

**Mississippi's Freshwater ANS Report for the
Gulf & South Atlantic Regional Panel on Aquatic Invasive Species
December 2020 Virtual Meeting**

**By
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Activities from February 2020 – November 2020

Aquatic Plant Control Activities

Giant Salvinia management in Ross Barnett Reservoir included:

- Containment with floating booms within Pelahatchie Bay
- Prescribed fire to burn vegetation which harbored Giant Salvinia
- Boat, aerial (drone), and on-foot surveys conducted for Giant Salvinia
- New colonies identified and treated with glyphosate, flumioxazin, and fluridone from airboat and helicopter
- Recreational access opened from main lake into Pelahatchie Bay and closed area reduced to inside the containment booms
- Drawdown to 296.0' elevation (-1.5') to expose any remaining plants to cold temperatures over winter

MDWFP fisheries biologists chemically treated Water Hyacinth, Alligator weed, Cuban bulrush, Hydrilla, and Giant Salvinia at Ross Barnett Reservoir

May - August 2020 biologists sprayed over 7000 gallons of chemical herbicide on 200 acres of water hyacinth in Horseshoe Lake.

July – August 2020 biologists sprayed an estimated 900 gallons of chemical herbicide on 50 acres of water hyacinth in Little Round Lake.

Provided Technical Guidance to USFS on Giant Salvinia at Lake Okhissa

Treated 2 acres of Alligator weed at Lake Monroe with Imazapyr.

Parrotfeather management in Wall Doxy State Park Lake (Spring Lake) included:

- Surveying and photographing expansion of parrotfeather reported in March 2020.
- Treating critical areas (around piers and boat ramp) with herbicide and monitored effects
- Purchasing and stocking 1,000 additional Triploid Grass Carp in June 2020
- Performing winter drawdown as per fisheries management plan.

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Asian Carp Control Activities

Issued 3 Special Permits for the harvest of Asian Carp at Moon Lake for 2020-2021 season (November 2020).

Submitted Grant Application Documents to secure new Asian Carp contract fishing project for their removal in the MS River and Yazoo River Basin. Initiated October 2020. Contacted over 1, 200 commercial fishing license holders about this opportunity. Fifty Three indicated interest, 20 selected to proceed with program.

Coordination Activities

Ongoing activities:

Coordinated and administered federal ANS grant to implement activities specified in the *Mississippi State Management Plan for Aquatic Invasive Species*.

Coordinated and administered ANS grant for research on "Development of management strategy for surveillance and containment of invading Asian carp in waters connected to the Tennessee River". Initiated in September 2019

Attended the June and September 2020 conference calls of the Mississippi Aquatic Invasive Species Council to guide implementation of the activities specified in the *Mississippi State Management Plan for Aquatic Invasive Species*.

Attended MS Cooperative Weed Management Area (CWMA) quarterly meetings (in person and virtual).

Attended Gulf and South Atlantic Panel on Aquatic Invasive Species virtual meeting in April 2020.

Reviewed two Asian Carp research proposals for the Lower Miss. River Conservation Commission.

New activities:

Submitted a letter of support to the Mississippi Bureau of Plant Industry for obtaining a special local needs 24c designation for an aquatic labelled Metsulfuron Methyl herbicide to be used on Giant Salvinia in the state of Mississippi.

Participated in Tennessee River -Cumberland River Asian Carp Control, Barrier Placement Structured Decision Making calls and webinars.

Information & Education Activities

New activities:

Gave oral presentation on Giant Salvinia management at Ross Barnett Reservoir for Interagency Giant Salvinia Task Force Meeting at Lake Caddo in Oil City, Louisiana.

Miss. State University developed fact and control sheets for Cuban Bulrush, Common Reed, Brittle Naiad, Parrotfeather and Common Salvinia.

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Edited Aquatic Nuisance Species Task Force Report to Congress.

Ongoing activities:

Continued distributing “Stop Aquatic Hitchhiker” cards along with all initial boat registrations and boat renewal registration cards that are mailed out.

Continued printing The Stop Aquatic Hitchhiker logo and bullet list in the annual regulation guides --- *Mississippi Outdoor Digest*, (375,000 copies printed each year) and the *Digest of Mississippi Freshwater Commercial Fishing Laws and Regulations* (8,000 copies printed each year).

Links to the Mississippi River Basin Panel on Aquatic Nuisance Species and the Gulf and South Atlantic Panel on Aquatic Invasive Species, Stop Aquatic Hitchhiker and Habitattitude websites are on the department website.

The Mississippi Museum of Natural Science has a permanent exhibit on exotic species.

Monitoring & Reporting Activities

Miss. State University did a third aquatic and riparian plant survey of 11 lakes and 33 rivers. They found 40 new plant species in lakes, 6 nonnative that were all riparian. They found 119 aquatic/riparian plant species in streams with 18 nonnative species. Water hyacinth, alligator weed, Chinese tallow and common reed were the most widespread nonnatives observed.

Monitoring Giant Salvinia population at Ross Barnett Reservoir.

Surveyed aquatic vegetation coverage, including parrotfeather, on Duck Pond, Marshall County.

Surveyed upper end of Arkabutla Lake for potential water hyacinth expansion after high water.

Collected data on Silver Carp captured during electrofishing sampling, Tunica Cutoff.

Continued Asian Carp Telemetry Project on Pickwick and Tennessee -Tombigbee Waterway (TTW).

Continue telemetry project for Asian Carp in TN River and TTW. Continue to sample for Asian Carp in Pickwick, the Divide Cut, and Bay Springs.

Continue to monitor Giant Salvinia in Pickwick and the TTW. Treat as needed in Pickwick.

Reported new Northern Snakehead locations to the USGS NAS database.

Notified online sellers (Amazon, eBay, Craigs List and Etsy) that sales and shipment of water hyacinths, alligator weed and *Trapa natans* are illegal under federal law.

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Research Activities

New activities:

Submitted Grant Application Documents to secure new Asian Carp movement research study at Moon Lake conducted by MS State Univ. Initiated October 2020.

Assisted Tennessee Tech Univ with gillnetting for Asian Carp on Pickwick.

Coordinated and implemented Asian Carp tagging on Pickwick in December.

Assisted USGS and Kentucky Dept. of Wildlife and Fisheries with modified unified method on KY Lake in February.

Conducted herbicide efficacy treatments on Alligator weed for Mississippi State University on Ross Barnett Reservoir.

Ongoing activities:

Mississippi State Univ. Research Project: “Development of management strategy for surveillance and containment of invading Asian carp in waters connected to the Tennessee River”. Initiated in September 2019

Project activities performed by Mississippi State University personnel/students in January - September 2020 for the research project:

- Two silver carp have been collected at Bay Springs and no Asian carp has been collected at Yellow Creek. Catch rate at Bay Springs has been 0.125 silver carp per net night.
- working with TVA’s long-term gillnetting data set searching for signs of shifts in fish assemblages that can be linked to the Asian carp invasion.
- We have obtained data on movement of approximately 300 bigheaded carp in the Tennessee River system. These detections will be used to test whether bigheaded carp movements differ among seasons, focusing on the time period in March when the water level is raised and the time period in September when the water level is drawn down. Our objective is to determine whether seasonal water level changes encourage movements.
- We continue to investigate the potential effects of bigheaded carps on native fish assemblages in reservoirs of the lower Tennessee River relying on TVA’s long-term dataset. Temporal changes are apparent, but at this point they cannot be directly attributed to bigheaded carps.

New Detections

Giant Salvinia - Woodville, MS. – new location .

Northern Snakehead collected in Steele Bayou (May 2020) and Perry Martin Lake (June 2020) – new locations.

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Ongoing Activities

Continue to participate in the Mississippi Aquatic Invasive Species Council to guide implementation of the activities specified in the *Mississippi State Management Plan for Aquatic Invasive Species*.

Future Activities

Continue surveying state lakes for aquatic invasive plants.

Develop management and control fact sheets on invasive aquatic plants

Continue chemical treatments of Giant Salvinia at Ross Barnett Reservoir and survey reservoir for new occurrences.

Purchase aquatic herbicides and hire contractors to treat public and private waters infested by invasive plants.

Purchase floating containment boom for emergency response to new detection of Giant Salvinia on public water in Mississippi.

Compose freshwater fishing bait regulations to specify what bait can be legally, sold, possessed, transported, and used in Mississippi.

Seek approval of legislation required to initiate licensing of retail bait outlets selling live freshwater fishing bait.

Adopt a list of approved, restricted and prohibited species under the authority specified in MS Code 49-7-80 and as specified in the *Mississippi State Management Plan for Aquatic Invasive Species* Amend list of approved, restricted and prohibited species as specified in the public notice that regulates aquaculture activities in Mississippi.

Establish an EDRR monitoring program comprised of state and federal personnel who sample aquatic species in Mississippi public waterways on a routine basis.

Submit backlog of reported nonnative species occurrences to ANS database.

Work on revisions to the *Mississippi State Management Plan for Aquatic Invasive Species*