



Solano
Regional GIS
Consortium



Water Data Update

DEPARTMENT OF INFORMATION
TECHNOLOGY, SOLANO COUNTY

The State of Water Data

January 2022 – Groundwater Sustainability Agencies (GSAs) in the Solano Sub basin finalized Groundwater Sustainability Plan (GSP).

- Requires accurate understanding of groundwater and surface water.

Wells data is critically deficient

Lack of Countywide comprehensive data on water flow over land

Lack of Countywide comprehensive data on underground pipes for water flow

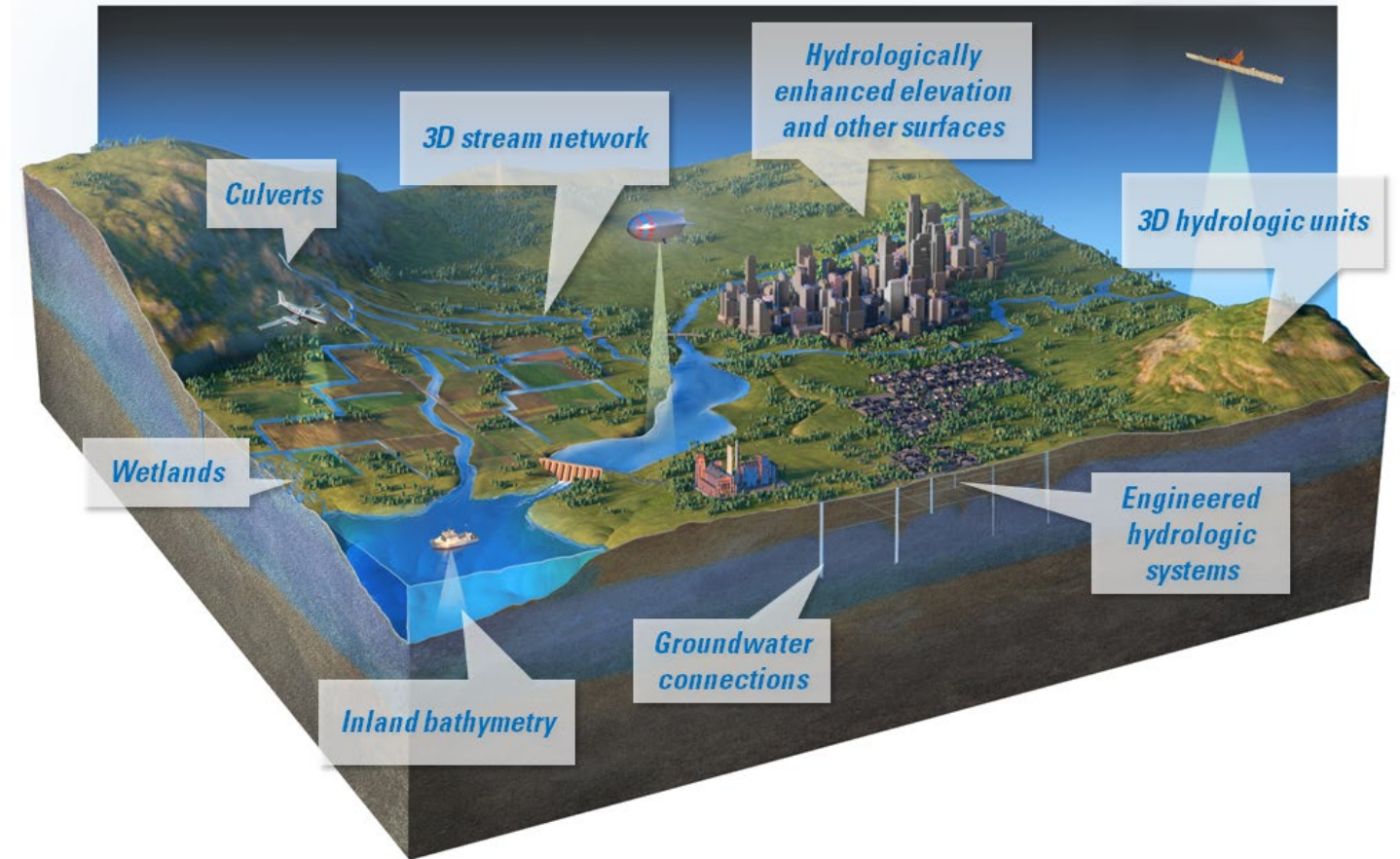
Irrigation channel data not consistent countywide

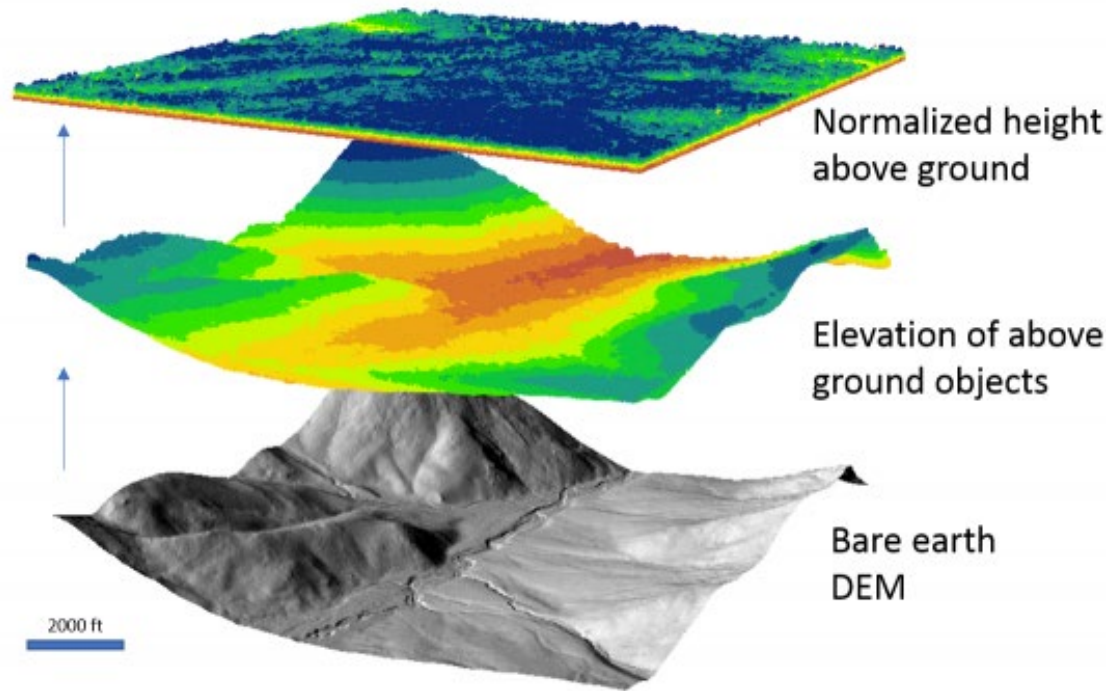
Existing hydrography only from Federal sources

Hydrography Solution

USGS 3-Dimensional Hydrography
Program (3DHP)

<https://www.usgs.gov/3d-hydrography-program>



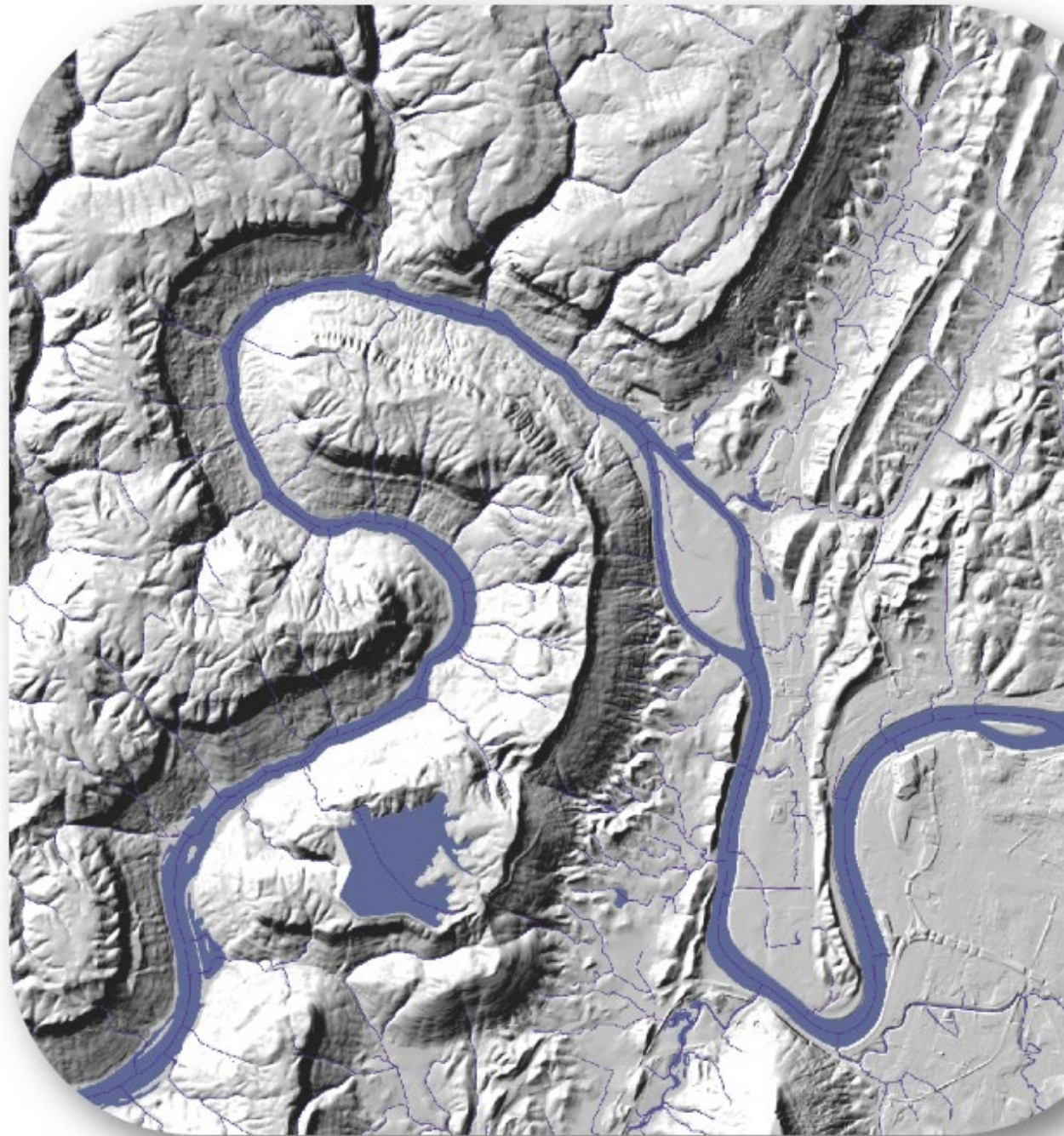


2017/2018 Merged QL2

2023 QL1

It starts with Lidar

THE DIGITAL ELEVATION MODEL (DEM) SHOWS THE CONTOURS AND SHAPE OF THE LAND.



Just add water...

And (more) data...

Hydrography Solution

Using LIDAR data and stormwater data.

Building a hydrography model.

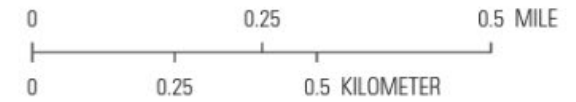
Working with partners.

Improve on data and capacity from there.

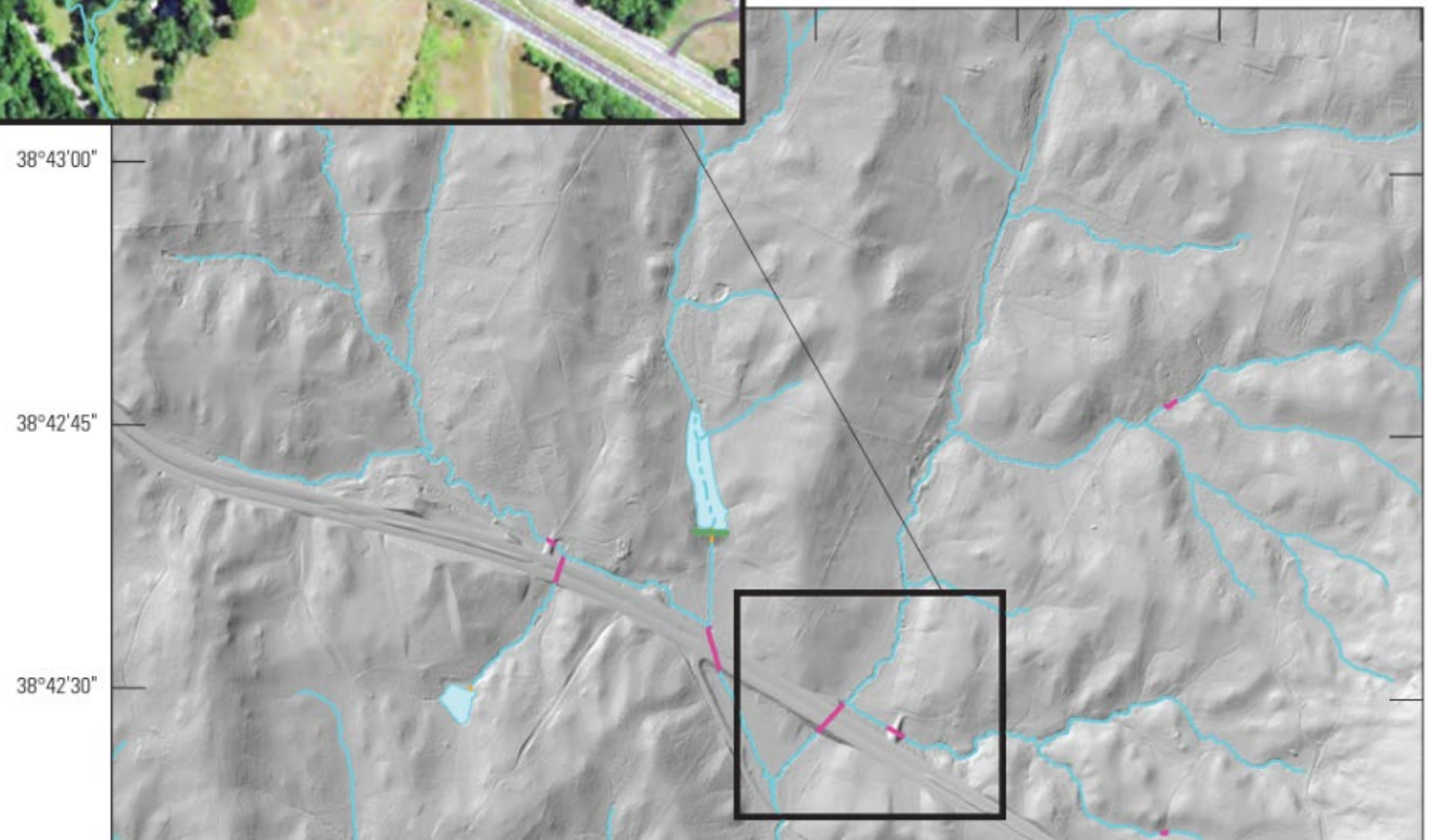


EXPLANATION

	Lake/pond		Stream/river—Culvert
	Artificial path		Connector
	Stream/river		Dam/weir



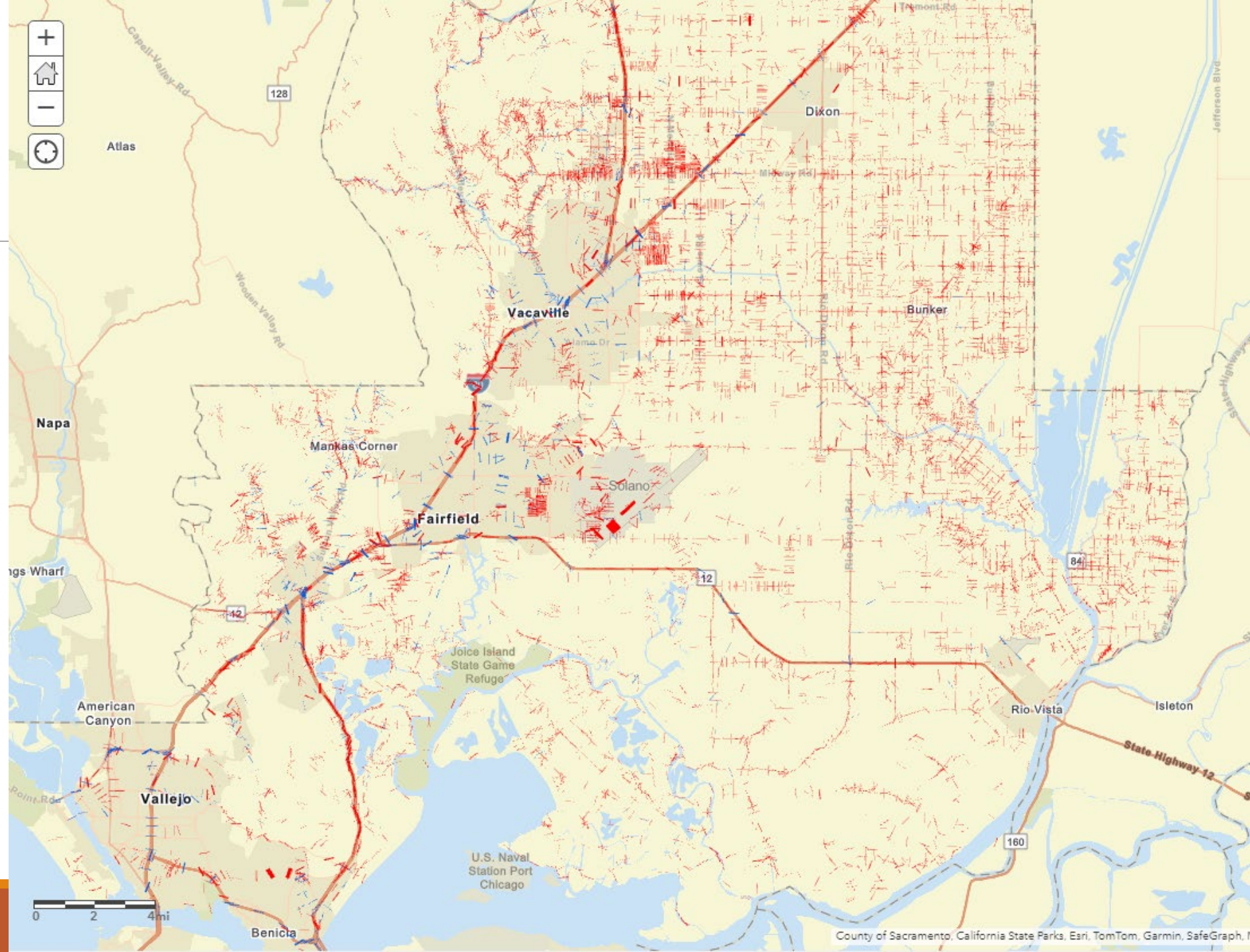
78°02'45" 78°02'30" 78°02'15" 78°02'00"



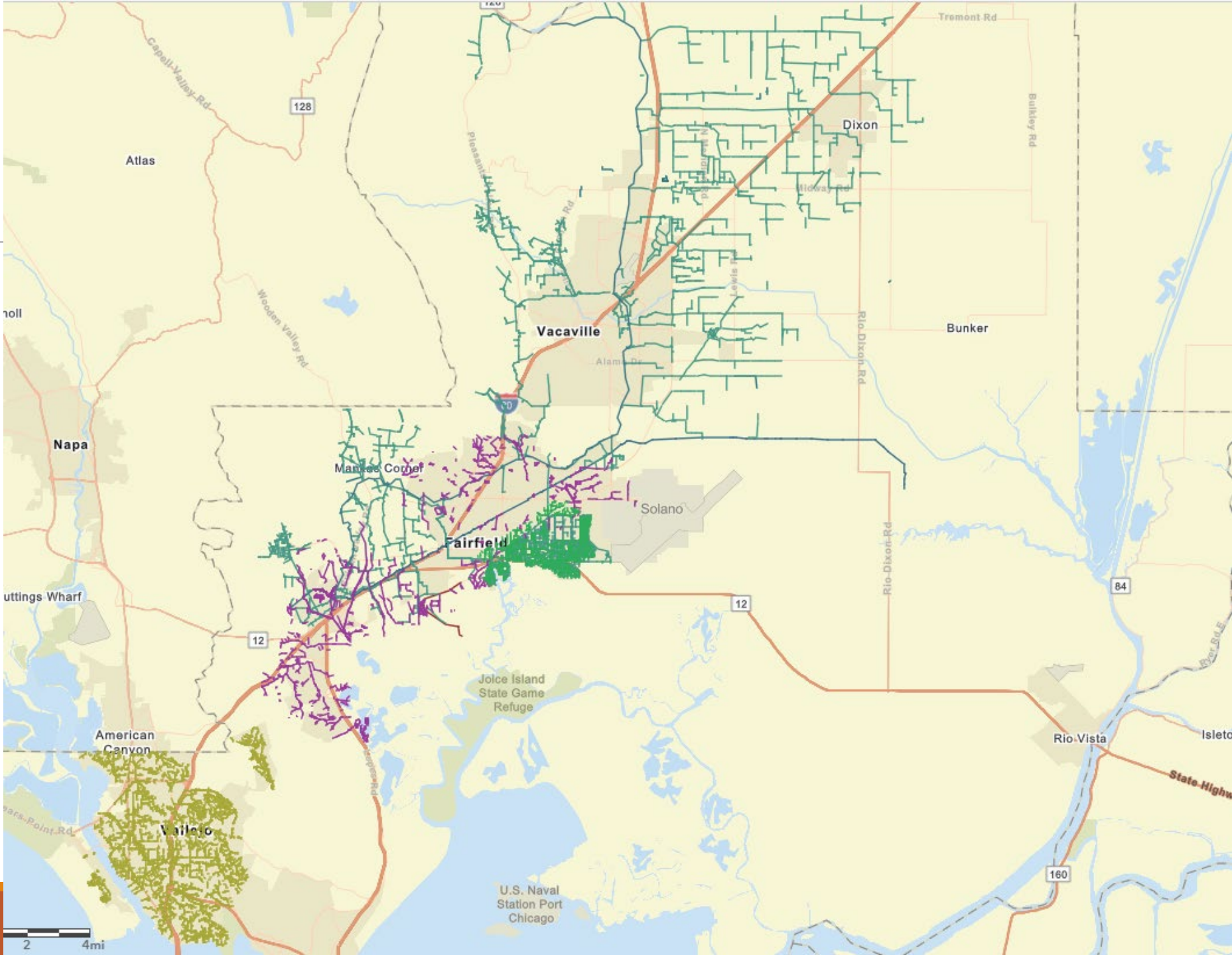
Culverts and Bridges

10,396 culverts

1,222 bridges



Stormwater and Irrigation



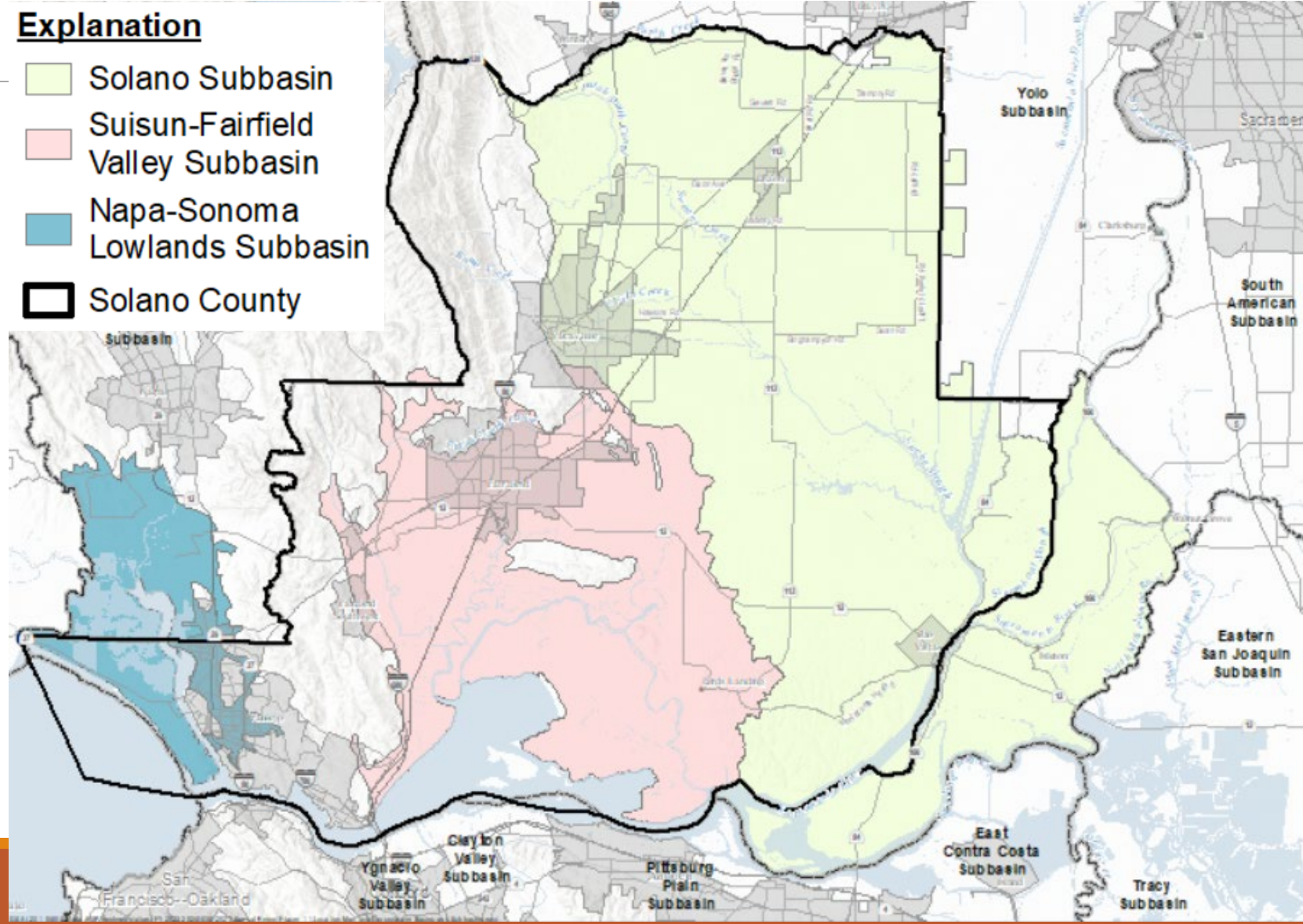
Solano Subbasin GSP Implementation

Subbasin awarded GSP implementation grant

Focus on data gaps, projects and management actions, and SGMA compliance

Includes tasks to inventory SW diversions and wells in Subbasin

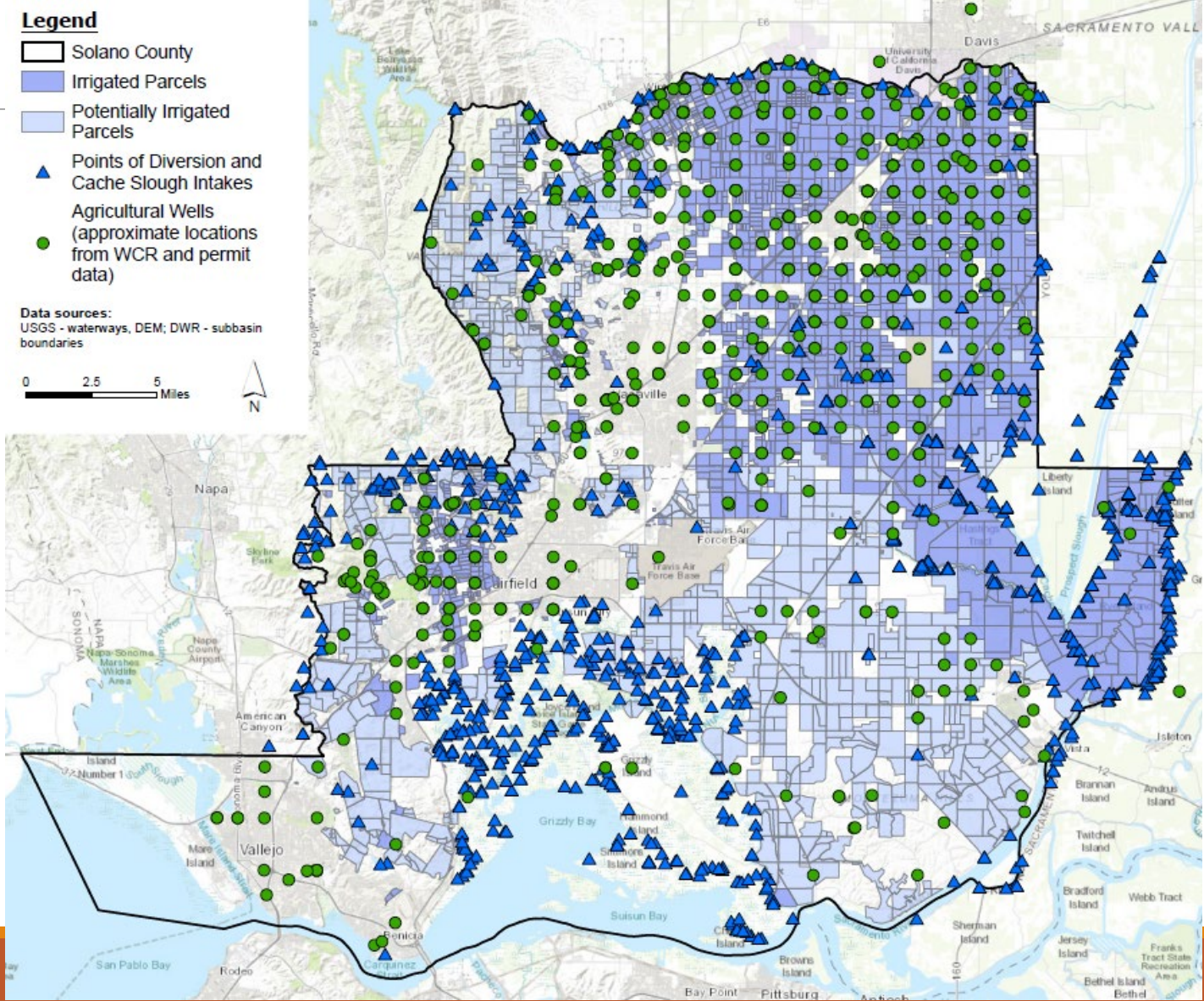
Solano Subbasin overlaps parts of Solano and Sacramento Counties



Water Wells/Surface Intakes

Conducted engineering study into status of water wells/surface intakes.

Study completed by Luhdorff & Scalmanini – Consulting Engineers

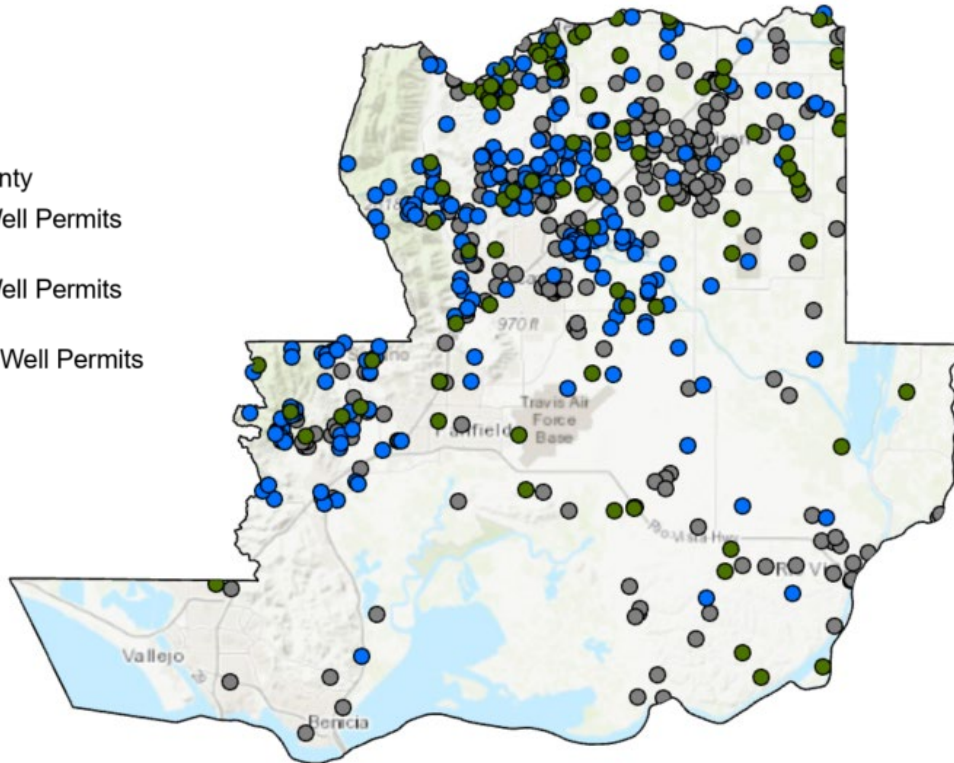


Well Permit Processing



Legend

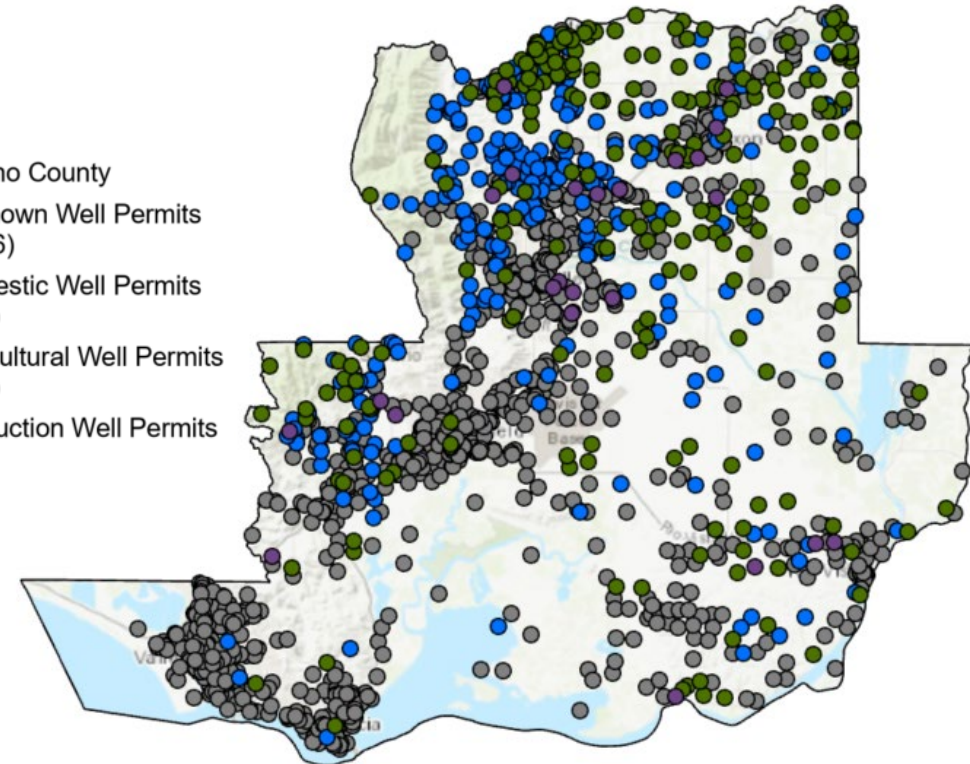
- Solano County
- Unknown Well Permits (254)
- Domestic Well Permits (211)
- Agricultural Well Permits (84)



Initial Permit Database

Legend

- Solano County
- Unknown Well Permits (1796)
- Domestic Well Permits (327)
- Agricultural Well Permits (272)
- Production Well Permits (29)

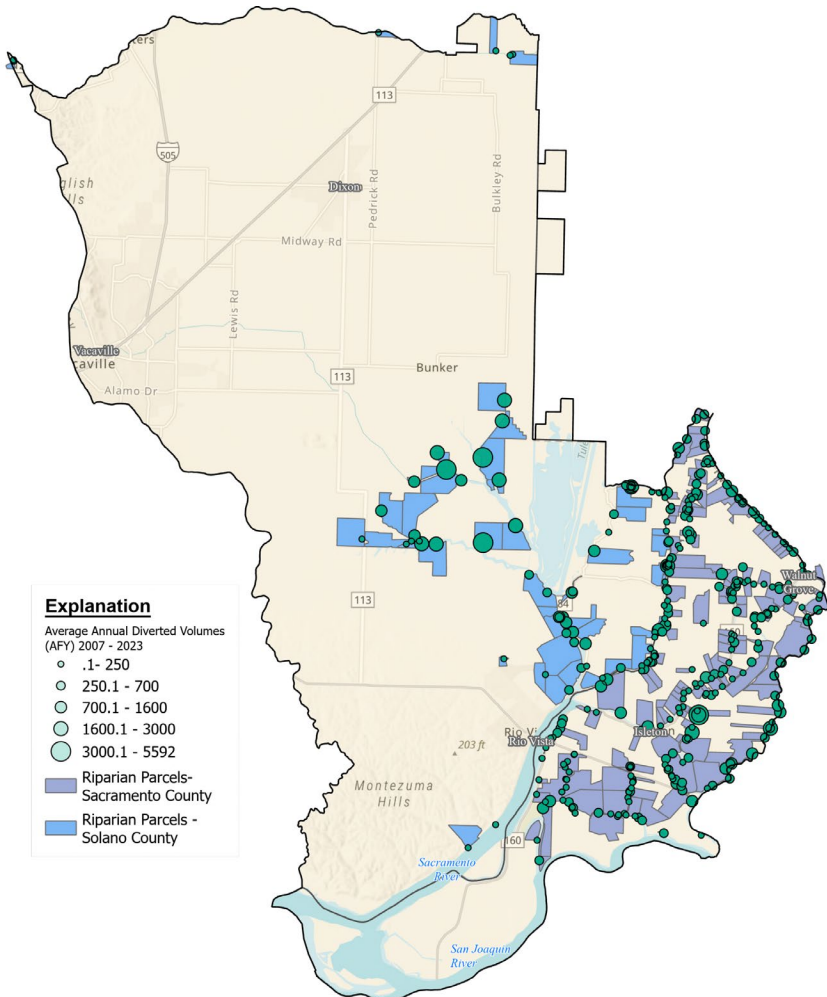


Updated Permit Database

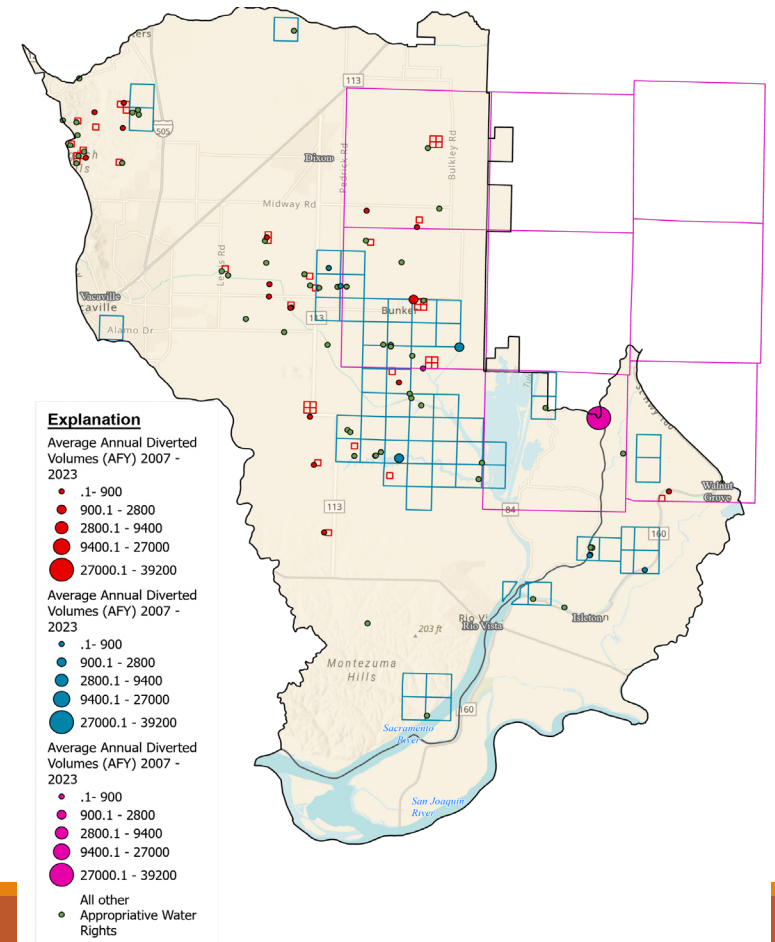
Ongoing Diversion Processing- Place of Use

- Riparian Rights Place of Use
 - Adjacent Parcel

- Appropriative Rights Place of Use
 - Compiled from eWRIMs documents
 - Varying levels of detail



Water Right Type	Number of Application	Number mapped to POUs	
Appropriative	54	Township	3
		Section	20
		QQ-Section	29
Riparian	432	Parcel	432



Removed urban deliveries (State Water Project; City of Vallejo; Sites Project – pending application)