

## Bantam Lake Morris/Litchfield, CT 2023 Annual Report

Prepared On: December 8, 2023

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In accordance with the contract between SOLitude Lake Management (SLM) and the Bantam Lake Protective Association (BLPA) for Bantam Lake in Morris/Litchfield, CT, the following document serves to provide this year's summary of the management program. No herbicide or algaecide treatments were conducted this year due to permitting issues, although as you will see below, the need for treatment was not indicated early in the season and recommended treatment areas later in the season were relatively limited. Cyanobacteria was of concern this season, but fortunately did not rise to severe levels.

### Survey Work

Three surveys of the various proposed management areas on Bantam Lake were conducted this year. The first survey was conducted on May 4th, primarily to identify areas of curly-leaf pondweed (*Potamogeton crispus*) that may be considered for herbicide treatment. The survey was conducted by SOLitude Biologists operating a 14-foot flat-bottomed boat and using a throw rake to gather vegetation not easily identified from the surface. Native vegetation species observed within the survey areas include: slender naiad (*Najas flexilis*), large-leaf pondweed (*Potamogeton amplifolius*), Robbins' pondweed (*Potamogeton robbinsii*), coontail (*Ceratophyllum demersum*), bladderwort species (*Utricularia spp.*), and white and yellow water lilies (*Nymphaea odorata* and *Nuphar variegata*, respectively). Invasive species observed include one trace patch of Eurasian watermilfoil (*Myriophyllum spicatum*), and a small sparse area of curly-leaf pondweed near the boat ramp. The invasive vegetation can be observed on **Figure 1**, attached. None of the proposed management areas exhibited any substantial growth of curly-leaf pondweed, therefore no initial treatment for this species was required this year.



The second survey was conducted on July 11th, using the same protocols as the early-season survey, to evaluate the presence of any nuisance weed growth in the mid-season time period. Typically in mid-summer, the nuisance species include but are not limited to slender naiad, large-leaf pondweed, and potentially non-native species such as Eurasian watermilfoil and fanwort (*Cabomba caroliniana*). One new location of Eurasian watermilfoil was observed in the middle northern cove at one of the inlets. Also, a large floating patch of several invasive species, including fanwort, Eurasian watermilfoil, and curly-leaf pondweed, in the upper northeastern corner near to the main inlet of the lake. The vegetation observed during the survey can be visualized on **Figure 2**, attached. At the time of the survey, many areas of slender naiad were at nuisance levels, but the management permit had not yet been issued. As a result, no treatments were completed.

The third survey was conducted on September 1st, to document the late-season vegetation assemblage, to determine potential future treatment areas, and to observe any increases in abundance or distribution of invasive species. This survey followed the same protocols as the previous two surveys. The most common species within the management areas was documented, and can be seen on **Figure 3**, attached. Many of the same native vegetation species were observed during the late-season survey as the previous two surveys. However, there was a small increase in areas of fanwort and Eurasian watermilfoil, and these observations of invasive species can be visualized on **Figure 4**, attached. This increase in invasive vegetation occurrences should be monitored closely next season to prevent infestation of any of the species observed.

### Herbicide/Algaecide Treatments

No herbicide or algaecide treatments were completed at Bantam Lake in 2023.

### Ongoing Management Recommendations

The Aquatic Management Program at Bantam Lake has worked extremely well to control non-native species and reduce the density of other nuisance species in the lake. The fact that no herbicide treatments were required in 2022 or 2023 is evidence of the ongoing success of this program and emphasizes the benefit of annual efforts to monitor conditions and conduct treatments as needed.

Despite finding minimal curly-leaf pondweed growth this year, it is still likely expected again in the spring. To continue to subdue and control the plant, May treatments are again recommended. We also recommend continuing to conduct a midsummer survey and treatment as needed.

Microscopic algae blooms continue to be a nuisance at Bantam Lake. To limit this, the BLPA is investigating several novel approaches including early season treatment with peroxide based algaecides aimed at controlling the reproductive cyanobacteria structures along the lake bottom. To address the root cause of the algae blooms, excessive phosphorus, the BLPA is also investigating the implementation of an alum treatment. Alum applications will reduce the phosphorus concentrations in the lake, which in turn will limit the amount of algae that can grow. Phosphorus is the limiting nutrient for algae growth, in most cases. In the meantime, continued copper sulfate treatments are recommended based on monitoring data, to control any blooms that occur.



Ongoing monitoring is important to the success of Bantam Lake. With continued monitoring, any nuisance or invasive plants can quickly be identified and remediated before they become established and widespread throughout the lake.

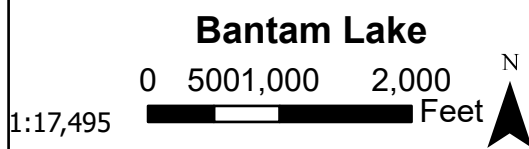
If you have any questions about the report, management plans, or recommendations, please reach out to our office. We appreciate your past collaboration and hope to work with you again in 2024.



### Legend

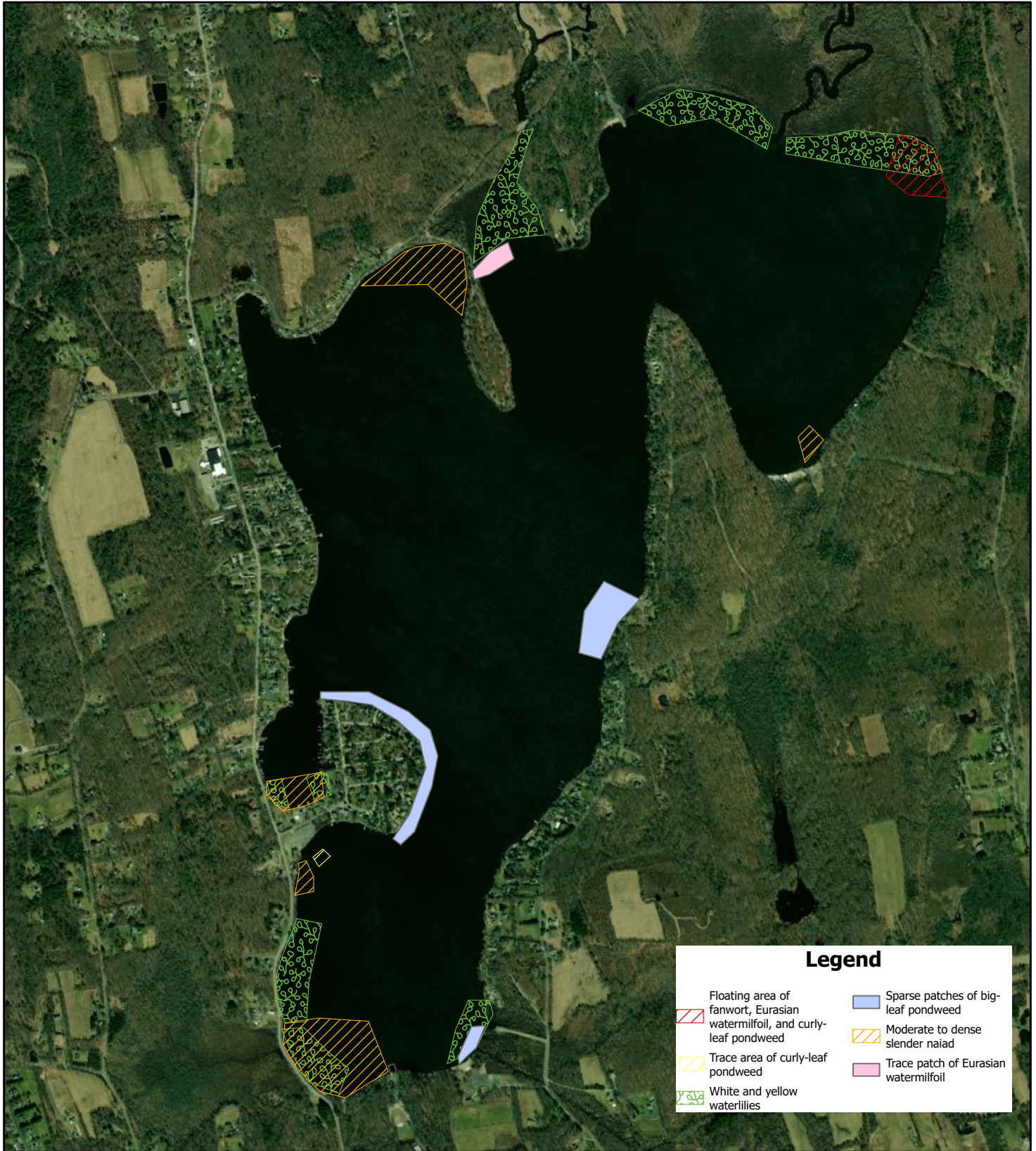
- Invasive vegetation
- Eurasian watermilfoil
  - ▲ Curly-leaf pondweed

Bantam Lake  
Morris/Litchfield, CT









Survey Date: 05/04/2023  
Map Date: 05/10/2023  
Prepared by: KV  
Office: SHREWSBURY, MA

**FIGURE 2: Bantam Lake Interim Visual Survey**  
 July 11, 2023



**Legend**

 Floating area of fanwort, Eurasian watermilfoil, and curly-leaf pondweed	 Sparse patches of big-leaf pondweed
 Trace area of curly-leaf pondweed	 Moderate to dense slender naiad
 White and yellow waterlilies	 Trace patch of Eurasian watermilfoil


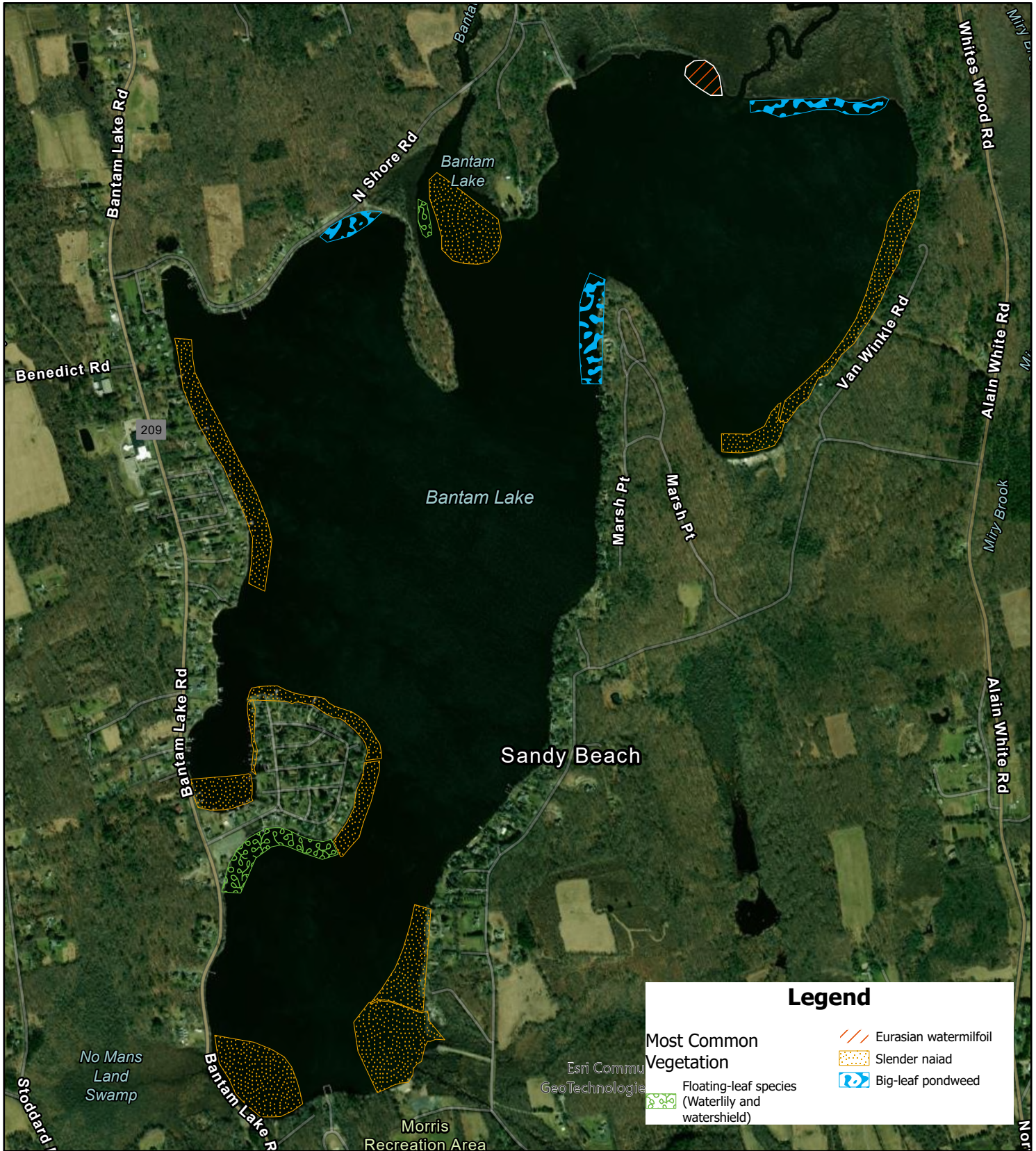
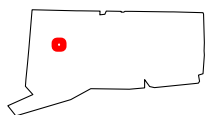
<p><b>Bantam Lake</b>                  Morris/Litchfield, CT</p>	<p><b>Bantam Lake</b></p> <p>1:18,689</p> <p>0 475 950 1,900                  Feet</p> <p style="text-align: right;">N  </p>	<p>Map Date: 7/18/2023                  File: BantamLk23_IntVeg                  Prepared by: KV                  Office: Shrewsbury, MA</p>
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Figure 3: Bantam Lake Post-Management Visual Survey  
Most Common Vegetation by Area



Bantam Lake  
Morris/Litchfield, CT



**Bantam Lake**

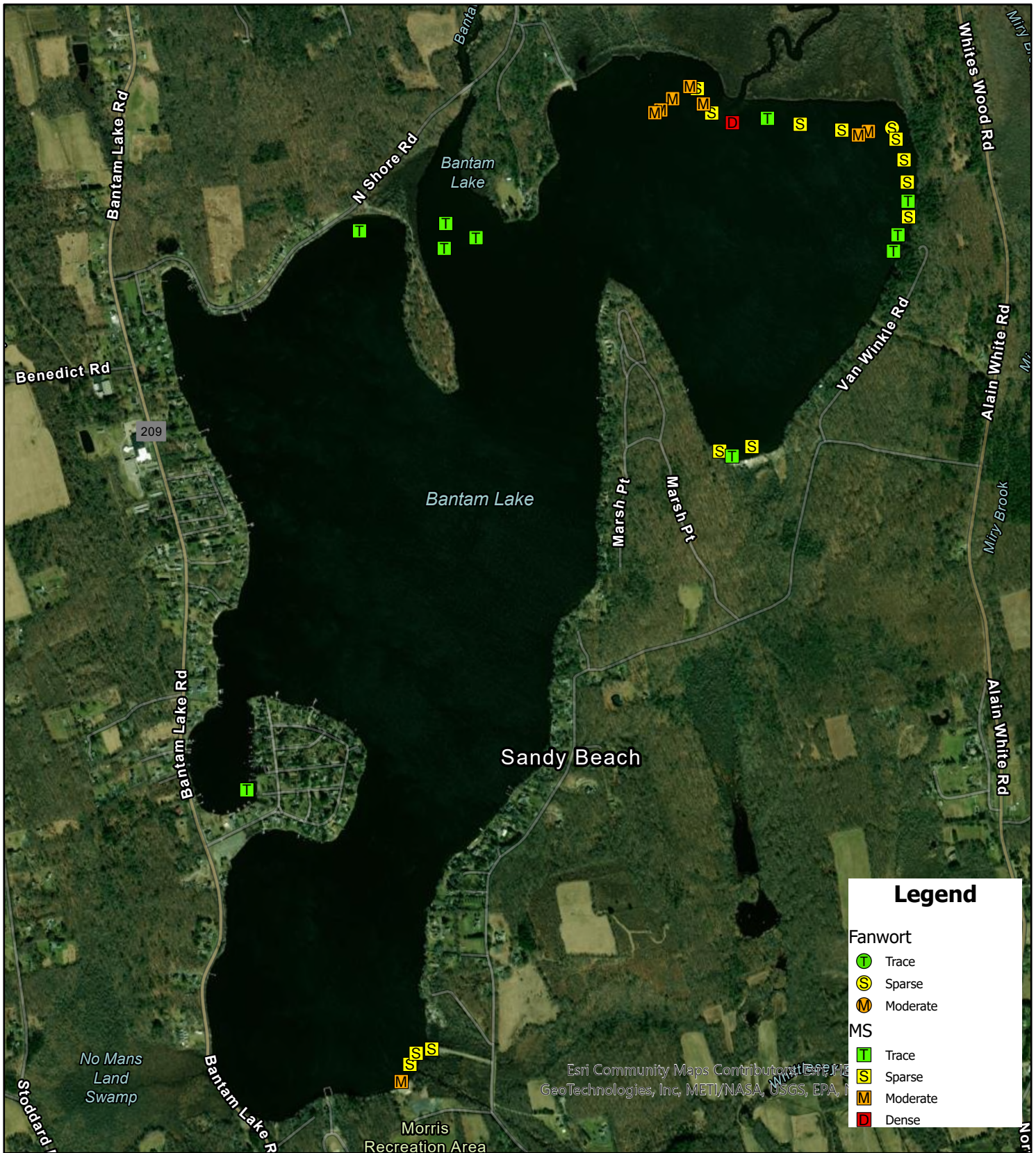
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Survey Date: 09/01/2023  
Map Date: 09/28/2023  
Prepared by: KV  
Office: SHREWSBURY, MA

# Figure 4: Bantam Lake Post-Management Visual Survey Density and Distribution of Invasive Vegetation



**Bantam Lake**  
Morris/Litchfield, CT

**Bantam Lake**

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Feet

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