The Oklahoma Cooperative Extension Service

WE ARE OKLAHOMA

The Cooperative Extension Service is the largest, most successful informal educational organization in the world. It is a nationwide system funded and guided by a partnership of federal, state, and local governments that delivers information to help people help themselves through the land-grant university system.

Extension carries out programs in the broad categories of agriculture, natural resources and environment; family and consumer sciences; 4-H and other youth; and community resource development. Extension staff members live and work among the people they serve to help stimulate and educate Americans to plan ahead and cope with their problems.

Some characteristics of the Cooperative Extension system are:

- The federal, state, and local governments cooperatively share in its financial support and program direction.
- It is administered by the land-grant university as designated by the state legislature through an Extension director.
- Extension programs are nonpolitical, objective, and research-based information.
- It provides practical, problem-oriented education for people of all ages. It is designated to take the knowledge of the university to those persons who do not or cannot participate in the formal classroom instruction of the university.
- It utilizes research from university, government, and other sources to help people make their own decisions.
- More than a million volunteers help multiply the impact of the Extension professional staff.
- It dispenses no funds to the public.
- It is not a regulatory agency, but it does inform people of regulations and of their options in meeting them.
- Local programs are developed and carried out in full recognition of national problems and goals.
- The Extension staff educates people through personal contacts, meetings, demonstrations, and the mass media.
- Extension has the built-in flexibility to adjust its programs and subject matter to meet new needs. Activities shift from year to year as citizen groups and Extension workers close to the problems advise changes.

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Tools for Rangeland Management and Assessment: Web Soil Survey

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Rangelands are complex systems to understand and to manage. Luckily there are tools available to aid in making management decisions such as setting initial stocking rates, identifying the current state of the site, and determining past management practices, as well as the potential of a site. The Web Soil Survey and Ecological Site Descriptions are two such tools where land managers, consultants and Extension educators can get site specific information even prior to visiting a particular location. This fact sheet provides detailed instructions for navigating the Web Soil Survey system. Refer to fact sheet NREM-2900 for information about Ecological Site Descriptions.

Web Soil Survey

The Web Soil Survey (WSS) is an online web based tool where information that was traditionally available through hardcopy county soil surveys is now available digitally. The benefits of this online version include having the most current information available and the ability to limit the information to what is relevant for specific land use concerns (i.e. rangeland versus cropland). Users can create colored soils maps with either satellite imagery or topographic map backdrops for their selected Area of Interest (AOI). In addition, any description or map created in the right-hand panel can be added to the free shopping cart and either printed or downloaded as a single PDF document.

Oklahoma Cooperative Extension Fact Sheets are also available on our website at:
http://osufacts.okstate.edu

Web Soil Survey for Rangeland Management

One important resource for rangeland management found on the WSS includes annual forage production estimates for different plant communities that are commonly associated with specific soils and geographic locations. Although clipping and weighing actual plant production is best, initial stocking rates can be calculated using these production estimates. Detailed information about those plant communities is also available with species lists and a model, called a State and Transition Model, of how the plant communities on that site may change under different management practices. Another important type of information available on the Web Soil Survey includes the ecological site description identification number which can be used at the Ecological Site Information System at https://esis.sc.egov.usda.gov/Welcome/pgReportLocation.aspx?type=ESD to access approved Ecological Site Descriptions (ESDs). ESDs are detailed descriptions of the topography, weather, and plants typically found on a site with a particular geographic location and soil type. They provide information concerning the potential plant communities a site could support as well as how particular management practices will maintain or change those plant communities. Refer to the Web Soil Survey Quick Guide below for instructions on how to navigate the Web Soil Survey system.

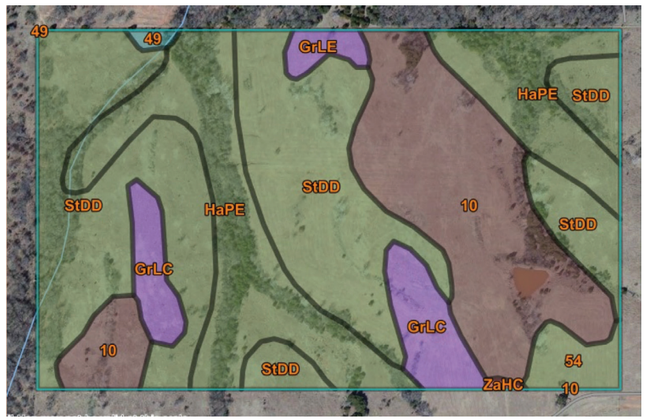


Figure 1. A soils map for a cross timbers pasture in Oklahoma.

Web Soil Survey Quick Guide for Rangelands

1. **Navigate** to http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm
2. **Press the start button** to begin.

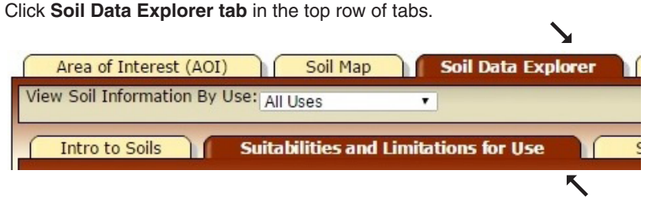
3. **Zoom to desired location** using one of the following methods:

   A. **Click zoom in tool** , then click on map to zoom in or click and drag to zoom to a selected area.
   B. Enter stre**et address,** in Quick Navigation panel on left. Click View.
   C. Enter **latitudinal and longitudinal coordinates** from Google Earth, in Quick Navigation panel. Click View. For acceptable formats click Help button .

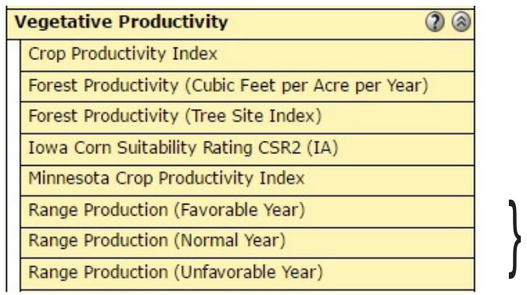
4. Click on the Area of Interest (AOI) tab. Outline your **Area of Interest (AOI):**

   A. Click the **AOI rectangle tool** if your AOI is a rectangle. Click and drag for selected area.
   B. Click the **AOI polygon tool** for any irregular shaped AOI. Place the + cursor on an edge of the area, click and move to the next corner, dropping a point by clicking at each bend. Double click to finish the shape.

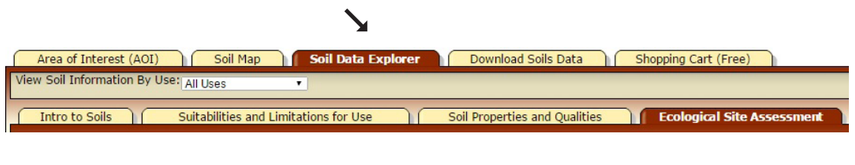
5. Click **Soil Data Explorer tab** in the top row of tabs.



6. Click **Suitabilities and Limitations for Use tab** from the bottom row of tabs.
7. Click double down arrows right of Vegetative Productivity.
8. Click **Range Production** (Favorable Year, Normal Year, or Unfavorable Year) for **annual plant production estimates.**



9. Remain under the **Soil Data Explorer tab.**

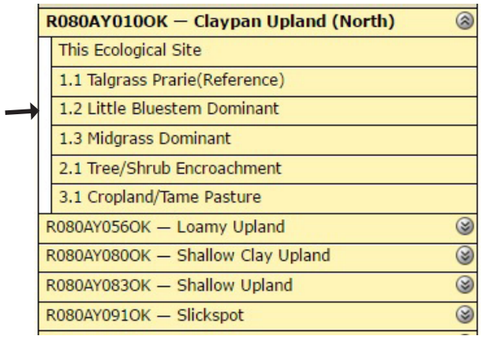


10. Click **Ecological Site Assessment tab.**
11. Click View All Ecological Sites Info on the left of the screen. Scroll down and here you will find the percent of the Area of Interest and the number of acres for each Ecological Site within your AOI with the **ecological site identification number**. Use the one or two ecological sites which are most representative, or have the greatest percent of AOI, for your pasture.

Payne County, Oklahoma

Map unit symbol	Map unit name	Component name (percent)	Ecological site	Acres in AOI	Percent of AOI
10	Darnell-Rock outcrop complex, 8 to 45 percent slopes	Darnell (50%)	R084AY088OK — Shallow Savannah	31.1	20.0%
		Rock outcrop (30%)			
		Harrah (5%)	R084AY075OK — Sandy Loam Savannah		
		Lucien (5%)	R080AY083OK — Shallow Upland		
		Masham (5%)	R080AY080OK — Shallow Clay Upland		
		Stephenville (5%)	R084AY075OK — Sandy Loam Savannah		
49	Renfrow and Grainola soils, 3 to 8 percent slopes, severely eroded	Renfrow, severely eroded (45%)	R080AY810OK — Eroded Claypan Prairie (North) (Obsolete) Refer To 80AY010	8.4	5.4%
		Grainola, severely eroded (40%)	R080AY810OK — Eroded Claypan Prairie (North) (Obsolete) Refer To 80AY010		

12. You can also click on individual ecological site ID number on the left and view **plant community information**. Click on the plant community title.



Then click View Plant Community Info .

13. Maps and descriptions in the right-hand panel may be added to the free shopping cart by clicking Add to Shopping Cart in the upper right-hand corner. All content added can then be printed or downloaded as a single PDF document by clicking Printable Version and View in the pop-up window.