

CONTACT INFORMATION

Phone: (207) 775-4495

Email: Jack.Wu@hdrinc.com

EDUCATION

B.S., Environmental Sciences/Studies (Natural Resources with Marine Concentration), University of Maine Orono, 1996

PROFESSIONAL REGISTRATIONS AND AFFILIATIONS

American Fisheries Society (2009-Present)

SPECIALIZED TRAINING AND CERTIFICATIONS

BioSonics Hydroacoustic Assessment Workshop Training, 2012

MAWS Winter Twig Identification Workshop, 2012

AHA Heartsaver First Aid CPR AED Certification, 2012

OSHA 10-hr Construction Safety Training, 2011

USACE Wetland Delineator Methods Certification, 2010

NMFS Boat-based Electrofishing Principles and Practices Certification, 2010

UMaine Sound Metrics DIDSON Training/Workshop, 2009

USFWS Principles & Techniques of Electrofishing Certification, 2009

OSHA 8-hr HAZWOPER Refresher, 2000-2003

Certificate of Proficiency in Microsoft Access for Windows 97, 2000

OSHA 40-hr HAZWOPER Training, 1999

PADI Open Water SCUBA Certification, 1995

INDUSTRY TENURE

16 Years



www.hdrinc.com

Experience Overview

Mr. Wu has 16 years of fisheries biology experience, including extensive knowledge of and participation in American eel studies. He has developed eel survey sampling plans, conducted and coordinated field surveys, and developed field survey reports for submittal to state and federal agencies.

Project Experience

Medway Hydroelectric Project, American Eel Evaluation, Maine, Black Bear Hydro. Conducted an American eel study for the Medway Hydroelectric Project on the Penobscot River. Survey included the use of boat and backpack electroshocking, eel pot, and fyke net deployment. Gear and sampling locations were targeted to evaluate the presence of American eels upstream of the project and the probability of American eels migrating downstream (fall silver eels) through the facility. Data collected were used to determine whether sufficient numbers of silver migrating eels could be collected for use in a downstream effectiveness study at the facility in the near future.

Presumpscot River Projects, American Eel Passage Studies, Maine, S.D. Warren Company. Supported eel passage studies associated with Federal Energy Regulatory Commission (FERC) license requirements involving development of plans to implement, test, and monitor upstream eel passage facilities at the Dundee, Gambo, Little Falls, Mallison Falls, and Saccarappa hydroelectric dams. Observed upstream passage behavior of elvers, including daytime observations of collection buckets and passage entrances and nighttime monitoring of eels attracted to or attempting to climb various passage structures. Test releases of elvers at interim passages were also performed to document the efficiency of eels attempting to pass the fishway. Assessed effectiveness of passage facilities, and developed monitoring and passage plans. Monitoring included use of both interim passages and siting structures.

Hogansburg Hydroelectric Project, American Eel Survey, New York, Brookfield Renewable Energy Group. Assistant scientist for the Hogansburg hydroelectric project relicensing on the St. Regis River, New York. Duties included seasonal fishery survey (backpack and boat electroshocking, gillnetting, and Missouri trawl), Delphi study, impoundment fluctuation survey, dam decommission report, water quality data collection, and photo documentation. The Missouri trawl captured the New York State listed (special concern) eastern sand darter, gillnetting captured the State listed (threatened) mooneye, and boat electroshocking captured Atlantic salmon and American eel. The collected data will be used either for the FERC relicensing or dam decommissioning process.

York Haven Hydroelectric Project, American Eel Passage Assessment, Pennsylvania, York Haven Power Company. Supported an American eel passage assessment in support of FERC relicensing. Objectives were to estimate the likely preferred upstream passage route and passage methods at the project; help develop conceptual designs for the most appropriate upstream eel passage facility or facilities; and assist with preparing preliminary layouts and designs for American eel that consider the potential for drop-back of passed eels through the project turbines.

JACK WU

Fisheries Biologist

Key Species: American Eel

Description of Expertise and Experience with the Relevant Species/Grouping of Species

Mr. Wu has extensive knowledge of American eel and other finfish species. He has participated in desktop and field studies involving study design, data collection and analysis, field quality assurance/quality control, and report writing. He is knowledgeable and experienced with a variety of scientific sampling equipment including radio telemetry (Lotek), DIDSON training, backpack and boat electrofishers, snorkeling, SCUBA, beach seines, fyke nets, trap nets, otter trawls, gill nets, minnow traps, Breder traps, throw traps, eel pots, benthic sleds, bongo nets, and ichthyoplankton trawls.

Description of Expertise and Experience in Development and Implementation of Mitigation, Effects Monitoring, and Effectiveness Monitoring Plans

Mr. Wu has developed plans to implement, test, and monitor upstream eel passage facilities. His expertise include assisting in the development of juvenile American eel upstream passage and adult American eel downstream passage study plans for hydroelectric facilities on the Penobscot River, Maine. Additionally, he has experience in observing the development and construction of upstream eel ladder and fish lift/trap at hydroelectric facilities, as well as, having direct hands on experience in conducting various eel monitoring surveys or implementing effectiveness monitoring plans.

Description of Expertise and Experience in the Hydroelectric Sector

Mr. Wu has supported numerous scientific studies related to conventional and pumped storage hydroelectric facilities as well as tidal and wave energy projects. This experience includes state and federal environmental permitting support, hydrologic investigations including Delphi and instream flow incremental methodology studies, National Environmental Policy Act environmental assessments, environmental impact statements, and biological assessments; Clean Water Act Sections 401, 404, and 10 permits; essential fish habitat; coastal zone management; and National Pollutant Discharge Elimination System permits. He has supported numerous studies involving planning and assessments, analysis of field data, fieldwork, and working extensively with government and state agencies.