

2020 DWR Submerged Aquatic Vegetation Survey Report Lake Devin

Introduction

Hydrilla, (*Hydrilla verticillata*), is one of the most economically and ecologically damaging invasive plants in the world and can lead to many undesirable outcomes. These include the forming of dense monocultures that crowd out native vegetation, reducing the habitat quantity and quality for aquatic organisms, clogging of municipal water intakes and severely impacting recreational activities such as boating and swimming. For these reasons, it is considered a federal and state noxious weed which prohibits the import, sale and movement of Hydrilla without a permit. Hydrilla was first reported in Lake Devin in 2019. Since then the Aquatic Weed Program (AWCP) and the City of Oxford have worked together to manage Hydrilla in Lake Devin. More information concerning past management activities can be found on the AWCP online database ([NCDEQ-DWR :: Aquatic Weed Control \(ncwater.org\)](https://ncdeq-dwr.org/AquaticWeedControl)).

Methods

Three rake tosses were conducted at pre-determined points throughout the lake to determine presence/absence of SAV as well as quantify rake coverage. Additionally, a recording fathometer (SONAR) was used to map and record the bottom. The SONAR data was uploaded to a third-party company, Biobase, to quantify the depth and biovolume data. Biovolume is a percentage of the water column taken up by vegetation, when vegetation is present. All of this was then combined with the rake-toss data using GIS software to estimate coverage. The survey was completed on 10/28. Approximately 10 miles of SONAR were logged.

Results

A total of 45 points were sampled during 2020. Of those 45 points, Hydrilla was found at 35, or 78%, of them (Figure 1). This was a decrease from 2019 where Hydrilla was found at all 45 points (Figure 2). The overall estimated coverage of Hydrilla is 9 acres (Figure 3). This is a decrease from 2019 where the estimated coverage of Hydrilla was 23 acres (Figure 4). There was no other SAV found during the survey. However, the macroalga Chara (*Chara spp.*) was found during the survey. It was found at 1, or 2%, of the points (Figure 5). Other aquatic vegetation observed during the survey was Creeping Water Primrose (*Ludwigia grandiflora*) and Common Rush (*Juncus spp.*). Creeping Water Primrose was found mostly at the northern end of the lake (Figure 6) whereas the Rush was found along the shoreline with the boat ramp.

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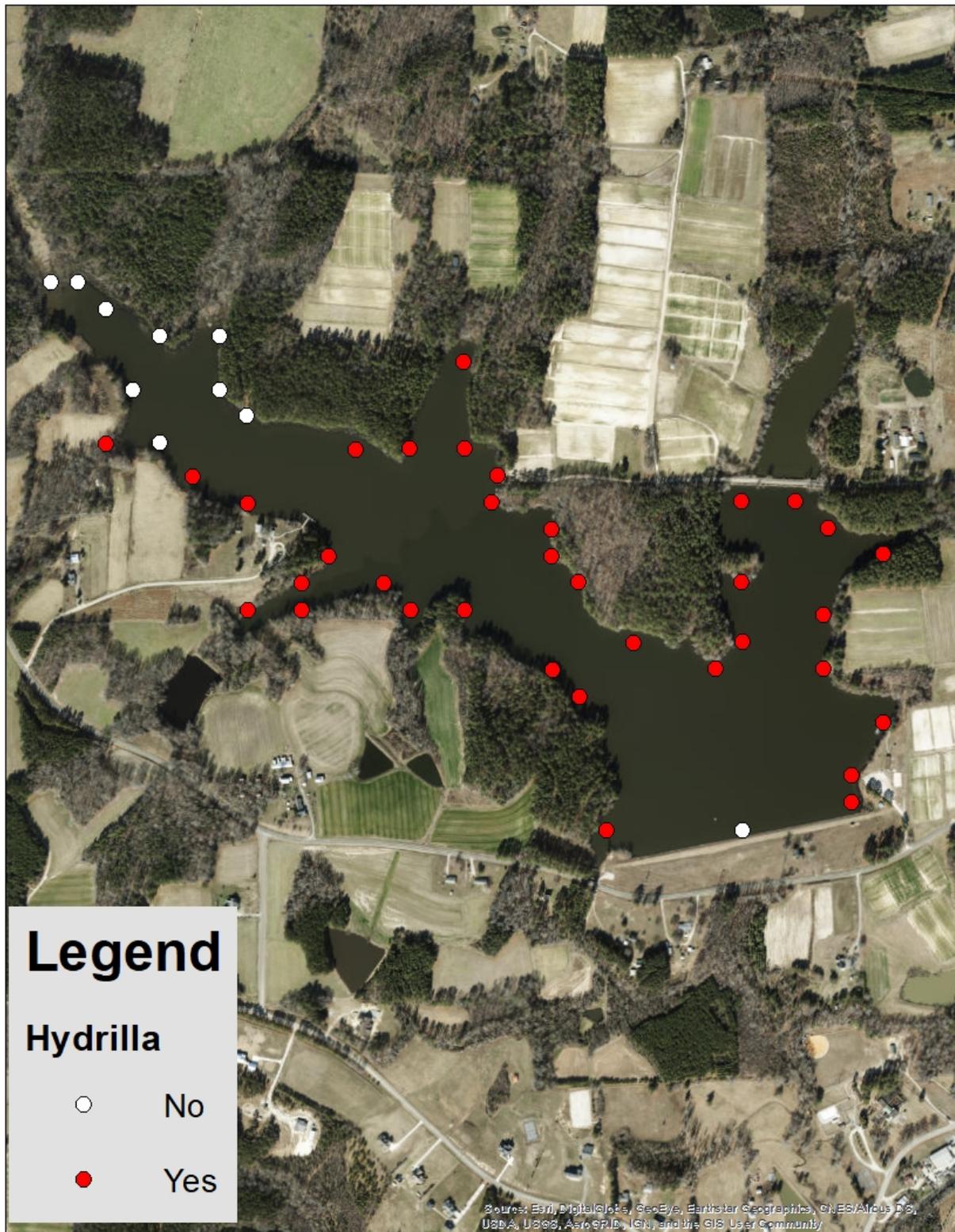


Figure 1. Map showing presence/absence of Hydrilla in Lake Devin in 2020.

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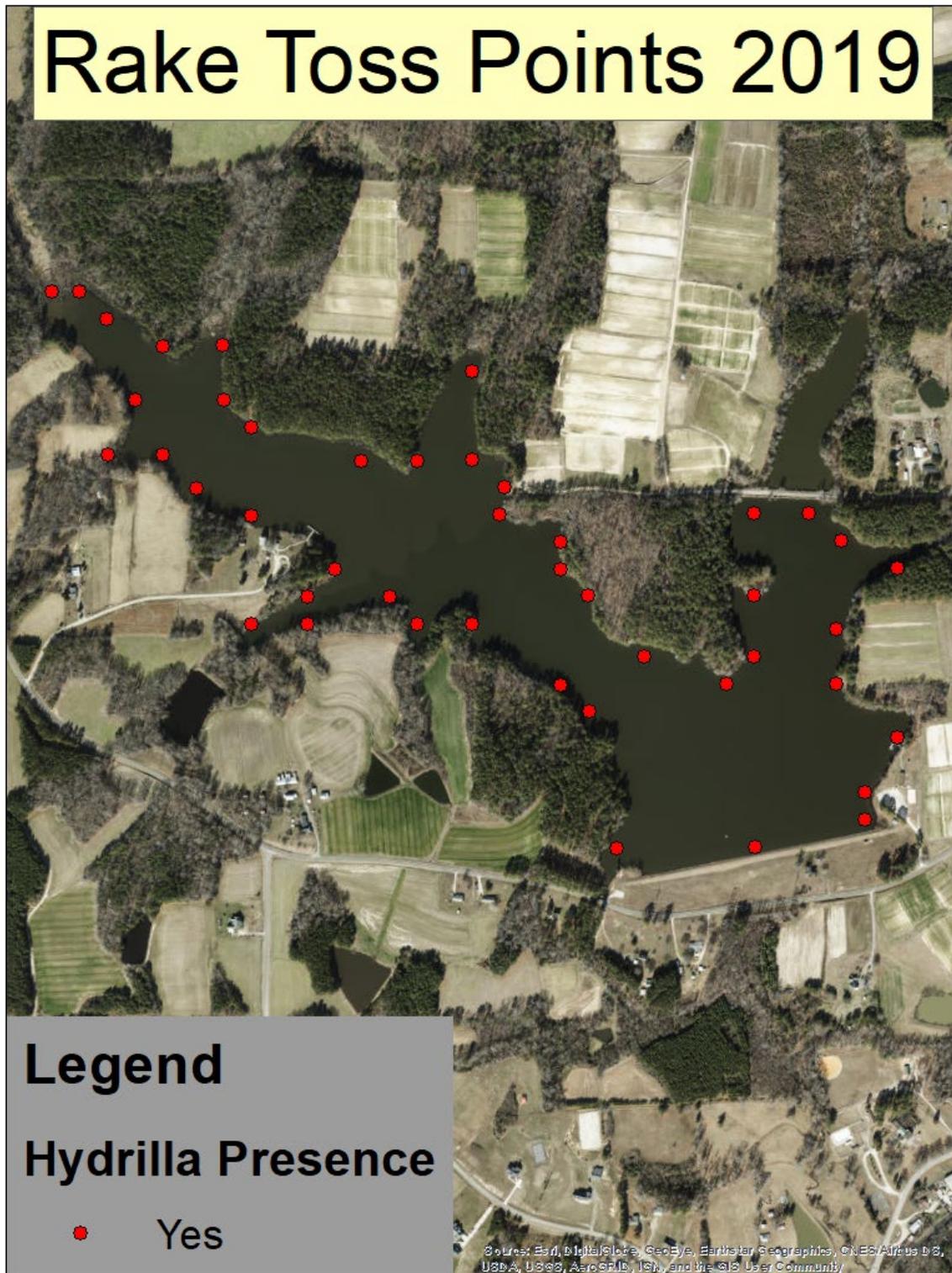


Figure 2. Map showing presence/absence of Hydrilla in Lake Devin in 2019.

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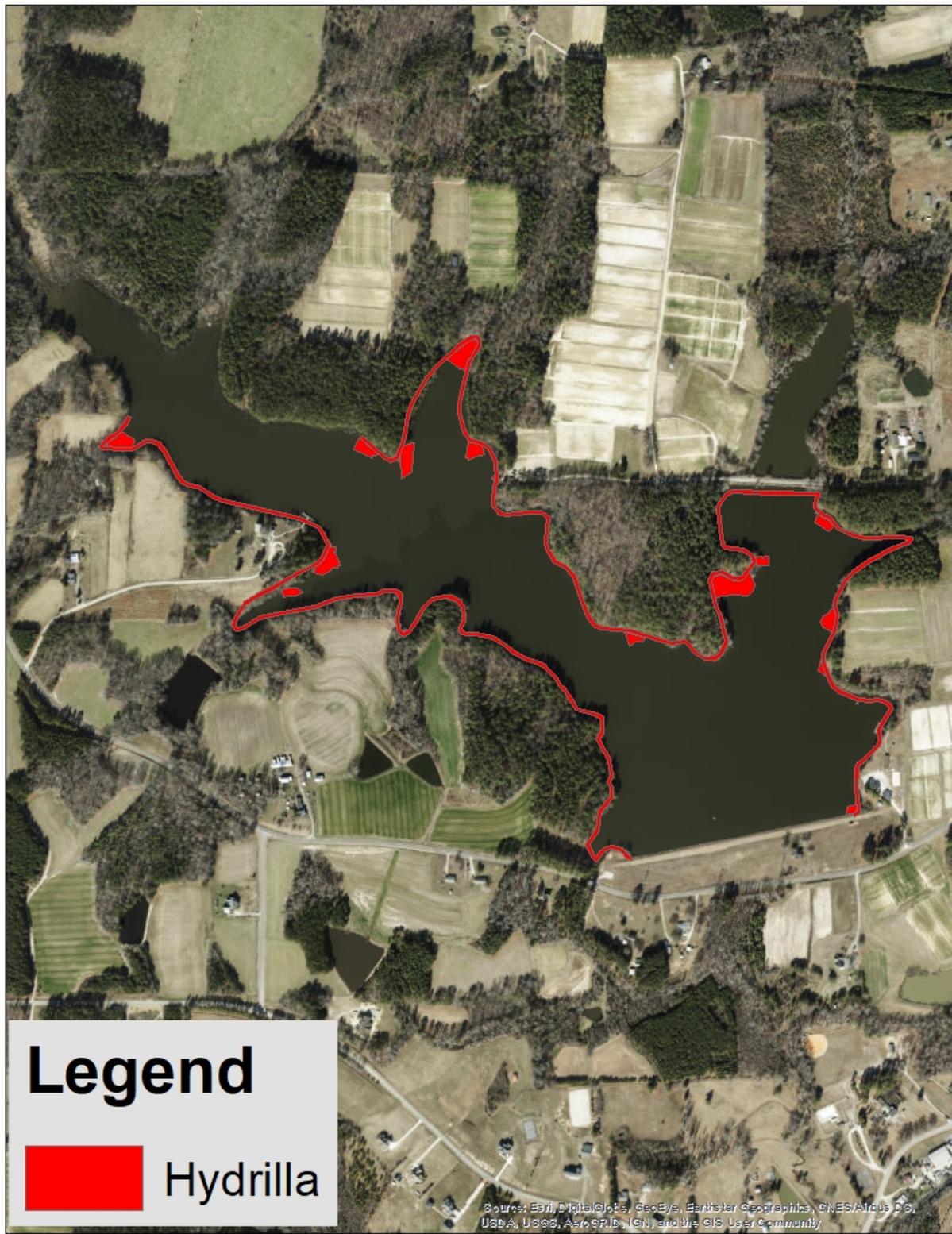


Figure 3. Map showing Hydrilla coverage at Lake Devin in 2019 (~9 acres).

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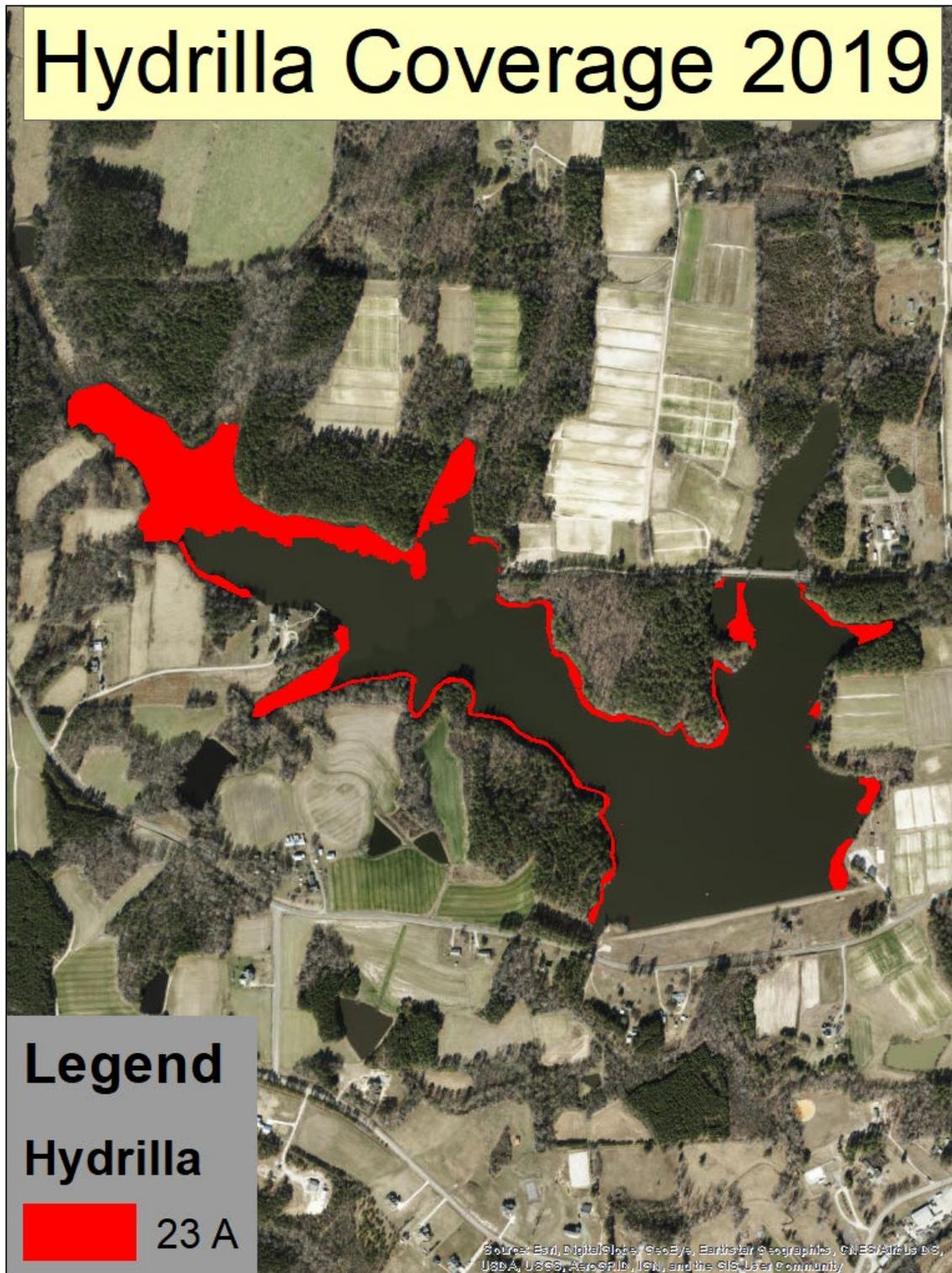


Figure 4. Map showing Hydrilla coverage at Lake Devin in 2019 (~23 acres).

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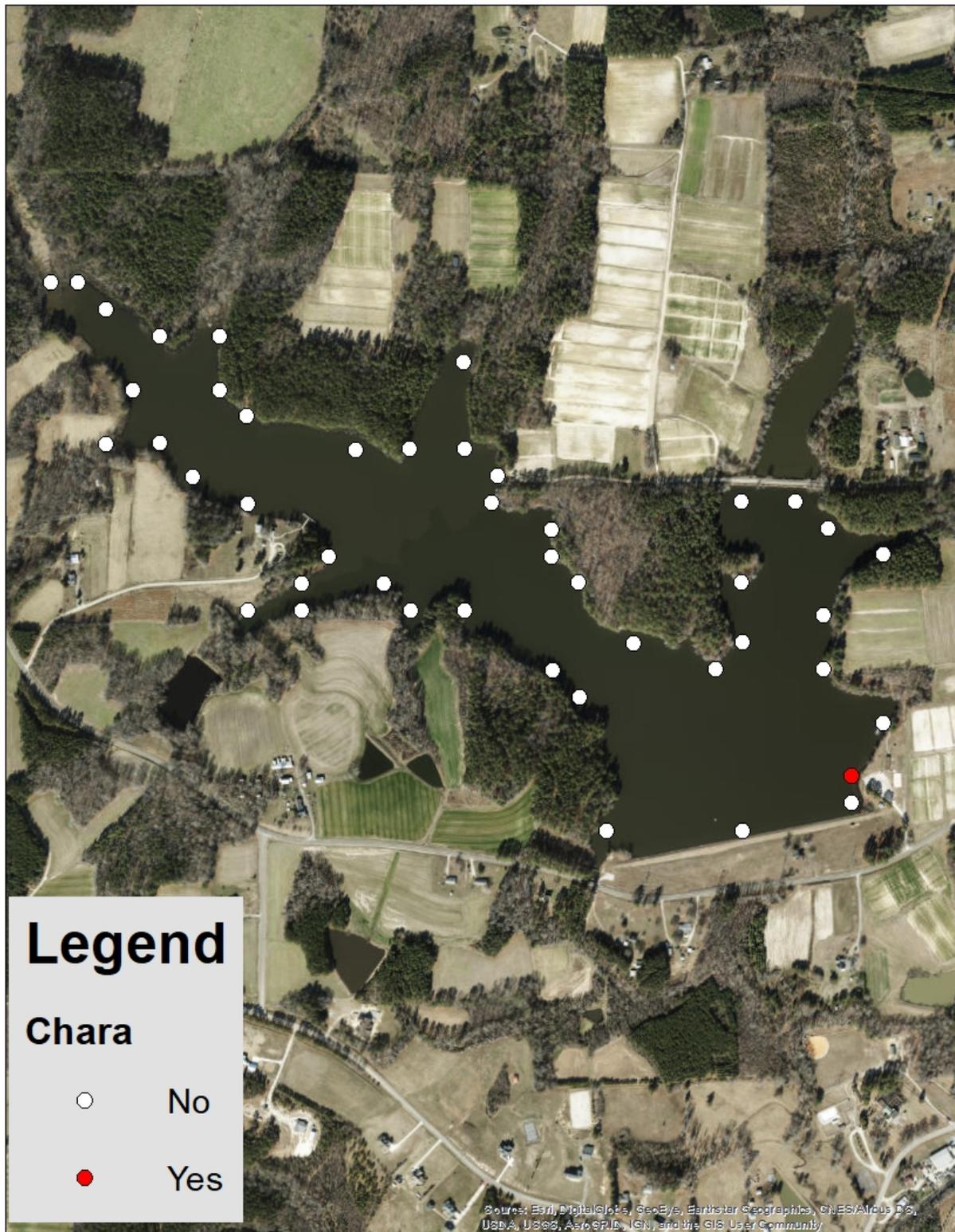


Figure 5. Map showing presence/absence of Chara in Lake Devin in 2020.

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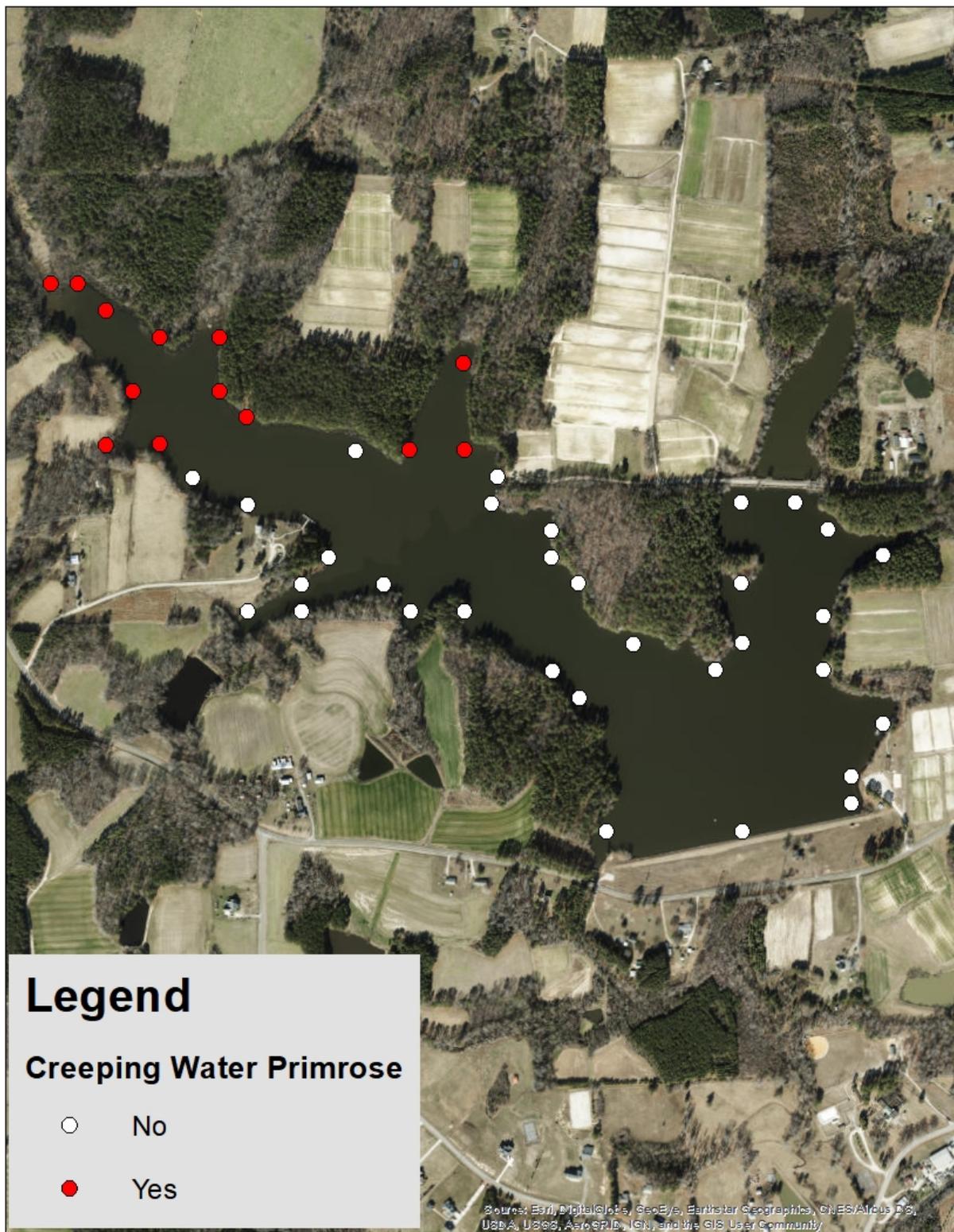


Figure 6. Map showing presence/absence of Creeping Water Primrose in Lake Devin in 2020.