The USDA-ARS Southeast Watershed Research Laboratory and Little River Experimental Watersheds

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Abstract

The USDA-ARS Southeast Watershed Research Laboratory (SEWRL) is one of six watershed hydrology research centers created by Congress as a result of Senate Document 59 to address critical hydrology and erosion research needs within major physiographic regions of the United States. The SEWRL, funded in 1965, has a primary focus within the Gulf-Atlantic Coastal Plain, an important agricultural region making up approximately 10 percent of the U.S. land area. A priority identified by Congress was establishing a hydrologic monitoring program to provide research quality watershed-scale hydrologic data within the region. Reliable, long-term hydrologic databases were not previously available for heavily vegetated, low-gradient stream systems. The Little River Watershed (LRW) in southern Georgia was selected as representative of mixed-use, agricultural watersheds in the region. In 1967, the SEWRL instrumented a 334 km² headwater portion of the LRW. The original network provided measurement of rainfall at 52 locations, stream stage at eight sites and groundwater stage at three locations. Currently, over 30 years of hydrologic data are available from up to eight watersheds ranging in area from 2.6 to 334 km². The SEWRL provides hydrologic data for characterizing Coastal Plain hydrologic processes and for development and testing of hydrologic modeling concepts. The hydrologic data, along with associated environmental quality data, have been used to support a broad range of natural resource and water quality research. This research has been aimed at developing agricultural management practices and systems that conserve natural resources while maintaining or enhancing the quality of our environment.

Keywords: watersheds, hydrology, streamflow, water quality

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