

# WISCONSIN DEPARTMENT OF NATURAL RESOURCES

## 2022 STREAM SURVEY REPORT

### THORNBERRY CREEK

TROUT STREAM ROTATION (WBIC 410050)

BROWN COUNTY



### INTRODUCTION AND OBJECTIVES

Thornberry Creek is a 1.4-mile Class I trout stream in Brown County and is part of the Duck Creek watershed. The objectives of the rotation surveys are to determine species composition, relative abundance and size structure for trout and other gamefish present.

Regulations Category: **Yellow**

Size Limit: 8 inches

Daily Bag Limit: 3 (in total)

### WISCONSIN DNR CONTACT INFO.

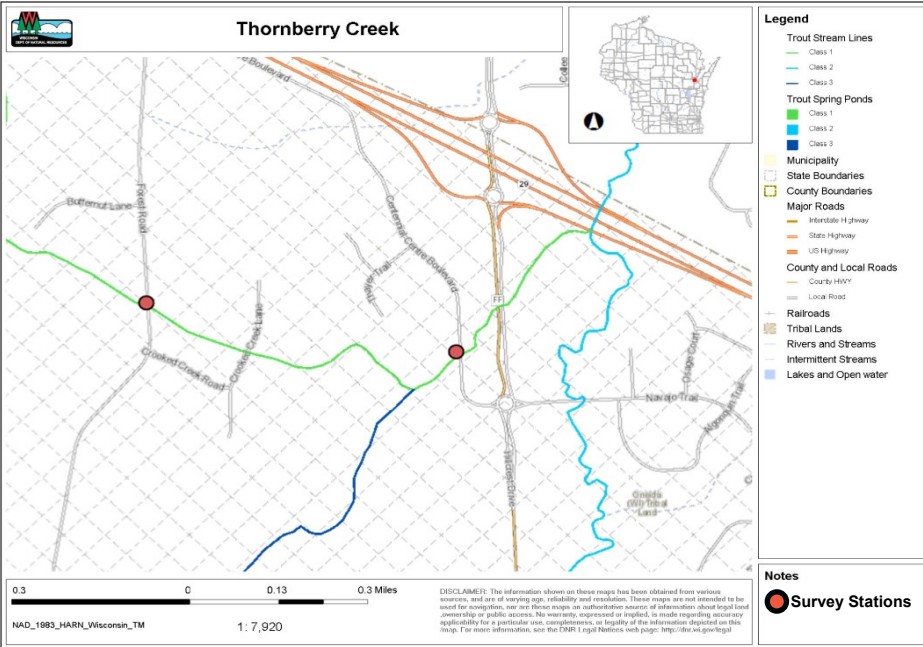
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### SURVEY INFORMATION

Station	Survey Dates	Station Length	Temperature (°F)	Mean Stream Width (ft)	GPS (Start/Finish)	Gear	Dippers	IBI
Centennial Centre Boulevard	08/04/2022	330 ft	62	4.7	44.5562600, -88.131510 44.5557717, -88.131373	Backpack Shocker	1	Yes
Forest Road	08/04/2022	330 ft	59	3.8	44.5574683, -88.140285 44.5578433, -88.140628	Backpack Shocker	1	Yes



### SURVEY METHOD

- All streams are sampled according to DNR wadeable streams monitoring protocols. Thornberry Creek is currently on a six year rotation schedule with two locations selected for the section of stream in Brown County.
- All sampling stations are electrofished with either a towed barge shocker or backpack shocker.
- Sampling distance is at least 35 times the mean stream width or a minimum of 330 feet (i.e., 100 meters).
- All trout are counted and measured, while all other species are counted in order to calculate an Index of Biotic Integrity (IBI) score (i.e., a rating of environmental quality based on the fish assemblage). IBI scores of 90 - 100 indicate excellent stream quality, while scores less than 30 indicate poor stream quality. Our analysis utilizes the IBI for Wisconsin coldwater streams. Coldwater streams in Wisconsin are those in which the maximum daily mean water temperature is usually <22°C (71.6°F). A coolwater stream IBI may also be used when a stream doesn't fit the temperature criteria for a coldwater stream.

### SUMMARY

- No trout were captured in this survey. A total of 83 fish from 11 different species were captured between the two sites. Creek chub, lamprey ammocoetes, Johnny darter, and brook stickleback were the most abundant species captured in this survey.
- This stream was last surveyed in 2015 and 2016 with no trout being captured in either year. The fish community in surveys conducted in 2015 and 2016 was similar to what was observed in 2022. A total of 36 brook trout were captured at the Forest Road station in 2001.
- While water temperatures may be cool enough to allow trout to persist throughout the summer, habitat conditions in this stream were very poor. In particular, this stream was shallow and wide with almost exclusively fine sediments, especially near the Forest Road station. Bank erosion and the resulting increase in fine sediment covering spawning substrate likely contributed to brook trout being extirpated from this stream.
- The IBI score suggests this stream is a poor trout stream, and the Wisconsin Streams Natural Community Model considers this a cool-cold headwater stream. IBI scores were calculated at both sites, with both receiving a score of a 10. The lack of trout and other coldwater species is likely the factor driving the very poor IBI score.

### Species Community and IBI for Forest Road

Species Sampled	Total	IBI Score	Integrity Rating
Brook stickleback	9	<b>10</b>	<b>Poor</b>
Fathead minnow	4		
Green sunfish	1		
Johnny darter	1		
Largemouth bass	1		
White sucker	1		