

Mississippi Department of Marine Resources

AIS Program Update – GSARP Spring 2021 Meeting

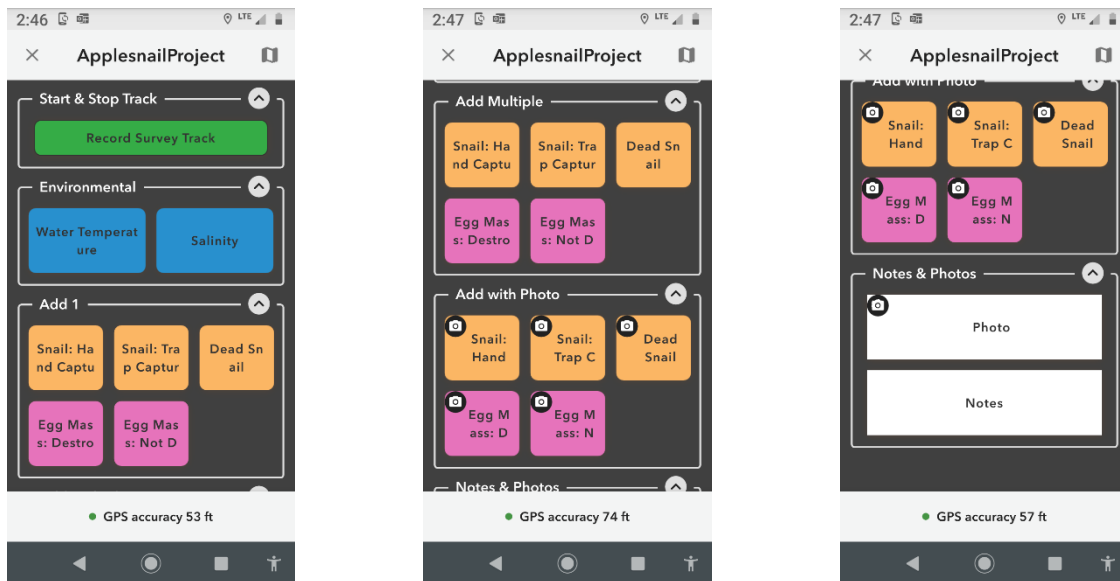
Early Detection / Rapid Response Activities

- One aerial photo survey of 185 miles was conducted for early detection of AIS and to monitor existing infestations. Experimental UAV flights were also conducted to investigate the potential for giant salvinia detection using different imaging systems.
- A program of integrated pest management and spot herbicide application was used to control populations of common salvinia, giant salvinia, alligator weed, torpedo grass, beach vitex and water hyacinth in accordance with all regulations.
- An amphibious marsh buggy equipped with a herbicide sprayer has been used to find and treat giant salvinia in difficult to access marsh areas of the Pascagoula River. Rented using Gulf Environmental Benefit Funds administered thru the National Fish and Wildlife Foundation and the Mississippi Department of Environmental Quality, this equipment has allowed us to treat giant salvinia in areas that are inaccessible by conventional watercraft or by crews on foot. Limitations found so far, are that the machine can get stuck in muddy areas when water levels are low and that the travel speed in open water is slow.



- No new sightings of Asian tiger shrimp (*Penaeus monodon*) or giant applesnail (*Pomacea maculata*) were received during this reporting period. A grand total of 30,368 egg masses have been destroyed and 1,132 live snails have been removed from the river since this infestation was first detected in 2014.

- A customized ArcGIS Quick Capture mobile application was configured to better document giant applesnail locations and record control efforts. With this convenient tool, MDMR staff and contractors can easily document their survey paths and record and photograph egg masses destroyed and live snail collection with just the push of a button. This technology will also soon be configured to document invasive plant sightings and treatments. Below are some screen views from this customized application. Buttons to record egg mass and snail sightings are color-coded pink and tan respectively to match the objects being recorded to help speed field data collection. Data gathered by each mobile user is automatically uploaded to MDMR's server to be viewed and analyzed.



Coordination and Outreach Activities

- Normal outreach activities at events, such as Celebrate the Gulf have again been suspended due to COVID-19.
- MDMR invasive species staff visited with local pet retailers to inform them about the potential contamination of zebra mussels in aquarium moss balls and to provide them with literature about the situation. No aquarium moss balls checked during these visits had visible zebra mussels but all the stores voluntarily quarantined them as a precaution.
- A mobile phone invasive species reporting tool has been made available to the public and promoted on MDMR's website social media outlets.



This mobile application powered by ArcGIS Survey 123 allows citizens to quickly take and upload a geotagged picture in the field of a suspected invasive species thru a web browser or a free downloadable application. MDMR invasive species staff review and validate each report and determine the appropriate response. A link to the reporting application can be found here:

<https://survey123.arcgis.com/share/a71d99709f3c4533ada7b7cce3f22500?open=menu>

Confirmed new AIS sightings will be treated using best management practices and reported to the NAS database.

- The Mississippi Department of Marine Resources continues to serve on the Mississippi Aquatic Invasive Council (MAISC) and the Mississippi Cooperative Weed Management Area (MS-CWMA).