

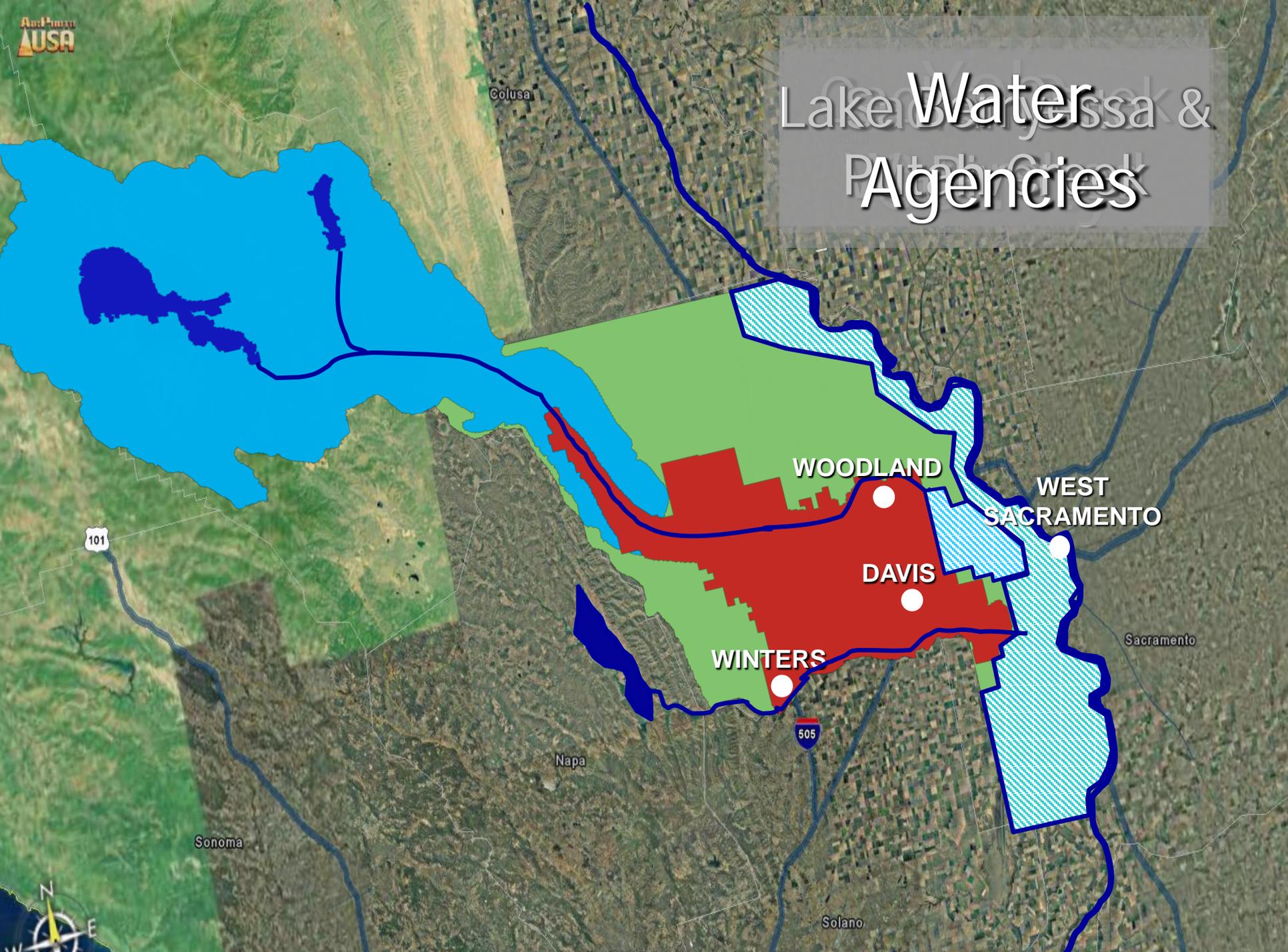
Workshop for Temporary Permits for Groundwater Recharge and Storage

State Water Resources Control Board

April 26, 2016

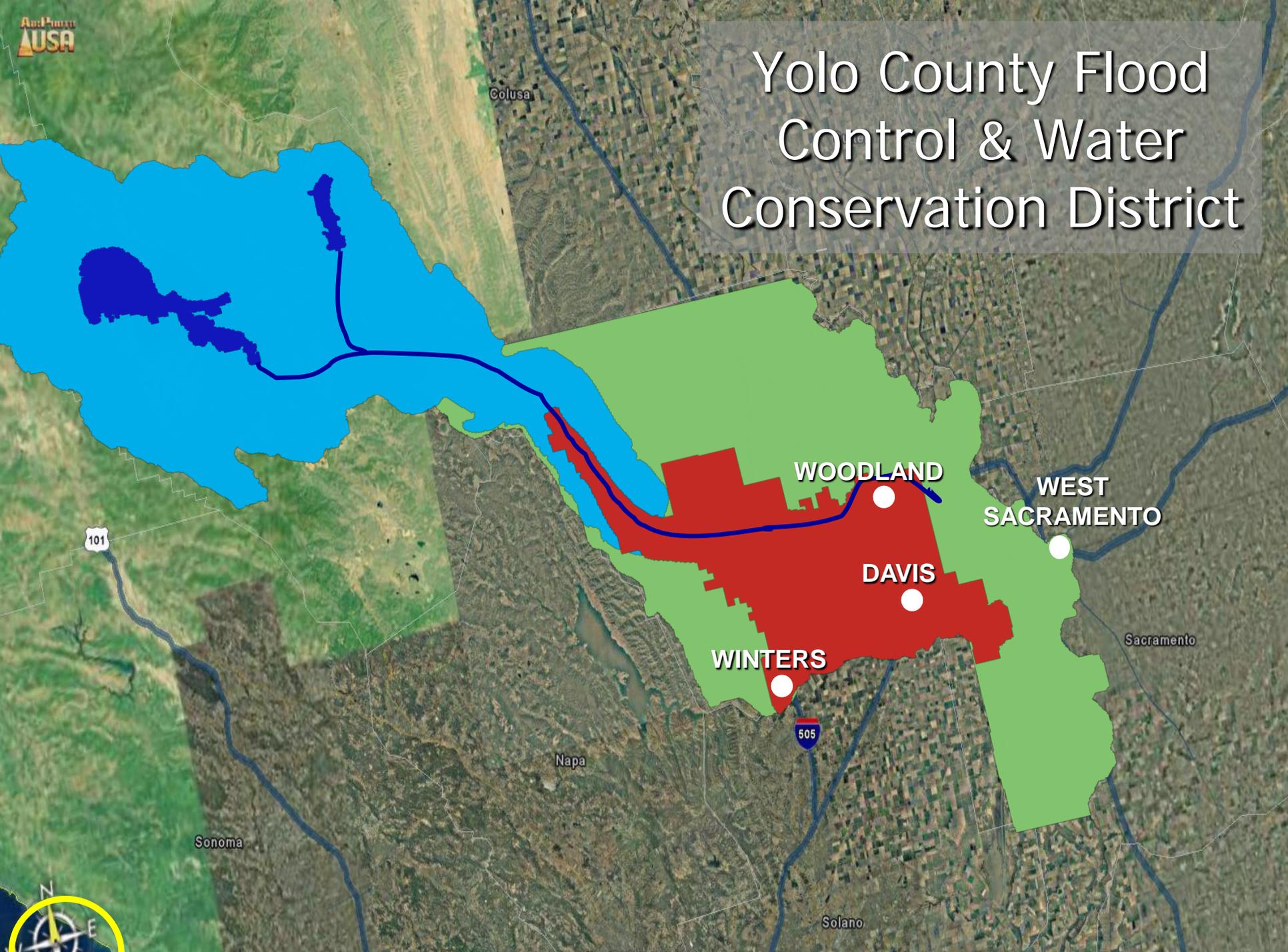
Tim O'Halloran
www.ycfcwcd.org

Water Agency & Agency





Yolo County Flood Control & Water Conservation District



Colusa

WOODLAND

WEST SACRAMENTO

DAVIS

WINTERS

Sacramento

Napa

Sonoma

Solano

101

505

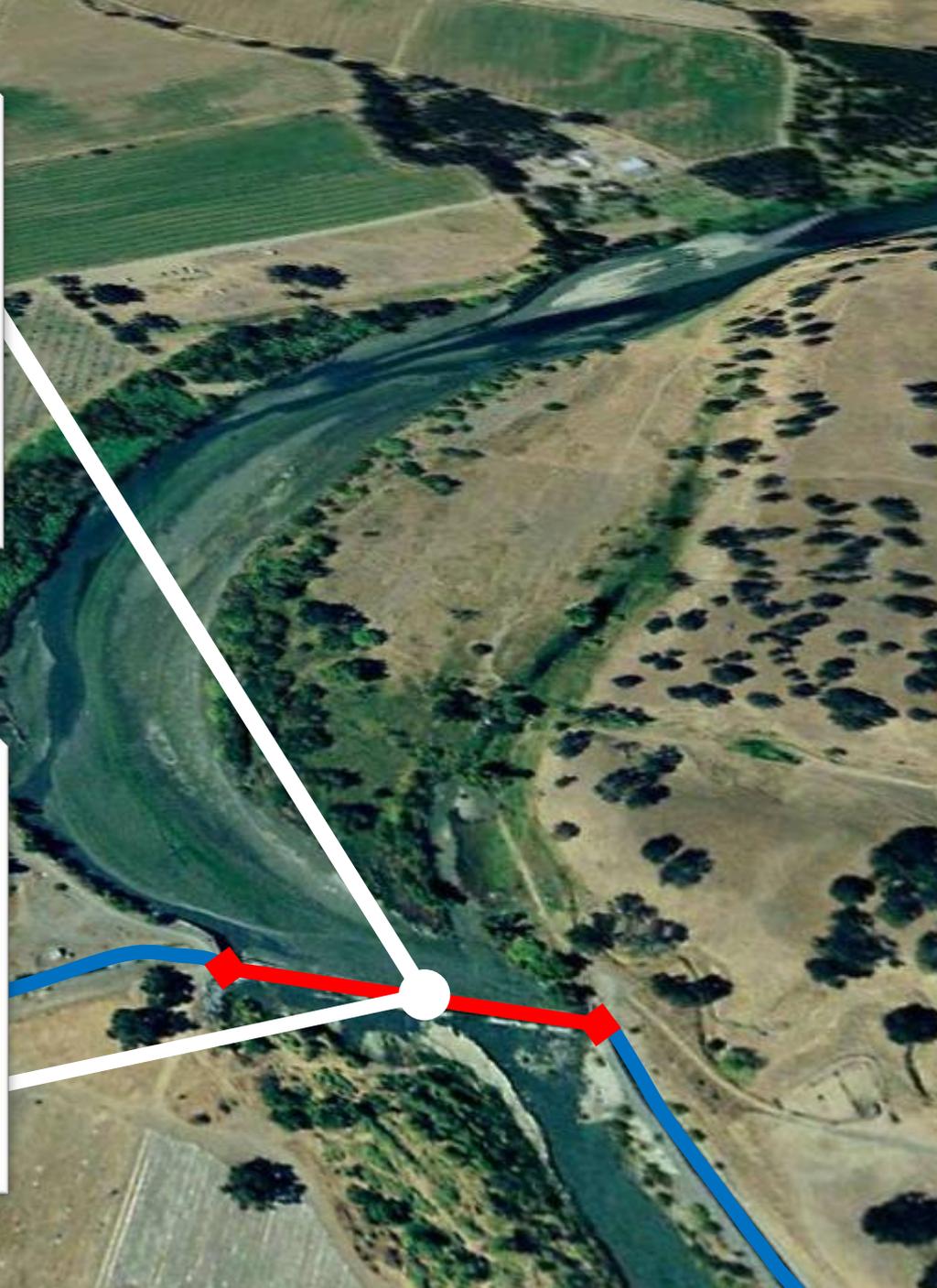




FLOOD FLOWS



INFLATABLE DAM





FLOOD FLOWS

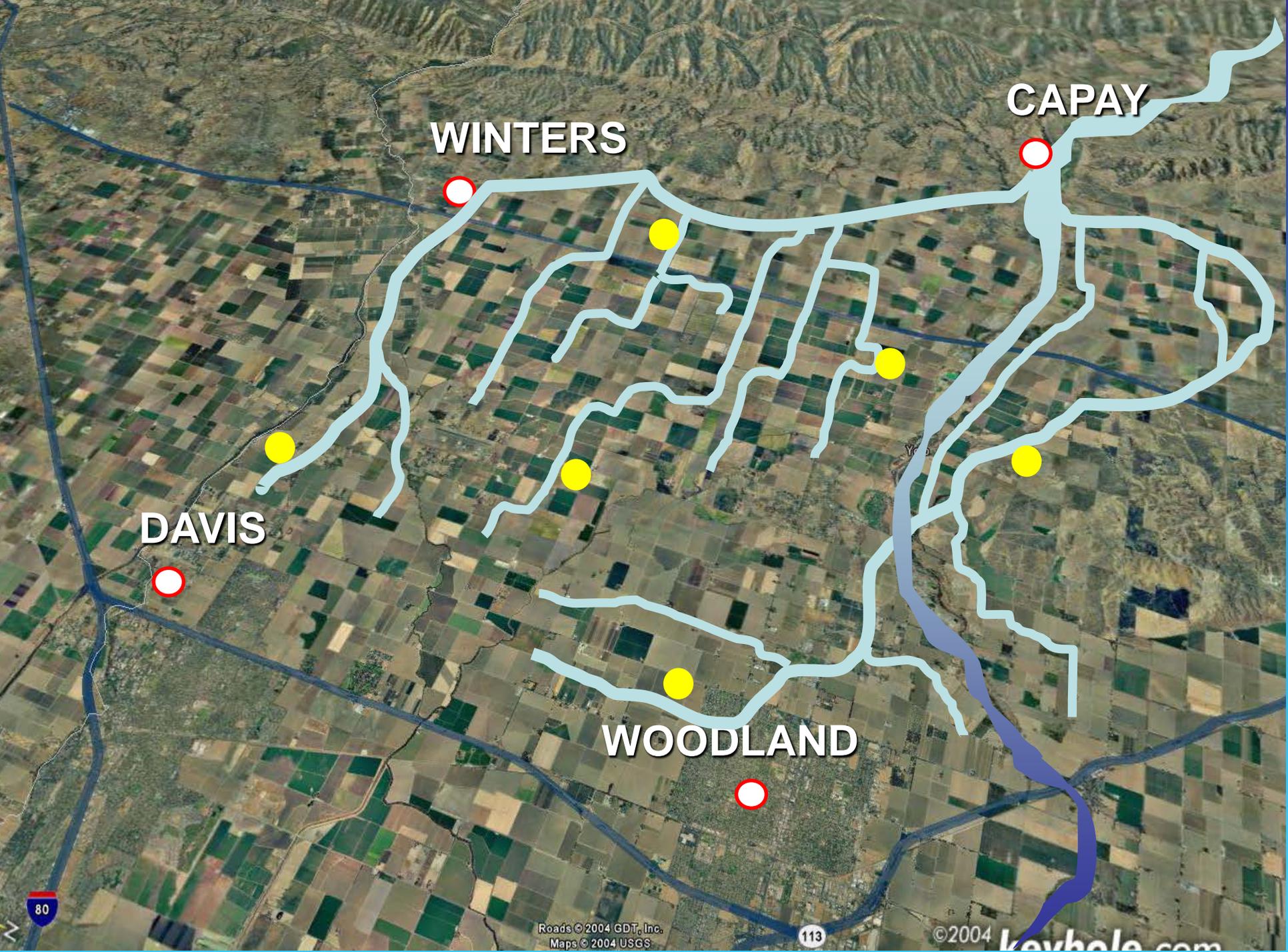


LOW FLOWS



WOODLAND

CAPAY



WINTERS

CAPAY

DAVIS

WOODLAND

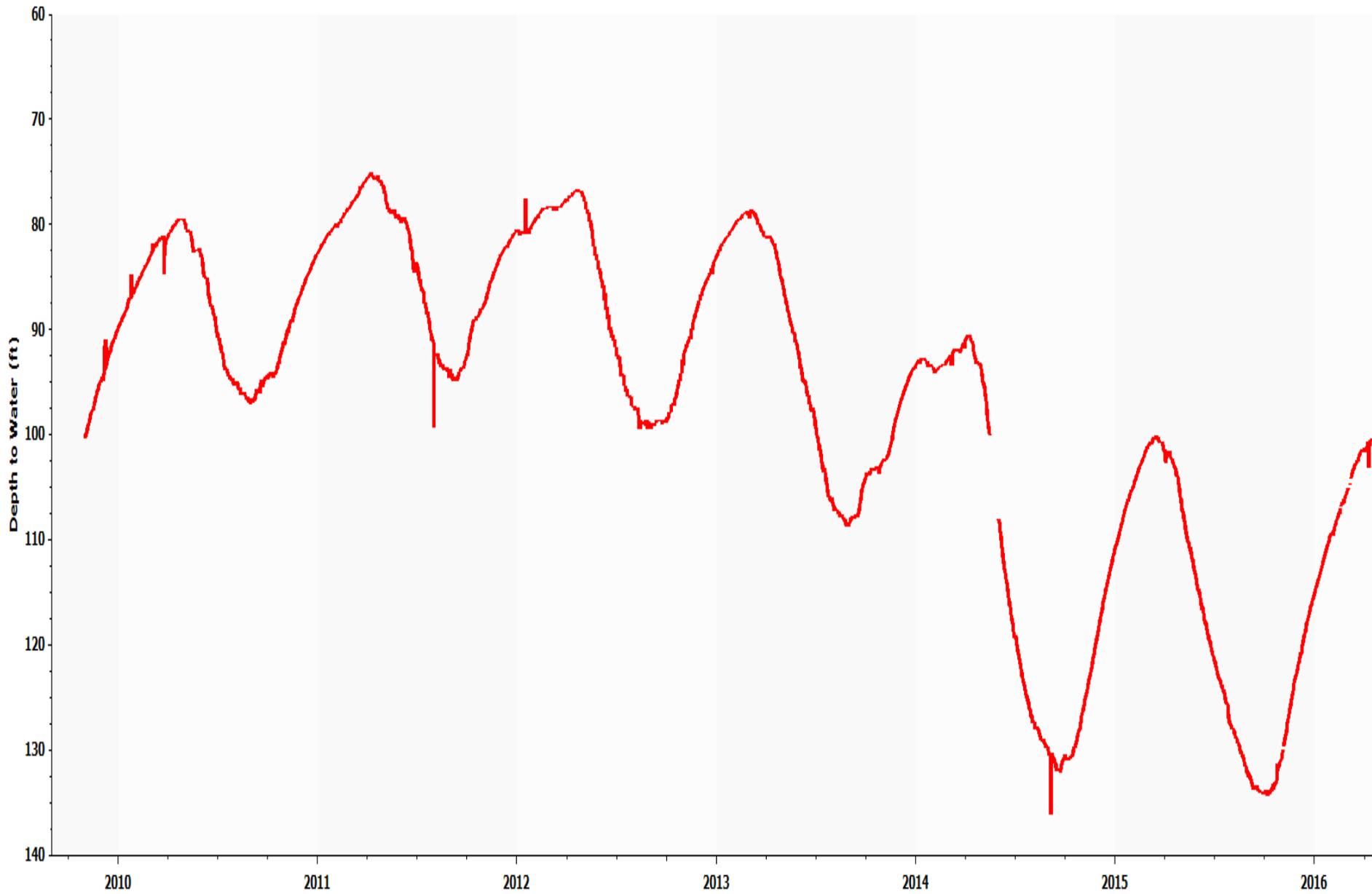
80

113

Roads © 2004 GDT, Inc.
Maps © 2004 USGS

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HQ Well Depth to Water

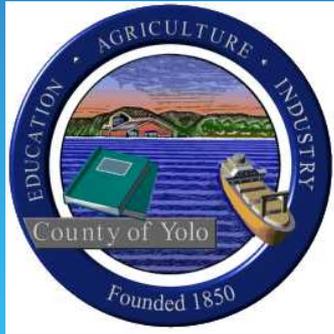




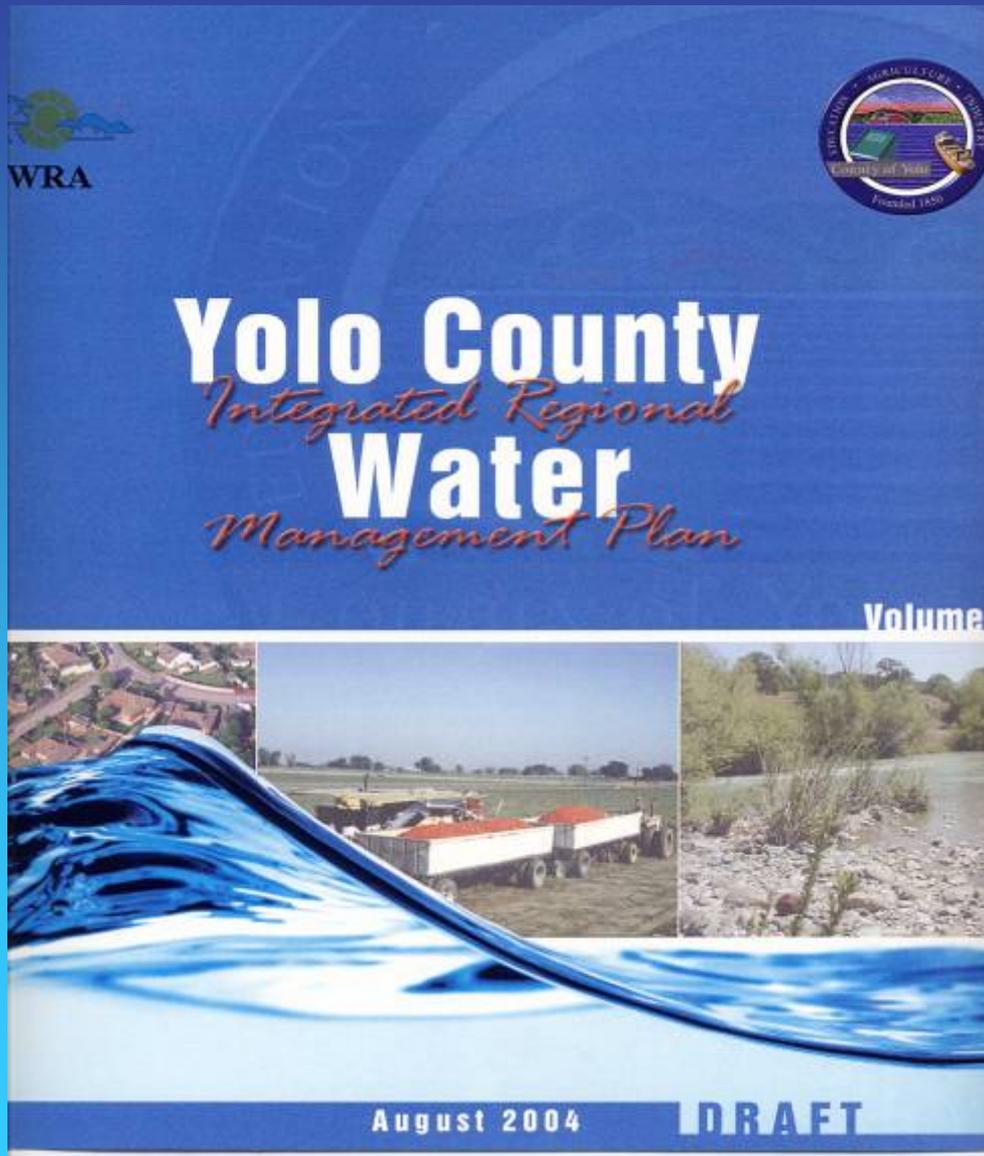
Water Resources Association and the Integrated Regional Water Management Plan



WRA



Integrated Regional Water Management Plan



- ✓ Water Supply & Drought Preparedness
- ✓ Water Quality
- ✓ Storm Drainage and Flood Control
- ✓ Aquatic Ecosystem Enhancement
- ✓ Recreation

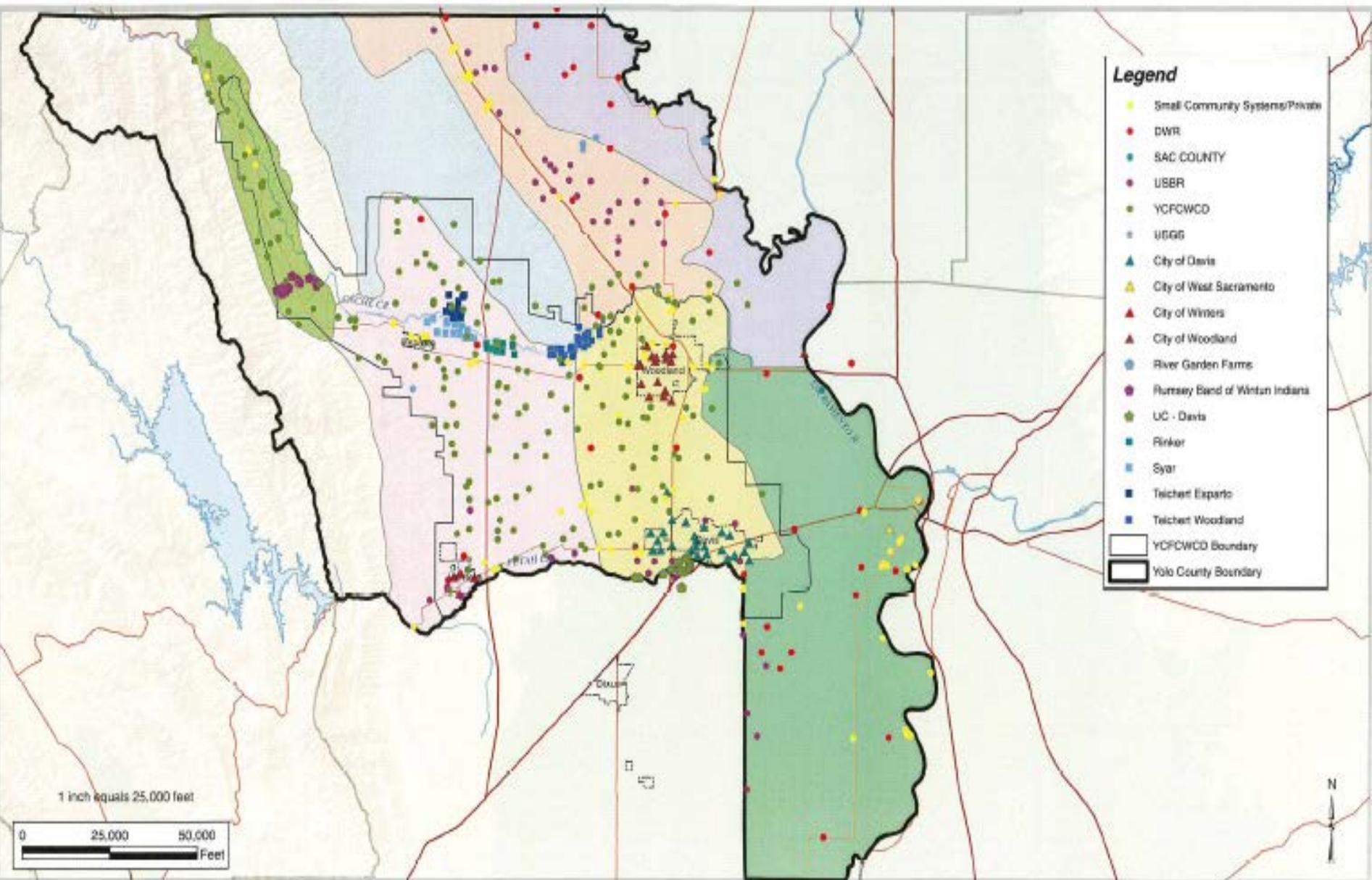


IRWMP Foundational Actions

Integrated Regional Water Management Plan

- **Groundwater Monitoring**
- **Surface Water Monitoring**
- **Subsidence Monitoring**
- **Groundwater Modeling**
- **WEAP Climate Change Model**
- **Environmental and Aquatic Habitat**
- **Topographic Mapping (LiDAR)**

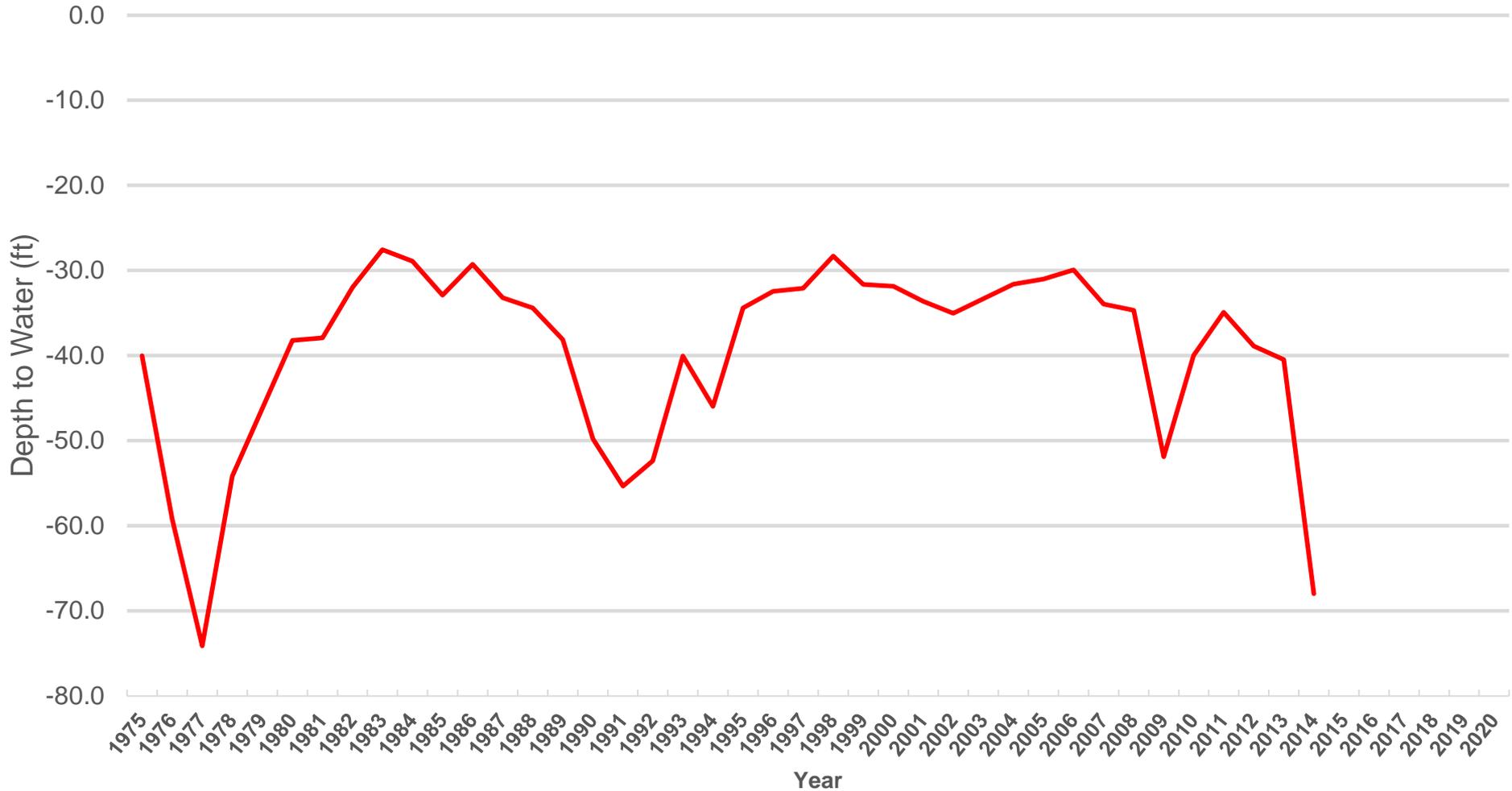
- **Water Resource Information Database**
- **SCADA Network Enhancement**



Yolo County Groundwater Monitoring Program

Average Depth to Groundwater in Yolo County (ft)

(average of annual maximum depth to water by well)



Program at a Glance

- Permit obtained after 2 months of dialogue with staff
- Respect senior water rights and no damage to the environment
- “Pilot Program”
- Permit Conditions
 - 50 cfs at Yolo Gauge
 - Delta in Excess Condition
 - “Basis of Right”
 - Reporting of Diversions and Use
- Diverted 11,006 AF from February 4-April 15
- Program considered very successful

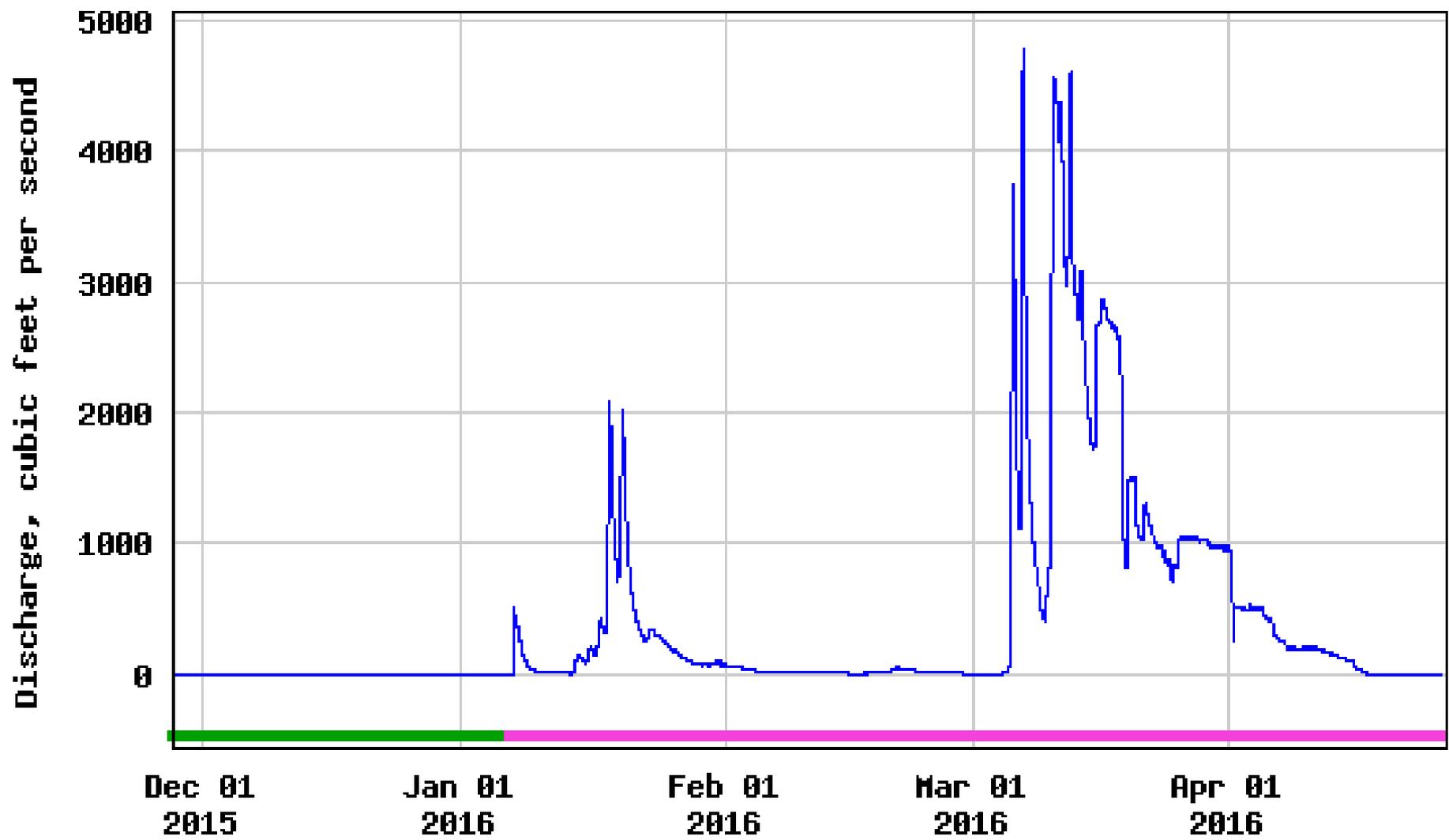
Demonstration of Beneficial Use

- How can a diverter, who is not the party consuming the water, demonstrate the beneficial use?
- How does an applicant who does not have a groundwater model or a monitoring system in place demonstrate beneficial use?
- How may a diverter identify and report the water that is being extracted under a temporary permit versus another basis of right?
- Should there be a different level of accounting based on the end use of the water or any other aquifer characteristics?

Expedited Processing, Water Availability & Thresholds for Diversions

- Should there be an expedited process for diversion of higher flows versus available flows?
- What approaches could be used to determine the availability of excess stream flow for a project?
- How may thresholds be determined to differentiate high versus available flows?
- How could “channel forming” flows be protected?

USGS 11452500 CACHE C A YOLO CA



— Discharge
— Period of approved data
— Period of provisional data

Graph courtesy of the U.S. Geological Survey

Lessons Learned

- Have a robust monitoring system
- Know the landscape and hydrology – each watershed is unique
- Make outreach a component of the plan
- Optimize the system while balancing objectives
 - automatic gates
 - construction activities
 - debris build up
 - avoid diverting sediment
- Maximize flexibility to achieve sustainability





Thank You

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