

# 2020 Cube Hydro Submerged Aquatic Vegetation Survey Report

## NC Division of Water Resources

### 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 Cube Hydro lakes in 2011. Since then multiple partners including the Aquatic Weed Control Program (AWCP), the NC Wildlife Resources Commission (WRC), and Cube Hydro have worked together to manage Hydrilla in the reservoirs. 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 along the shoreline 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 of Falls Reservoir was completed on 10/8. The surveys of Harper Hearn and Ski Pond were completed on 10/16.

### Results

#### Harper Hearn

A total of 15 points were sampled during 2020. There was no Hydrilla found at any of the sample points (Figure 1). There was no other SAV found during the survey. Water Willow (*Justicia americana*) was found growing along much of the shoreline.

#### Ski Pond

A total of 10 points were sampled during 2020. There was no Hydrilla found at any of the sample points (Figure 2). There was no SAV found during the survey. Water Willow (*Justicia americana*) was found growing along a majority of the shoreline (Figure 3).

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### Falls Reservoir

A total of 28 points were sampled during 2020. There was no Hydrilla found at any of the sample points (Figure 4). The only other SAV found during the survey was the aquatic moss Fontinalis (*Fontinalis spp.*). It was found at 1, or 4%, of the rake toss points (Figure 5). The cyanobacteria Lyngbya, *Lyngbya wollei*, was also found during the survey. It was found at 7, or 25%, of the sample points (Figure 6). The estimated coverage of Lyngbya is 1.5 acres (Figure 7). Water Willow (*Justicia americana*) was also found along much of the shoreline (Figure 8).

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Figure 1. Map showing absence of Hydrilla in Harper Hearn.

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Figure 2. Map showing absence of Hydrilla at Ski Pond.

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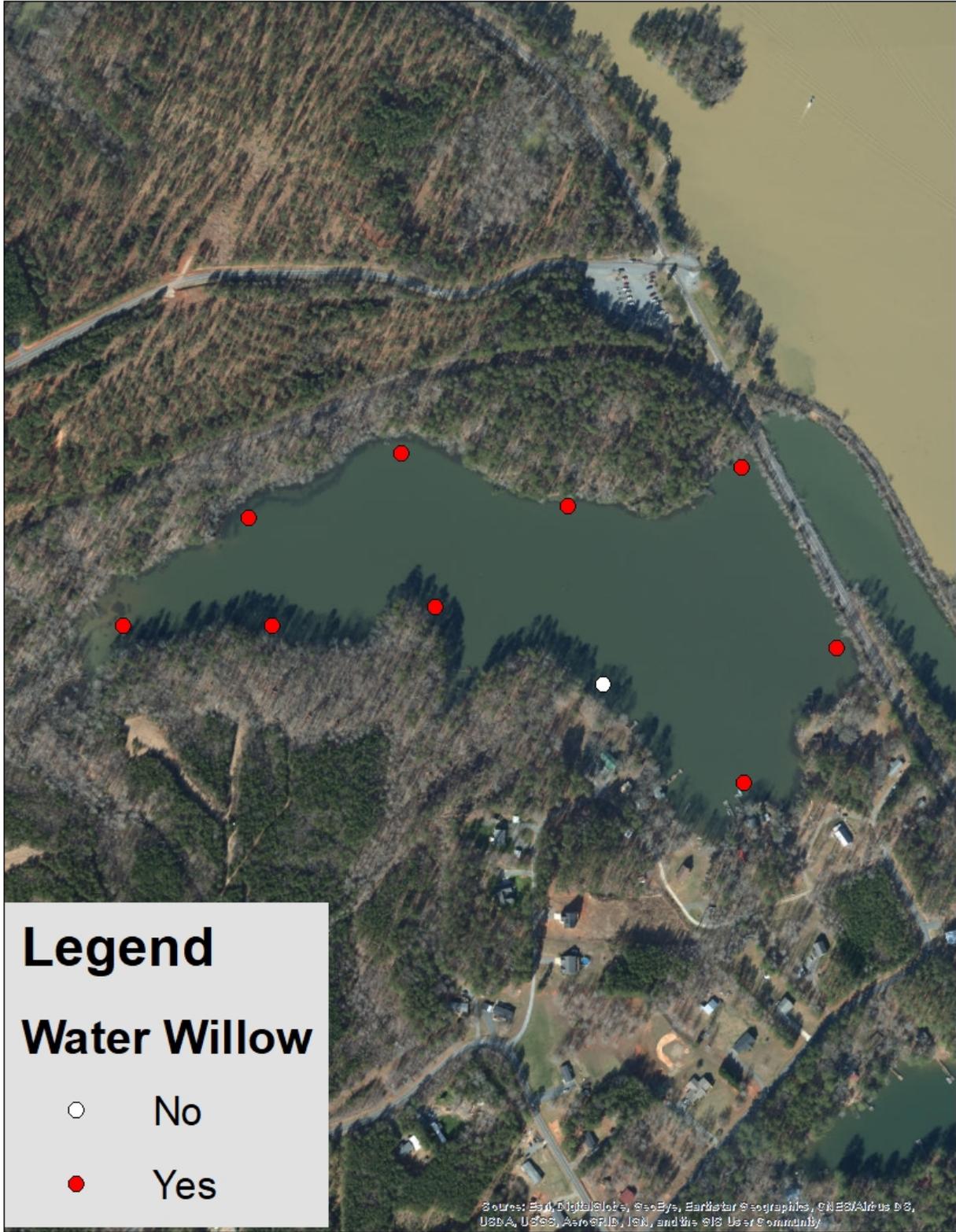


Figure 3. Map showing presence/absence of Water Willow at Ski Pond.

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Figure 4. Map showing absence of Hydrilla at Falls Reservoir.

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Figure 5. Map showing presence/absence of the aquatic moss Fontinalis at Falls Reservoir.

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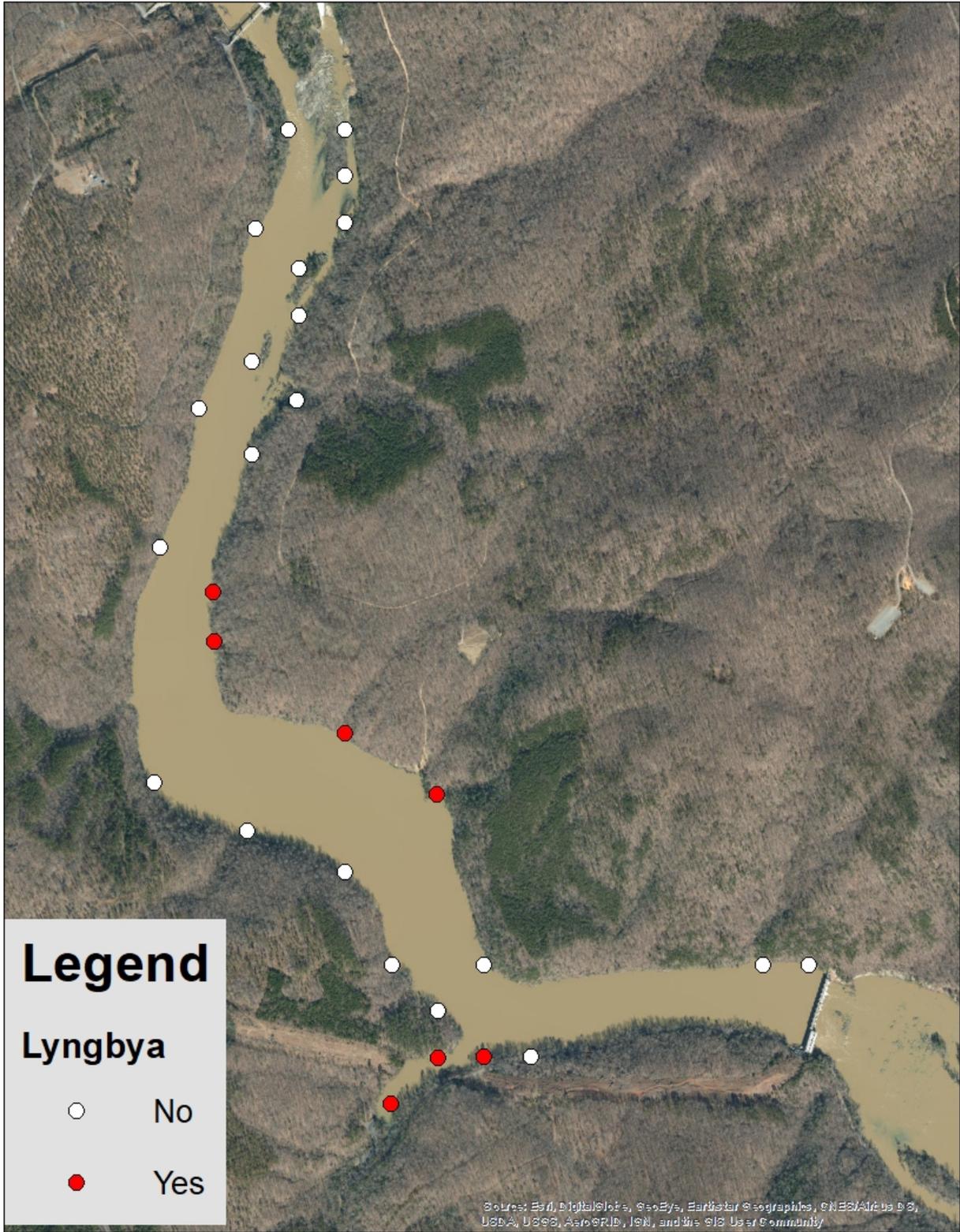


Figure 6. Map showing presence/absence of the cyanobacteria Lyngbya at Falls Reservoir.

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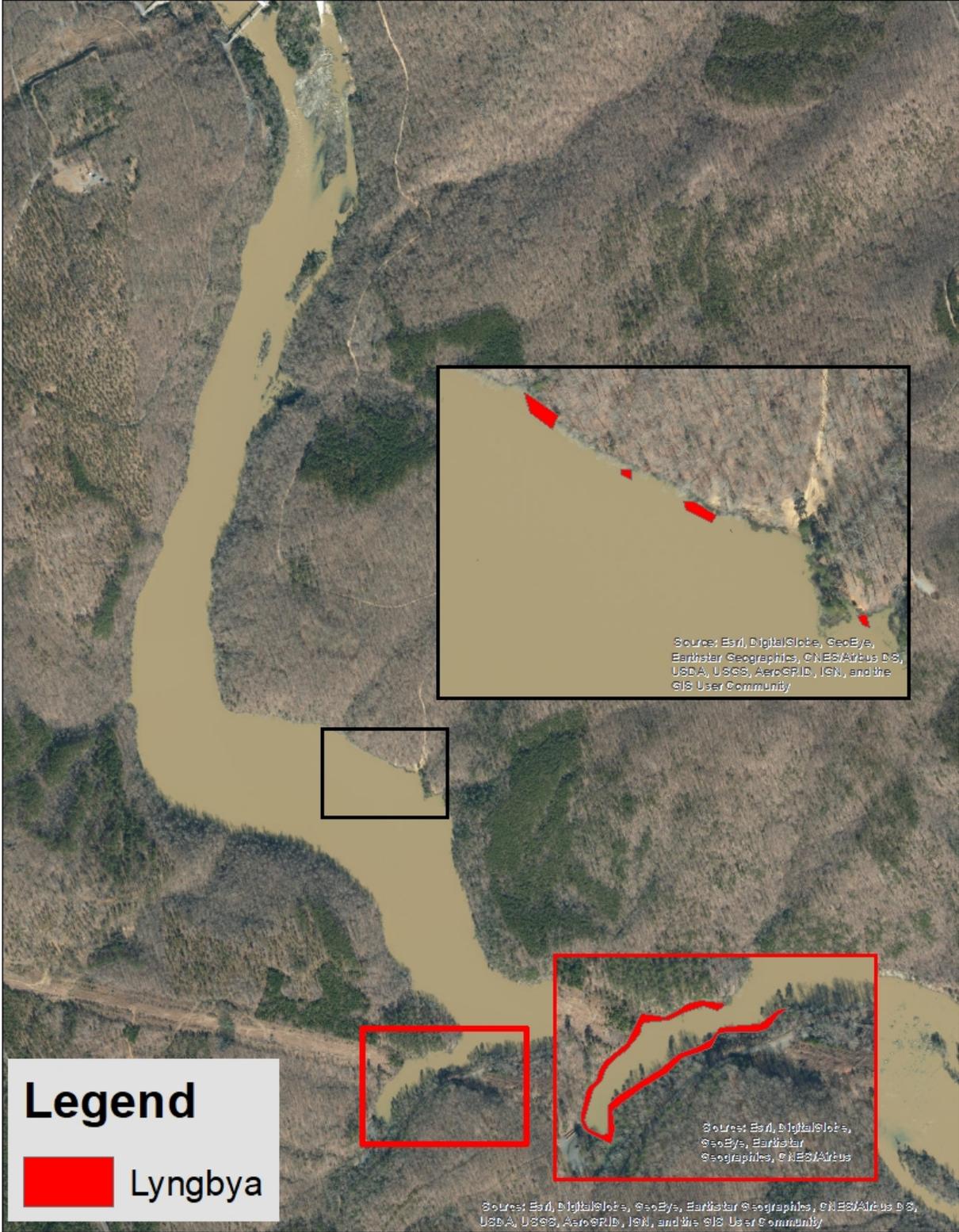


Figure 7. Map showing Lyngbya coverage (1.5 A) in Falls Reservoir.

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Figure 8. Map showing presence/absence of Water Willow at Falls Reservoir.