



Bone Lake Public Access September 22, 2020

Aquatic Invasive Species Search in Bone Lake, Washington County, Minnesota

Search Date:
September 22, 2020

Prepared for:
Comfort Lake Forest Lake
Watershed District



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Aquatic Invasive Species Search in Bone Lake, Washington County, Minnesota

Summary of the 2020 search: Two searchers from Blue Water Science surveyed the boat access and surrounding areas in Bone Lake on September 22, 2020 searching for occurrences of invasive species, primarily zebra mussels (Figure 1). Zebra Mussels were previously discovered in Bone Lake and all known zebra mussels were treated with Earthtec copper sulfate in 2019. AIS searches at the public water accesses are a high priority in order to identify new infestations before it spreads to the rest of the lake. The searchers spent approximately 2.0 search hours using scuba diving and snorkeling. No starry stonewort and no zebra mussels were observed. Representative photos and observations shown on the following pages.

Table 1. Site data for the two aquatic invasive species searches on September 22, 2020.

	Number of Searchers	Starry Stonewort (SSW)	Zebra Mussels (ZM)	Bottom Conditions
September 22, 2020				
1. Public Access and surrounding area	2 (120 minutes total search time)	No SSW found	No ZM observed	Sandy, rocks rare, some branches. Moderate plant growth.

Bone Lake Aquatic Invasive Species Search
September 22, 2020

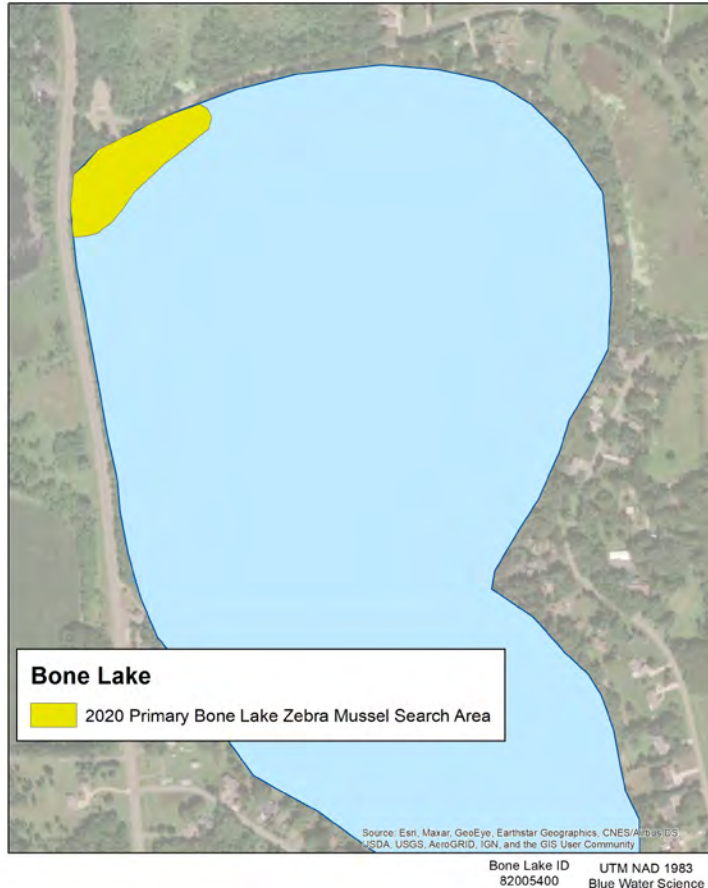


Figure 1. Location of the search sites.

Photos from the September 3, 2020 AIS Search- No New AIS Observed

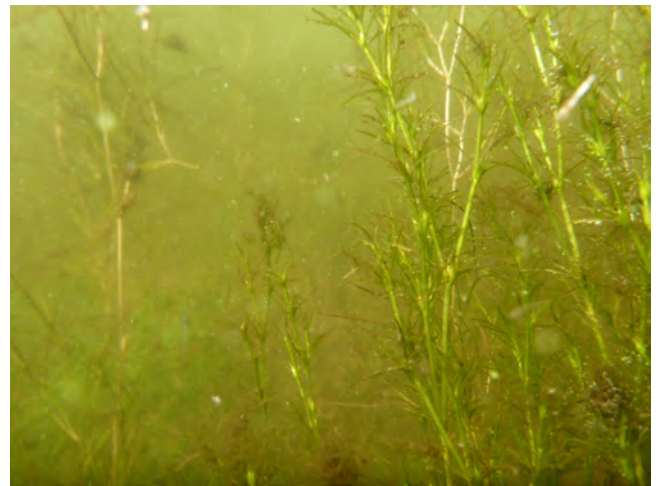
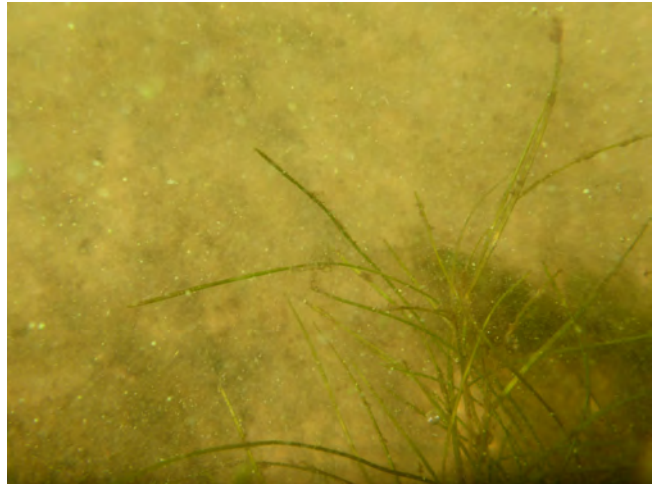
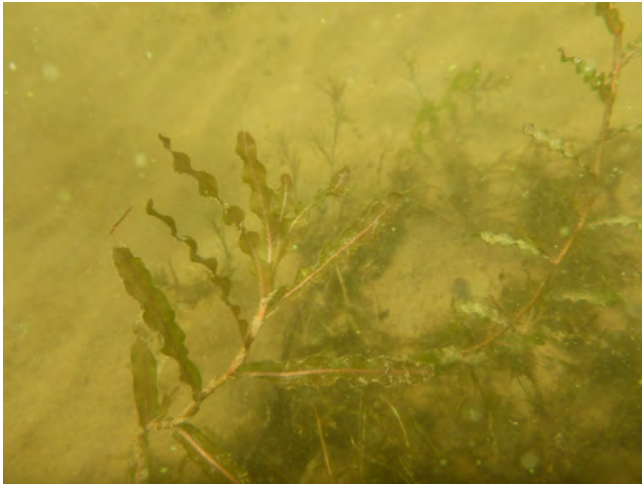


Figure 2. Plants were still growing in Bone Lake on in September. The public access area substrate is dominated by a sand bottom with few rocks or branches. Scattered branches would seem to be the most suitable growing substrate for early infestations of zebra mussels in bone lake.

Starry Stonewort Information Sheet

INVASIVE **Starry stonewort**
Nitellopsis obtusa

KEYS TO ID

- Long, smooth branchlets are attached in whorls of 5 - 8
- Small, star-shaped bulbils form on clear threads at base of plant and may be found above or below the sediment surface
- Small, orange spheres called antheridia may be visible, these are male reproductive structures
- Typical branchlets are long; can be up to twelve inches
- Can form dense mats in water




LOOKS SIMILAR TO

- Native *Chara* (native)
- Native *Nitella* (native)
- Sago pondweed (native)
- Water stargrass (native)

WHERE TO LOOK

- In shallow, still water and near access

CURRENTLY FOUND

Actual size of bulbils
Below: orange antheridia



Figure 3a. [left] Starry stonewort identification page from the University of Minnesota Aquatic Invasive Species Research Center (MAISRC).

NATIVE **Muskgrasses**
Chara spp.

KEYS TO ID

- Stems are typically rough and crunchy
- Thin branchlets form whorls around thin stems
- May produce bulbils, but not star-shaped
- May have musky odor




LOOKS SIMILAR TO

- Starry stonewort (invasive)
- Native *Nitella* (native)
- Sago pondweed (native)
- Water stargrass (native)
- Minnesota has nine *Chara* species

WHERE TO LOOK

- Fully submerged
- Along lake bottoms forming patches called meadows

CURRENTLY FOUND

Rough stems; whorled branchlets

Starry stonewort looks a lot like some growth forms of chara and nitella (Figure 3). Starry stonewort was not observed in Bone Lake in 2020.

Initial searches for Starry Stonewort focus on public access points as a priority, nearly all new SSW infestations are found at boat launch locations.

Figure 3b. Chara identification page from the MAISRC.

Rapid Response Plan for Starry Stonewort or Zebra Mussels

Neither starry stonewort nor zebra mussels were found in Bone Lake on the September 29, 2020 search. A rapid response plan, shown in Table 2, has a number of preventative steps as well as actions to be considered after a potential new AIS sighting.

Table 2. Tasks and assignments for an early detection and rapid response program for Bone Lake, Minnesota.

	Bone Lake Lake Assoc.	CLFLWD	Washington County	MnDNR	Others	Treatment Contractor	BWS
1. Early Detection							
1.1. Create website information.	X						
1.2. Designate contact person.	X						
1.3. Conduct training session for volunteer searchers.	Late summer	Late summer					Late summer
1.4. Conduct monthly targeted searches (late summer).	X						X
1.5. Press release if SSW is found.	X			X			
2. Rapid Response Assessment							
2.1. Conduct an initial exploratory search after the first report of a starry stonewort observation.				X			X
2.2. Organize and train lake resident searchers for a full search effort.	X						X
2.3. Conduct an expanded targeted search with diving (if needed).	X	X		X			X
3. Rapid Response Action							
3.1. Meet to determine treatment options.	X		X	X	X	X	X
3.2. Close public access, if necessary.	X		X	X	X		
3.3. Treat area with copper sulfate.						X	
3.4. Evaluate treatment.				X			X
3.5. Report all findings and results.	X			X			X