

Maine Wilderness Guides Org.

An Association of Registered Maine Guides



MWGO eNews, vol 12: August 2021

The negative impacts of low flows and high temperatures on cold water fisheries

Sean McCormick, MWGO Board Member

Low flows and high temperatures are major stressors for cold water fish species. Both should be considered by anglers when participating in fishing for cold water fish species during the warmest summer months.



All species of fish have optimal temperature and oxygen ranges that are required for them to successfully reproduce and survive the long Maine winters. Fish are cold blooded, and temperature has a big impact on their metabolism and a slowing metabolism affects their ability to store energy for the stress of fall spawning and the long period during winter when their metabolism slows way down. Different species of cold water fish, ie- salmonids, have different optimal temperature ranges. Lake trout, or togue require temps between 39°F - 65°F. Brook trout prefer temps between 50°F - 65°F. Brown trout like a range of 53°F - 66°F. Rainbow trout like temps ranging from 45°F - 67°F and landlocked salmon like 40°F - 70°F.

Low flows are directly related to high temperatures. As current slows, the sun can have a major impact on warming of a stream or river. Slower water tends to warm faster and cool slower each day, making habitat less optimal for cold water species. Trout and salmon move to cooler areas where spring fed brooks enter larger streams or find spring seeps in the river or pond to lay near during warm water conditions. This method of survival makes the fish more congregated, and thus more vulnerable to predators, including humans.

Oxygen levels also drop as flows slow down. Water gets its oxygen when running water is turbulent, or on ponds when there are waves mixing the water with air. Spring water has extremely low oxygen as it is cool because it is welling up from underground where there is no air to mix oxygen into the water. The fish must lay either just above a thermocline in a pond, or just above the cold spring water and the more oxygen rich surface water. This behavior allows them to stay cool enough while still getting the oxygen their bodies need to keep going.

While this all seems like a recipe for disaster for our highly prized, cold-water fisheries, there are several steps that we can take to modify our behavior to make life easier for the cold-water fish we all love to fish for.

Continued on next page

SAVE THE DATE: Annual Meeting and Banquet

The Maine Wilderness Guide Organization's Annual Meeting will take place **Sunday, October 24 at The Birches Resort in Rockwood, ME**. The MWGO board is currently working on the agenda and we are seeking your input. Proposed Agenda:

9:00 am Coffee and Conversations

10:00 am Quarterly Meeting of the Board

11:00 am MWGO Annual Meeting of the Membership - Summary of the year's accomplishments, Review Strategic Plan, Board Elections

Lunch and Facilitated Conversations

· See the questionnaire below for more information and to tell us what you want to discuss

First Aid Workshop - Participate in a series of hands-on simulations to freshen up your first aid skills!

Depart by approximately 4pm

The leadership team is seeking your input! Please [click here to fill out a questionnaire](#) to help us plan the day and ensure we address topics you care about and want included.

MWGO is seeking Committee Members, Board Members and a Treasurer. Contact [MWGO President Jeanne Christie](#) for info!

From the Field



Sunrise from Rockwood, ME
Photo Credit: [Mike Harrington via the My Moosehead Facebook Group](#)

Continued from previous page

- Self-imposed “hoot owl” regulations as stream warm. This consists of fishing early in the morning and later in the evening as the sun is lower in the sky and air temps are cooler. Many states go a step further and impose a mandatory hoot owl regulation as temps get high and relax them when temps cool later in the season.
- Refrain from targeting fish gathered at spring holes in small streams or ponds. A relatively small number of trout might be most of the spawning adults on a small stream, putting the population at risk of losing most of its spawning adults, thus a whole year class of young fish for future seasons.
- Implement catch and release if you are not already. As the famous angler Lee Wulff once stated, “...a game fish is too valuable to only be caught once.”
- If you are practicing catch and release already, make sure you are using up to date best practices to ensure a good outcome for the fish. Always keep the fish in the water, even when taking pictures. Fish can't breathe when in the air. After a fight for its life, it seems unfair to make it hold its breath while you are getting a photo to show off to friends. Think of it like you just crossed the finish line of a 5k race, then the race officials dunk your head into a bucket of water for 2-3 minutes. We might not do too well under those conditions!



For other ideas about best practices on handling fish during warm, low flows, check out [Keep Fish Wet](#) for great ideas by fisheries scientists about keeping the fish you love in the best condition possible. A good local resource is the Maine IF&W fisheries biologists. You can contact them through the [IF&W website](#) to get more tips on best practices for cold water species during warm summer weather.

Upcoming Events and Dates

- Sep 25-26: Wilderness First Aid at Northeast Whitewater in Shirley, ME. Contact info@northeastwhitewater.com or 207-695-0151 for more info.
- Oct 22-23 and 22-24: Wilderness First Aid and WFR/WEMT Recertification Courses by Jon Tierney of LifeFlight at Mahoosuc Guide Service, Newry, ME. Contact Polly Mahoney at mahoosucguides@gmail.com or 207-824-2073.
- Oct 24: MWGO Annual Meeting and Banquet at The Birches in Rockwood, ME. See previous page for more information.

MWGO Professional Members are eligible for a \$50 reimbursement (\$25 for Supporting Members) for WFA, WAFA, WFR, WEMT or Recertification Courses.

Do you have an article, recipe, tip, event, or photo to share in the next eNews?
Send your submission to: newsletter@mwgo.org!

(c) 2021 [Maine Wilderness Guides Organization](#). All Rights Reserved.

Guide Tips: Did you pack the 10 Essentials?

See the [NPS.gov 10 Essentials](#) page for more info!



Navigation – Map, compass, GPS system



Sun Protection – Sunglasses, sunscreen, hat



Insulation – Jacket, hat, gloves, rain shell, thermal underwear



Illumination – Flashlight, lanterns, headlamp



First Aid Supplies – First Aid Kit



Fire – Matches, lighter, fire starters



Repair Kit and Tools – Duct tape, knife, screwdriver, scissors



Nutrition – Food



Hydration – Water, water treatment supplies



Emergency Shelter – Tent, space blanket, tarp, bivy

Update your 10 Essentials during the COVID-19 Pandemic:



Wear a cloth face covering when social distancing (6 feet) cannot be maintained.



Use a 60% or higher alcohol-based hand sanitizer when water and soap are not available for handwashing.

Invasive of the Month: Common Buckthorn

Rhamnus cathartica

This widespread shrub or small tree is severely invasive and grown in forests, forest edges, old fields, and open areas. It also invades rare floodplain forest communities in Maine, which is a top concern for conservation of biodiversity. Common buckthorn produces a



chemical that is associated with malformation and mortality in amphibian species. The plant can be identified by the small spines at the very end of most twigs. Leaves are 1-3" long, elliptical or round, toothed, with a pointed tip. It keeps its leaves late into the fall after native plants have dropped theirs. The fruit is round, ¼ - ½" wide, and turns from green to a glossy black color in late summer. Larger plants have orange inner bark. Birds, mice, and deer eat the fruit and disperse the seeds, which can remain viable for up to six years. Persistent and diligent cutting or mowing multiple times during the growing season over several years may kill the plant.

Photo credit: ME Dept. of Agriculture, Conservation & Forestry