2021 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)).

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 surveys of these reservoirs were completed on 9/23.

Results

Harper Hearn

A total of 15 points were sampled during 2021. 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 2021. 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.

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Falls Reservoir

A total of 24 points were sampled during 2021. Hydrilla was found at 1, or 4%, of the rake toss points (Figure 3). In 2020 there was no Hydrilla found at any of the rake toss points. There was no other SAV found during the survey. In 2020, the aquatic moss Fontanilis (*Fontinalis spp.*) was the only SAV found during the survey. It was found at 1, or 4%, of the rake toss points. The cyanobacteria Lyngbya, *Microseria wollei*, was not found during the 2021 survey. In 2020 it was found at 7, or 25%, of the sample points and the estimated coverage of was 1.5 acres. Water Willow (*Justicia americana*) was also found along much of the eastern shoreline.

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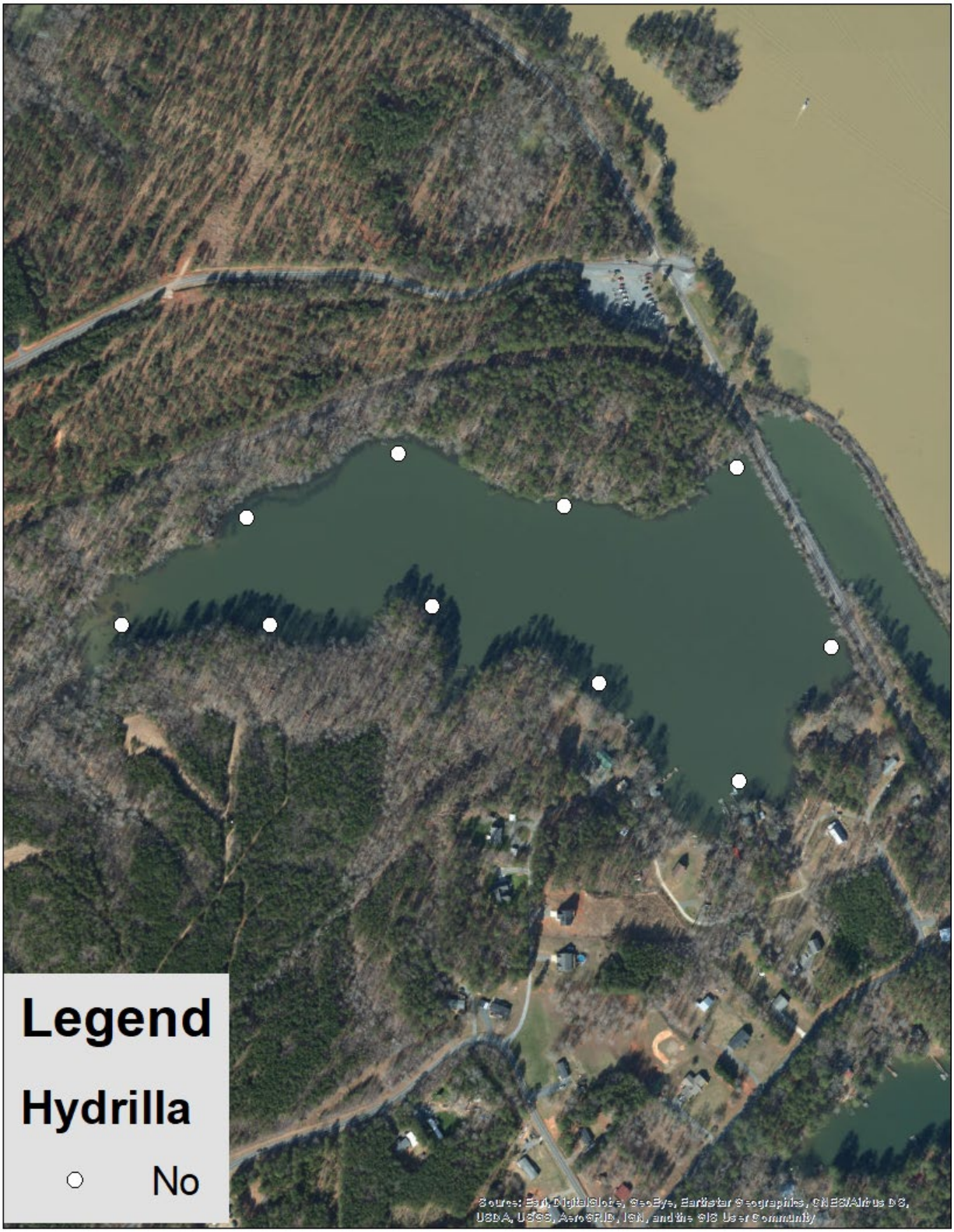

Figure 3. Map showing presence of Hydrilla at Falls Reservoir