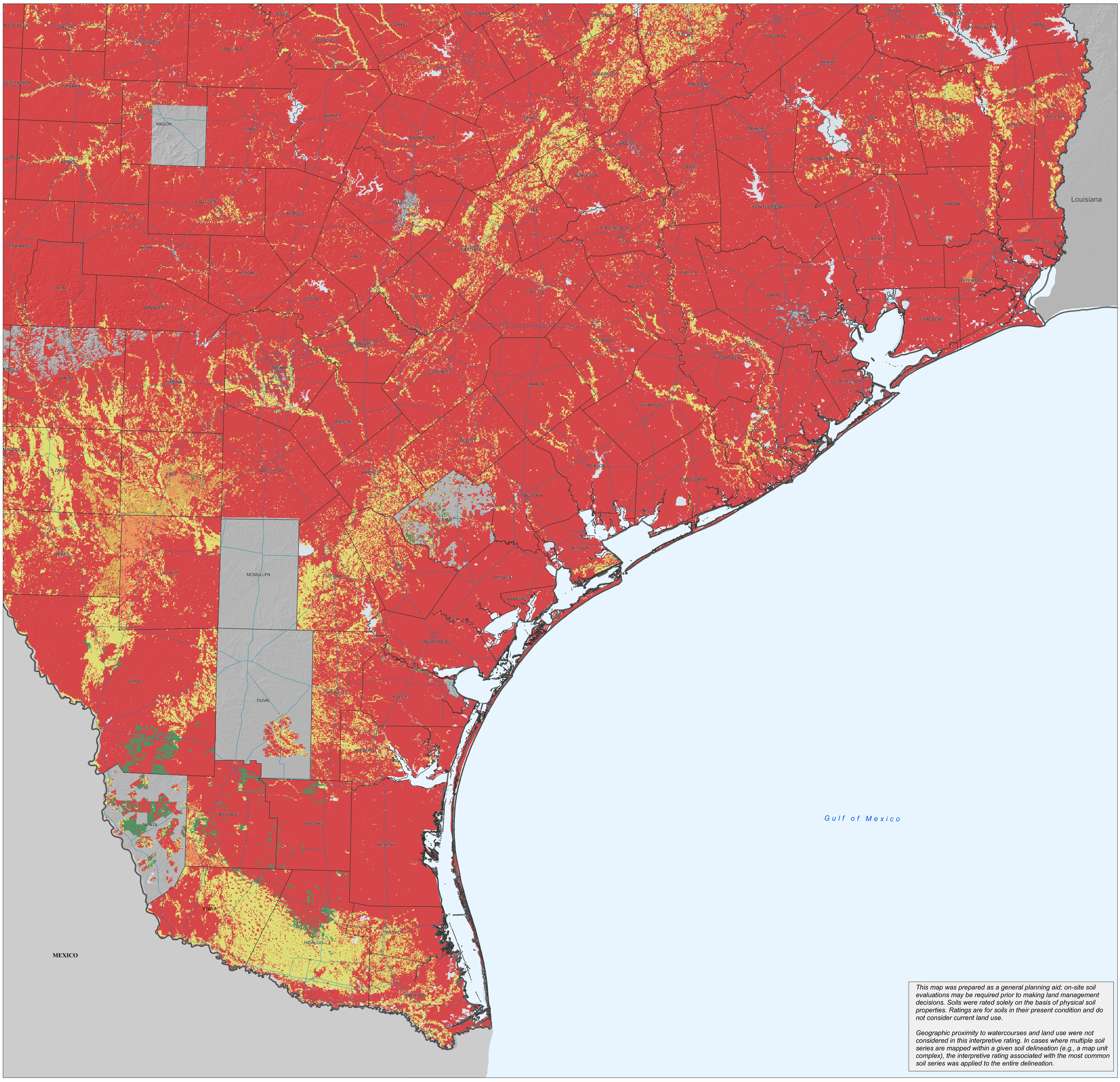
Limitations for Septic Tank Absorption Fields - Texas (2008)



This map was prepared as a general planning aid; on-site soil evaluations may be required prior to making land management decisions. Soils were rated solely on the basis of physical soil properties. Ratings are for soils in their present condition and do not consider current land use.

Geographic proximity to watercourses and land use were not considered in this interpretive rating. In cases where multiple soil series are mapped within a given soil delineation (e.g., a map unit complex), the interpretive rating associated with the most common soil series was applied to the entire delineation.

Septic Tank Absorption Fields

Septic Tank Absorption Field interpretations are a tool for guiding the user in site selection for safe disposal of household effluent. Septic tank absorption fields are subsurface systems of tile or perforated pipe that distribute effluent from a septic tank into the natural soil. The centerline depth of the tile is assumed to be 24 inches or deeper. Only the soil between depths of 24 and 60 inches is considered in making the ratings. Soil properties and site features considered are those that affect the absorption of the effluent, those that affect the construction and maintenance of the system, and those that may affect public health.

Soils are rated and placed into septic tank absorption field interpretive rating classes per their rating indices. These are not limited (rating index = 0), somewhat limited (rating index > 0 and < 1.0), or very limited (rating index = 1.0).

Soil properties and qualities that affect the absorption of the effluent are permeability, depth to a seasonal high water table, depth to bedrock, depth to a cemented pan, and susceptibility to flooding. Stones and boulders and a shallow depth to bedrock, ice, or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in down-slope areas. In addition, soil erosion is a hazard where absorption fields are installed in steep soils.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth less than 4 feet below the distribution lines. In these soils, the absorption field may not adequately filter the effluent, particularly when the system is new; consequently, ground water supplies may be contaminated. Percolation tests are used by some regulatory agencies to evaluate the suitability of a soil for septic tank absorption fields. These tests should be performed during the season when the water table is highest and the soil is at minimum absorptive capacity.

This interpretation is applicable to both heavily populated and sparsely populated areas. While some general observations may be made, onsite evaluation is required before the final site is selected. Improper site selection, design, or installation may cause contamination of ground water, seepage to the soil surface, and contamination of stream systems from surface drainage or flood water. Potential contamination may be reduced or eliminated by installing systems designed to overcome or reduce the effects of the limiting soil property.

N
W E
S

0 30 60
Kilometers

0 15 30
Miles

Original Map Scale 1:500,000

Original Map Scale is 1:500,000 when printed using a page size of 54"W x 70"H. When printed at other page sizes, the original absolute map scale will no longer be valid and scale bars should be used for reference.

Albers Equal Area Map Projection
North American Datum of 1983

NRCS Natural Resources Conservation Service

Soil Limitations

- Water
- Null or No Data
- 0.00: Not Limited
- 0.01 to 0.20: Slightly Limited
- 0.21 to 0.40: Moderately Limited
- 0.41 to 0.60: Moderately Limited
- 0.61 to 0.80: Moderately Limited
- 0.81 to 0.99: Significantly Limited
- 1.00: Very Limited
- State Boundaries
- CLAY County Boundaries
- Roads
- Hillshade

Sources:
ESRI. 1992. 1:3,000,000 Oceans. ArcWorld. ESRI - Redlands, CA.
National Atlas (http://www.nationalatlas.gov/). Roads. (09/2005).
National Atlas (http://www.nationalatlas.gov/). State Boundaries. (03/2007).
Soil Survey Staff. 2006. ENG – Septic Tank Absorption Fields Interpretation, National Soil Information System (07/13/2007). USDA, Natural Resource Conservation Service, National Soil Survey Center, Lincoln, Nebraska. (Draft 4.0, 11/2006).
USDA-NRCS-Draft. 2008. County Boundaries derived from 1:100,000 (Bureau of Census – TIGER) source as provided by C. Lloyd, USDA-NRCS, Information Technology Center, Fort Collins, CO.
USDA-NRCS. 2008. Soil Survey Geographic Database (SSURGO) version 2.1. Texas Collection. Temple, TX. Soil Data Mart Source (http://soildatamart.nrcs.usda.gov). Fiscal Year 2008, second quarter edition.
USGS. Analytical Hillshade computed from 30 meter National Elevation Dataset (NEDS) using the following parameters: 315 degrees altitude, 45 degrees azimuth, and z factor 1x. Prepared by USDA-NRCS-NGDC, Morgantown, WV.