# VAIUING FARNLLAND USING LAND CLASS RRTINGS 

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Presenter

## Why Use Land Class Ratings?

■OBJECTIVE when applied properly
DDATA required is readily available
SIMPLE
$\square$ RESULTS are credible

You're DYING to know more, aren't you???

# 3 Easy Steps 

## Gather Soil Data

## Use Soil Data to Construct Land Class Rating

Adjust Comparable Land Values Using Land Class Rating

## Step 1

## Gather Soil Data

Web Soil Survey
U.S. Department of Agriculture

Natural Resource Conservation Service
http://websoilsurvey.nrcs.usda.gov/app/


You are here: Web Soil Survey Home

## Search

| Enter Keywords | Go |
| :--- | :--- |
| All NRCS Sites |  |

## Browse by Subject

- Soils Home
- National Cooperative Soil Survey (NCSS)
- Archived Soil Surveys
- Status Maps
- Official Soil Series Descriptions (OSD)
- Soil Series Extent Mapping Tool
- Geospatial Data Gateway
- EFOTG
- National Soil Characterization Data


## The simple yet powerful way

 to access and use soil data.
## START wss

## Welcome to Web Soil Survey (WSS)



Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the USDA Natural Resources Conservation Service (NRCS) and provides access to the largest natural resource information system in the world. NRCS has soil maps and data available online for more than 95 percent of the nation's counties and anticipates having 100 percent in the near future. The site is updated and maintained online as the single authoritative source of soil survey information.

Soil surveys can be used for general farm, local, and wider area planning. Onsite investigation is needed in some cases, such as soil quality assessments and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center or your NRCS State Soil Scientist.

## I Want To...

Start Web Soil Survey (wss)

- Know the requirements for running Web Soil Survey - will Web Soil Survey work in my web browser?
- Know the Web Soil Survey hours of operation
- Find what areas of the U.S. have soil data
- Find information by topic
- Know how to hyperlink from other documents to Web Soil Survey


## Announcements/Events

- Web Soil Survey 3.1 has been released! View description of new features and fixes.
- Web Soil Survey Release History
7 Sign up for e-mail updates via GovDelivery



## Area of Interest (AOI)




(8)

## Map your Area of Interest



PVA Aerial Map used here

Scale





## Area of Interest is Defined

## Area of interest (AOI) Soil Map Soil Data Explorer Download Soils Data Shopping Cart (Free)



## Soil Map View

| Area of Interest (AOI) Soil Map | Soil Data Explorer | Download Soils Data | Shopping Cart (Free) |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Printable Version | Add to Shopping Cart |  |



## Soil Map View

| Search | © |
| :--- | ---: |
| Map Unit Legend | ? |
|  |  |

## Barren County Area, Kentucky (KY646)

| Map |
| :---: |
| Unit |
| Symbol |


(16)

## Soil Map View

Area of Interest (AOI)

Soil Map
Soil Data Explorer Download Soils Data Shopping Cart (Free)

Printable Version Add to Shopping Cart

| Search |  |  |
| :--- | :---: | :---: | ---: |
| Map Unit Legend | Acres | Percent |
| in |  |  |
|  | of A0I |  |$|$


(17)

## Soil Map View

## Area of Interest (AOI) <br> Soil Map <br> Soil Data Explorer Download Soils Data Shopping Cart (Free)

Printable Version Add to Shopping Cart

| Search | © |
| :--- | ---: |
| Map Unit Legend | Q |
|  | ? |

## Barren County Area, Kentucky (KY646)

| $\begin{gathered} \text { Map } \\ \text { Unit } \\ \text { Symbol } \end{gathered}$ | Map Unit Name | $\begin{gathered} \text { Acres } \\ \text { in } \\ \text { AOI } \end{gathered}$ | Percent of AOI |
| :---: | :---: | :---: | :---: |
| Bab | Baxter cherty silt loam, 2 to 6 percent slopes | 1.6 | 1.2\% |
| BaC2 | Baxter cherty silt loam, 6 to 12 percent slopes, eroded | 4.0 | 3.2\% |
| BoD | Bodine cherty silt loam, 12 to 20 percent slopes | 0.3 | 0.2\% |
| BoE | Bodine cherty silt loam, 20 to 35 percent slopes | 5.1 | 4.1\% |
| ClB | Christian silt loam, 2 to 6 percent slopes | 2.7 | 2.2\% |
| CmC3 | Christian silty clay loam, 6 to 12 percent slopes, severely eroded | 8.3 | 6.6\% |
| CnC2 | Clarksville cherty silt loam, 6 to 12 percent slopes, eroded (trimble) | 5.3 | 4.2\% |
| CnE2 | Clarksville cherty silt loam, 20 to 30 percent slopes, eroded (trimble) | 0.1 | 0.1\% |
| CrB | Crider silt loam, 2 to 6 percent slopes | 10.3 | 8.2\% |
| CrC2 | Crider silt loam, 6 to 12 percent slopes, eroded | 3.0 | 2.4\% |
| DCA | Dickson silt loam, 0 to 2 percent slopes | 1.6 | 1.3\% |
| DCB | Dickson silt loam, 2 to 6 percent slopes | 11.3 | 8.9\% |
| DcC2 | Dickson silt loam, 6 to 12 | 2.6 | 2.1\% |



## Printing the Soil Map




## Capability Class



## Capability Class



## Nonirrigated Capability Class

| Nonirigated Capability Class- Summary by Map Unit - Barren County Area, Kentucky (KY646) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| BaB | Baxter cherty silt loam, 2 to 6 percent slopes | 2 | 1.6 | 1.2\% |
| BaC2 | Baxter cherty silt loam, 6 to 12 percent slopes. eroded | 3 | 4.0 | $3.2 \%$ |
| BoD | Bodine cherty silt loam, 12 to 20 percent slopes | 6 | 0.1 | 0.1\% |
| BoE | Bodine cherty silt loam, 20 to 35 percent slopes | 7 | 5.0 | 4.0\% |
| ClB | Christian silt loam, 2 to 6 percent slopes | 2 | 2.7 | 2.2\% |
| CmC3 | Christian silty clay loam, 6 to 12 percent slopes. severely eroded | 4 | 8.0 | 6.4\% |
| CnC2 | Clarksville cherty silt loam, 6 to 12 percent slopes, eroded (trimble) | 3 | 5.2 | 4.1\% |
| CnD2 | Clarksville cherty silt loam, 12 to 20 percent slopes, eroded (trimble) | 4 | 0.0 | 0.0\% |
| CnE2 | $\begin{aligned} & \text { Clarksville cherty silt } \\ & \text { loam, } 20 \text { to } 30 \text { percent } \\ & \text { slopes, eroded } \\ & \text { (trimble) } \end{aligned}$ | 6 | 0.1 | 0.1\% |
| CrB | Crider silt loam, 2 to 6 percent slopes | 2 | 10.3 | 8.2\% |
| CrC2 | Crider sitt loam, 6 to 12 percent slopes. eroded | 3 | 3.1 | 2.5\% |
| DCA | Dickson sit loam, 0 to 2 percent slopes | 2 | 1.6 | 1.3\% |
| DcB | Dickson sitt loam, 2 to 6 percent slopes | 2 | 11.3 | 9.0\% |
| DcC2 | Dickson silt loam, 6 to 12 percent slopes, eroded | 3 | 2.6 | 2.1\% |
| GaB | Garmon silt loam, 2 to 6 percent slopes | 3 | 2.1 | 1.7\% |
| GaC2 | $\begin{aligned} & \text { Garmon silit loam, } 6 \text { to } 12 \\ & \text { percent slopes, } \\ & \text { eroded } \end{aligned}$ | 4 | 2.7 | 2.1\% |Natural Resources

Conservation Service

## Refer to Handout for larger view

| Nonirrigated Capability Class- Summary by Map Unit - Barren County Area, Kentucky (KY646) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| GmE3 | Garmon shaly silt loam, 15 to 25 percent slopes, severely eroded | 7 | 2.6 | 2.1\% |
| Gu | Gullied land | 8 | 3.7 | 2.9\% |
| Ha | Hamblen silt loam | 2 | 3.8 | 3.0\% |
| HuC2 | Humphreys cherty silt loam, 6 to 12 percent slopes, eroded | 3 | 1.5 | 1.2\% |
| MoB | Mountview silt loam, 2 to 6 percent slopes | 2 | 0.0 | 0.0\% |
| MoC2 | Mountview silt loam, 6 to 12 percent slopes, eroded | 3 | 7.0 | 5.6\% |
| NmC3 | Needmore silty clay, 6 to 12 percent slopes. severely eroded | 6 | 4.4 | 3.5\% |
| N | Newark silt loam | 2 | 4.4 | 3.5\% |
| PbC2 | Pembroke silt loam, 6 to 12 percent slopes, eroded | 3 | 3.8 | 3.0\% |
| Rg | Robinson ville gravelly silt loam (sensabaugh) | 2 | 11.1 | 8.8\% |
| Rs | Roellen silty clay loam | 3 | 1.6 | 1.3\% |
| st | Staser silt loam | 2 | 0.7 | 0.6\% |
| Ta | Taft silt loam | 3 | 9.5 | 7.5\% |
| TrB | Tarklin cherty sitt loam, 2 to 6 percent slopes | 2 | 0.9 | 0.7\% |
| TrC | Tarklin cherty sitt loam, 6 to 12 percent slopes | 3 | 9.8 | 7.8\% |
| w | Water |  | 0.4 | 0.3\% |
| Totals for Area of Interest |  |  | 125.7 | 100.0\% |

## Refer to Handout for larger view

## Now We're Cookin'!!

## Soil Data Collection is Complete

## Step 2

## Use Soil Data to

## Construct a Land Class Rating

## Converting Soil Classes into Rating Classifications

Class 1 soils have few limitations that restrict their use. ..... 100Class 2 soils have moderate limitations that reduce the choice ofplants or that require moderate conservation practices.85
Class 3 soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both. ..... 70
Class 4 soils have very severe limitations that reduce the choice of plants or that require very careful management, or both. ..... 55
Class 5 soils are subject to little or no erosion but have otherlimitations, impractical to remove, that restrict their use mainly to40pasture, etc.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to25 pasture, etc.
Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to10 grazing, forestland, etc.
Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and restrict their use torecreational purposes, wildlife habitat, or esthetic purposes.

## Other Considerations

$\square$ USE is not appropriate for interim ag uses Development potential will skew results
$\square P O N D S / W A T E R$ not included
Their value assigned elsewhere

## Calculating the Land Class Rating <br> (SWubject Properity)

| Soil Class | Acres | Soil Rating | Composite (PU) |
| :---: | :---: | :---: | :---: |
| 2 | 48.5 | 85 | 4122.5 |
| 3 | 50.2 | 70 | 3514 |
| 4 | 10.7 | 55 | 588.5 |
| 6 | 4.6 | 25 | 115 |
| 7 | 7.6 | 10 | 76 |
| 8 | 3.7 | 5 | 18.5 |
| Totals | 125.3 | 际 |  |



## Calculating the Land Class Rating (Coxnowroble sale)

| Soil Class | Acres | Soil Rating | Composite (PU) |
| :---: | :---: | :---: | :---: |
| 2 | 53.5 | 85 | 4547.5 |
| 3 | 65 | 70 | 4550 |
| 4 | 6.5 | 55 | 357.5 |
| 6 | 2.3 | 25 | 57.5 |
| 7 | 1.7 | 10 | 17 |
| 8 | 0 | 5 | 0.0 |
| Totals | 129 |  | 9529.5 |


| Composite | $\div$ | Total Acres | $=$ |
| :---: | :---: | :---: | :---: |
| 9529.5 | 129 | Land Class Rating |  |

## Writing up a Comparable Sale

## KYTC Form 62-20C is DESIGNED to accommodate LCR

(Excerpt from Handout Supplement)


## Price Per Productive Unit

A Meaningful Unit of Comparison


## Price/Acre vs. Price/Productive Unit

A Sample of Actual Sales

| SALE PRICE | ACRES | PER ACRE <br> PRICE | COMPOSITE <br> (TOTAL PU) | $\$ \$ /$ PU |
| :---: | :---: | :---: | :---: | :---: |
| $\$ 29,000$ | 30.00 | $\$ 967$ | 900 | $\$ 32.22$ |
| $\$ 47,520$ | 31.68 | $\$ 1,500$ | 1,462 | $\$ 32.49$ |
| $\$ 36,800$ | 36.80 | $\$ 1,000$ | 1,104 | $\$ 33.33$ |
| $\$ 94,926$ | 55.28 | $\$ 1,808$ | 2,990 | $\$ 33.42$ |
| $\$ 44,304$ | 27.69 | $\$ 1,600$ | 1,323 | $\$ 33.49$ |
| $\$ 25,500$ | 14.96 | $\$ 1,705$ | 665 | $\$ 38.33$ |
| Variances |  |  | $187 \%$ |  |

Which appears more meaningful???

## Calculating Price/Productive Unit

 (రుฐiog the Conఇparoble sale)
# Land Value $\$ 319,000$ <br> Composite (PU) 눙 9530 

$$
\$ 33.47 \text { per PU }
$$

## Step 3

Adjust Comparable Land

## Values Using Land Class Rating

When selecting comparable sales, look for those most similar in acreage/size and Land Class Rating to the Subject

## Adjusting for Land Class Rating

## Which property is superior?



## Adjusting for Land Class Rating

Subject LCR $67.3 \div$ Sale LCR $73.9=.91$

$$
.91-1.0=-.09
$$

Sale's OVERALL Land Value is $\$ 2,458 /$ acre

Comparable Sale's land value of \$2,458/acre X Adjustment factor of $-.09=-\$ 221 /$ acre

## HELPFUL LINKS \& RESOURCES

## Web Soil Survey

U.S. Department of Agriculture

Natural Resource Conservation Service
http://websoilsurvey.nrcs.usda.gov/app/

How to Use Web Soil Survey 3.0
http://websoilsurvey.nrcs.usda.gov/app/Help/WSS Ho
mePage HowTo 3 0.pdf

For a complete PDF of this presentation, please email a request to: laparkinson@duncanappraisal.biz

## OUESTIONS \& COMMENTS

