

Groundwater Monitoring Implementation Project

Monitoring Well Site Selection

Joe Zilles, PG, C-57
September 10, 2025



**EASTERN SAN JOAQUIN
GROUNDWATER AUTHORITY**



**Managing Resources Today
for a Thriving Tomorrow**

Agenda

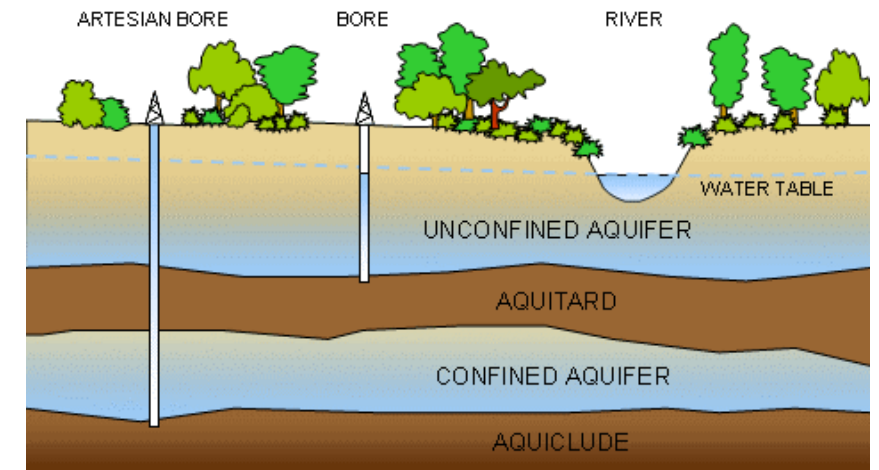
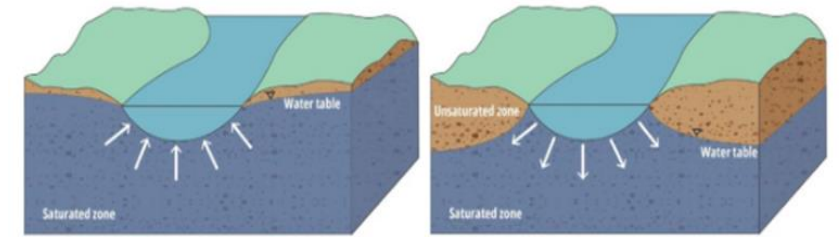
1. Background
2. Issues and Needed Actions
3. Progress since 2020 GSP at Candidate Sites
4. Candidate Site Location Review
5. Action Items and Schedule

Undesirable Results within the Subbasin:

1. Chronic Lowering of Groundwater Levels (HCM)
2. Reduction in Groundwater Storage (HCM)
3. Degraded Water Quality
4. Depletion of Interconnected Surface Water (ISW) affecting Groundwater Dependent Ecosystems (GDEs)
5. Seawater Intrusion
6. Land Subsidence

Issue: Data Gaps exist within the Subbasin

- ISWs, GDEs and their relationship
 - Wells near streams needed
 - Identify Natural Communities Commonly Associated with Groundwater (NCCAG). Reclassify as GDEs if appropriate
 - Understanding how ISWs impact GDEs
- Groundwater Levels
 - Data near streams, Subbasin boundaries, and Subbasin groundwater depression
- Groundwater Quality
 - Spatial distribution, well construction data, monitoring frequency and additional constituents

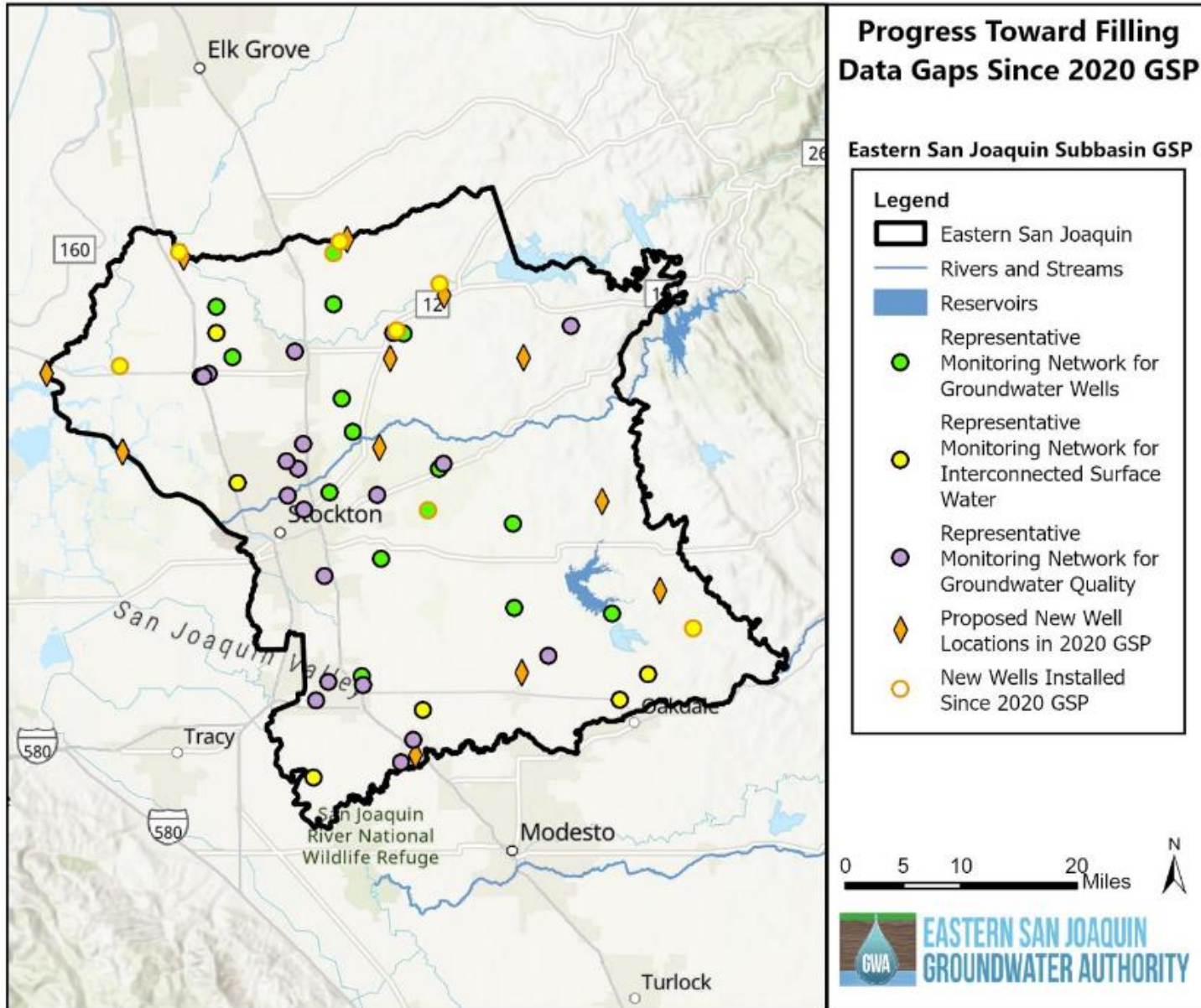


ACTION: Fill data gaps within the Subbasin monitoring well network

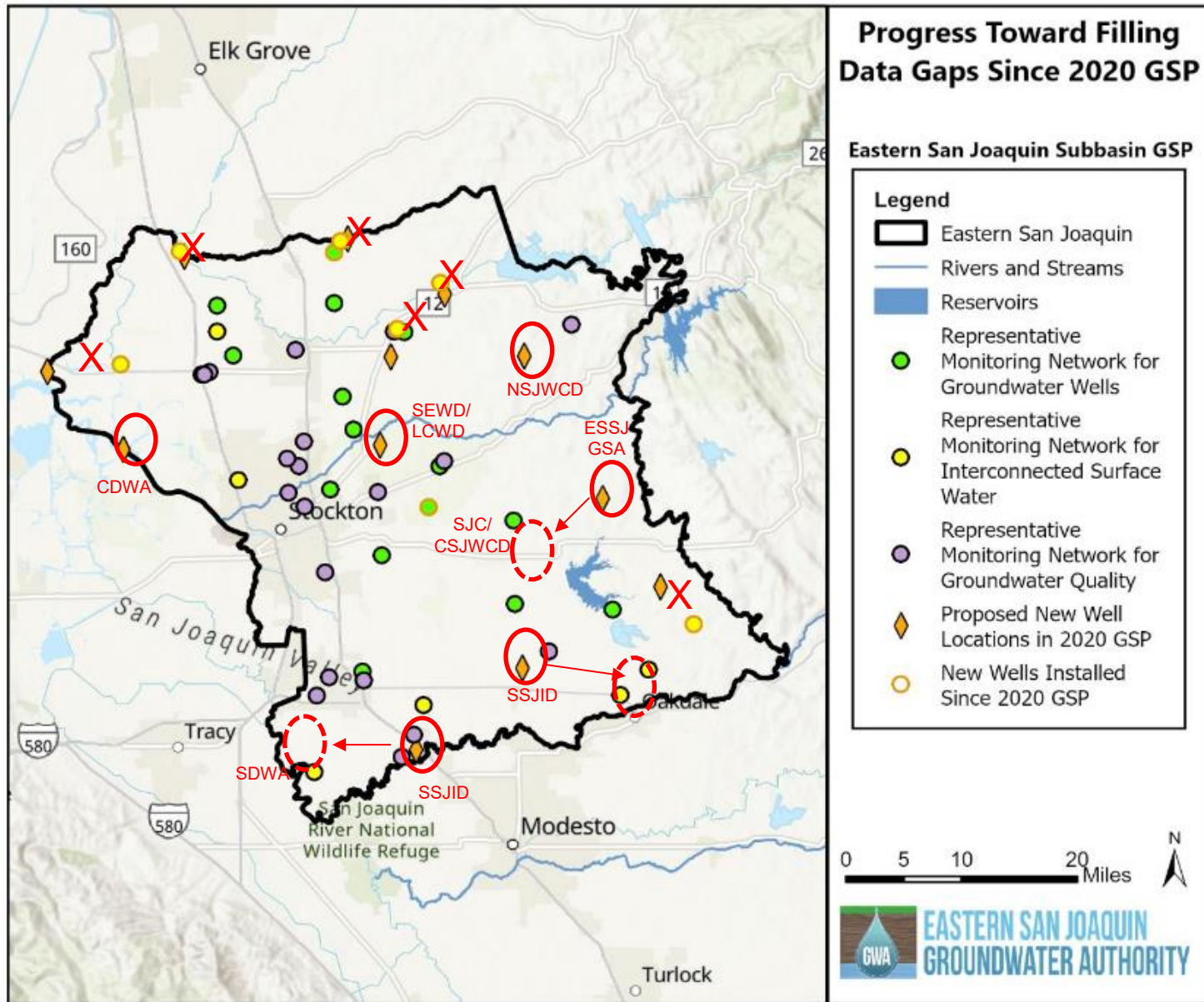
Optimize monitoring locations:

- ISW and NCCAG as GDEs are a priority
- Co-location of wells: potential GDE areas and near streams
- Multi-completion wells to refine HCM, Subbasin boundaries and groundwater depression area





GSP Proposed New
Monitoring Wells at
12 Candidate Sites
(Orange Diamonds)



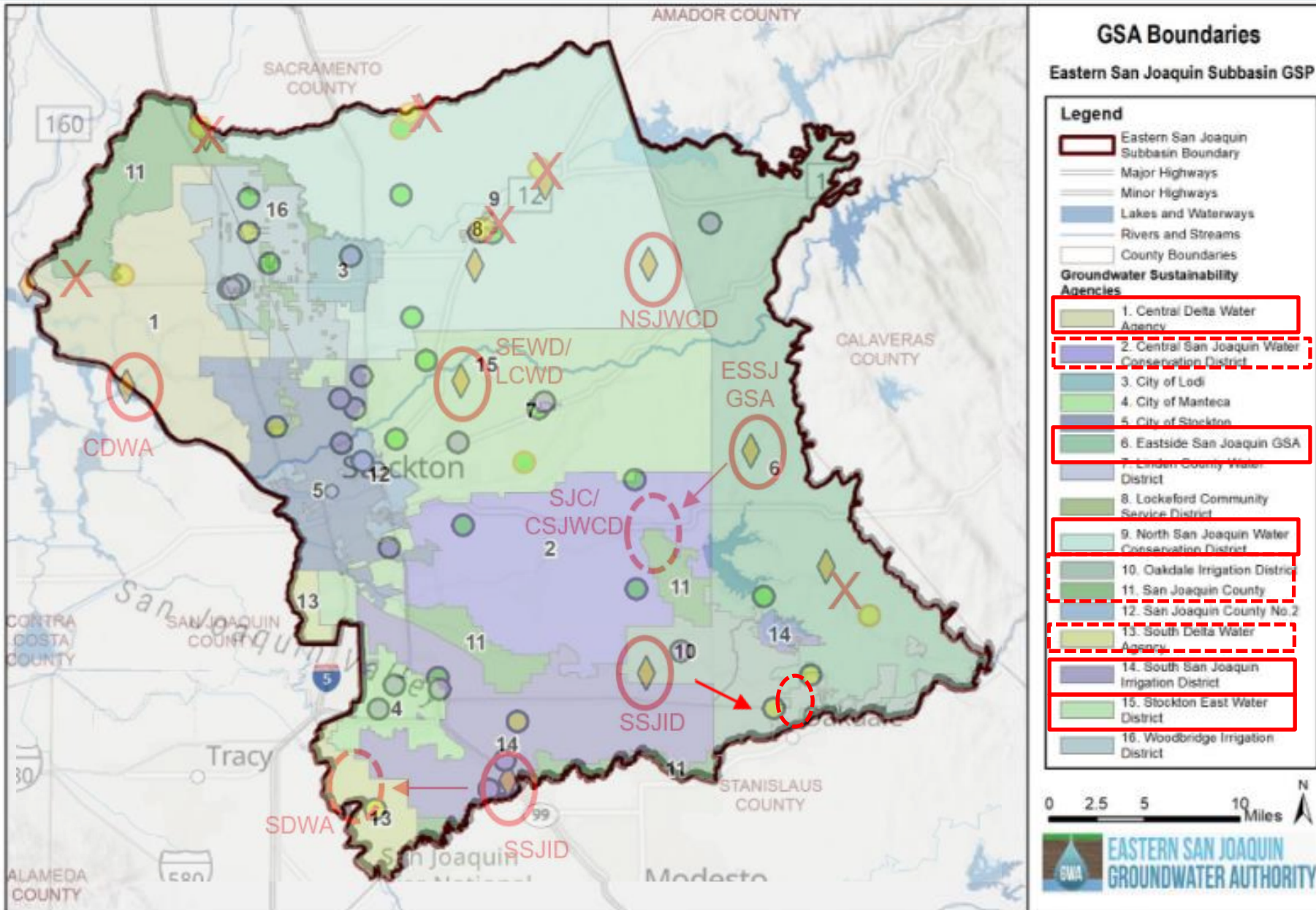
Since 2020:

6 Locations Completed: X

6 Remaining Locations: O

Potential Site GSAs include:

- SJC
- CDWA
- NSJWCD
- SEWD/LCWD
- CSJWCD
- ESSJ GSA
- OID
- SSJID
- SDWA



6 Remaining
Candidate Site
GSAs include:

- CDWA
- NSJWCD
- SEWD/LCWD
- ESSJ GSA
- SSJID

Alternate Site
GSAs:

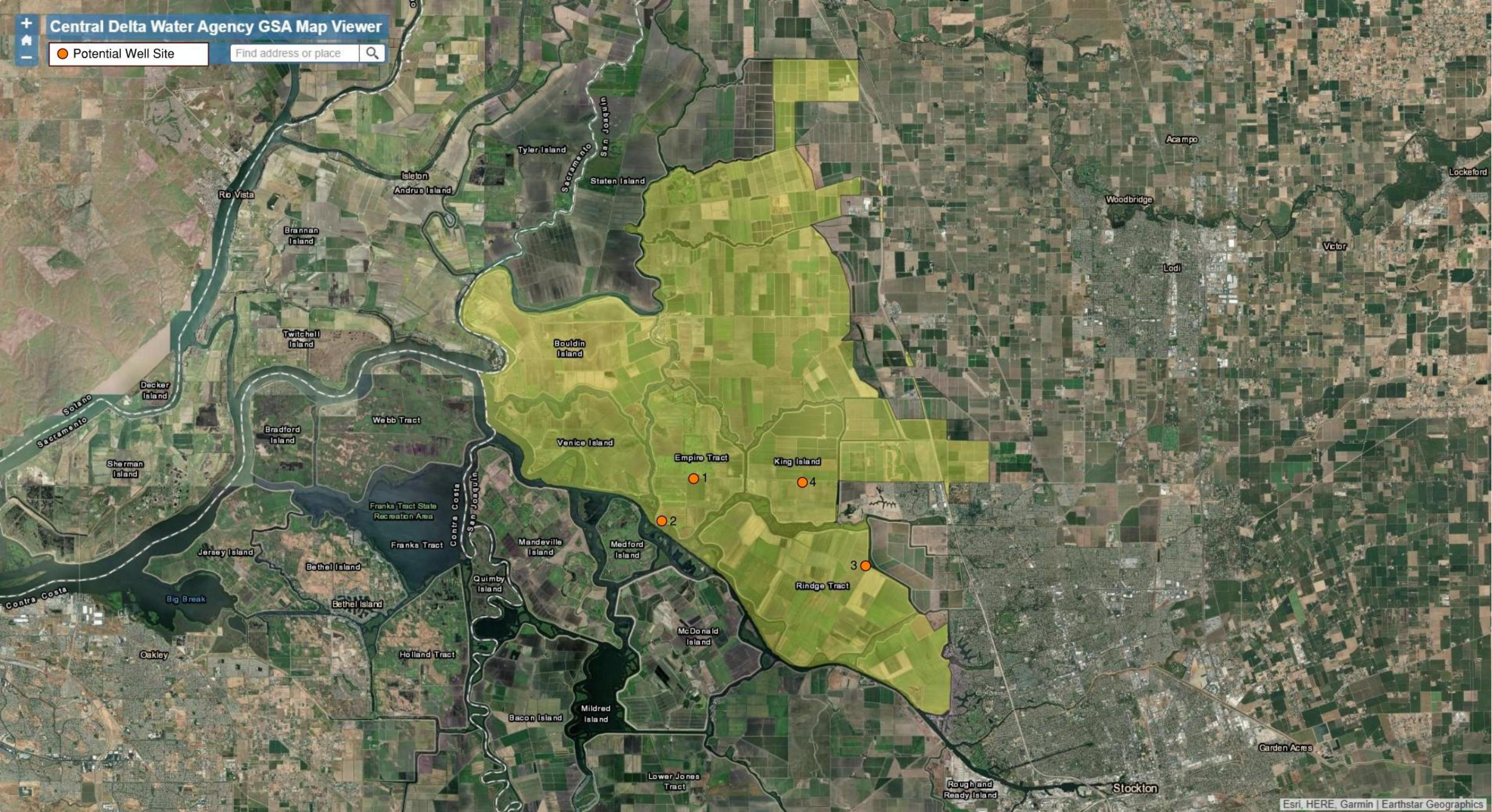
- OID
- SJC/CSJWCD
- SDWA

Candidate Sites

GSA Jurisdiction	Number of Potential Sites	GW Levels	GW Quality	Interconnected Surface Water	Groundwater-Dependent Ecosystems
Central Delta Water Agency	4				
Stockton East Water District	5				
Linden County Water District	6				
Eastside San Joaquin GSA	4				
North San Joaquin Water Conservation District	1				
Oakdale Irrigation District	3				
Central San Joaquin Water Conservation District	2				
San Joaquin County 1	1				
South San Joaquin Irrigation District	7				

Potential Well Site

Find address or place



Find address or place



Earthstar Geographics | Esri, HERE, Garmin



Linden County Water District GSA Map Viewer

● Potential Well Site

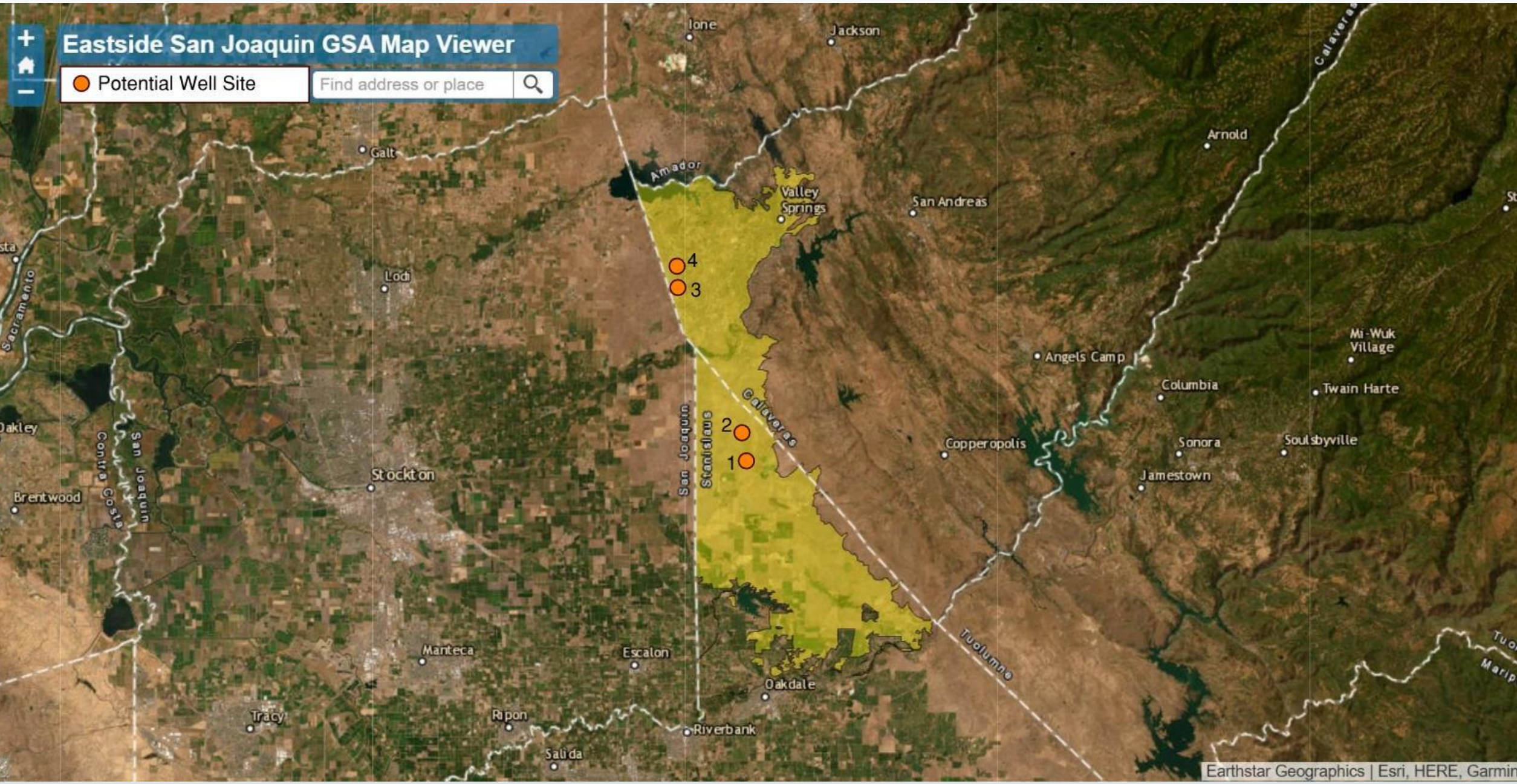
Find address or place



The screenshot displays the 'Eastside San Joaquin GSA Map Viewer' interface. At the top left, there is a navigation bar with a '+' sign, a home icon, and a '-' sign. To the right of these icons is the title 'Eastside San Joaquin GSA Map Viewer'. Below the title is a legend indicating that an orange circle represents a 'Potential Well Site'. To the right of the legend is a search bar with the placeholder text 'Find address or place' and a magnifying glass icon. The map itself shows a large yellow-shaded region in the Central Valley of California, primarily within Stanislaus and San Joaquin counties. Four orange circles, numbered 1 through 4, are placed within this yellow region. The map includes labels for various cities and counties, such as Stockton, Lodi, Galt, Amador, Valley Springs, San Andreas, San Joaquin, Stanislaus, Calaveras, Tuolumne, Mariposa, Fresno, and Kern. The bottom right corner of the map contains the text 'Earthstar Geographics | Esri, HERE, Garmin'.

The screenshot displays the 'Eastside San Joaquin GSA Map Viewer' interface. At the top left, there is a navigation bar with a '+' sign, a home icon, and a '-' sign. To the right of these icons is a search bar containing the text 'Find address or place' and a magnifying glass icon. Below the search bar, a legend indicates that an orange circle represents a 'Potential Well Site'. The map itself shows a large yellow-shaded region in the Central Valley of California, primarily within Stanislaus and San Joaquin counties. Four orange circles, numbered 1 through 4, are placed within this yellow region. The map also shows surrounding areas, including parts of Contra Costa, Alameda, and Calaveras counties, with various cities and towns labeled. The bottom right corner of the map contains the text 'Earthstar Geographics | Esri, HERE, Garmin'.

The screenshot displays the 'Eastside San Joaquin GSA Map Viewer' interface. At the top left, there is a navigation bar with a '+' sign, a home icon, and a '-' sign. Below this is a search bar with the text 'Find address or place' and a magnifying glass icon. A legend indicates that orange circles represent 'Potential Well Site'. The map shows a large yellow-shaded region in the Central Valley, with four numbered orange circles (1, 2, 3, 4) marking specific potential well sites. The map includes labels for various cities and counties, such as Stockton, Lodi, Galt, Amador, Valley Springs, San Andreas, San Joaquin, Stanislaus, Calaveras, Tuolumne, Mariposa, Fresno, and Kern. The map is credited to 'Earthstar Geographics | Esri, HERE, Garmin' at the bottom right.



The screenshot displays the 'Eastside San Joaquin GSA Map Viewer' interface. At the top left, there is a navigation bar with a '+' icon, a home icon, and a '-' icon. To the right of these icons is the title 'Eastside San Joaquin GSA Map Viewer'. Below the title is a legend indicating that an orange circle represents a 'Potential Well Site'. To the right of the legend is a search bar with the placeholder text 'Find address or place' and a magnifying glass icon. The map itself shows a large yellow-shaded region in the Central Valley of California, primarily within Stanislaus and San Joaquin counties. Four orange circles, numbered 1 through 4, are placed within this yellow region. The map includes labels for various cities and counties, such as Stockton, Lodi, Galt, Amador, Valley Springs, San Andreas, San Joaquin, Stanislaus, Calaveras, Tuolumne, Mariposa, Fresno, and Kern. The bottom right corner of the map contains the text 'Earthstar Geographics | Esri, HERE, Garmin'.

The screenshot displays the 'Eastside San Joaquin GSA Map Viewer' interface. At the top left, there is a navigation bar with a '+' icon, a home icon, and a '-' icon. To the right of these icons is the title 'Eastside San Joaquin GSA Map Viewer'. Below the title is a legend indicating that an orange circle represents a 'Potential Well Site'. To the right of the legend is a search bar with the placeholder text 'Find address or place' and a magnifying glass icon. The map itself shows a large yellow-shaded region in the Central Valley of California, primarily within Stanislaus and San Joaquin counties. Four orange circles, numbered 1 through 4, are placed within this yellow region. The map includes labels for various cities and counties, such as Stockton, Lodi, Galt, Amador, Valley Springs, San Andreas, San Joaquin, Stanislaus, Calaveras, Tuolumne, Mariposa, Fresno, and Kern. The bottom right corner of the map contains the text 'Earthstar Geographics | Esri, HERE, Garmin'.

The screenshot displays the 'Eastside San Joaquin GSA Map Viewer' interface. At the top left, there is a navigation bar with a '+' sign, a home icon, and a '-' sign. To the right of these icons is the title 'Eastside San Joaquin GSA Map Viewer'. Below the title is a legend indicating that an orange circle represents a 'Potential Well Site'. To the right of the legend is a search bar with the placeholder text 'Find address or place' and a magnifying glass icon. The map itself shows a large yellow-shaded region in the Central Valley of California, primarily within Stanislaus and San Joaquin counties. Four orange circles, numbered 1 through 4, are placed within this yellow region. The map includes labels for various cities and counties, such as Stockton, Lodi, Galt, Amador, Valley Springs, San Andreas, San Joaquin, Stanislaus, Calaveras, Tuolumne, Mariposa, and others. The bottom right corner of the map contains the text 'Earthstar Geographics | Esri, HERE, Garmin'.

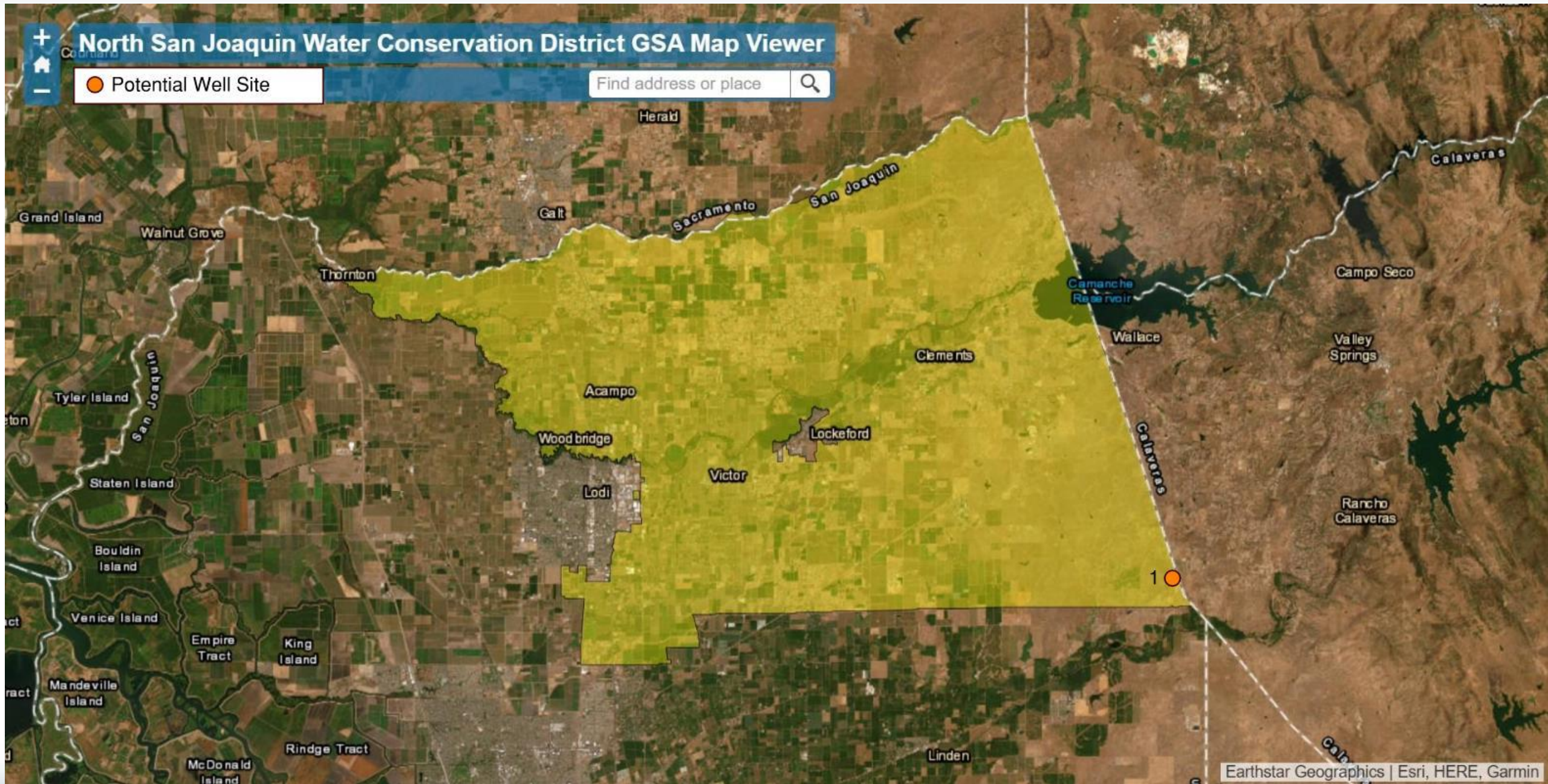
The screenshot displays the 'Eastside San Joaquin GSA Map Viewer' interface. At the top left, there is a navigation bar with a '+' sign, a home icon, and a '-' sign. To the right of these icons is the title 'Eastside San Joaquin GSA Map Viewer'. Below the title is a legend indicating that an orange circle represents a 'Potential Well Site'. To the right of the legend is a search bar with the placeholder text 'Find address or place' and a magnifying glass icon. The map itself shows a large yellow-shaded region in the Central Valley of California, primarily within Stanislaus and San Joaquin counties. Four orange circles, numbered 1 through 4, are placed within this yellow region. The map includes labels for various cities and counties, such as Stockton, Lodi, Galt, Amador, Valley Springs, San Andreas, San Joaquin, Stanislaus, Calaveras, Tuolumne, Mariposa, Fresno, and Kern. The bottom right corner of the map contains the text 'Earthstar Geographics | Esri, HERE, Garmin'.



North San Joaquin Water Conservation District GSA Map Viewer

● Potential Well Site

Find address or place





Oakdale Irrigation District GSA Map Viewer

● Potential Well Site

Find address or place



1 2 3

Escalon

San Joaquin
Stanislaus

Oakdale

East Oakdale

Calaveras
Stanislaus

San Joaquin
Stanislaus



Central San Joaquin Water Conservation District GSA Map Viewer

● Potential Well Site

Garden Acres

Find address or place



Stockton

French Camp

Farmington

2

1

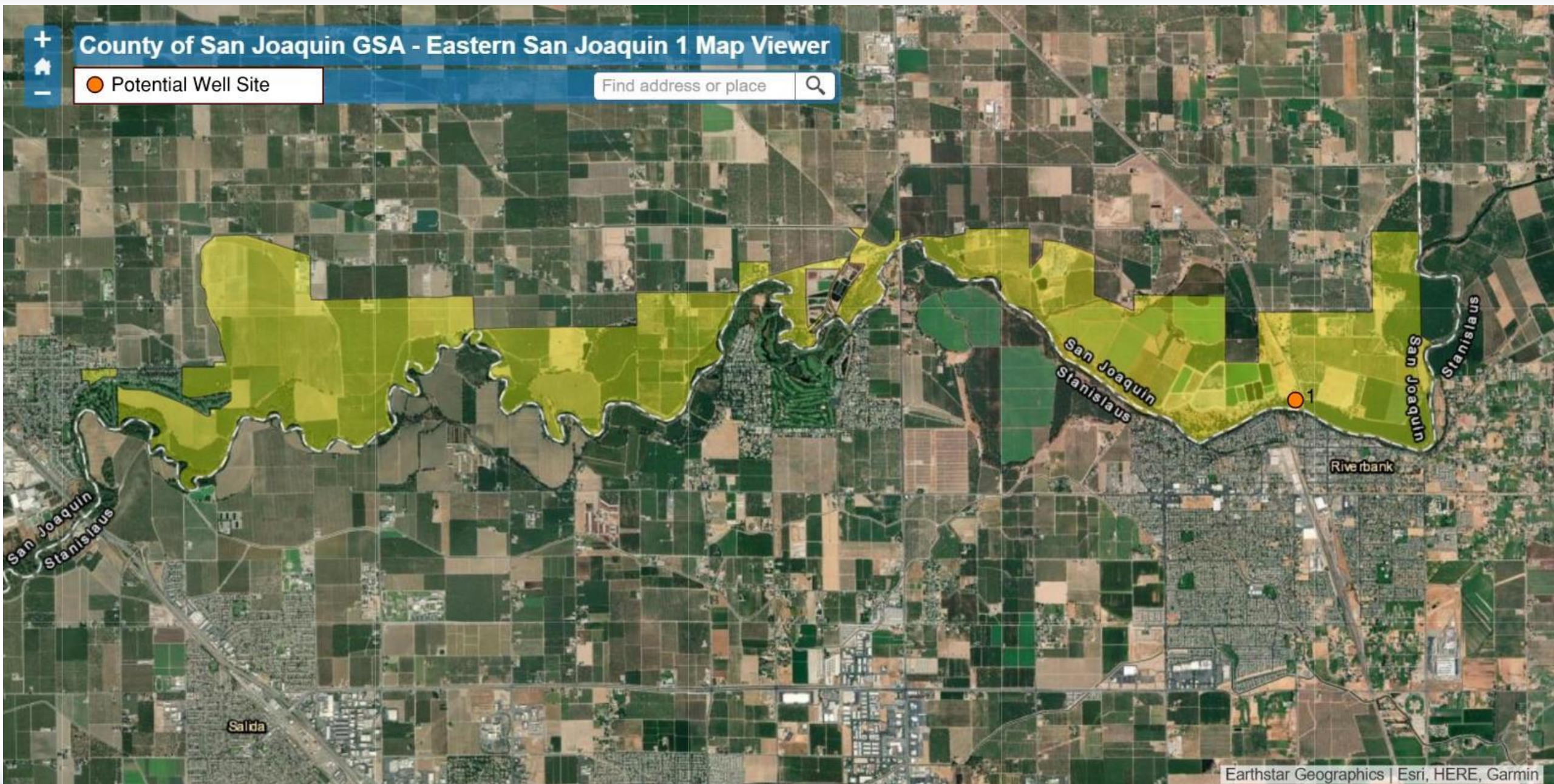
San Joaquin
Stanislaus

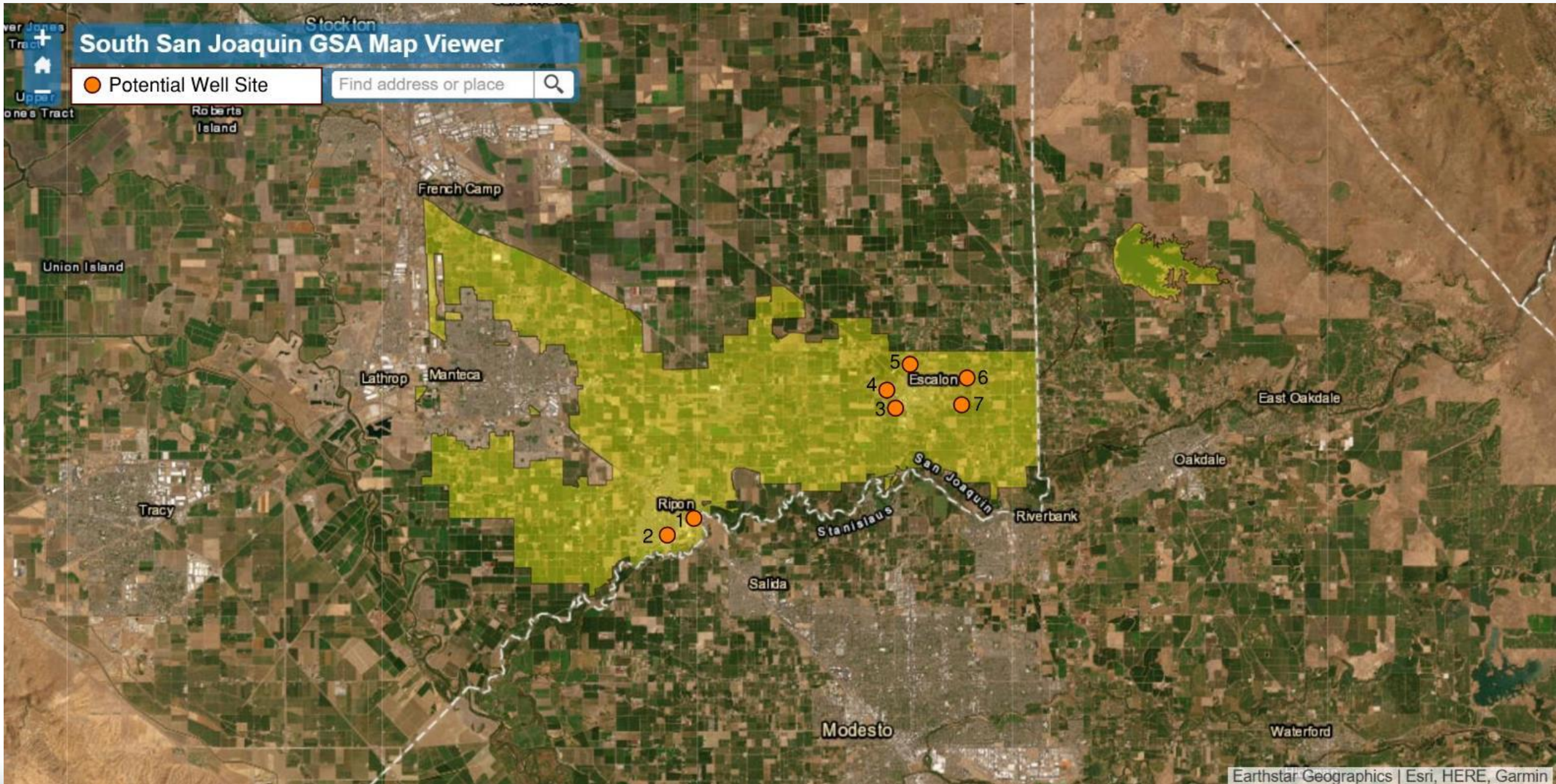


County of San Joaquin GSA - Eastern San Joaquin 1 Map Viewer

● Potential Well Site

Find address or place





ACTION ITEMS AND SCHEDULE



- SEPT 10, 2025 CANDIDATE SITES SUBMITTED TO GSA'S FOR CONSIDERATION
- OCT 10, 2025 GSA'S RESPOND
- NOV 2025 SITES SELECTED
- DEVELOP PROJECT SCOPE(S)
- ISSUE RFP(S) FOR WORK
- **WORK BEGINS EARLY 2026**
- **WORK MUST BE COMPLETED BY DEC 31, 2026**



Questions?

