

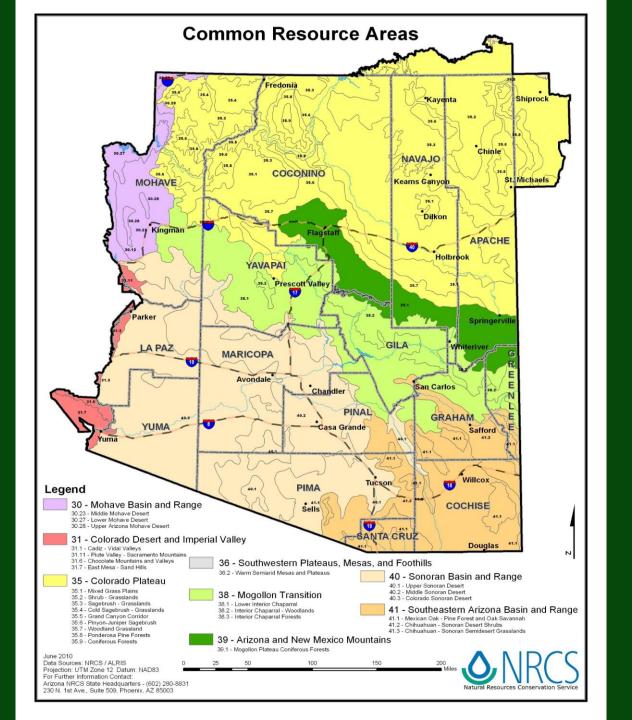


# How to Find Information About Ecological Sites

Lamar Smith, Ph.D. August 2021









**Ecological sites have a unique identifier.** 

**Example:** 

Site ID: R030XA101AZ

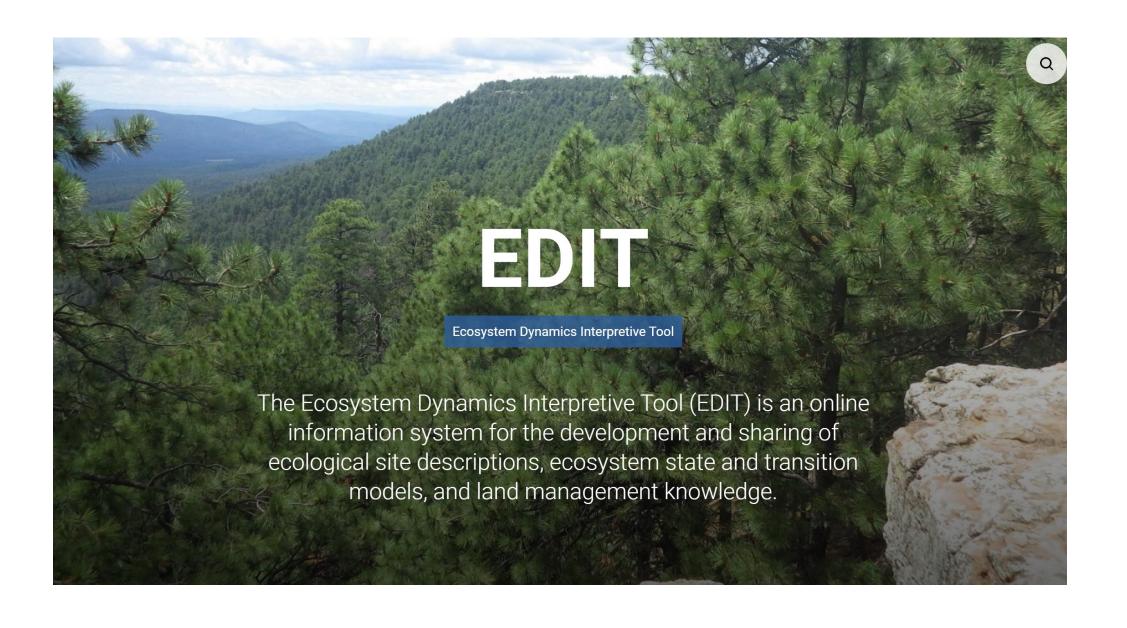
R = range; 030 = MLRA 30; 101 = Site Number; AZ = Arizona

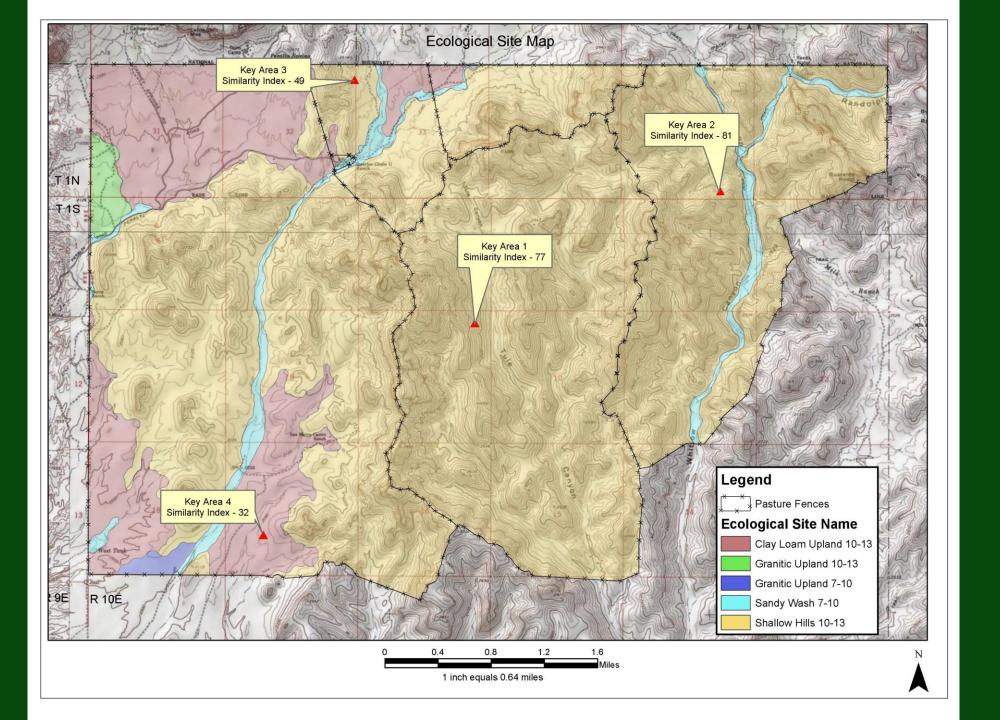
Each ecological site also has a name and precipitation zone attached. The names may be used in other environmental zones or Major Land Resource Areas, i.e., they are not unique.

**Example:** 

Site Name: Basalt Hills 3-6 p.z.

p.z. = precipitation zone which corresponds to CRA 30-1





#### STATUS OF SSURGO CERTIFIED SOIL SURVEYS SOIL SURVEY PROGRAM - ARIZONA CLICK ON SOIL SURVEY # TO DOWNLOAD THE GIS LAYER AND DATABASE. шли уэли, эт UT643 NV608 AZ701 NM717 AZ823 NM618 AZ712 AZ713 AZ707 AZZ/13 /AZZ/15 AZ697 AZ631 AZ7(15) AZ633 AZ627 AZ637 AZ635 LA PAZ AZ845 QUARTZSITE AZ657 AZ651 AZ653 AZ659 AZ669 AZ668 AZ703 Legend AZ669 SSURGO Certified AZ723 Certification Planned - FY 2012 AZ667 AZ671 U.S. Forest Service - Terrestrial Ecosystem Survey DOUGLAS AZ723 Digitizing Plans Incomplete — County Boundary 120



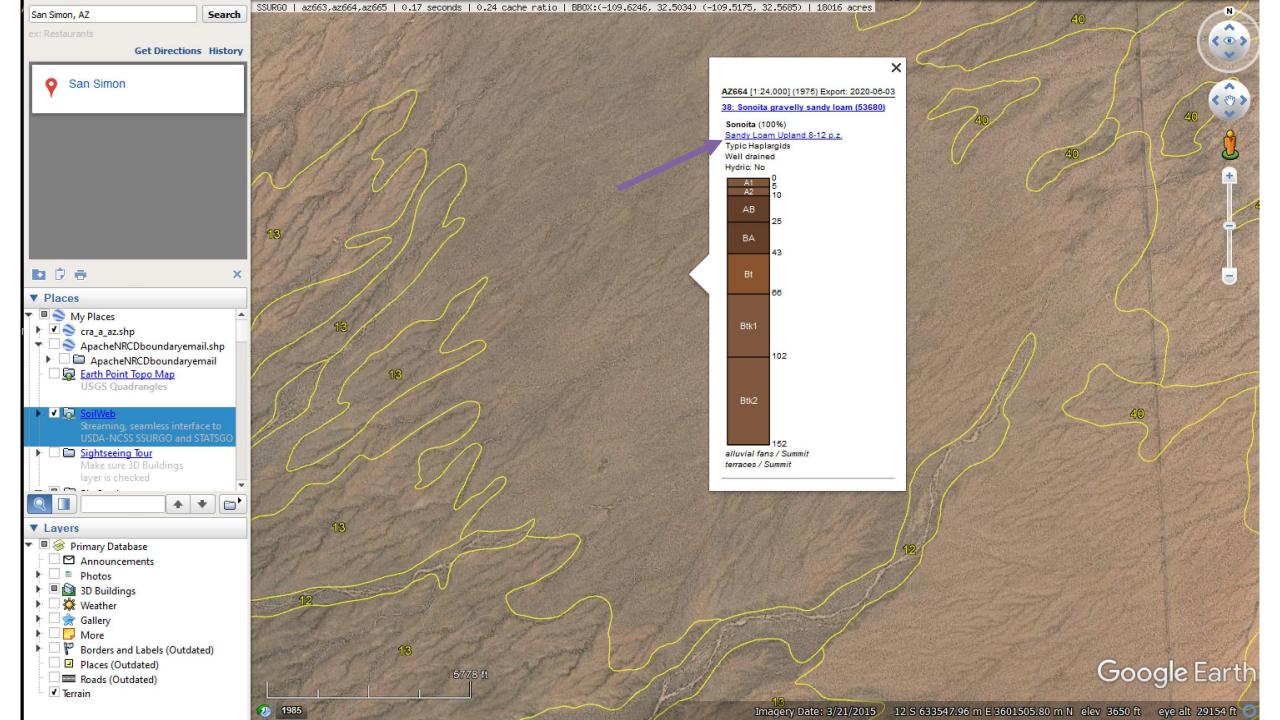
# SOIL SURVEY OF SAN SIMON AREA, ARIZONA PARTS OF COCHISE, GRAHAM, AND GREENLEE COUNTIES

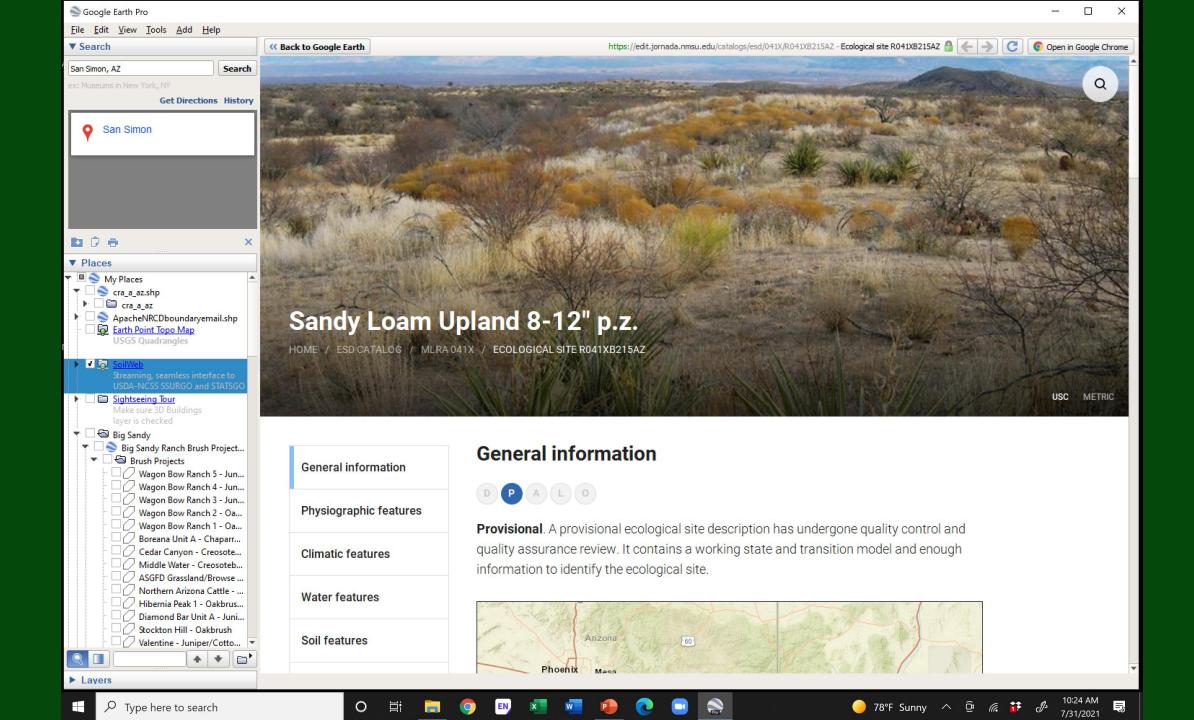


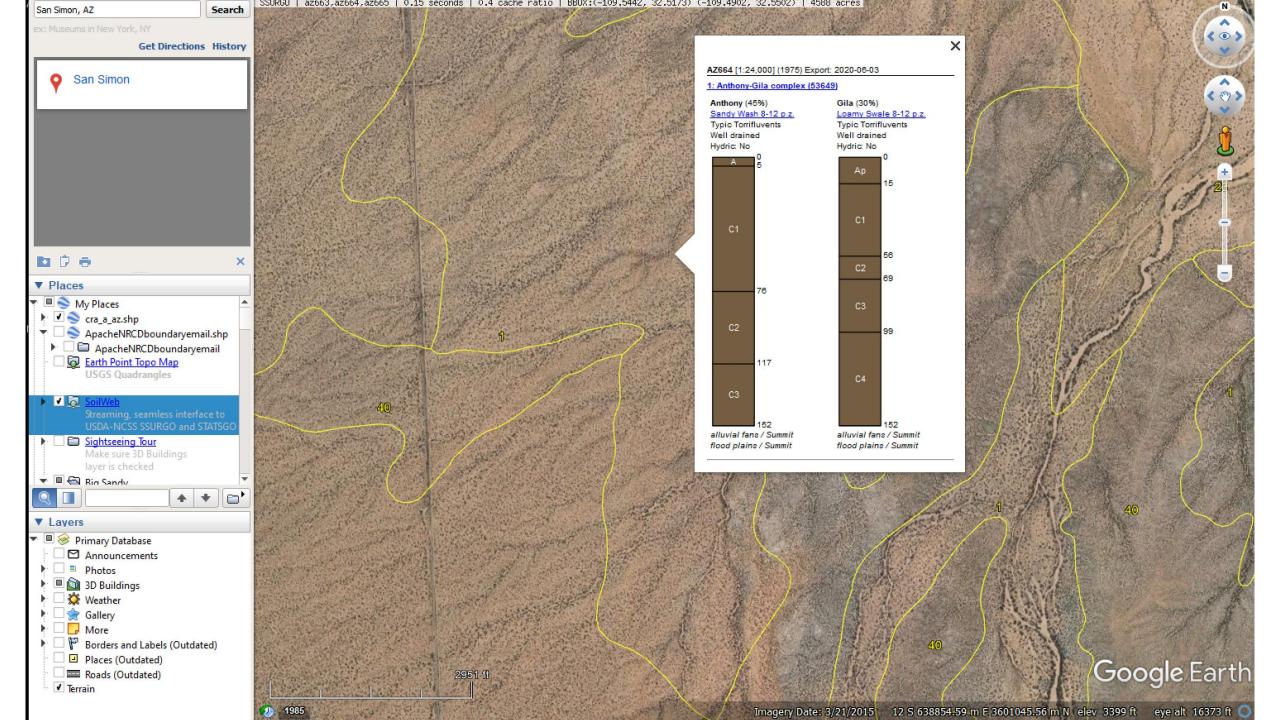
United States Department of Agriculture Soil Conservation Service in cooperation with Arizona Agricultural Experiment Station













You are here: Web Soil Survey Home

Search
Enter Keyword Go

All NRCS Sites

Browse by Subject

- Soils Home
- National Cooperative Soil Survey (NCSS)
- Archived SoilSurveys
- Status Maps
- Official Soil SeriesDescriptions (OSD)
- Series Extent Explorer
- Geospatial DataGateway
- eFOTG
- National Soil Characterization Data
- Soil Health
- Soil Geography

The simple yet powerful way to access and use soil data.



#### 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 at the following link: <a href="USDA Service Center">USDA Service Center</a> or your NRCS State Soil Scientist at the following link: <a href="NRCS State Soil Scientist">NRCS State Soil Scientist</a>.

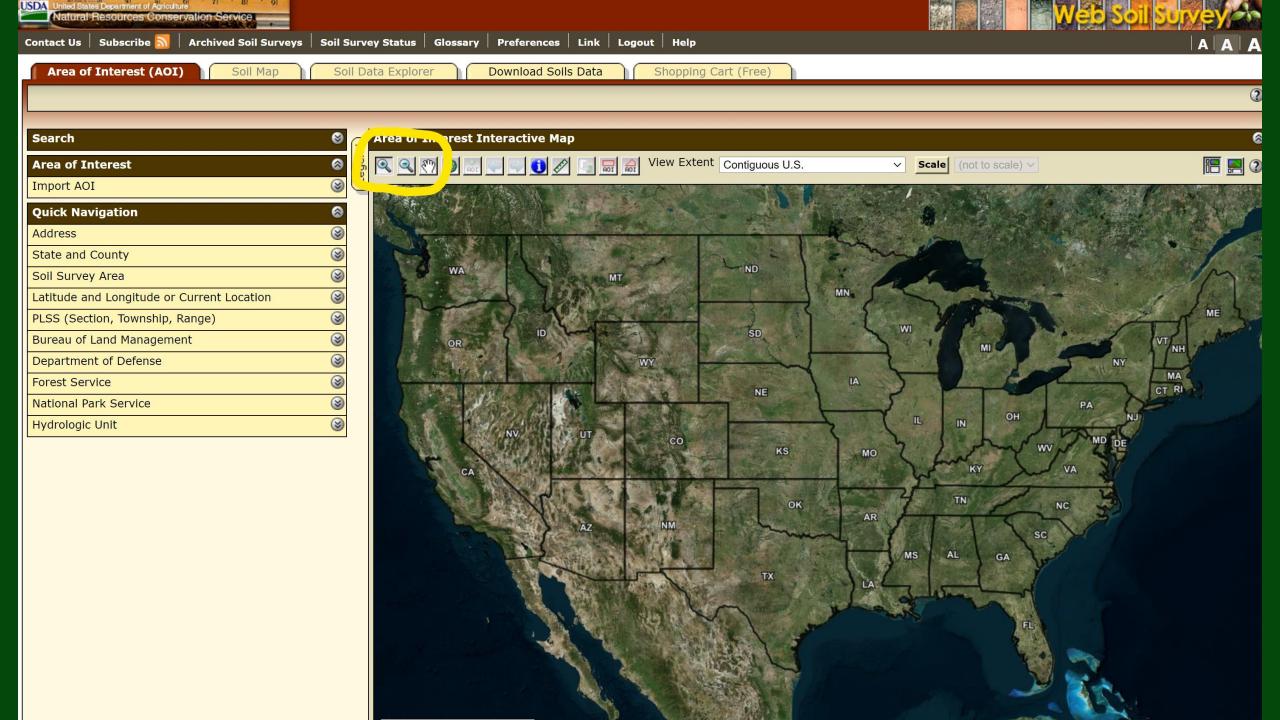
#### Four Basic Steps

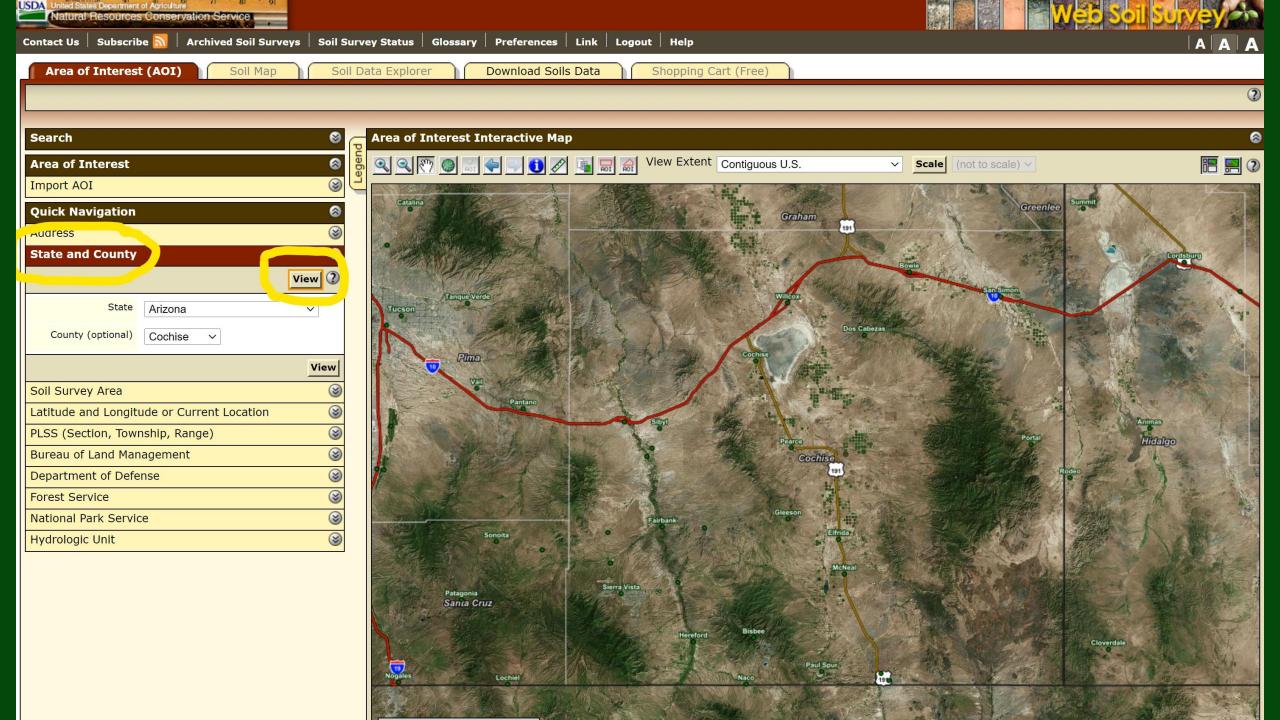
#### I Want To...

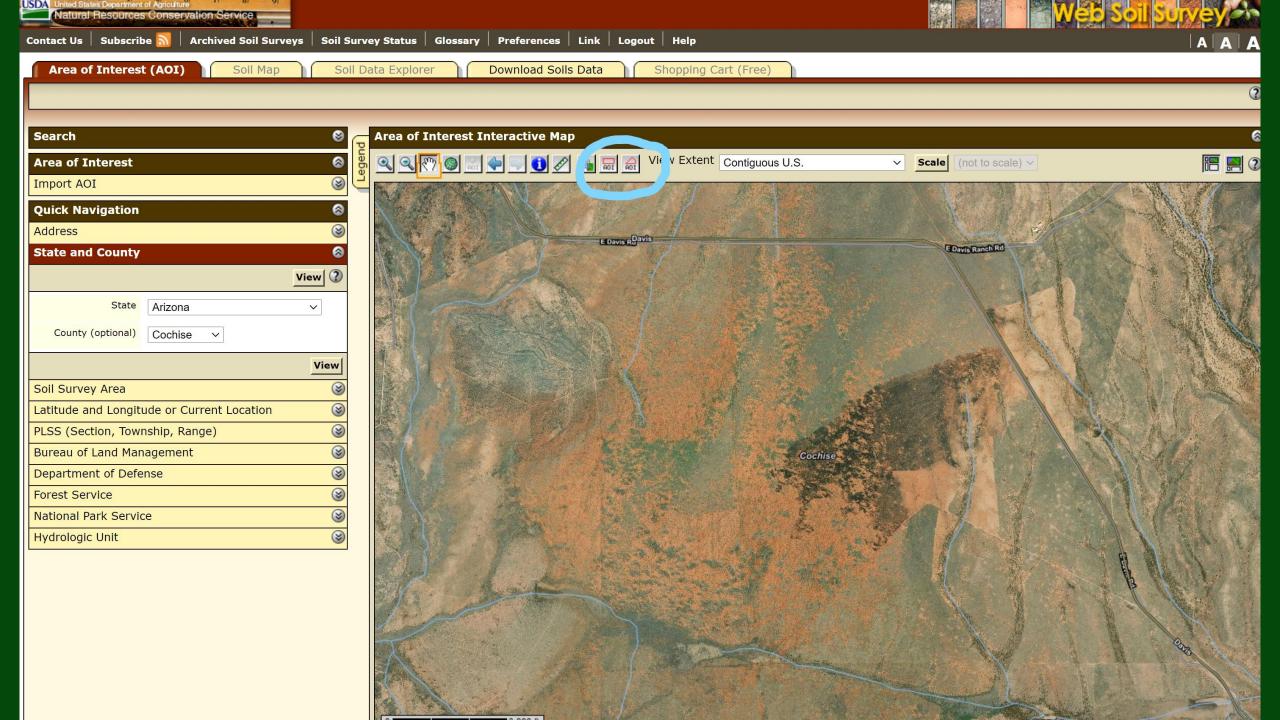
- Start Web Soil Survey (WSS)
- Know Web Soil Survey Requirements
- Know Web Soil
   Survey operation
   hours
- Find what areas of the U.S. have soil data
- Find information by topic
- Know how to hyperlink from other documents to Web Soil Survey
- Know the SSURGO data structure
- Use Web Soil
   Survey on a mobile device

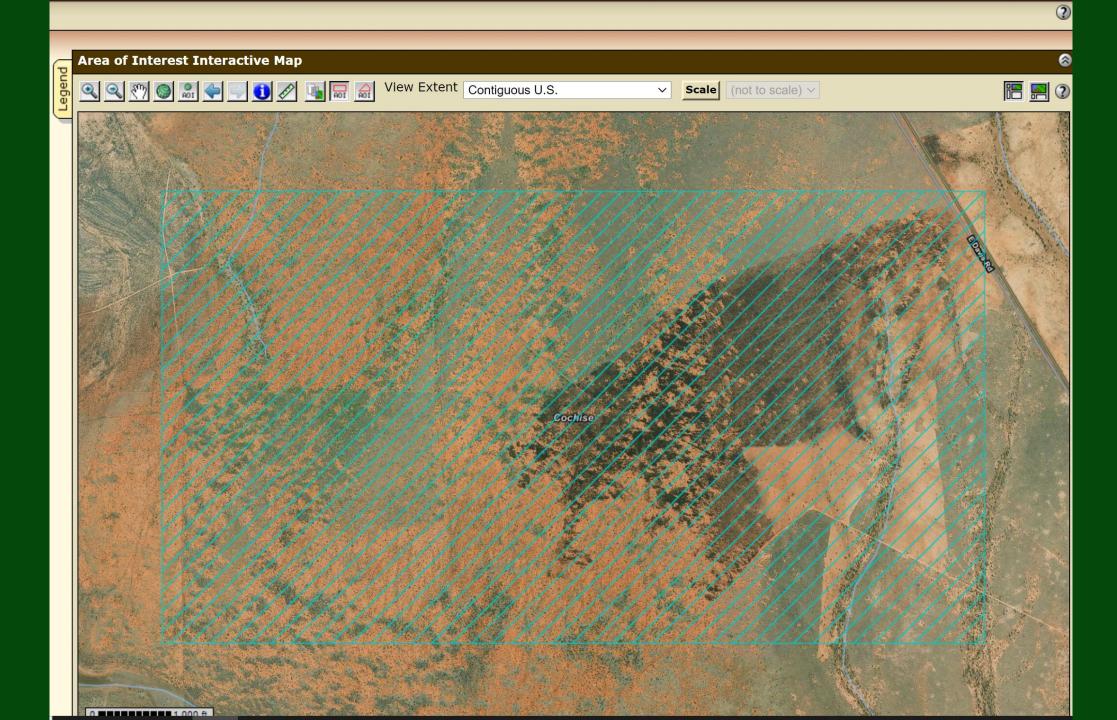
#### Announcements/Events

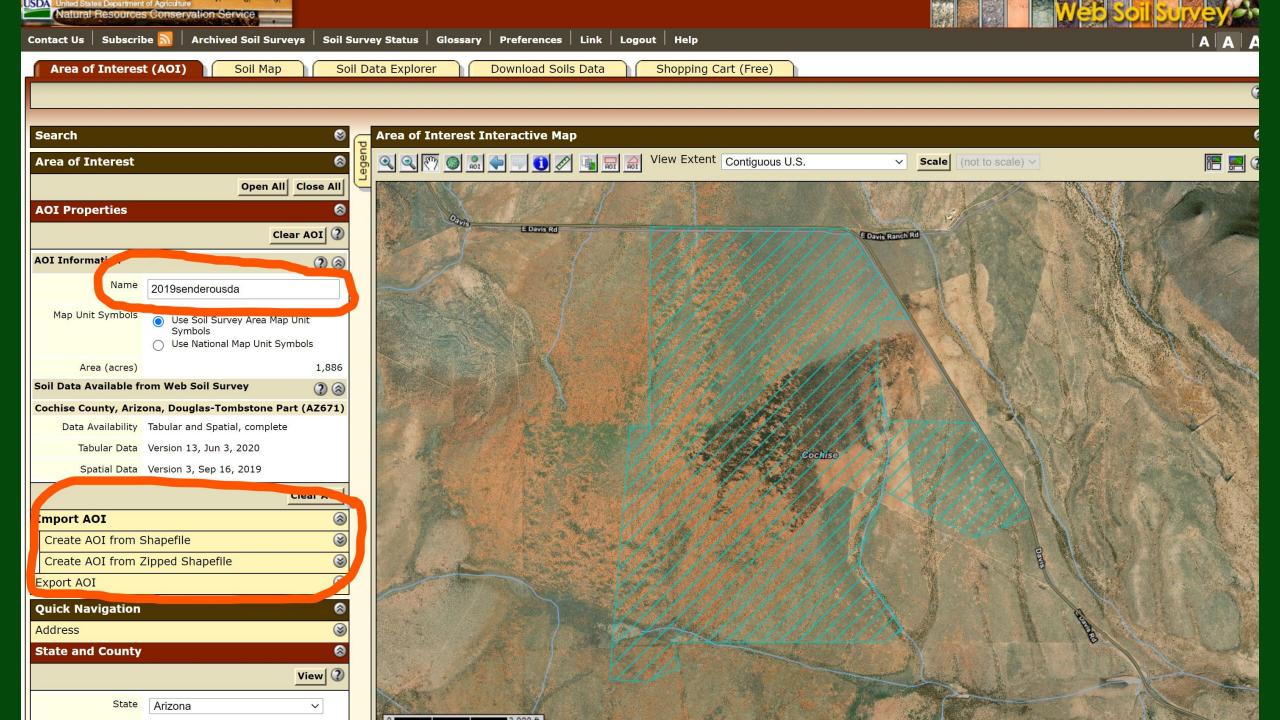
Web Soil Survey
 3.4.0 has been
 released! View
 Web Soil Survey
 release history
 Sign up for e-mail

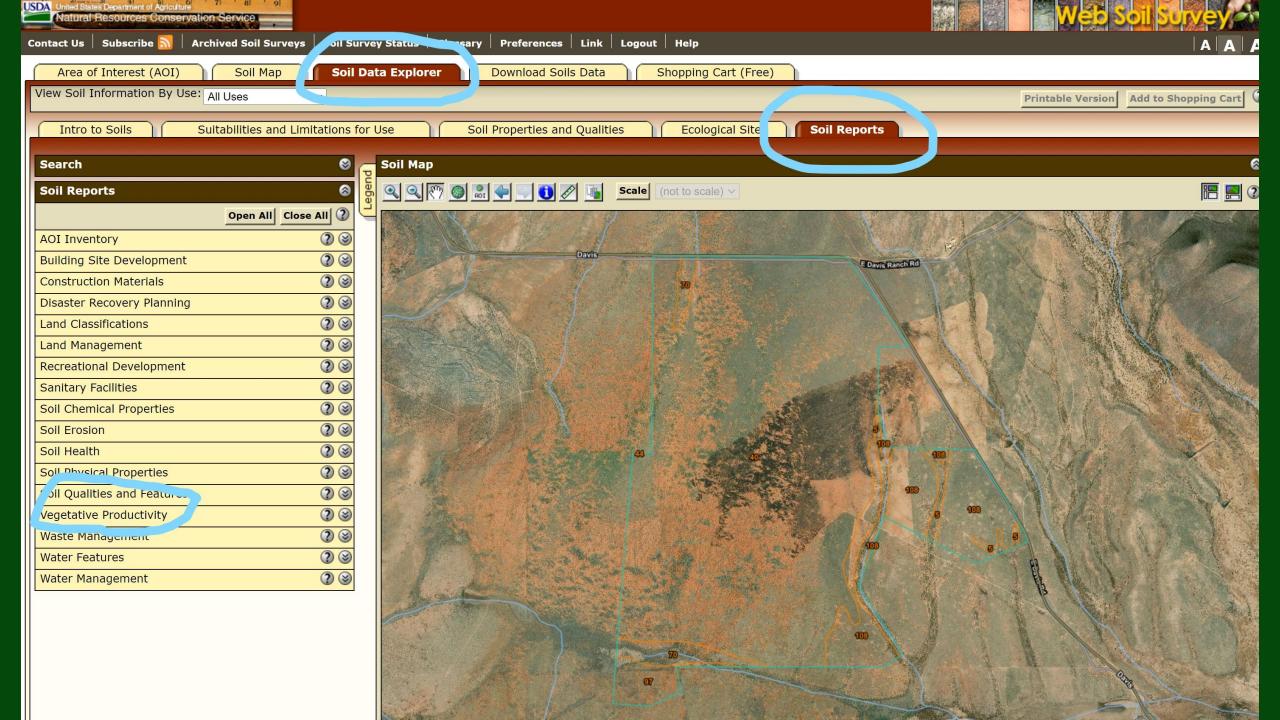


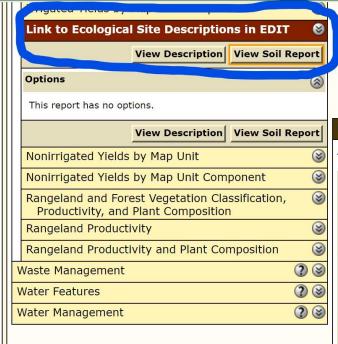














#### Report — Link to Ecological Site Descriptions in EDIT

This report links the soils in the Area of Interest to the ecological sites in the EDIT website.

| (8) | Cochise County, Arizona, Douglas-Tombstone Part            |             |                           |                    |   |   |
|-----|--|-------------|---------------------------|--------------------|---|---|
|     | Map symbol and map unit name                               | Component   | Percent<br>of map<br>unit | Ecological Site ID | Ecologica<br>Site<br>Name                 | Hyperlink to Ecological Site<br>Description in EDIT                 |
|     | 5—Baboquivari-Combate complex, 0 to 3 percent slopes       |             |                           |                    |   |   |
|     |  | Baboquivari | 50                        | R041XC313AZ        | Loamy<br>Upland<br>12-16"<br>p.z.         | https://edit.jornada.nmsu.edu/<br>catalogs/esd/041X/<br>R041XC313AZ |
|     |  | Combate     | 40                        | R041XC318AZ        | Sandy<br>Loam 12-<br>16" p.z.<br>Deep     | https://edit.jornada.nmsu.edu/<br>catalogs/esd/041X/<br>R041XC318AZ |
|     | 40—Courtland-Sasabe-Diaspar complex, 1 to 8 percent slopes |             |                           |                    |   |   |
|     |  | Courtland   | 36                        | R041XC319AZ        | Sandy<br>Loam<br>Upland<br>12-16"<br>p.z. | https://edit.jornada.nmsu.edu/<br>catalogs/esd/041X/<br>R041XC319AZ |
|     |  | Sasabe      | 35                        | R041XC313AZ        | Loamy<br>Upland<br>12-16"<br>p.z.         | https://edit.jornada.nmsu.edu/<br>catalogs/esd/041X/<br>R041XC313AZ |
|     |  | Diaspar     | 20                        | R041XC319AZ        | Sandy                                     | https://edit.jornada.nmsu.edu/                                      |

https://edit.jornada.nmsu.edu/catalogs/esd/041X/R041XC313AZ



General information

Physiographic features

Climatic features

Water features

Soil features

# **General information**











Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.





Sign In



United States
Department of
Agriculture

**Natural Resources Conservation Service** 



# **Welcome to ConserveAZ Portal!**

**Arizona's Conservation Districts** 

## **About This App**

Welcome to ConserveAZ Portal! This Portal was created by the Arizona Association of Conservation Districts (AACD) in cooperation with the Natural Resources Conservation Service (NRCS) and with technical support from the Timmons Group. The purpose of the Portal is to provide both the Natural Resource Conservation Districts (NRCDs) and the NRCS information useful in conducting resource needs assessments, developing conservation plans and priorities, and tracking progress in implementation of conservation practices.

The maps and data in the Portal are drawn from existing data available online from state and federal agencies and entities. This Portal makes them more readily available to the NRCDs and NRCS. The data in the Portal may be accessed for specific areas of interest ranging from statewide to specific project areas (e.g., NRCD boundaries, counties, watersheds, individual ranches or farms, or land treatment projects). Some of the data are more useful at a broader level of analysis and planning, and some will be more useful for smaller areas, where more detailed information is needed.

AACD has used data from numerous sources in compiling this Portal and cannot guarantee the accuracy or current status of the information. Users of the Portal are invited to identify where errors may exist or to submit suggestions on additional data or improved presentation of data that would increase the usefulness of the Portal.

# Are you interested in ConserveAZ?

SIGN UP

**CONTACT US** 





`

Legend

Identify

Select the Identify This Area button to see more detail about the current extent.

The view has changed since you last used this feature.

#### **RETURN TO EXTENT**

**Conservation District Code:** 

702

Inventory

District Name:

GILA VALLEY

#### **ZOOM TO**

**Conservation District Code:** 

743

**District Name:** 

WINKELMAN

**ZOOM TO** 

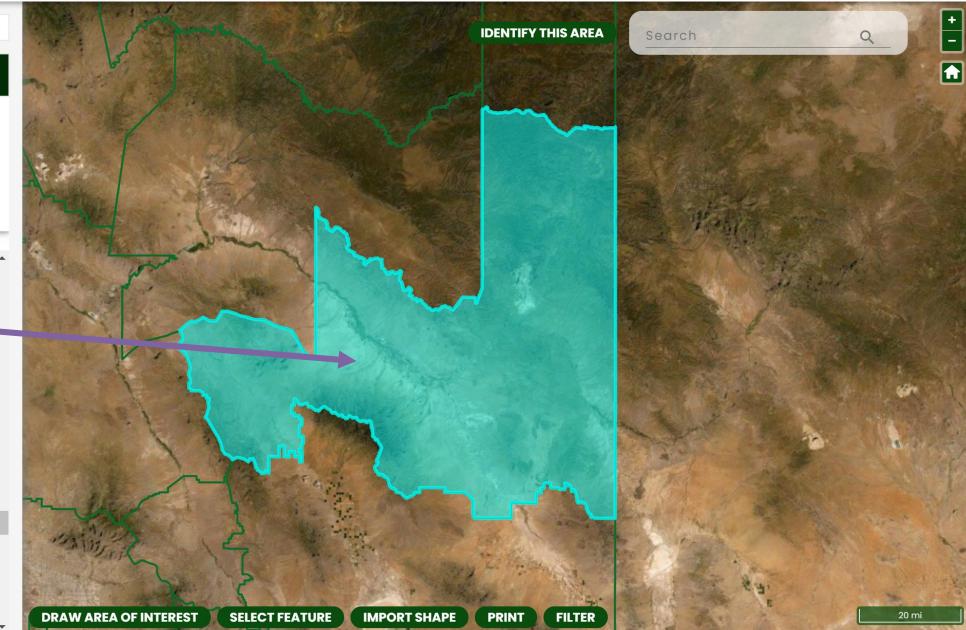
**Conservation District Code:** 

723

**District Name:** 

FLORENCE - COOLIDGE

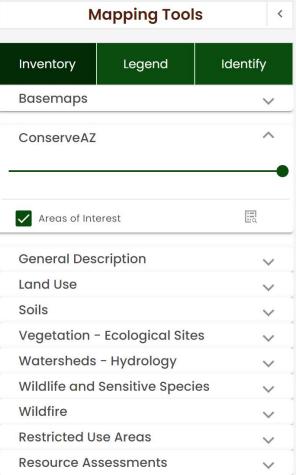
**ZOOM TO** 

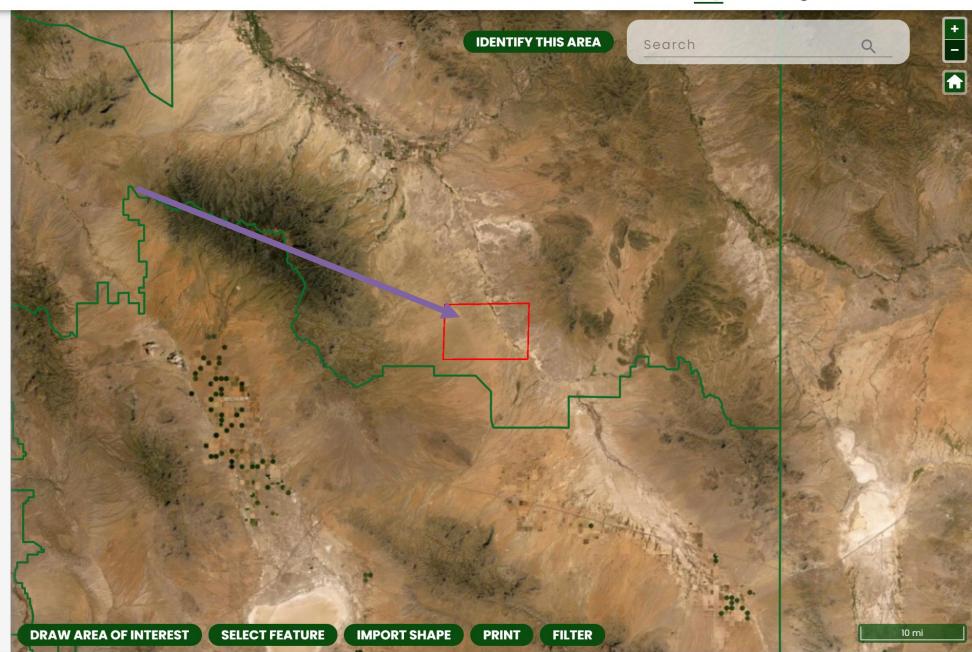


Dashboard

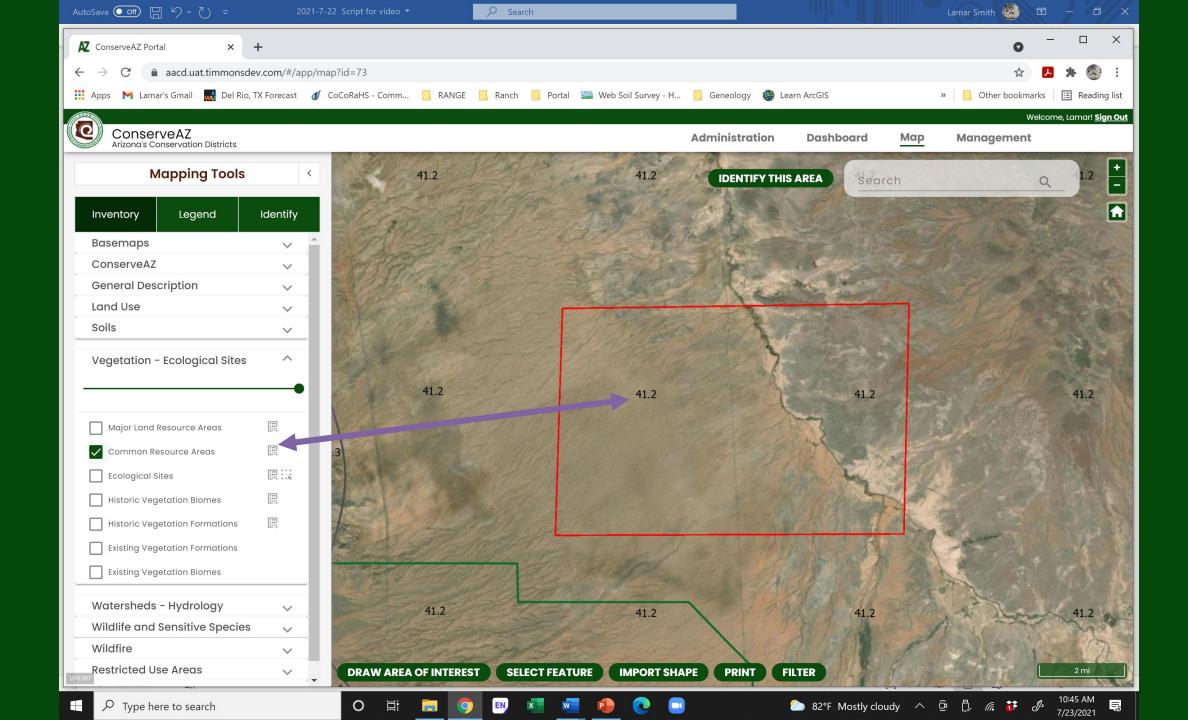
Map

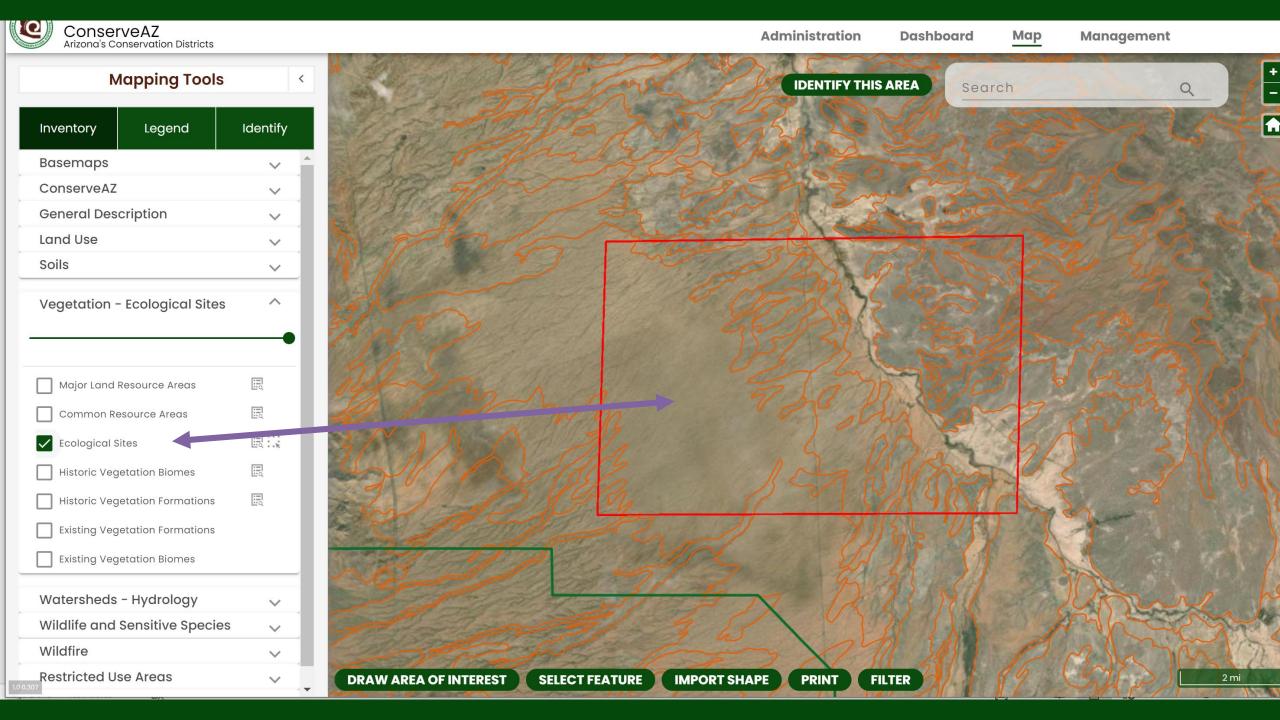
Management





Administration





## **Mapping Tools**

Inventory

Legend

Identify

Select the Identify This Area button to see more detail about the current extent.

The view has changed since you last used this feature.

#### **RETURN TO EXTENT**

**Ecological Site ID:** 

R041XB215AZ

**Ecological Site Name:** 

Sandy Loam Upland 8-12" p.z.

Source:

Ecological Site ID DCD, NRCS Rangeland Site

**Soil Mapping Unit:** 

AZ664-38

#### **ZOOM TO**

**Ecological Site ID:** 

R041XB213AZ

**Ecological Site Name:** 

Sandy Wash 8-12" p.z.

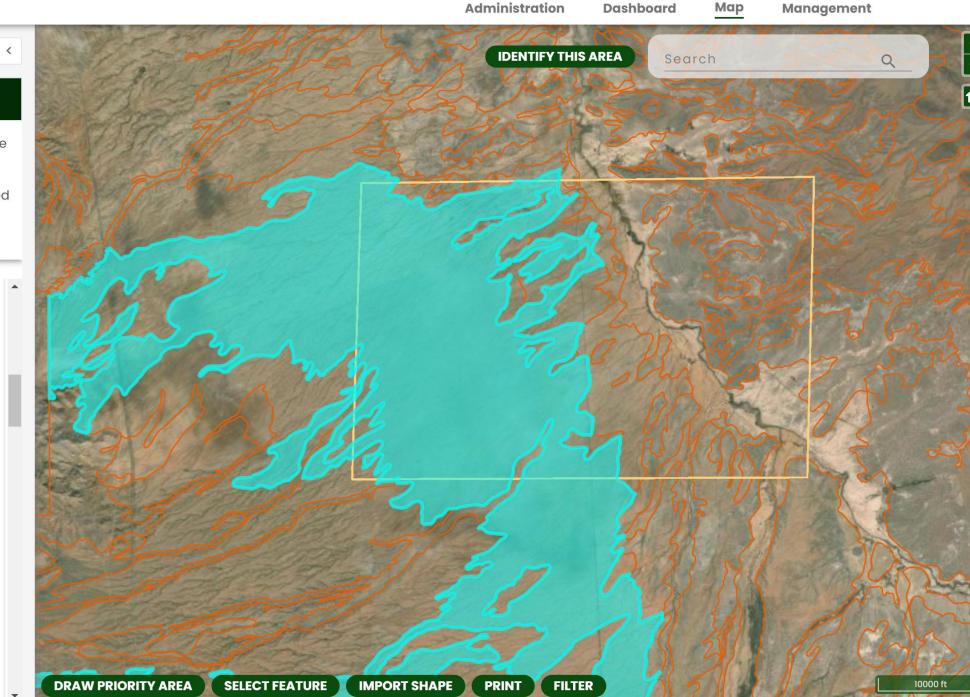
Source:

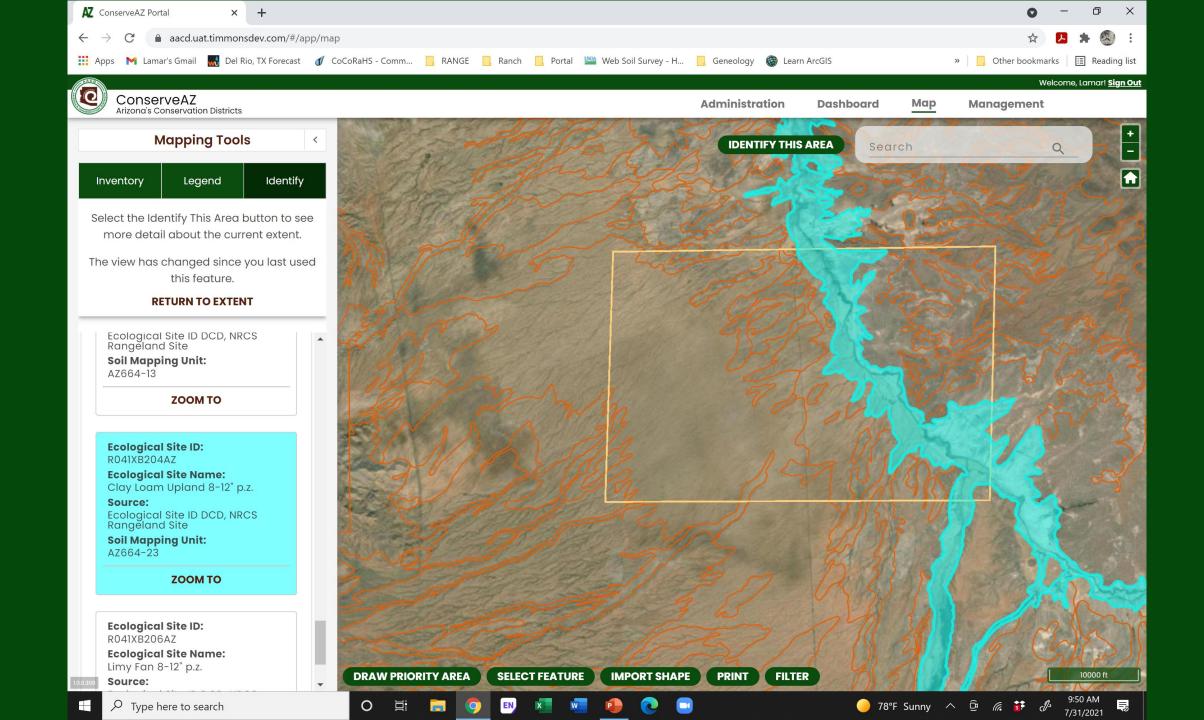
Ecological Site ID DCD, NRCS Rangeland Site

Soil Mapping Unit:

AZ664-1

**ZOOM TO** 





Dashboard

Мар

Management

## **Mapping Tools**

11 0

Inventory

Legend

Identify

Select the Identify This Area button to see more detail about the current extent.

The view has changed since you last used this feature.

#### **RETURN TO EXTENT**

**Ecological Site ID:** 

R041XB215AZ

**Ecological Site Name:** 

Sonoita gravelly sandy loam

Source:

Ecological Site ID DCD, NRCS Rangeland Site

**ZOOM TO** 

**Ecological Site ID:** 

R041XB210AZ

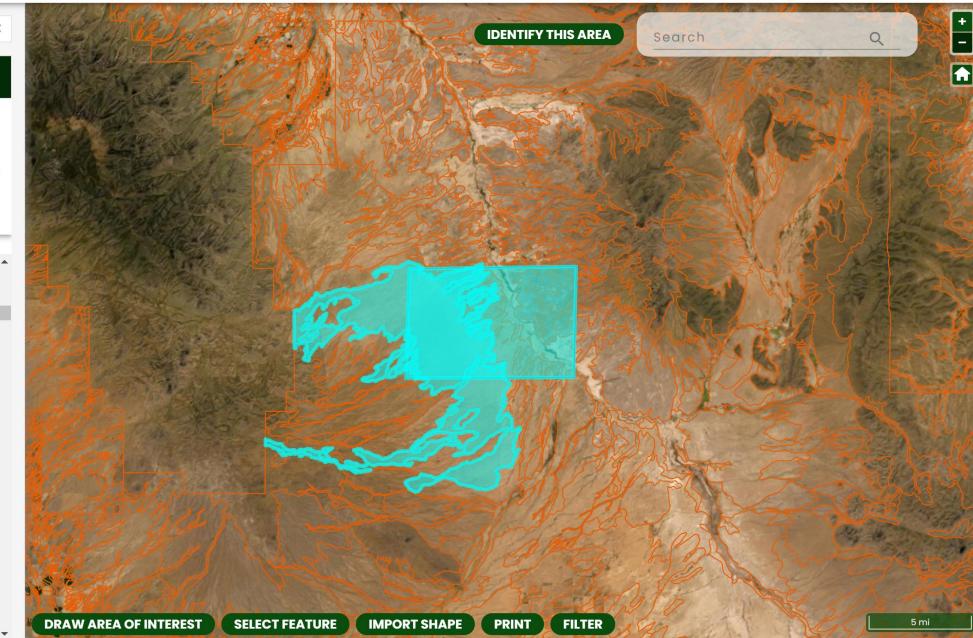
**Ecological Site Name:** 

Continental-Tubac complex

Source:

Ecological Site ID DCD, NRCS Rangeland Site

**ZOOM TO** 



**Administration** 



# Select a data catalog



## **Ecological Site Descriptions**

Ecological sites are the basic component of a land-type classification system that describes ecological potential and ecosystem dynamics of land areas. All land/land use types are identified within the ecological site system, including rangeland, pasture, and forest land. An ecological



## **U.S. Ecological Site Groups**

This catalog features ecosystem dynamics of the United States by ecoregion. Ecoregions are subdivided into classes known as ecological site groups, and separate models of ecosystem dynamics are developed for each class. Models are used to characterize ecosystem

# **Ecological site descriptions**

HOME / ESD CATALOG

General information

Next steps

MLRA list

MLRA map

MLRA photos

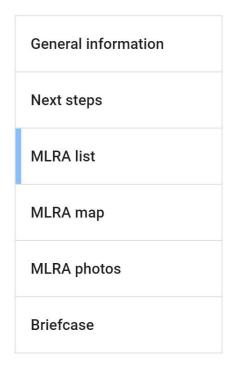
Briefcase

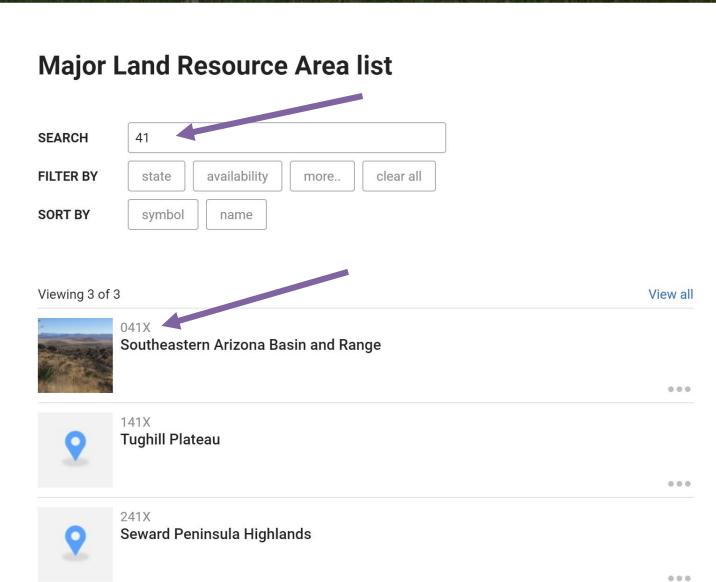
# **Overview**

Ecological sites are the basic component of a land-type classification system that describes ecological potential and ecosystem dynamics of land areas. All land/land use types are identified within the ecological site system, including rangeland, pasture, and forest land.

An ecological site is defined as a distinctive kind of land with specific soil and physical characteristics that differ from other kinds of land in its ability to produce a distinctive kind and amount of vegetation and its ability to respond similarly to management actions and natural disturbances. Lands are classified considering discrete physical and biotic factors. Physical factors include soils, climate, hydrology, geology, and physiographic features. Biotic factors include plant species occurrence, plant community compositions, annual biomass production, wildlife-vegetation interactions, and other factors. Ecological dynamics, primarily disturbance regimes such as grazing, fire, drought, management actions and all resulting interactions, are also a primary factor in the development of ecological sites.

Information and data pertaining to a particular ecological site are organized into a







**General information** 

Next steps

Ecological site list

Ecological site map

Ecological site keys

Ecological site photos

Print

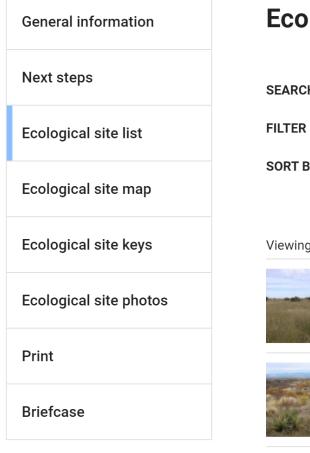
# **Key publications**

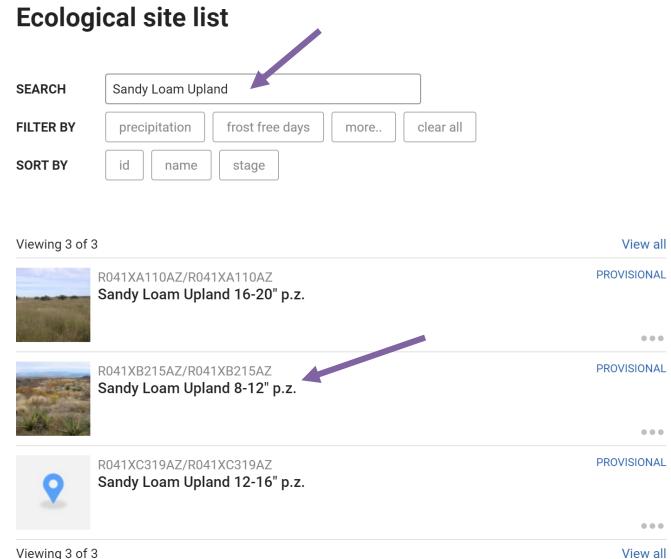
■ Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin

000

**Ecological site list** General information Next steps SEARCH FILTER BY precipitation frost free days more.. Ecological site list **SORT BY** stage name Ecological site map Ecological site keys Viewing 20 of 113 R030XA101AZ/R030XA101AZ Basalt Hills 3-6" p.z. Ecological site photos Print R030XA102AZ/R030XA102AZ Breaks 3-6" p.z. **Briefcase** 

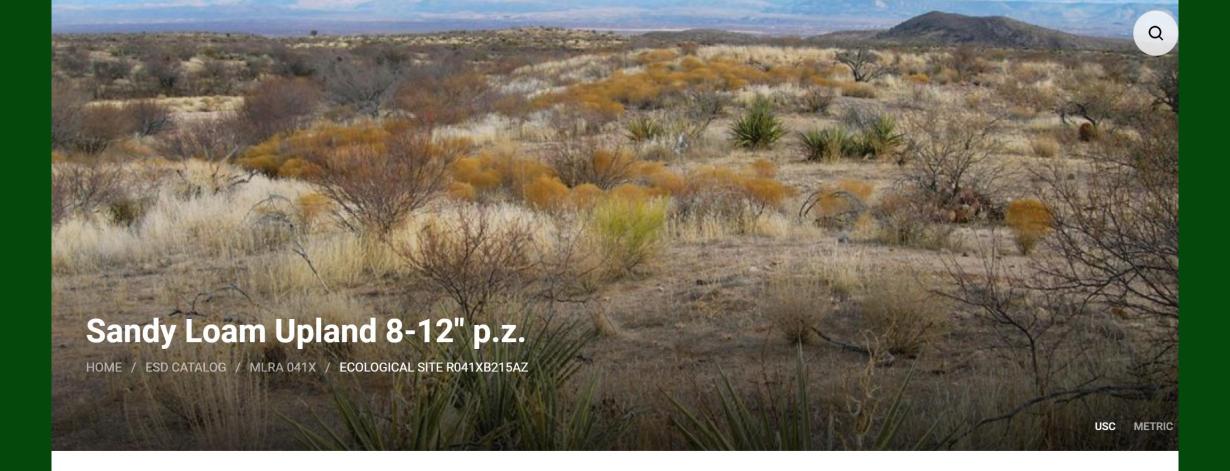
clear all View all **PROVISIONAL** 000 **PROVISIONAL** 000 R030XA104AZ/R030XA104AZ **PROVISIONAL** Granitic Hills 3-6" p.z.





Q

Viewing 3 of 3



**General information** 

Physiographic features

Climatic features

Water features

#### **General information**



**Provisional**. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

#### **General information**











Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

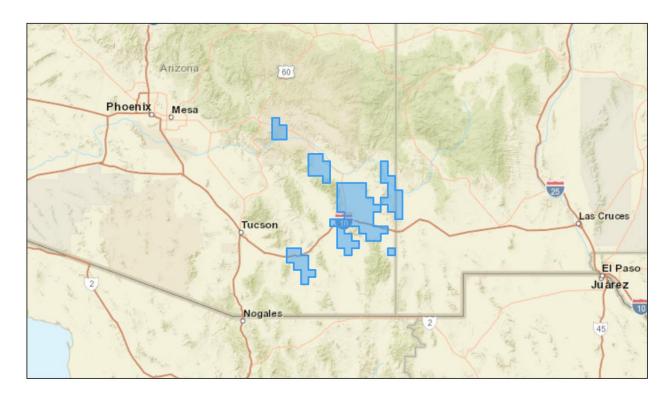


Figure 1. Mapped extent

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this nmsu.edu/catalogs/esd/041X/R041XB215AZ#soil-bookmark cological site to occur outside of highlighted areas if detailed soil survey has not been





## **Similar sites**

| R040XA118AZ | Sandy Loam Upland 10"-13" p.z. |
|-------------|--------------------------------|
| R041XC319AZ | Sandy Loam Upland 12-16" p.z.  |

#### Table 1. Dominant plant species

| Tree       | (1) Prosopis glandulosa var. torreyana                                    |
|------------|---|
| Shrub      | (1) yucca elata<br>(2) ephedra fasciculata                                |
| Herbaceous | <ul><li>(1) muhlenbergia porteri</li><li>(2) bouteloua eriopoda</li></ul> |

**All Sections** 

#### **General information**



**Provisional**. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.

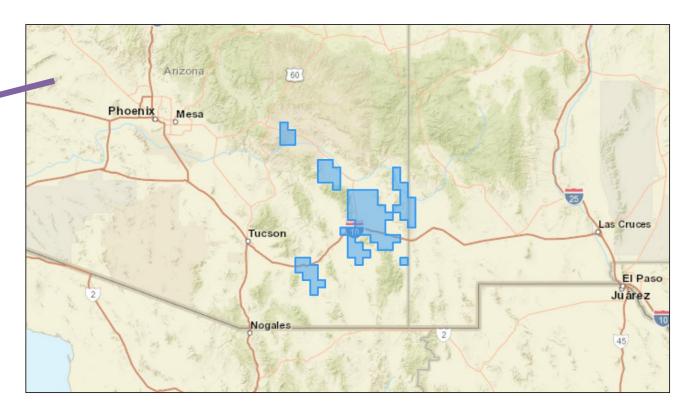


Figure 1. Mapped extent

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this

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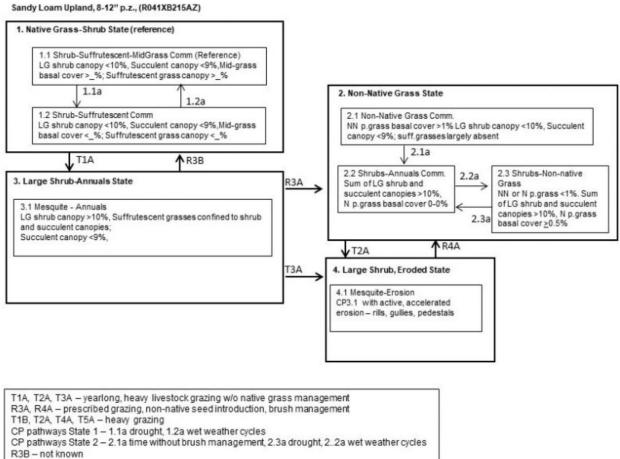
Print options

All Sections

State and transition model

CUSTOM DIAGRAM

STANDARD DIAGRAM



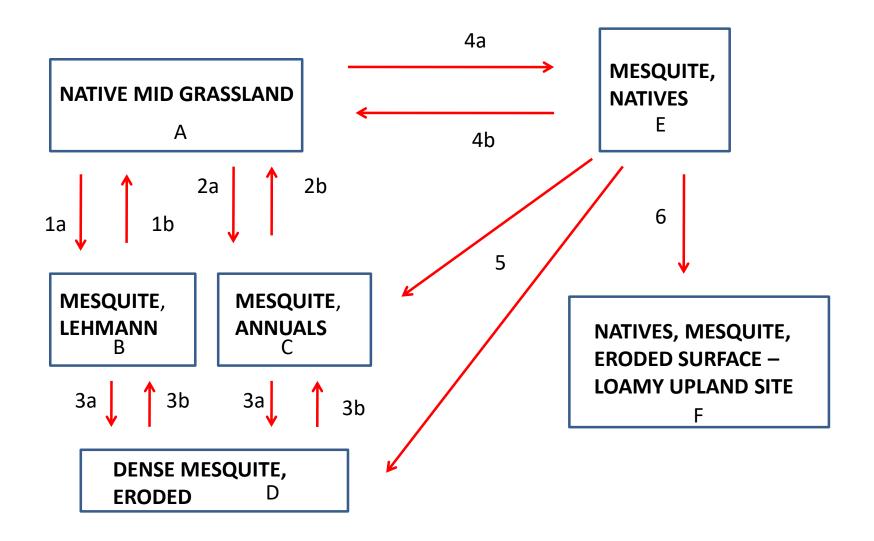
Q

#

Figure 8. State and Transition Model, Sandy Loam Upland, 8"-12" p.z.

More interactive model formats are also available. View Interactive Models >

# STATE AND TRANSITION MODEL SANDY LOAM UPLAND – MLRA 41-3



# **Community 1.1 Historic Climax Plant Community**

The native potential plant community on this site is a mixture of perennial grasses and desert shrubs and cacti. Annual forbs and grasses, of both the winter and summer seasons, are very important in the plant community in their respective (wet) seasons. Black grama and bush muhly are the dominant perennial grasses, with lesser amounts of threeawns. The cover of shallow rooted grass species, like Rothrock grama fluctuate widely from wet to dry years. Lehmann lovegrass can invade and persist in this plant community, but will fluctuate (in amounts) with climate and not become dominant.

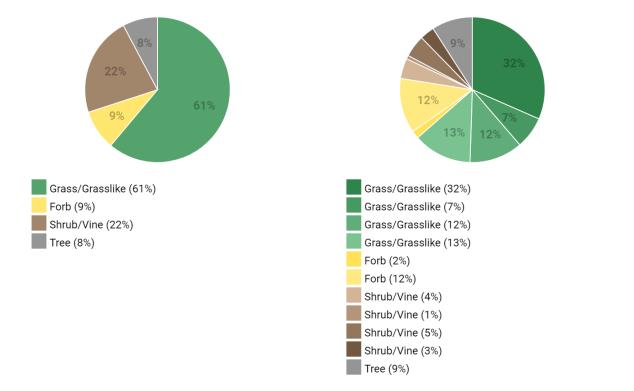


Figure 9. Annual production by plant type (representative values) or group (midpoint values)

| Plant Type      | Low<br>(Lb/Acre) | Representative Value<br>(Lb/Acre) | High<br>(Lb/Acre) |
|-----------------|------------------|-----------------------------------|-------------------|
| Grass/Grasslike | 150              | 275                               | 655               |
| Forb            | 7                | 40                                | 170               |
| Shrub/Vine      | 45               | 100                               | 140               |
| Tree            | 15               | 35                                | 100               |
| Total           | 217              | 450                               | 1065              |

#### Table 6. Soil surface cover

| Tree basal cover                  | 1%     |
|-----------------------------------|--------|
| Shrub/vine/liana basal cover      | 1-2%   |
| Grass/grasslike basal cover       | 1-2%   |
| Forb basal cover                  | 1-2%   |
| Non-vascular plants               | 0%     |
| Biological crusts                 | 1-5%   |
| Litter                            | 15-65% |
| Surface fragments >0.25" and <=3" | 5-35%  |
| Surface fragments >3"             | 0-5%   |
|                                   |        |







### **Additional community tables**

Table 8. Community 1.1 plant community composition

| Group           | Common Name                | Symbol  | Scientific Name         | Annual<br>Production<br>(Lb/Acre) | Foliar<br>Cover (%) |  |  |  |  |
|-----------------|----------------------------|---------|-------------------------|-----------------------------------|---------------------|--|--|--|--|
| Grass/Grasslike |                            |         |                         |                                   |                     |  |  |  |  |
| 1               | Dominant Perennial Gra     | 100-300 |                         |                                   |                     |  |  |  |  |
|                 | bush muhly                 | MUP02   | Muhlenbergia porteri    | 25-125                            | -                   |  |  |  |  |
|                 | black grama                | BOER4   | Bouteloua eriopoda      | 25-100                            | -                   |  |  |  |  |
|                 | Arizona cottontop          | DICA8   | Digitaria californica   | 1-50                              | -                   |  |  |  |  |
|                 | plains bristlegrass        | SEVU2   | Setaria vulpiseta       | 1-25                              | -                   |  |  |  |  |
| 2               | Miscellaneous Perenni      | 15-75   |                         |                                   |                     |  |  |  |  |
|                 | whiplash PAVA2 pappusgrass |         | Pappophorum vaginatum   | 0-25                              | -                   |  |  |  |  |
|                 | sideoats grama             | BOCU    | Bouteloua curtipendula  | 1-20                              | -                   |  |  |  |  |
|                 | spike dropseed             | SPC04   | Sporobolus contractus   | 1-15                              | -                   |  |  |  |  |
|                 | sand dropseed              | SPCR    | Sporobolus cryptandrus  | 1-15                              | -                   |  |  |  |  |
|                 | cane bluestem              | BOBA3   | Bothriochloa barbinodis | 1-15                              | -                   |  |  |  |  |
|                 | mesa dropseed              | SPFL2   | Sporobolus flexuosus    | 0-10                              | -                   |  |  |  |  |

| Site ID: R30XA101AZ            |                           |            |                   |                                |        | Site Name: |                      |           | Basalt Hills 3-6 p.z. |  |                    |        |     |
|--------------------------------|---------------------------|------------|-------------------|--------------------------------|--------|------------|----------------------|-----------|-----------------------|--|--------------------|--------|-----|
| Major Land Resource Area:      |                           |            |                   | 30—Mojave Desert               |        |            |                      |           |                       |  |                    |        |     |
| Ecozone<br>(CRA):              |                           | 30-1 Low   | wer Mojave Desert |                                |        |            |                      |           |                       |  |                    |        |     |
| Landform                       | า:                        | Hills/Mo   | untain            | S                              |        | Elevat     | ion:                 | 800-1700  |                       |  | Slope:             | 15-70  | )%  |
| Topograp                       | hic Po                    | sition:    | Hill              | Parent Material: Basalt        |        |            |                      |           |                       |  |                    |        |     |
| Soil Temp                      | peratui                   | re/ Moist  | ure Re            | gime:                          | Нуре   | rthern     | nic/ T               | ypic A    | Aridic                |  |                    |        |     |
| Soil Dept                      | h Class                   | <b>:</b>   | 7-20'             | ,                              |        |            |                      | Ava       | ilable Wa             | ter C                                  | apacity:           | Low    |     |
| Soil Surface Texture:          |                           |            | Very<br>loam      | /ery gravelly loam/clay<br>oam |        |            | Soil Surface Gravel: |           |                       | <b>l:</b> 0-6                          | 0-60%              |        |     |
| Soil Subs                      | urface                    | Texture:   | Clay              | loam                           |        |            |                      | Sub       | surface Gi            | ravel                                  | : 35-              | 35-80% |     |
| Soil Erosi                     | on Haz                    | ard by W   | ater:             | High                           |        | Effer      | vesce                | nce:      | slight at             | slight at surface, strong near surface |                    |        |     |
| Historic V                     | /egetat                   | tion Form  | ation:            | Desertscrub                    |        |            | Biome: Cro           |           |                       | Creoso                                 | eosotebush-Bursage |        |     |
| Vegetatio                      | on Asp                    | ect:       | Shrul             | os/scatt                       | ered ह | grasse     | S                    |           |                       |  |                    |        |     |
| Major Do                       | minan                     | t(s):      | Brittl            | ebush –                        | Whit   | e burs     | age                  |           |                       |  |                    |        |     |
| Associate                      | ed Tree                   | s:         | None              | <u> </u>                       |        |            |                      |           |                       |  |                    |        |     |
| Associate                      | ed Shru                   | ıbs:       | Creo              | sotebus                        | h – ra | tany –     | barre                | el cac    | tus                   |  |                    |        |     |
| Associate                      | ed Gras                   | ses:       | big g             | alleta-to                      | bosa-  | -bush      | muhly                | y - anı   | nuals                 |  |                    |        |     |
| Annual P                       | roduct                    | ion by Pla | nt Typ            | e – Pou                        | nds//  | Acre- F    | Repre                | senta     | tive (dry v           | veigh                                  | it)                |        |     |
| Shrub/                         | Grass<br>160 Grass        |            | s/                |                                |        |            |                      |           |                       |  |                    |        |     |
| Vine:                          |                           |            | s-                | 20                             |        |            | 20                   |           | Tree:                 | 0                                      | T                  | Total: | 200 |
|                                |                           | like:      |                   |                                |        |            |                      |           |                       |  |                    |        |     |
| State and Transition model? No |                           |            |                   |                                |        | R          | efere                | nce Sheet | ?                     | No                                     |                    |        |     |
| Data Sou                       |                           |            | EDIT              |                                |        |            |                      |           |                       |  |                    |        |     |
| Access Da                      | Access Date: June 2, 2021 |            |                   |                                |        |            |                      |           |                       |  |                    |        |     |