CIRRICULUM VITAE

THOMAS L. TAYLOR

EDUCATION

University of California at Davis: M.S. Aquatic Ecology, 1978
California State University at Fresno: B.A. Biology, 1970

Thesis Topic: Distribution and Habitat Associations of Stream Fishes in the Clear Lake Basin

CERTIFICATIONS

Certified Fisheries Scientist, American Fisheries Society No. 1911
NAUI certified as an Advanced SCUBA diver

PROFESSIONAL HISTORY

Mr. Taylor has over 30 years professional experience in freshwater and estuary fisheries in California. His experience includes over 15 years working for California State agencies and 16 years in the consulting field. His overall experience includes 20 years of work on the Sacramento-San Joaquin Delta addressing the effects of water diversions and water transfers on species in the Delta, Sacramento and San Joaquin Rivers. He has over 30 years of on-the-ground experience on anadromous salmon and steelhead in coastal streams. His expertise includes over 15 years of restoration experience on wetlands, estuaries and rivers.

ENTRIX, Inc., Senior Aquatic Biologist, 1997 to date

Endangered Species Consultation

Mr. Taylor has provided technical expertise to the City and County of San Francisco for steelhead restoration actions in the Alameda Creek watershed. The City operates two reservoirs and is a land manager for substantial holdings within the Alameda Creek watershed. Mr. Taylor has carried out studies to identify conditions that are limiting steelhead in order to prioritize steelhead restoration actions in the watershed. Steelhead habitat in much of the watershed is presently fragmented by passage barriers and existing reservoirs. Much of the remaining accessible habitat has been altered by channelization, water projects, and adjacent land uses. Mr. Taylor worked to develop an approach to restoration with the City and several other entities active in the watershed including the Alameda County Water District, the Alameda County Water Conservation and Flood Control District, East Bay Regional Parks District, Pacific Gas and Electric Company, the US Army Corps of Engineers, State Coastal Conservancy, Regional Water Quality Control Board, and the Alameda Creek Alliance.

Mr. Taylor has conducted numerous formal and informal consultations for steelhead and coho salmon in coastal streams in Humboldt, Sonoma, and Santa Cruz counties and steelhead in Monterey and San Luis Obispo counties; and Spring-run Chinook salmon in the Central Valley. Consultations conducted for projects included housing developments, conference centers, dam repair, maintenance, operations and removal, water supply operations, fish passage improvement, and coastal lagoon management. Consultation has occurred under both Section 7 and Section 10 of the federal Endangered Species Act. Mr. Taylor has worked closely with NOAA Fisheries staff including fisheries biologists, fisheries engineers, and hydrologists to bring the consultations to successful completion.

Experience in the Sacramento-San Joaquin Delta and Central Valley

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Mr. Taylor prepared EAs for the reissuance of Long-Term Water Contracts through the Bureau of Reclamation for the Friant and Cross Valley Canal Units of the Central Valley Project. The EA examined changes to the water use relative to existing contracts, and any changes in water use that may have resulted from re-operation from the sources at Millerton Lake and the Delta. The EA examined the consequences for the San Joaquin River downstream of Friant Dam and affects on the Delta resulting from any change in storage and delivery timing resulting from increased water rates.

Mr. Taylor has provided professional services to the City and County of San Francisco for biological support on their interests in the Bay-Delta Process and as a member of the San Joaquin River Group Authority. Mr. Taylor was an active participant on developing and providing peer review for the Vernalis Adaptive Management Plan. He participated on interagency meetings to address the study design and interacted with agencies to determine the best methods to use hatchery salmon in the study. Mr. Taylor participated in the development of the Newman-Rice model, and assisted in the compilation of some of the data sets used in early version of the model. He participated in numerous workshops at the request of the client, and prepared documents and issues papers on topics ranging from fish hatcheries to fish outmigration studies. Mr. Taylor is also an integral team member of biologists working to develop and implement monitoring of the effectiveness of the 1995 Water Quality Control Plan. He is also participating on this group to respond to issues during the third triennial review of the 1995 WQCP.

Mr. Taylor prepared the analysis of impacts to flows on fisheries in the river and Delta areas for the Long-Term Environmental Water Account EIR. The analysis examined changes in project-related river flows and temperatures in the rivers and changed hydrodynamics in the Delta as environmental water was released from project reservoirs. The analysis used output from CalSim II to predict flow and hydrodynamic changes, and an additional modeling step was used to predict temperature changes in the rivers. The EIR evaluated the effect of implementing the long-term Environmental Water Account (EWA) on fishery resources of the Central Valley. The analysis focused on changes to aquatic resources supporting listed, commercially or recreationally important fish species including all races of Central Valley Chinook salmon, steelhead and delta smelt. Modeled changes to river flows and temperatures were evaluated based on exceeding temperature criteria established from the literature. Rivers analyzed included the Sacramento River from Keswick Dam to the Delta and the tributaries of the Feather and American Rivers. The analysis also included the Stanisluas River on the San Joaquin System. The analysis also evaluated hydrodynamic changes in the Sacramento-San Joaquin Delta. Changes in rivers flows and temperatures and hydrodynamics in the Delta were evaluated relative a future no action scenario. The analysis included an assessment of effects on Essential Fish Habitat and related management objectives of three Fishery Management Plans, and provided a biological assessment of project implementation on take and recovery of protected fish populations pursuant to ESA Section 7.

For a confidential client, Mr. Taylor prepared detailed testimony on the habitat use of native Delta fishes and how population changes are associated with water development in the Sacramento-San Joaquin Delta. His testimony reviewed the change in distribution and abundance of the different life stages of delta smelt and related changes to altered hydraulic conditions in the Delta. Mr. Taylor reviewed output of CalSim models to develop this testimony for clients on both the Sacramento River and San Joaquin River sides of the Delta. This material was prepared in response to a water rights challenge before the State Water Resources Control Board.

Mr. Taylor prepared the fisheries resources section of the pre-Administrative DRAFT EIR/EIS for fish passage improvements at Daguerre Point Dam on the Lower Yuba River. The document evaluated several options to improve both up and downstream passage at Daguerre Point Dam including rebuilding the existing fishy ladders, notching the dam, bypassing the dam and removing the dam. Analysis considered potential impacts on passage of spring and fall run Chinook salmon and steelhead and considered the issue of providing passage to predator species such as striped bass from dam removal. The analysis also considered impacts to available spawning upstream of the existing dam.

Mr. Taylor managed a project to assess the amount of potential spawning habitat in the lower San Joaquin River as a subconsultant to Jones and Stokes for work on the Friant Water Users Authority/Natural Resourced Defense Council studies. The survey examined the lower San Joaquin River from Friant Dam to Highway 99 mapping all potential

salmon spawning habitat under existing flows. Spawning sites were identified using criteria developed from scientific literature (depth, velocity and substrate). Potential spawning areas were located by floating the river and mapping the sites using GPS/GIS methods. Each potential spawning area was delineated on the ground and an estiamte was made of the available square feet of spawning habitat at each site. Potrential spawning areas were also assessed for limitations to potential spawning (embeddedness, insufficient flow, cementation). The field data was complied into a report summarizing the potential spawning habitat available in the Lower San Joaquin River by reach as one piece of information for the overall restoration of the SJR and presented at a workshop on the condition of the San Joaquin River.

River Restoration

Mr. Taylor is the Project Manager responsible for the environmental contract and all subconsultants for this State of California, Real Estate Services Division and California Tahoe Conservancy project. The Sunset Stables Project is a former horse-riding ranch that has been acquired by the California Tahoe Conservancy (CTC) and is in need of restoration and a long-term management plan. The site includes over 700 acres of wetland, meadow, and upland habitat along two and half miles of the Upper Truckee River near the South Lake Tahoe Airport. The project is using an interdisciplinary team of professionals and a technical advisory group to identify actions to improve forest resources, meadows, wildlife, and aquatic habitat in the project area.

Dam Removal

Mr. Taylor prepared the Aquatic Resources Section of the DRAFT EIR/EIS for the Seismic Retrofit for San Clemente Dam on the Carmel River. The EIREIS evaluated the proposed project and three alternatives that included dam notching with partial sediment removal, dam removal with complete sediment removal and dam removal with river rerouting and partial sediment removal. Relative effects of the various options were evaluated in regard to steelhead and California red-legged frog use of the river and project area and considerations in regard to sedimentation and effects on the riparian system in the Carmel River in the vicinity of San Clemente Dam.

Mr. Taylor directed a team consisting of hydrologists, engineers, geomorphologists, and botanists to conduct a feasibility study for removal of two dams in Niles Canyon on Alameda Creek. The team assessed sediment accumulation behind both dams, examining both the volume of sediment and grain size behind each dam. Access routes for dam and sediment removal were evaluated for potential impacts to riparian vegetation and channel morphology of Alameda Creek.

Trihey & Associates, Inc., Senior Aquatic Biologist, 1992 to 1997

Mr. Taylor provided expert witness testimony regarding the cost of monitoring fish populations, aquatic habitat conditions and riparian vegetation during the interim restoration of Rush and Lee Vining Creeks during hearings before the El Dorado County Superior Court.

Mr. Taylor developed expert witness testimony on the abundance and growth of juvenile steelhead and coho salmon in response to stream flow conditions, turbidity and temperature in a coastal stream. This information was developed in anticipation of the client's filing a petition for reconsideration before the State Water Resources Control Board.

Mr. Taylor was the fishery biologist in charge of the interim restoration for Rush and Lee Vining Creeks, Mono County, California. Restoration planning included an evaluation of historical conditions and comparison to pre-restoration conditions of the stream flow regime, riparian vegetation and channel morphology. An assessment was made of how similar stream reaches could be restored to its historic target condition. Recommendations for

restoration actions throughout the entire stream were based upon this assessment. Restoration success was documented through an integrated program of monitoring fish populations, aquatic habitat conditions and monitoring the condition of the stream channel and riparian regrowth.

Mr. Taylor supervised a multi-year habitat-based monitoring program for coho salmon and steelhead in Lagunitas Creek. The monitoring was designed to evaluate how summer stream flow conditions and aquatic habitat influenced populations of the juvenile coho salmon (federally threatened Central California Coast Coho ESU) and steelhead (federally threatened Central California Coastal ESU). The sampling program was designed to provide data that was compatible with a long-term data set spanning over 20 years to provide for evaluation of time trends in population changes. Mr. Taylor also assisted in the development of a Riparian Management Plan for Lagunitas Creek that addressed recruitment and retention of woody debris to improve the variety and quality of aquatic habitat.

Mr. Taylor provided an aquatic habitat and fishery assessment of the Navarro River watershed as part of a watershed restoration planning process. Information on the historical distribution of juvenile coho salmon and steelhead was compiled from the literature and other sources and compared with existing known information on distribution. The change in the distribution of the fish was integrated with information about aquatic habitat conditions, stream temperatures, stream flows, sedimentation, riparian resources and related factors to erosion events and land uses in the watershed. The project involved cooperatively working with public and private land owners such as logging interests, the viticulture and grazing industries and many small private land owners.

California Department of Parks and Recreation, Aquatic Biologist, 1982 to 1992

Mr. Taylor developed and implemented a mitigation plan to enhance San Simeon lagoon by increasing the amount of adjacent wetland vegetation for the California Department of Parks and Recreation. This project included dredging an arm of San Simeon Creek lagoon, removal of fill and spoil materials, recontouring the banks, and revegetation of the disturbed area. Habitat improvements for two sensitive species, the western pond turtle and tidewater goby were incorporated into the project.

Mr. Taylor supervised the preparation of a wetland mitigation plan for Gaviota State Park Coastal Wetland that included assessment of historic change, wetland delineation, biological surveys, evaluation of impacts to several sensitive aquatic or wetland dependent species, integration with a nearby campground rehabilitation project, and informal consultation with permitting agencies for several sensitive species.

Mr. Taylor managed a multi-year restoration project at Pescadero Marsh that included the assessment of historic conditions, wetland topography, hydrology, water quality, biological resources, and the development of an enhancement plan. The plan integrated the need to provide for one federally listed endangered species and five species of special concern, as well as, the concerns of the local farming community regarding land management, flooding issues, and channel maintenance problems.

Mr. Taylor planned and Implemented river restoration projects on reaches of the San Lorenzo River, Santa Cruz County and Big Sur River in Monterey County.

Mr. Taylor developed and implemented a monitoring plan to assess the fish populations in Bull Creek, a tributary to the South Fork Eel River within Humboldt Redwoods State Park. The tributary had been greatly changed through mass wasting in the upper logged watershed. The channels had become wide and shallow and were prone to large shifts in alignment as well as shifts in habitat from year to year. The monitoring plan was implemented to determine the abundance of steelhead with summer habitat conditions to evaluate past restoration success and as input to future restoration actions.

Mr. Taylor developed the Interim Fish Passage Improvements in Little River. Two bridge aprons and ten in-stream concrete or brick fords within Van Damme State Park impeded passage for spawning runs of coho salmon and steelhead. Passage was improved at most sites through the use of gravel filled burlap bags or wooden flashboards to

increase the depth of water and decrease flow velocity across the aprons to facilitate access by during moderate to low flow periods. The interim approach allowed fish to gain access to spawning sites in Little River while a comprehensive plan was developed to permanently modify the stream crossings.

California Department of Fish and Game, Fishery Biologist, 1978 to 1982

Mr. Taylor conducted field work in the Delta for 3 years participating on tagging studies of striped bass, sturgeon and catfish and a boat electrofishing study of resident delta species. Supervised field crews, analyzed data and prepared sections of reports.

Mr. Taylor worked on the California Native Fishes Project and was responsible for evaluating habitat condition and the status of native California species in Southern California. He conducted studies, prepared reports and prepared recovery plans for State Listed species.

PROFESSIONAL TRAINING

2008, CEQA Update
2002, Engineering Innovative Fish Passage, Dam Removal and Nature-like Fishways
2002, Endangered Species Update, CLE International
1994 "California Wetlands", CLE International
1991 Stream Classification and Restoration, Dave Rosgen, short course, TRPA
1989 Natural Resource Negotiations, AFS
1989 Time Management, Franklin Institute, AFS
1988 CEQA Update, State of California
1988 Aerial Photography for Resource Managers, UCSB, AFS
1988 Environmental Ethics and Resource Management, Phil Pister, AFS
1987 Wetlands Delineation and Assessment, Terry Huffman, AFS
1986 Hydrology for Biologists, Dr. J. Orsborne, AFS
1986 Project Management, State of California

MEMBERSHIPS

American Fisheries Society, member since 1974
- AFS Involvement
  - President of Cal-Neva Chapter, 1992-92
  - Program Chair for Cal-Neva Chapter Annual Meeting, 1986
  - Treasurer, Cal-Neva Chapter, 1982-83

Association Institute of Biological Sciences, member since 2002

PUBLICATIONS

Publications available upon request.