

P. Travis James, P.E.

Senior Project Engineer

CONTACT INFORMATION

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EDUCATION

B.S. 2007
Environmental Resources
Engineering, Humboldt State
University, California

PROFESSIONAL ENGINEERING REGISTRATION

California Civil No. C76663

AREAS OF PRACTICE

- Aquatic Organism Passage
- River Engineering
- Fish Screening
- Dam Removal
- Fishways
- Stream Restoration
- Estuarine Restoration
- Geomorphic Assessment

AFFILIATIONS

- Former President
Northcoast Chapter
Engineers Without Borders
- Member Salmonid
Restoration Federation

EXPERIENCE

Mr. Travis James is a licensed Civil Engineer with extensive experience in fisheries and fluvial geomorphology, including fish passage engineering, fish screen systems, channel hydraulics, and watershed hydrology. Riverine projects often include working with existing infrastructure such as diversions, dams, pipe networks, bridges, and roads, while coordinating with landowners and other stakeholders. Travis enjoys engineering in this highly dynamic field. Since his initial work in water resources and fish passage engineering in 2004, Travis has excelled at using both deterministic and probabilistic approaches in design using multiple tools, including industry standard and customized numerical models, civil design software, and GIS software. Beyond design, Travis is experienced at developing the contract documents necessary for construction and working successfully with contractors.

Merced River Fish Passage Feasibility Study, Snelling, CA

Lead author of this study developing feasible options to provide fish passage at four dams on the Merced River. The dam's heights ranged from 15 to 480 feet. In addition to developing feasible options, the hydrology and hydraulics of the watershed, reservoirs, and diversions were analyzed. The study resulted in the development of a suite of options that could be selected, a la carte, to create many different alternatives, each with a relative construction cost. To better describe the different options, GIS maps and 3-D models were developed to demonstrate near real-world conditions of a particular option. Overall, this project provides the tools necessary to develop preferred alternatives by the stakeholders.

Client: NOAA National Marine Fisheries Service

Completion Date: September 2013

Lower Alameda Creek Fish Passage Improvement Project, Fremont, CA

Lead project engineer for this multi-million dollar fish passage project within the Alameda Creek Flood Control Channel. The project includes design of two fishways at two rubber dam locations and one concrete drop structure, and a 425 cfs screened water intake. Design efforts included extensive agency coordination to establish design criteria and develop innovative means of providing downstream fish passage protection. The first rubber dam/drop structure fishway includes a 200-foot roughened channel, a 370-foot long vertical slot fish ladder, an out-migrant juvenile spillway, a 30 cfs screened auxiliary water system for fish attraction, and a sediment sluicing system. The work also included electrical and instrumentation design, including operational logic, necessary to operate 11 fishway gates to for numerous operational scenarios. The second rubber dam fishway is similar to the first, but 200 feet long. The 425 cfs intake structure includes six cylindrical screens and piping necessary to transport water to the District's groundwater recharge ponds.

Client: Alameda County Water District

Completion Date: Ongoing

Auburn Ravine NID Gage Station Fish Passage Project, Lincoln, CA

Lead project engineer for this fish passage project on Auburn Ravine at the Nevada Irrigation District (NID) Gauging Weir. The project included a 180-foot chute-and-pool roughened channel with cutoff walls. The design effort included hydraulic modeling, designing rock gradation and layout, ingress and egress to this public area, revegetation, and the development of the plans, specifications, and cost estimate. Cutoff walls associated with each chute were included in the design to keep low-flows on the surface and provide additional stability. At the client's request, two options for installing cutoff walls were incorporated into the design: concrete and sheetpile. This gave the contractor the flexibility to select the most cost effective approach. Located at the NID Gage, the project needed to protect NID's ability to measure flow at the site.

Client: Placer County

Construction: 2011

Salt River Ecosystem Restoration Project, Ferndale, CA

Lead project engineer for Phase 2 of this ongoing project to restore the lower 4.5 mile reach of the Salt River and 0.5 mile reach of the Francis Creek tributary. The project includes removing salmonid migration barriers, constructing engineered large wood structures, improving geomorphic function, and increasing riparian buffers, tidal exchange, and habitat diversity for avian and aquatic species. Responsibilities included working with the design team and managing the development of the construction plans, specifications, and opinion of probable cost. The first 1.25 miles of Salt River were constructed in summer 2014. As Lead Construction Inspector, Travis' responsibilities included assisting the contractor to meet design objectives, adhere to permit conditions, and work with landowners. In total, approximately 85,000 cubic yards were excavated from the site to create a dynamic, multi-channel system with 43 in-channel wood structures. The remainder of the channel will be constructed over the next two summers.

Client: Humboldt County Resource Conservation District

Completion Date: Ongoing

Alum Rock Fish Passage Project, San Jose, CA

Travis was responsible for the preparation of the construction contract documents including plans, specifications, and cost estimates for this roughened channel fish passage project. Work involved hydraulic modeling, geomorphic assessment, and design of a 300-foot chutes-and-pools roughened channel, bank stabilization, floodplain expansion, a bridge wing wall, a rock mortared retaining wall, and an irrigation system to support revegetation. The project is located in California's oldest municipal park and so design needed to protect the park's historic structures. The project was constructed in summer 2012 and Travis provided observation during the construction. This project has received two awards since being constructed from the San Francisco Chapter of ASCE and from ASCE Region 9 for Small Project and Environmental Project of the Year, respectively.

Client: Santa Clara Valley Transportation Agency and City of San Jose

Construction: 2012