

Stream Watch

A Citizen–Science Groundwater and Surface Water
Monitoring Program for Napa Valley

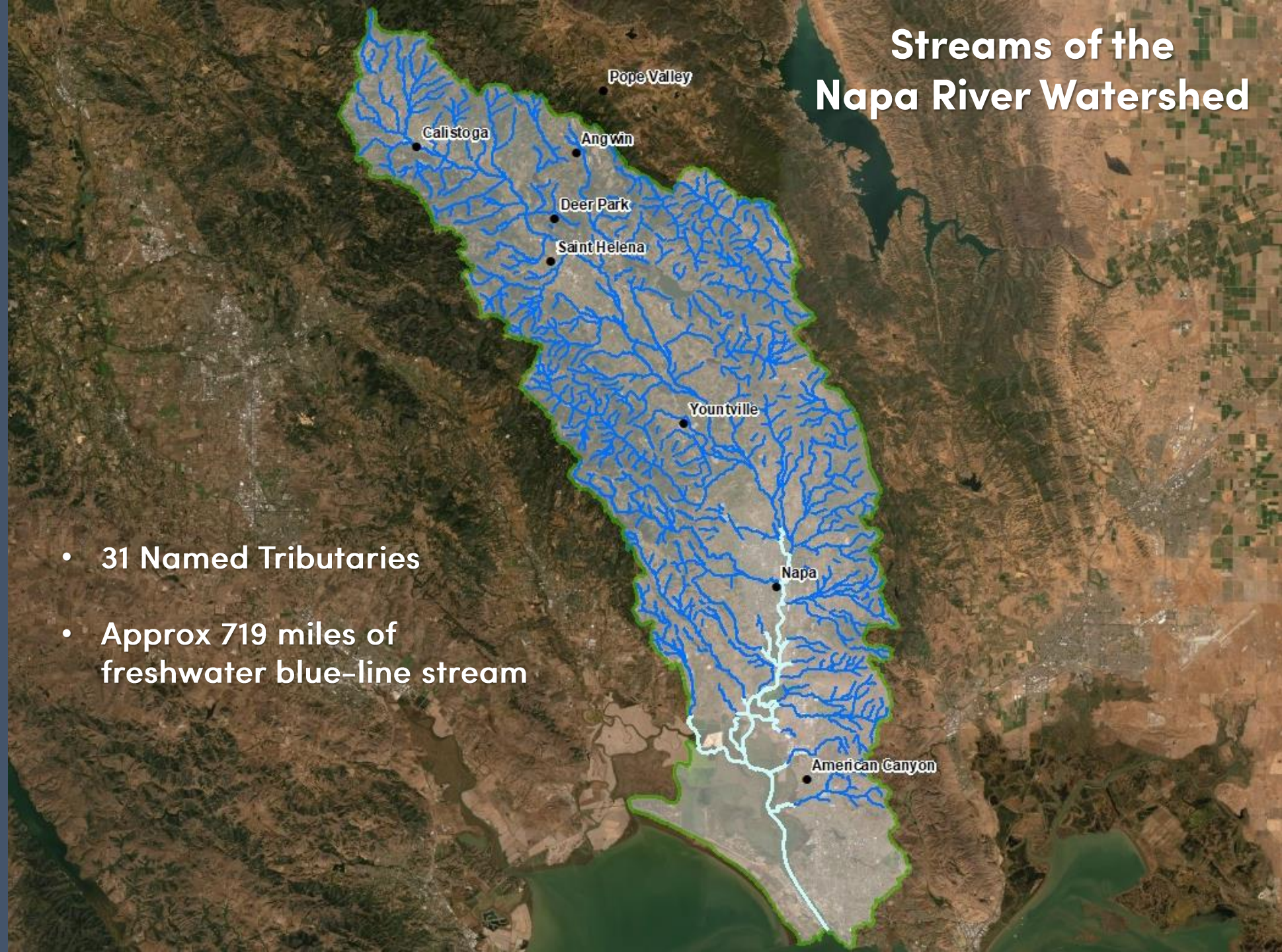


Napa River Watershed



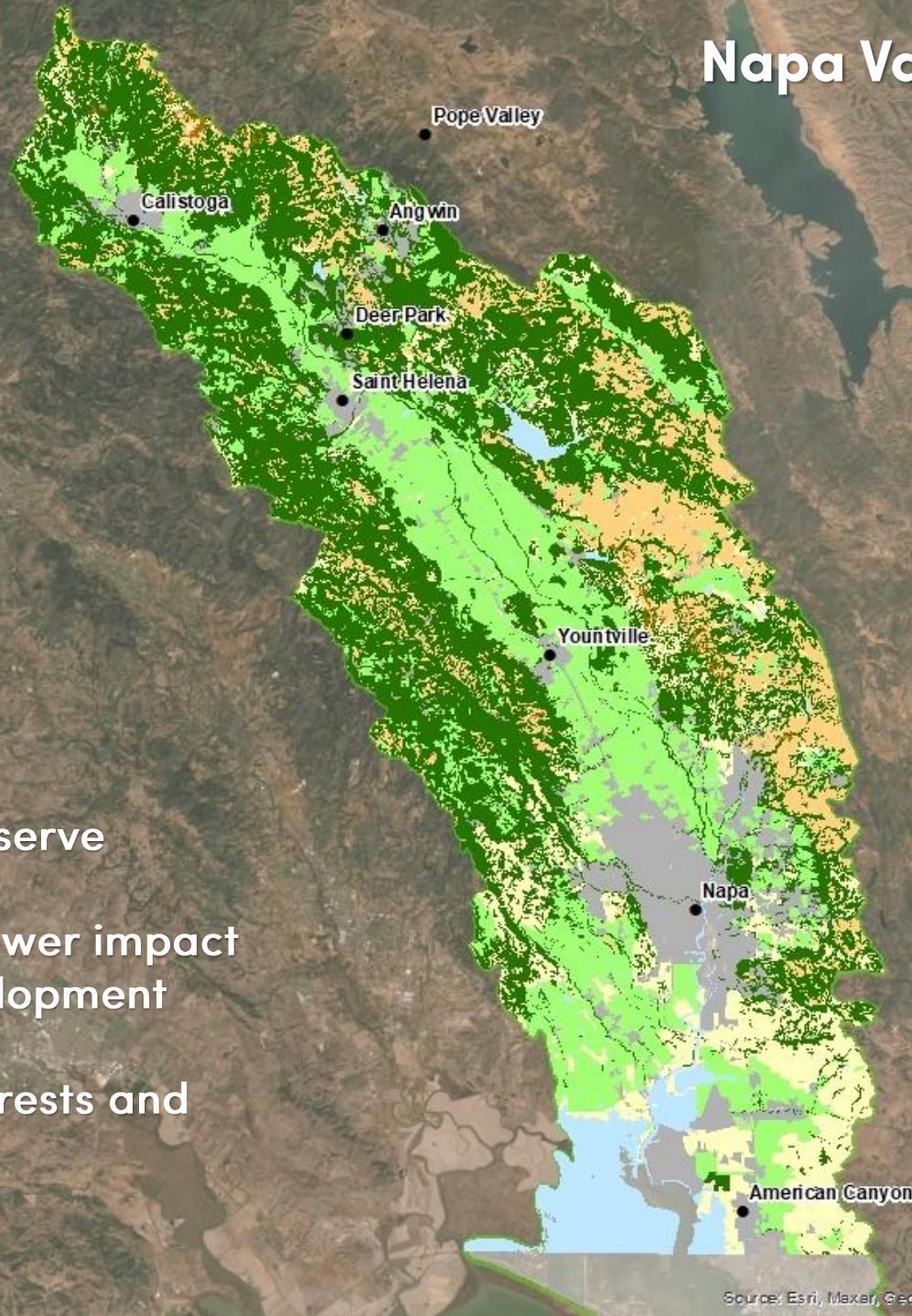
Streams of the Napa River Watershed

- 31 Named Tributaries
- Approx 719 miles of freshwater blue-line stream



Napa Valley Land Cover

- Agricultural Preserve
- Vineyards are lower impact than other development
- Intact upland forests and shrublands



Mill Creek



York Creek



Redwood Creek



Campbell Creek



Steelhead

Oncorhynchus mykiss



Steelhead

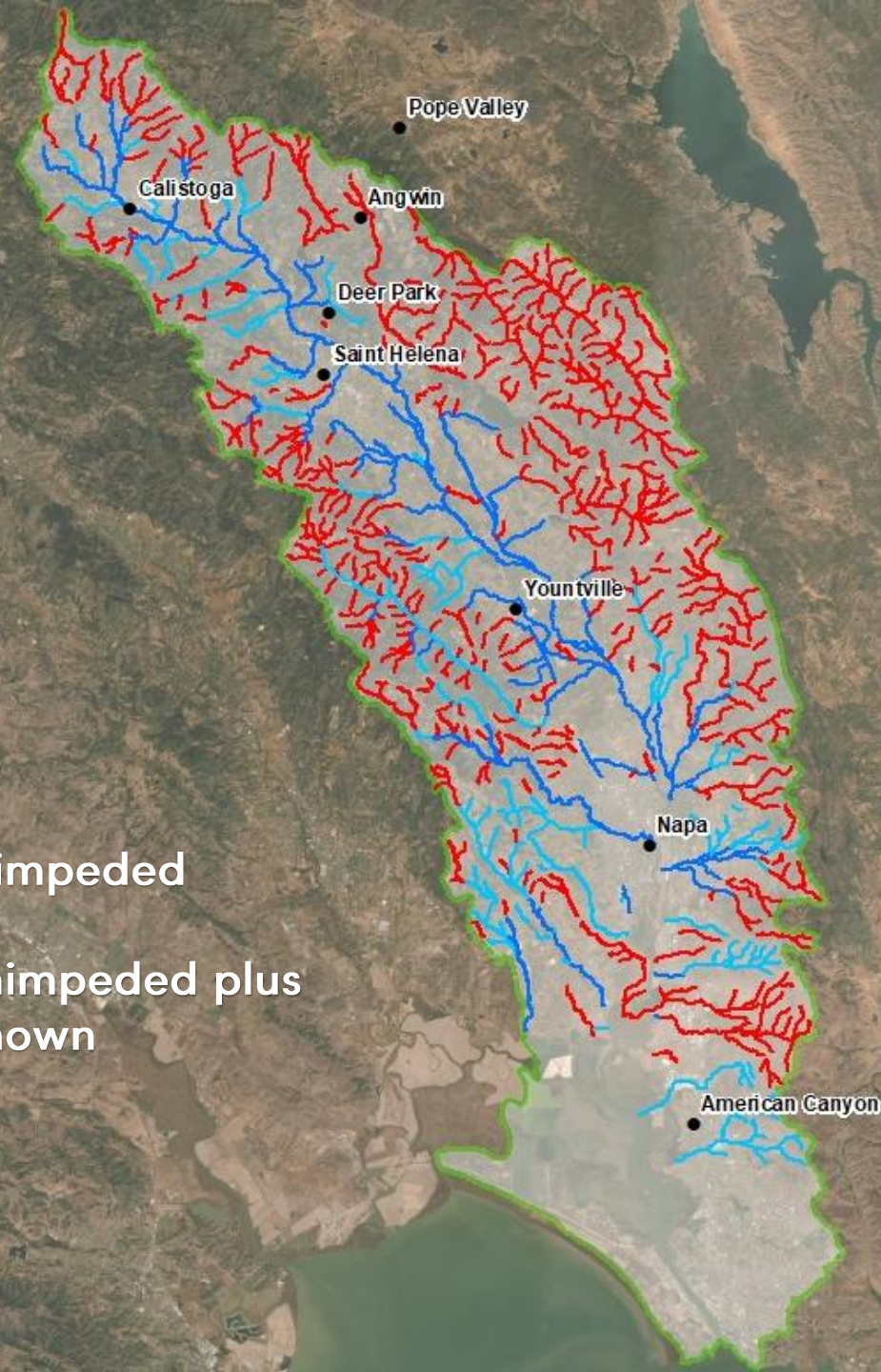
Oncorhynchus mykiss

- Listed as “Threatened” under the Federal Endangered Species Act
- Anadromous form of Rainbow Trout
- Young spend 1–4 years in freshwater



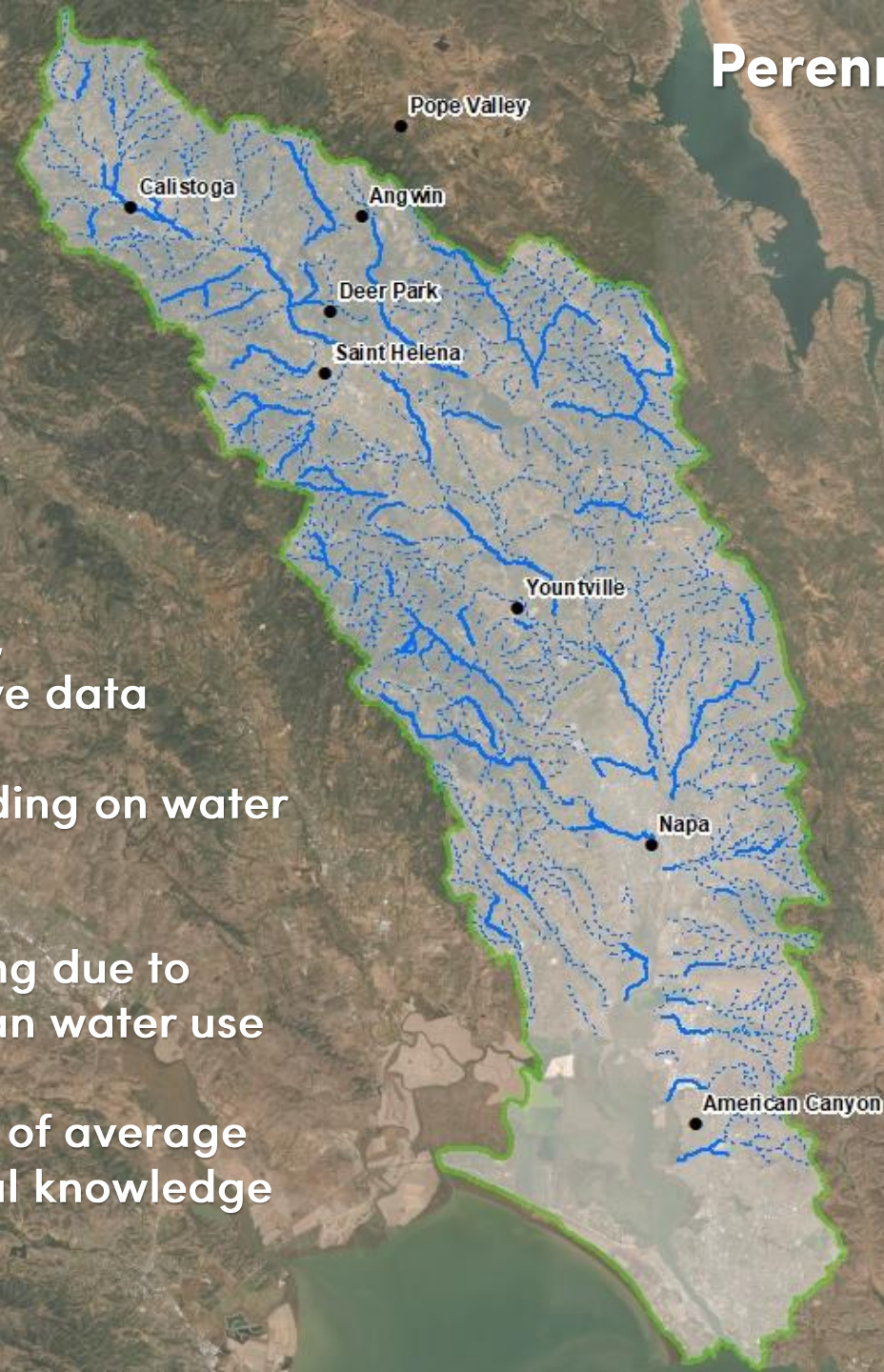
Fish Passage

- 158 miles unimpeded
- 300 miles unimpeded plus limited/unknown



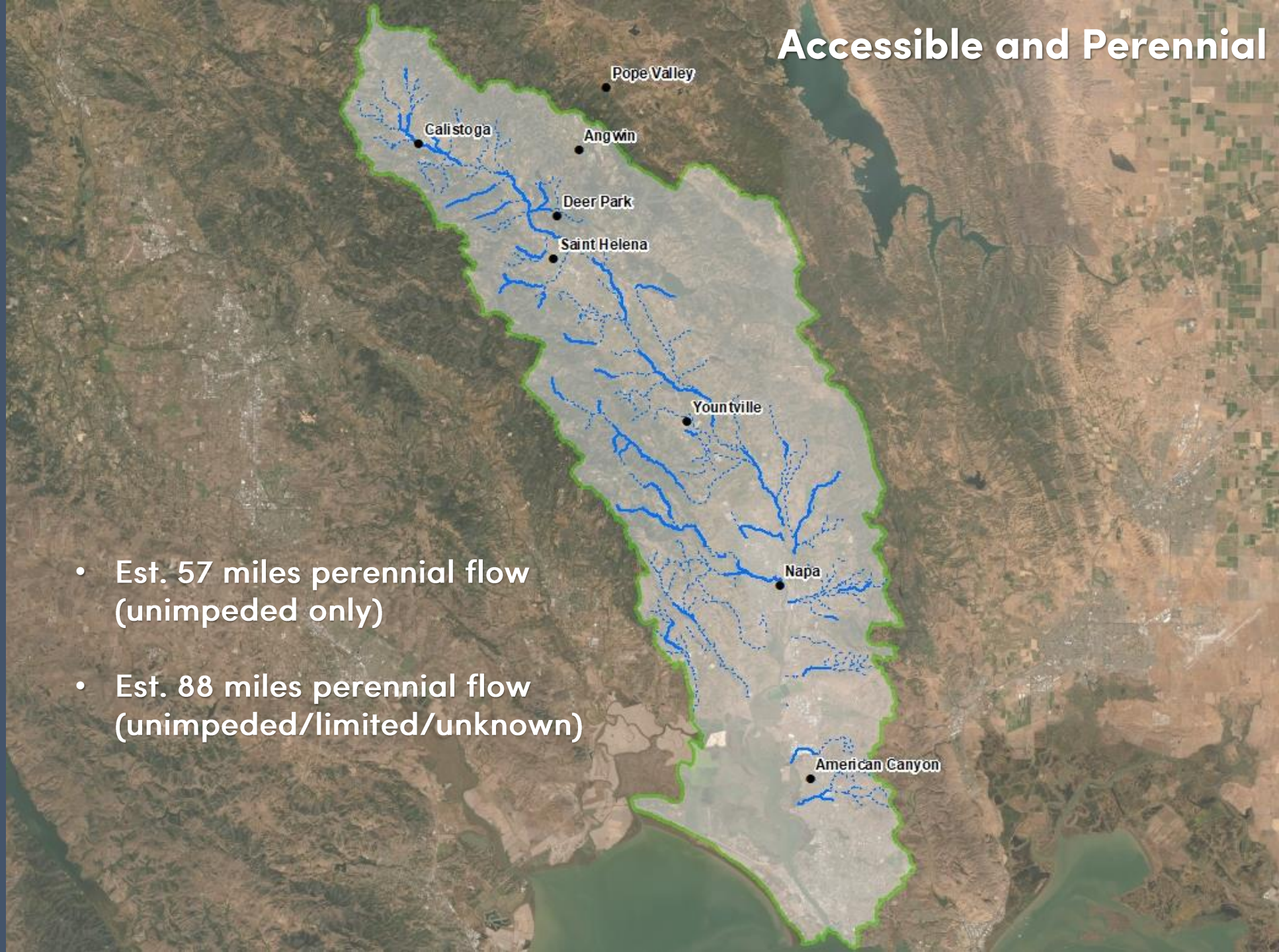
Perennial Streamflow

- No long-term, comprehensive data
- Varies depending on water year type
- Likely changing due to climate/human water use
- Best estimate of average based on local knowledge (151 miles)



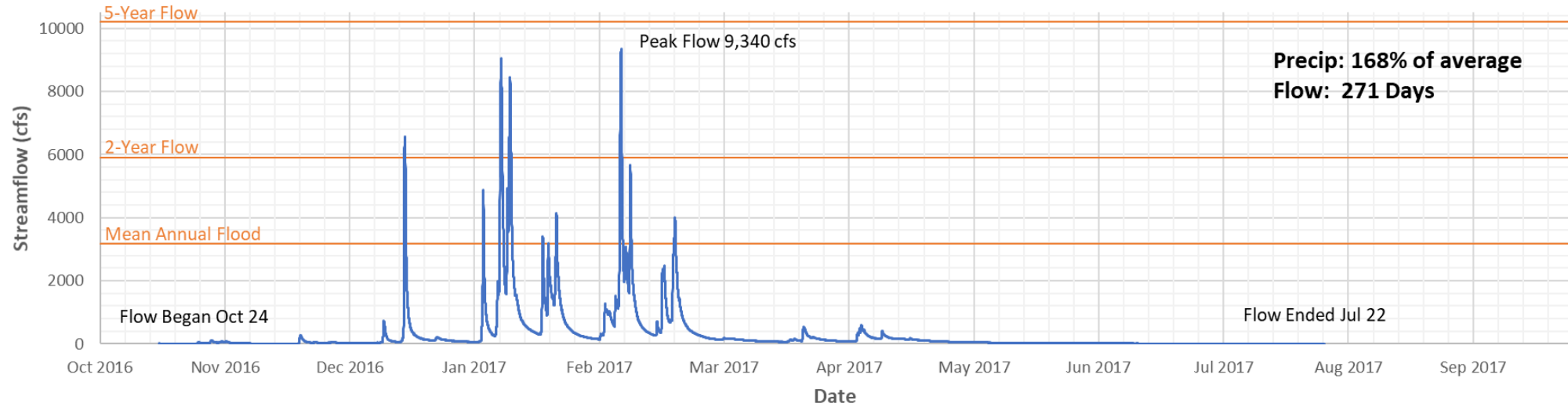
Accessible and Perennial

- Est. 57 miles perennial flow (unimpeded only)
- Est. 88 miles perennial flow (unimpeded/limited/unknown)

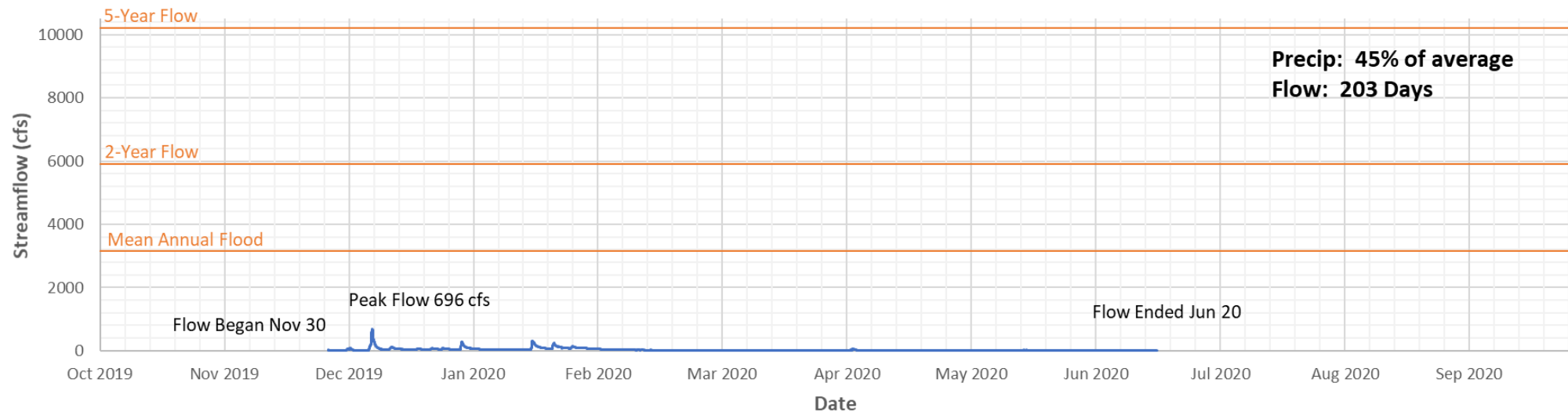


USGS Napa River Streamgaging Station Near Pope Street, St Helena

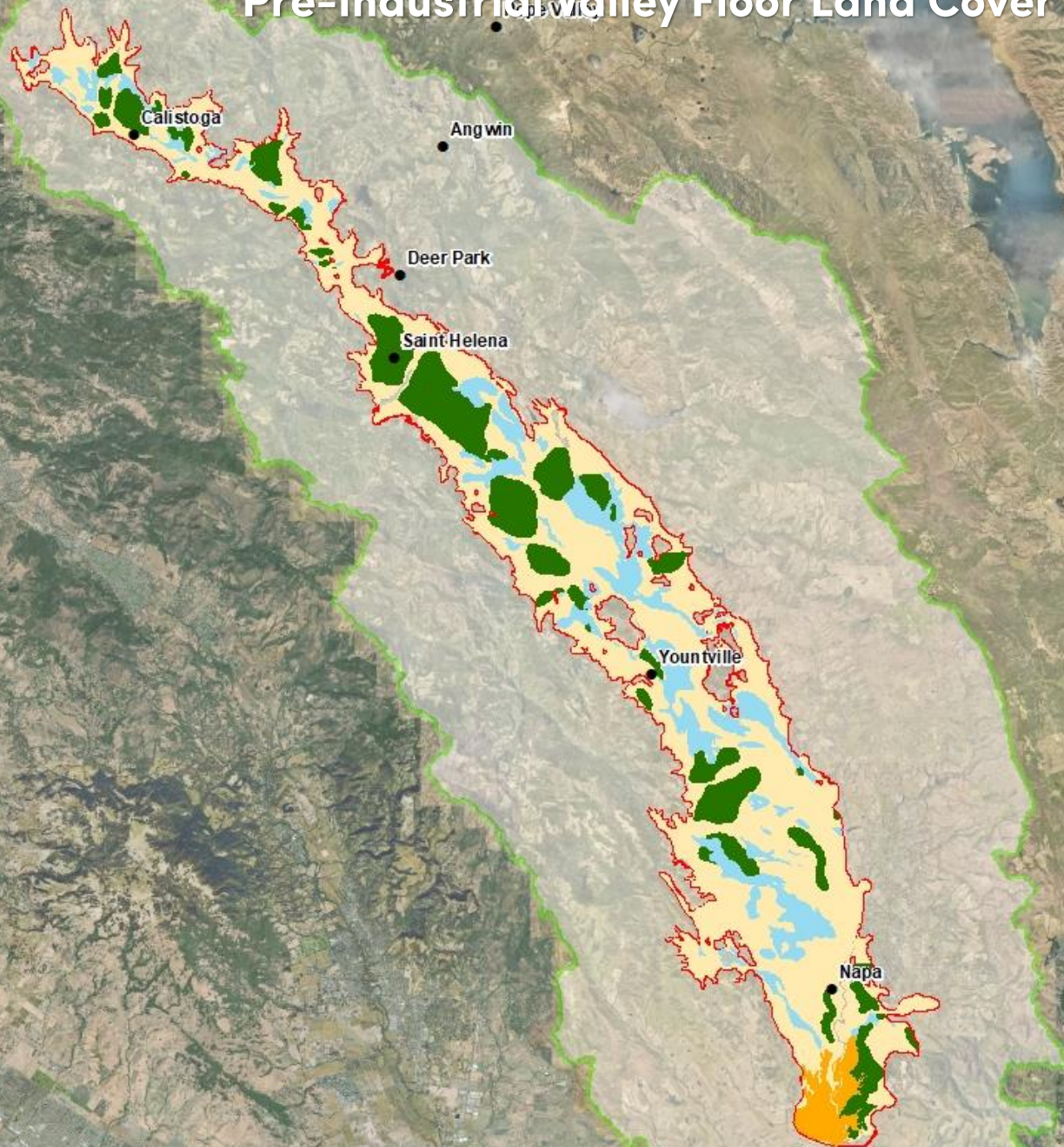
WY 2016-17



WY 2019-20

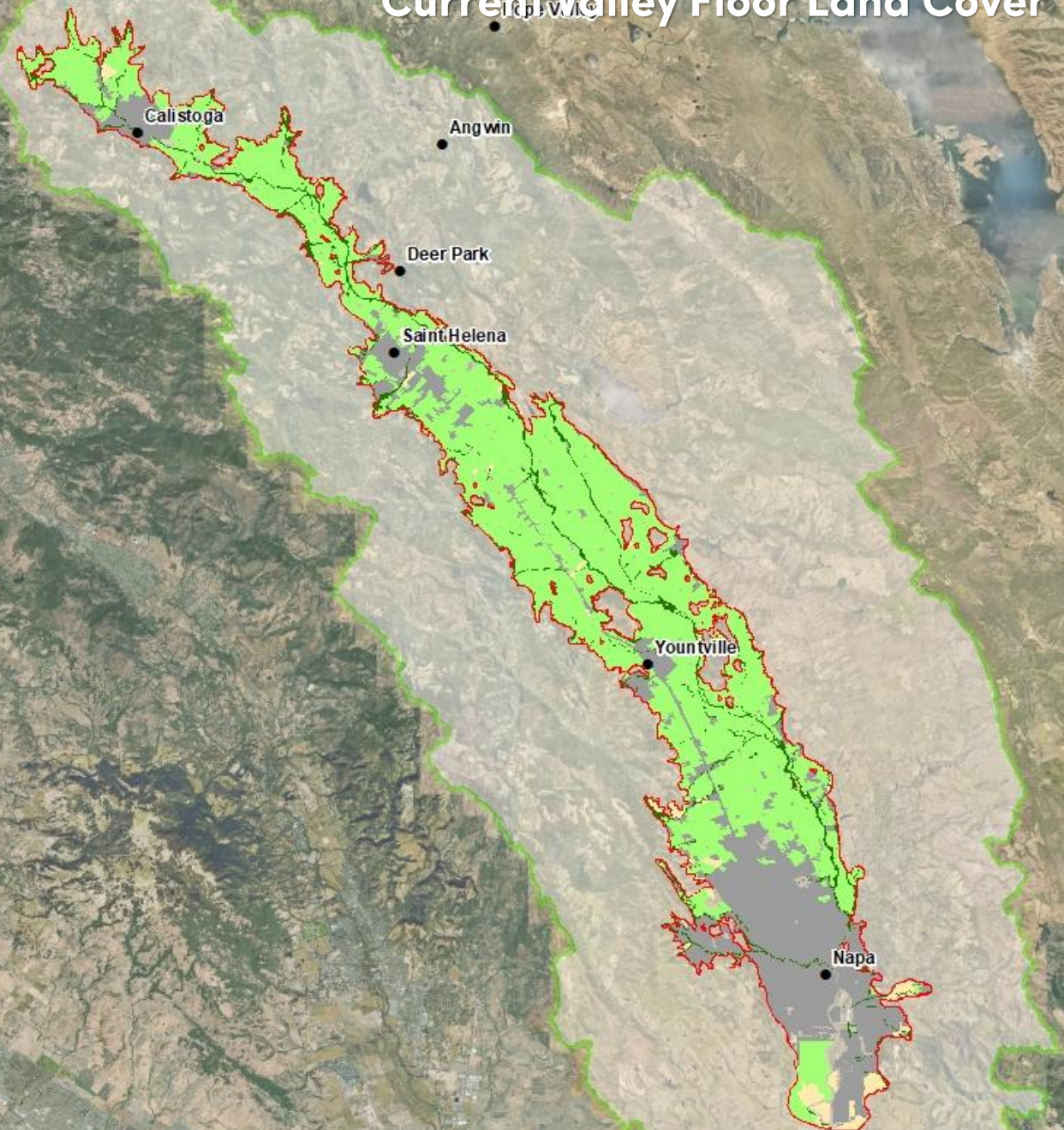


Pre-Industrial Valley Floor Land Cover



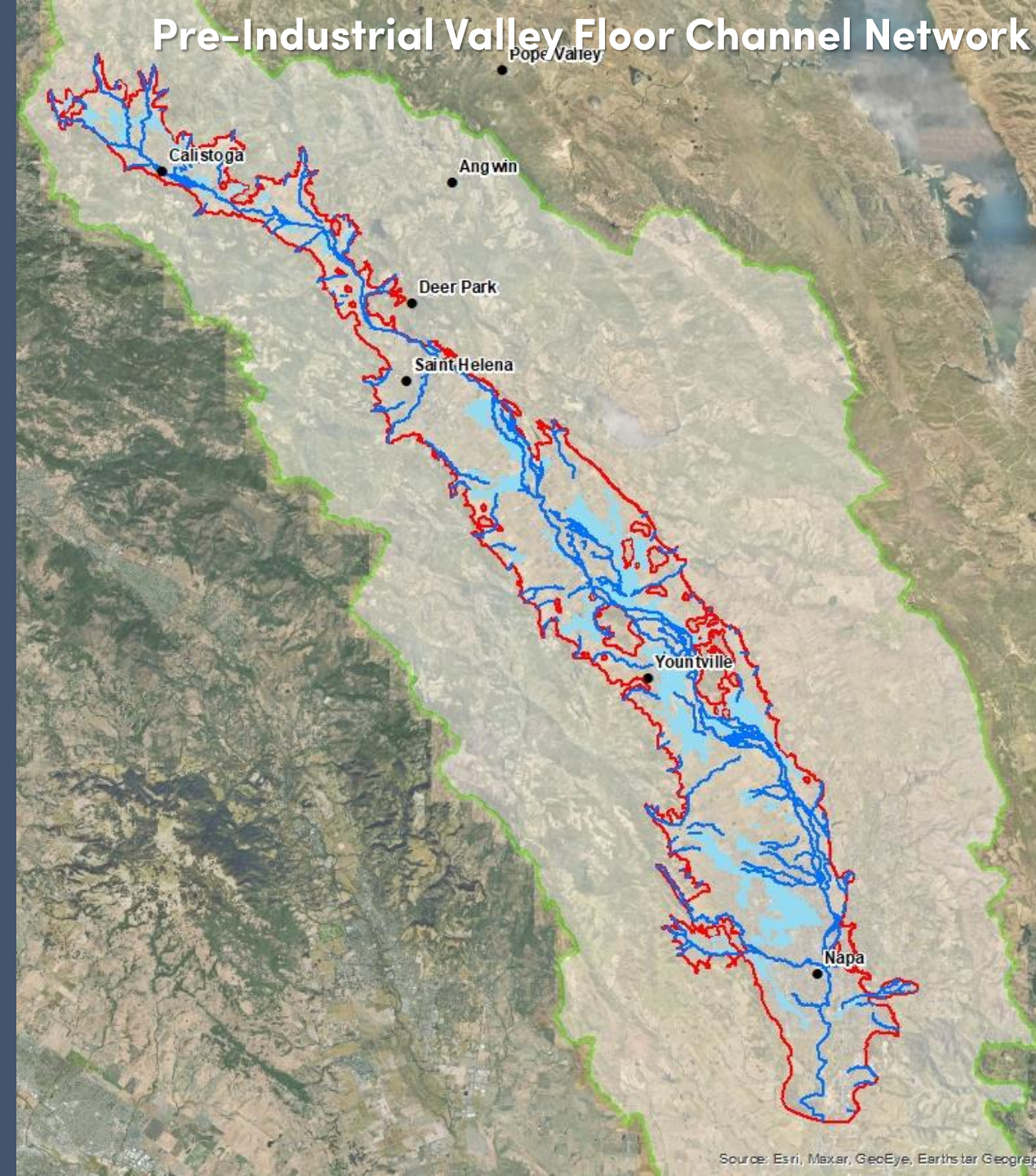
Source: Esri, Maxar, GeoEye, Earthstar Geograph

Current Valley Floor Land Cover



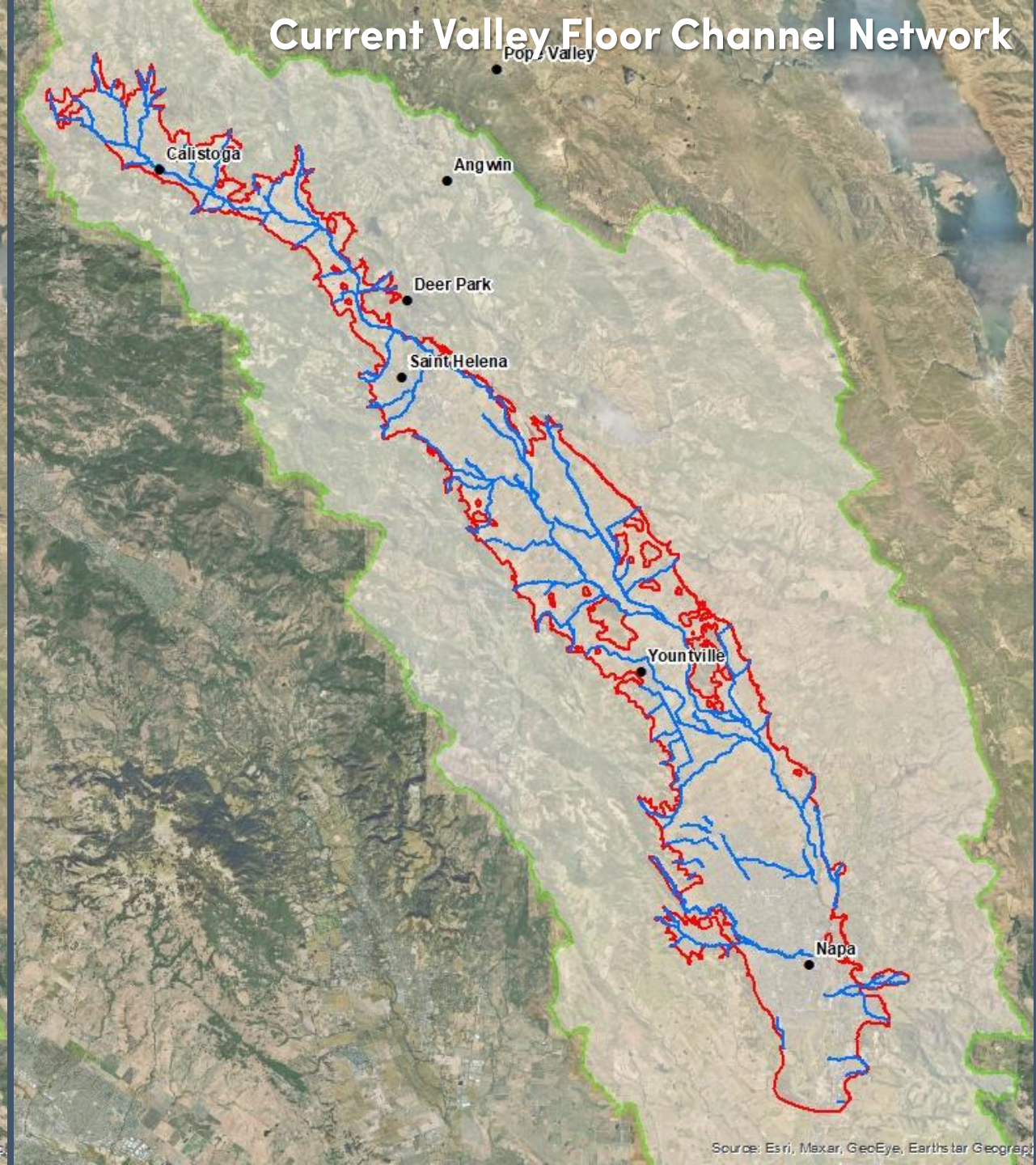
Source: Esri, Maxar, GeoEye, Earthstar Geograph

Pre-Industrial Valley Floor Channel Network



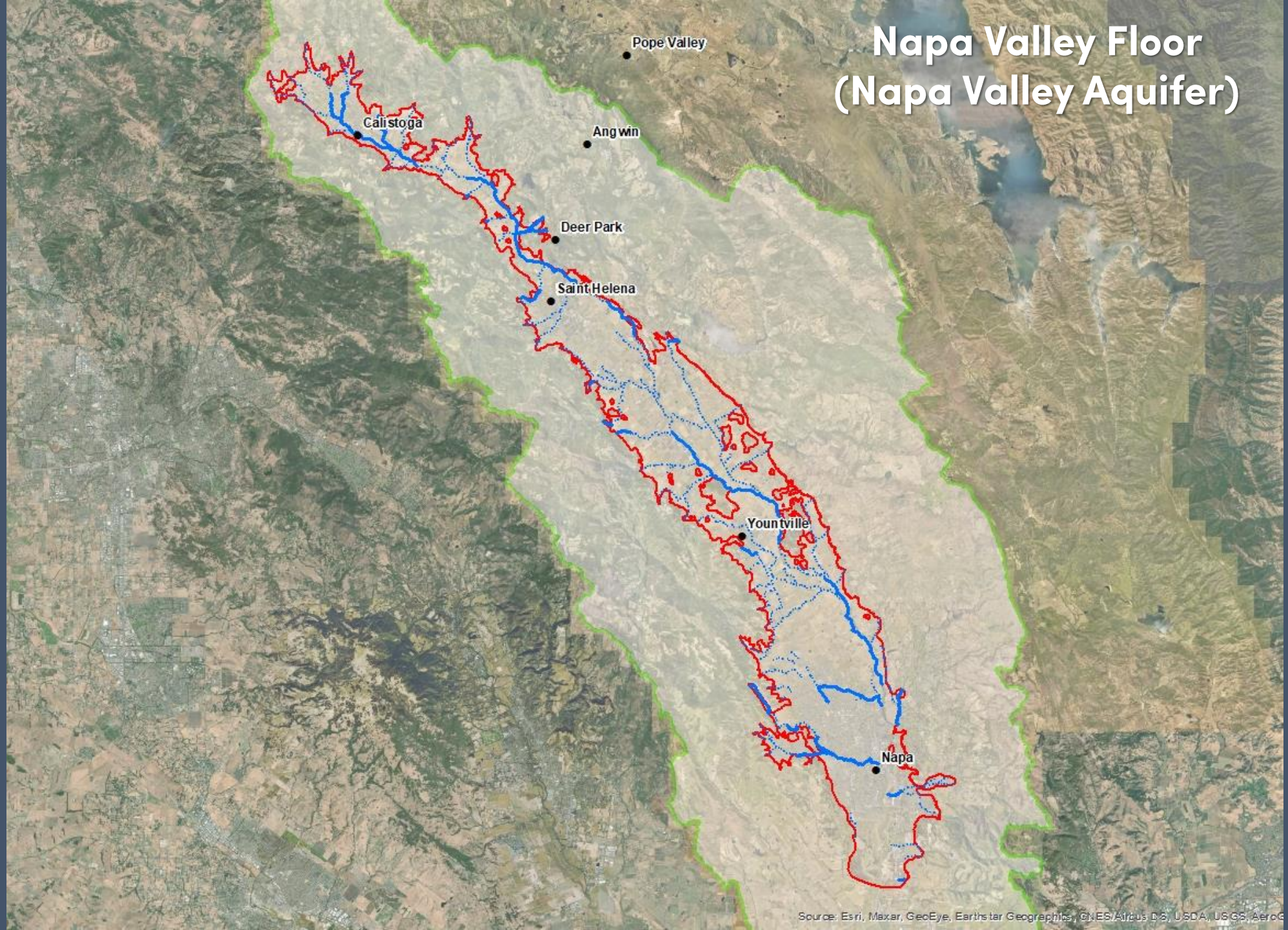
Source: Esri, Maxar, GeoEye, Earthstar Geograph

Current Valley Floor Channel Network

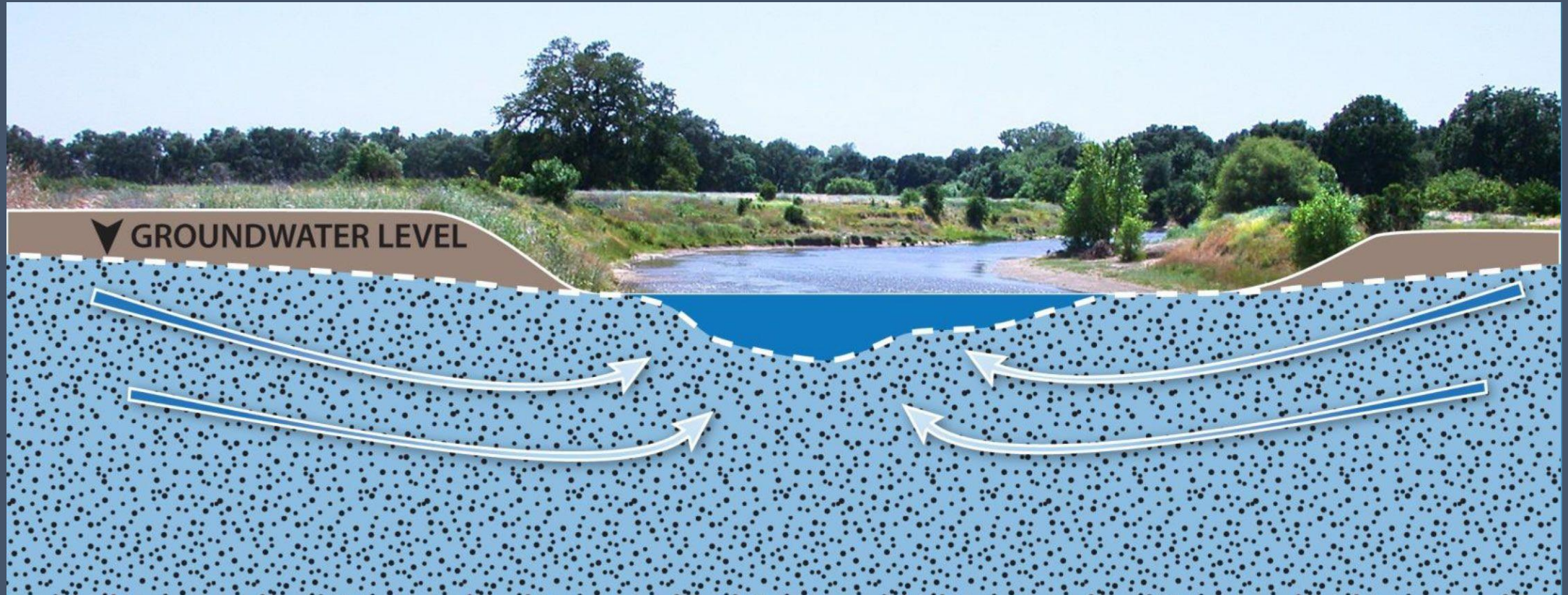


Source: Esri, Maxar, GeoEye, Earthstar Geograph

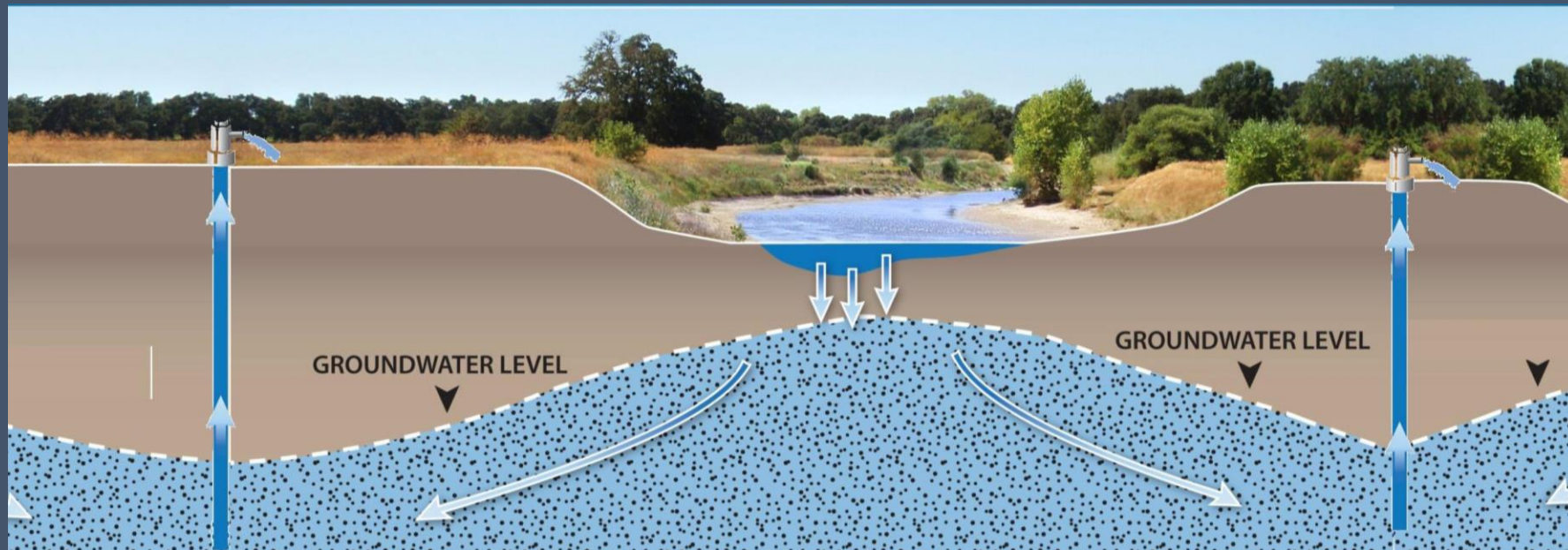
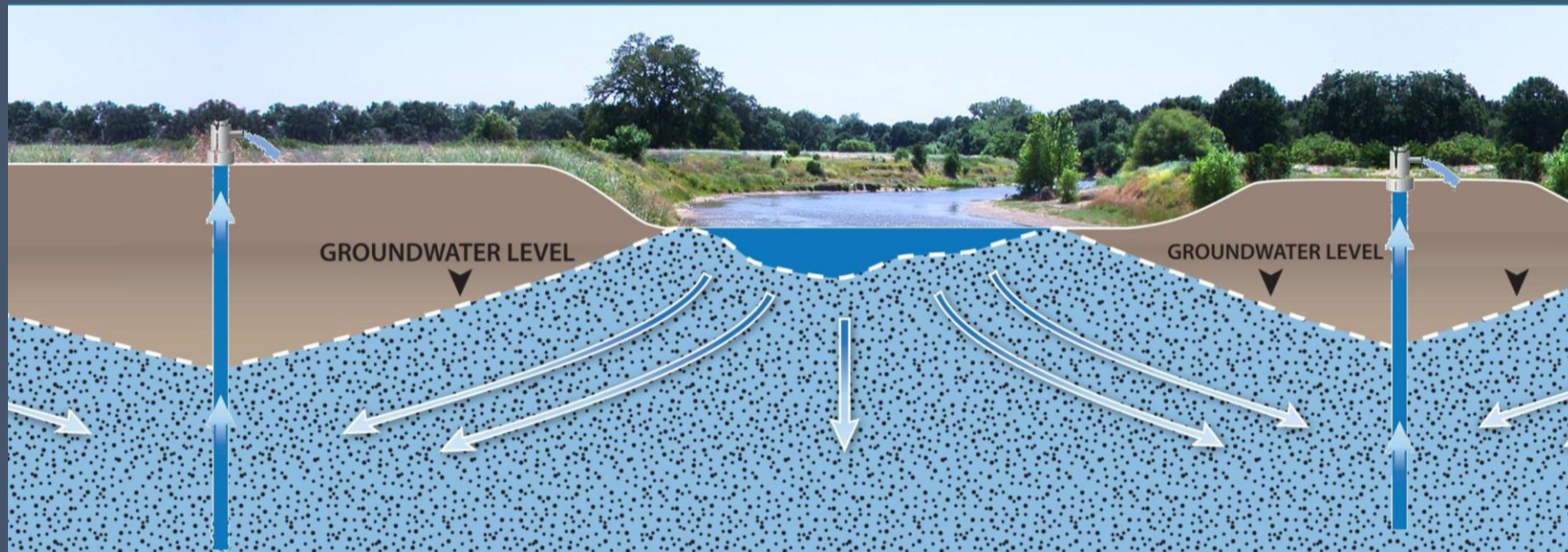
Napa Valley Floor (Napa Valley Aquifer)



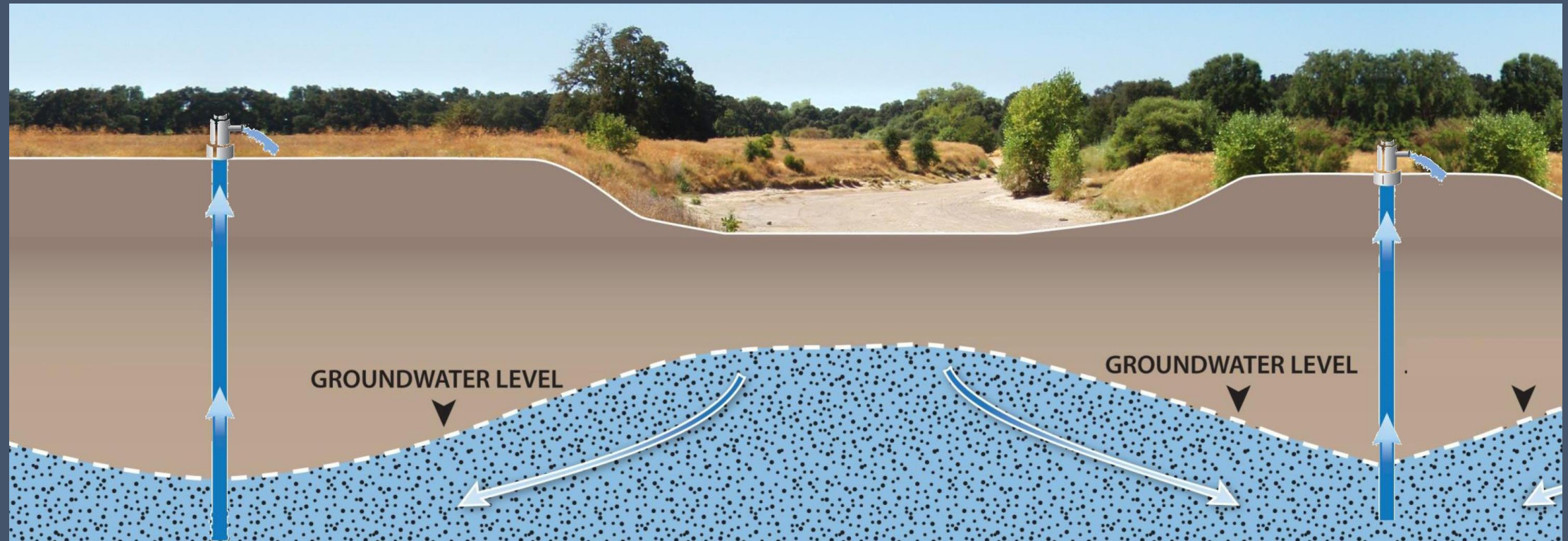
Gaining Stream



Losing Streams



Dry Stream



Ritchey Creek



Tulucay Creek



Bale Slough



York Creek



Camille Creek



Napa River



Sustainable Groundwater Management

Groundwater Dependent Ecosystems (GDEs)

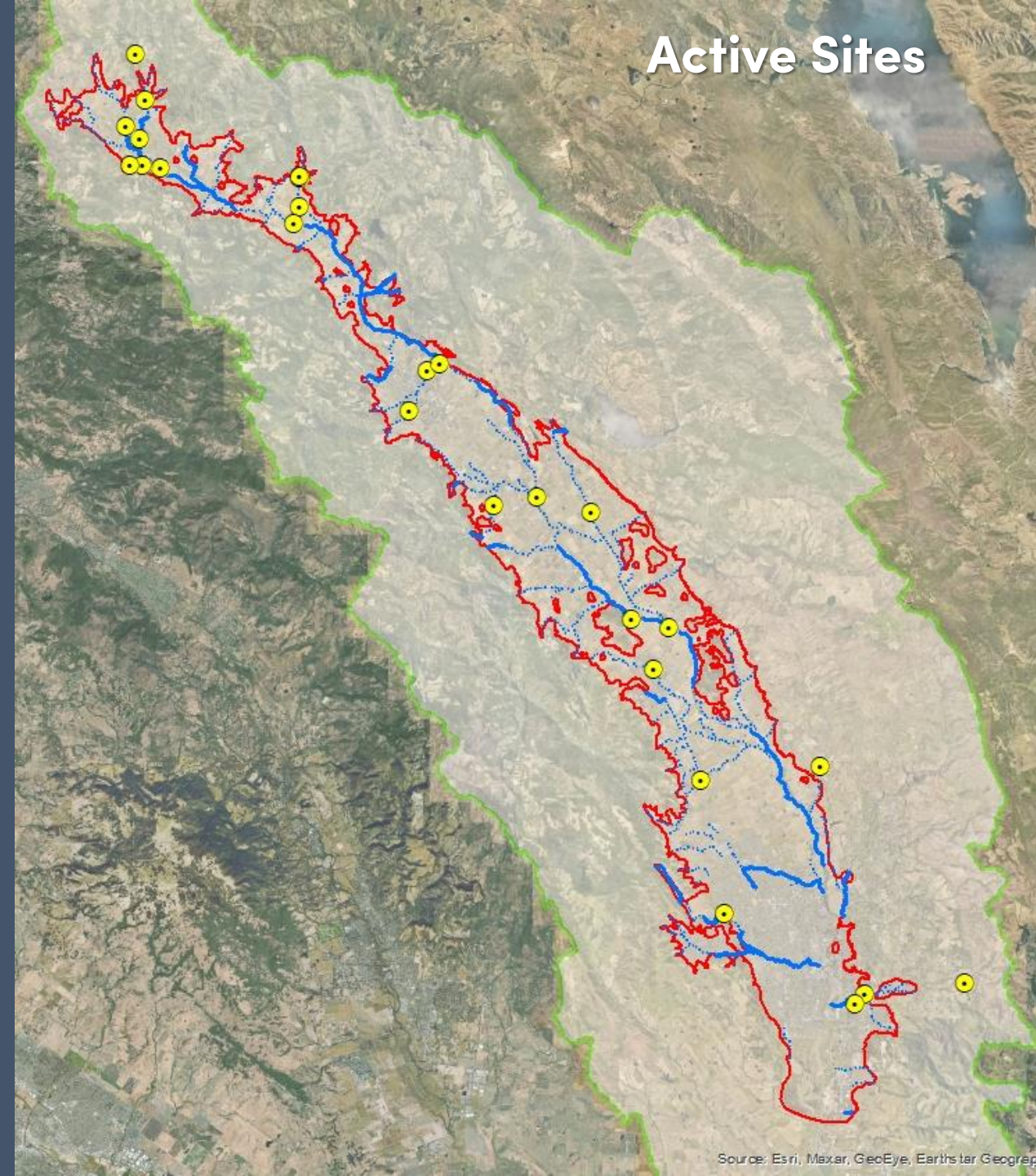
Yountville



So what do we want to do about all this?

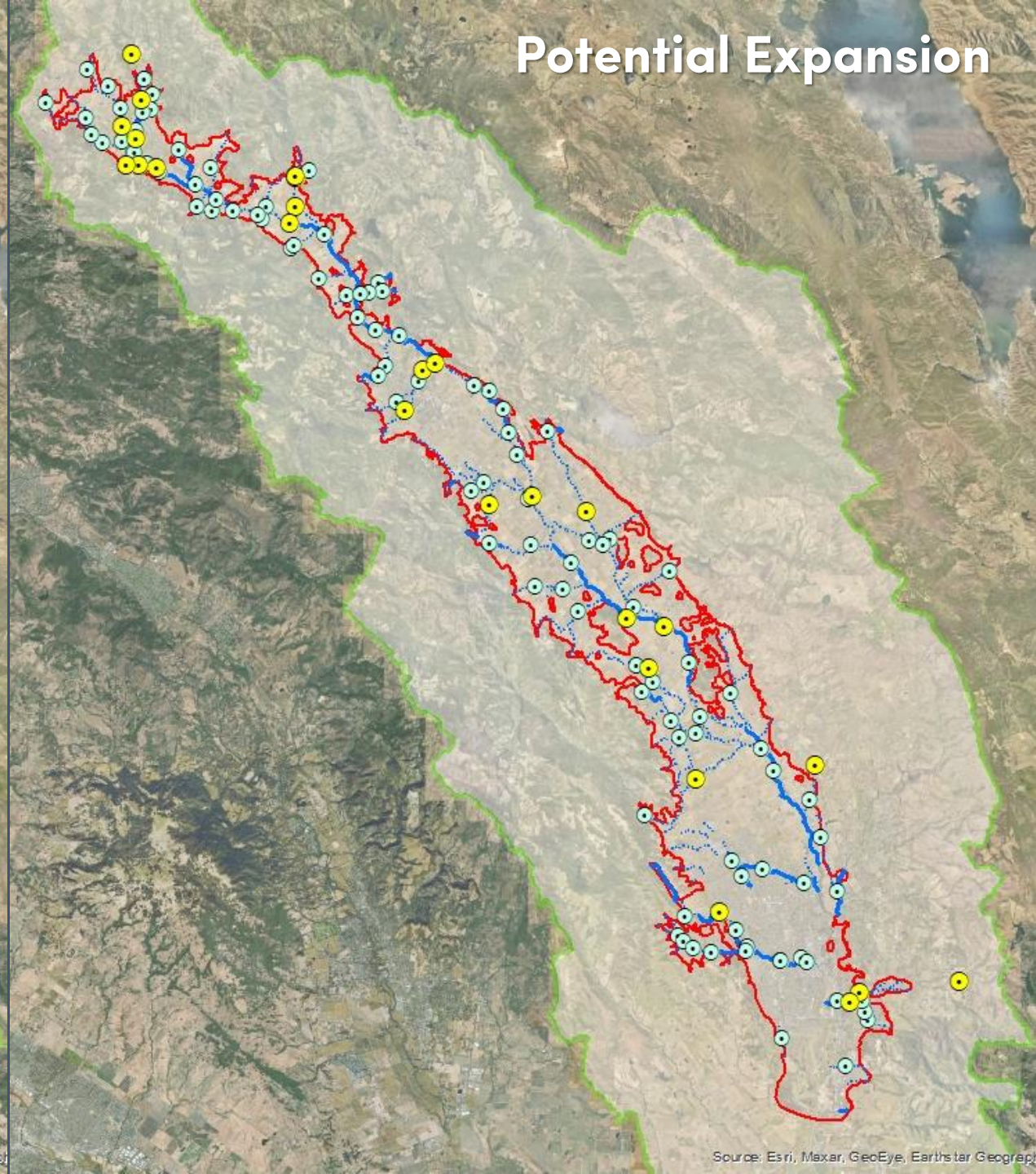
Go out and look at the streams.

Active Sites



Source: Esri, Maxar, GeoEye, Earthstar Geograph

Potential Expansion



Source: Esri, Maxar, GeoEye, Earthstar Geograph

Dry



Isolated Pools



Flowing



Contribute a stream observation

How to use this form



Your Location (required)

1. Napa River at Yountville Eco-Reserve

Upload your photo (required)

Choose File

No file chosen

Your Name (required)

Email (optional)

Organization or School (optional)

Trash Level (required) [See examples](#)

Not Littered

Slightly Littered

Littered

Very Littered

Water Level (required) [See examples](#)

High

Low

Separated Pools

Dry

Flow Rate (required) [See examples](#)

Dry

Separated Pools

Flowing - Still

Flowing - Slow

Flowing - Fast

Additional Observations (optional)

Characters left: 200

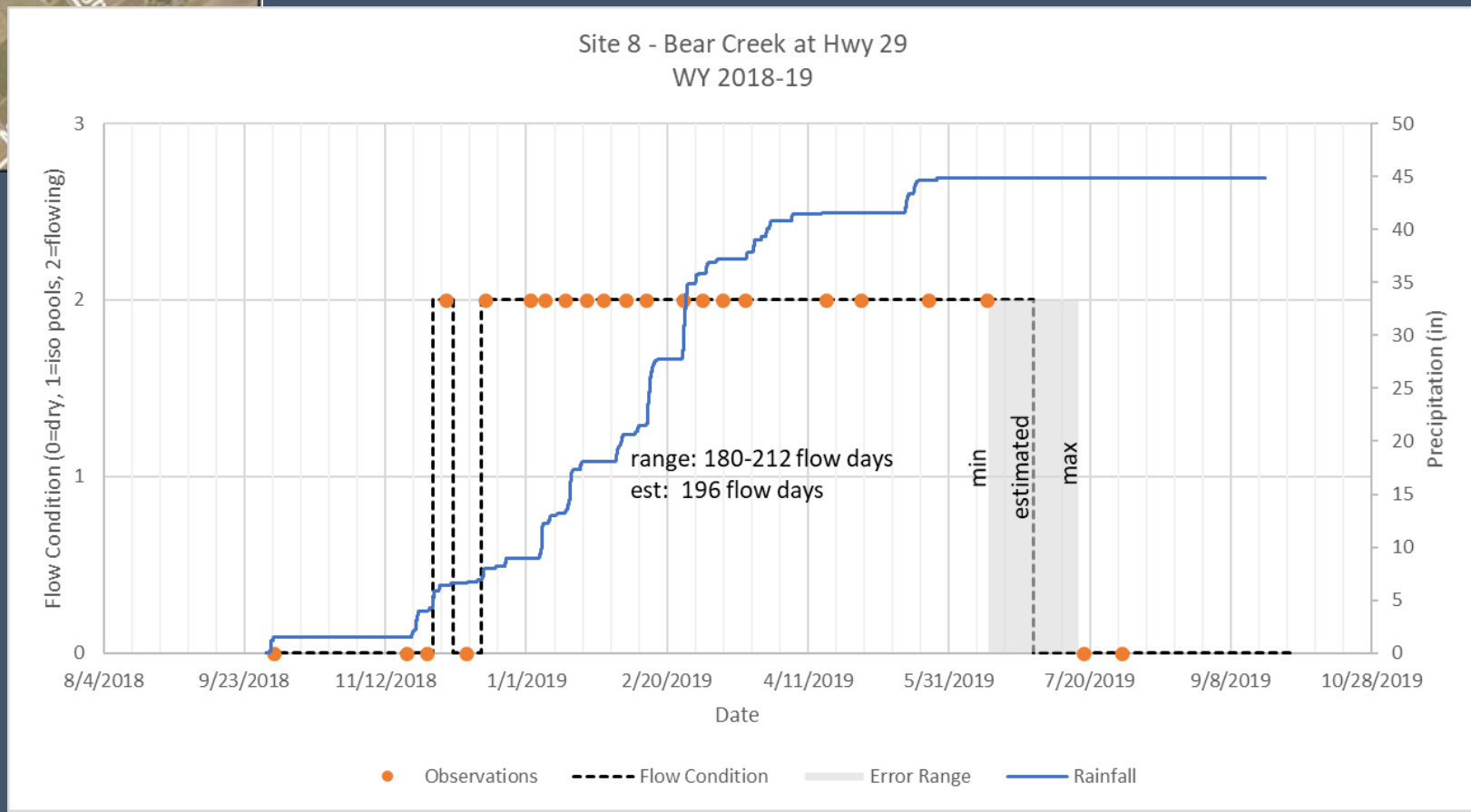
☐ I'm not a robot

reCAPTCHA
Privacy - Terms

Upload

Cancel

- Web-based data collection tool already in development by WICC and available for use
- Volunteers can collect data and photos with their own smartphones or tablets
- Development may continue to include an app and data presentation features



Benefits

- Will identify priority steelhead summer rearing habitat
- Will identify priority reaches for further study/restoration
- Will engage the community in local watershed science
- Will assist with SGMA compliance by providing cost-effective monitoring of GDEs

Challenges

- Funding
- Safety at Observation Sites
- Privately-owned reaches
- Web tool is not as easy as a smartphone app, and does not work at all sites

More Information:

naparcd.org

napawatersheds.org

Thanks to:

- Napa County Watershed Information & Conservation Council (WICC)
- Friends of the Napa River (FONR)
- Napa County Wildlife Conservation Commission (WCC)

