

CALFED BAY-DELTA PROGRAM

Office Memorandum

Date: August 26, 1998

To: Steve Ritchie

From: Dave Samson

Subject: Project Descriptions for Stage 1 Implementation –
Conveyance Actions

Per Stein Buer request, attached are the project descriptions for Stage 1 implementation of proposed conveyance actions.

Cc: Mark Cowin
Stein Buer

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D-011304

Project Descriptions for Stage 1 Implementation Conveyance Actions

NORTH DELTA INTERIM IMPROVEMENTS

1. Hood Test Diversion

A facility to divert Sacramento River water is a key feature of both the Through-Delta Alternative 2, and the Dual Delta Alternative 3. It includes flood gates, a new Highway 160 bridge, fish screens and return facilities, a pump station, and upstream migrant passage. It does not include a connecting channel to the Mokelumne River. The current range of potential diversion capacities for this facility is between 8,000 and 12,000 cfs.

The "test" facility being proposed in Stage 1 would divert about 2,000 cfs. The ultimate "build-out" of the facility could be achieved by constructing additional 2,000 cfs modules of the same scale and functionality as the initial facility that will have been monitored and refined over an evaluation period. In the case of the Alt. 2 scenario, handling the upward migrating fish on the downstream side of the facility would also be evaluated and refined.

** Note that the cost for open channel reach from the Hood facility to the Mokelumne River was NOT included in the cost estimate prepared for Stage 1 actions

SEE FIGURE 3 FOR CONCEPTUAL SCHEMATIC OF THE HOOD FACILITY

2. Delta Land Acquisition

This action item refers to the procurement of property along the South Mokelumne for the dual purpose of developing shallow water habitat as well as providing flood water storage during major storm events. The areas identified as prime locations for implementation are Canal Ranch and Brack Tracts. It is assumed that the proposed McCormack Williamson Tract acquisition would be funded under existing Category III funds.

3. Setback Levees

A test program is proposed to evaluate the use of levee setbacks to achieve the dual purpose of increasing conveyance capacity of the channel for flood control, along with the development of waterside habitat. A 4½ mile reach of the South Mokelumne between New Hope Landing and Beaver Slough is included.

4. Dredging

Dredging the North Mokelumne and the South Mokeumne channels to a depth of up to 20 ft. About 10 miles of channel are assumed to be dredged.

SEE FIGURE 1 FOR LOCATION OF STAGE 1 - NORTH DELTA IMPROVEMENTS

Project Descriptions for Stage 1 Implementation Conveyance Actions

SOUTH DELTA IMPROVEMENTS

1. 3 Control Barriers, 1 Fish Barrier, Dredging

These are components of DWR's Interim South Delta Program. The three flow control barriers are located on Middle River, Old River, and Grantline Canal. The fish control structure is located at the head of Old River. Channel dredging in Old River adjacent to Victoria Island is also a component of the ISDP.

2. New CCFB Intake

The component that varied between Calfed and the ISDP was the new Clifton Court Forebay Intake Structure. The ISDP concept originally featured a 25,000 – 30,000 cfs gated structure that is operated in conjunction with the tidal cycle. This design would allow for continuous pumping of 10,300 cfs from the Banks Pumping Plant.

CALFED's version of the intake facility consists of a fish-screening complex and pump station that would restrict the total CCFB inflow to 15,000 cfs in the case of this facility becoming the joint point diversion for the SWP and CVP, or 10,300 cfs if CCFB remains a SWP facility. Further studies are required to support the theory of continuous diversion at a rate of 15,000 cfs, year around, without adversely impacting stages and water quality in south Delta channels.

****NOTE:** The results of these studies may also indicate that the dredging requirements in Old River (Item 1 above) might be modified, or eliminated, at this restricted flow rate.

Potential design could bypass part of the flow when inflow needs to exceed the capacity of 15,000 cfs.

3. 400 cfs Downstream Intertie

This action item provides a pump station to lift 400 cfs from the DMC to the Calif. Aqueduct somewhere near Milepost 8. This is prompted by restricted conveyance capacity of the DMC downstream of this point. Diverting 400 cfs allows the Tracy Pumping Plant (CVP) to pump its full permitted capacity (4600 cfs) rather than limiting pumping to 4200 cfs. The CVP water carried by the Aqueduct could then be dropped back into the DMC at a point where adequate conveyance capacity exists.

****NOTE:** Further study is required to: 1.) Verify the ability of the Aqueduct (10,300 cfs design capacity) to carry the additional 400 cfs along the specified reach, and 2.) If there is the capacity to carry the additional water, evaluate the possibility of wheeling the CVP water thru Banks (SWP), which has the pumping capacity to deliver the extra 400 cfs. In order to wheel CVP water through SWP facilities without having a joint point of diversion agreement in place will require SWRCB approval.

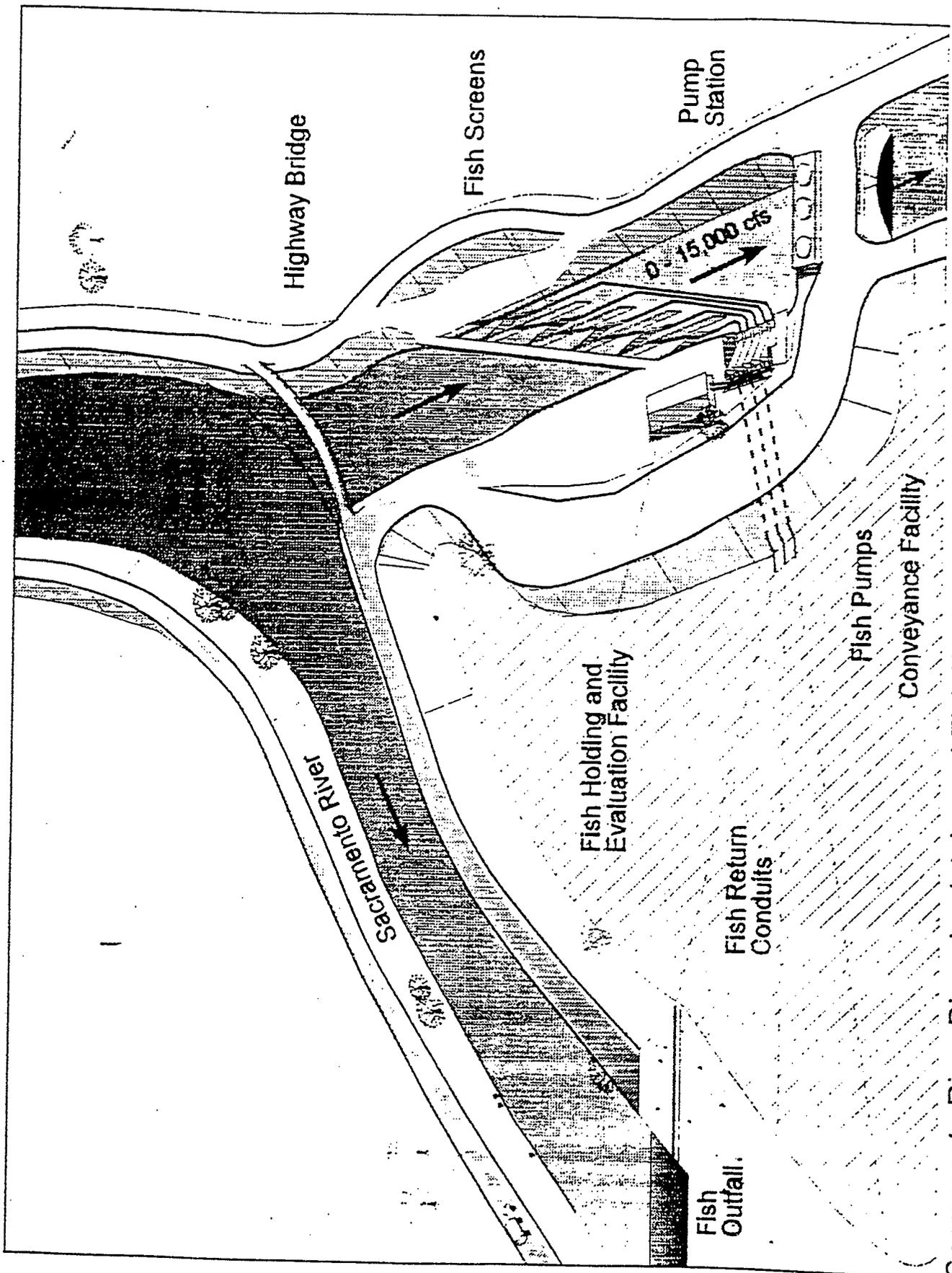
4. CVP / SWP Intake Intertie (Planning Only)

This is the CCFB-DMC Intertie that would be required should the two water projects utilize one diversion facility (at CCFB) under a joint point of diversion agreement and could provide greater operational flexibility. In Stage 1, this is a planning item only.

5. 2,500 cfs Tracy Fish Screen

This action item is currently underway as the "Tracy Fish Facility Improvement Program". This program was mandated under the CVPIA and has recently been modified to address the CALFED objective of testing and evaluating a full-scale module capable of being replicated for use in the new CCFB Intake structure (Item 2). The Stage 1 action includes planning and design for build-out of this facility to 4,600 cfs.

SEE FIGURE 2 FOR LOCATION OF INTERIM SOUTH DELTA PROGRAM FACILITIES



Sacramento River Diversion Intake and Fish Facility at North Delta

FIGURE 3

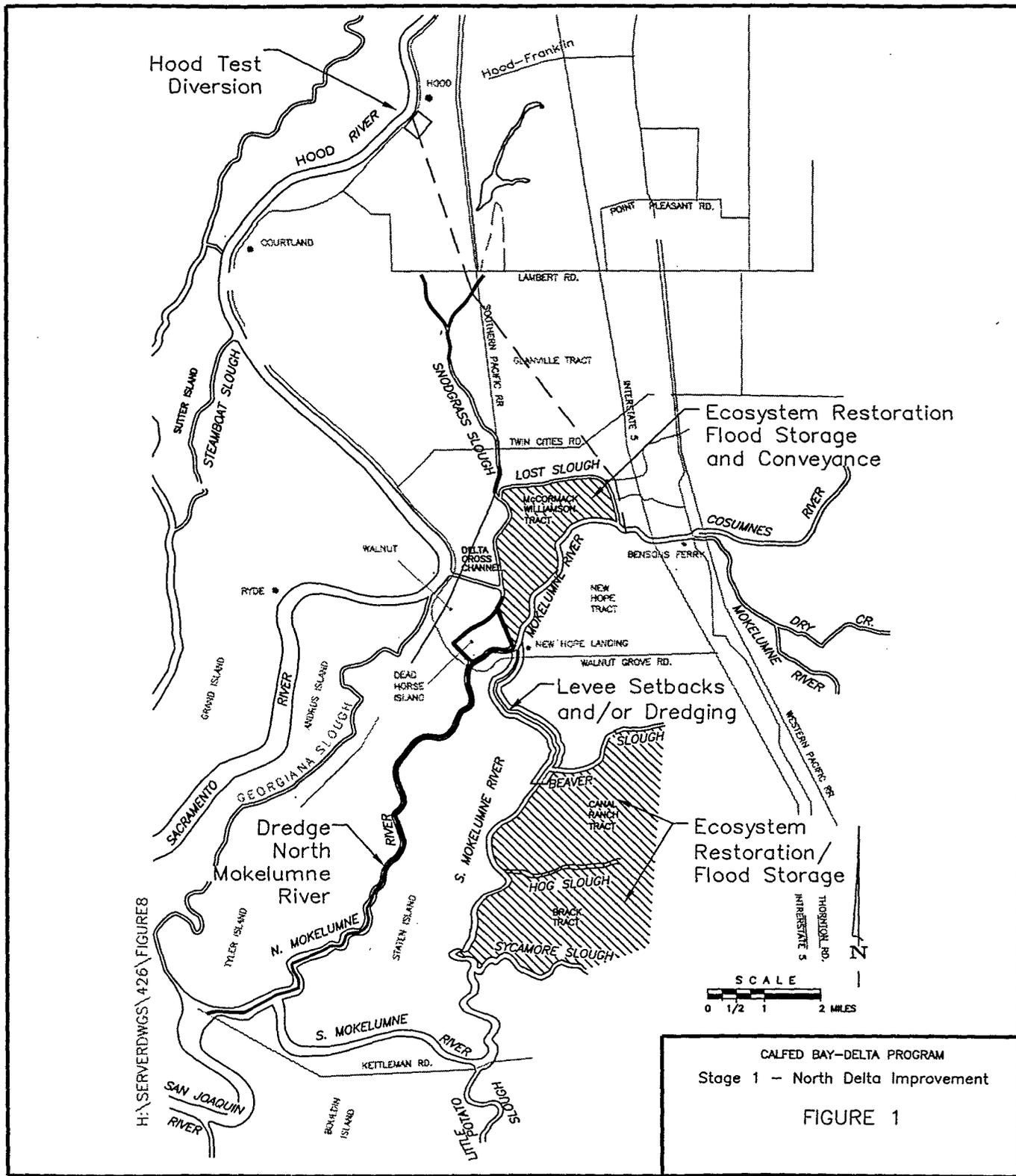
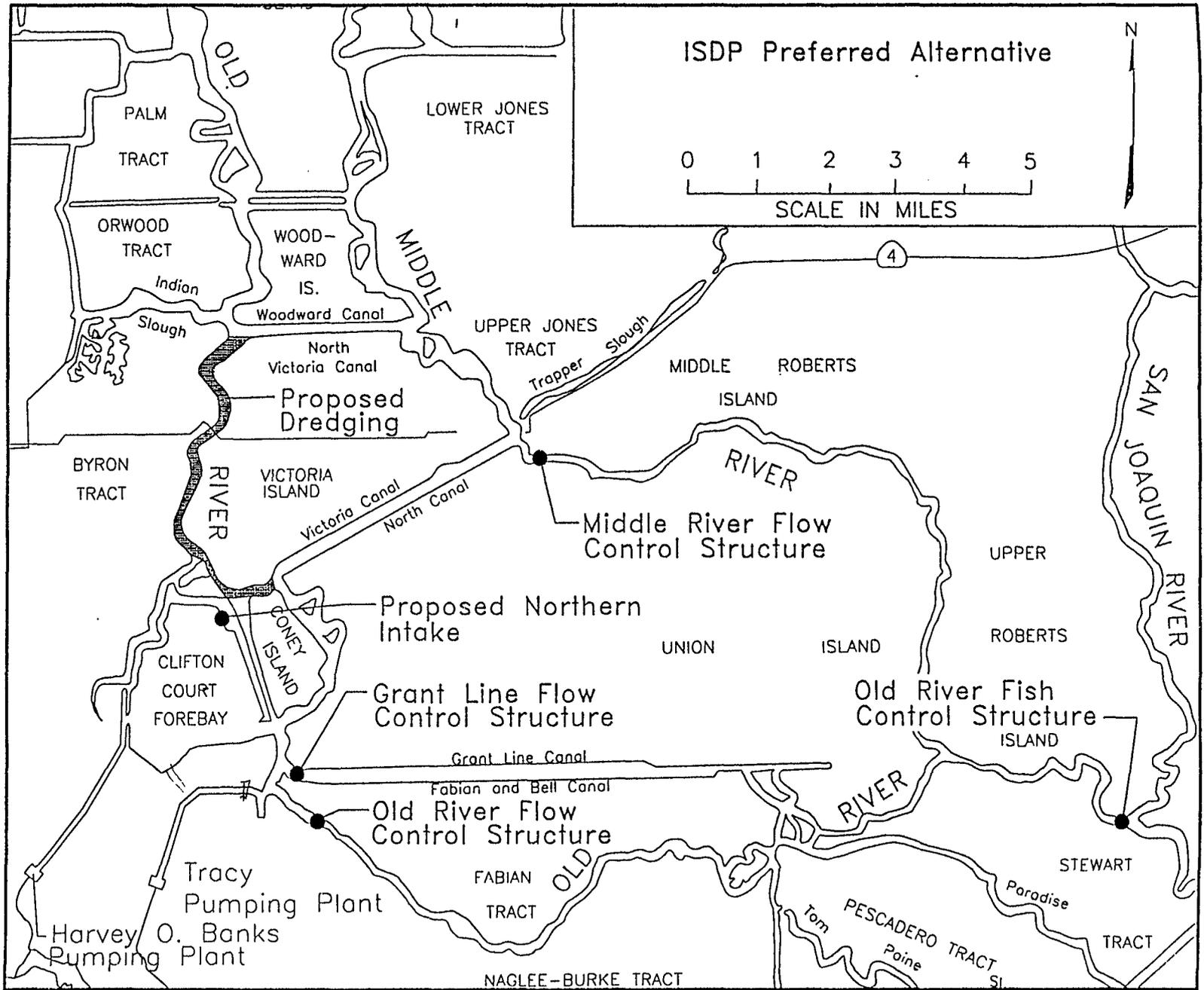


Figure 2 Interim South Delta Program Facilities.



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Cost split estimate for Stage 1 Implementation Conveyance Actions

rev. 8/12/98, smb

North Delta Interim Improvements	Total Costs		Cost Shares, percent			Cost Shares, Millions			
	1996	1998 (6)	state	federal	user	state	federal	local	totals
Hood Test Diversion	\$74.4	\$76.9	33.3	33.3	33.3	\$25.6	\$25.6	\$25.6	\$76.8
Delta Island Land Acquisition (1)	\$0.0	\$0.0	50	50	0	\$0.0	\$0.0	\$0.0	\$0.0
Setback Levees (2)	\$65.1	\$67.2	25	65	10	\$16.8	\$43.7	\$6.7	\$67.2
Dredging (3)	\$49.6	\$51.2	25	65	10	\$12.8	\$33.3	\$5.1	\$51.2
totals	\$189.1	\$195.3				\$55.2	\$102.6	\$37.4	\$195.3
percents						28	53	19	100

South Delta Improvements	Total Costs		Cost Shares, percent			Cost Shares, Millions			
	1996	1998	state	federal	user	state	federal	local	totals
3 control barriers, 1 fish b, dredging	69.7	\$72.0	0	0	100	\$0.0	\$0.0	\$72.0	\$72.0
New CCFB Intake (4)	186	\$192.1	70.3	0	29.69	\$135.1	\$0.0	\$57.0	\$192.1
400 cfs d/s intertie	9.3	\$9.6	0	0	100	\$0.0	\$0.0	\$9.6	\$9.6
CVP/SWP Intake Intertie, plng. Only	6	\$6.2	0	0	100	\$0.0	\$0.0	\$6.2	\$6.2
2300 cfs Tracy Fish Screen (5)	123.3	\$127.4	0	75	25	\$0.0	\$95.5	\$31.8	\$127.4
totals	394.3	\$407.3				\$135.1	\$95.5	\$176.7	\$407.3
percents						33	23	43	100

Isolated Conveyance	Total Costs		Cost Shares, percent			millions			
	1996	1998	state	federal	user	state	federal	local	totals
Isolated Conveyance, Planning	70	\$72.3	0	0	100	\$0.0	\$0.0	\$72.3	\$72.3
totals	70	72.31	0	0	100	0	0	72.31	72.31
grand totals						\$190.3	\$198.1	\$286.4	\$674.9
						28	29	42	100

1. Land acq. Covered under ERP
2. Assume from Mcw to Canal R, Corps fed partner
3. North and South Mokelumne Ch., Corps fed. Partner
4. Assumes 75/25 state/user for fish screens (\$180m), 100% user for new gate
5. Includes completion of 2300 cfs and planning and design for buildout to 4600 cfs
6. USBR construction cost index, 3.3% escalation from '96 to '98

2500

2552

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