Groundwater in the Sacramento Valley – How Does It Work?

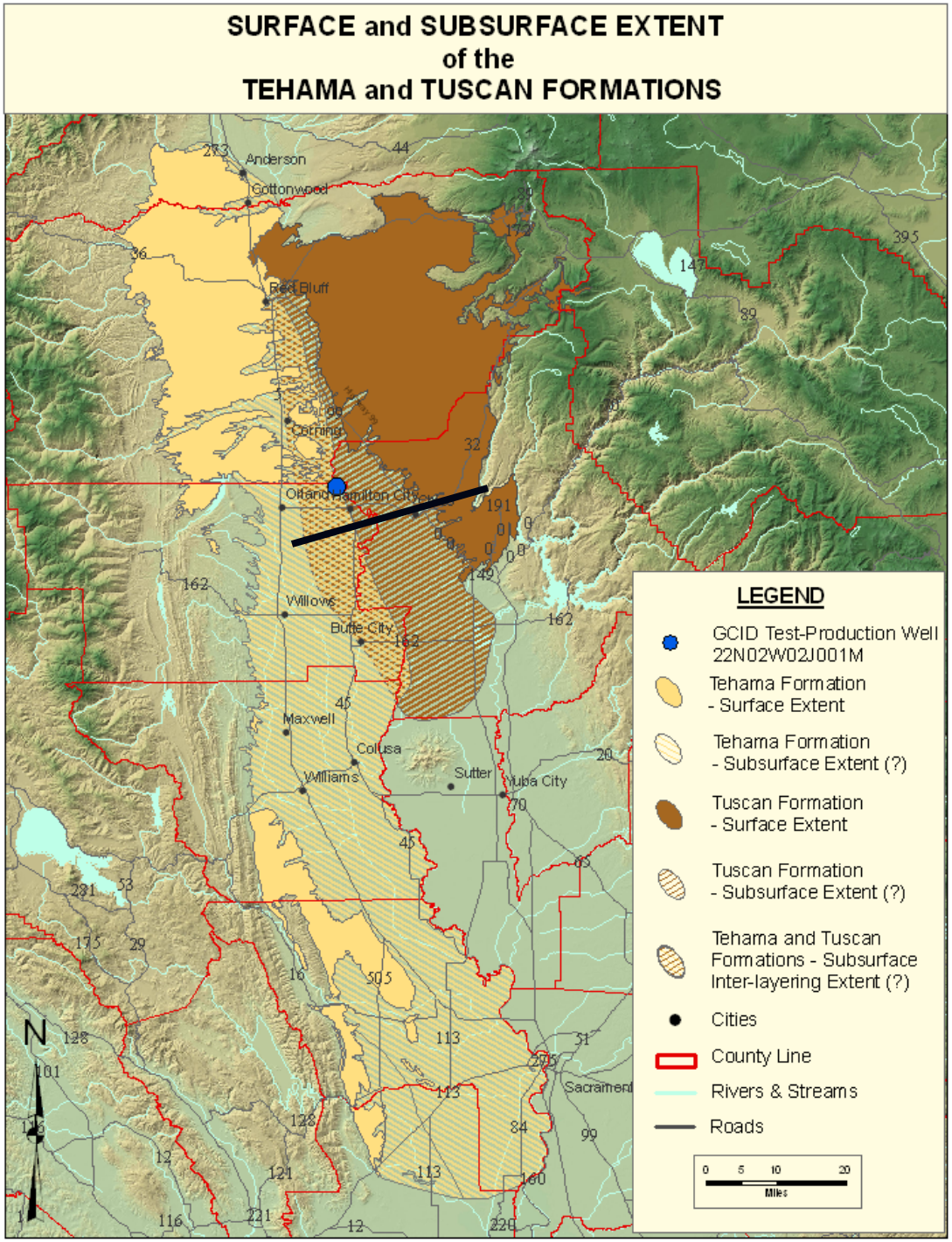
Presentation to the
Delta Vision Task Force

Glenn-Colusa Irrigation District
March 21, 2008

Filling in the “Gaps”

- Geology
- System Demands
- System Recharge
- Ongoing Studies
- Who is in Charge?

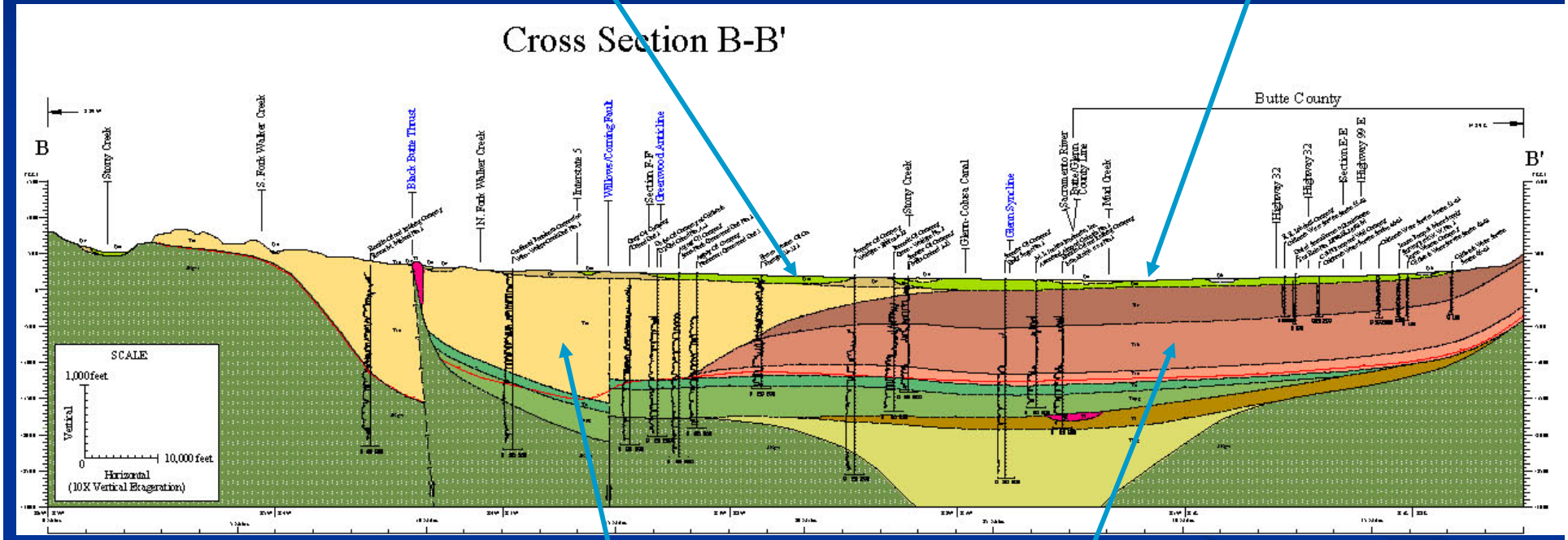
Geology 101


SURFACE and SUBSURFACE EXTENT
of the
TEHAMA and TUSCAN FORMATIONS
Anderson
Cottonwood
Red Bluff
Corning
Orland
Hamilton City
Willows
Butte City
Maxwell
Colusa
Williams
Sutter
Yuba City
Sacramento
N
LEGEND
GCID Test-Production Well 22N02W02J001M
Tehama Formation - Surface Extent
Tehama Formation - Subsurface Extent (?)
Tuscan Formation - Surface Extent
Tuscan Formation - Subsurface Extent (?)
Tehama and Tuscan Formations - Subsurface Inter-layering Extent (?)
Cities
County Line
Rivers & Streams
Roads
0 5 10 20
Miles

Geology 101

Riverbank Formation

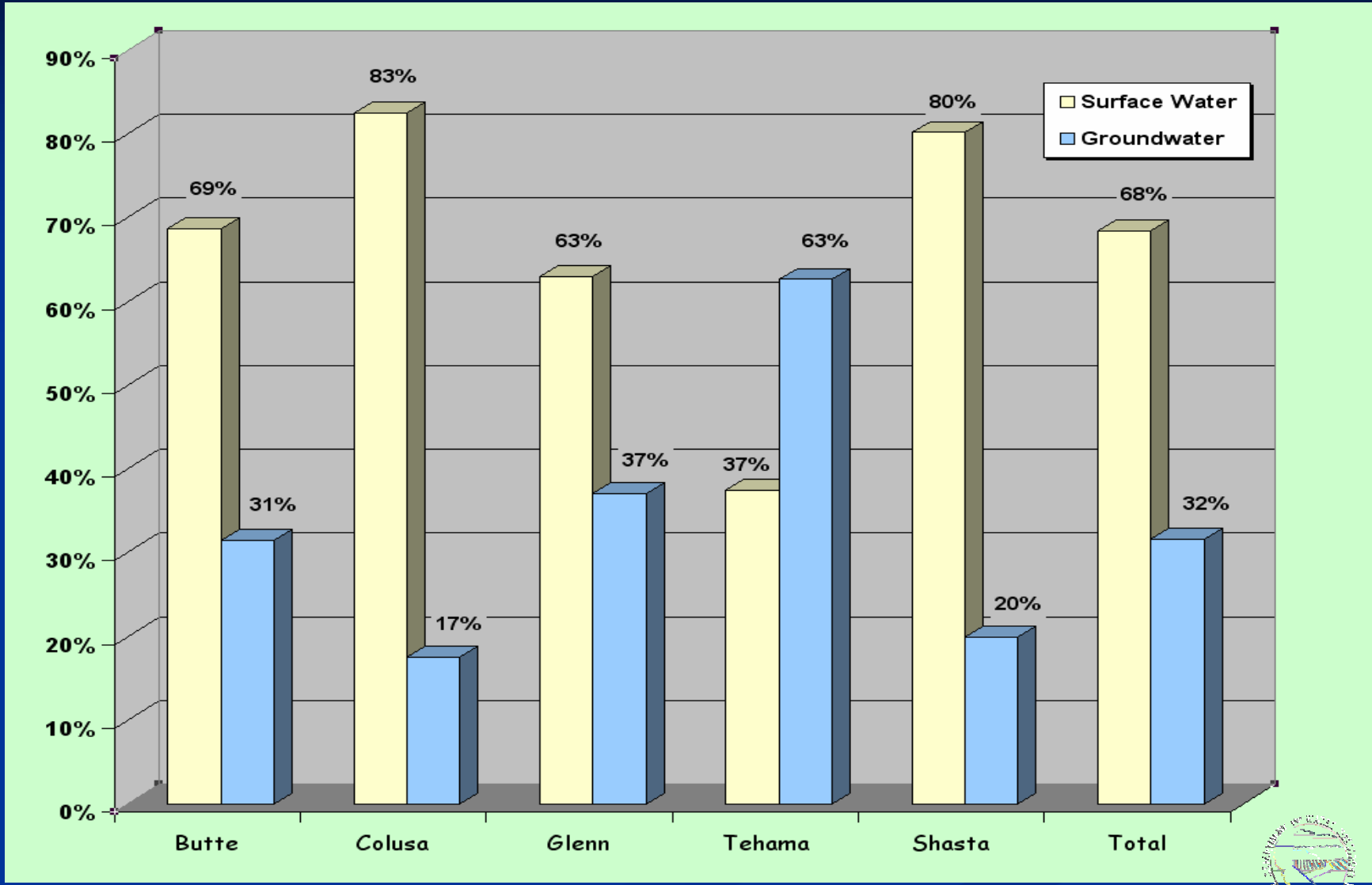
Modesto Formation



Tehama Formation

Tuscan Formation

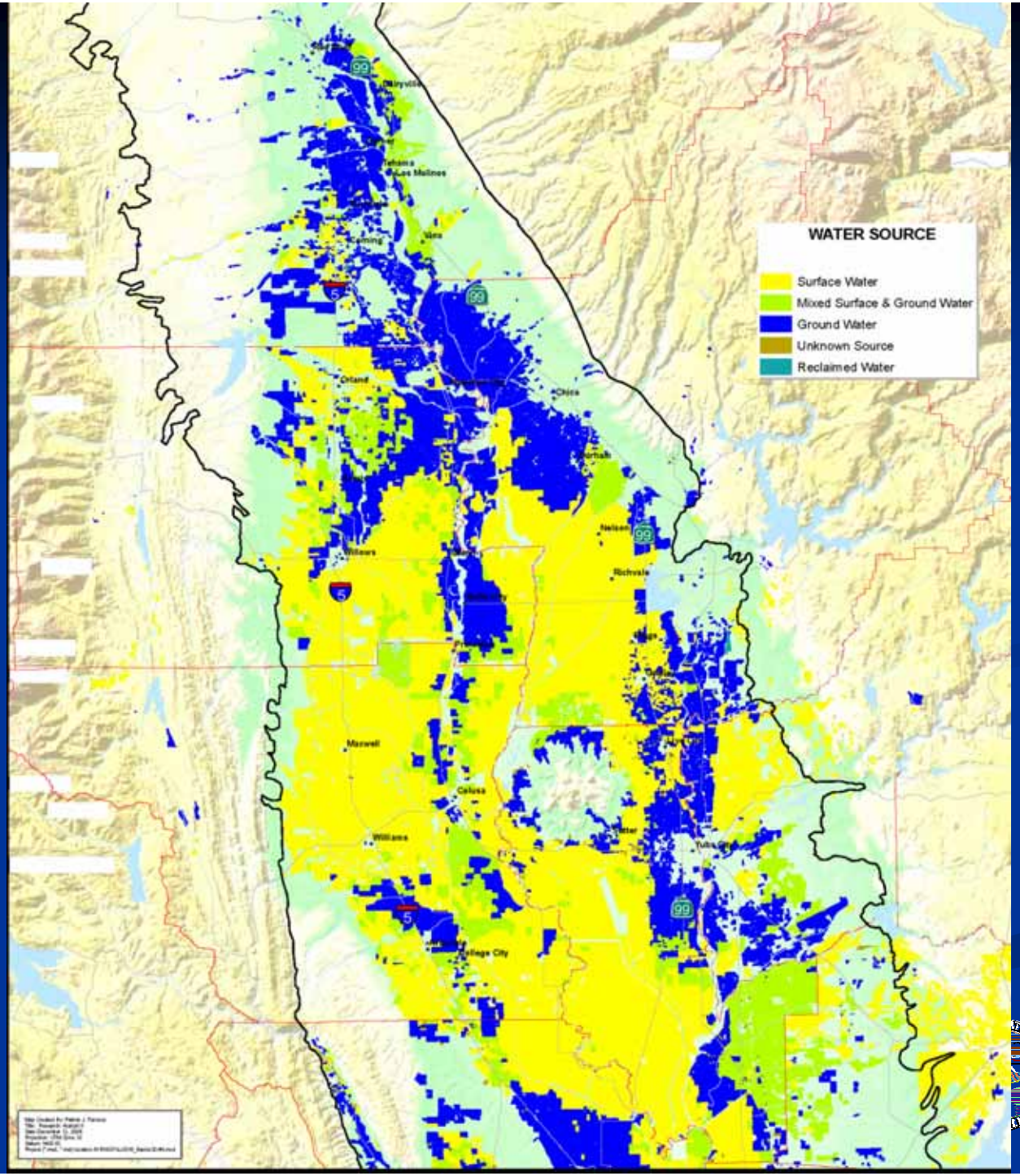
System Demands



Northern Sac Valley Prime Water Supply (% SW/GW)

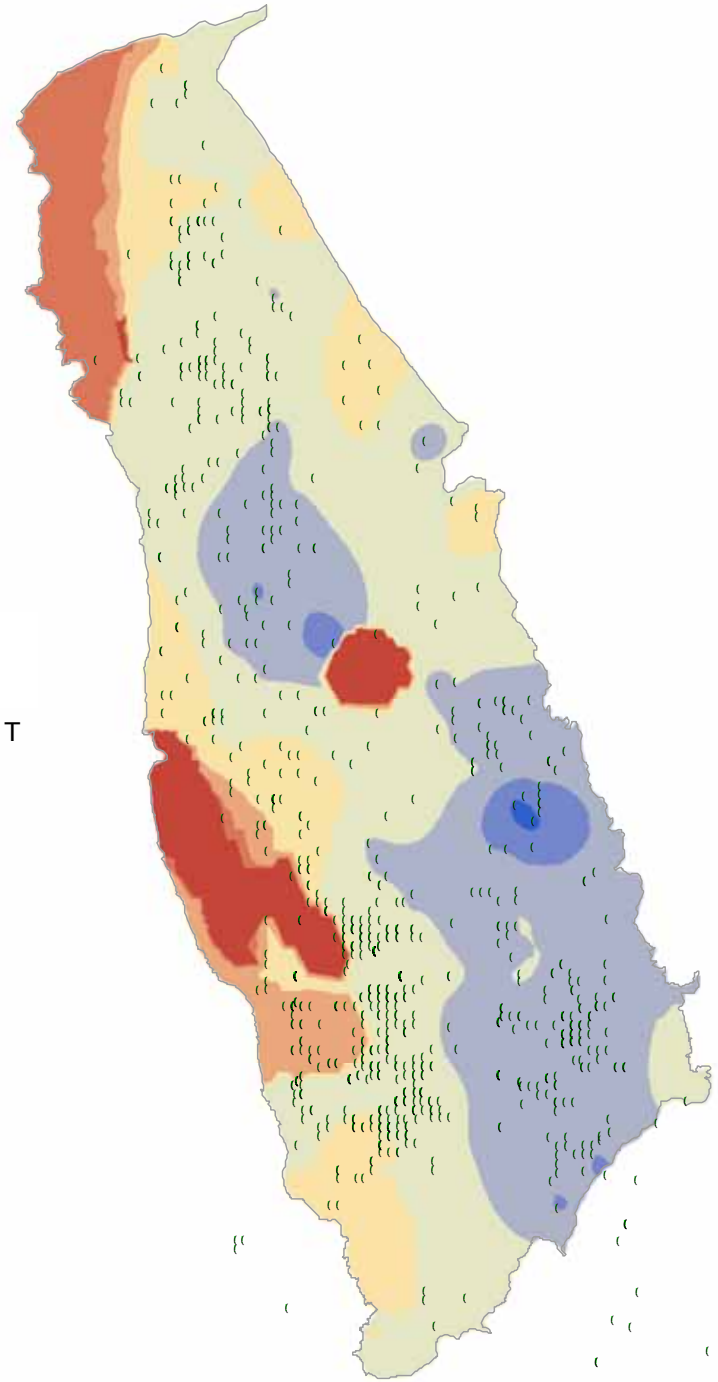
Data Source: DWR ND 2000 Land & Water Use Data

System Demands



Data Source: DWR ND 2000 Land & Water Use Data

System Recharge



LEG

HYDRAULIC CONDUCTIVITY DATA POINT

MODEL BOUNDARY

HYDRAULIC CONDUCTIVITY (feet/day)

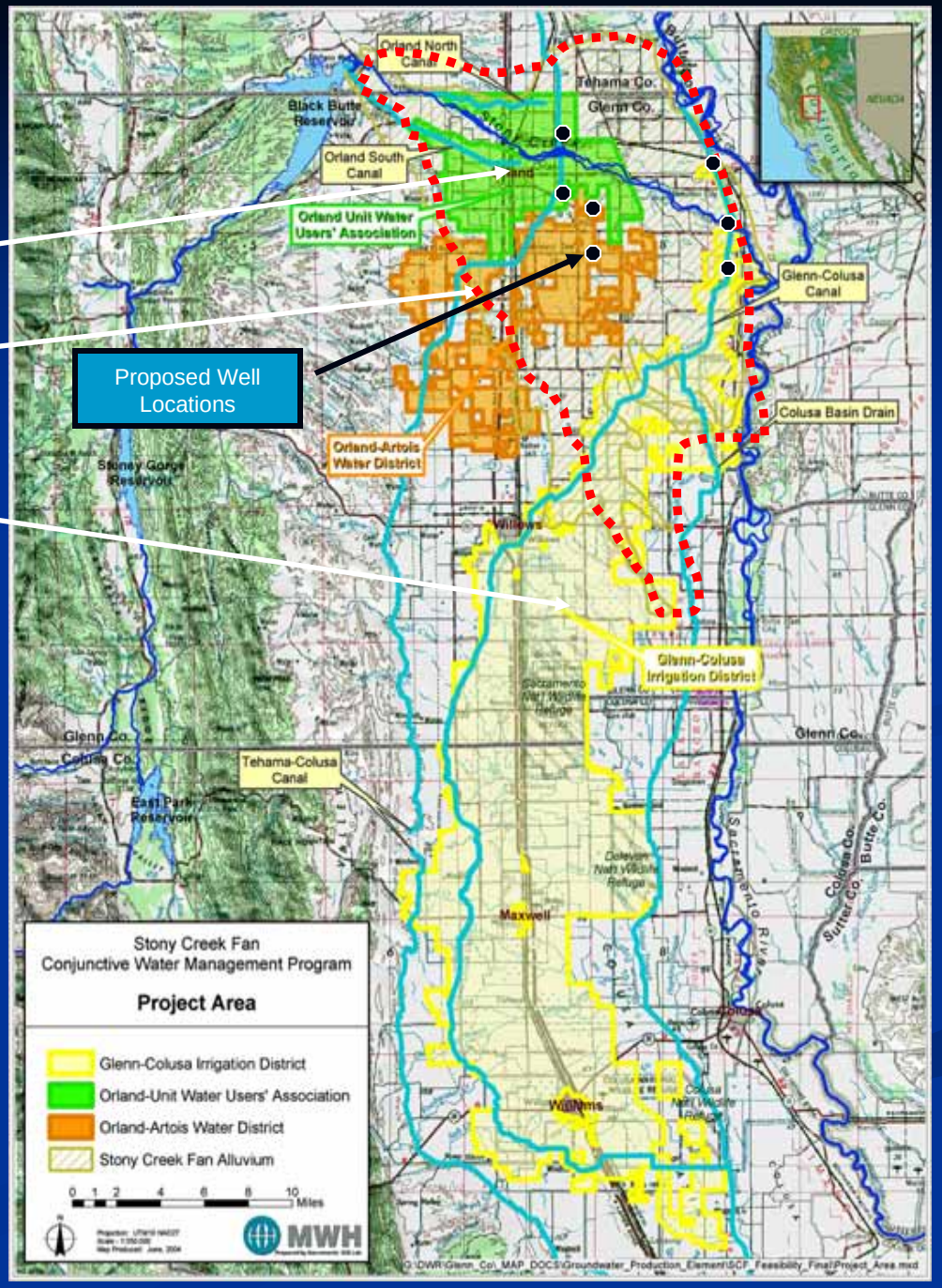
- < 0.1
- 0.1 TO 10
- 10 TO 50
- 50 TO 100
- 100 TO 200
- 200 TO 300
- 300 TO 400
- 400 TO 450

Ongoing Studies

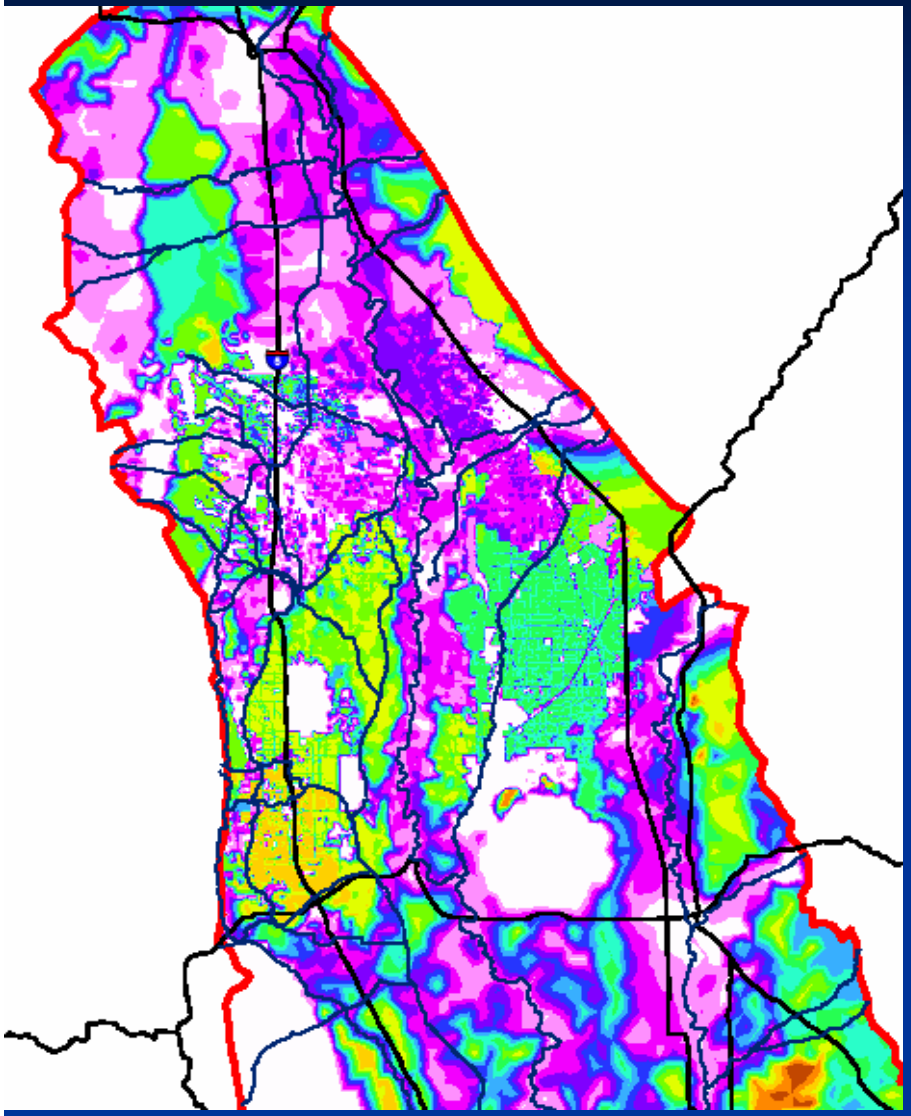
SCF Partnership

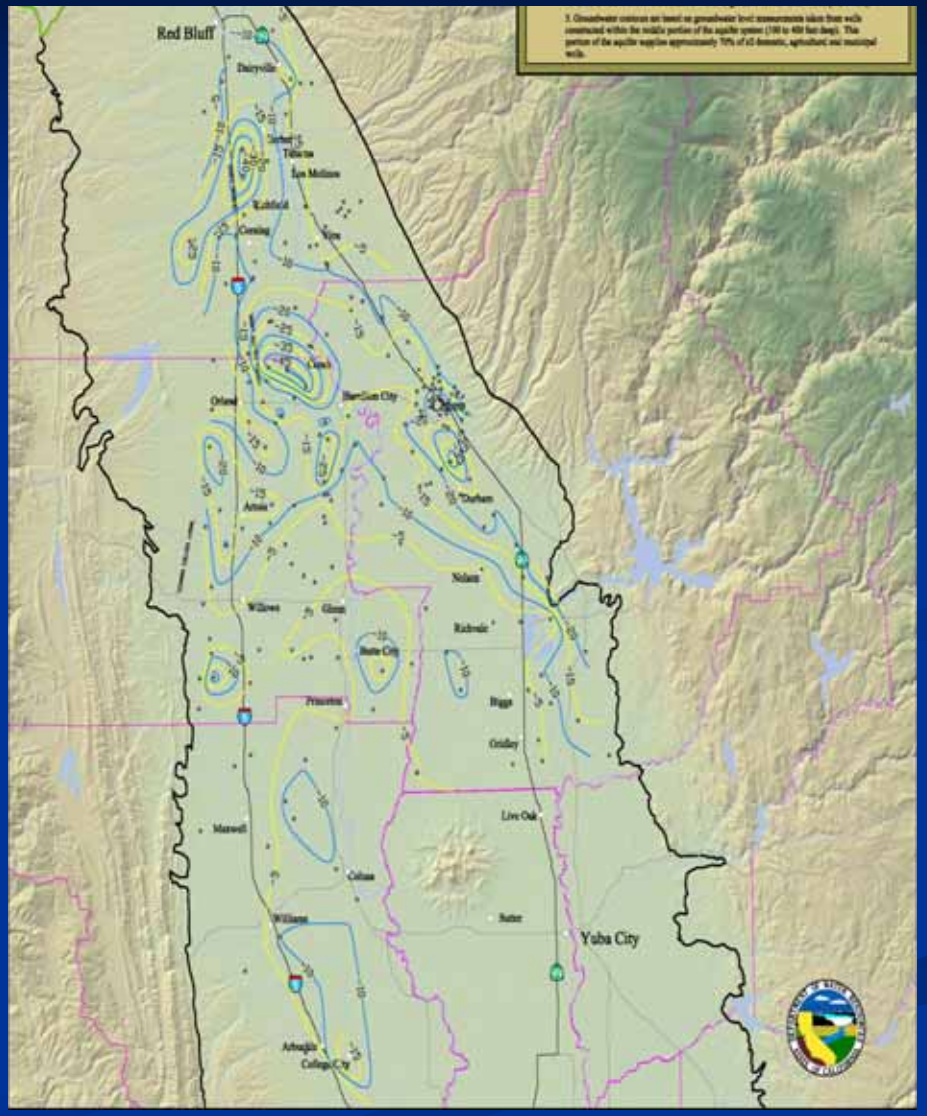
- OUWUA
- OAWD
- GCID

Purpose of Study - Aquifer Performance Testing to better understand sources of recharges, pumping limits, and impacts



Ongoing Studies – GCID / NHI





Purpose of Study – Identify Conjunctive Use Opportunities to Meet Local Water Needs, Instream Flows, and Statewide Needs.

Who is in Charge?

- Irrigation / Water Districts have historically taken the lead.
- Counties attitude of regulate vs. participate
- Consensus Governance
- It's "My Groundwater"
- Northern Sacramento Groundwater Forum