

Cisco Monitoring, Summers 2023 and 2024

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Natural Resources

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Cisco (*Coregonus artedii*)

- Body color generally silvery, grading from brown, bronze or pale green on the back to silvery blue on the flanks to cream on the belly.
- Typically 300-450 mm (12-18 in) TL; maximum about 525 mm (21 in).
- Also called Lake Herring
- Feeds on microscopic zooplankton, insect larvae
- Can also eat small fish
- Documented to eat alewife and round goby in the Great Lakes

UW Sea Grant Cisco Picture



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Side view adult.

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Mayfly Larvae and Copepods



Fisheries Staff, Plymouth DNR

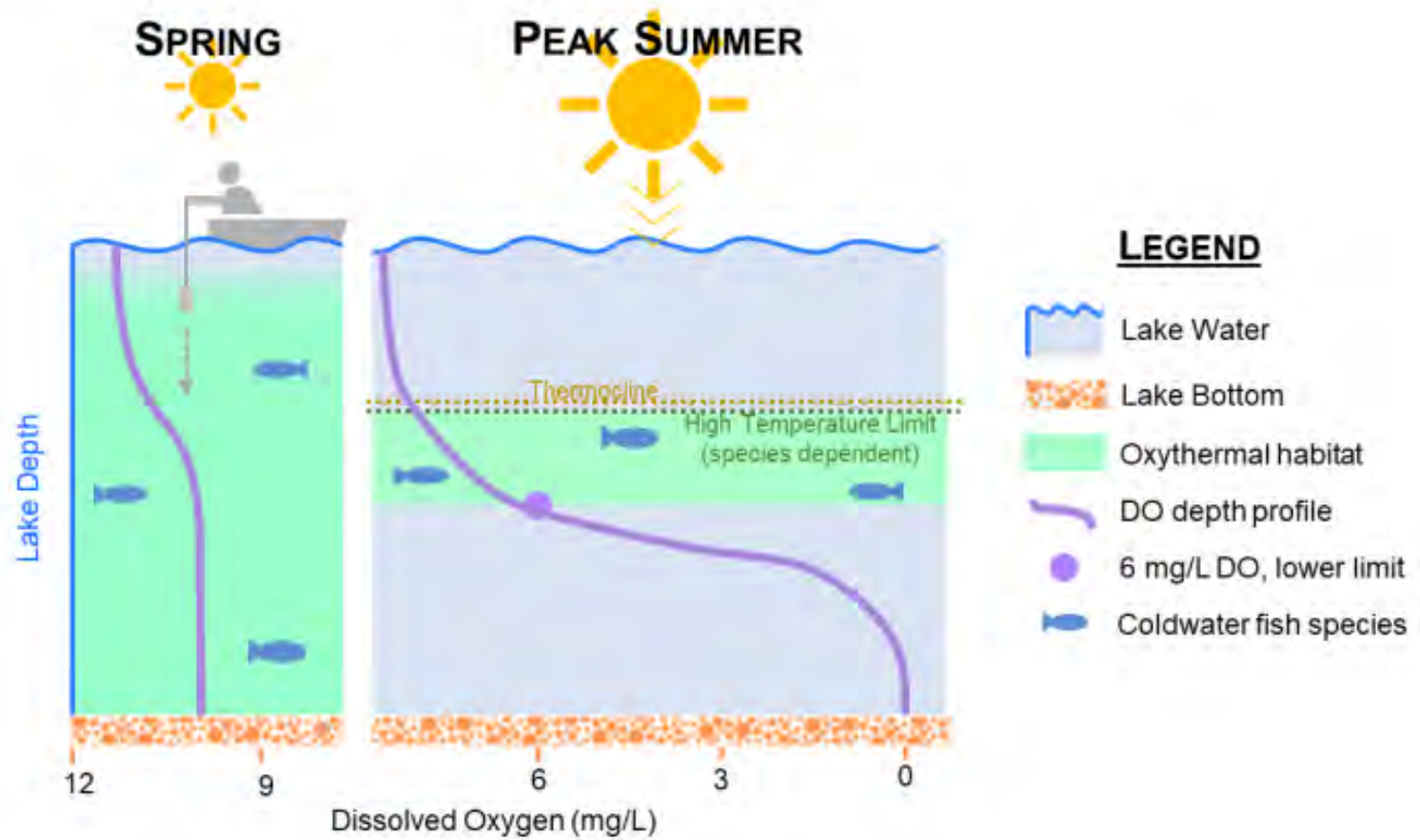
- Ben Breaker, Former DNR Fisheries Biologist
- Alec Meyer, Fisheries Technician
- Tanya Meives, Fisheries Technician – Advanced
- Breanna Crane, Waukesha Water Resources

Design of Project

- Monitor Big Cedar for two summers at the deep hole (102 feet)
- Use a YSI DSS
- Temperature, Dissolved Oxygen readings every 3 feet from the surface to the bottom of the lake
- Research Question – Can Big Cedar Lake support a long term Cisco population?


Oxythermal Habitat

- Dissolved oxygen must be a minimum of 6 mg/L
- Water Temperature must be below 19 degrees Celsius or 66 degrees Fahrenheit (considered ideal habitat)
- May be able to tolerate up to 22.7 degrees Celsius or 73 degrees Fahrenheit (WisCALM guidance)



Sampling Events in 2023 and 2024

- 3, 1 events in July
- 3, 3 events in August
- 2, 3 events in September
- 1, 0 event in October
- 9 total sampling events in 2023 and 7 total sampling events in 2024



Date	Location of Habitat	Thickness of Habitat
7/13/2023	21 feet to 72 feet	51
7/21/2023	24 feet to 75 feet	51
7/28/2023	24 feet to 69 feet	45
8/09/2023	24 feet to 60 feet	36
8/23/2023	27 feet to 60 feet	33
8/28/2023	30 feet to 57 feet	27
09/13/2023	30 feet to 51 feet	21
09/20/2023	27 feet to 39 feet	12
10/02/2023	18 feet to 39 feet	21

- Ideal Habitat

Date	Location of Habitat	Thickness of Habitat
7/22/2024	27 feet to 78 feet	51
08/05/2024	27 feet to 69 feet	42
08/12/2024	30 feet to 57 feet	27
08/19/2024	30 feet to 48 feet	18
09/09/2024	30 feet to 33 feet	3
09/18/2024	30 feet to 33 feet	3
09/23/2024	30 feet to 33 feet	3

- Ideal or Optimum Habitat

Questions?



WisCALM habitat zone

Date	Location of Habitat	Thickness of Habitat
7/13/2023	18 feet to 72 feet	54 instead of 51
7/21/2023	21 feet to 75 feet	54 instead of 51
7/28/2023	24 feet to 69 feet	45
8/09/2023	24 feet to 60 feet	36
8/23/2023	24 feet to 60 feet	36 instead of 33
8/28/2023	24 feet to 57 feet	33 instead of 27
09/13/2023	3 feet to 51 feet	51 instead of 21
09/20/2023	3 feet to 39 feet	39 instead of 12
10/02/2023	3 feet to 39 feet	39 instead of 21