



Northeast Aquatic Research



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Mansfield Center, CT 06250
www.northeastaquaticresearch.net

December 10th, 2021

TO: Boone Lake Dam Management District, Exeter, RI
FROM: Hillary Kenyon, CLM
ATTN: Tim Venter <tmventer@cox.net>

Re: Boone Lake 2021 Aquatic Vegetation Survey Results

Boone Lake was surveyed on September 20, 2021 by Northeast Aquatic Research staff. The survey consisted of 123 unique waypoints spaced evenly throughout the littoral zone. The survey used a combination of point-intercept and meander census style survey methods, utilizing a combination of visual assessment, raking, and SONAR down-imaging to determine species presence and respective densities at each waypoint. A small fraction of the total waypoints were extra sampling locations in shallow water, spaced closer together if a new species was located or if aquatic invasive plants were present. The invasive Variable leaf milfoil (*Myriophyllum heterophyllum*) was present at 8 waypoints, mostly in the northern part of the lake. There were other species of native *Myriophyllum* also present in several areas.

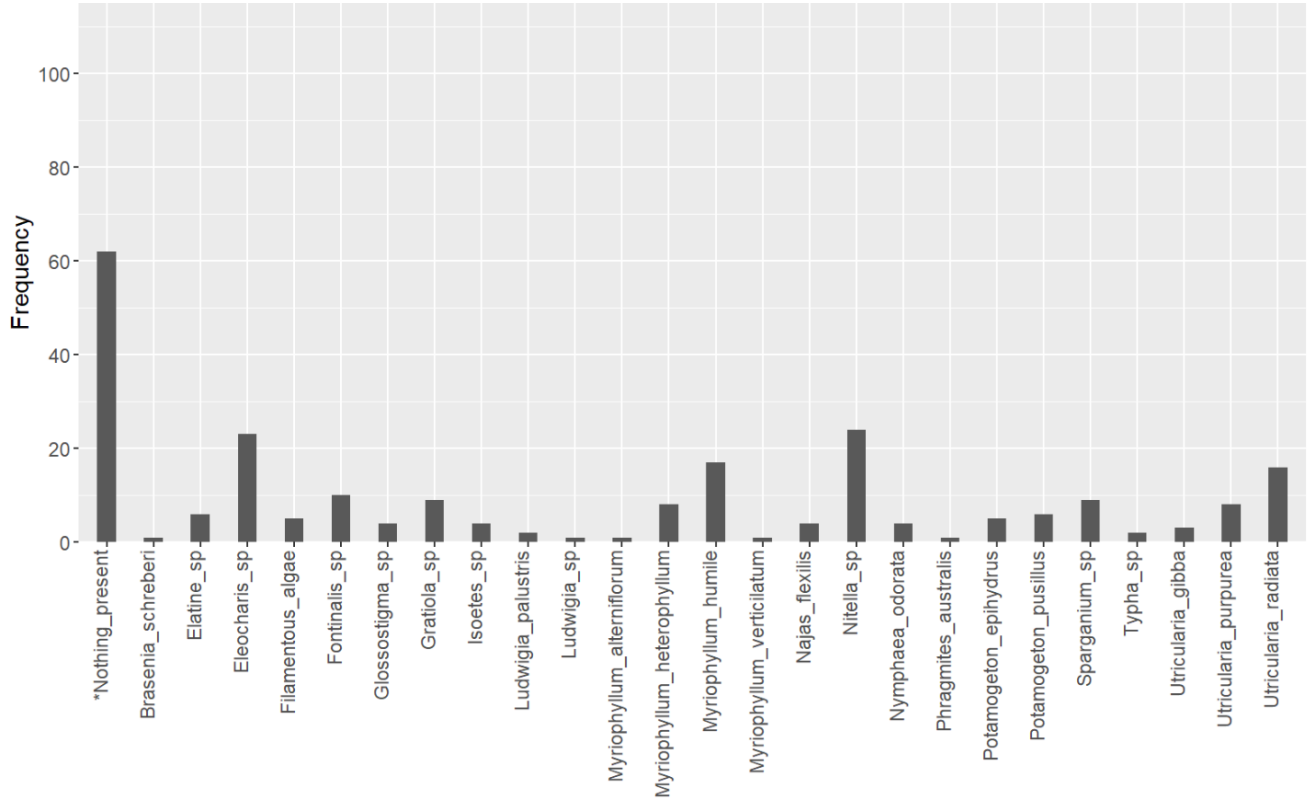
A large number of the survey waypoints had no aquatic plants (62 waypoints), primarily in water deeper than 7ft. In total 23 unique aquatic plant species were found, and two types of algae were noted. *Nitella sp.* is a type of plant-like macroalgae, and “Filamentous algae” refers to visible green algae present either on plants, as floating underwater blobs, or growing in a covering over the sediment surface.

A species frequency histogram and maps for each species is included in this summary letter. If you have additional questions regarding the results of this survey, please contact me via email at hillary.kenyon@gmail.com.

Thank you for the opportunity to help protect and manage Boone Lake.

Sincerely,
Hillary Kenyon
Certified Lake Manager & Limnologist
Northeast Aquatic Research LLC

Boone Lake September 20, 2021 Survey Results



Boone Lake 9-20-2021: Watershield (*Brasenia schreberi*)

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Species Density

● Very Sparse

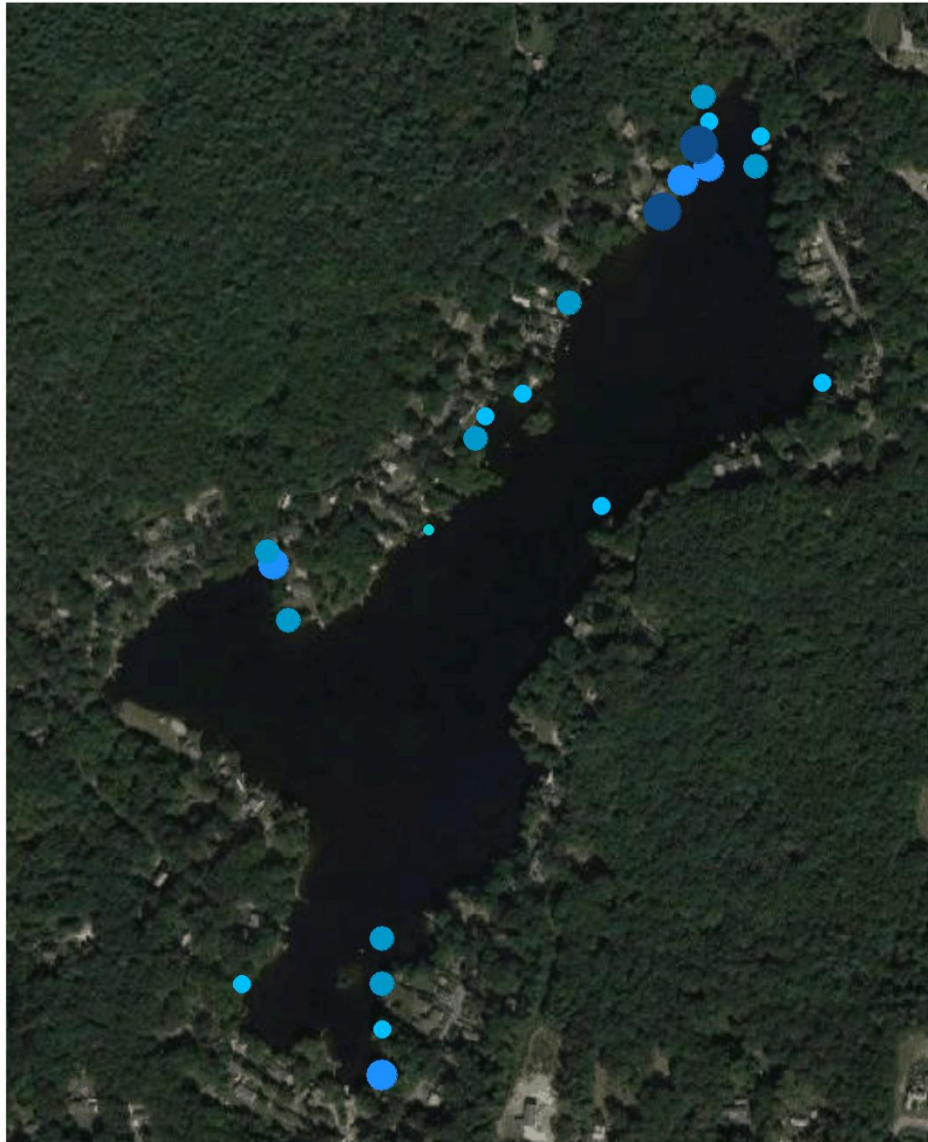
Boone Lake 9-20-2021: Waterwort (*Elatine sp.*)

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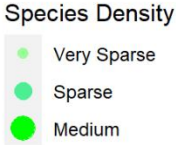


Boone Lake 9-20-2021: Sedge sp. (*Eleocharis sp.*)

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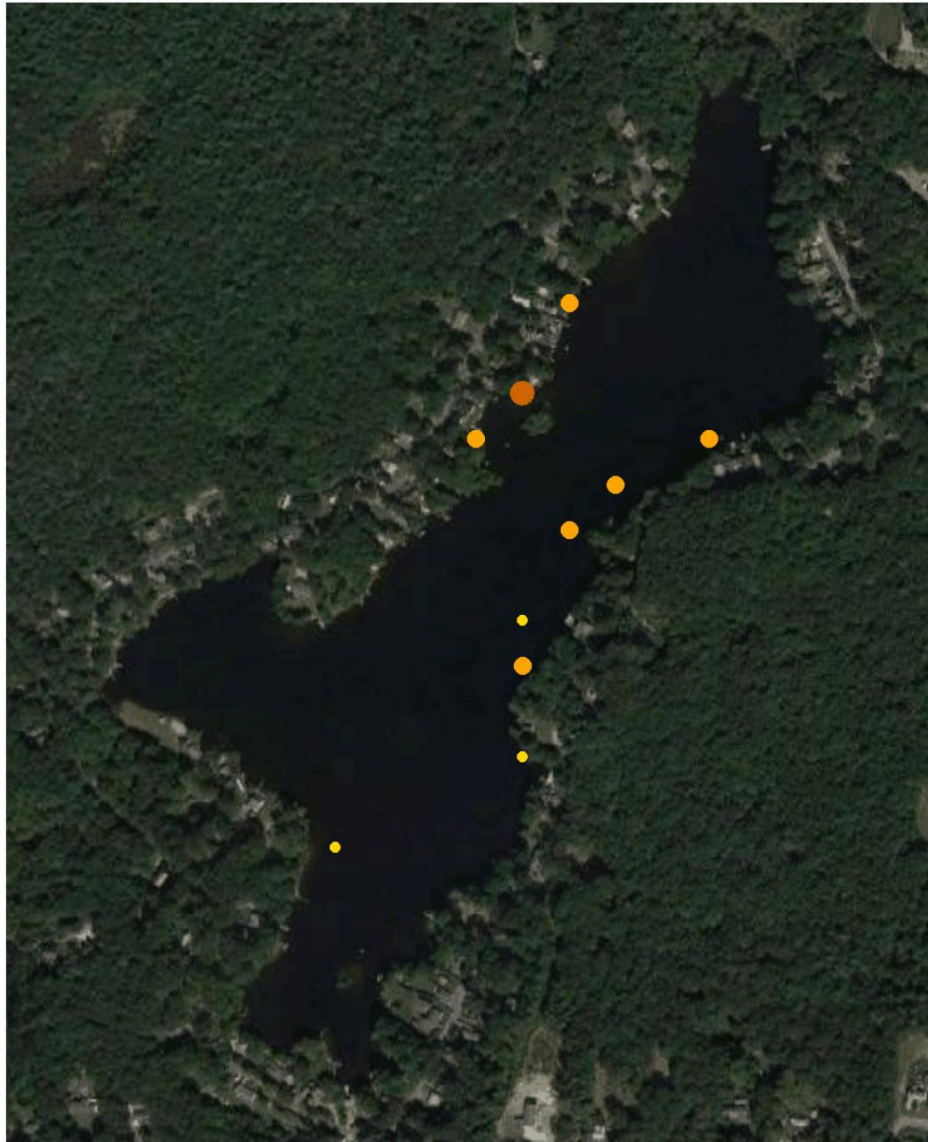


Boone Lake 9-20-2021: Filamentous algae
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Boone Lake 9-20-2021: Aquatic moss (*Fontinalis sp.*)

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Species Density

- Very Sparse
- Sparse
- Medium

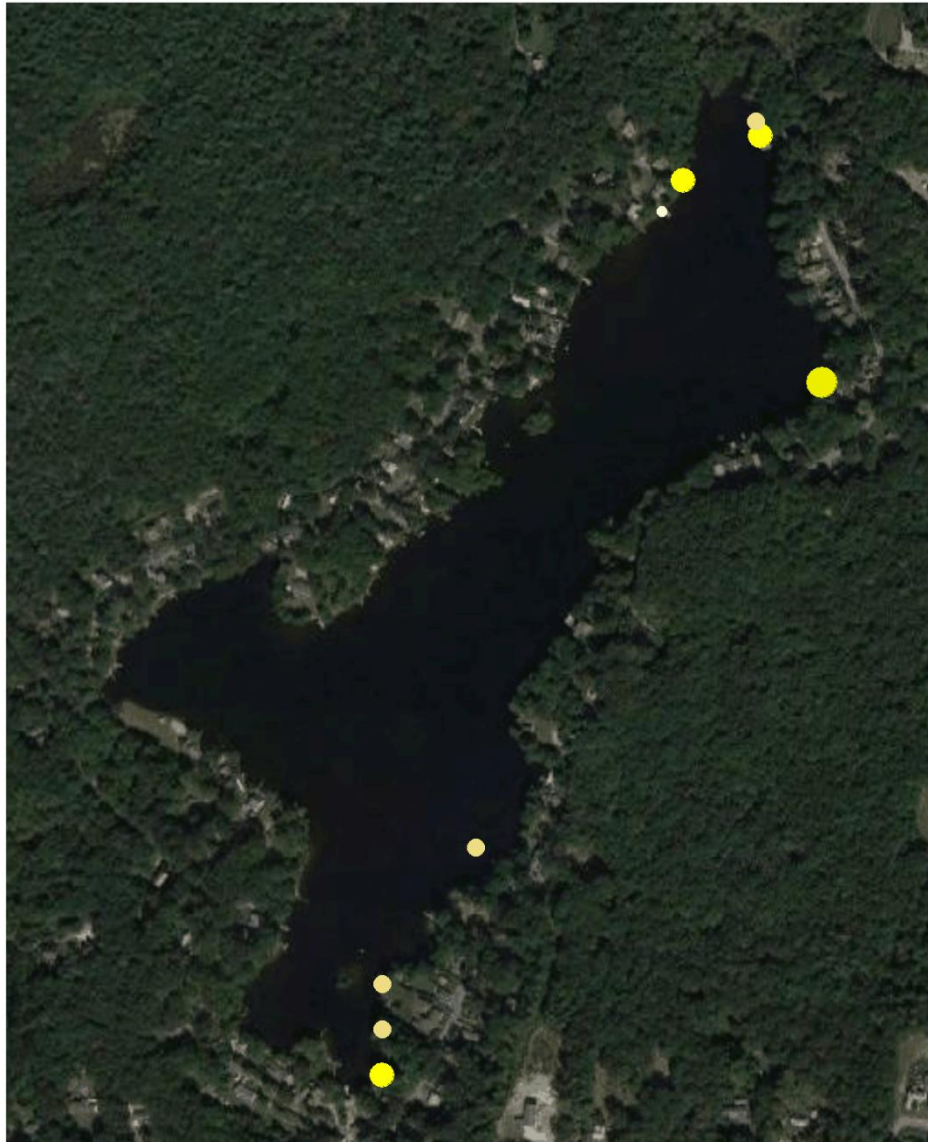
Boone Lake 9-20-2021: Mudmat sp. (*Glossostigma* sp.)

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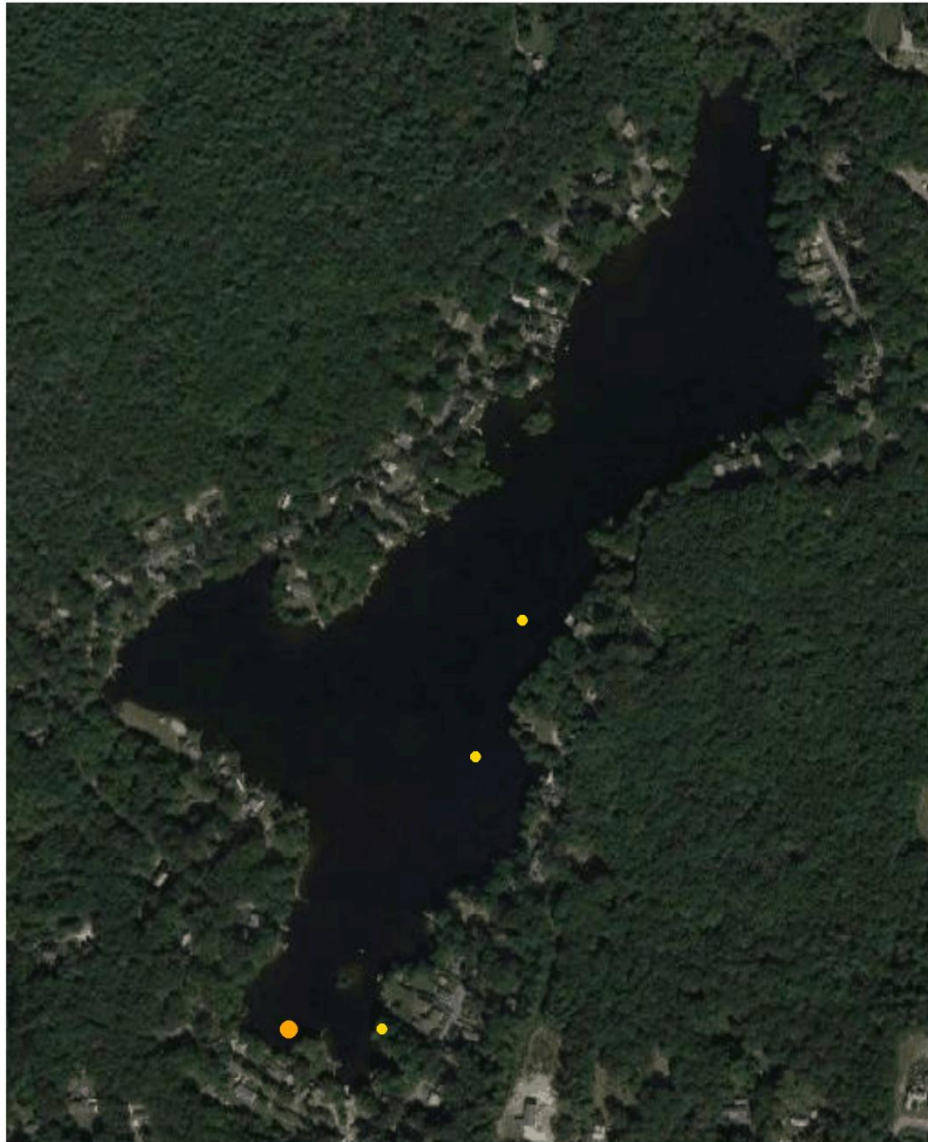
Boone Lake 9-20-2021: Hedge hyssop sp. (*Gratiola sp.*)

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Boone Lake 9-20-2021: Quillwort sp. (*Isoetes* sp.)

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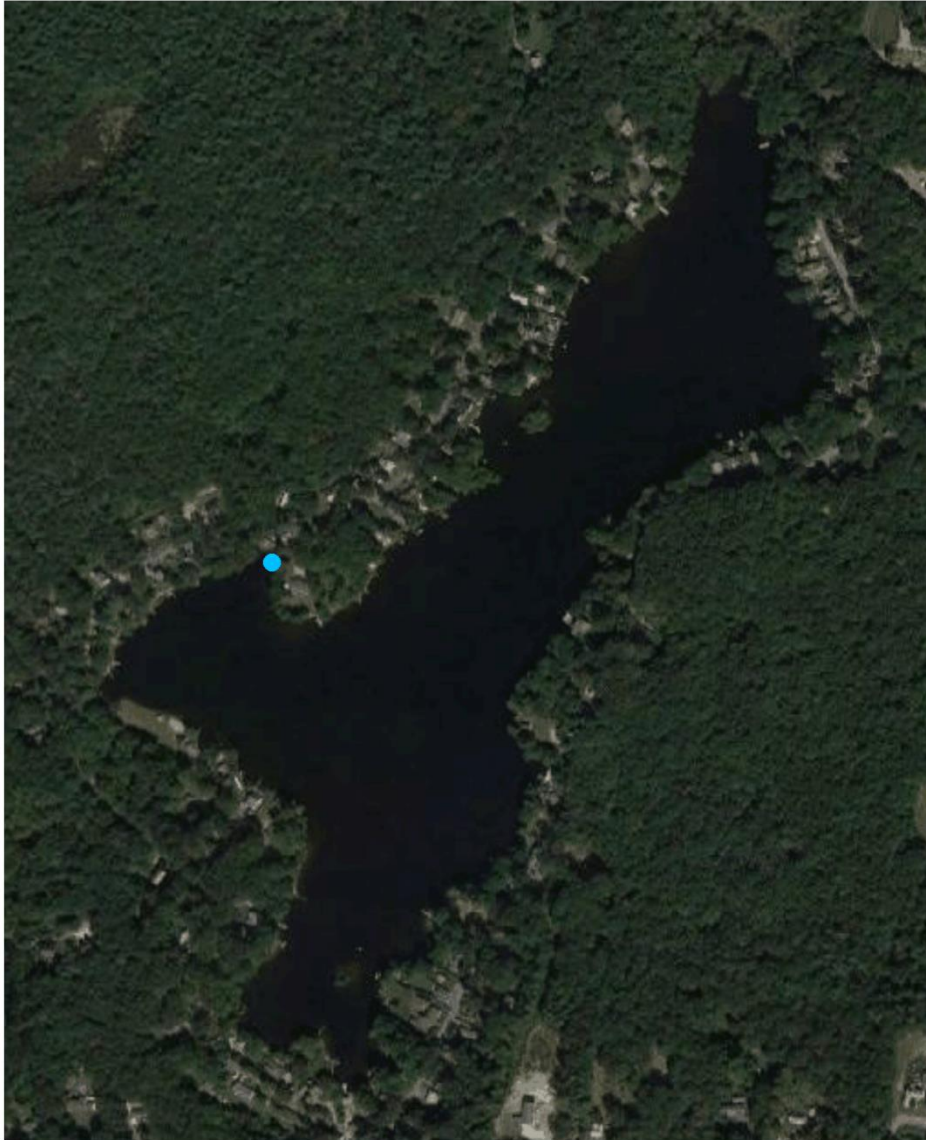
Boone Lake 9-20-2021: Water purslane (*Ludwigia palustris*)

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Boone Lake 9-20-2021: Water purslane sp. (*Ludwigia sp.*)

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Species Density

● Sparse

Boone Lake 9-20-2021: Alternate leaf milfoil (*Myriophyllum alterniflorum*)
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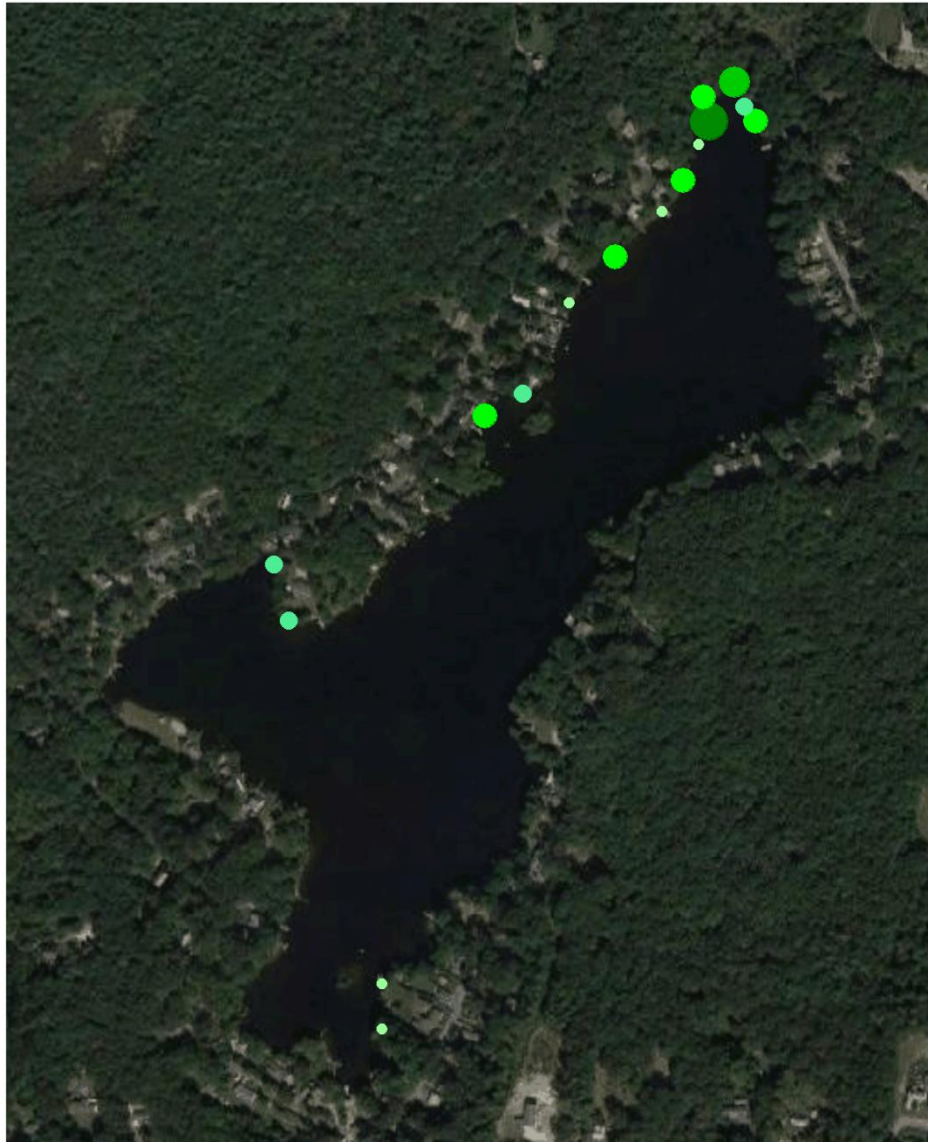
Species Density
Very Sparse

Boone Lake 9-20-2021: Variable leaf milfoil (*Myriophyllum heterophyllum*)
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Boone Lake 9-20-2021: Low water milfoil (*Myriophyllum humile*)

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Boone Lake 9-20-2021: Whorl-leaf milfoil (*Myriophyllum verticillatum*)

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Species Density

● Sparse

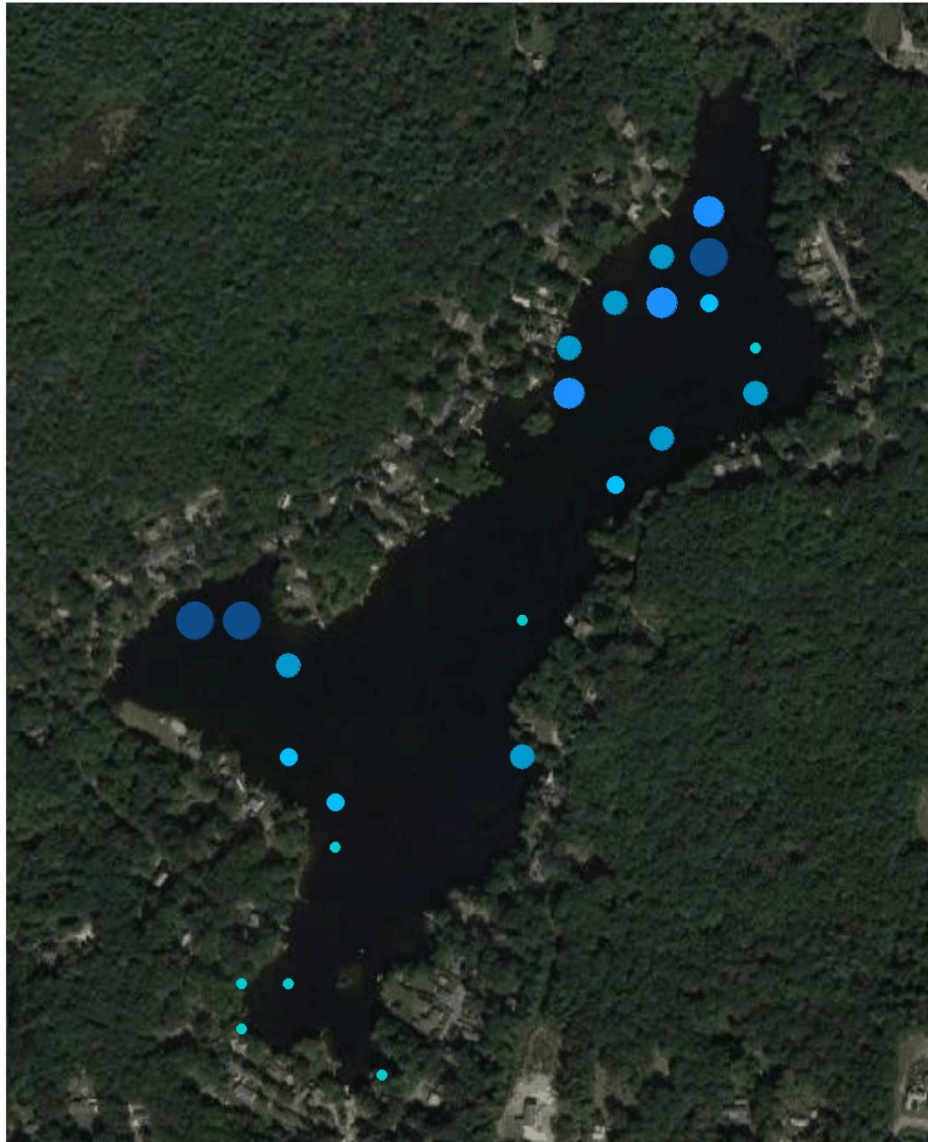
Boone Lake 9-20-2021: Nodding water nymph (*Najas flexilis*)

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Boone Lake 9-20-2021: Macroalgae sp. (*Nitella* sp.)

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Species Density

- Very Sparse
- Sparse
- Medium
- Dense
- Very Dense

Boone Lake 9-20-2021: White water lily (*Nymphaea odorata*)

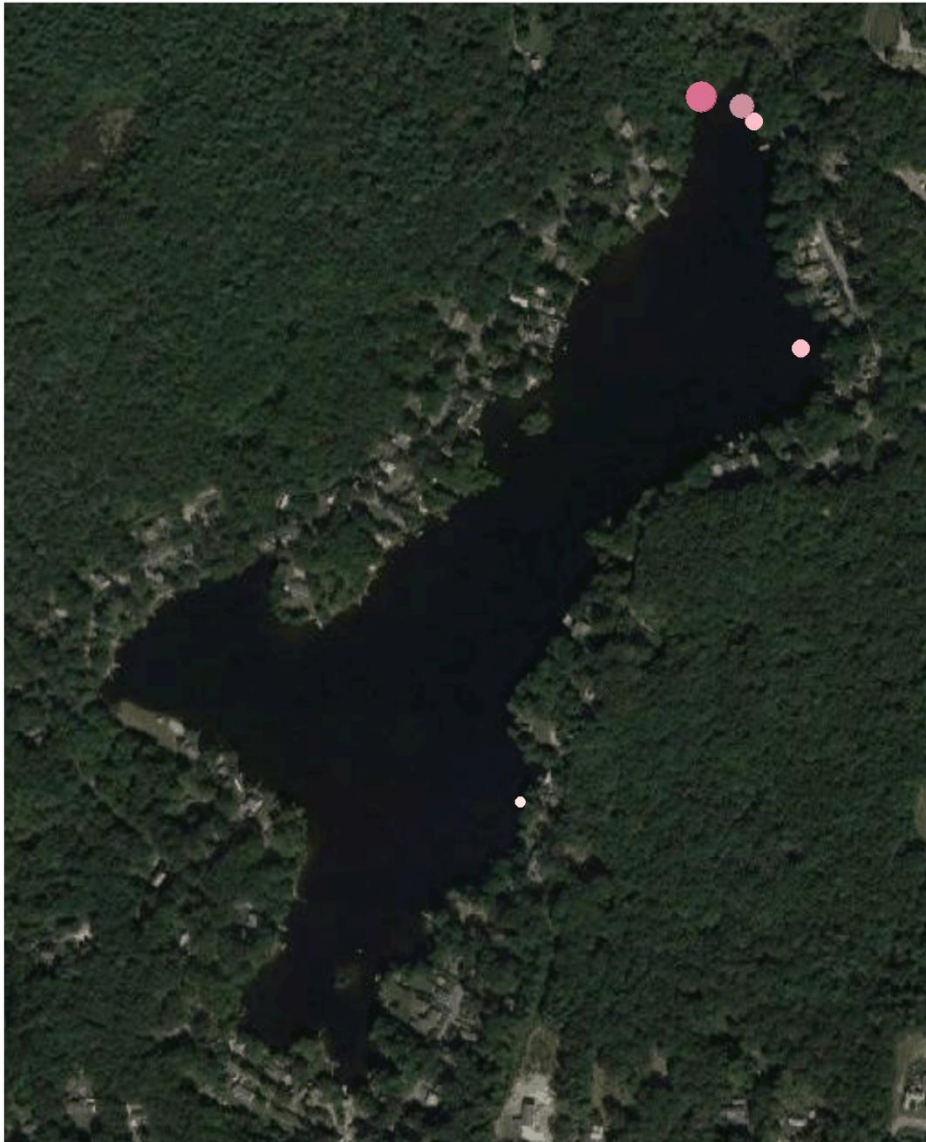
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Species Density

● Very Sparse

Boone Lake 9-20-2021: Ribbonleaf Pondweed (*Potamogeton epihydrus*)
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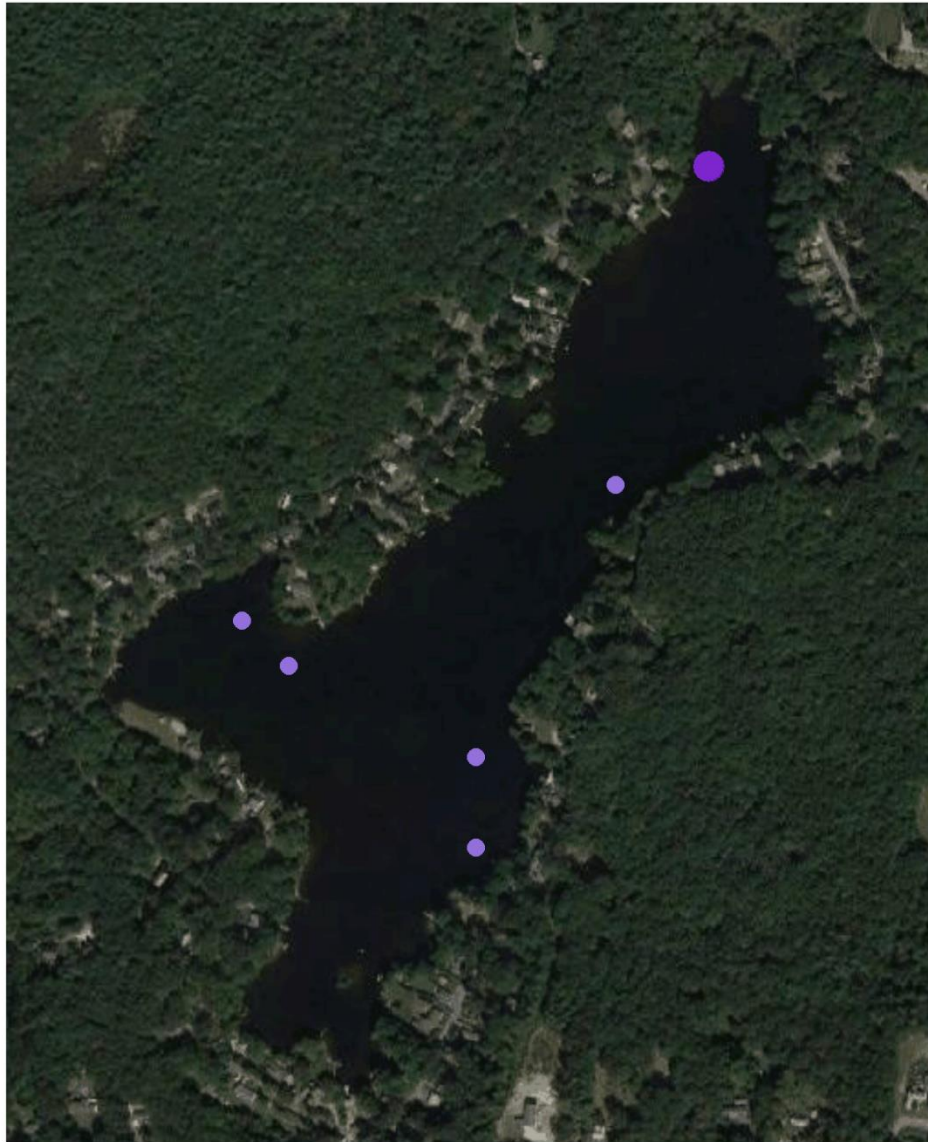


Species Density


- Very Sparse
- Sparse
- Medium
- Dense

Boone Lake 9-20-2021: Small Pondweed (*Potamogeton pusillus*)

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Species Density

-  Sparse
-  Dense

Boone Lake 9-20-2021: Invasive common reed (*Phragmites australis*)

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Species Density

● Sparse

Boone Lake 9-20-2021: Bur-reed sp. (*Sparganium sp.*)

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Species Density

Very Sparse

Sparse

Boone Lake 9-20-2021: Cattail sp. (*Typha sp.*)

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Species Density

- Very Sparse
- Sparse

Boone Lake 9-20-2021: Floating bladderwort (*Utricularia gibba*)

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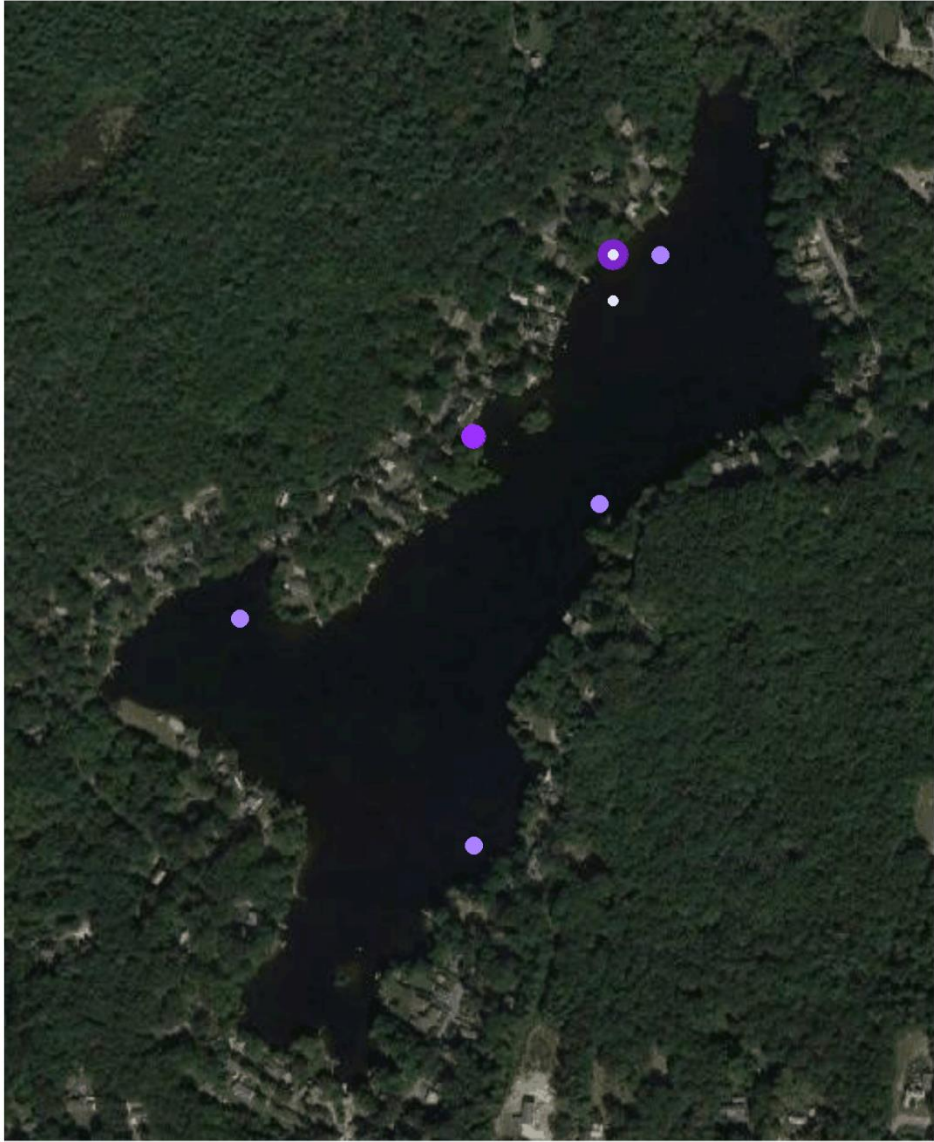


Species Density

Very Sparse

Boone Lake 9-20-2021: Eastern Purple bladderwort (*Utricularia purpurea*)

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Boone Lake 9-20-2021: Little floating bladderwort (*Utricularia radiata*)

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