



Climate Engine



Drought Severity Evaluation Tool

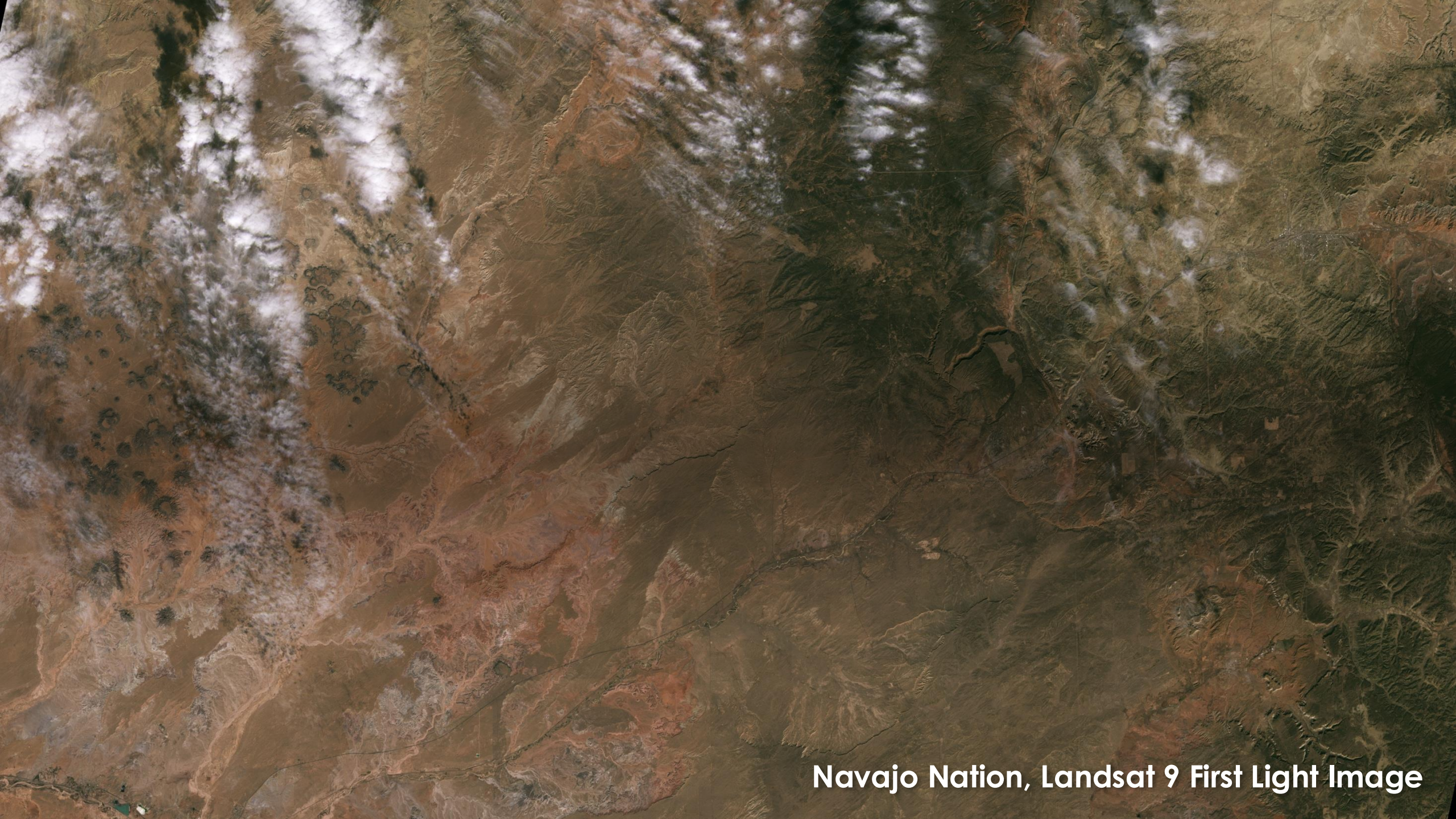
An Earth Observation collaboration with the Navajo Nation

Project Team:

Nikki Tulley (BAERI/NASA Ames Research Center)
Amber McCullum (*Has since moved onto work with Planet*)
Carlee McClellan (NN DWR)
Justin Huntington (DRI)
Britta Daudert (DRI)

DSET Website Link

<https://app.climateengine.org/dset>



Navajo Nation, Landsat 9 First Light Image

The image is a horizontal split-screen composition. The left half shows a dramatic, stormy sky with dark, heavy clouds and a bright, jagged lightning bolt striking across the upper left. Below the clouds, a green field with some trees and a few animals is visible. The right half shows a clear, bright sky with a single, faint rainbow arching across it. Below the sky, a dry, yellowish-brown landscape with sparse vegetation and distant hills is visible. The text "Drought Impacts" is centered across the middle of the image, spanning both halves.

Drought Impacts

Drought Impacts



Sense of Place & Satellite Connection



Place-based to Space Connections



Navajo Nation Drought Severity Evaluation Tool

Introductory Video



A NASA Western Water Applications Office (WWAO) funded project.

Bringing Ways of Knowing Together



Bringing Ways of Knowing Together

- A collaboration of Sovereignty and Science for the Navajo Nation
- NASA Western Water Applications Office (WWAO)
- Co-developed with the Navajo Nation Division of Water Resources (N.N. DWR), and the Desert Research Institute (DRI)



Free Web Application



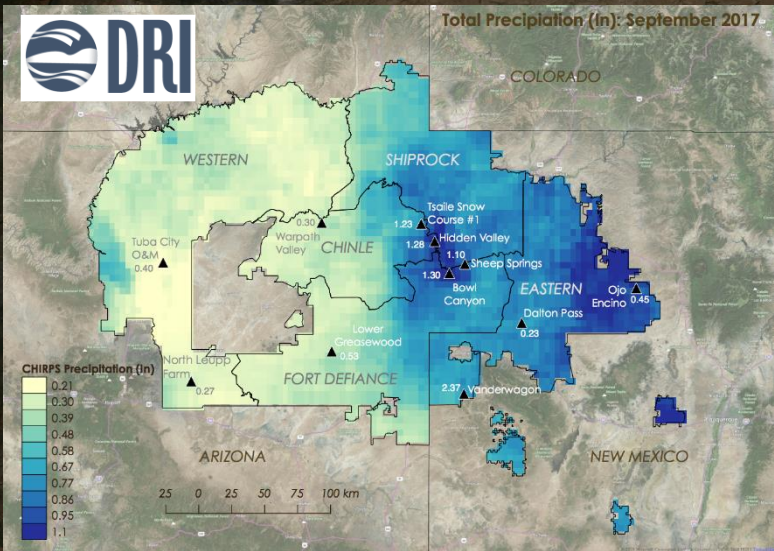
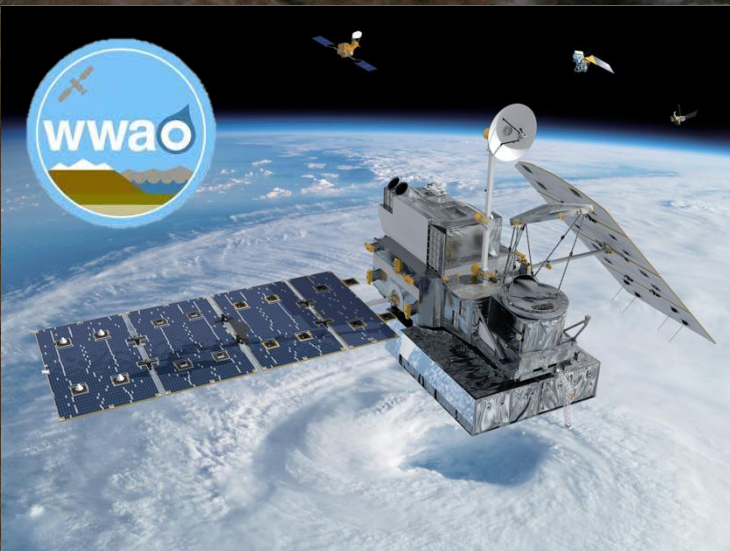
User Friendly



Time & Storage Saver



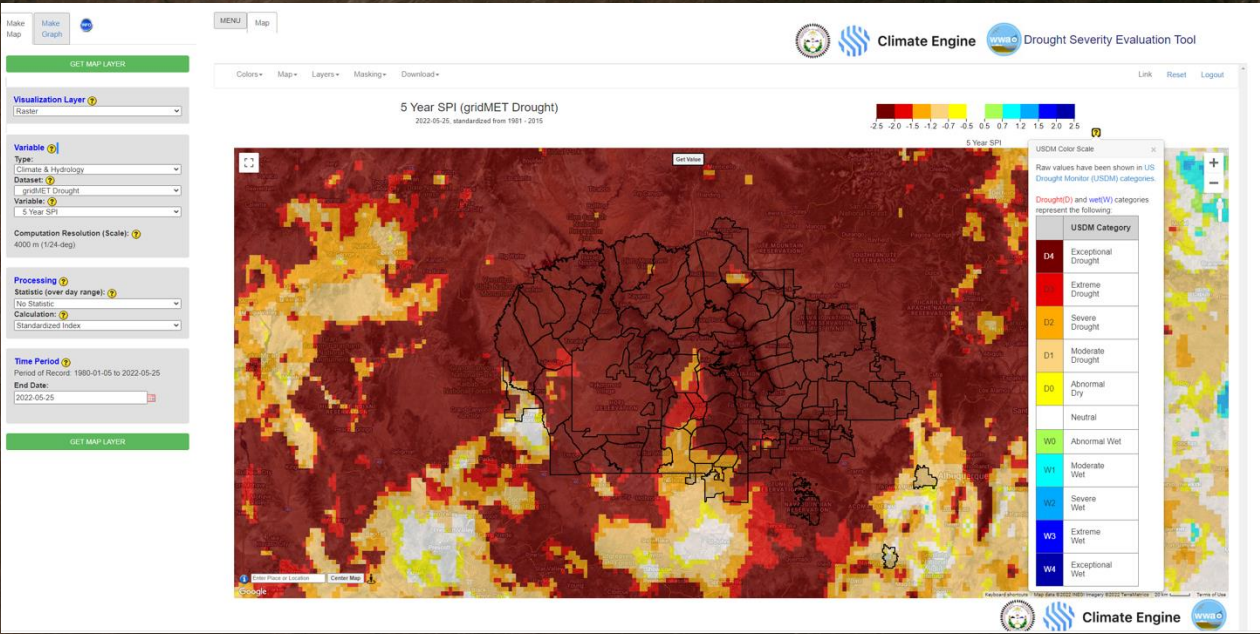
Analyzing & Visualizing
Data made easier



Satellite Data

Navajo Rain Gauge Data

Modeled Data and Drought Indices



Drought Severity Evaluation Tool

GET MAP LAYER

Visualization Layer ?

Feature Summaries

Feature Type ?

US Regions

Features ?

Navajo Nation Chapters

Variable ?

Type: Search Datasets

Climate

Dataset: ?

GridMET Drought - 4km - Pentad

Variable: ?

14 Day SPI

Computation Resolution (Scale): ?

4000 m (1/24-deg)

Processing ?

Statistic (over day range): ?

No Statistic

Calculation: ?

Standardized Index

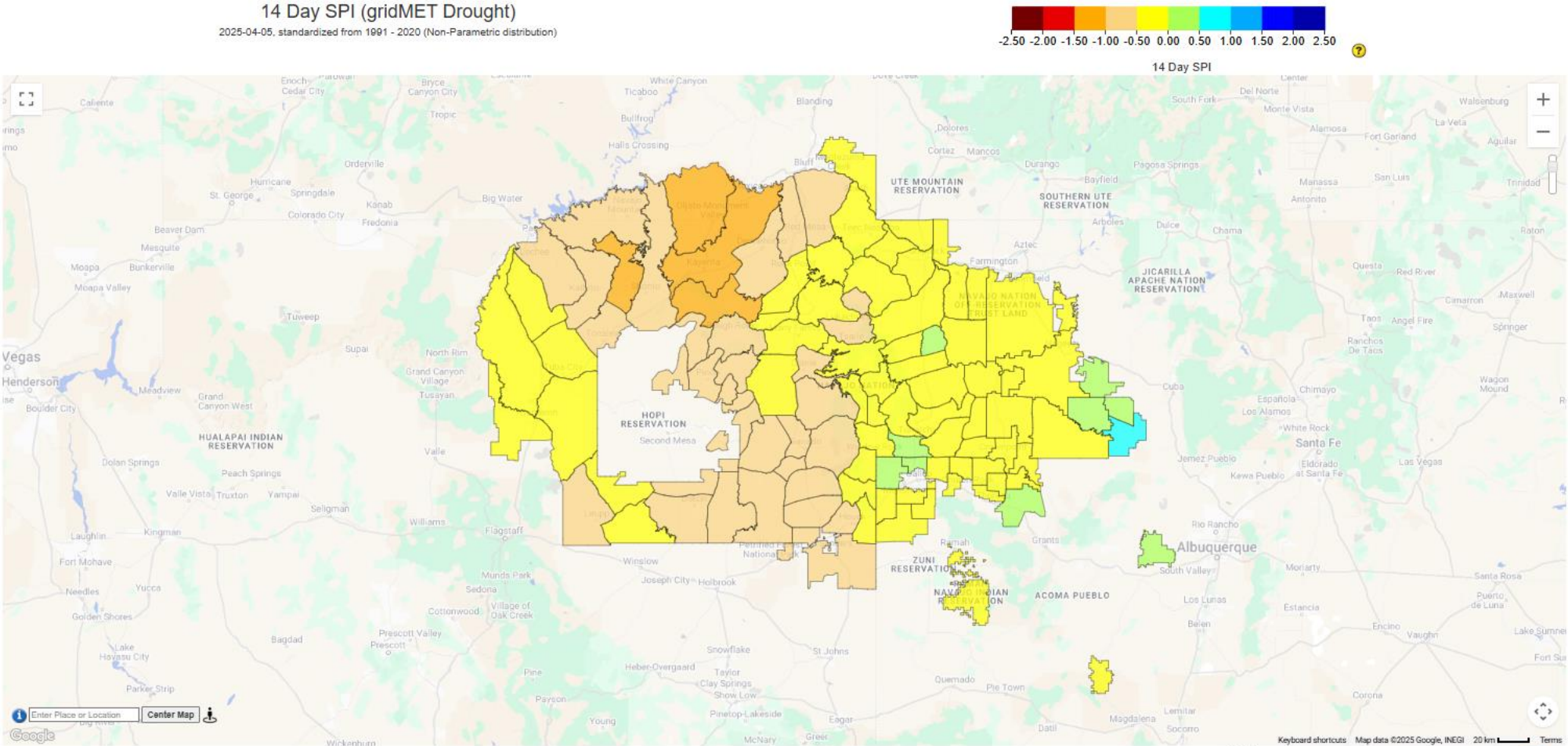
Time Period ?

Period of Record: 1980-01-05 to 2025-04-05

End Date:

2025-04-05

GET MAP LAYER



Strong Community Relationships





Ahéhee' (Thank You)

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