEAR-TERM MEASURES

PROJECT NAME/DESCRIPTION	SPECIES BENEFITED	PROPONENT	LOCATION	IMPLEMENTATION TIMING	TOTAL MEASURE COST
FACTOR 7 - LOSS OF RIPARIAN, WETLAND, AND ESTUARINE HABITATS (Continued)					
Little Mandeville Restoration Project Purchase and restore as tidal wetland and shaded riverine habitat. The island is currently flooded. Following purchase, spoilt material would be deposited in selected portions of the island to create a mosaic of open channels and emergent wetland habitat.	Delta, smelt, Sacramento splittail and salmonids.	CDFG	Northern Delta	1995 1996 1997 O&M (Endowment)	$500,000 $400,000 $100,000 $150,000
Gravel Restoration on Mokelumne River Addition of gravel to enhance salmon spawning habitat and to optimize habitat by creating spawning berms.	Salmon.	EBMUD	Northern Delta Mokelumne River (Below Camanche Dam)	1995 1996 1997 O&M (Annual)	— — — $50,000
TOTAL FACTOR 7 COSTS				Capital O&M (Annual) O&M (Endowment)	[illegible] [illegible] [illegible]

CATEGORY III
POTENTIAL NEAR-TERM MEASURES

PROJECT NAME/DESCRIPTION	SPECIES BENEFITED	PROPONENT	LOCATION	IMPLEMENTATION TIMING	TOTAL MEASURE COST
FACTOR 8 - CHANNEL ALTERATIONS					
Cosumnes River Watershed Project The proposed project consists of three components: 1) the purchase of conservation easements along the Cosumnes River (within the prescribed boundaries of the Bay-Delta) and subsequent restoration of these areas to riparian habitats, with a focus on areas of bank and levee instability; 2) the evaluation and modification of the fish ladder at a diversion dam for Rancho Murietta water supplies; and 3) the analysis and enhancement of the fall-run salmon spawning gravels to determine present conditions and restoration and/or enhancement needs.	Aquatic (salmon) and avian species.	TNC	Northern Delta	1995 1996 1997 O&M (Endowment) O&M (Annual)	$575,000 $325,000 $375,000 $50,000 $4,000
Riparian Restoration Sacramento River (Verona to Colusa) This project would consist of planting native riparian vegetation on riverside levee toe berms and riprapped waterward edges of those berms. The project would utilize locally available vegetation, and would require approximately three year post-planting maintenance, consisting mainly of watering, weeding, and monitoring. Each site is a nearly-level berm approximately forty-feet wide, and would provide nearly ten acres of riparian habitat where none presently occurs.	Benefits to aquatic fauna, fishery habitat and salmon.	WCB	Upper Sacramento River	1995 1996 1997 O&M (Annual)	$540,000 — — Unknown
TOTAL FACTOR 8 COSTS				Capital O&M (Endowment) O&M (Annual)	$1,815,000 $50,000 $4,000

CATEGORY III
POTENTIAL NEAR-TERM MEASURES

PROJECT NAME/DESCRIPTION	SPECIES BENEFITED	PROPONENT	LOCATION	IMPLEMENTATION TIMING	TOTAL MEASURE COST
FACTOR 9 - FISH PASSAGE/BARRIERS					
Clough Dam Removal Project					
The purpose of this action is to improve the up- and downstream passage of adult and juvenile spring-run chinook salmon and steelhead. Clough Dam is privately owned and has a fish ladder. Although the ladder operates reasonably well, there are frequent problems that hinder the entrance of salmon and steelhead. The overall result is often a delay in the upstream passage of adults.	Spring-run chinook salmon and steelhead.	CDFG	Upper Sacramento River	1995	$2,000,000
				1996	—
				1997	—
				O&M (Annual)	Unknown
TOTAL FACTOR 9 COSTS				Capital	$2,000,000
				O&M (Annual)	Unknown

CATEGORY III
POTENTIAL NEAR-TERM MEASURES

PROJECT NAME/DESCRIPTION	SPECIES BENEFITED	PROPONENT	LOCATION	IMPLEMENTATION TIMING	TOTAL MEASURE COST
FACTOR 10 - ARTIFICIAL PROPAGATION					
Captive Breeding/Artifical Propagation of Delta Smelt					
Development of methods and techniques for captive breeding and artificial propagation of Delta smelt including broodstock maturation, tank spawning, egg incubation, larval rearing and fish health managment.	Delta Smelt.	UC Davis	NA	1995	$100,000
				1996	—
				1997	—
				O&M (Annual)	$270,000
Sacramento River Winter-Run Chinook Salmon Captive Broodstock Program					
This proposal requests partial support of the existing Winter Run Chinook Captive Broodstock Program (WRCCB). The WRCCB project is a large multi-agency activity that is utilizing new technologies to preserve the state and federally ESA-Listed Sacramento River Winter Run Chinook.	Winter-run chinook Salmon.	PCFFA	Upper Sacramento River	1995	$80,000
				1996	—
				1997	—
				O&M (Annual)	$952,000
TOTAL FACTOR 10 COSTS				Capital	$180,000
				O&M (Annual)	$1,220,000
TOTAL COSTS FOR ALL FACTORS				Capital	[illegible]
				O&M (Annual)	[illegible]
				O&M (Recurring)	[illegible]