

WORKING DRAFT

GIANT GARTER SNAKE/HABITAT GIS ANALYSIS - KEY TO SAMPLE ACTIONS MAP
CALFED CONSERVATION STRATEGY
December 8, 1998

Stage 1 Actions Proposed by CALFED Staff for the Ecosystem Restoration Program (July 24, 1998)

Map No.	Location	Description of Proposed Stage 1 Actions
1	a. Iron Mountain Mine b. Spring Creek	a. Endowment for operation of water quality treatment plant.
2	a. Clear Creek	a. Improve streamflows for fish using releases from Clair Hill and Whiskeytown dams. b. Improve and augment natural recruitment of sediment. c. Reestablish stream channel and meander in the lower 8 miles. d. Establish, maintain, and restore riparian habitat. e. Acquire water rights to eliminate diversion of water from the McCormick Dam. f. Upgrade or replace the fish ladder at McCormick Dam. g. Reduce the level of illegal harvest and reduce level of harvest on wild fish stocks. h. Develop and implement a multi-agency watershed management plan. <i>NOTE: There's no reference to Seltzer Dam in the ERPP</i>
3	a. Cottonwood Creek	a. Relocate instream gravel mines. b. Develop and implement a watershed management plan.
4	a. Battle Creek	a. Remove barriers to fish passage. b. Improve streamflows. c. Install fish ladders to improve fish passage. d. Adopt hatchery management practices designed to better protect the genetic integrity of wild stocks.
5	a. Sacramento River from Red Bluff to Chico Landing	a. Protect, enhance, and restore the meander belt. b. Screen all diversions of 100 cfs or less (diversions larger than 100 cfs screened under CVPIA).

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Map No.	Location	Description of Proposed Stage 1 Actions
6	a. Mill Creek	a. Develop a watershed management plan. b. Remove Clough Dam.
7	a. Deer Creek	a. Increase streamflow in the lower 10 miles. b. Develop an interagency watershed management plan. c. Restore and maintain riparian habitat along the lower 10 miles. d. Restore meadows.
8	a. Big Chico Creek	a. Develop a watershed management plan.
9	a. Butte Creek	a. Remove barriers to fish passage. b. Protect and restore riparian habitat. c. Remove diversions. d. Develop a watershed management plan.
10	a. Sacramento River from Chico Landing to Verona	a. Evaluate the feasibility of setting back levees in concert with the Corps' Sacramento and San Joaquin River Basins Comprehensive Study. b. Screen all diversions of 100 cfs or less (diversions larger than 100 cfs screened under CVPIA).
11	a. Sacramento River	a. Screen the GCID diversion.
12	a. Colusa Drain	a. Install a barrier to eliminate straying in conjunction with development of CALFED storage reservoirs.
15	a. Sutter Basin b. Butte Basin c. Colusa Basin d. American Basin	a. Enhance existing seasonal wetland habitats to support meeting goals of the CVHJV. <i>NOTE: Do the goals of CVHJV coincide with the ERPP Strategic Plan?</i>

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Map No.	Location	Description of Proposed Stage 1 Actions
16	a. Daguerre Point Dam on the Yuba River	a. Complete development of a feasibility study for removal of Daguerre Dam. b. Remove Daguerre Dam. <i>Consider other options?</i>
17	a. Englebright Dam on the Yuba River	a. Implement and complete a feasibility study for removal of Englebright Dam. <i>Consider other options?</i>
18	a. The Sunset Pumps on the Feather River	a. Screen the diversion.
19	a. Coleman National Fish Hatchery b. Feather River Fish Hatchery c. Nimbus Hatchery d. Mokelumne River Fish Hatchery e. Merced River Fish Hatchery	a. Improve hatchery management and release strategies to maintain the genetic integrity of wild fish stocks. <i>What are the major issues and management actions? Are they the same for each of these rivers?</i>
20	a. Sacramento River from Verona to Collinsville	a. Complete the evaluation of the feasibility of revegetating levees. <i>Consider other options, such as waterside berms, parallel levees, or levee setbacks?</i>
21	a. Consumnes River	a. Continue land acquisitions for floodplain protection. <i>What is being "protected"?</i>
22	a. Granly Dam on the Consumnes River	a. Improve passage through Granly Dam.
23	a. Mokelumne River	a. Reconfigure diversion dam to improve fish passage.

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Map No.	Location	Description of Proposed Stage 1 Actions
24	a. Tuolumne River	a. Improve base flows below Don Pedro Dam. b. Evaluate the quality of spawning gravels and renovate or supplement gravel supplies to enhance substrate quality if needed. c. Preserve and expand the existing meander belt. d. Develop a floodplain management plan. e. Conduct a feasibility study to construct setback levees. f. Restore stream channel and overflow basin configurations within the floodplain. g. Minimize effects of permanent in-stream structures on floodplain processes. h. Evaluate the impact of irrigation returns on stream temperature. i. Evaluate the use of devices or reservoir operations for reducing stream temperature during critical periods. j. Restore and enhance streamside riparian habitats. k. Evaluate the feasibility of screening small pump diversions, provide alternative water sources to diverters, and purchase water rights to reduce entrainment of fish. l. Eliminate gravel pits connected to the channel. m. Reduce the adverse affects of legal and illegal harvest on fish. n. Adopt hatchery management practices designed to better protect the genetic integrity of wild stocks. o. Evaluate the feasibility of constructing sediment detention basins.
25	a. Upper Tuolumne River Watershed	a. Develop and implement a multiagency watershed management plan.
26	a. West San Joaquin Basin Ecological Zone	a. Enhance existing seasonal wetland habitats to support meeting goals of the CVHJV. b. Coordinate floodplain improvements with the Corps' Sacramento and San Joaquin Basin Comprehensive Study. <i>This is too general to be clear on the ERPP actions needed.</i>

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Map No.	Location	Description of Proposed Stage 1 Actions
27	a. West San Joaquin Basin Ecological Zone	a. Evaluate the effect of drainwater on water quality and methods to reduce contaminants. <i>NOTE: Saline groundwater may be the primary source of surface water salinity in some cases.</i>
28	a. Merced River	a. Isolate gravel mines from the channel.
29	a. Cache Creek	a. Control non-native invasive plants in riparian habitats.
30	a. Cache Creek	a. Fund studies to identify solutions for controlling mercury sources.
31	a. Napa River	a. Acquire and restore portions of the floodplain along the lower river.
32	a. Petulama Marsh	a. Restore habitat to expand the marsh.
33	a. Napa/Sonoma Marsh	a. Marsh restoration.
34	a. Van Sickle Island	a. Restore tidal wetlands.
35	a. Suisun Marsh	a. Restore tidal wetlands.
36	a. San Pablo Bay	a. Develop a restoration plan for the San Pablo Baylands.
37	a. Coastal Pacific Ocean	a. Develop and implement a plan to manage discharge of ballast water.
38	a. Coastal Pacific Ocean	a. Develop and implement a harvest management plan for anadromous salmonids.
39	a. Yolo Bypass	a. Allocate water and modify the Fremont Weir to provide flows for fish passage. b. Install fish ladder at Fremont Weir to allow for fish passage. c. Restore riparian forest along the west side of the Toe Drain. d. Allow riparian vegetation to establish on the east levee of the Deep Water Ship Channel. e. Conduct a feasibility analysis for reduction of fish stranding.

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Map No.	Location	Description of Proposed Stage 1 Actions
40	a. Yolo Bypass	a. Support enhancement of existing wetlands by the Yolo Basin Foundation.
41	a. Prospect Island b. Liberty Island c. Little Holland Tract	a. Restore tidal wetlands.
42	a. McCormick-Williamson Tract	a. Restore tidal wetlands and riparian forest.
43	a. Staten Island	a. Improve land use practices to enhance wildlife habitat values provided by agricultural lands.
44	a. Delta Meadows	a. Acquire and protect existing stands of riparian vegetation.
45	a. Bouldin Island	a. Restore nontidal marsh, seasonal wetland, herbaceous upland, and agricultural habitat areas for wildlife.
46	a. Holland Tract	a. Restore nontidal marsh, seasonal wetland, herbaceous upland, and agricultural habitat areas for wildlife.
47	a. Frank's Tract	a. Restore tidal marsh.
48	a. Sherman Island	a. Restore nontidal marsh and seasonal wetlands.
49	a. Decker Island	a. Restore tidal wetlands.
50	a. Delta	a. Eliminate the need for or screen diversions throughout the Delta.
51	a. Sherman Island	a. Restore shallow water habitat by constructing benches along the water side of levees.
52	a. Big Break	a. Restore tidal wetlands.
53	a. Delta	a. Restore tidal sloughs to increase shallow water habitat and shaded riverine aquatic cover.

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Map No.	Location	Description of Proposed Stage 1 Actions
54	a. South Fork of the Mokelumne River	a. Protect existing channel islands from erosion.
55	a. Venice Tip on Venice Island	a. Restore tidal wetlands.
56	a. McDonald Tip on Venice Island	a. Restore tidal wetlands.
57	a. San Joaquin River downstream of Stockton	a. Restore shallow water habitat using clean dredge material from the Port of Stockton.
58	a. South Delta	a. Reclamation of small islands. b. Restore tidal wetlands.
59	a. Tracey Pumping Plant	a. Pilot scale project to screen a large pumping facility.
Not on Map	a. Sacramento and San Joaquin Rivers	a. Purchase 100,000 acre feet of water for management of stream flow.
Not on Map	a. San Joaquin River	a. Screen all diversions over 250 cfs.

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