



How to Access Occurrence Data and Species Habitat Models: BLM West FY22 and BLM SSS FY21

About the BLM Licensed Dataset

Under the terms of a Data License Agreement, NatureServe has published a secure ArcGIS feature service to give the BLM access to Element Occurrence (EO) and related Source Feature (SF) species location records, as well as non-Biotics (NatureServe's central database system) format observations data for 14 western states. Additionally, authorized BLM staff have access to a suite of species habitat models associated with the BLM SSS Project, generated in coordination between NatureServe and BLM.

Authorized BLM users that have completed the required online **Data Use Training** tutorial and agreed to the terms of the data license (<https://www.natureserve.org/data-use-training>) can access this feature service and models by connecting to it through ArcGIS Pro, NatureServe's Geodata Portal using their assigned username and password, or through the BLM GIS Portal (EO and SF data only). The licensed dataset is also available for BLM data users via NatureServe Explorer Pro. Please take the time to provide feedback on your experience using NatureServe Explorer Pro using our feedback form (<https://explorer.natureserve.org/AboutUs/FeedbackForm>).

The BLM Secure Multi-jurisdictional Database Feature Service User Tips and Best Practices Guide can be accessed at the following URL: https://transfer.natureserve.org/download/Deleted_Yearly/BLM_MJD/ **password = Sezayu15**

The Habitat Model data has two services: a categorized model data service and a continuous model data service. They have a REST endpoint available for calling the data and viewing it in desktop or web-based map viewers. It is not enforced that each model has a categorized and continuous version available, some models may only exist as one or the other. If a model does have both a categorized and continuous model available, it will share model attributes such as the habitat model id and the metadata associated with the model.

The model data in the Image Services are returned as a mosaic of raster datasets, with an attribute table containing a record of each model's species' scientific name, species' common name, species' element unique id, a link to the metadata for the model, a low, medium, and high probability threshold, and a label for the model. The models in the mosaic dataset can be filtered or queried to retrieve specific models. If the mosaic dataset is not filtered or queried to retrieve specific models, it will default to displaying the first 20 models uploaded into the service.

In the case of the continuous model data, the raster is an un-categorized probability that habitat is suitable to support the species in each raster cell with a value from 0-1 reflecting the probability. In the case of the categorized model data, the data has been binned into 4 categories depending on how the

value of each cell in the raster compares to the model's low, medium, and high probability thresholds. See table below for details.

Pixel Value	Meaning	Categorization
1	High Probability Habitat	pixel value \geq high probability threshold
2	Medium Probability Habitat	medium probability threshold \leq pixel value $<$ high probability threshold
3	Low Probability Habitat	low probability threshold \leq pixel value $<$ medium probability threshold
4	Non-Habitat	pixel value $<$ low probability threshold

If additional assistance is needed to set up access to these datasets, please reach out to NatureServe at gis_ws@natureserve.org (please add "BLM Support Request" to the subject line) with a description of what is needed.

Contents

- About the BLM Licensed Dataset..... 1
- Accessing the Species Occurrence and Model Datasets..... 4
 - 1. BLM GIS PORTAL 4
 - 2. ARCMAP 4
 - 3. NATURESERVE EXPLORER PRO..... 4
 - Register for NatureServe Explorer Pro..... 4
 - 4. ARCGIS PRO..... 5
 - Sign up for the Geodata Portal 5
 - Connect to data in the Geodata Portal in ArcGIS Pro 7
 - Add data to ArcGIS Pro via Portal Item Navigation..... 8

Accessing the Species Occurrence and Model Datasets

1. BLM GIS PORTAL

Authorized BLM users that have completed the required online Data Use Training tutorial can access this feature service by connecting to the BLM GIS Portal. Once the Data Use Training completion form is submitted, please forward the automated confirmation email to Anthony Titolo (atitolo@blm.gov), Carly Herndon (cherndon@blm.gov), and Stacey Crowe at scrowe@blm.gov to request access to the dataset. Species habitat models cannot be accessed via the BLM GIS Portal.

2. ARCMAP

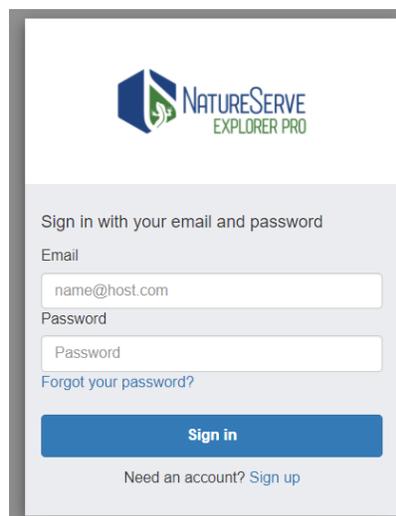
Due to some technical issues with ESRI versioning, this dataset is not accessible by connection to ArcGIS Online and/or ArcGIS Geoportal map services via-ArcMap. Once we can rectify this issue, this document will be updated with the appropriate instructions. For use of the dataset in ArcMap, BLM data users can download a copy of the licensed dataset including Occurrence Data and Species Models from the [NatureServe Geodata Portal](#) following the sign-in instructions below.

3. NATURESERVE EXPLORER PRO

[Register for NatureServe Explorer Pro](#)

NatureServe's data and models can be viewed on NatureServe Explorer Pro for users with access agreements.

1. Visit the NatureServe Explorer Pro website and sign up you're your email and password: <https://explorer.natureserve.org/pro/Welcome>



The screenshot shows the sign-in interface for NatureServe Explorer Pro. At the top is the logo, which consists of a stylized green and blue icon followed by the text 'NATURESERVE EXPLORER PRO'. Below the logo, the text 'Sign in with your email and password' is displayed. There are two input fields: 'Email' with the placeholder 'name@host.com' and 'Password' with the placeholder 'Password'. A link 'Forgot your password?' is located below the password field. A blue 'Sign in' button is positioned below the input fields. At the bottom of the form, there is a link 'Need an account? Sign up'.

2. You will receive a verification code in your email. Visit your email to copy and enter your verification code into the Explorer Pro website.

NATURESERVE
EXPLORER PRO

We have sent a code by email to k***@v***. Enter it below to confirm your account.

Verification Code

Confirm Account

Didn't receive a code? [Resend it](#)

- Return to the sign in screen to sign into Explorer Pro with your account. Upon sign in, you will need to agree to the terms of service by clicking “Accept.”

Terms of Service

I have read and agree to the Explorer Pro [terms of service](#).

DECLINE ACCEPT

- Contact [NatureServe GIS Web Services](#) to request that your account be given access to the BLM licensed dataset in Explorer Pro. Please provide your full name email address, and Explorer Pro username in the contact. Your access to the dataset will be granted within 24 hours.

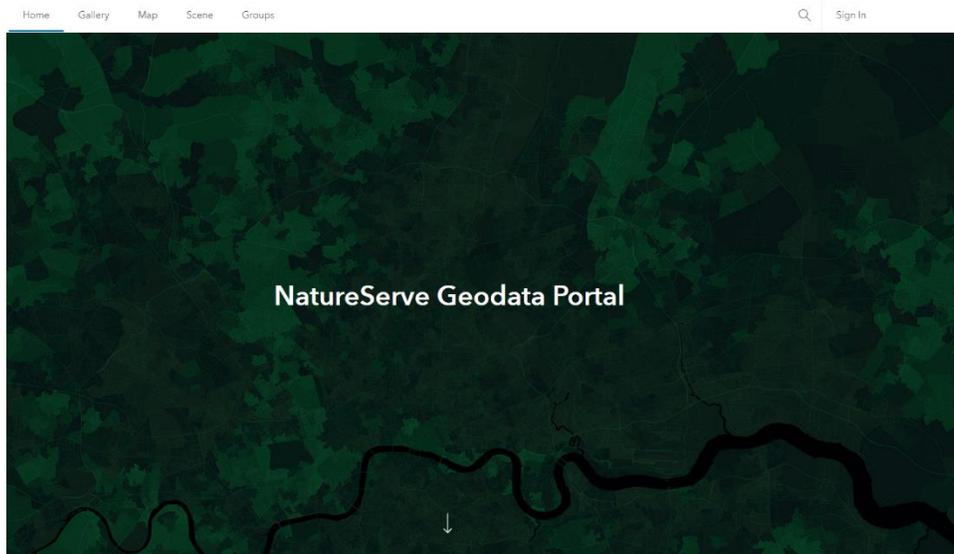
4. [ARCGIS PRO](#)

Authorized users can access occurrence data through a geodata portal and conduct analyses with occurrence data in ArcGIS Pro. Users must sign up for the geodata portal for access and set up their connection to the portal in ArcGIS Pro.

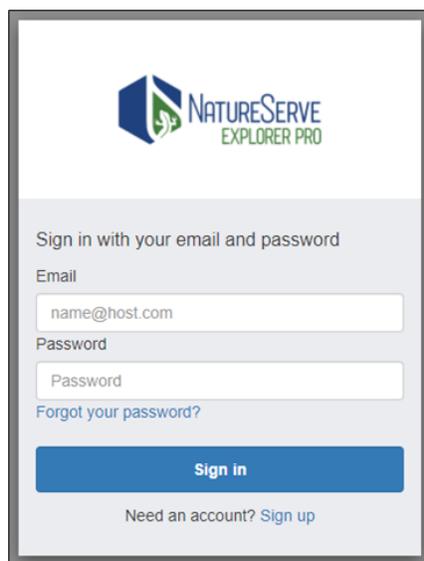
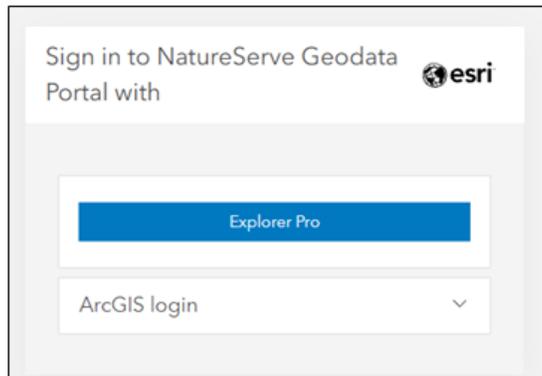
[Sign up for the Geodata Portal](#)

NatureServe’s occurrence data is shared on NatureServe’s geodata portal and is accessible via a NatureServe Explorer Pro account. The below instructions document how you can sign up for Explorer Pro on the Geodata Portal itself.

- Navigate to the [NatureServe Geodata Portal](#) and click on “Sign In”



2. Click the button labeled “**Explorer Pro**” and sign up to create an Explorer Pro account

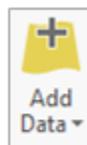


3. After following the signup instructions, return to the sign in page and sign in using your Explorer Pro account
 - a. This creates a user on the portal for you based on your Explorer Pro account.
 - b. If you do not have an Explorer Pro account, please see the Registering for NatureServe Explorer Pro section above.
4. Contact [NatureServe GIS Web Services](#) to request that your portal user be given access to the BLM Endangered Species Database and Habitat Models. Please provide your full name email address, and Explorer Pro username in the contact. Your access to the dataset will be granted within 24 hours.
5. Once your account has access to the BLM Endangered Species Database and Habitat Models, you can navigate to the [BLM West Dataset FY22 Group Content on the NatureServe Geodata Portal](#) to see all the content.

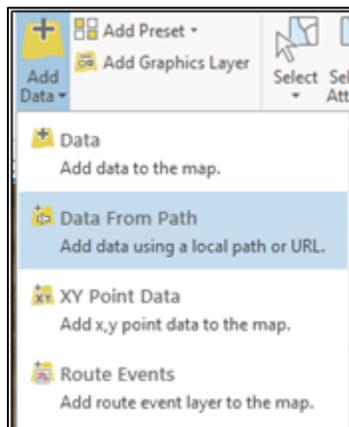
Connect to data in the Geodata Portal in ArcGIS Pro

The data from the Geodata Portal may be accessed in ArcGIS Pro simply by adding the data via a URL

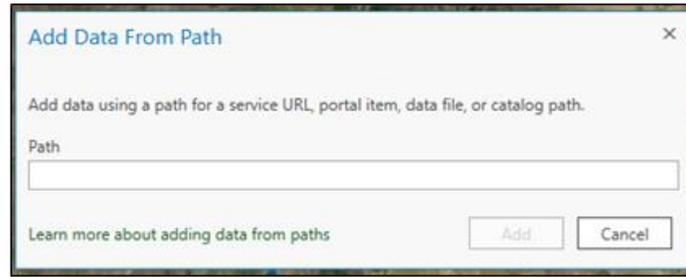
1. Open ArcGIS Pro to any map pane
2. Click the **“Add Data”** dropdown arrow



3. Click **“Add Data from Path”**



4. Enter the location of the feature service under **“Path”**



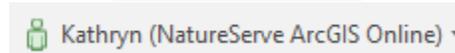
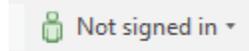
- a. This can be found on the NatureServe Geodata Portal item page for the service under "URL"

Add data to ArcGIS Pro via Portal Item Navigation

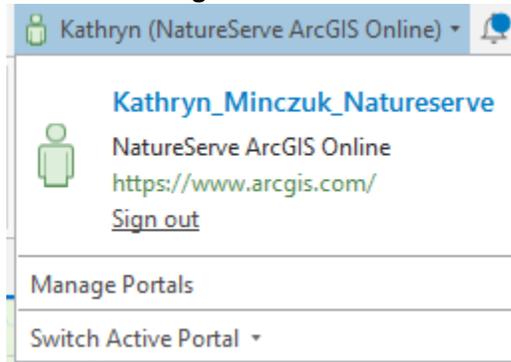
The licensed dataset can be added to ArcGIS Pro via a folder like navigation after connecting to the NatureServe Geodata Portal

1. Open ArcGIS Pro to any map pane

- In the top right of ArcGIS Pro, you will see one of two buttons, shown below.



- Click the drop down and select "Manage Portals"



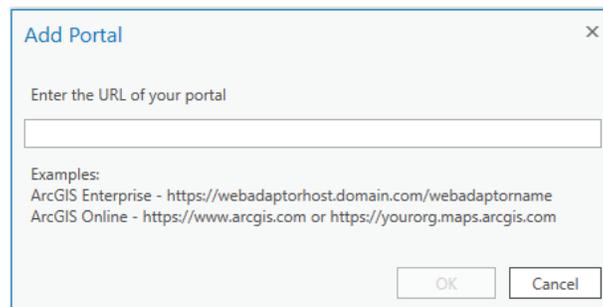
- In this new pane, click on "Add Portal"

Sign in using browser

Add Portal

Refresh

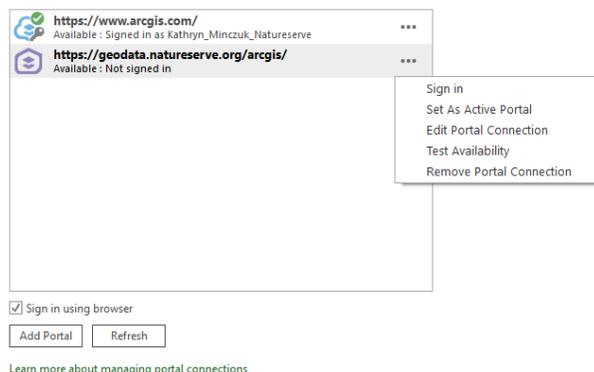
- Enter the URL of the model data portal: <https://geodata.natureserve.org/arcgis/>



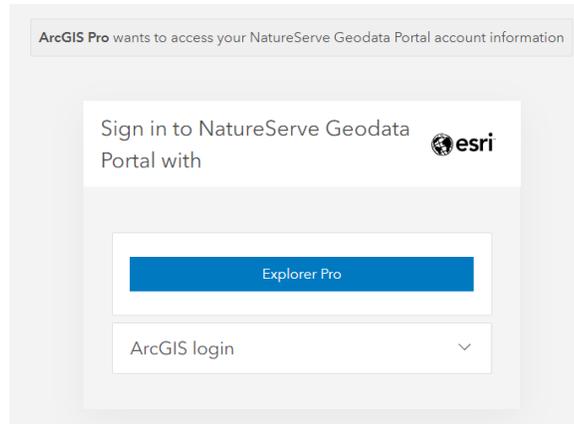
- Hit "OK"

- The portal will be added to the list you see on this page. Click on the "..." next to the portal connection item and then click on "Sign In"

Portals

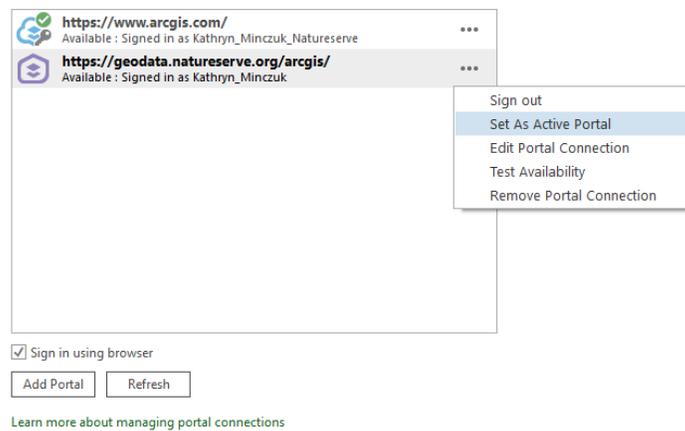


- In the sign in pop-out window, select "**Explorer Pro**" and then sign in via you explorer pro credentials

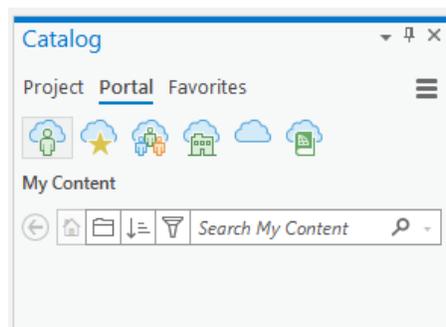


- Click on the "..." again and select set "**Set As Active Portal**"

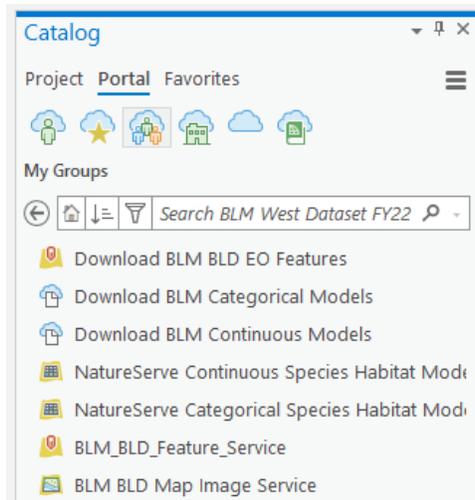
Portals



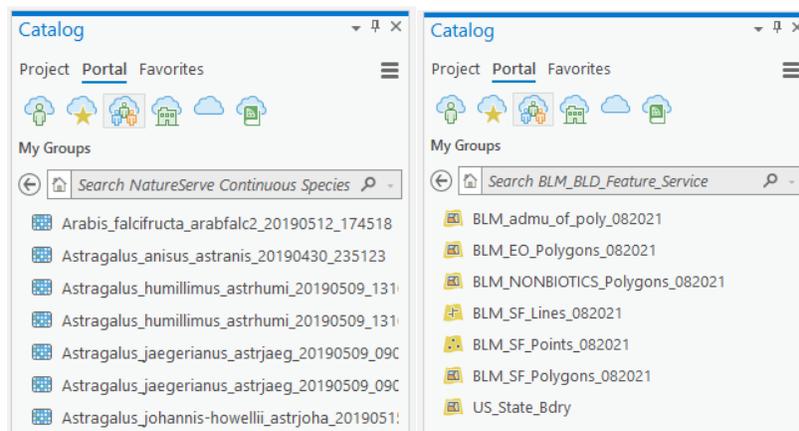
- Click the back arrow to return to the map pane.
- Open a Catalog Pane (**View → Catalog Pane**) and click on "**Portal**"



- Click on the 3 people icon to view all the model services by your access groups



13. From here you can add the entire dataset to you map by right-clicking on it or double click to see a list of all the files in the service and add only one to your map



Note: If you add the entire model dataset to your map, the data set gets added to your map as a mosaic dataset. This mosaic includes an attribute table with the habitat model id, which can be used to find the species and model attributes. If you add only a single model to your map it is added as a raster

Contents

Search

Drawing Order

- Map
- NatureServe Continuo

Value

0.998047

0.00195312

- World Topographic M
- World Hillshade

Map

1:16,063,492

131.1853275°W 48.869707°N

Selected Features: 0

Catalog

Project Portal Favorites

My Groups

Search BLM We

- Download BLM BLD EO Feature
- Download BLM Categorical Mo
- Download BLM Continuous Mo
- NatureServe Continuous Specie
- NatureServe Categorical Specie
- BLM_BLD_Feature_Service
- BLM_BLD_Map_Image_Service

NatureServe Continuo...at Models (BLM)

Field: Add Calculate Selection: Select By Attributes Zoom To Switch Clear Delete Copy

OBJECTID	Shape	RASTER	Name	MinPS	MaxPS	LowPS	HighPS	Category	Tag	Group
1	Polygon	Raster	Astragalus_rafaelen...	0	90000	0.003783	0.003783	Primary	Dataset	
2	Polygon	Raster	Penstemon_idahoe...	0	90000	0.004055	0.004055	Primary	Dataset	
3	Polygon	Raster	Arabis_falcifruca_a...	0	90000	0.004044	0.004044	Primary	Dataset	
4	Polygon	Raster	Cordylanthus_tecop...	0	90000	0.004008	0.004008	Primary	Dataset	
5	Polygon	Raster	Streptanthus_oligan...	0	90000	0.004015	0.004015	Primary	Dataset	
6	Polygon	Raster	Astragalus_johannis...	0	90000	0.000368	0.001473	Primary	Dataset	
7	Polygon	Raster	Castilleja_mendocin...	0	90000	0.000443	0.001772	Primary	Dataset	
8	Polygon	Raster	Lomatium_latilobu...	0	90000	0.000344	0.002754	Primary	Dataset	
9	Polygon	Raster	Salvia_greatae_salv...	0	90000	0.000352	0.002819	Primary	Dataset	
10	Polygon	Raster	Astragalus_anisus_a...	0	90000	0.000336	0.001345	Primary	Dataset	
11	Polygon	Raster	Hesperolinon_didy...	0	90000	0.000383	0.000766	Primary	Dataset	
12	Polygon	Raster	Heuchera_brevista...	0	90000	0.000353	0.000705	Primary	Dataset	
13	Polygon	Raster	Astragalus_humillim...	0	90000	0.000338	0.00135	Primary	Dataset	
14	Polygon	Raster	Astragalus_jo...	0	90000	0.000355	0.00145	Primary	Dataset	