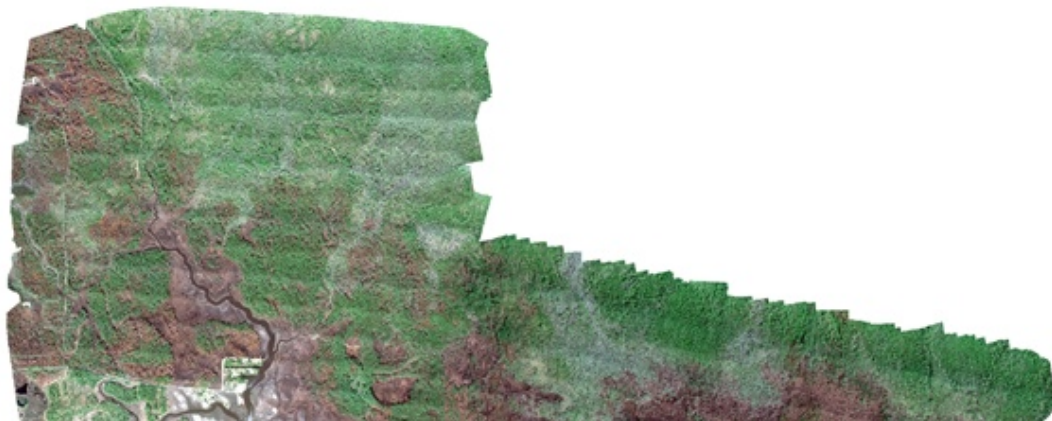


Grand Bay Fire Flight February 2016



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NGI Unmanned Aircraft Systems (UAS) Rapidly Respond to GBNERR Wildfire

Grand Bay National Estuarine Research Reserve (GBNERR) has partnered with NOAA's Northern Gulf Institute (NGI) and the Geosystems Research Institute (GRI) at Mississippi State University to utilize Unmanned Aircraft Systems (UAS) for a variety of missions

Over the past year, the Grand Bay National Estuarine Research Reserve (GBNERR) has partnered with NOAA's Northern Gulf Institute (NGI) and the Geosystems Research Institute (GRI) at Mississippi State University to utilize Unmanned Aircraft Systems (UAS) for a variety of missions. These missions include: high resolution vegetation mapping along GBNERR Sentinel Site research infrastructure, monitoring a simulated disaster response exercise, and mapping the extent of a marsh wildfire. These missions were possible through the support of the NOAA UAS Program Office and the NERR UAS working group.

The most recent mission was flown in response to a wildfire that burned from February 11, 2016 to February 18, 2016 across 4,246 acres of marsh and upland habitat within the Grand Bay National Estuarine Research Reserve, Grand Bay National Wildlife Refuge, and adjacent lands. GBNERR wanted to obtain imagery of the fire for the purposes of mapping the effected marsh/upland habitats and analyzing vegetation regeneration. Efficient coordination between GBNERR, NGI, and GRI at MSU allowed for a mission to be coordinated quickly, funding identified, and the flight vetted through the U.S. Fish and Wildlife Service. On February 25 and 26, an Altavian Nova Block III was flown over the wildfire carrying a Micasense RedEdge payload.

"The work we have done with the Grand Bay NERR demonstrates the value of small UASs in measuring the effects of climate change and in preserving our natural coastal resources. We can measure subsidence and sea level rise without trampling on or dragging equipment through the habitat," observes Dr. Robert Moorhead, Director of NGI and GRI Mississippi State University.

Five (5) band imagery (blue, green, red, red-edge, and near infrared) of almost the entire wildfire area was obtained at 8 cm ground resolution in 3 flights. Overflights near the GBNERR headquarters, which was on the periphery of the wildfire area, were deemed too dangerous due to visibility limitations, personnel in the building, and high voltage power lines in the area.

Is this is an issue of potential concern?

This item has high visibility

Geographic Location (Relevant region, city location) Grand Bay NERR, Northern Gulf Institute

Partnering offices OAR, NOAA UAS Program, NGI (CI), NOS, NERRS

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