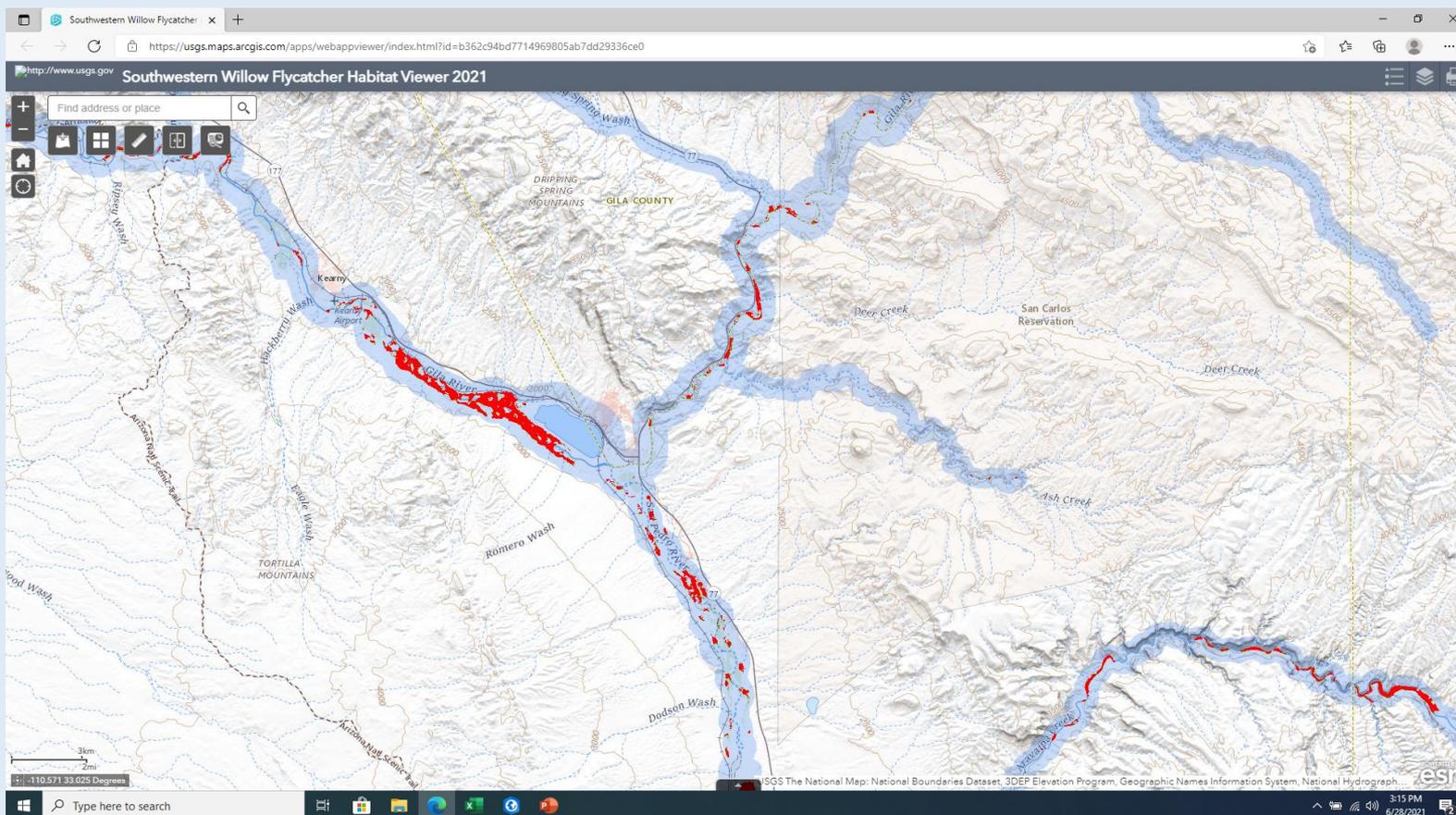


# USER MANUAL FOR THE ARCGIS ONLINE SOUTHWESTERN WILLOW FLYCATCHER HABITAT VIEWER



James R. Hatten<sup>1</sup>

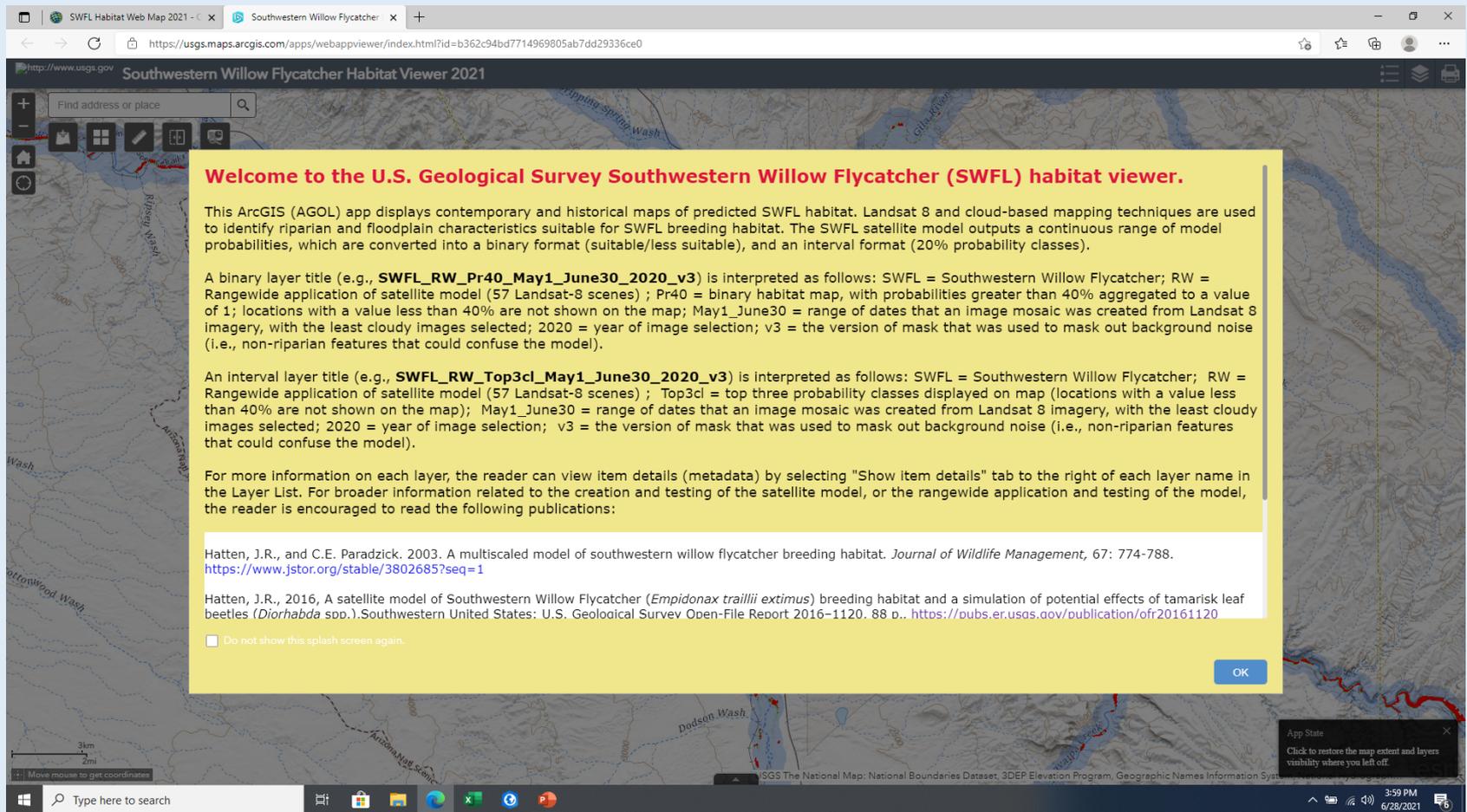
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# Overview

- The Southwestern Willow Flycatcher (SWFL) ArcGIS Online (AGOL) habitat viewer (SWFL habitat viewer) enables you to view, query, and download SWFL predicted breeding habitat from 2013 until present, output from the SWFL satellite model.
- Specifically, Landsat 8 and cloud-based mapping techniques are used to identify riparian and floodplain characteristics suitable for SWFL breeding habitat. Fifty-seven Landsat scenes are required to map the entire range of SWFL, encompassing parts of six States and millions of 30-meter pixels. The term “predicted habitat” is used to distinguish areas the satellite model predicts as suitable habitat from what occurs on the ground. A rangewide accuracy assessment conducted in 2014 with 758 territories found that 88 percent of territories were correctly classified (i.e., occurred in predicted habitat) at a 40 percent probability threshold, with an exponential relationship between territory densities and five probability classes (20% intervals).
  - For more information on the methods and interpretations of the model results the reader is encouraged to read the following publications and visit our website:  
[https://www.usgs.gov/labs/wfrc-crri/science/southwestern-willow-flycatcher-habitat-viewer?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/labs/wfrc-crri/science/southwestern-willow-flycatcher-habitat-viewer?qt-science_center_objects=0#qt-science_center_objects)
  - Hatten, J.R., and C.E. Paradzick. 2003. A multiscaled model of southwestern willow flycatcher breeding habitat. *Journal of Wildlife Management*, 67: 774-788. <https://www.jstor.org/stable/3802685?seq=1>
  - Hatten, J.R., 2016, A satellite model of Southwestern Willow Flycatcher (*Empidonax traillii extimus*) breeding habitat and a simulation of potential effects of tamarisk leaf beetles (*Diorhabda* spp.), Southwestern United States: U.S. Geological Survey Open-File Report 2016–1120, 88 p., <https://pubs.er.usgs.gov/publication/ofr20161120>

# Open SWFL Habitat Viewer

- [Southwestern Willow Flycatcher Habitat Viewer 2021 \(arcgis.com\)](https://www.usgs.gov/arcgis/apps/webappviewer/index.html?id=b362c94bd7714969805ab7dd29336ce0)
- The splash screen describes the two types of habitat maps: binary, and top-3 probability classes (the lower two probability classes are not shown on the map).
- Familiarize yourself with the naming convention because it provides important information about each layer. Select ok and the habitat viewer will open.



**Welcome to the U.S. Geological Survey Southwestern Willow Flycatcher (SWFL) habitat viewer.**

This ArcGIS (AGOL) app displays contemporary and historical maps of predicted SWFL habitat. Landsat 8 and cloud-based mapping techniques are used to identify riparian and floodplain characteristics suitable for SWFL breeding habitat. The SWFL satellite model outputs a continuous range of model probabilities, which are converted into a binary format (suitable/less suitable), and an interval format (20% probability classes).

A binary layer title (e.g., **SWFL\_RW\_Pr40\_May1\_June30\_2020\_v3**) is interpreted as follows: SWFL = Southwestern Willow Flycatcher; RW = Rangewide application of satellite model (57 Landsat-8 scenes) ; Pr40 = binary habitat map, with probabilities greater than 40% aggregated to a value of 1; locations with a value less than 40% are not shown on the map; May1\_June30 = range of dates that an image mosaic was created from Landsat 8 imagery, with the least cloudy images selected; 2020 = year of image selection; v3 = the version of mask that was used to mask out background noise (i.e., non-riparian features that could confuse the model).

An interval layer title (e.g., **SWFL\_RW\_Top3cl\_May1\_June30\_2020\_v3**) is interpreted as follows: SWFL = Southwestern Willow Flycatcher; RW = Rangewide application of satellite model (57 Landsat-8 scenes) ; Top3cl = top three probability classes displayed on map (locations with a value less than 40% are not shown on the map); May1\_June30 = range of dates that an image mosaic was created from Landsat 8 imagery, with the least cloudy images selected; 2020 = year of image selection; v3 = the version of mask that was used to mask out background noise (i.e., non-riparian features that could confuse the model).

For more information on each layer, the reader can view item details (metadata) by selecting "Show item details" tab to the right of each layer name in the Layer List. For broader information related to the creation and testing of the satellite model, or the rangewide application and testing of the model, the reader is encouraged to read the following publications:

Hatten, J.R., and C.E. Paradzick. 2003. A multiscaled model of southwestern willow flycatcher breeding habitat. *Journal of Wildlife Management*, 67: 774-788. <https://www.jstor.org/stable/3802685?seq=1>

Hatten, J.R., 2016, A satellite model of Southwestern Willow Flycatcher (*Empidonax traillii extimus*) breeding habitat and a simulation of potential effects of tamarisk leaf beetles (*Diorhabda* spp.). Southwestern United States: U.S. Geological Survey Open-File Report 2016-1120. 88 p.. <https://pubs.er.usgs.gov/publication/ofr20161120>

Do not show this splash screen again.

OK

App State  
Click to restore the map extent and layers visibility where you left off.

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System

3:59 PM  
6/28/2021

# Overview of SWFL Habitat Viewer

The screenshot displays the 'Southwestern Willow Flycatcher Habitat Viewer 2021' web application. The interface includes a top navigation bar with the title and a URL. A toolbar on the left contains icons for home, layers, full screen, measure, swipe, and screen. A central map shows a topographic view of a region with various washes and creeks, overlaid with red and blue habitat data. A legend and layer list are visible on the right side. The bottom of the screen shows a Windows taskbar with the search bar and system tray.

**Default extent  
Your location**

**Widgets – add data,  
change base map, measure,  
swipe layers, and  
screening (analyze patches)**

**Legend  
Layer list**

# Layer list (predicted habitat from 2013 to present)

Southwestern Willow Flycatcher Habitat Viewer 2021

Find address or place

Predicted habitat 2021

Background map – USGS National Map Is default

Layer List

Layers

- SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4
- SWFL\_RW\_Pr40\_May1\_June30\_2020\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2019\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2018\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2017\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2016\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2015\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2014\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2013\_v3
- SWFL\_RW\_Top3c1\_May1\_June10\_2021\_v4
- SWFL\_RW\_Top3c1\_May1\_June30\_2020\_v3
- SWFL\_RW\_Top3c1\_May1\_June30\_2019\_v3
- SWFL\_RW\_Top3c1\_May1\_June30\_2018\_v3
- SWFL\_RW\_Top3c1\_May1\_June30\_2017\_v3
- SWFL\_RW\_Top3c1\_May1\_June30\_2016\_v3
- SWFL\_RW\_Top3c1\_May1\_June30\_2015\_v3
- SWFL\_RW\_Top3c1\_May1\_June30\_2014\_v3
- SWFL\_RW\_Top3c1\_May1\_June30\_2013\_v3
- SWFL\_Modeled\_areas

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geog...

11:27 AM  
6/29/2021

Areas considered by model (blue buffer)

# SWFL Habitat Viewer – Binary and Top-3 Class Habitat Maps

The screenshot displays the 'Southwestern Willow Flycatcher Habitat Viewer 2021' web application. The interface includes a search bar at the top left, a map of the Gila River region in Gila County, Arizona, and a 'Layer List' on the right side. The map shows two distinct habitat maps: a 'Binary map' (red) and a 'Top-3 map' (green). The 'Binary map' is highlighted with a yellow box and a red arrow pointing to the red area on the map. The 'Top-3 map' is also highlighted with a yellow box and a red arrow pointing to the green area on the map. The 'Layer List' on the right shows the following layers:

- SWFL\_RW\_P40\_May1\_June10\_2021\_v4
- SWFL\_RW\_P40\_May1\_June30\_2020\_v3
- SWFL\_RW\_P40\_May1\_June30\_2019\_v3
- SWFL\_RW\_P40\_May1\_June30\_2018\_v3
- SWFL\_RW\_P40\_May1\_June30\_2017\_v3
- SWFL\_RW\_P40\_May1\_June30\_2016\_v3
- SWFL\_RW\_P40\_May1\_June30\_2015\_v3
- SWFL\_RW\_P40\_May1\_June30\_2014\_v3
- SWFL\_RW\_P40\_May1\_June30\_2013\_v3
- SWFL\_RW\_Top3cl\_May1\_June10\_2021\_v4
- SWFL\_RW\_Top3cl\_May1\_June30\_2020\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2019\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2018\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2017\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2016\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2015\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2014\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2013\_v3

The map also shows various geographical features such as 'Dripping Spring Wash', 'Gila River', 'Kearny', 'Kearny Airport', 'Donnelly Wash', 'Cottonwood Wash', 'Boyo Wash', 'Tortilla Mountains', 'Romero Wash', and 'Dodson Wash'. The bottom of the screen shows the Windows taskbar with the search bar and system tray.

# View Metadata For Each Layer

SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4

Overview Data Visualization Usage Settings

SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4

Open in Map Viewer Classic

Open in Scene Viewer

Open in ArcGIS Desktop

Publish

Create View Layer

Export Data

Update Data

Share

Metadata

Item Information

Low High

Details

Source: Feature Service

Created from: SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4

Shapefile

Data Last Updated: Jun 22, 2021, 2:55:01 PM

Size: 23 MB

Description

The SWFL satellite model outputs a continuous range of model probabilities (Hatten and Paradzick, 2003). In this layer, a probability threshold was set at 40 percent. Thus, areas with model probabilities less than 40% were considered less suitable breeding habitat and were excluded from the map; model probabilities greater than 40% were converted to a value of one and displayed in the map. At a 40-percent cutpoint (binary habitat map), 88 percent (667) of flycatcher territories were located inside predicted habitat in 2014, whereas 12 percent (91) were located outside predicted habitat (omission) (Hatten, 2016). For a complete description of methods and interpretation of maps, see Hatten and Paradzick, 2003; Hatten, 2016.

The layer title (SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4) is interpreted as follows: SWFL = Southwestern Willow Flycatcher; RW = Rangewide application of satellite model (56 Landsat-8 scenes); Pr40 = binary habitat map, with probabilities greater than 40% aggregated to a value of 1; locations with a value less than 40% are not shown on the map; May1\_June10 = range of dates that an image mosaic was created from Landsat 8 imagery, with the least cloudy images selected; 2021 = year of image selection; v4 = the version of mask that was used to mask out background noise (i.e., non-riparian features that could confuse the model).

Hatten, J.R., and C.E. Paradzick. 2003. A multiscaled model of southwestern willow flycatcher breeding habitat. *Journal of Wildlife Management*, 67: 774-788. <https://www.jstor.org/stable/3802685?seq=1>

Hatten, J.R., 2016. A satellite model of Southwestern Willow Flycatcher (*Empidonax traillii eximius*) breeding habitat and a simulation of potential effects of tamarisk leaf beetles (*Diorhabda* spp.), Southwestern United States. U.S. Geological Survey Open-File Report 2016-1120, 88 p., <https://pubs.er.usgs.gov/publication/of20161120>

Layer List

Layers

- SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4
- SWFL\_RW\_Pr40\_Me
- SWFL\_RW\_Pr40\_Ma
- SWFL\_RW\_Pr40\_M
- SWFL\_RW\_Pr40\_Me
- SWFL\_RW\_Pr40\_Me
- SWFL\_RW\_Pr40\_Me
- SWFL\_RW\_Pr40\_Me
- SWFL\_RW\_Top3cL\_May1\_June10\_2021\_v4
- SWFL\_RW\_Top3cL\_May1\_June30\_2020\_v3
- SWFL\_RW\_Top3cL\_May1\_June30\_2019\_v3
- SWFL\_RW\_Top3cL\_May1\_June30\_2018\_v3
- SWFL\_RW\_Top3cL\_May1\_June30\_2017\_v3
- SWFL\_RW\_Top3cL\_May1\_June30\_2016\_v3
- SWFL\_RW\_Top3cL\_May1\_June30\_2015\_v3
- SWFL\_RW\_Top3cL\_May1\_June30\_2014\_v3
- SWFL\_RW\_Top3cL\_May1\_June30\_2013\_v3
- SWFL\_Modeled\_areas

Context menu for SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4:

- Zoom to
- Transparency
- Set visibility range
- Disable pop-up
- Move up
- Move down
- View in Attribute Table
- Show item details

# SWFL Habitat Viewer (Add Data) Widget

The screenshot displays the SWFL Habitat Viewer web application interface. The main map area shows a topographic view of a region with several creeks and washes, including Rock Creek, Cottonwood Wash, Meddler Wash, Campion Creek, and Apache Lake. A red arrow points to the 'Add Data' widget, which is open and shows a search interface with tabs for 'Search', 'URL', and 'File'. The 'Search' tab is active, displaying a list of 753 items with columns for 'My Organization', 'Search...', 'Type', and 'Relevance'. Three items are visible in the list:

- CONUS LANDFIRE 2014 (LF 1.4.0.)
- BLM Public Land Survey System (PLSS)
- WMS Lunar Server, Lunaserv by ASU

On the right side of the map, there is a 'Layer List' panel with a search icon and a list of layers. The layers are:

- SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4
- SWFL\_RW\_Pr40\_May1\_June30\_2020\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2019\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2018\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2017\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2016\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2015\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2014\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2013\_v3
- SWFL\_RW\_Top3cl\_May1\_June10\_2021\_v4
- SWFL\_RW\_Top3cl\_May1\_June30\_2020\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2019\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2018\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2017\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2016\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2015\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2014\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2013\_v3
- SWFL\_Modeled\_areas

The browser address bar shows the URL: <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=b362c94bd7714969805ab7dd29336ce0>. The bottom of the screen shows the Windows taskbar with the search bar and various application icons.

# SWFL Habitat Viewer Widget (Basemap Gallery)

The screenshot displays the SWFL Habitat Viewer Web Map 2021 interface. The browser address bar shows the URL: <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=b362c94bd7714969805ab7dd29336ce0>. The page title is "Southwestern Willow Flycatcher Habitat Viewer 2021".

The main map area shows a topographic view of a region with rivers and creeks, including Cottonwood Wash, Meddler Wash, Salt River, Campatan Creek, and Apache Lake. A red arrow points to the "Basemap Gallery" widget, which is open and displays a grid of map styles:

- Dark Gray Carves
- Imagery
- Imagery with Labels
- Light Gray Carves
- National Geographic
- Oceans
- OpenStreetMap
- Streets
- Terrain with Labels
- Topographic
- USA Topo Maps
- USGS National Map

The "Layer List" widget on the right side of the map shows a list of layers:

- SWFL\_RW\_P40\_May1\_June10\_2021\_v4
- SWFL\_RW\_P40\_May1\_June30\_2020\_v3
- SWFL\_RW\_P40\_May1\_June30\_2019\_v3
- SWFL\_RW\_P40\_May1\_June30\_2018\_v3
- SWFL\_RW\_P40\_May1\_June30\_2017\_v3
- SWFL\_RW\_P40\_May1\_June30\_2016\_v3
- SWFL\_RW\_P40\_May1\_June30\_2015\_v3
- SWFL\_RW\_P40\_May1\_June30\_2014\_v3
- SWFL\_RW\_P40\_May1\_June30\_2013\_v3
- SWFL\_RW\_Top3cd\_May1\_June10\_2021\_v4
- SWFL\_RW\_Top3cd\_May1\_June30\_2020\_v3
- SWFL\_RW\_Top3cd\_May1\_June30\_2019\_v3
- SWFL\_RW\_Top3cd\_May1\_June30\_2018\_v3
- SWFL\_RW\_Top3cd\_May1\_June30\_2017\_v3
- SWFL\_RW\_Top3cd\_May1\_June30\_2016\_v3
- SWFL\_RW\_Top3cd\_May1\_June30\_2015\_v3
- SWFL\_RW\_Top3cd\_May1\_June30\_2014\_v3
- SWFL\_RW\_Top3cd\_May1\_June30\_2013\_v3
- SWFL\_Modeled\_areas

The bottom of the screen shows the Windows taskbar with the search bar and various application icons. The system tray on the right indicates the time is 12:08 PM on 6/29/2021.

# SWFL Habitat Viewer Widget (Slider)

The screenshot displays the 'Southwestern Willow Flycatcher Habitat Viewer 2021' web application. The interface includes a search bar at the top left, a toolbar with navigation and map controls, and a 'Layer List' panel on the right. The map shows a topographic view of a region with various washes and rivers, overlaid with colored habitat areas. Three yellow callout boxes with red arrows point to specific features: 'Show your location in the field' points to the location pin icon in the toolbar; 'Slider widget' points to a slider control on the map; and 'Select 2 layers' points to the 'Layer List' panel. The 'Layer List' panel shows a list of layers with checkboxes, including 'SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4' (checked), 'SWFL\_RW\_Pr40\_May1\_June30\_2020\_v3', 'SWFL\_RW\_Pr40\_May1\_June30\_2019\_v3', 'SWFL\_RW\_Pr40\_May1\_June30\_2018\_v3' (checked), and 'SWFL\_Modeled\_ereses' (checked).

Find address or place

layer(s) selected

Select 2 layers

Slider widget

Show your location in the field

Layer List

Layers

- SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4
- SWFL\_RW\_Pr40\_May1\_June30\_2020\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2019\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2018\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2017\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2016\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2015\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2014\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2013\_v3
- SWFL\_RW\_Top3cl\_May1\_June10\_2021\_v4
- SWFL\_RW\_Top3cl\_May1\_June30\_2020\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2019\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2018\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2017\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2016\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2015\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2014\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2013\_v3
- SWFL\_Modeled\_ereses

110.851 32.980 Degrees

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names

10:55 AM 6/30/2021

# SWFL Habitat Viewer Widget (Measurement)

The screenshot displays the 'Southwestern Willow Flycatcher Habitat Viewer 2021' web application. The browser address bar shows the URL: <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=b362c94bd7714969805ab7dd29336ce0>. The map shows a topographic view of a region with various water bodies and elevation contours. A blue polygon highlights a specific area of interest, and a red arrow points from this area to a 'Measurement' pop-up window.

The 'Measurement' window displays the following information:

- Unit: Hectares
- Measurement Result: 6,979.8 Hectares
- Clear button

The 'Layer List' on the right side of the map shows the following layers:

- Measurement
- SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4
- SWFL\_RW\_Pr40\_May1\_June30\_2020\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2019\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2018\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2017\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2016\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2015\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2014\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2013\_v3
- SWFL\_RW\_Top3cl\_May1\_June10\_2021\_v4
- SWFL\_RW\_Top3cl\_May1\_June30\_2020\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2019\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2018\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2017\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2016\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2015\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2014\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2013\_v3

The bottom of the screen shows the Windows taskbar with the search bar and various application icons. The system tray on the right indicates the time is 12:12 PM on 6/29/2021.

# SWFL Habitat Viewer Screening Widget (part A)

The screenshot displays the 'Southwestern Willow Flycatcher Habitat Viewer 2021' web application. The main map shows a topographic view of a region with a red-shaded Area of Interest (AOI) along a river valley. A 'Screening' widget is overlaid on the left side of the map, featuring a search bar, 'Draw' mode selection, and a 'Report' button. A yellow callout box points to the 'Report' button with the text 'See report output on next page (part B)'. The 'Layer List' on the right side of the map shows a list of layers, with 'SWFL\_Modeled\_areas' checked at the bottom. The browser's address bar shows the URL: <https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=b362c94bd7714969805ab7dd29336ce0>. The browser's taskbar at the bottom shows the time as 11:48 AM on 6/30/2021.

Southwestern Willow Flycatcher Habitat Viewer 2021

Find address or place

Screening

AOI

Place name Draw Shapefile Coordinates

Select draw mode

Buffer distance (optional)

Show results within

0 Miles

Report Start Over

Layer List

Layers

- SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4
- SWFL\_RW\_Pr40\_May1\_June30\_2020\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2019\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2018\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2017\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2016\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2015\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2014\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2013\_v3
- SWFL\_RW\_Top3cl\_May1\_June10\_2021\_v4
- SWFL\_RW\_Top3cl\_May1\_June30\_2020\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2019\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2018\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2017\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2016\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2015\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2014\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2013\_v3
- SWFL\_Modeled\_areas

See report output on next page (part B)

USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic N

11:48 AM 6/30/2021

# SWFL Habitat Viewer Screening Widget (part B)

The screenshot displays the 'Southwestern Willow Flycatcher Habitat Viewer 2021' interface. The central map shows a red-shaded habitat area within a grey analysis boundary. A 'Screening' widget on the left lists patches with their IDs and counts. A 'Layer List' on the right shows various data layers. A yellow callout box points to the 'Screening' widget with text explaining the report outputs.

**Screening Report**

Area: 8,299.63 hectares

Patch ID	Count
PR40_21	(32)
PR40_20	(24)
PR40_19	(22)
PR40_18	(18)
PR40_17	(32)
PR40_16	(40)
PR40_15	(22)
PR40_14	(32)
PR40_13	(63)
TOP3_21	(425)
TOP3_20	(369)
TOP3_19	(260)
TOP3_18	(405)
TOP3_17	(337)
TOP3_16	(323)

Upload shapefile to include in analysis [Upload]

**Layer List**

- SWFL\_RW\_Pr40\_May1\_June10\_2021\_v4
- SWFL\_RW\_Pr40\_May1\_June30\_2020\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2019\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2018\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2017\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2016\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2015\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2014\_v3
- SWFL\_RW\_Pr40\_May1\_June30\_2013\_v3
- SWFL\_RW\_Top3cl\_May1\_June10\_2021\_v4
- SWFL\_RW\_Top3cl\_May1\_June30\_2020\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2019\_v3
- SWFL\_RW\_Top3cl\_May1\_June30\_2018\_v3

**Screening Report outputs number and size (area) of each patch inside analysis boundary. Can download to your laptop, workstation, etc. See next page (part C) of Screening**

# SWFL Habitat Viewer Screening Widget (part C)

Can download geospatial data in multiple formats for viewing and analysis on your desktop.

Each layer is a separate year (e.g., PR40\_21 is a binary habitat map for the year 2021). One could download layers from 2013 – 21 and create a habitat time series.

## Questions, Comments, Feedback

- I am continually trying to improve the SWFL habitat viewer. Please send me any comments, questions, or feedback related to the habitat viewer.
- Reach me by phone: 509-439-2276
- Reach me by email: [jhatten@usgs.gov](mailto:jhatten@usgs.gov)