

Appendix B Applicable Laws and Examples of Fish Passage Programs at Other Agencies

Applicable Laws and Regulations

California Fish and Game Commission and Department of Fish and Game

The Fish and Game Commission and the Department of Fish and Game make up the fish and wildlife resource management branch of State government. DFG has broad jurisdiction over man-made or natural fish barriers, fishways, dam modifications, fish water bypasses, artificial barriers, and fish entrainment situations.

In the early 1900s, the California Legislature made it unlawful to impede fish passage (Fish and Game Code Sections 5901 and 5931) and made unlawful the accumulation of mining debris or logjams that impede fish passage (Fish and Game Code Section 5948). Later the Legislature required fish screens on diversions (Fish and Game Code Section 5980).

DFG has mandated authority to influence the management of watersheds through inspecting the design of dams for fishery protection, issuing Streambed Alteration Agreements, and commenting on Timber Harvest Plans. DFG is mandated "from time to time" to examine all dams in the state and to order, upon a finding by the Fish and Game Commission, dam owners to construct a fishway if there is not free passage for fish over or around the dam (Fish and Game Code Section 5930-1). Fish and Game Code Section 5937 requires dam owners to allow sufficient water to pass through the dam to keep in good condition any fisheries downstream of the dam.

The Fish and Game Commission receives applications for new dams filed with the Department of Water Resources (DWR) and can order the construction of a fishway, if it is necessary and practical. If not, the commission can order the owner to establish a fish hatchery (Fish and Game Code Sections 5933 and 5938). Of broad effect, Fish and Game Code Sections 1600–1616 charge DFG with regulating any project altering the bed, bank, or channel of a river, stream, or lake if that project may substantially impact fish and wildlife resources.

In issuing a Streambed Alteration Agreement, DFG is required to propose modifications to the project to protect any fish and wildlife resources on the site that may be substantially adversely affected. The Salmon, Steelhead Trout and Anadromous Fisheries Program Act of 1988 required DFG to establish a comprehensive program to increase the natural production of salmon and steelhead trout, as opposed to production via hatcheries. The act established as State policy that this should be accomplished primarily through improvement in stream habitat. In addition, habitats shall not be diminished without offsetting the impacts (Fish and Game Code Sections 6900–6957). DFG reviewed dam removals in the Klamath River Drainage in

the early 1950s. Subsequently, in the early 1950s, 23 dams were removed, opening up at least 210 miles of spawning stream (Handley and Coots 1953).

State and Federal Species Protection Legislation

In 1970 California enacted the Endangered Species Act. Three years later, the federal Endangered Species Act of 1973 became law. Both laws protect animal species by designating them as either threatened or endangered. The laws require State and federal agencies to develop and implement plans to protect and recover populations of the designated species. The US Fish and Wildlife Service (USFWS) and NOAA's National Marine Fisheries Service (NMFS) enforce the federal version of the law, and DFG is responsible for enforcement of the State law.

In October 1986 the federal Electric Consumer Protection Act was enacted. It required the Federal Energy Regulatory Commission (FERC) to consider the value of fish and wildlife in its hydroelectric power program. It also required that recommendations of federal and state fish and wildlife agencies be considered when new power plants are built. In 1992 the federal Central Valley Project Improvement Act (CVPIA) became law. It required that the Central Valley Project consider fish and wildlife protection and restoration as important a priority as irrigation, domestic water uses, and power generation.

Other Programs

California Resources Agency

In November 1999 the California Resources Agency (Resources Agency) convened a group of State, local, and federal agencies, fisheries conservation groups, researchers, restoration contractors, and others to discuss ways to restore and recover anadromous salmonid populations by improving fish passage at road crossings with culverts. This effort was part of the Resources Agency's effort to implement the California Coastal Salmon and Watersheds Program, which included an objective to coordinate fish passage activities. Through coordinating resources and authorities and creating the Fish Passage Forum, a comprehensive program was achieved and formalized in a Memorandum of Understanding that was to be signed by all cooperators by the end of 2002. As trustee for fisheries resources, DFG serves as the principal coordinator for the Fish Passage Forum.

The Fish Passage Forum participants have worked together to develop short-term solutions for several high priority fish passage projects. They have also developed a strategic plan to facilitate and coordinate fish passage inventory and assessment, data sharing and database development needs, fish passage design, fish passage project implementation, training, and public education and outreach.

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Five-counties Program

The five North Coast counties of Humboldt, Mendocino, Trinity, Siskiyou, and Del Norte began a coordinated effort to inventory, prioritize, and resolve fish passage at road crossings, such as bridges, roads, and culverts. The program is overseen by NOAA's NMFS and is going into its fourth year.

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California Department of Fish and Game

DFG carries out many fish passage and fish protection projects through a variety of programs. DFG's fish passage programs are implemented by the regional offices. Two fish screen shops in Region 1, one shop in Region 2, and one shop in Region 4 build, install, and maintain screens for diversions and some fish ladders. Central Valley region offices (Regions 1, 2 and 4) each have an Anadromous Fish Restoration Program coordinator supported by the USFWS AFRP which coordinates with local, federal, and other State agencies on fish passage and fish protection and habitat restoration projects in the region. In addition, DFG provides funds from grant and bond programs for projects that benefit anadromous salmonids, including fish passage projects. Proposals are accepted annually, and advisory committees recommend projects for funding.

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DFG established a statewide fish passage coordinator in the Native Anadromous Fish and Watershed Branch, assisting in the coordination of fish passage programs in other agencies and nongovernmental organizations, as well as acting as lead person coordinating the Fish Passage Forum for statewide activities to restore anadromous fish passage.

DFG's Statewide Fish Screen and Fish Passage Program, part of the Inland Fisheries Division's Salmon, Steelhead Trout and Anadromous Fisheries Restoration and Enhancement Program, has identified and is performing the following activities: (1) inventory of water diversion and fish passage problems; (2) evaluation and prioritization of fish screening and fish passage problems; (3) implementation or coordination fish protection activities; (4) evaluation of existing and proposed fish protective installations; and (5) review of fish screening and fish passage literature.

Fish Passage Criteria. DFG has developed draft guidelines that address fish passage at road crossings and culverts. The guidelines set criteria for water velocities, water depths and high and low passage flows for adult and juvenile salmonids. The draft guidelines are available from DFG upon request. The Fish Passage Improvement Program (FPIP) uses these and NMFS criteria to guide evaluations of road crossings and culverts.

California Coastal Conservancy

The State Coastal Conservancy provides grants and technical assistance to nonprofits, local governments, Resource Conservation Districts, and other organizations for watershed planning, assessment, implementation projects, and monitoring. Many such efforts address fish migration barriers. The conservancy is participating with State and federal agencies and nonprofit organizations in evaluating the removal of Matilija Dam, evaluating alternatives for fish passage at San Clemente Dam on the Carmel River,

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contributing funding for fish ladders on Robles Dam on the Ventura River, and providing funding for fish passage improvement projects in Humboldt, Del Norte, and Mendocino counties. Through an interagency agreement, FPIP is assisting the California Coastal Conservancy with its coastal barrier inventory. The conservancy, with \$750,000 provided by State legislation, is developing a comprehensive assessment of barriers to fish passage in many coastal watersheds. The assessment will compile and standardize existing data into an Internet-accessible GIS database. The assessment program will be augmented by an ongoing conservancy-funded assessment of road and stream crossings in Marin County and proposed assessments of barriers in streams of the Santa Monica Mountains and the Sisquoc watershed. In compiling this assessment, the conservancy will draw from many other barrier assessment efforts statewide. A final report of the program was due in February 2003.

California Department of Transportation

In 2000 Caltrans began implementing a Statewide Passage Barrier Assessment and Correction Program within each of its districts to assess state highway culverts and stream crossings for fish passage impediments. The program will enhance Caltrans' overall rate of completing inventories and facilitate prioritization of funding for sites needing correction.

The statewide assessment of highway culverts started along the Northern California coast (District 1) and is now progressing to the northeast and Central Coast areas of the state (Districts 2, 4, 5). Humboldt State University, as part of an interagency agreement with Caltrans, is performing the field assessment and analysis of state highway routes in Northern California.

Caltrans signed an interagency agreement with DWR' FPIP to assist with inventory and analysis of culverts along the remainder of the state's highways. Caltrans is pursuing restoration partnerships with other agencies and local watershed groups as one method of augmenting funding for implementing corrective actions at road crossings to improve fish passage conditions.

In 2001 Caltrans and the National Park Service received an Environmental Enhancement and Mitigation grant for fish passage remediation on Solstice Creek. The Caltrans program is also working on development of a fish passage engineering manual for Caltrans engineers and biologists to use as a guide for road and culvert construction in streams.

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NOAA's National Marine Fisheries Service (NMFS)

FERC relicensing. NMFS has authority under Sections 18 and 10(j) of the Federal Power Act to protect fish at hydroelectric facilities. Specifically, under Section 10(j) NMFS recommends to a FERC licensee conditions for fish protection, mitigation, and enhancement. Section 18 expressly authorizes the Department of Commerce to issue mandatory fishway prescriptions, stating that FERC must require construction, maintenance, and operations by a licensee at its own expense of such fishways as may be prescribed by the Secretary. Over the next 10 or more years, NMFS proposes to participate in numerous FERC relicensing actions. Forty-two project licenses in California are either undergoing relicensing or will expire between 2000 and 2010. The FERC anticipates that up to 85 percent of project applicants will opt to use the Alternative Licensing Process, a new collaborative approach to relicensing intended to improve efficiency. NMFS anticipates greatly increased demands on staff as a result.

Fish Passage Criteria. NMFS has developed criteria for water velocities, water depths and high and low passage flows for adult and juvenile salmonids. The guidelines address fish passage at road crossings and culverts. The FPIP uses these and DFG criteria to guide evaluations of road crossings and culverts.

US Bureau of Reclamation

CVPIA Anadromous Fish Restoration and Screening Programs. The US Bureau of Reclamation is involved with fish passage improvements in the Central Valley through two CVPIA-funded programs (co-managed by USBR and USFWS)—the Anadromous Fish Screen Program and the AFRP. The AFSP directs the Department of the Interior to help the state avoid losses of juvenile anadromous fish resulting from unscreened or inadequately screened diversions. The program provides a mechanism and a major source of funds to minimize and avoid loss of juvenile anadromous fish at diversions. Since 1996 the AFSP has helped fund more than 25 projects, 17 of which have been completed. Through the program, diversions of totaling almost 4,000 cfs will be screened. Roughly 70 percent of all diversions over 250 cfs were to be screened within the Sacramento and San Joaquin River systems, the Delta, and Suisun Marsh by end of 2002 fiscal year.

US Fish and Wildlife Service

The AFRP implements a program through a variety of actions that has the goal of at least doubling natural production of anadromous fish in California's Central Valley streams. Since 1995 the AFRP has helped implement more than 70 projects to restore natural production of anadromous fish. USBR and USFWS jointly manage and fund projects such as the removal of Saeltzer Dam on Clear Creek (see Chapter 4) and improvements at Red Bluff Diversion Dam on the Sacramento River (see Chapter 3). In addition, USBR responded to a request from Ventura County for assistance with investigations at Matilija Dam on Matilija Creek. USBR was already performing fish passage and flood control projects at two other dams in the

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The NMFS guidelines are
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same watershed, so it was deemed appropriate for the agency to undertake sediment and feasibility studies at Matilija Dam as well (see Chapter 3).

Literature Cited

Handley J, Coots M. 1953. The removal of abandoned dams in the upper Klamath River drainage, California. California Department of Fish and Game. 39(3): p 365-374.