



## **Maine Brook Trout Coastal Streams Survey: Frequently Asked Questions**

### **What is the status of brook trout in Maine?**

Maine has the most extensive distribution and abundance of brook trout throughout their native range in the United States, and has been designated as the last true stronghold for wild brook trout. Maine brook trout represent one of the largest reservoirs of native salmonid genetic diversity left in the country, and we have a special responsibility to protect this unique natural resource.

There are significant threats to wild brook trout throughout their range. While Maine has the majority of pond-dwelling and sea-run brook trout left, they have not escaped exploitation and face significant challenges. Conservative management is absolutely critical to the survival of the species.

Native brook trout in Maine are a valuable resource of unrivaled ecological, historic and economic importance. In order to focus on conservation and protection, we first have to understand the extent of the species' current range. The Maine Brook Trout Survey Project is a critical component of this important mission. Maine is one of the only places in the contiguous United States where previously-unknown populations of wild and native salmonids are still being discovered. Through proper identification and regulation, brook trout waters can be better protected and remain viable into the future.

### **What is the overall goal of the Brook Trout Coastal Stream Survey project?**

Maine Audubon, along with partners Trout Unlimited (TU), Maine Department of Inland Fisheries and Wildlife (MDIFW), and most recently the Sea Run Brook Trout Coalition (SRBTC), is seeking volunteers to identify previously-undocumented wild brook trout populations in Maine's coastal streams and rivers. The goal is to collect information to help inform future fisheries management decisions. Maine brook trout are a special resource, and we need to know where they are before we can protect and manage them appropriately. Currently, we have very little data on coastal brook trout populations.

Other states with wild diadromous brook trout have already undertaken a comprehensive approach to cataloging, restoring, and protecting their remaining populations. It is our hope that Maine will see fit to follow suit and protect these rare, sensitive, and poorly understood native fish.



### **How do brook trout in coastal streams differ from other populations?**

Brook trout that live in coastal streams may spend part of their lives in saltwater and come back to freshwater to spawn, a life history strategy called "diadromy." Diadromous brook trout may leave their freshwater environment for periods ranging from a few months to over a year. Typically, they migrate from fresh to salt water at an early age, probably to take advantage of the more abundant food resources in salt water estuaries, and sometimes to seek thermal refuge.

### **What is the purpose of this survey?**

The state of Maine lacks basic data about which coastal streams contain wild brook trout populations. The purpose of the Coastal Stream Survey is to identify coastal subwatersheds for further standardized assessment by fisheries biologists.

The distribution and life history of coastal brook trout in Maine is poorly understood. Not all brook trout in coastal streams adopt a diadromous life history. It is not known why some brook trout head to salt water and some stay in fresh water. Diadromous brook trout in coastal streams appear to be in decline and are under significant pressure from a number of threats. This includes development, agriculture, habitat fragmentation, inadequate road/stream crossings, damming, and angler exploitation. There has never been an intensive survey of Maine's diadromous brook trout populations, so their current status in Maine is uncertain.

This lack of information has prompted MDIFW to start a volunteer angling survey of coastal brook trout waters. Recruiting anglers to aid in this effort greatly increases our ability to gather data over a wide area. Volunteer datasheets detailing the amount of time spent fishing and the number of fish caught will provide fisheries biologists with valuable data for an initial assessment of coastal brook trout populations in Maine.

### **When is the best time to fish for brook trout in coastal streams?**

Spring is the best time to fish for "salter" brook trout. Although coastal brook trout anglers typically have the best luck fishing very early in the spring season, these streams are often open all year. Research in two Maine streams with sea-run brook trout found that their migration from fresh to salt water occurred mainly from April through June. Their return to fresh water starts in May and can last until early August. When brook trout return to streams from salt water they have a silvery color, which fades after only two weeks in fresh water.

Volunteer anglers are asked to survey streams within coastal watersheds where the state is lacking data on wild brook trout population status. Anglers fish the stream



multiple times throughout the spring in an effort to catch wild brook trout. Volunteers are also asked to document barriers to fish passage (both natural and man-made), habitat characteristics, water temperature, and signs of angler presence.

The survey list for 2016 includes streams on the immediate coast and also streams higher up in the watershed. Wild brook trout will move considerable distances throughout their lives (especially these migratory sea-run trout) and that it is possible that a wild fish caught miles from the ocean could at one point have been out in the salt. Ultimately, we are seeking to document the presence of wild brook trout within watersheds where the fish have access to the ocean.

#### **Why is this information important?**

Ultimately, Maine's coastal brook trout streams need to be accurately documented so that MDIFW biologists have accurate information to make informed management decisions. Knowing whether or not wild brook trout are present in coastal streams will lead to further research (standardized stream surveys) and may eventually result in changes in regulations, restoration efforts, environmental permit reviews, and other management decisions. MDIFW has stated that their overarching conservation strategy is one of habitat restoration. There is already a statewide effort to survey and document bad culverts and fish passage issues. What we lack regarding coastal trout is knowing where most populations occur so that MDIFW and partners can be more of a player in the coastal habitat/fish passage arena.

#### **How were survey waters identified?**

The Google Earth map of survey waters for the Coastal Stream Project is organized by *subwatershed*. (A watershed is the land area or topographic region that drains into a particular body of water; a subwatershed is a smaller area of land that is part of a larger watershed.) These particular subwatersheds were chosen because they were identified during a recent coastal brook trout status assessment as lacking adequate information to determine trout presence or absence. The Coastal Stream Survey Project is focused at the subwatershed level because it is unnecessary to survey every stream in a given watershed. A brook trout that migrates from a stream into an estuary would theoretically have access to any other coastal stream in the subwatershed. Therefore, volunteers can choose to survey *any stream* in the outlined subwatershed.



### How do I choose a stream to survey?

1. **Choose a subwatershed:** Consult the Google Earth map online (Target subwatersheds are shaded in light green.) Select an area of the Maine coast where you would like to fish.
2. **Choose a stream:** Consult your Delorme Maine Atlas & Gazetteer alongside the Google Earth map and look for rivers and streams inside your subwatershed.
  - a. Any stream that exists in the subwatershed is fair game, but we have also provided a list of potential survey streams within each watershed on the project website (see "2016 List of Survey Streams").
  - b. Remember, small streams do not always show up on Google Earth aerial photography.
3. **Download and complete the survey form** – Please read the attached instructions first.

### How many times should I fish a stream in any given subwatershed?

Repeat visits to your chosen stream may be necessary to catch fish. At a minimum, we recommend that you return to your chosen stream *at least three times*. It's also helpful if you keep fishing even after you've confirmed that trout are present in the stream – the more fish data we can collect, the better. This is because diadromous brook trout truly are a "hit-or-miss" resource. Just because you don't catch fish doesn't mean that salter brook trout aren't using this stream.

### What does typical salter brook trout habitat look like?

Remember, some of these survey streams are not close enough to the ocean to be tidally influenced. These inland portions of the larger coastal subwatershed are important, too: Here you will be fishing for wild brook trout (which could potentially move downstream to access the ocean at some point if there are no impassable barriers).

If you are fishing a stream close to the ocean and wish to catch diadromous wild brook trout, you might have to "check some of your expectations at the door." Fishing for coastal brook trout is not the same as fishing for wild trout in inland waters. There is no "typical" salter brook trout habitat; in fact, the best places to catch these sea-run fish are often in areas that might be overlooked by the traditional trout fisherman. For example, these streams are often muddy, shallow, and below head of tide. Water temperature and structure are the most important features to these fish. The best way to figure it out is to cover a lot of water and keep fishing, because this is a hit-or-miss fishery. But when you do start catching these coastal trout, it is very exciting! See below for some pictures of the types of places where you might catch coastal brook trout:



MAINE  
AUDUBON





### How can I sign up to help?

Interested anglers should contact **Annica McGuirk** at [brooktrout@maineaudubon.org](mailto:brooktrout@maineaudubon.org) or **207-781-2330 (x219)**. Additional information can also be found at the project website. Maine Audubon and its partners will provide data sheets and instructions for how to complete a survey. Anglers should be enthusiastic about fishing for brook trout, be willing to conduct repeat surveys, and have a sense of adventure. Surveys can be done any time before September 30, but we are encouraging anglers to get out as early in the spring as possible.