



Soil and Plant Science Division

Technical Soil Services

South Central Soil Survey Region



Previously Unidentified Minor Hydric Soil Component in Reynosa Silty Clay Loam

Robstown, Texas, Major Land Resource Area (MLRA) Soil Survey Office (SSO)

Purpose

Texas NRCS Zone 3 Office staff contacted Robstown, Texas, MLRA SSO staff for assistance in determining if a minor hydric soil component was present in a map unit on a flood plain of the Rio Grande River in Hidalgo County. Hydric soils are important in this area because they assist in the filtration of the water before it enters the Rio Grande River. Unidentified hydric soils and wetlands are at risk of degradation because they may lack proper management, which could have a negative effect on soil conservation, water management, and agriculture in the area. On July 16, 2026, MLRA Soil Scientist Gary Harris and NRCS Texas Zone 3 Wetland Conservationist Shanna Dunn investigated a potential hydric soil component within the boundaries of a Reynosa silty clay loam map unit (fig. 1).



Figure 1.—Grass and wildflowers growing in an area of Reynosa silty clay loam in Hidalgo County at the site under investigation for a potential hydric soil.



Background

In Hidalgo County's original 1979 soil survey, a minor hydric soil component was not identified within the Reynosa silty clay loam map unit even though it is located on the flood plain of the Rio Grande River. The original soil survey identified the major components and most of the minor components within the survey area, but the hydric soils in this map unit were not identified because they are of very small extent.

While evaluating an application for brush control, an NRCS soil conservationist noted the potential for a hydric soil at the site and brought the issue to Dunn's attention. Dunn requested assistance from Harris to determine if a hydric soil minor component is present at the site. Harris used a truck-mounted bull probe to dig a hole in a representative area to look for hydric soil indicators, such as redoximorphic features, in the soil. He also looked at vegetation, site history, and water rings on trees at the site. Based on his investigation, Harris determined that there is a hydric soil present at the site within the Reynosa silty clay loam map unit.

Key Outcomes

Based on Harris' findings, local NRCS staff can work with the landowner to develop a plan to apply conservation practices that best manage the land. Careful management can help preserve the hydric soil in the area and the important ecological role it plays. Dunn expressed the need for a future soil survey project to include the hydric soil minor component in the Reynosa silty clay loam map unit, which would provide valuable information for other areas of this map unit.