

## Chapter 4 Current Program Activities

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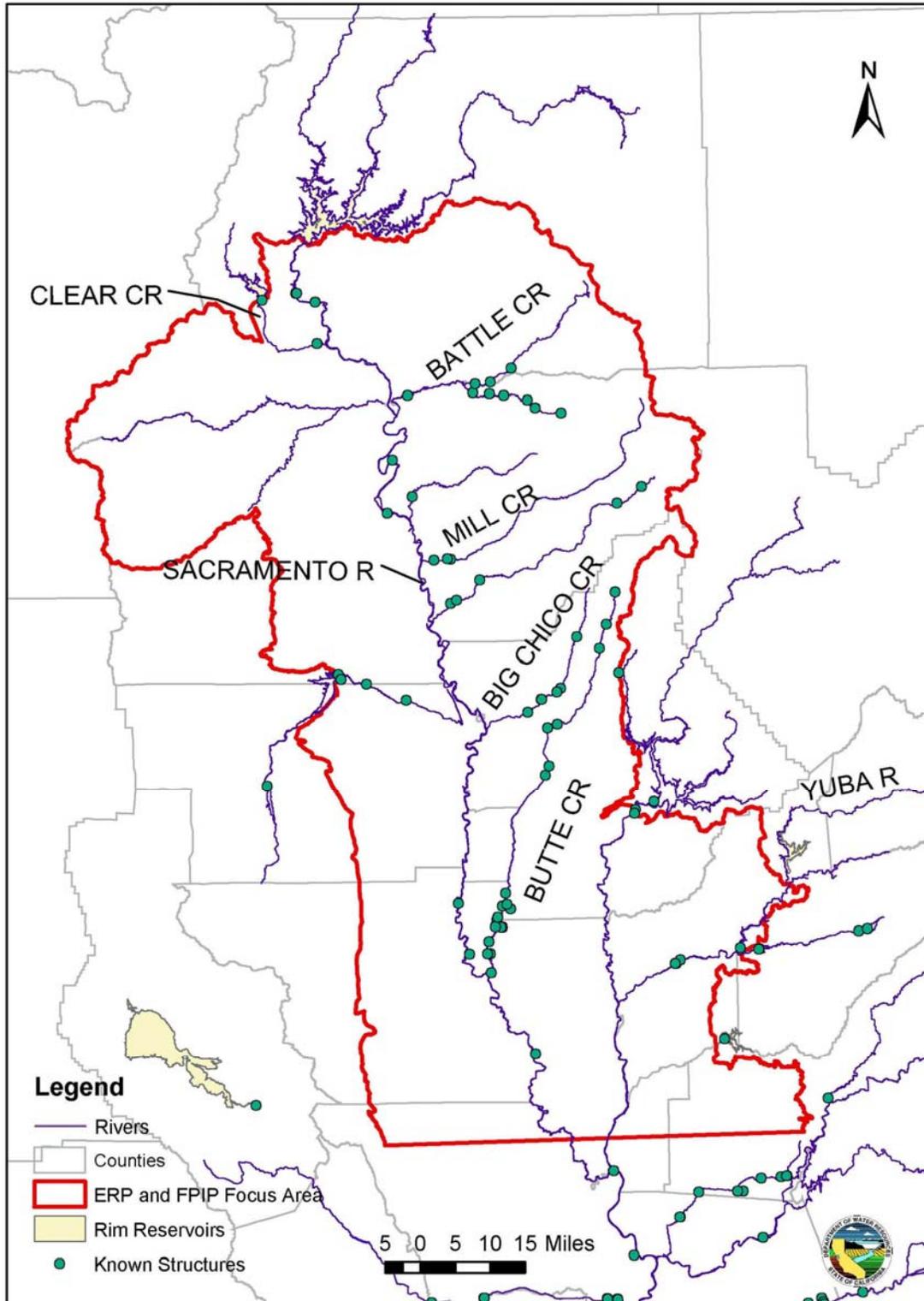
**Figure 4-1 Structures in waterways of the Fish Passage Improvement Program**



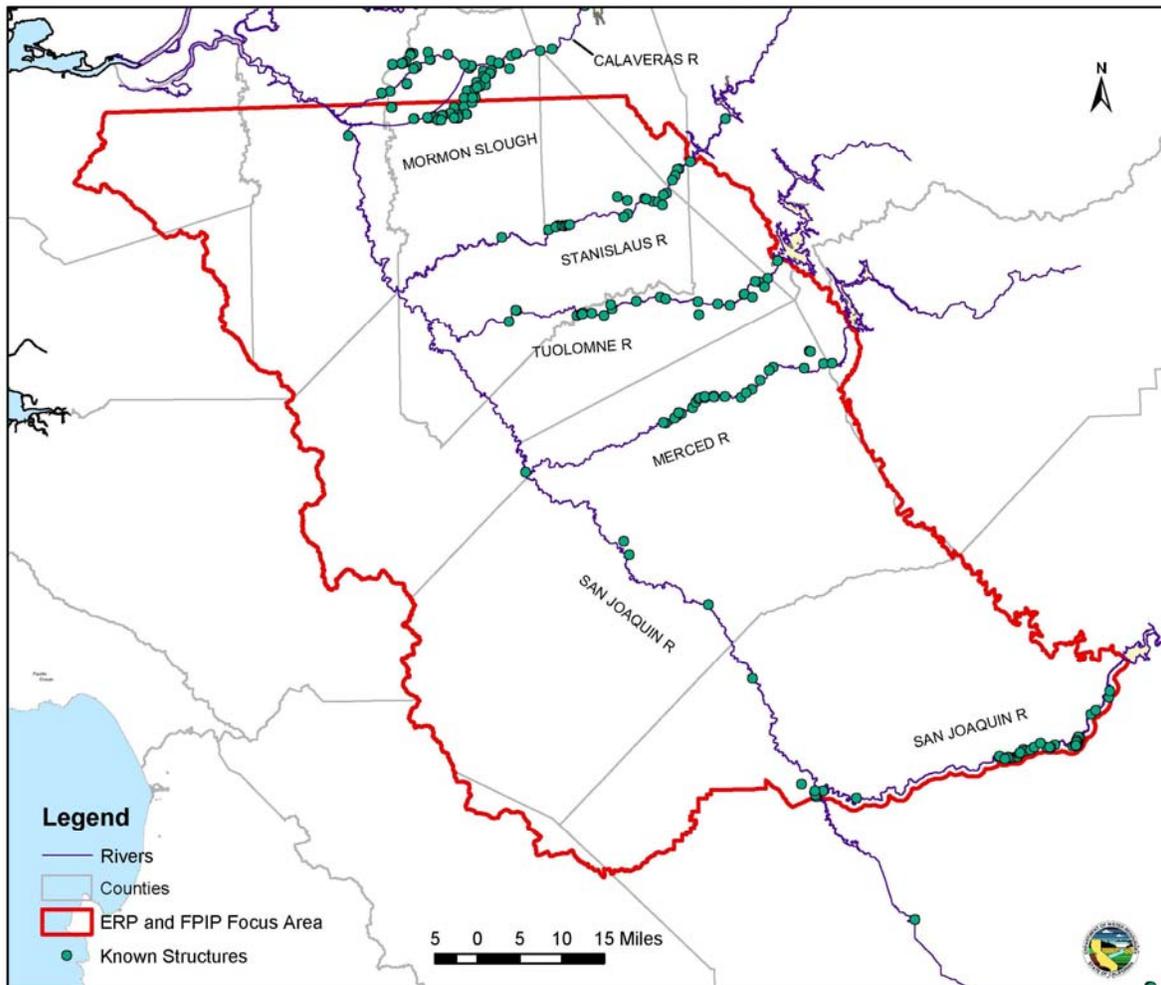
**Figure 4-2 Known structures in critical habitat for winter-run Chinook salmon**



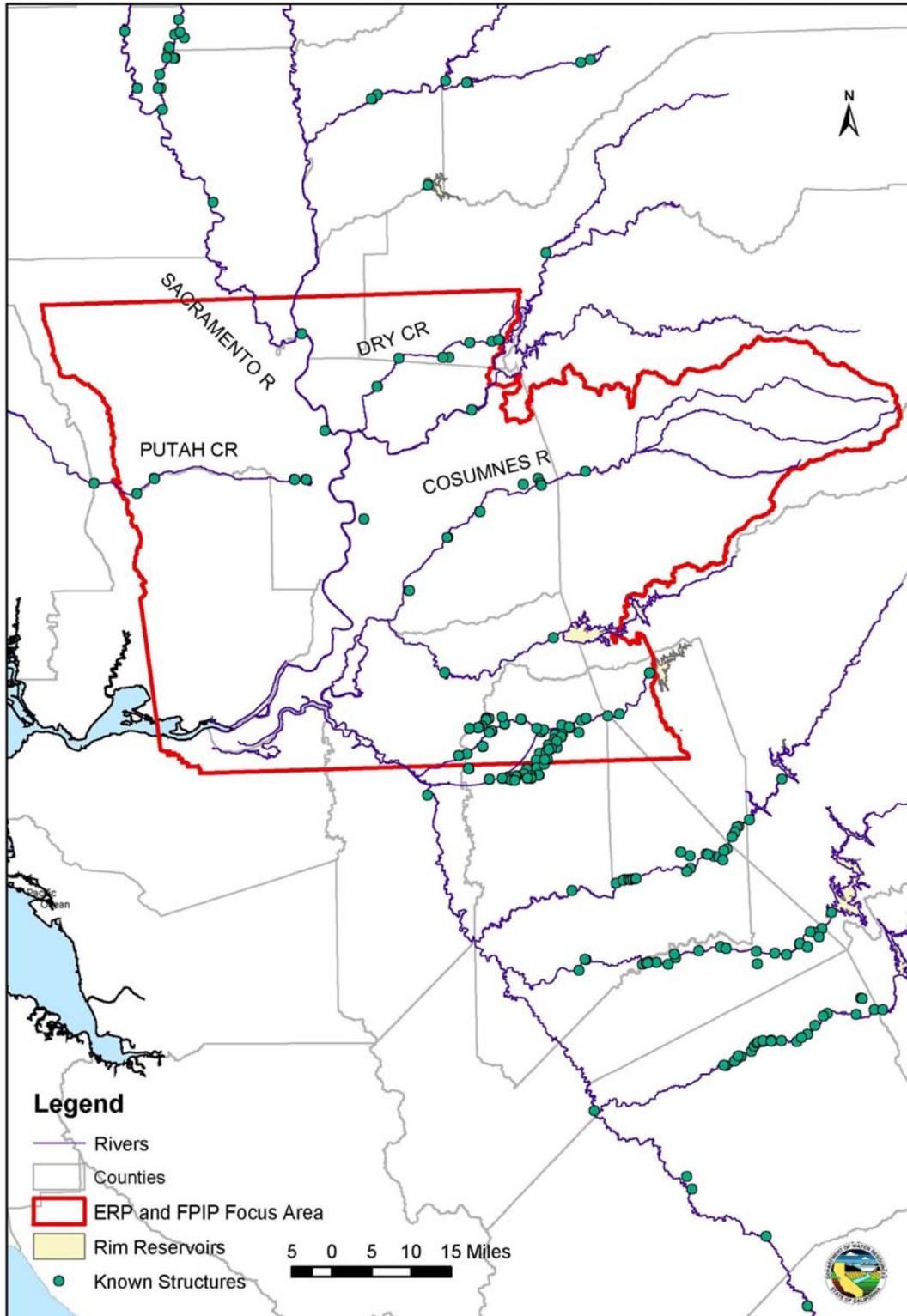
**Figure 4-3 Fish Passage Improvement Program priority waterways and known structures of the Sacramento River and tributaries**



**Figure 4-4 Fish Passage Improvement priority waterways and known structures of the San Joaquin River and tributaries**



**Figure 4-5 Fish Passage Improvement Program priority waterways and known structures of the Lower Sacramento River and tributaries**



**Photo 4-1 Battle Creek Salmon and Steelhead Restoration Project**



**Photo 4-2 Battle Creek—Coleman Dam**



Friends of the River photo

**Photo 4-3 Big Chico Creek—Iron Canyon's worn concrete and collapsed floor**



DWR photo

**Photo 4-4 Butte Creek—White Mallard Bottom Weir**



DFG Paul Ward photo

**Photo 4-5 Upper Butte Creek Watershed Project Weir 1, Sutter Bypass**



DFG Paul Ward photo

**Photo 4-6 Lower Butte Creek Project East-West Weir—Sutter Bypass**



DFG Paul Ward/photo

**Photo 4-7 Clear Creek—Saeltzer Dam Berm (Shasta County) before removal of armored gravel berm**



DWR photo

**Photo 4-8 Clear Creek after removal of armored gravel berm**



DWR photo

**Photo 4-9 Deer Creek–Stanford-Vina Ranch Diversion Dam**



**Photo 4-10 Mill Creek—Ward Dam (Tehama County)**



**Photo 4-11 Yuba River—Daguerre Point Dam**



**Photo 4-12 Yuba River–Harry L. Englebright Dam**



CALFED photo

**Photo 4-13 Cosumnes River—Blodgett Dam after flood damage**



DFG photo

**Photo 4-14 Cosumnes River—South Granlees Diversion Dam (Sacramento County)**



DFG photo

**Photo 4-15 Cosumnes River—fish ladder at North Granlees Dam  
(Retrofit in 2003)**



**Photo 4-16 Dry Creek—Hayer Dam**



DWR photo

**Photo 4-17 Dry Creek—pipeline on Secret Ravine (Sacramento and Placer counties)**



DWR photo

**Photo 4-18 Murphy Creek–Sparrowk Dam with concrete spillway in foreground, dam in background (Amador and San Joaquin counties)**



DWR photo

**Photo 4-19 Lower Putah Creek—check dam (Yolo County)**



Joe Krovoza photo

**Photo 4-20 Yolo Bypass—Fremont Weir (Yolo County)**



**Photo 4-21 Yolo Bypass toe drain—Lisbon Weir**



DWR Photo

**Photo 4-22 Mormon Slough—flashboard dam**



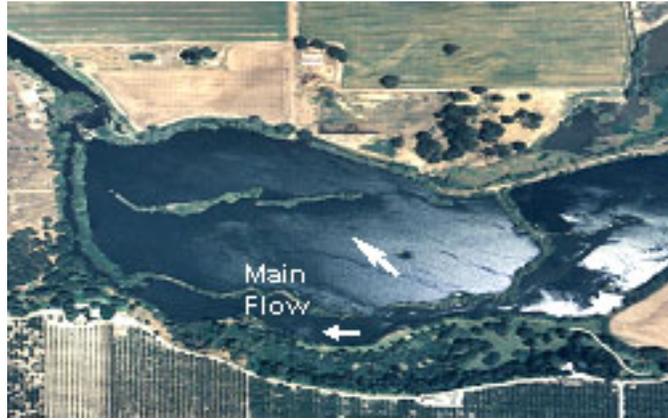
DWR photo

**Photo 4-23 Mormon Slough—Bellota Weir with temporary fish ladder**



DWR photo

**Photo 4-24 Merced River—Ratzlaff gravel pit before restoration (Merced County)**



DWR photo

**Photo 4-25 Merced River—Ratzlaff gravel pit after restoration (Merced County)**



DWR photo

**Photo 4-26 Stanislaus River—Oakdale Recreation Pond gravel pit isolation/restoration project**



USACE photo

**Photo 4-27 Tuolumne River—Dennett Dam (Stanislaus County)**



DWR Photo

**Table 4-1 Examples of priority projects of the Fish Passage Improvement Program that meet Level I and Level II criteria**

Stream system	Project or structures
<b>Sacramento River Basin</b>	
Butte Creek	Butte Creek/Butte Sink/Sutter Bypass Willow Slough Weir* Weir 1 Guisti Weir Weir 2* Weir 3 Weir 5 Wadsworth Canal Outfall East-West diversion Weir Tarke Weir Drivers Cut Weir Morton Weir End Weir Mile Long Canal North Weir Drumheller Slough Outfall White Mallard Outfall White Mallard Dam
Clear Creek	McCormick-Saeltzer Dam Berm
Yuba River	Daguerre Point Dam* Englebright Dam*
<b>Lower Sacramento-Delta Region</b>	
Consumnes River	Consumnes River Salmonid Barrier Improvement Project Blodgett Dam* Low-water crossing Hopland Dam Granlees Dam
Murphy Creek	Sparrowk Dam* Road crossing*
Sacramento River	Fremont Weir*
<b>San Joaquin River Basin</b>	
Calaveras River	42 seasonal flashboard diversion dams* 20 Road Crossings* Bellota Weir* Gravel Pit
Merced River	Magneson Pond Isolation Project-Four Pumps project constructed in 1996. Gravel Pit Merced River Salmon Habitat Enhancement Project Robinson Reach gravel pits*- construction completion 2002.
Stanislaus River	Oakdale Recreation Area gravel pits*
Tuolumne River	Dennett Dam*

\* indicates project receiving support from FPIP

**Table 4-2 Examples of fish passage projects from other DWR divisions or districts**

Stream System	Project and/or Structures	DWR Division/District
<b>Sacramento River Basin</b>		
Battle Creek and tributaries	Battle Creek Salmon and Steelhead Restoration Project Coleman Diversion Dam Wildcat Dam South Diversion Dam Lower Ripley Creek Diversion Dam Soap Creek Diversion Dam Eagle Canyon Diversion Dam North Battle Creek Feeder Diversion Dam Inskip Diversion Dam	Northern District
Big Chico Creek	Iron Canyon fish ladder Bear Hole	Northern District
Mill Creek	Clough Dam	Northern District
Yuba River	Hallwood-Cordura Diversion Screen	Central District
<b>Lower Sacramento-Delta Region</b>		
Putah Creek	Lower Putah Creek Anadromous FPIP Yolo Bypass seasonal check dam Road culverts Remains of dam near Winters Putah Diversion Dam	Division of Environmental Services
Yolo Bypass Toe Drain	Fremont Weir Lisbon Weir	Division of Environmental Services
<b>San Joaquin River Basin</b>		
Carmel River	San Clemente Dam	San Joaquin District
Merced River	Merced River Salmon Habitat Enhancement Project Ratzlaff and Stone Reaches	San Joaquin District

**Table 4-3 Structures on Battle Creek**

Structure name	RM	Height (ft)	Width (ft)	Description	Fish passage facility	Passage?
CNFH Barrier weir	6.0			Concrete weir	Pool and weir fish ladder	Ladder is closed Sept. through early March
CNFH Intake #3 Diversion	7.2			Concrete weir	Pool and weir fish ladder	Yes
Coleman Powerhouse tailrace (Intake #1)	7.6	NA		Concrete weir		Temporary fish barrier exists at bottom of tailrace to block access; plans for permanent barrier.
Wildcat Dam (North Fork)	2.4	8	15	Masonry dam	Pool and weir fish ladder	Passable only at certain flows
Eagle Canyon (North Fork)	5.1	15	70	Masonry dam	Alaska steep pass fish ladder	Intentionally closed
North Battle Creek Feeder Diversion Dam (North Fork)	9.2	8	93	Masonry dam	Alaska steep pass fish ladder	Passable only at certain flows
Coleman Diversion Dam (South Fork)	2.5	13	75	Masonry dam	Alaska steep pass fish ladder	Intentionally closed
South Diversion Dam (South Fork)	13.9	15	100	Masonry dam	Denil fish ladder	Passable only at certain flows
Inskip Diversion (South Fork)	8	28	80	Masonry dam	Alaska steep pass fish ladder	Passable only at certain flows
Lower Ripley Creek Diversion Dam	1	5	44	Concrete dam	None	No
Soap Creek Diversion Dam	1	10	41	Concrete dam	None	No

**Table 4-4 Structures on Big Chico Creek**

Structure name	RM	Height (ft)	Width (ft)	Description	Fish passage facility	Passage?
Bear Hole	13.3	5	N/A	Natural barrier	No	Yes, but difficult at low flows
Iron Canyon	14.2	35	N/A	Natural barrier	Pool and weir fish ladder	Yes, but limited and difficult

**Table 4-5 Structures on Butte Creek and Sutter Bypass—Butte County Sutter Bypass**

Structure name	RM	Height (ft)	Width (ft)	Description	Fish passage facility	Passage?	Comment
Wadsworth Canal Outfall	3.4		26	Outfall structure	Fish barrier recommended to exclude fish from canal.	No Progress as of 10/2004	
Willow Slough Weir and fish ladder	9.6	10	275	Earthen dam with two 5-ft. diameter cmp culverts	Denil fish ladder	Yes, at certain flows	DWR lead with AFRP funding. Design complete.
Weir #1	19.9	12	26	Concrete diversion weir (five 5-ft. bays)	Vertical slot fish ladder	Yes, at certain flows	Existing structure stabilized
Guisti Weir	22.5	6	115	Earthen dam with two 4-ft. diameter cmp culverts	Bypass channel	Yes, at certain flows	Low flow fish passage installed. Diversion closed off. Water purchased for instream flow.
Weir #2	25	13	82.5	Concrete diversion weir (twelve 5.88-ft. bays)	Pool and weir fish ladder	Yes, at certain flows	DWR lead with AFRP funding. Design complete.
Weir #3	25	8	30.6	Concrete diversion weir with flashboards (six 4.4-ft. bays)	None	Yes, at certain flows	New weir and fish ladder. Completed 2002.
Weir #5	28.9	10.1	73	Concrete diversion weir with flashboards (eleven 6-ft. bays)	None	Yes, at certain flows	Upgrades to weir & new fish ladder and screened diversion.
East-West Diversion Weir	29.8	7.5	19.6	Concrete sill with flashboard weir (four 4.4-ft. bays)	None	Yes, at certain flows	New water control structure and fish ladder.

*Table 4-5 continued on next page*

Structure name	RM	Height (ft)	Width (ft)	Description	Fish passage facility	Passage?	Comment
<i>Table 4-5 continued</i>							
<b>Butte Creek</b>							
Tarke Weir	3.6			Concrete weir	None		
Drivers Cut Outfall	5.5		24	Adult fish barrier	None		Scheduled for completion by 12/2004
RD 833				Adult fish barrier	None		Scheduled for completion by 12/2004
Drumheller Slough Outfall	8.3	6	12	Flashboard weir with an 8-ft. riser and 84-inch culvert outlet structure	None	No, but if boards are improperly placed, fish could pass.	Structure to discourage fish from entering the system. Completed 12/2000
White Mallard Outfall	10.2	6-ft. drop at low flow	90	Flashboard weir with a riser and outlet structure	None	Operational agreement has been developed to improve fish passage.	Construction completed
White Mallard Dam and associated diversions in progress	12.0			Water control structures with fish ladder and associated screen	Pool and weir fish ladder	Yes, at certain flows.	Scheduled for completion by 12/2004
<b>Cherokee and RD 833 Canal</b>							
Morton Weir Complex	0.9		25	2 diversions and a fish ladder	Yes	Yes	Structures completed in 12/2003
RD 833				No adult fish barrier	None		Scheduled for completion by 12/2004
<b>Sanborn Slough</b>							
End Weir	2.8			Water control structure and fish ladder	Yes		Completed in 12/03
North Weir	1.7	2 to 4-ft. drop		Water control structure	Yes	Yes, minimal hindrance from fall through spring	Completed in 12/2003

**Table 4-6 Clough Dam, a Barrier to Fish Passage on Mill Creek**

Structure name	RM	Height (ft)	Width (ft)	Description	Fish passage facility	Passage?
Clough Dam	4.2	N/A	N/A	Concrete diversion dam (partially washed out)	Not applicable (NA)	Dam removal completed 06/30/2003

**Table 4-7 Daguerre Point Dam: a barrier to fish passage on Yuba River**

Structure name	RM	Height (ft)	Width (ft)	Description	Fish passage facility	Passage?
Daguerre Point Dam	11.5	24	575	Concrete diversion dam	Pool and weir fish ladder on each bank.	Passage problems at certain flows

**Table 4-8 Englebright Dam, a barrier to fish passage on Yuba River**

Structure name	RM	Height (ft)	Width (ft)	Description	Fish passage facility	Passage?
Harry L. Englebright Dam	24	260	1,142	Concrete dam	None	No

**Table 4-9 Structures on the Cosumnes River—Sacramento County**

Structure name	RM	Ht (ft)	Width (ft)	Description	Fish passage facility	Passage?
Onetto	10	3	90	Low Flow Crossing – seasonal concrete road	Installed box culvert	Repaired by Fisheries Foundation '99-2000
Mahon	12.7			Flashboard dam	None	Installed flow focusing curves & modified d/s riprap 2003
Hop Ranch Dam	16.6	4		Flashboard dam	None	Installed flow focusing curves & modified d/s riprap 2003
Blodgett Dam	23	6	72	Flashboard dam	Temporary fish passage channel	Repaired dam, installed weir and flow focusing curves,'03
Granlees Diversion Dam	34	17	364	Dam	ladders and a screen	Repaired by F.F. 2002

**Table 4-10 Structures in the Dry Creek watershed—Sacramento and Placer counties**

Structure name	RM	Height (ft.)	Width (ft.)	Description	Fish passage facility	Passage?
<b>Dry Creek</b>						
Hayer Dam	2.6	10	92	Flashboard diversion dam	None	Removed in summer 2004
Rubble Dam	4.6	6	51	Culvert	None	Yes, when opened
Sewer Pipeline	0.1	4	53	Pipeline	None	Potentially impassable at low flow
<b>Miners Ravine</b>						
Cottonwood Dam	7.4	20	100	Dam	None	No
<b>Secret Ravine</b>						
Water Pipeline	0.1	2	17	Pipeline	none	Potentially impassable at low flow

**Table 4-11 Structures on Murphy Creek—Amador and San Joaquin counties**

Structure name	RM	Height (ft)	Width (ft)	Description	Fish passage facility	Passage?
Sparrowk Dam		8	60	Earthen dam	N/A	Dam removed in 8/2003
Road crossing			20 each	2 concrete double box culverts	None	Improved low flow passage

**Table 4-12 Structures on Lower Putah Creek—Yolo County**

Structure Name	RM	Height (ft)	Width (ft)	Description	Fish passage facility	Passage?
Bypass Check Dam	1.5	12		Seasonal check dam	None	Under evaluation
Road crossing	1.5			Seasonal dirt road	Culvert	Culvert may not be adequate for fish passage
Winters Percolation Dam	20	5		Remains of a concrete dam base that has been destroyed by a flood	None	Abandoned in 1952 after destruction by a 1951 flood. Passable at unknown flows
Putah Diversion Dam	24	16	910		None	Impassable except at flood flows

**Table 4-13 Structure on the Yolo Bypass—Yolo County**

Structure name	RM	Height (ft.)	Width (ft.)	Description	Fish passage facility	Passage?
Fremont Weir	76.3	6	9,500	Concrete	Ladder	No

**Table 4-14 Structures on the Calaveras River, Mormon Slough, and the Stockton Diverting Canal**

Structure name	RM	Height (ft.)	Width (ft.)	Description	Fish passage facility	Passage?
<b>Calaveras River</b>						
Asphalt apron	6.12			Bridge apron	none	
Gotelli road crossing	6.2	4	20	Road	none	
McAllen dam	6.9	5.3	36	Dam	none	
Cherryland dam	7.9	8.1	46.2	Dam	none	
DWR stream gage weir	9.45	1.4	15.5	Weir	none	
Solari dam	10.1		48.3	Dam		
Pezzi dam	12	12.5	6.9	Dam	none	
Murphy dam	12.4	10.5	68.7	Dam	none	
Eight Mile dam	14.7	8.82	70.15	Dam	none	
Tully dam	17.3	10	67.4	Dam	none	
Clements dam	20.7	9.6	58	Dam	none	
Gotelli dam	25.35	9.6	58	Dam	none	
Calaveras head works	25.87			Weir	none	
McGurk crossing	26.6		11.9	Road	none	
Gravel pit pond	27			Instream pond		
Wilson's crossing	27.1	12	200	Road	none	
Dog Ranch Road	27.8	4	21.5	Road	none	
Williams crossing	30.4	2.8	134	Road	none	
Road	32.4	1.2	83	Road	none	
Gotelli crossing	32.8	1.2	100	Road	none	
Rubble dam	33	2	93.5	Dam	none	
New Hogan Dam Road	41.9			Bridge apron	none	
New Hogan dam	42.9	210	1960	Earth fill dam	none	Impassable at all flows

*Table 4-14 continued on next page*

Structure name	RM	Height (ft.)	Width (ft.)	Description	Fish passage facility	Passage?
<i>Table 4-14 continued</i>						
<b>Mormon Slough-Stockton Diverting Canal</b>						
Structure Name	RM	Height (ft.)	Width (ft.)	Description	Fish Passage Facility	Passage?
Central CA Traction RR	.95	17	200	RR trestle	none	
Budiselich dam	2			Dam	none	
Main Street dam	4.9			Dam	none	
Panella dam	6.6	4.85	40.3	Dam	none	
Caprini crossing	7.25	4.5	45	Road	none	
Lavaggi dam	7.5	7.2	45.4	Dam	none	
Hogan crossing	8.43	5	50	Road	none	
McClellan dam	8.5	6.76	45.5	Dam	none	
Fujinaka crossing	9.48	5	110	Road	none	
Pratto dam	10.4	6.8	45.6	Dam	none	
Mormon Slough trestle	11.1	23.5	249.5	RR trestle	none	
Piazza dam	12	6.8	50.4	Dam	none	
Bonomo dam	12.2	7.1	38.4	Dam	none	
Hosie low water crossing	13	1.2	152	Road	none	
Hosie dam	13.4	1.2	152	Dam	none	
Avansino dam	14.4	7.5	60.9	Dam	none	
Fine dam	15.4	8	80.8	Dam	none	
Flashboard dam	16.55	6.2	65.5	Dam	none	
Watkins crossing	16.86	0.2	196	Road	none	
Bellota weir	18		170	Dam	Denille ladder-temporary in fall.	Impassable at lower flows

Note: Complete data for some structures not available at this time.

**Table 4-15 Structures on the Merced River**

Structure Name	RM	Description
Magneson Pond	32	Pit
Ratzlaff Pond	40	Pit
Western Stone	41	Pit
Lower Robinson Reach	42	Pit
Upper Robinson Reach	44	Pit

**Table 4-16 Partial list of structures on the Stanislaus River**

Structure name	RM	Description
Oakdale Recreation Area 1	33.9	Pit
Oakdale Recreation Area 2	34.2	Pit
Oakdale Recreation Area 3	34.4	Pit
Oakdale Recreation Area 4	34.7	Pit
Oakdale Recreation Area 5	34.9	Pit

**Table 4-17 Structure on the Tuolumne River**

Structure name	RM	Height (ft)	Width (ft)	Description	Fish passage facility	Passage?
Dennett Dam	16.7			Dam footing	notch	partial