

**Mississippi's Freshwater ANS Report for the
Gulf & South Atlantic Regional Panel on Aquatic Invasive Species
April 2021 Virtual Meeting**

**By
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Activities from December 2020 – March 2021

Aquatic Plant Control Activities

Giant Salvinia management in Ross Barnett Reservoir included:

- Containment with floating booms within Pelahatchie Bay
- Boat 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

Herbicide purchased with ANS funds

- 150 gallons liquid, 100 pounds granular 2,4-D
- 100 gallons glyphosate
- 100 gallons surfactant
- 30 gallons diquat
- 30 gallons imazapyr

Floating containment boom (750 feet) purchased with ANS funds.

Floating containment boom (550 feet) deployed in March 2021 at Horseshoe Lake for water hyacinth control.

Asian Carp Control Activities

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

Abandoned efforts to enlist commercial fishers as contract workers to harvest Asian Carp in the Mississippi River and Yazoo River Basin because only 1 person submitted the necessary forms to do so. Initiated effort to provide an Incentivized Asian Carp Fishing Contract with Asian Carp processors. Wrote scope of work, reimbursement invoice and fish purchase ticket documents for inclusion in contracts. Two processing firms signed contracts to participate. MDWFP will reimburse them 18 cents per pound of Asian Carp if they pay fisherman at least 25 cents per pound.

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April 2021 meeting of the

Gulf & South Atlantic Regional Panel on Aquatic Invasive Species

Coordination Activities

Ongoing activities:

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

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*.

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

Coordinated and administered ANS grant for the "Moon Lake Asian Carp Tracking Research Project". Initiated October 2020.

Coordinated (with USFWS, Tennessee and Kentucky) and administered ANS grant for Asian Carp incentivized harvest program in Mississippi River and Yazoo River Basin.

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

New activities:

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

Attended ANSTF and Regional Panel principals virtual meetings in December 2020.

Reviewed and edited ANSTF Annual Report to Congress and Bylaws.

Information & Education Activities

New activities: None.

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).

The "Help Stop Aquatic Hitchhikers in Mississippi" brochure is available at all MDWFP state parks, state fishing lakes and offices.

MDWFP – Mississippi Freshwater Aquatic Nuisance Species Report

April 2021 meeting of the Gulf & South Atlantic Regional Panel on Aquatic Invasive Species

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

Monitoring Giant Salvinia population at Ross Barnett Reservoir.

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

Continued to sample for Asian Carp in Pickwick, the Divide Cut, and Bay Springs.

Coordinated and implemented Asian Carp tagging on Pickwick in December.

Assisted USGS, USFWS, TWRA, and TVA personnel with Asian Carp tagging on Pickwick Lake.

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

Monitoring water hyacinth at Horseshoe Lake, Little Round Lake, and Belzoni Cutoff.

Completed ANS expenditure survey for Auburn Univ.

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.

Submitted annual performance report for federal ANS grant to implement activities specified in the *Mississippi State Management Plan for Aquatic Invasive Species*. (December 2020)

Submitted annual performance report (CY2020) for MSU “Development of management strategy for surveillance and containment of invading Asian carp in waters connected to the Tennessee River” project to USFWS.

Research Activities

New activities:

Reviewed two FY21 Asian Carp funding proposals submitted by MS State Univ. Submitted work plan documents to USFWS.

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 October – December 2020 period for this research project:

MDWFP – Mississippi Freshwater Aquatic Nuisance Species Report

April 2021 meeting of the Gulf & South Atlantic Regional Panel on Aquatic Invasive Species

- Sampling in Bay Springs and Yellow Creek was conducted on December 7th through December 9th. There were no Asian Carp captured in either body of water during these sampling events.
- In 2020 we were able to sample Bay Springs six times and Yellow Creek four times. Total net-nights have been 25 at Bay Springs and 12 at Yellow Creek. Yellow Creek has been more challenging to sample because of the smaller area and higher boat traffic, along with winter drawdowns two of the times we sampled.
- By catch was very minimal during the December sampling in both Bay Springs and Yellow Creek. By catch mainly consisted of Blue Catfish, Flathead Catfish and Common Carp.
- 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 and develop the manuscript.

Mississippi State Univ. Research Project: “Moon Lake Asian Carp Tracking Research Project”. Initiated in October 2020.

Project activities performed by Mississippi State University personnel/students in October 2020 – March 2021 period for this research project:

- Graduate student hired and he successfully completed and defended a research proposal.
- Made several trips to Moon Lake and made key contacts.
- We began rounding up existing hydrography data from various gauges available near the study area. These data will be used to model water levels in Moon Lake and Yazoo Pass and predict when connections are made.
- Various pieces of equipment needed to complete the project were identified and purchased.
- Currently have 83/85 of acoustic tags inside Silver Carp with functioning passive acoustic array collecting movements of these fish.
- Have started manual tracking of fish within Moon Lake.
- Wildlife cameras are set up to relate direction of flow to movement of Silver Carp.
- Have started to create a relational database to hold, manipulate, and relate collected data.

New Detections

Confiscated 25 live Asian Swamp Eels (rice eels) identified as *Monopterus albus* from a Chinese food market in Jackson, MS on 3/26/2021. Specimens ranged in length from 60.5-80 cm and were vouchered and frozen.

Reported zebra mussels in moss balls in two pet stores in Mississippi to the USGS NAS database.

Future Activities

Continue surveying state lakes for aquatic invasive plants.

Develop management and control fact sheets on invasive aquatic plants.

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April 2021 meeting of the

Gulf & South Atlantic Regional Panel on Aquatic Invasive Species

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 booms for emergency response to new detections of invasive plants in public waters in Mississippi.

Compose freshwater fishing bait regulations to specify what live 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 agency rule 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*