

## Steps for using the Web Soil Survey for Onsite Wastewater Treatment System (OWTS) Evaluations (Related to Real Estate Transactions)

1. Open the link: <http://websoilsurvey.nrcs.usda.gov/app/>.

NOTE: There are help links on the right, including “Getting Started With Web Soil Survey.”

2. Click the green button labeled Start WSS.

3. Open the **Address** form on the left.

4. Type the site address information and then the enter key, or click **View**.

5. Clicking the three buttons on the left above the map, you can click and drag to zoom in, zoom out, or pan, if needed.

NOTE: Lot lines are not available on this site; ensure you have enough area visible based on a plat or other preliminary site location information.

6. Set your Area of Interest: Click the **AOI Rectangle** button (several buttons to the right of the pan button) then click and drag to form a rectangle area, OR click the **AOI Polygon** button (12<sup>th</sup> from the left) then click points on the map and double click the last point. You should include all of the system and lot and preferably some surrounding area for clarity.

7. Click the **Soil Map** tab to view the soil map and note map unit symbol(s) in the system/lot area.

8. Click the **Soil Data Explorer** tab and a set of inner tabs open.

9. Open the “**Suitabilities and Limitations for Use**” inner tab (if it didn’t open) and open the **Sanitary Facilities** folder on the left.

10. Open the “**On-site Waste Water Absorption Fields (MO)**” form and click **View Rating**.

11. Scroll down to see ratings and reasons in table form.\*

12. If steps 10 and 11 didn’t answer the permeability question:

a. Click the **Soil Reports** inner tab and open the **Soil Physical Properties** folder on the left.

b. Open the **Physical Soil Properties** form and click **View Soil Report**.

c. Scroll down to see Saturated Hydraulic Conductivity ( $K_{sat}$ ) by horizons.\*\*

13. Click the **Soil Reports** inner tab and open the **Water Features** folder on the left.

14. Open the **Water Features** form and click **View Soil Report**.

15. Scroll down to see the water table upper limit.

NOTE: You can print the soil map and other items discussed above. The soil map will automatically be included and you can add any other rating or report by clicking the **Add to Shopping Cart** button after clicking **View**. When you click the **Shopping Cart (Free)** button and **Check Out** button, a pdf file is generated to print or save.

Permeability Interpretations:

\* Based on the On-Site Waste Water Absorption Fields (MO) table rating and reasons:

- If Rating is Unsuitable, answer to 4b is generally No
- If Rating is Provisionally Suitable - Low, check reasons for any indication of slow permeability and answer 4b No if reasons are related to permeability or Yes if unrelated.
- If Rating is Provisionally Suitable - High, the answer to 4b is generally Yes.

\*\* Based on the Physical Soil Properties table:

- If any horizon from 0 to 48 inches has a  $K_{sat}$  of  $\leq 1$ , answer 4b No; if all  $K_{sat}$  numbers are greater than one ( $>1$ ) micron per second, answer 4b Yes.

## Steps for using a Soil Survey Books/Manuscripts for Onsite Wastewater Treatment System (OWTS) Evaluations (Related to Real Estate Transactions)

1. If using the online manuscripts go to <http://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=MO> and find the county of interest; click the county name with the latest “Archived PDF online” and download the manuscript (note some manuscripts are for multiple counties and the Mark Twain National Forest contains parts of Carter, Oregon, Ripley, and Shannon Counties).
2. Find the Index to Map Sheets page (or click the link to the Map Index).
3. Use city/town and road names to find approximate property location and determine which detailed map sheet to open (click the detail sheet link if online; zoom and scroll as needed).
4. Locate the property and OWTS on the detailed map sheet.
5. Note the map unit(s) in the OWTS area.
6. Find the map unit name(s) in the Soil Legend on the back of the Index to Map Sheets page (or use the back button to return to the manuscript and click (Legends”).
7. Find the map unit(s) in the Sanitary Facilities Table (or click on the table link in the bookmarks). Look for the “Septic tank absorption field” ratings and reasons.\*
8. If step 7 and the Sanitary Facilities table didn’t answer the permeability question:
  - a. Find the map unit(s) in the Physical and Chemical Properties of the Soils Table (or click on the table link in the bookmarks).
  - b. Check the permeability in inches/hour for each horizon.\*\*
9. Find the map unit(s) in the Soil and Water Features Table or the Water Features Table (or click on the table link in the bookmarks).
10. Look for the shallowest “Depth” under “High water table.”

NOTE: Table numbers may differ in Soil Survey Books/Manuscripts.

### Permeability Interpretations:

\* Based on the Sanitary Facilities table:

- If Rating is Severe, check reasons; answer to 4b is generally No.
- If Rating is Moderate, check reasons; if it shows “percs slowly” or another indication of slow permeability, answer 4b No, or if reasons are unrelated to permeability, generally answer Yes.
- If Rating is Slight, answer to 4b is generally Yes.

\*\* Based on the Physical and Chemical Properties of the Soils Table:

- If any horizon from 0 to 48 inches has a permeability range 0.2-0.6 in./hr. or less, answer 4b No.
- If all permeability numbers are equal to or greater than 0.6 in./hr., answer 4b Yes.