**Project Title:** Atlantic Salmon Freshwater Assessments and Research

**Project Location:** Jonesboro office of the Maine Department of Marine Resources Division of Sea-run Fisheries and Habitat

**Project Leader: Ernie Atkinson (**ernie.atkinson@maine.gov)

**Project Time Frame:** May 2021 – August 2021

**Total Hours:** up to 520

**Semester Hour Allocation:** 40 hours per week as available

Gulf of Maine Atlantic salmon are the last wild populations in the USA and are listed as endangered under the Endangered Species Act. Continued management based research and assessments are necessary to document population responses to management action and habitat improvements and restoration.

ME-DMR Division of Sea-run Fisheries and Habitats have been in a cooperative agreement with NOAA-Fisheries for several years with the purpose of preserving Atlantic salmon within the Gulf of Maine. Under this agreement, ME-DMR staff conducts smolt trapping operations, operate adult salmon traps, perform juvenile assessments using electrofishing, and conduct spawner surveys. ME-DMR staff also works with other diadromous species such as river herring and rainbow smelt collecting data and counts. They work with other partners on habitat connectivity and restoration projects. This intern would be exposed to a variety of fisheries techniques and management over the course of their term. A clean driving record is a requirement as there may be a need to use a State of Maine vehicle for project needs. All work is contingent on being able to conduct it in a COVID-safe environment and appropriate modifications to the scope of work will be made as appropriate.

The intern would perform the following project involving water temperature monitoring: MDMR and partners collect water temperature data from across the Downeast Region to better understand ambient conditions for juvenile and adult Atlantic Salmon. For this project the intern would be expected to:

* Work with DMR scientist Ernie Atkinson to develop a spatially balanced deployment plan and then deploy temperature loggers across the Downeast Region.
* Collect data from previously deployed loggers.
* Perform summary analyses on existing data and create maps to help understand where thermal refuge exists.
* Produce a summary document describing methods and results

The intern will also be involved in the following ongoing activities:

* Operation of rotary screw traps for the purpose of enumerating out-migrating Atlantic salmon smolts (juvenile salmon) in the Narraguagus and East Machias Rivers
* Operation of an adult trapping site on the Narraguagus River in Cherryfield, ME
* Assist in habitat connectivity and habitat restoration projects such as coarse wood additions and other habitat manipulations

Other Opportunities Include:

* Getting to know and work with scientists from state and federal agencies
* Exposure to fisheries science and enumeration techniques like smolt population estimate models