

2020 DWR Submerged Aquatic Vegetation Survey Report

Buckhorn Lake

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 Buckhorn Lake in 2008. Since then the Aquatic Weed Program (AWCP) and the City of Wilson have worked together to manage Hydrilla. More information concerning past management activities can be found on the AWCP online database ([NCDEQ-DWR :: Aquatic Weed Control \(ncwater.org\)](https://ncdeq-dwr.gov/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 9/2 – 9/3, 9/11 and 9/14. Approximately 46 miles of SONAR were logged.

Results

A total of 73 points were sampled during 2020. Of those 73 points, Hydrilla was found at 2, or 3%, of them (Figure 1). This was a slight decrease from 2019 where Hydrilla was found at 5, or 7%, of the points. The estimated Hydrilla coverage in 2020 is 0.7 acres (Figure 2). The only other SAV that was found during the survey was Proliferating Spikerush, *Eleocharis baldwinii*. It was found at 23, or 32%, of the points (Figure 3). The estimated coverage is 14 acres (Figure 4). The cyanobacteria Lyngbya (*Microseira wollei*) was also found during the survey. It was found at 22, or 30%, of the points (Figure 5). This was a slight decrease from 2019 where it was found at 35, or 48%, of the points. The estimated coverage is 32 acres (Figure 6). Other vegetation that was found during the survey was Alligatorweed (*Alternanthera philoxeroides*), Creeping water primrose (*Ludwigia grandiflora*) and cattail (*Typha spp.*).

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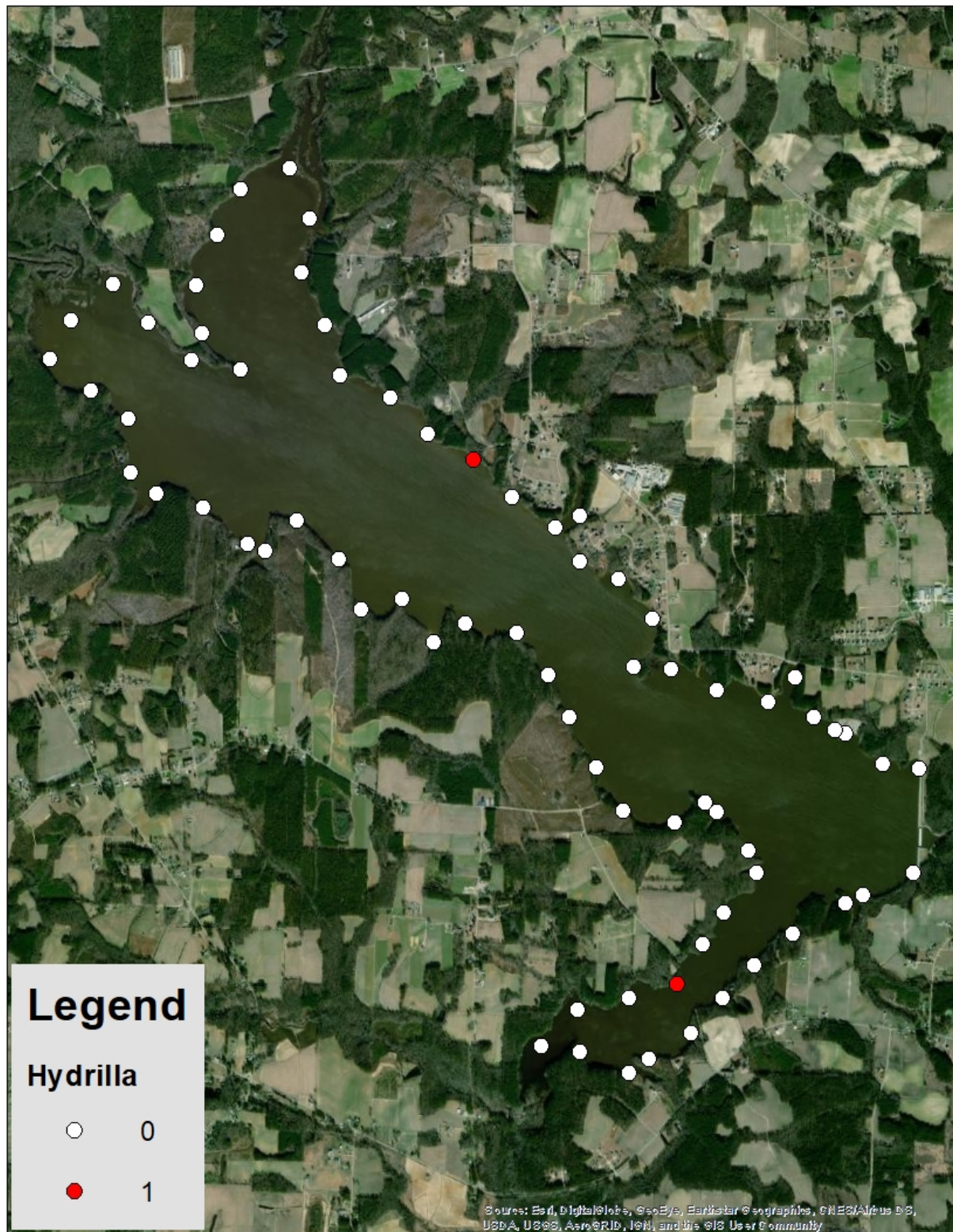


Figure 1. Map showing presence/absence of Hydrilla in Buckhorn Lake.

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Figure 2. Map showing Hydrilla coverage at Buckhorn Lake (0.7 A).

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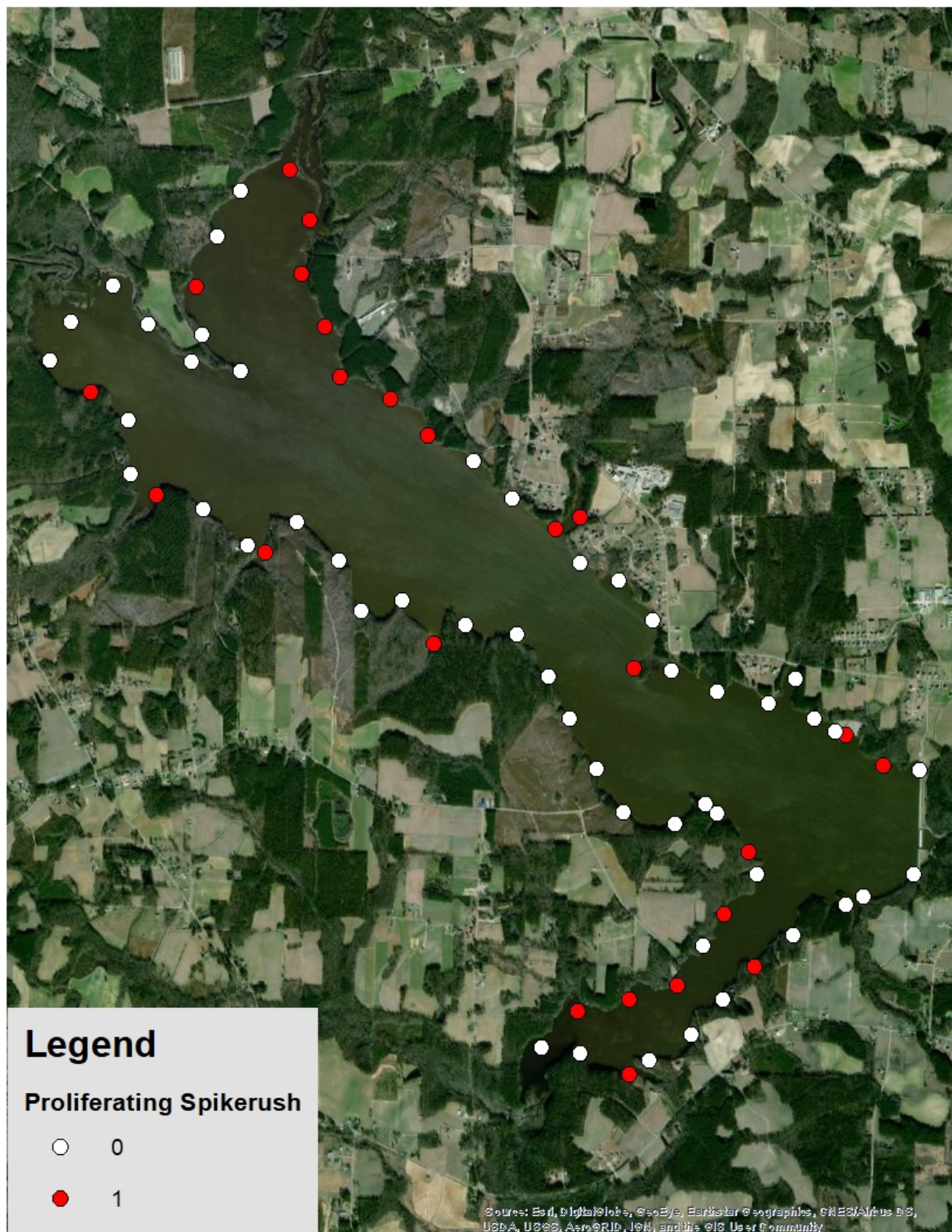


Figure 3. Map showing presence/absence of Proliferating Spikerush.

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Figure 4. Map showing coverage of Proliferating Spikerush (14 acres).

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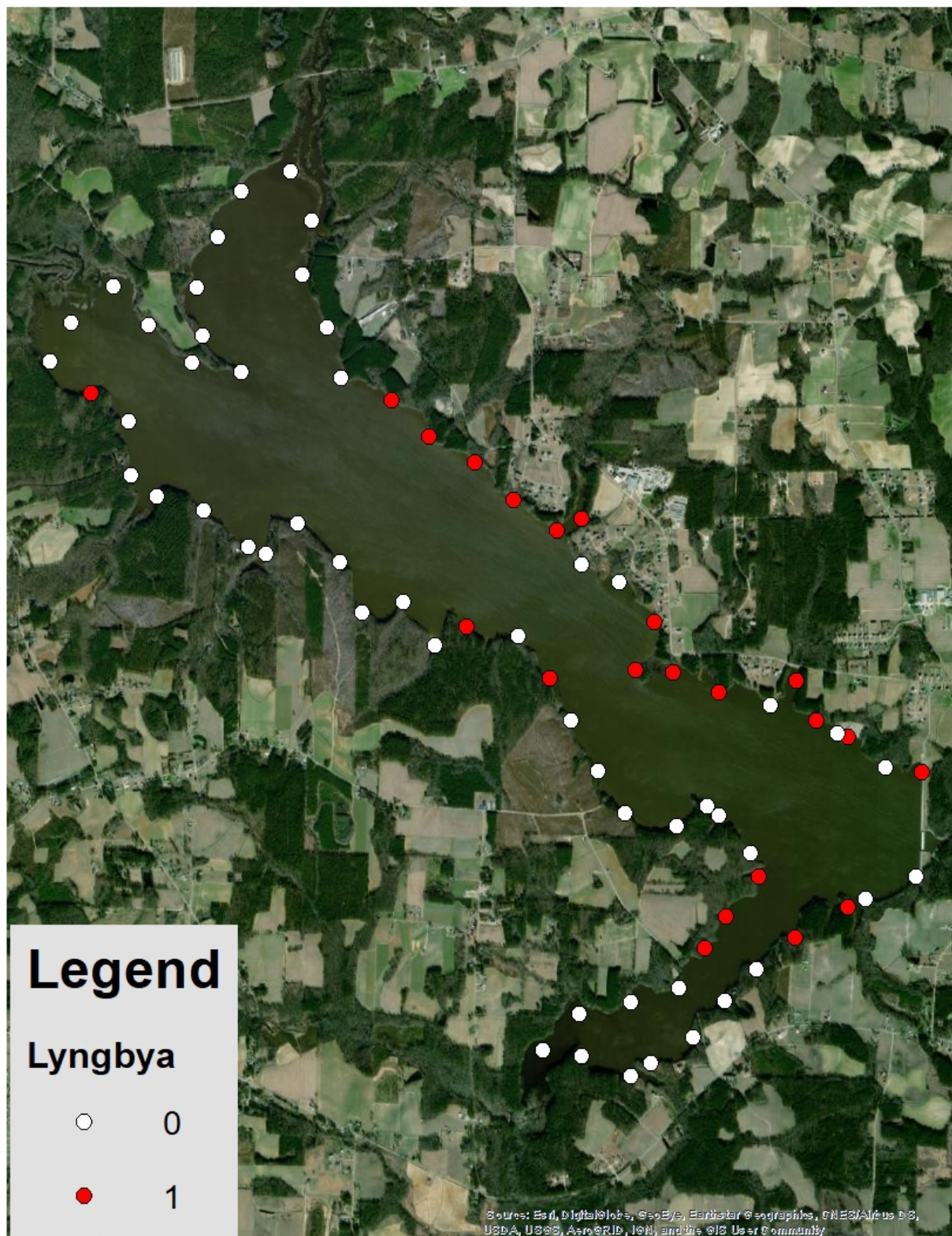


Figure 5. Map showing presence/absence of Lyngbya in Buckhorn Lake.

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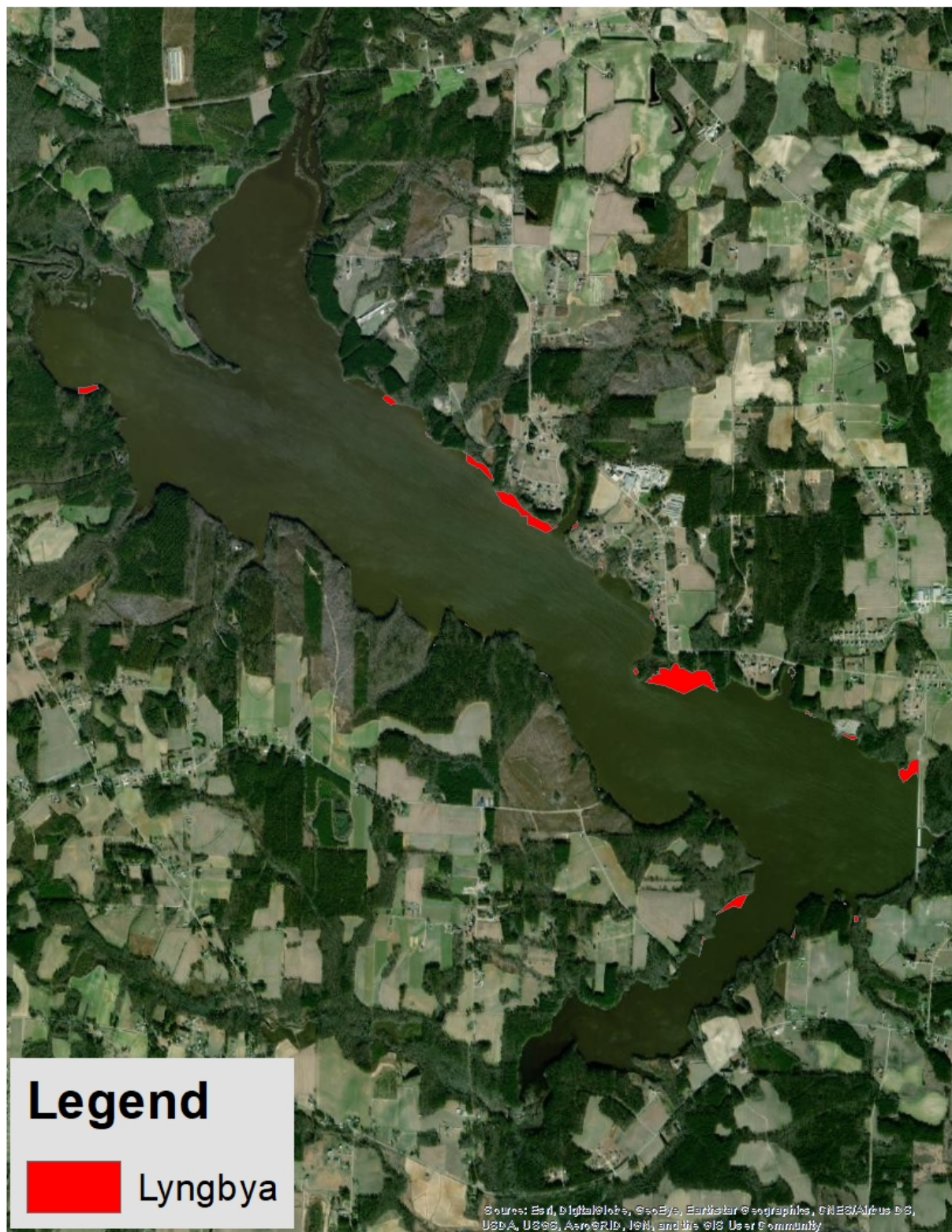


Figure 6. Map showing coverage of Lyngbya in Buckhorn Lake (32 acres).