MISSISSIPPIVIEW 2018 - 2019

MISSISSIPPIVIEW HISTORY AND SUCCESSES

UMGC is the organizational lead tasked with the operation and development of the State View Consortium (MississipiView) project at the University of Mississippi. UMGC is a program of the Mississippi Mineral Resources Institute (MMRI). UMGC is a leading multi-disciplinary research center in the State of Mississippi for the advancement of geospatial information science and technology (GIS&T) and its innovative application to problems of local, state and national importance.

The mission of MississippiView is to promote and facilitate geospatial data usage, research, and collaboration among the geospatial community in Mississippi while fostering national and international cooperation. Our work connects us with local agencies and communities to assist in accomplishing their mission.

High-resolution (1-cm pixel) of University of Mississippi campus used for research and education.

Mapping the effects of a landslide along the Skuna River in central Mississippi in March 2019.

Post-event analysis of a dam failure in northern Mississippi near Hatophia Creek in February 2019.

Since 2005, MississipiView has provided outreach and created partnerships across the state. During spring 2019, torrential rainfall resulted in flooding, dam failures and landslides across the region. MississippiView provided support to researchers and regional officials to assist in their work. We have created new curriculum and provide access to educators

Our most recent collaborations build on past successes. These include:

- Benchmark for mapping coastal change
- Improving flood awareness using remote sensing
- Geospatial materials focused on 200th anniversary of the New Madrid Earthquake
- Remote sensing for lake water quality
- Analysis and update of land use in 16th section lands in Mississippi

MississippiView is a member of the AmericaView Consortium, a nationally coordinated network of academic, agency, non-profit, and industry partners and cooperators that share the vision of promoting and supporting the use of remote sensing data and technology within each state. AmericaView is funded by USGS grant agreement G18AP00077.

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MISSISSIPPIVIEW 2018 - 2019 ACTIVITIES

MississippiView is working with local and state partners to provide geospatial and remote sensing support for a variety of research and outreach projects.

- MississippiView supported the work of a graduate student who evaluated the use of sUAS-derived imagery for monitoring flood protection infrastructure. Her work used structure-from-motion (SfM) photogrammetry to investigate methods of detecting movement in i-walls, which are common flood protection. Her thesis results were presented at a state-wide water resource conference.
- MississippiView took a large role in the Summer 2019 offering of the University of Mississippi High School Engineering Camp. The Camp is a weeklong STEM experience for 24 students from the 6th-8th grade from across the state of Mississippi. We developed an outreach program that included geology, environment resources, and monitoring using satellite and sUAS derived data.
- The M-Partners is a program that connects University of Mississippi capabilities with the goals and needs of local communities. MississippiView has participated by collaborating with the leaders of Charleston, Mississippi. We provide geospatial and remote sensing data related to their economic development and policy, marketing and tourism, and resiliency efforts.

Mississippi high school students learning about small unmanned aerial system (sUAS) during a filed demonstration.

Acquiring a GPS location of a ground control point for high-resolution imagery along floodways of north Mississippi.

Conferences and publications include:

- Yarbrough, L.D., 2019. Planning to Integrate Small Unmanned Aerial Systems (sUAS) into Your Current Data Acquisition Workflow? The State of the Technology: Highlights, Case Studies, Pitfalls, and Future Trends. Invited Talk presented at 2019 Mississippi Water Resources Conference, 02–03 April 2019, Hilton Conference Center in Jackson, MS.
- Dietz, Eleanor and Yarbrough, L.D., 2019. Evaluating the Use of sUAS-Derived Imagery for Monitoring Flood Protection Infrastructure. Presented at 2019 Mississippi Water Resources Conference, 02–03 April 2019, Hilton Conference Center in Jackson, MS.

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