**Project Title:** Marine-derived nutrient subsidies in rivers of Downeast Maine

**Project Location:** Virtual

**Project Leaders: Emily Zimmermann** (emily.zimmermann@maine.gov) **and Rory Saunders** (rory.saunders@noaa.gov)

**Project Time Frame:** April 2021 – June 2021

**Total Hours:** up to 200

**Semester Hour Allocation:** roughly 10 hours per week as available

Sea-run fish provide a wide range of ecological services of value to their native ecosystems. Among those services is the deposition of marine-derived nutrients in freshwater environments where productivity is nutrient limited. The possibility that sea-run fish fuel the productivity of inland waters is increasingly accepted for freshwater ecosystems on the West Coast. In fact, agency-led programs augmenting the ecological services formerly conveyed by sea-run fish are now being implemented as restoration activities (marine-derived nutrient augmentation etc.). These concepts are not nearly as well understood in East Coast systems. The successful applicant will help us review the current literature with a view to determining if the loss of marine-derived nutrient deposition in freshwater is a factor limiting salmon recovery efforts and if so whether management intervention is feasible and desirable.

The intern would be involved in:

* Reviewing the state of the science related to marine-derived nutrient deposition in freshwater
* Drafting a review of the literature related to marine-derived nutrient deposition and the implications for Atlantic salmon recovery efforts in Maine
* Present findings to stakeholders and agency scientists

Opportunities Include:

* Getting to know and work with scientists from state and federal agencies
* Exposure to fisheries science as a potential career
* Practical experience in fisheries science