

# Mike Sears, MS – Business Development Manager/Senior Fisheries Biologist

Mike has over 15 years of broad environmental science experience in the public and private sectors, with an emphasis in fisheries sciences. Mr. Sears has supported and led fisheries studies on a variety of projects and fish species, including Atlantic salmon, American shad, river herring, American eel, and sturgeon species. He is experienced with evaluating project effects on fishery resources, contributing to conceptual fish passage designs, assessing fish passage projects, and conducting fish passage effectiveness and survival studies. Mr. Sears has prepared and reviewed environmental resource permit applications and supported the Federal Energy Regulatory Commission (FERC) relicensing of several hydropower facilities.



## Selected Project Experience

### **Mattaceunk Hydroelectric Project, Brookfield Renewable Partners, Penobscot River, ME**

Mike drafted the fish and aquatic resources section of the Pre-Application Document (PAD), assisted in the development of fisheries and fish passage study plans, and was involved with fisheries issues and studies throughout the relicensing process. Mike was the technical lead on two years of salmon smolt survival studies (2014 and 2015) using radio telemetry, and played a key role in several other studies associated with the ongoing relicensing of this Projects, including, a smallmouth bass spawning survey conducted with SCUBA, an upstream eel passage study, a minimum flow study, a fish entrainment study, fish passage feasibility assessments, and preparation of the Atlantic salmon Biological Assessment and Species Protection Plan.

### **Medway Hydroelectric Project, Brookfield Renewable, Penobscot River, ME**

Mike led a survey evaluating the abundance of adult migrating (silver phased) American eels present upstream of the Medway Project in 2012 and 2013. This study was conducted to assess if enough silver eels are present upstream to conduct a downstream effectiveness telemetry study required by FERC. Sampling methods included boat electrofishing, trap netting, and eel pots over a large area in the West Branch Penobscot River.

### **York Haven Hydroelectric Project, Olympus Power Company, LLC, Susquehanna River, Pennsylvania**

Mike served as an aquatic scientist conducting aquatic resource surveys conducted in support of project relicensing under FERC. Responsibilities included American shad radio telemetry and fish passage studies, fish electroshocking surveys, identification of collected fish samples, habitat surveying, data process and analysis, and preparation of the fisheries sections of the FERC required study reports, as well as the draft and final license applications.

*Years of Experience: 15 years*

#### **Education**

M.S., Environmental Science and Policy, University of South Florida

B.S., Fisheries and Wildlife Biology, University of Vermont

**Tappan Zee Bridge Replacement Project, New York State Highway Authority, New York City**

Mike assisted in developing a study plan that uses acoustic telemetry to monitor the migration and habitat use by Atlantic and shortnose sturgeon during construction. The monitoring array consists of Lotek and VEMCO acoustic systems that span across the Hudson River with overlapping detection zones for obtaining 2-D positional data for behavior and movement analyses. Mr. Sears currently leads efforts to support the acoustic hydrophone deployments, data collection and interpretation for this study, which includes the bi-monthly and quarterly reporting, as required by the NYDEC and NMFS through their Biological Opinion and an Incidental Take Statements (ITS) issued under the ESA.

**Atlantic Salmon Passage and Survival Studies, Worumbo and Pejepscot Hydroelectric Projects, Miller Hydro, Inc. and Brookfield Renewable, Androscoggin River, Maine**

Mike was the technical lead and project manager for these survival studies, which resulted from requirements prescribed under the Endangered Species Act to assess whether these hydroelectric facilities safely pass salmon smolts downstream. Radio tags were surgically implanted into salmon smolts, which were monitored passing through the two hydroelectric projects in 2013. Data was analyzed and reports were prepared for client and agency review. Mike conducted a second and third year of field studies in 2014 and 2015, and led the data analysis and report preparation.

**Cobscook Bay Tidal Energy Project, ORPC, Eastport, ME**

ORPC obtain a FERC Pilot License for the Cobscook Bay Tidal Energy Project located near Eastport, Maine. Mike served as assistant biologist preparing the draft Biological Assessment for Atlantic salmon and sturgeon and Essential Fish Habitat reports, as well as aquatic resource sections of the final pilot license application for the proposed project. Duties also included conducting a site evaluation and wetland delineation for the land-based portion of the proposed transmission line.