

Data Interpretation – Instructions

On the following pages, you will see a series of maps covering an area in Johnson County, TX northeast of Cleburne. All maps were developed using WebSoilSurvey, an on-line tool developed by the Natural Resources Conservation Service to assist farmers and other landowners make informed decisions about land use practices appropriate for their location.

The first map shows the delineation for the various soil types within the area under examination. The letters in the delineation lines are the abbreviations for the soil name. The name and a brief description of each of the soils is provided in the table beneath the soil map.

The 4 maps on the second page are of the same area, but each map provides information about a specific characteristic of the area.

- The first map provides information about the suitability of each of the soils in the area to have a septic system installed, using a drip irrigation or the most expensive method for developing a home septic system.
- The second map shows farmland classification or areas that are most suitable for crop farming.
- The third map shows productivity of the land if used for rangeland or grazing of beef cattle.
- The fourth map shows the erosion potential for the soils in the designated area.

Questions

1. Looking at the Map Unit Legend, you will notice that each map unit symbol (except for Pb for pits and W for water) consists of 3 letters. The first 2 letters designate the name of the soil. Examine information in this table to determine what information is included in the 3rd letter.
 - a. Amount of clay in the soil
 - b. Percent slope
 - c. Erosion potential
 - d. Flooding potential
2. You want to build a home in this area and needed to have your own septic system. You also want a small area to productively raise beef cattle. Which soil type should you select?
 - a. Purves clay
 - b. Ponder clay loam
 - c. Frio silty clay
 - d. Lewisville silty clay
3. The best use of the land with Aledo-Bolar association soil is
 - a. Housing construction
 - b. Grazing
 - c. Woodlands or wildlife conservation
 - d. Crop production

4. Which of the following soils is most likely to drain poorly following rainstorms?
 - a. Bolar clay loam
 - b. Lewisville silty clay
 - c. Sanger clay
 - d. Purves clay

5. Which soil is most closely associated with the soil that is most likely to flood?
 - a. Purves clay
 - b. Sanger clay
 - c. Ponder clay loam
 - d. Seawillow clay loam

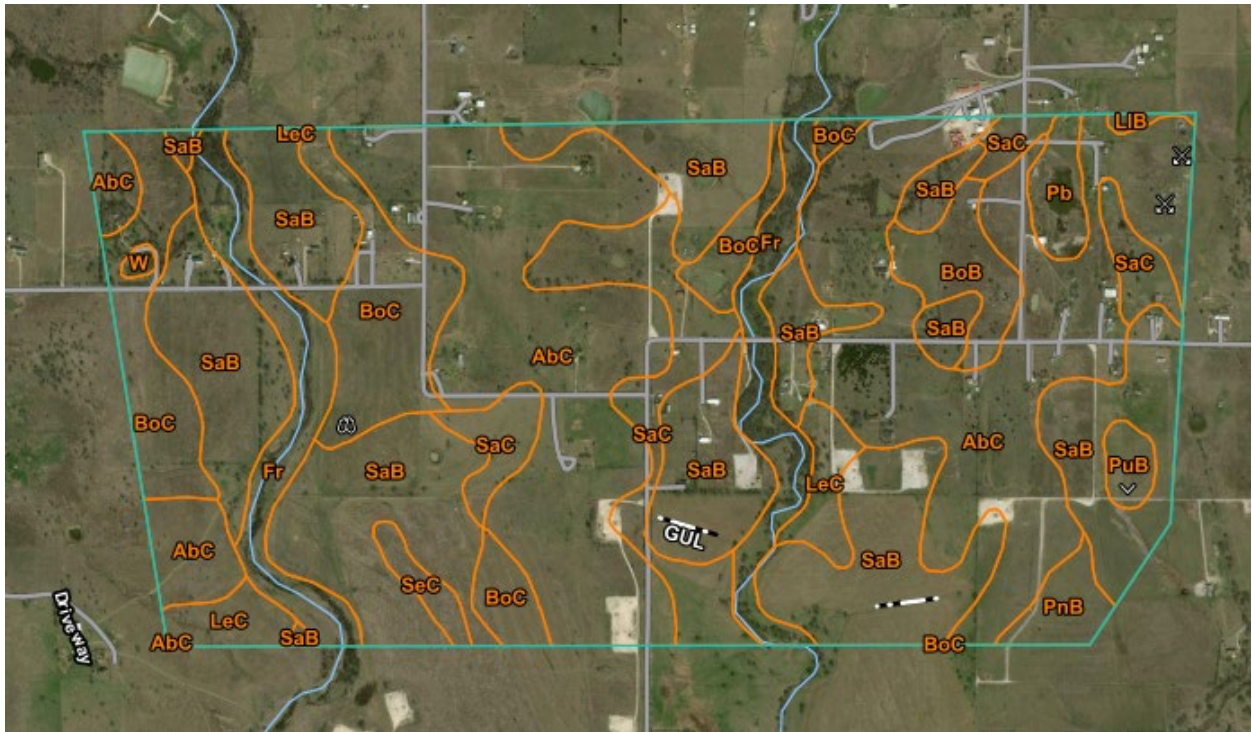
6. Which soil type delineates the ridges of the 2 small watersheds in this area?
 - a. Purves clay
 - b. Seawillow clay loam
 - c. Sanger clay
 - d. Aledo-Bolar association

7. You want to protect the water quality in the river on the west side of the map. Which soil would you not graze during the dry season when vegetation cover is limited?
 - a. Sanger clay
 - b. Bolar clay loam
 - c. Purves clay
 - d. Frio silty clay

8. What is the greatest limitation of the Frio silty clay to agricultural and home building use?
 - a. Steep slopes
 - b. High drought potential
 - c. Flood potential
 - d. Poor drainage

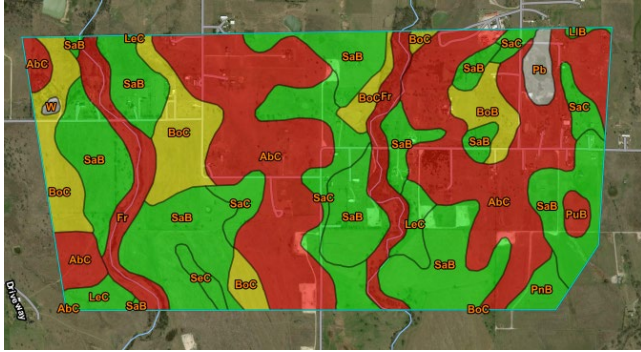
9. Approximately what percentage of the area has less than 3% slope?
 - a. 10%
 - b. 32%
 - c. 56%
 - d. 45%

10. Each of the large white rectangles on the map is a fracking site. What is the greatest environmental risk factor associated with these sites?
 - a. Earthquakes
 - b. Water pollution
 - c. Erosion siltation
 - d. Wind gusts



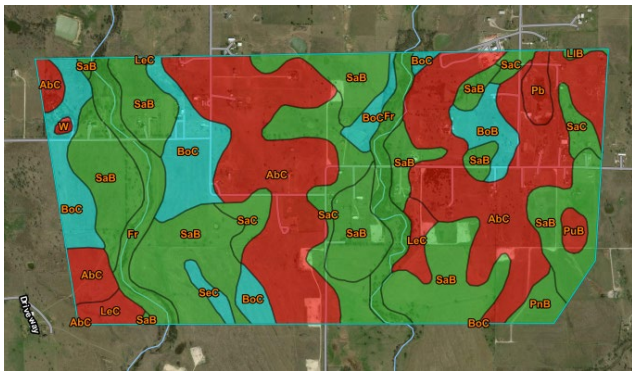
Map Unit Legend (FFA-19-S)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AbC	Aledo-Bolar association, 1 to 8 percent slopes	288.9	35.0%
BoB	Bolar clay loam, 1 to 3 percent slopes	17.7	2.1%
BoC	Bolar clay loam, 3 to 8 percent slopes	83.4	10.1%
Fr	Frio silty clay, 0 to 1 percent slopes, occasionally flooded	62.5	7.6%
LeC	Lewisville silty clay, 3 to 5 percent slopes, eroded	19.4	2.4%
LIB	Lindale clay loam, 1 to 3 percent slopes	1.4	0.2%
Pb	Pits, 0 to 45 percent slopes	9.8	1.2%
PnB	Ponder clay loam, 1 to 3 percent slopes	9.7	1.2%
PuB	Purves clay, 1 to 3 percent slopes	5.5	0.7%
SaB	Sanger clay, 1 to 3 percent slopes	259.2	31.4%
SaC	Sanger clay, 3 to 5 percent slopes	60.9	7.4%
SeC	Seawillow clay loam, 1 to 5 percent slopes	5.6	0.7%
W	Water	1.3	0.2%
Totals for Area of Interest		825.1	100.0%



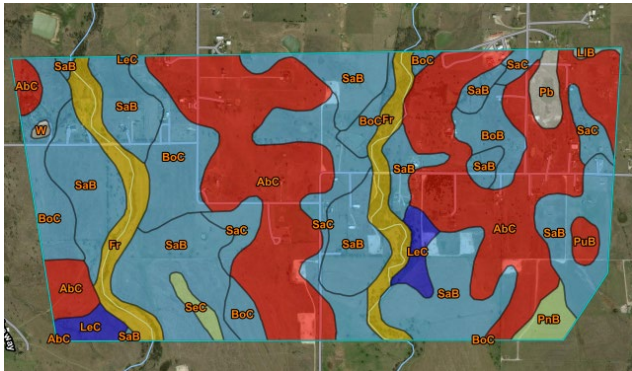
Septic system using drip irrigation

Red = not recommended
 Yellow = may be used if specified practices are used
 Green = no restrictions



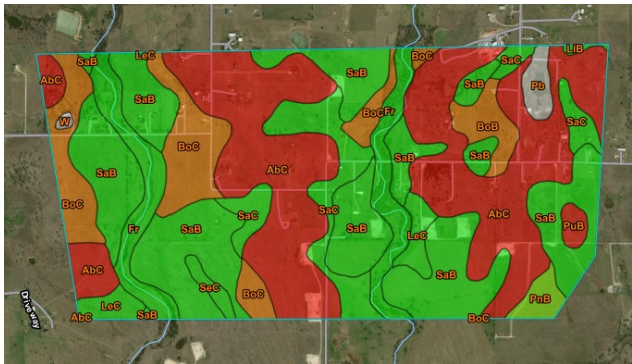
Farmland classification

Red = not prime farmland
 Green = prime farmland
 Blue = prime farmland if drained



Rangeland production in lb/acre/year

Red <= 2500
 Yellow 2500 – 3400
 Lime 3400 – 4000
 Light blue 4000 – 4500
 Dark blue 4500 – 5425



Erosion potential in tons/acre/year allowable

Red = 1 (highly erodible)
 Orange = 2
 Yellow = 3
 Green = 4 (low erodibility)

Answer Key

1. B
2. D
3. C
4. A
5. B
6. D
7. B
8. C
9. D
10. B