



MASS**W**ILDLIFE

# Coldwater Fisheries Resources

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Modified from presentation prepared by Todd Richards-  
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# What is a Coldwater Fisheries Resource (CFR)?

Massachusetts Division of Fisheries and Wildlife definition:

“A CFR denotes a waterbody that contains Coldwater Fish that reproduced in that waterbody or a tributary thereto and use such waters to meet one or more of their life history requirements”

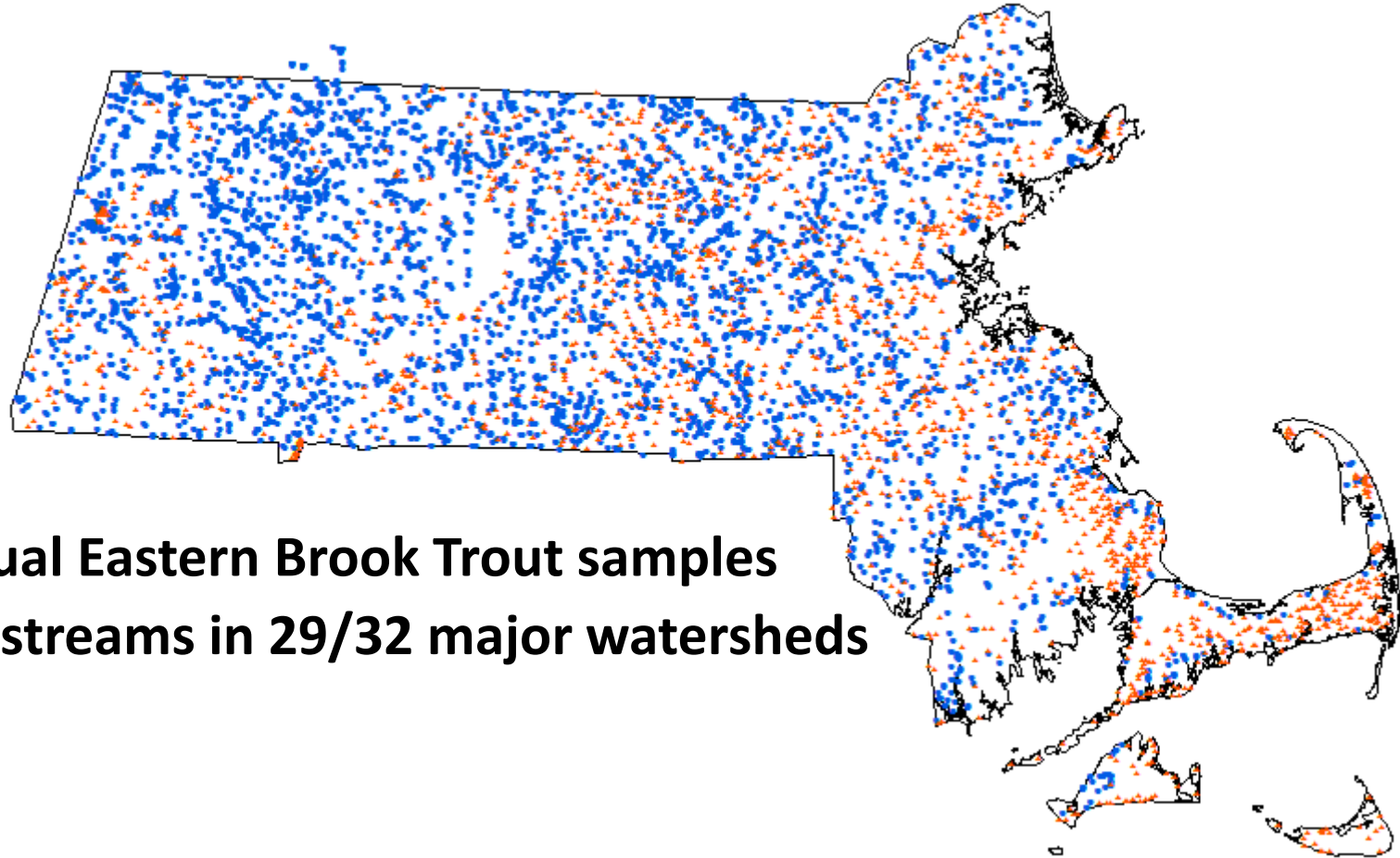
Coldwater Fish include the following:



- Slimy Sculpin (*Cottus cognatus*)
- Longnose Sucker (*Catostomus catostomus*)
- Lake Chub (*Couesius plumbeus*)
- American Brook Lamprey (*Lampetra appendix*)
- Burbot (*Lota lota*)
- **Brook Trout (*Salvelinus fontinalis*)**
- Brown Trout (*Salmo trutta*)
- Rainbow Trout (*Oncorhynchus mykiss*)
- Landlocked Salmon (*Salmo salar*)
- Lake Trout (*Salvelinus namaycush*)
- Rainbow Smelt (*Osmerus mordax*)



- The Division samples fish communities as part of the statewide survey and inventory project
- To date we have over 5,500 (>2,400 from streams) fish community samples and more than 600k individual fish records



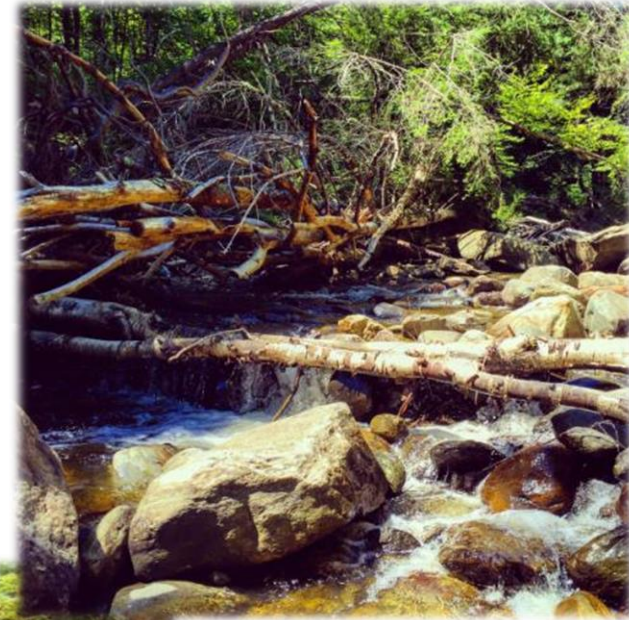
- 70k individual Eastern Brook Trout samples from 1,100 streams in 29/32 major watersheds

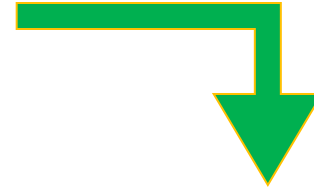
- Currently, there are ~1,200 CFRs statewide (~49% of all streams surveyed)
  - More added annually
- The Westfield River watershed has the most CFRs in Massachusetts – 171 (out of 222 streams surveyed)
  - Followed by the Deerfield (162/190), Connecticut (144/222), & Chicopee watersheds (136/250)



# Typical Coldwater Fish Habitat

- Riparian cover
  - Shade, LW
- Cover and complex habitat
  - Protection from predators, high and low flow events, food production
- Suitable substrate (and upwelling areas) for spawning

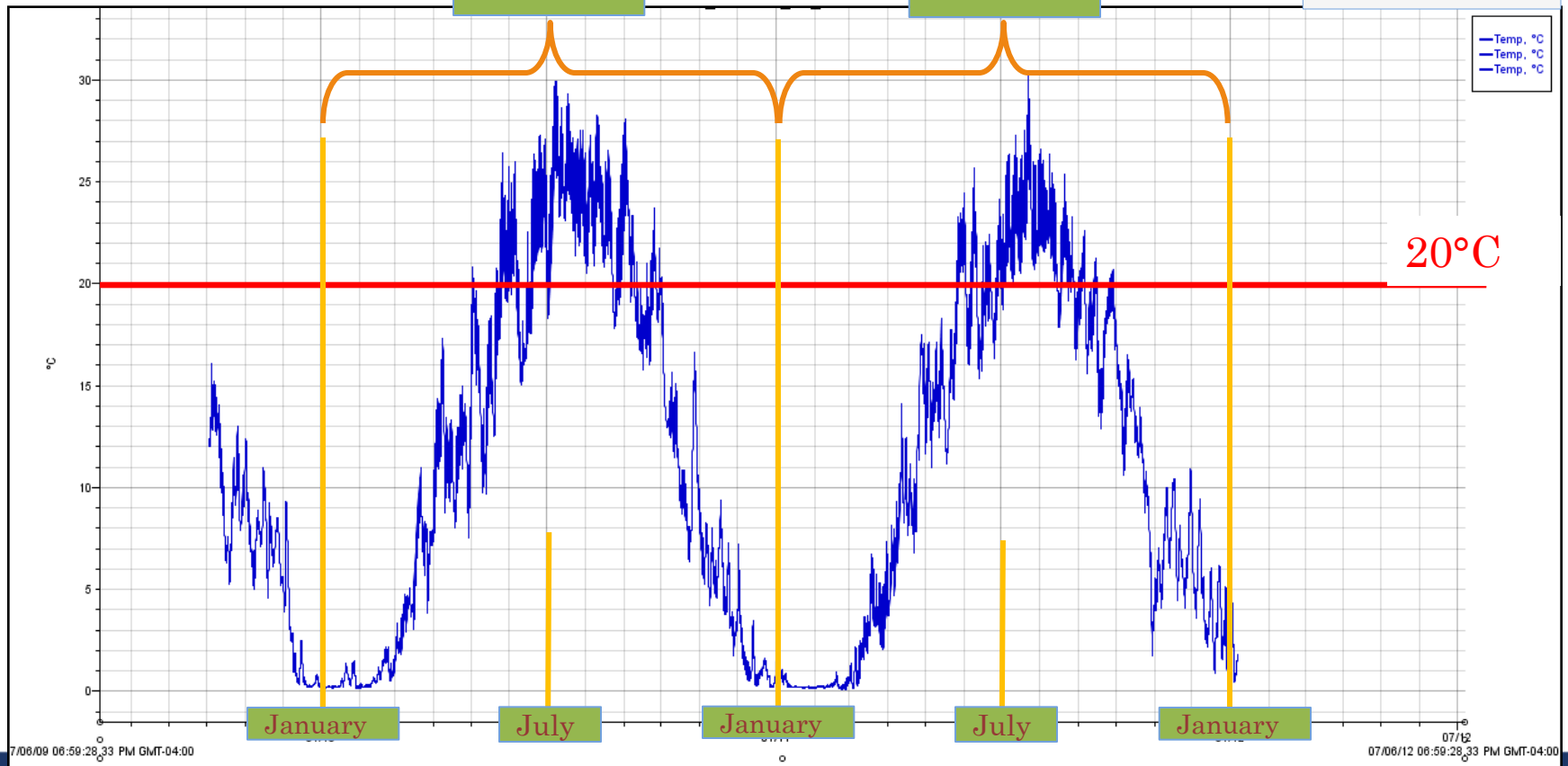




2010

2011

Hamant Brook



# Impacts to Coldwater Fisheries

- Impervious surfaces
- Road drainage and stormwater
- Water withdrawals
- Dams
- Poorly-designed road crossings & undersized culverts
- Deforestation & vegetation removal
- Wastewater discharge



# CFR Applications

- Anglers (advocates, information)
- Conservation Commissions (local knowledge, help prioritize, get work done)
- Sampling and Biology (monitoring changes, identifying gaps or areas for improvement...)
- Regulation
  - Water Quality Standards (critical area status...protected and maintained...)
  - Water Management Act (...minimize impact of water withdrawals...)
  - DFW – 321 CMR 5.00 (...codifies the criteria, procedures and related definitions used by the Division to designate waterbodies as CFRs.)

# Future directions

- Continue monitoring and identifying new CFRs
- Promote Brook Trout fisheries
- Develop clearer understanding of Brook Trout population dynamics, relationships with stocked salmonids, etc.
- Work with Cons. Comms. to identify and improve/restore critical coldwater resources
- Partnerships with other organizations; e.g., Eastern Brook Trout Joint Venture

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