

2021 Harris Lake Submerged Aquatic Vegetation Survey

NC Division of Water Resources

Introduction

Shearon Harris Reservoir (Harris Lake) is a 4,100-acre reservoir located in Wake and Chatham counties. The primary purpose of the reservoir is to serve as the cooling water for the Shearon Harris Nuclear Electrical Generation Station cooling tower and general operational water supply for the nuclear station. Secondary uses of the reservoir include recreational activities including fishing, boating and hunting. Hydrilla, *Hydrilla verticillata*, was first reported in the reservoir in 1988 and was thought to be introduced at one of the public ramps. A survey conducted in 2014 by NCSU identified approximately 668 acres of Hydrilla and a survey in 2015 found approximately 942 acres. No lake-wide survey was completed in 2016 or 2017. Starting in 2018 the Aquatic Weed Control Program (AWCP) partnered with Duke Energy to eradicate Hydrilla from the reservoir. A survey conducted by the AWCP in 2018 found approximately 232 acres of Hydrilla. In December 2018 1,400 sterile grass carp were stocked to control the growth of Hydrilla. The following spring another 2,600 sterile grass carp were stocked.

Methods

The AWCP completed a full-lake survey September 7th – 8th and September 10th. Three rake tosses were conducted at pre-determined points along the shoreline to determine presence/absence of SAV as well as quantify rake coverage. Rake coverage was quantified using a scale from 0 to 4 (0 = no vegetation; 1 = <25%; 2= 25% - 50%; 3= 50% - 75%; 4= 75% - 100%). Additionally, a recording fathometer (SONAR) was used to map and record the bottom. Roughly 53 miles of SONAR was logged. The SONAR data was uploaded to a third-party company, Biobase, to quantify the depth and biovolume, a percentage of the water column taken up by vegetation when vegetation exists, data. All of this was then combined with the rake-toss data using GIS software to estimate coverage.

Results

A total of 155 points were sampled (Figure 1). Hydrilla was not present on any of the rake tosses. There was no other SAV found during the survey. The cyanobacteria Lyngbya, *Microseria wollei*, was not found during the survey. Other emergent and floating vegetation observed was Giant Cutgrass (*Zizaniopsis miliacea*), Cattail (*Typha domingensis*), Water Willow (*Justicia americana*), Alligatorweed (*Alternanthera philoxeroides*), Creeping Water Primrose (*Ludwigia grandiflora*), American Lotus (*Nelumbo lutea*) and Fragrant Water Lily (*Nymphaea odorata*).

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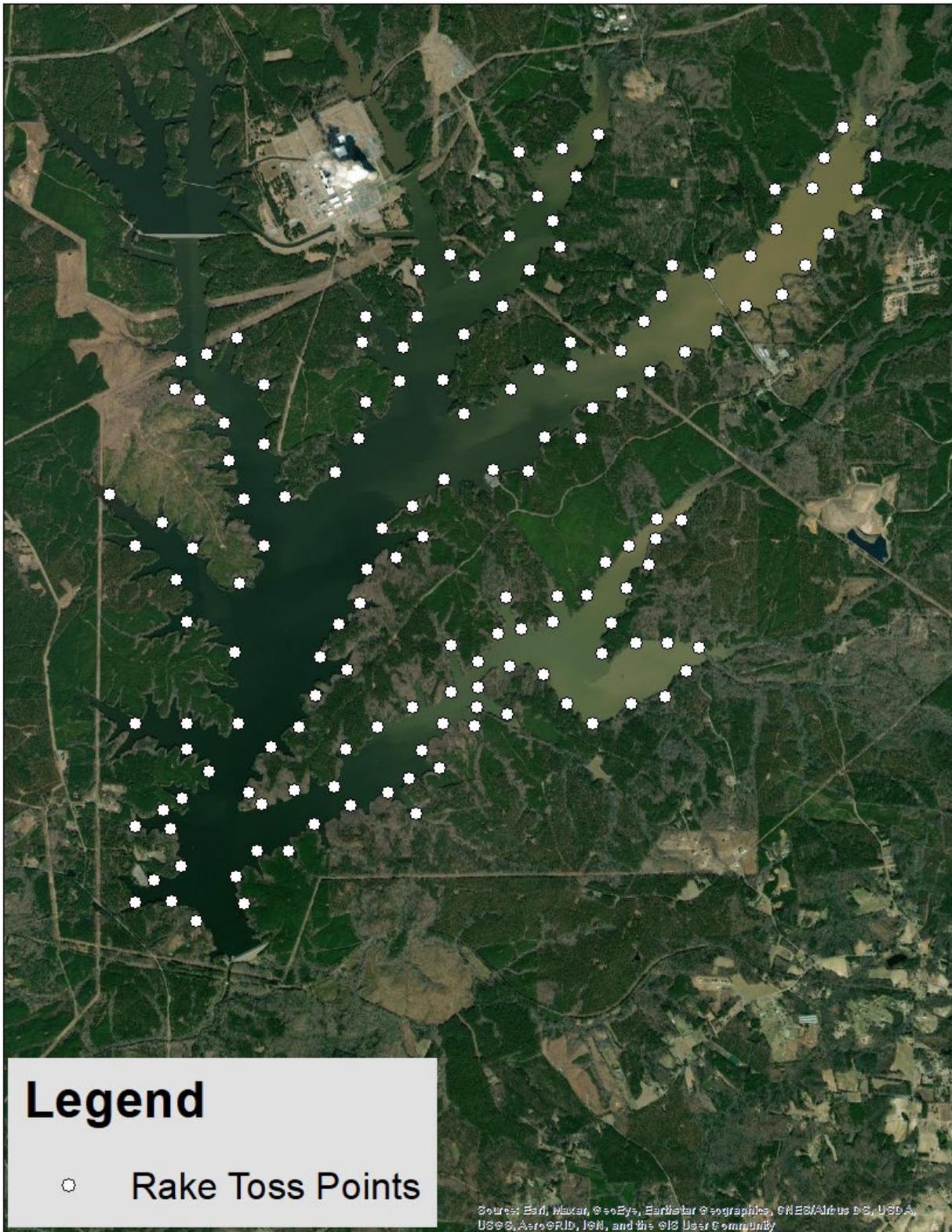


Figure 1. Map showing locations of pre-determined rake toss points.