



# FISHBIO

*Fisheries Research, Monitoring, and Conservation*

FISHBIO is a unique fisheries and environmental consulting company dedicated to advancing the research, monitoring, and conservation of fishes around the world. Founded in Oakdale, California, in 2006, FISHBIO is committed to solving challenging fisheries and natural resource management problems and providing cost-effective, practical solutions. We employ a multidisciplinary staff of experienced research scientists, engineers, and technicians, some with decades of fisheries experience in California's Central Valley. FISHBIO specializes in maintaining and providing advanced tools and solutions locally that other firms cannot match. We employ a diversity of technologies to conduct fish and wildlife surveys, hydrological assessments, and habitat mapping and restoration, and can fabricate specialized fish monitoring equipment in-house. FISHBIO's offices are located in Chico, Oakdale, and Santa Cruz, California, and Vientiane, Laos, reflecting our commitment to advancing fisheries research locally and globally.

[www.FISHBIO.com](http://www.FISHBIO.com)



# SPECIALIZED EQUIPMENT *FABRICATION FOR RESEARCH AND MONITORING NEEDS*

We pride ourselves in our unique ability to design and build customized equipment, tailored to suit individual project needs. Our skilled and creative technicians perform quality construction and craftsmanship, and manage our in-house machine shop and fleet of small research boats.

- Fish Traps and Fish Guidance Devices
- Resistance Board Weirs
- Largest-of-its-Kind PIT Tag Antenna
- In-stream PIT Tag Detection Systems
- Fish Ladders and Screens
- Hydroacoustic Monitoring Arrays
- DIDSON/ARIS Mounts
- Wireless Data Retrieval Hardware
- Underwater Video Monitoring Systems
- Remote Solar and Natural Gas Power Systems
- Laboratory and Field Testing Services

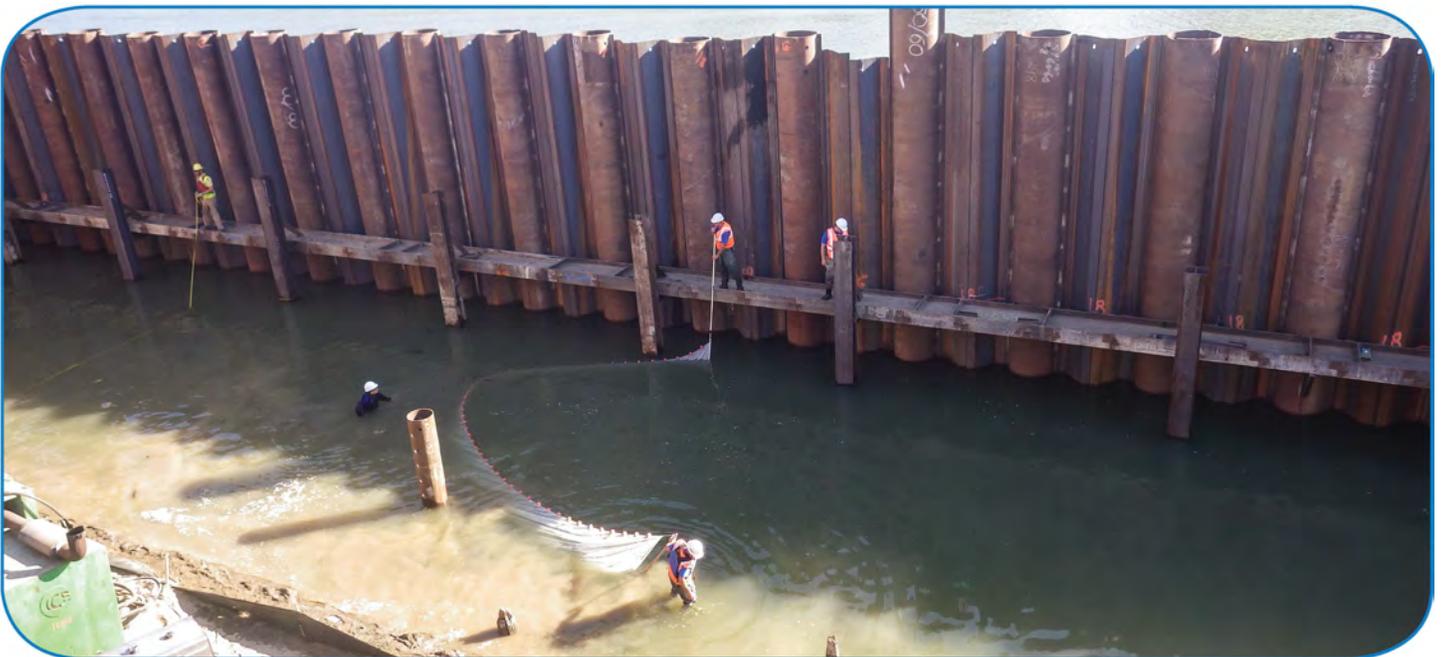


# CONSTRUCTION SUPPORT

Nearly all in-water construction projects require that fish are removed and/or excluded from the immediate work area. We can provide experienced staff and required equipment for a variety of fish capture methods such as electrofishing, seine netting, or hand netting, depending on localized conditions, constraints, and requirements. We always follow strict fish handling- and transport protocols that meet and exceed regulatory requirements to capture and release recovered fish in good condition.



- Pre-construction Surveys
- Preparation of Fish Rescue Plans
- Fish Removal and Salvage
- Pump Screen Fabrication
- Off- and on-site Fabrication of Fish Exclusion Devices
- Fish Transport and Relocation
- Construction Monitoring



# FISH POPULATION DYNAMICS



We study the key role fish populations play in supporting fisheries and ecosystem processes. Our work includes fish life history and limiting factor analyses, predator-prey interactions, aquatic food web studies, and monitoring fisheries harvest and management trends.

- Population Status Assessments
- Life History and Population Modeling
- Freshwater and Marine Stock Management
- Commercial and Sport Harvest Management
- Life History Evaluations
- Predator-Prey and Food Web Dynamics
- Hatchery Operations and Impacts
- Limiting Factor Analyses



## FISH POPULATION MONITORING



We are highly proficient in the latest tagging and tracking technology to monitor how and where fish move. We coordinate large- and small-scale projects with PIT tag, acoustic, and radio telemetry. We can evaluate fish passage and entrainment as well as fish screen performance.

- Fish Passage Assessments
- Acoustic and Radio Telemetry
- PIT Tag Studies
- Entrainment Evaluations
- Underwater Video and SONAR Surveys
- Fish Screen Evaluations

# FISH HABITAT

Our aquatic ecologists understand good habitat is key to fish population success. We conduct fish habitat use and distribution studies, wetland and watershed analyses, benthic macroinvertebrate surveys, GIS mapping, and hydrologic and sediment transport modeling.

- Fish Habitat Assessments
- Aquatic Ecology
- Habitat Modeling
- Watershed Analyses
- Wetland Delineations
- Benthic Macroinvertebrate Surveys
- GIS Mapping and Spatial Information Technology
- Channel Hydrology and Hydraulic Modeling
- Sediment Transport Modeling
- Fish Habitat Use and Distribution



# HABITAT RESTORATION



We are competent in every stage of fish habitat restoration, from planning and design to construction and monitoring. Our activities include enhancing riparian habitats for fish spawning and rearing, removing non-native species, and evaluating restoration success.

- Restoration Planning, Design, and Construction
- Riparian Habitat Enhancement for Fish Spawning and Rearing
- Watershed and Ecosystem Restoration
- Non-Native Species Control

# THREATENED AND ENDANGERED SPECIES



We are proficient in the permitting and requirements involved in monitoring rare, endangered, and special status species. We conduct population viability analyses, create habitat conservation plans, and assess threats from environmental sources, human activities, and climate change.

- Surveys of Rare, Threatened, Endangered, and Special Status Species
- Endangered Species Permits and Habitat Conservation Plans
- NEPA/CEQA/ESA Compliance Reporting
- Population Viability Analyses
- Climate and Range Shift Analysis

## PERMITTING AND COMPLIANCE

Our detail-oriented and knowledgeable staff are experienced working within a regulatory environment. Our expertise includes federal and state permitting, relicensing, compliance monitoring, environmental impact reporting, habitat conservation plans, and ecological risk assessments.

- Experienced with FERC, EIR, EIS, HCP, ESA, NEPA, CEQA
- Ecological Risk Assessments
- Compliance Monitoring
- Streambed Alteration Permits

