

Monitoring Climate and Weather Variability in Mississippi

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Abstract

Climate variability and weather uncertainty pose challenges and opportunities for U.S. scientists assessing the potential consequences of climate change. Recent extreme weather patterns and multibillion-dollar impacts on a wide range of agricultural and commercial businesses are stimulating the need for this assessment. The objective of this poster is to highlight contributions the ARS Goodwin Creek Experimental Watershed is making to national and regional climate and weather monitoring projects. Goodwin Creek houses instrumented stations that are part of the national SURFRAD and ISIS networks developed by NOAA for long-term monitoring and climate research. Their objective is to support climate research with continuous, high quality measurements of the earth's surface radiation budget and energy transfer balance. Four of these NOAA stations were located within the Mississippi River Basin in support of the GEWEX Continental-Scale International Project. The SCAN network was established by NRCS to support natural resources assessments and agricultural conservation activities through integration of information from existing soil-climate data networks, and the establishment of new data collection points through partnership with federal, state, local, and tribal entities. Nine SCAN stations are currently located in Mississippi: two in the Goodwin Creek watershed, two in east central locations, and the rest distributed through out the Delta. Mississippi is home to some of the most active weather in the world; severe thunderstorms and tornadoes are a threat year-round, and winter storms can bring devastating ice accumulations. Development of a Mississippi meteorological mesonet is in the planning stages under the leadership of the Meteorological Program at Jackson State University, Mississippi. As envisioned, all SCAN stations in Mississippi, including those in the Goodwin Creek watershed, will contribute to the planned mesonet.

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