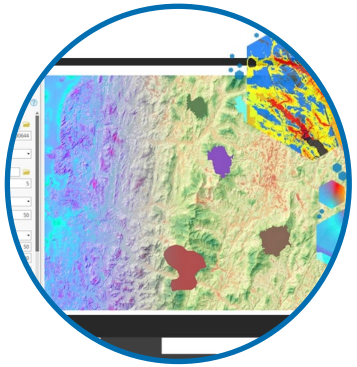
esri | THE SCIENCE OF WHERE

2022 ESRI USER CONFERENCE

Living Atlas Update

Gonzalo Espinoza

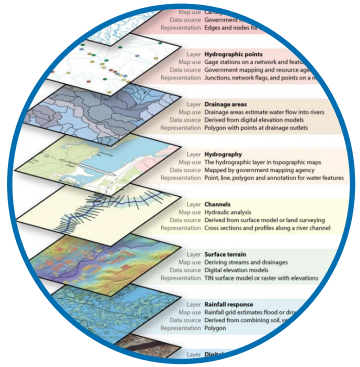
Esri Water Resources and Hydro Meeting



Spatial Analyst

Living Atlas

https://livingatlas.arcgis.com/



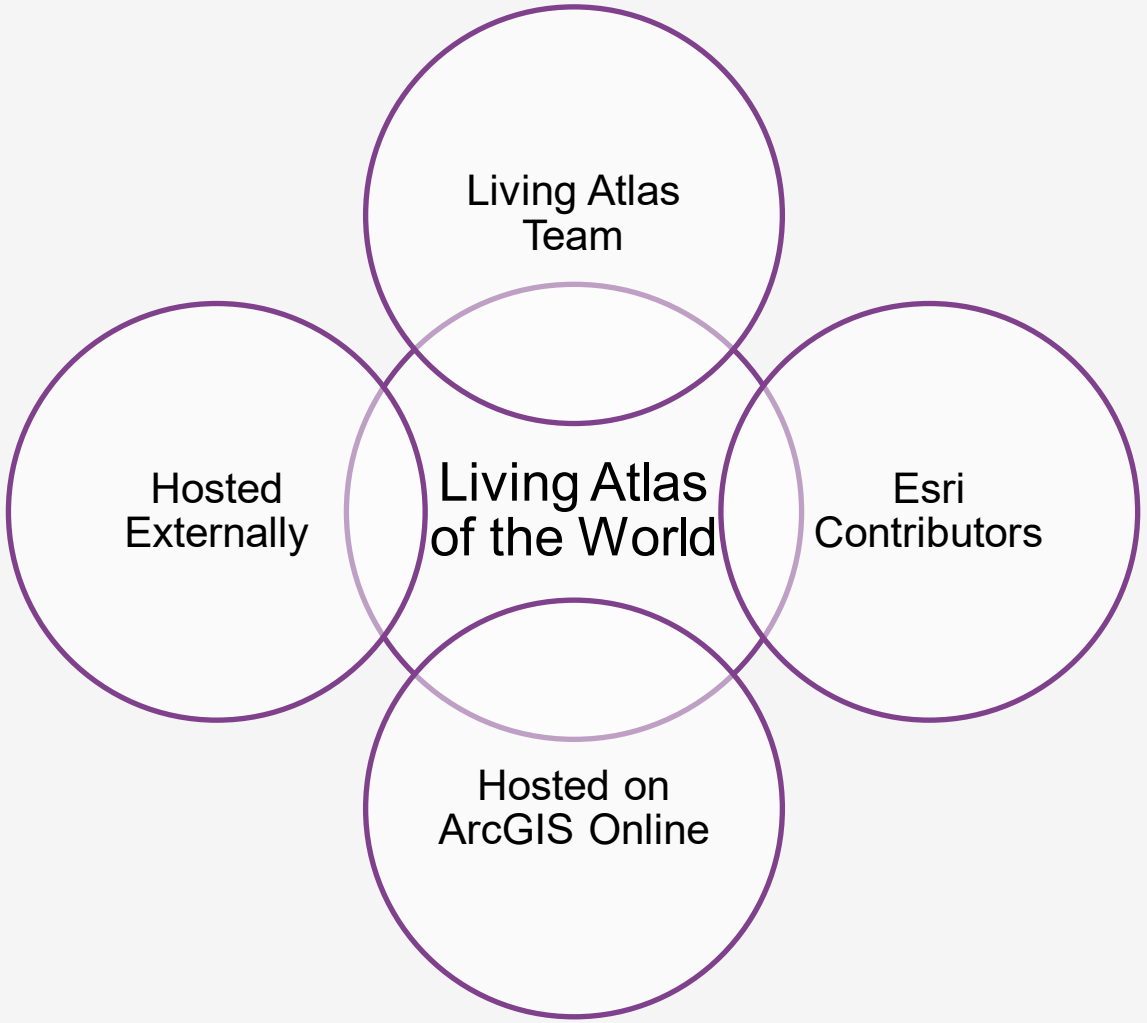
Arc Hydro

The Living Atlas of the World

Authoritative
Curated
Interoperable
Updated
Growing

Living Atlas Content

Source



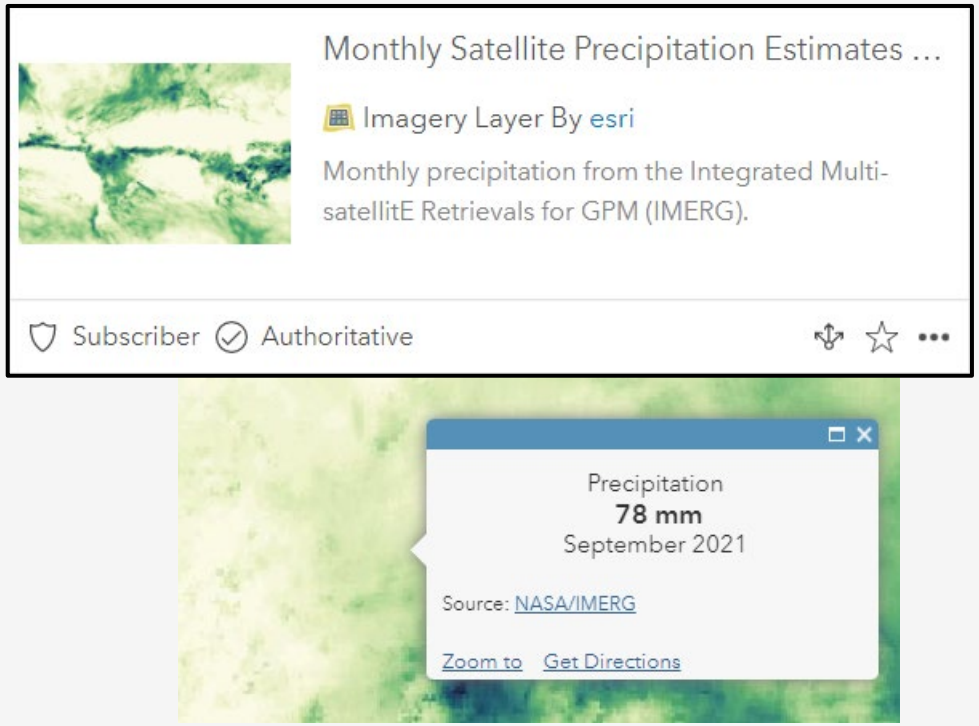
Water Resources Layers in Living Atlas

Blog

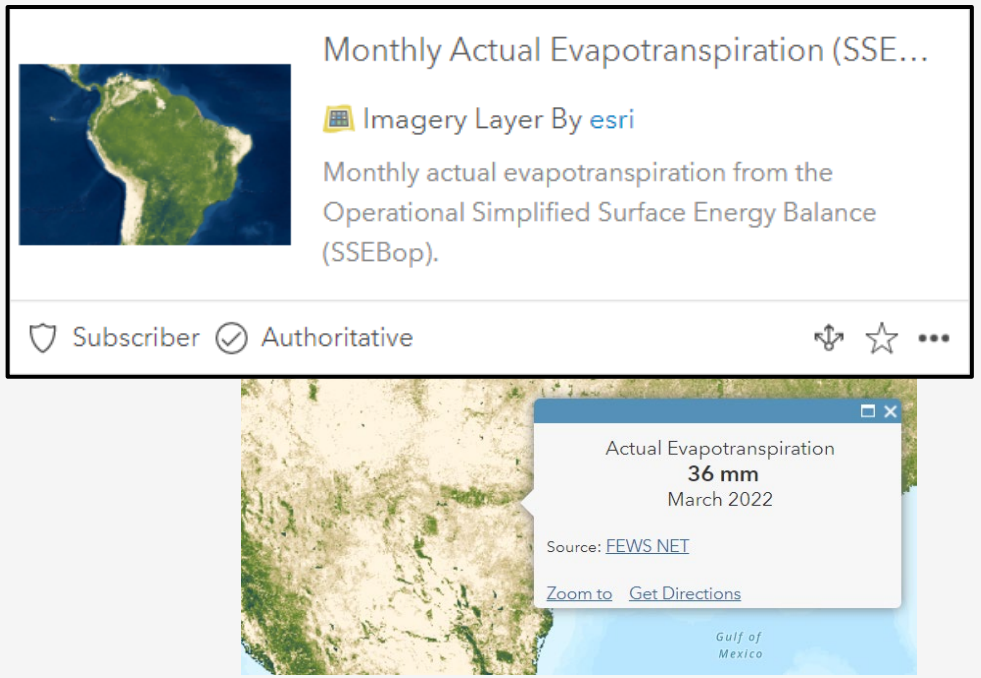
https://www.esri.com/arcgis-blog/products/arcgis-desktop/water/arcgis-living-atlas-of-the-world-layers-for-water-resources/

Precipitation & Evapotranspiration Image Services

- Monthly Satellite Precipitation Estimates (IMERG)



- Monthly Actual Evapotranspiration (SSEBop)



Precipitation Lessons in Learn ArcGIS

NOTEBOOK

Analyzing interannual precipitation using ArcGIS Notebooks

Use ArcGIS Notebooks to create a mean annual precipitation map, configure its pop-up, extract and chart precipitation values at different locations, and export a raster.

45 min

NOTEBOOK

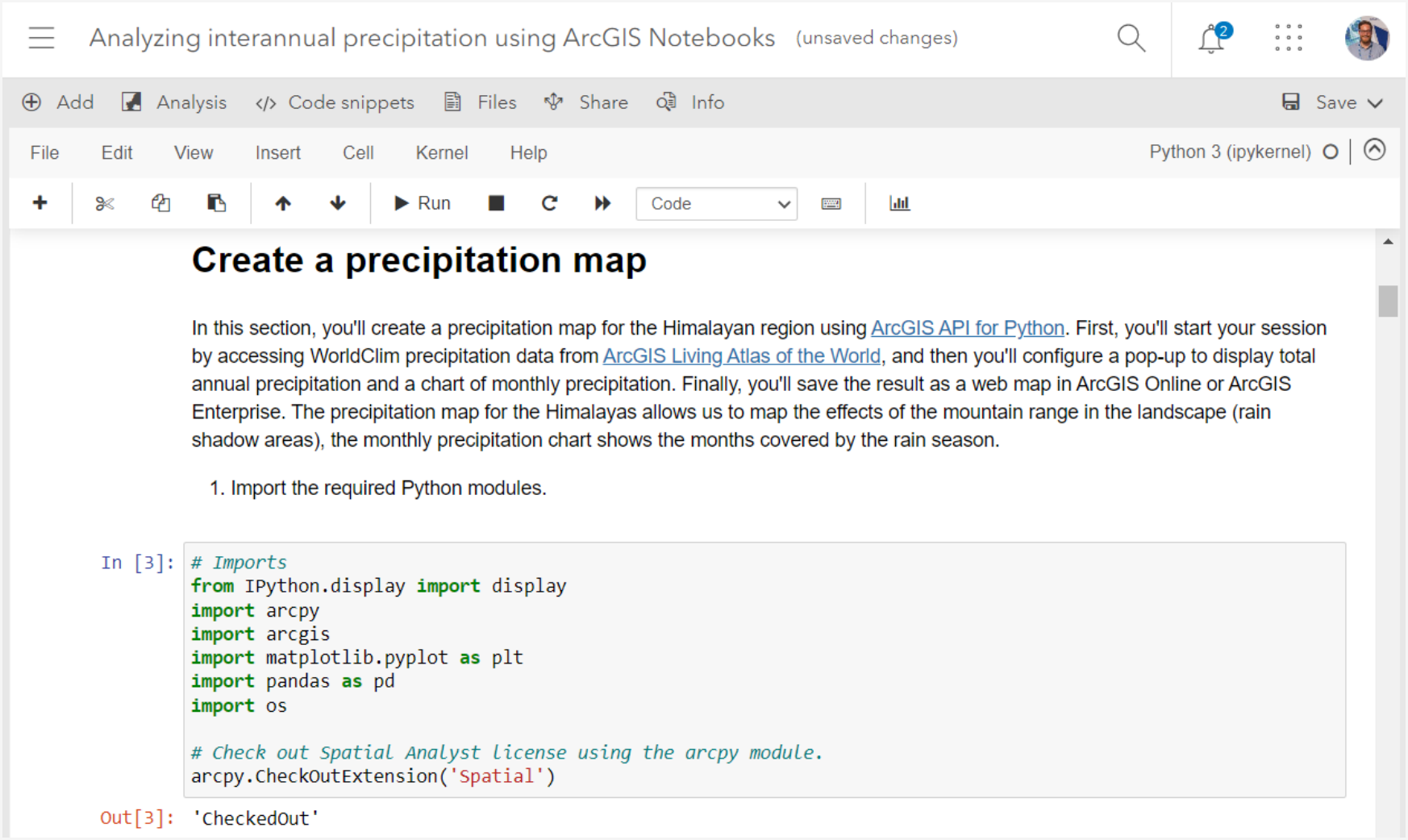
Extract precipitation data and create an annual precipitation map using ArcGIS Notebooks

In this lesson, you will learn how to extract precipitation data from a CSV file and create an annual precipitation map using Python and ArcGIS Notebooks.

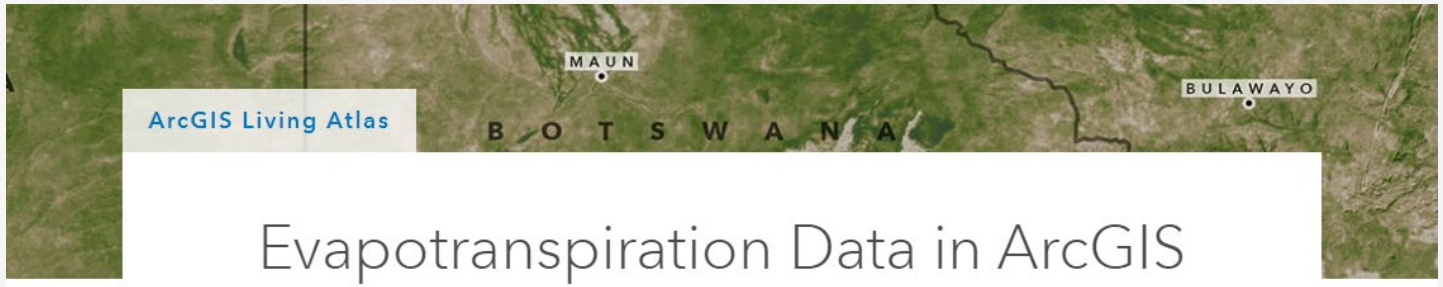
45 min

https://learn.arcgis.com/en/gallery/#?q=precipitation&r=datascientist

Hosted Notebooks in AGOL



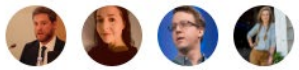
Evapotranspiration Blog



Evapotranspiration Data in ArcGIS Living Atlas of the World

Water

March 31, 2022



Gonzalo Espinoza
Emily Meriam
Craig McCabe
Abigail Fitzgibbon

Evapotranspiration (ET) is a key component of the water cycle and is useful for many analysis and mapping applications. A new time-enabled imagery layer with monthly ET measurements is now available in Living Atlas.

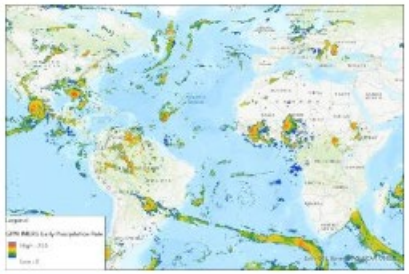
Understanding Evapotranspiration

Evapotranspiration represents the water that flows from the landscape into the atmosphe
ET combines the water fluxes from (1) direct soil evaporation, (2) evaporation from intercepted precipitation on trees, branches, and leaves, and (3) transpiration from plants.

https://www.esri.com/arcgis-blog/products/arcgis-living-atlas/water/evapotranspiration-data-in-arcgis-living-atlas-of-the-world/

GPM IMERG Early Precipitation Rate

NASA

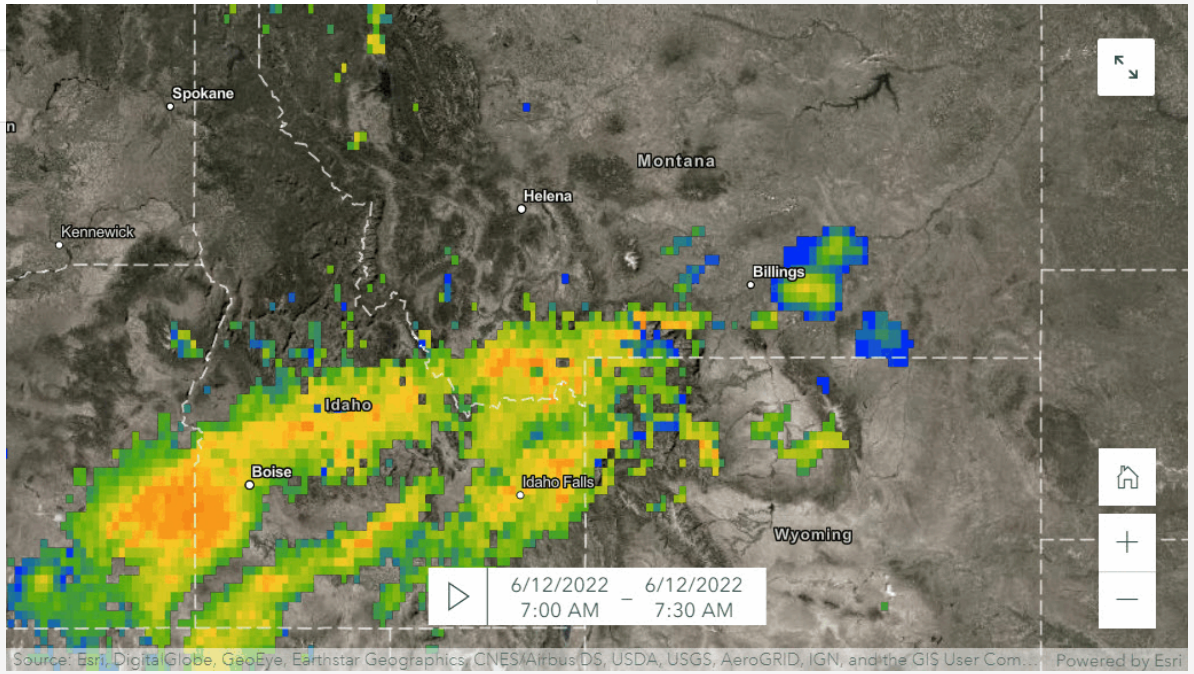


GPM IMERG Early Precipitation Rate (GPM_3IMERGHHE preci…

Imagery Layer By NASA_Earthdata

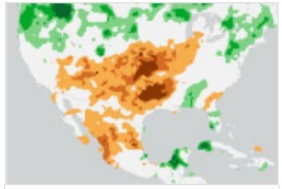
Image service of IMERG Early product displaying precipitation rate in mm/hr at 30 minute intervals. Information on map configuration, color bar, and data, is available in Item Details.

Authoritative



Precipitation Indices – SPI & SPEI

Standardized Precipitation Index (SPI) Recent Conditions



☆ Add to Favorites

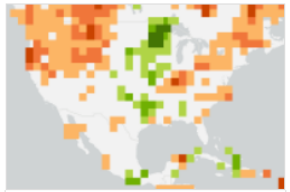
Standardized Precipitation Index (SPI) calculated from CHIRPS. Current month: April 2022.

Feature Layer from Esri
Managed by esri_livefeeds2

Created: Jul 7, 2020 Updated: Jun 1, 2022
View Count: 154,759

Authoritative | Living Atlas

Standardized Precipitation-Evapotranspiration Index (SPEI) Recent



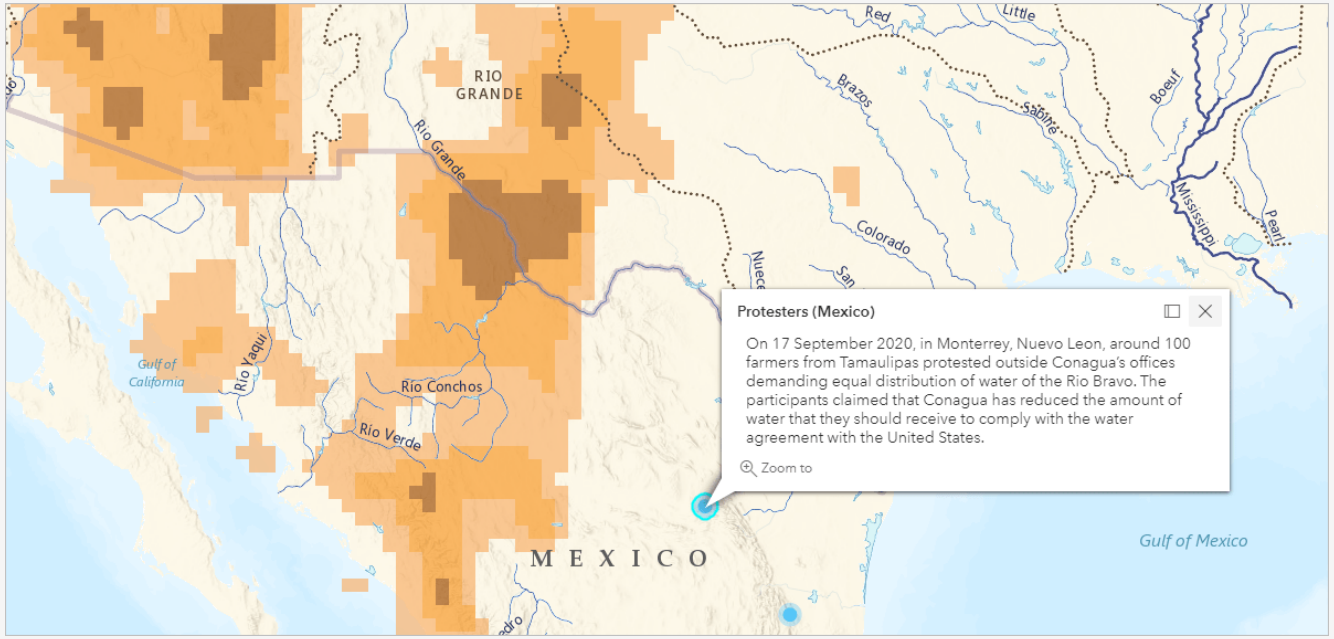
☆ Add to Favorites

Standardized Precipitation-Evapotranspiration Index from the SPEI Global Drought Monitor. Current month: May 2022.

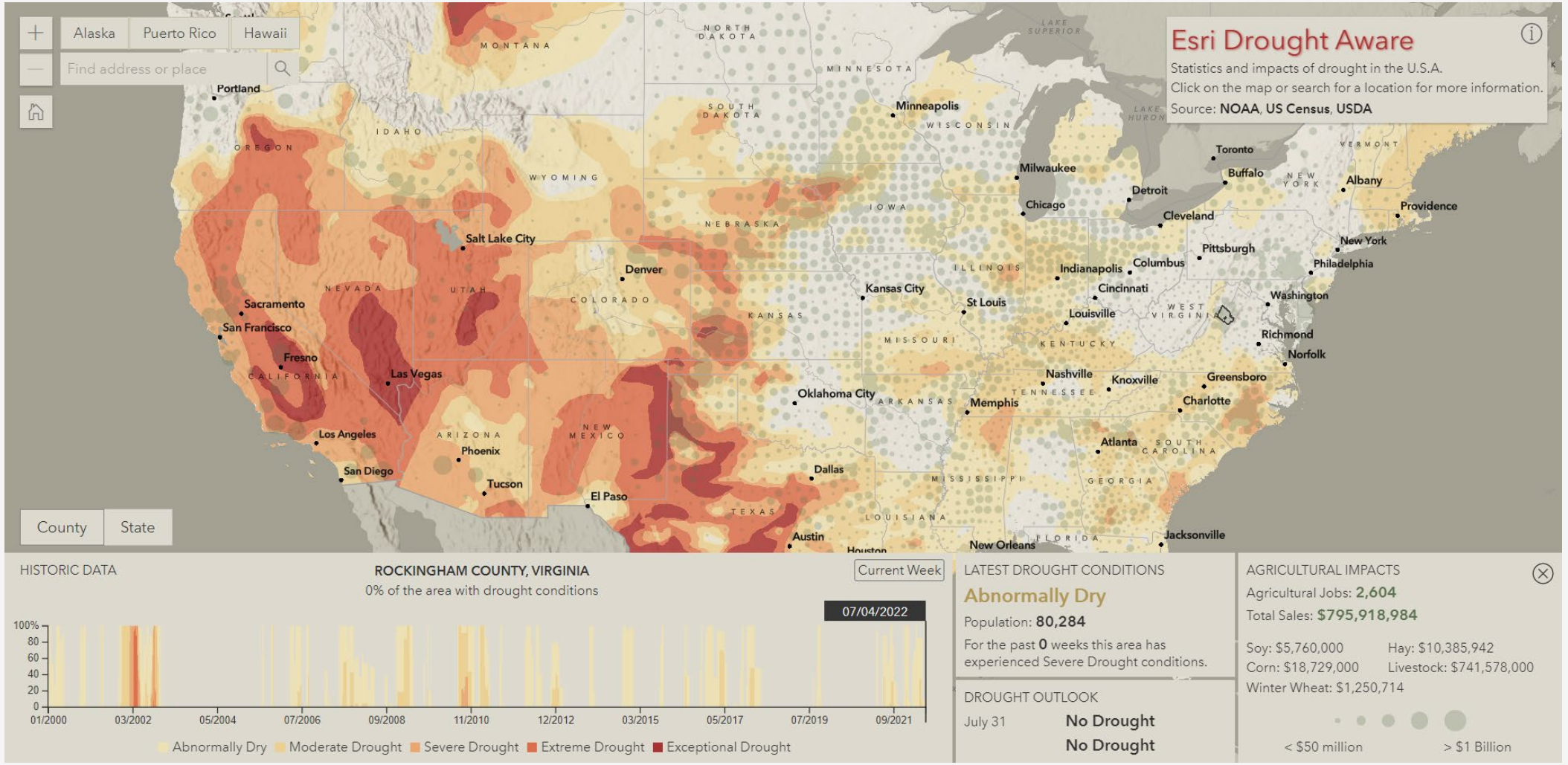
Feature Layer from Esri
Managed by esri_livefeeds2

Created: Feb 18, 2022 Updated: Jun 11, 2022
View Count: 2,227

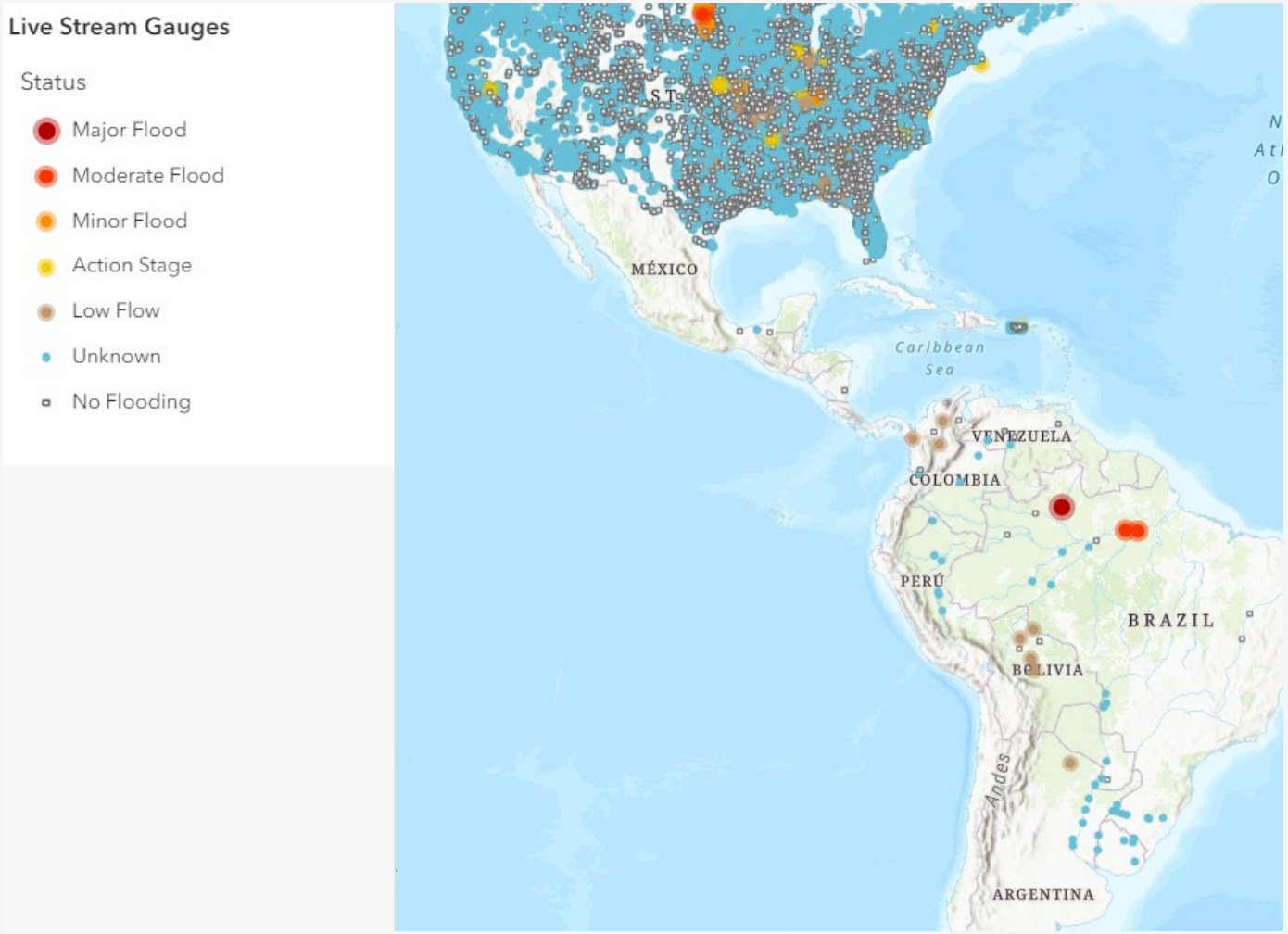
Authoritative | Living Atlas



Esri Drought Aware App



Live Stream Gauges



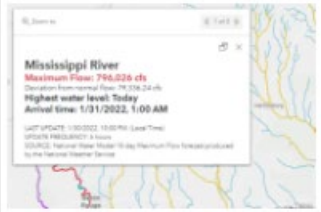
National Water Model

National Water Model Maximum Flow (Hourly ...

Feature Layer By esri_livefeeds2

This layer provides a summarization of the National Water Model Hourly Forecast, including maximum flow per river segment and time of maximum flow.

Authoritative



National Water Model Maximum Flow (10 Day ...

Feature Layer By esri_livefeeds2

This layer provides a summarization of the National Water Model 10-Day forecast, including maximum flow per river segment and time of maximum flow.

Authoritative

Summary

Living Atlas includes a collection of water resources layers that are ready-to-use in your maps, apps, & analysis.