

Soil and Plant Science Division

Technical Soil Services

South Central Soil Survey Region

Ecological Reassignment for the Crevasse Soil Series Within MLRA 118A—Arkansas Valley and Ridges, Eastern Part

South Central Soil Survey Regional Office, Temple, Texas

Purpose

The Oklahoma State Soil Scientist (SSS) contacted the South Central Soil Survey Regional Office in Temple, Texas, with a request to update the ecological site description (ESD) for Ecological Site F131AY009MO – Sandy Flood Plain Forest that had been assigned to the Crevasse soil series. The area of concern is in eastern Oklahoma within MLRA 118A (figs. 1 and 2). Although the landform position and general soil characteristics fit within the concept of this ecological site, these concepts did not geographically fit within the confines of MLRA 118A. Staff evaluated the current concepts in the ESDs within MLRA 118A to determine an appropriate assignment for the Crevasse series.

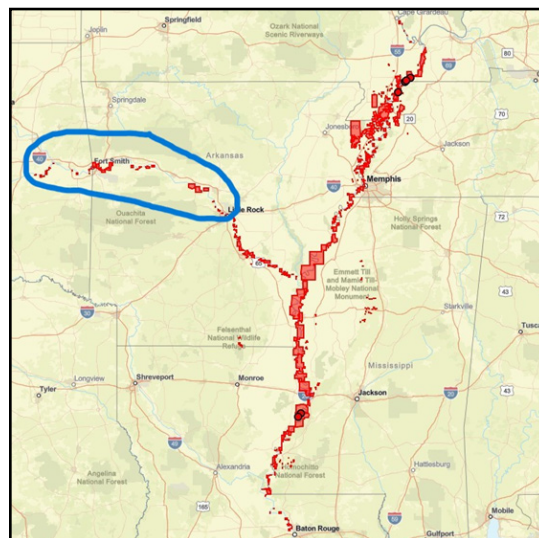


Figure 1.—The extent of the Crevasse soil series in Louisiana and Oklahoma.

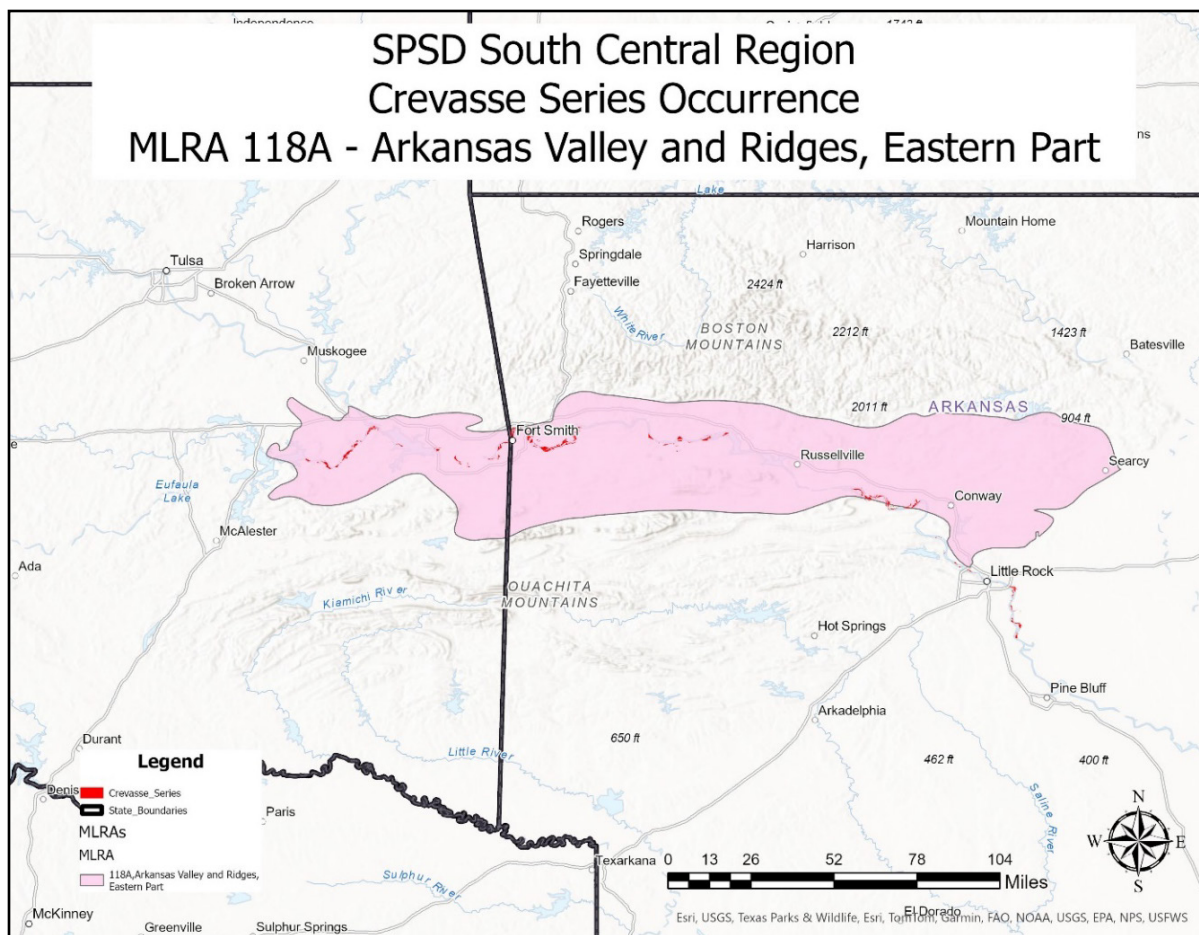


Figure 2.—Map units that include components of Crevasse in MLRA 118A. Map units to the west of the Oklahoma and Arkansas State boundary are those evaluated at the request of the Oklahoma SSS.

Background

The Oklahoma SSS contacted regional staff about an ecological site assignment associated with Crevasse soil series within map units in Haskell and LeFlore Counties in eastern Oklahoma. The Crevasse series consists of very deep, excessively drained, rapidly permeable soils that formed in sandy alluvium. It is classified as a mixed, thermic Typic Udipsamments associated with the flood plain of the Mississippi River and its tributaries. This classification is consistent with what would be encountered in low-water receiving landforms within the Mississippi and Arkansas River drainages. The soil surveys associated with Haskell and LeFlore Counties were first published in 1975 and 1931 respectively, with an updated publication for LeFlore County in 1983. It is believed the concepts for ESDs in MLRA 118A were not fully developed when the map unit components for the surveys were assigned to ESDs. Therefore, to assign an ecological site to these components, soil survey project staff used Sandy Flood Plain Forest from adjoining MLRA 131A—Southern Mississippi River Alluvium because of its landform position and general soil characteristics.



Key Outcomes

The Oklahoma SSS and regional staff worked together to identify the map units and components that needed to be evaluated using GIS analysis and the National Soil Information System (NASIS) database. The ecological data quality specialist (EDQS) analyzed the characteristics of the Crevasse series and the instances within each of the identified map units. The EDQS reviewed the available ecological sites in MLRA 118A to see if there were current ecological concepts fitting this series and discovered that Ecological Site F118AY009AR – Sandy Bottomland was a logical replacement. All subsequent map unit components were changed in the NASIS database to capture this change. The proper assignment of the ecological site will help ensure proper ecological concept interpretations are made.

The Soil and Plant Science Division (SPSD) continually reviews and analyzes current soil and ecological site information to ensure the most reliable, accessible ecosystem knowledge is available for conservation planners and others to use when making conservation decisions. Communication is vital to this effort. As part of the SPSP, the South Central Soil Survey Region places particular emphasis on communication and frequently requests input on how SPSP staff can better serve partners. Through open communication and collaboration, the Oklahoma NRCS and the SPSP regional staff completed the updates to the ESD for Ecological Site F131AY009MO – Sandy Flood Plain Forest in a timely fashion. The updated information will help conservationists and other end users with management decisions with ecological sites associated with the Crevasse series in the Arkansas River Valley.