CONSERVATION COMMITTEE 2019 ANNUAL REPORT

During 2019 the Chapter's Conservation Committee was engaged in several continuing and new projects aimed at improving cold water fisheries habitat as well as assisting other organizations' efforts to preserve and protect our natural water resources both within and outside of the Chapter's geographic reach. The organizations we have worked with this year include *Essex County Greenbelt, Ipswich River Watershed Association*, *MASS Division of Marine Fisheries*, *MASS Fish & Wildlife, Parker River Clean Waters Association*, *P-I-E Rivers Association*, *Sea Run Brook Trout Coalition The Governor's Academy*, , the Towns of *Boxford*, *Topsfield, Rowley, Ipswich* and *Manchester-by-the-Sea, Trout Unlimited (National)* and *Willowdale Trails Association.* This Report summarizes those efforts.

THE HOOD POND AND HOWLETT SUB-BASIN PROJECT, TOPSFIELD & IPSWICH, MA

Members of the Chapter and IRWA staff at Pye Brook stream channel clearing project, October 19,2019

What started out as an effort to replace a failing culvert at Pond Street in Topsfield, MA has evolved into an effort to assess the entire Howlett Brook Sub-Basin including restoration of alewives to Hood Pond and designs to improve connectivity along the Sub-Basin from the Ipswich River to Four Mile Pond in Boxford. Eighteen (18) impediments to fish passage will be evaluated under a *National Fish and Wildlife Foundation* grant secured by IRWA. Howlett Brook, designated by the state as a Cold Water Resource, will also be closely examined as trout habitat. This long term project is expected to result in the replacement of the Pond Street culvert complex with a design that meets the state's River and Stream Crossing Standards, with additional efforts to remove other barriers within the Sub-Basin.

MILL RIVER HABITAT STUDY, ROWLEY, MA

In November 2019 the Chapter released its three-year study of the Mill River habitat at and above the Jewel Mill in Rowley, MA. The study includes a compilation of water quality data at five different collection sites along the River and its tributaries. Conclusions from the study suggest that the portion of this watershed that the Chapter examined offers as much a six miles of habitat suitable for herring spawning and juvenile growth. Other locations were identified which meet the requirements of cold water (trout) habitat. Senior students from the Governor's Academy participated in each of the three years of this effort, collecting and evaluating macroinvertebrate samples and assisting in water quality measurements, including ammonium, pH, temperature, nitrates, salinity, conductivity, chlorides, dissolved oxygen, dissolved oxygen saturation and water velocity.

The study has been submitted to the MASS Division of Marine Fisheries with the objective of enabling the Chapter to move ahead with plans for installing a fish ladder over the Jewel Mill Dam. This project would allow fish migration into a quality habitat without disturbing the ongoing efforts of the owners of the Jewel Mill to reconstruct the Mill as an historic site whose operations date back to 1643.

MIDDLETON ROAD CULVERT REPLACEMENT, BOXFORD, MA

This Project, which was completed in September of 2018, was the culmination of a series of three related projects in Boxford, MA. To commemorate this accomplishment and to inform the public about the significance of these projects, the Chapter created and installed an informational plaque and placed it on the Lockwood Lane culvert project site. As a final step, the Town's

Greg Murrer and Chett Walsh install the Lockwood Display, May 2019

Conservation Commission requested that the Chapter construct an internal stone ledge along one side of the Middleton Road culvert to allow for the movement of animals from the Lockwood Forest (a Town preserve) to John C. Phillips Wildlife Sanctuary**.** On November 17, 2019 four members of the Chapter completed this improvement.

WILLOWDALE FISH LADDER, IPSWICH, MA

As the Chapter has done over the past several years, members maintained the Willowdale fish ladder under the leadership of Chett Walsh. Chamber boards were inserted, adjusted and removed to optimize fish passage. The ladder was also cleared of debris on April 27, 2019 prior to the herring migration. The same undertaking will be made this spring to enable herring and other species to find their way around the Willowdale Dam on the Ipswich River. We are hopeful

that in 2020 MASS Division of Marine Fisheries will meet its longstanding commitment to install an Alaskan Fish Passage device over the Dam. Until then, the efforts of our Chapter will continue.

OTHER CONSERVATION PROJECTS & CONTIBUTIONS

The Chapter has committed $8,567 in in-kind contributions and $10,633 in cash over three years as matching funds for the NFWF grant under the Howlett Sub-Basin Project.

Chapter contribution of $5,000 to the purchase of land by the Society for the Protection of NH Forests along the Ammonoosoc River in New Hampshire as part of the TU Concord, NH Chapter's efforts to preserve this cold water resource.

Contribution of the Chapter of $2,000 to the IRWA Paddle-A-Thon fundraising event, held in June 2019.

Contribution of the Chapter of $2,000 to MASS Rivers in renewing the Chapter's membership at the "Guardian" level.

Chapter funding of the Sea Run Brook Trout Coalition for additional HOBO water temperature meters ($1,000) and additional eDNA testing of North Shore streams ($1,000).

Chapter members cleared the Larkin Dam fishway of debris on April 27, 2019 in advance of the herring migration. The presence of herring was later confirmed by Chapter member Jim Shimer.

Chapter members participated in the September 19, 2019 clean-up day at the Parker River Refuge.

Evaluation of North Shore streams for native brook trout including MASS Fish & Wildlife electro-shocking, the funding of eDNA testing and coordination with a local Stream Team and school students to evaluate the resource. We anticipate that this project will involve at least two local schools in macroinvertebrate and water quality testing and the possibility of installing several streambed structures to enhance the quality of the habitat for native brook trout that have been discovered. These efforts should also improve conditions for the spawning and juvenile development of diadromous species such as alewives, herring and American eel which have not has access to the watershed for many years. The Chapter will be coordinating its efforts with the *Sea Run Brook Trout*

Coalition and Town officials. Funding is expected to come from grant applications and Chapter resources as well as the pro bono efforts of Chapter members.