



## **2019 Brook Trout Survey Project – Remote Ponds and Coastal Streams Volunteer Angler Survey Results – Report to Public**

### **Project Introduction:**

The Brook Trout Survey Project is an ongoing collaboration between Maine Audubon (MA), Trout Unlimited (TU) and the Maine Department of Inland Fisheries and Wildlife (MDIFW).

The Remote Pond Survey Project was initiated in 2011 and completed its ninth survey season in 2019. The goal of the project is to identify previously-undocumented self-sustaining native brook trout populations in remote Maine ponds and to protect brook trout in those survey waters where they are confirmed. The project was designed to effectively identify ponds using a three-step process: (1) Use existing knowledge from anglers and MDIFW biologists and wardens to identify priority waters to survey; (2) Recruit volunteer anglers to visit each water body and document where they observe or catch brook trout or detect signs of active angling; and (3) Use information from the volunteer survey to prioritize a list of waters for a more detailed survey by MDIFW biologists. The information collected by volunteer anglers and biologists is used to inform future fisheries management decisions and protect a unique wildlife and habitat resource in Maine.

The Coastal Stream Survey Project was added as a new component of the Brook Trout Survey Project in 2014. This portion of the project was designed based on the successful pond survey model, in which volunteer anglers help identify wild brook trout populations. Currently, the distribution and life history of coastal brook trout in Maine are poorly understood. Some brook trout in coastal streams adopt a diadromous life history, and these sea-run populations are thought to be declining throughout their range. There has never been an intensive survey of Maine's diadromous brook trout populations, so their current status in Maine is uncertain. Recruiting anglers to aid in this effort greatly increases our ability to gather data over a wide area and determine their status.

### **Volunteer Participation:**

Volunteer Anglers have been an important resource for this project and have been invaluable participants in this fisheries-related citizen science project. Maine Audubon maintains a list of over 1,000 anglers who are either past participants in the survey or have expressed an interest in supporting the project in future years. In 2019, 18 volunteer anglers actively participated in the survey by either attempting to survey or by completing one or more surveys at their assigned waterbody. A number of additional volunteers assisted with other aspects of the project, including website maintenance, mapping ponds, and various other tasks.

In summary, 18 volunteers participated in the brook trout survey in 2019. Surveying ponds and streams, volunteers contributed approximately 140 volunteer hours. The estimated dollar value of time provided by volunteers totaled \$3,560 not including the cost of fuel, vehicle usage, equipment, or supplies<sup>1</sup>. This project is dependent on the sustained effort of volunteer anglers. Volunteers are becoming more

interested in conducting stream surveys as the pond list has dwindled over the years and accessing the remote ponds has become increasingly more difficult.

#### **Volunteer Angler Survey Results – Ponds:**

A total of 124 ponds were identified as priorities to survey in 2019. Two ponds were assigned to volunteers but survey forms were not returned for these ponds, and it is assumed that they were not completed. These 124 ponds that were not attempted by volunteer anglers in 2019 will be carried forward for possible surveys in 2020 and beyond.

#### **Volunteer Angler Survey Results – Coastal Streams:**

More than 560 streams in eight regions of the state (southern, mid-coast, Downeast/MDI, Machias, Belfast/Penobscot Bay, Belfast/Blue Hill, Sebago Lake area, and Casco Bay area) were identified as priorities to survey in 2019. Volunteer anglers successfully evaluated 34 different streams or sections of streams within the four regions of the state in April and May 2019. An additional 5 streams were assigned to volunteers, but survey forms were not returned, and it is assumed that they were not completed. Volunteer anglers caught brook trout in 12 streams, some of which have potential to harbor sea-run brook trout<sup>4</sup>. It is possible that in some of these streams only wild brook trout and not sea-run brook trout were caught above impassable barriers in the stream.

An additional 4 streams were reported by volunteer anglers as being possible sea-run brook trout streams and should be re-surveyed by volunteer anglers.

A total of 3 streams will be removed from the survey list based on information from volunteers or MDIFW that suggests that the presence of brook trout is unlikely due to unfavorable habitat conditions, barriers to fish passage, or competing fish species. The remaining un-surveyed streams will be added to the 2020 stream survey list.

Detailed information about each survey can be found in the appendix.

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<sup>1</sup>Value of volunteer time is based on the 2019 national estimated value of volunteer time at \$25.43/hour, as determined by Independent Sector ([http://www.independentsector.org/volunteer\\_time](http://www.independentsector.org/volunteer_time)).

<sup>2</sup>Priority 1 = BKT Caught, Priority 2 = BKT Likely; for example: Observations of trout fly, rising fish, past success angling for brook trout

<sup>3</sup>BKT Possible = volunteer re-survey; for example: Anecdotal reports of brook trout from anglers or game wardens, good water quality, habitat conducive to brook trout

<sup>4</sup>Potential for sea-run trout – Wild brook trout caught in a stream with open access to the ocean (and some of these fish were caught below head tide and had morphological characteristics distinctive of salter brook trout).

#### **Nine-Year Summary:**

2019 marks the ninth field season for the Brook Trout Pond Survey Project. Since the first field season in 2011, 428 active volunteers for the Brook Trout Pond Survey Project donated over 8,774 hours to the project. In nine years, these volunteers have successfully surveyed over 464 remote Maine ponds for

which no data was previously available. In the four years since the Coastal Stream Survey was included, volunteers have successfully evaluated 230 coastal streams.

**Project Publicity:**

The Brook Trout Remote Pond Survey Project was included in the Maine Audubon and Trout Unlimited member newsletters and widely shared on partner websites. Volunteers received several direct communications about sign-ups and survey opportunities.

**Plans for 2020:**

In 2020, the Brook Trout Survey project will continue to encourage volunteers to sign up to conduct individual pond surveys. Trout Unlimited and Maine DIF&W, with support from Maine Audubon, will continue to focus more on coastal stream surveys and encouraging anglers to do multiple surveys at the same site throughout the season. In addition to coastal streams, volunteers will be able to survey interior brook trout streams identified as unsurveyed or priority by DIF&W.

**Acknowledgements:**

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