Searching for Aquatic Invasive Species in Bone Lake, September 2, 2021

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

Search Date: September 2, 2021

Prepared for:
Comfort Lake Forest Lake Watershed District

Prepared by:
Steve McComas, Jo Stuckert, and Connor McComas
Blue Water Science, St. Paul, MN

November 29, 2021

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

Summary of the 2021 search: Three searchers from Blue Water Science surveyed the boat access and surrounding areas in Bone Lake on September 2, 2021 searching for occurrences of invasive species, primarily zebra mussels or starry stonewort (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 3.0 search hours using scuba diving, snorkeling, and rake sampling (50 sites sampled with a fixed-head rake sampler). 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 2, 2021.

	Number of Searchers	Starry Stonewort (SSW)	Zebra Mussels (ZM)	Bottom Conditions
September 2, 2021				
1. Public Access and surrounding area	3 (180 minutes total search time)	No SSW found	No ZM observed	Sandy, rocks rare, some branches. Moderate plant growth.

Figure 1. Location of the search sites.

Photos from the September 2, 2021 AIS Search- No New AIS Observed

Figure 2. Plants were still actively growing in Bone Lake on in September. The public access area substrate is dominated by a sand bottom with few rocks or branches. Rocks, branches, litter, and hard artificial substrate are priority search items. Scattered branches would seem to be the most suitable growing substrate for early infestations of zebra mussels in Bone Lake.

Starry Stonewort Information Sheet

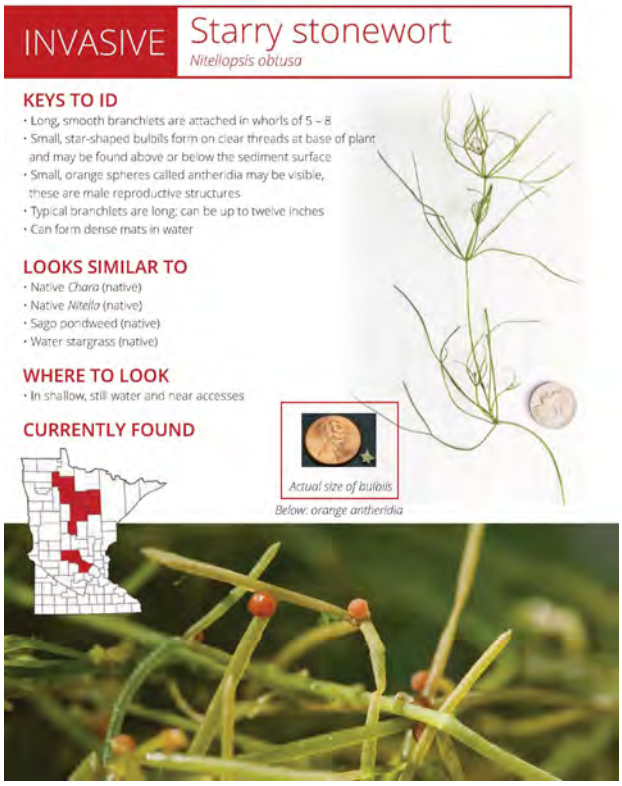

Figure 3a. [left] Starry stonewort identification page from the University of Minnesota Aquatic Invasive Species Research Center (MAISRC).

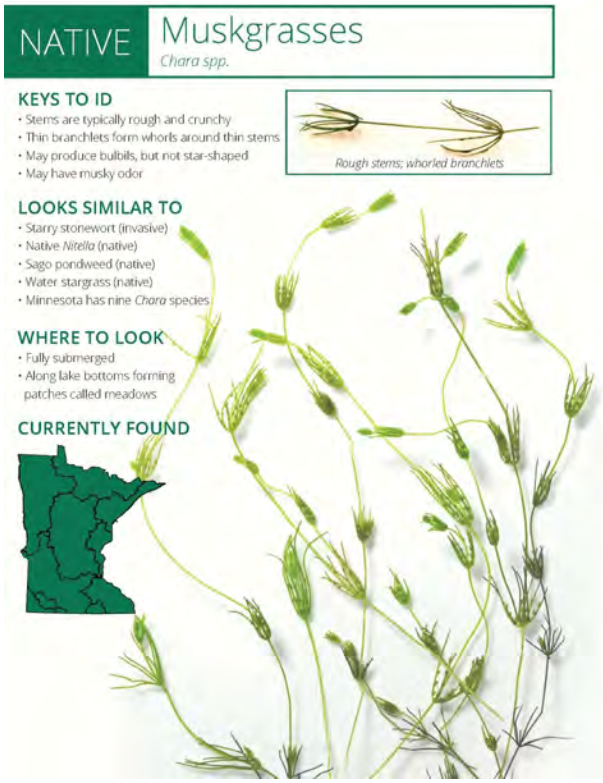

Figure 3b. Chara identification page from the MAISRC.

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.

Rapid Response Plan for Starry Stonewort

Neither starry stonewort nor zebra mussels were found in Bone Lake on the September 2, 2021 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 Association	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