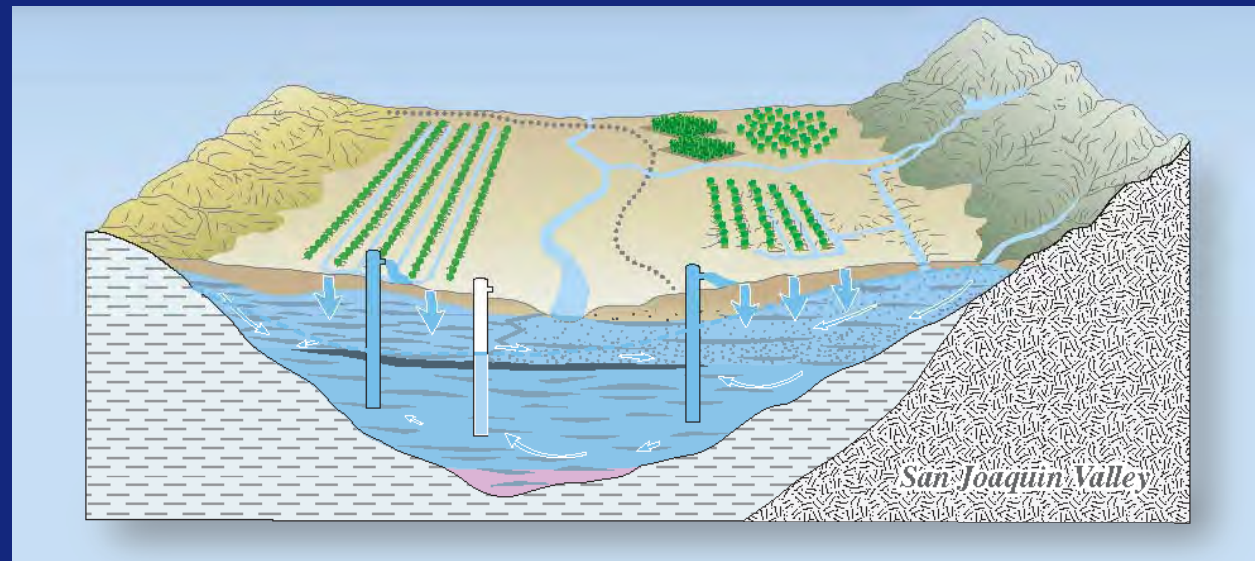
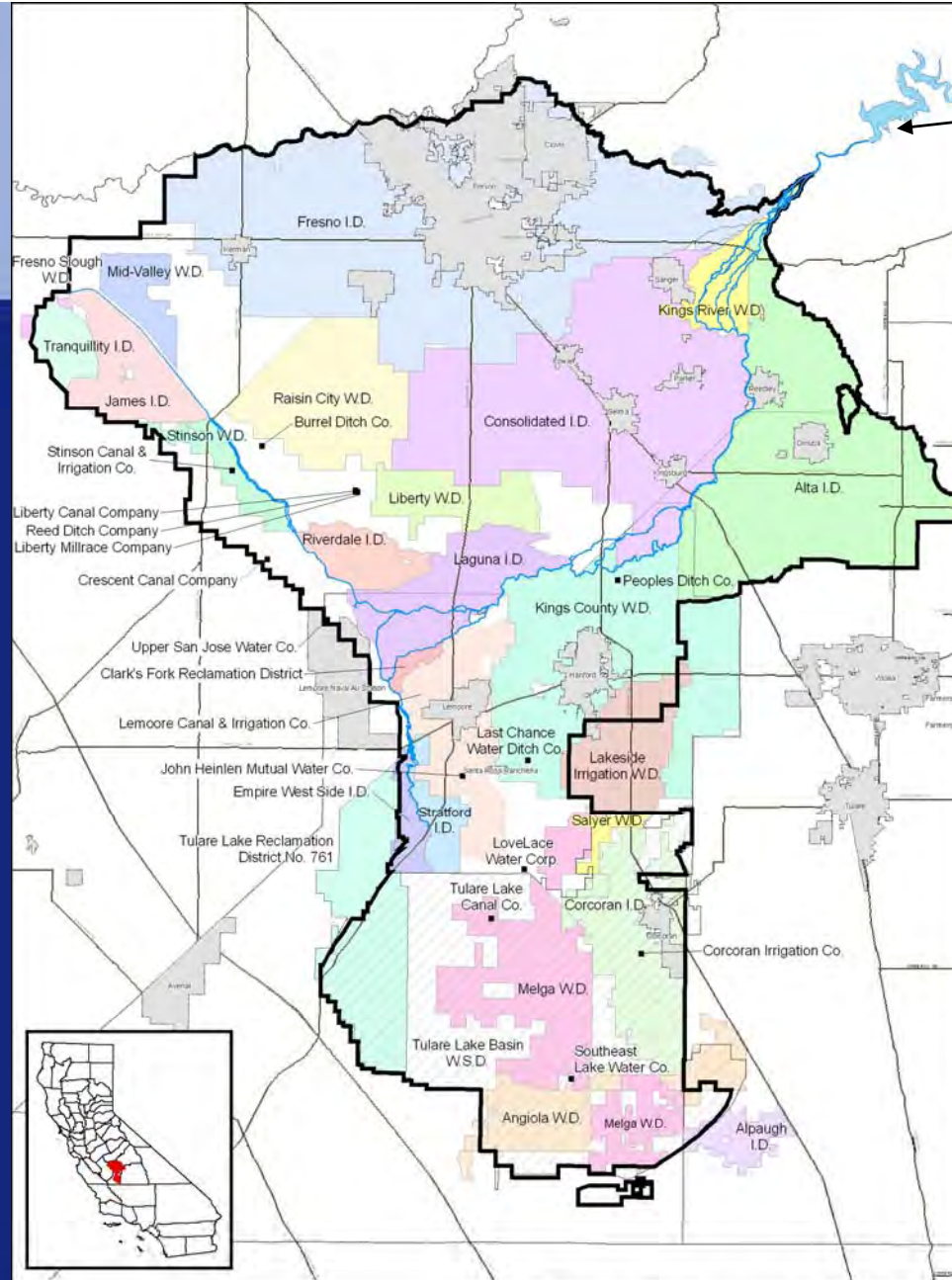


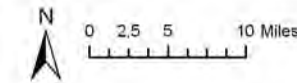
# Groundwater Issues



**Kings River Conservation District**  
**David Orth**  
**General Manager**



Pine Flat Dam and Reservoir



Kings River Conservation District  
Districts and Agencies

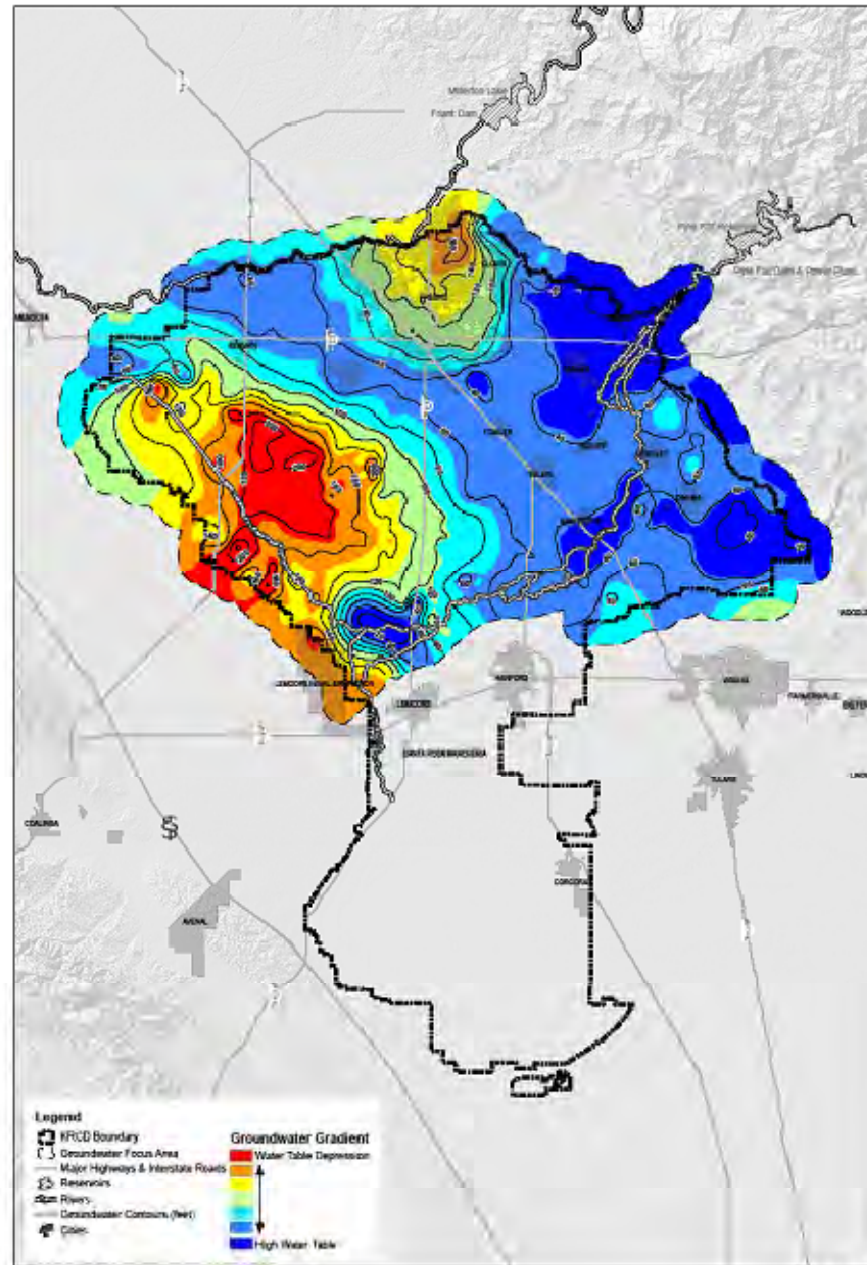
Figure 1

M:\PROJECTS\SRV\PM\Del\One figure\Fig 1 KRC D with Districts and Agencies.mxd - 6/2/2009 8:10:52 AM



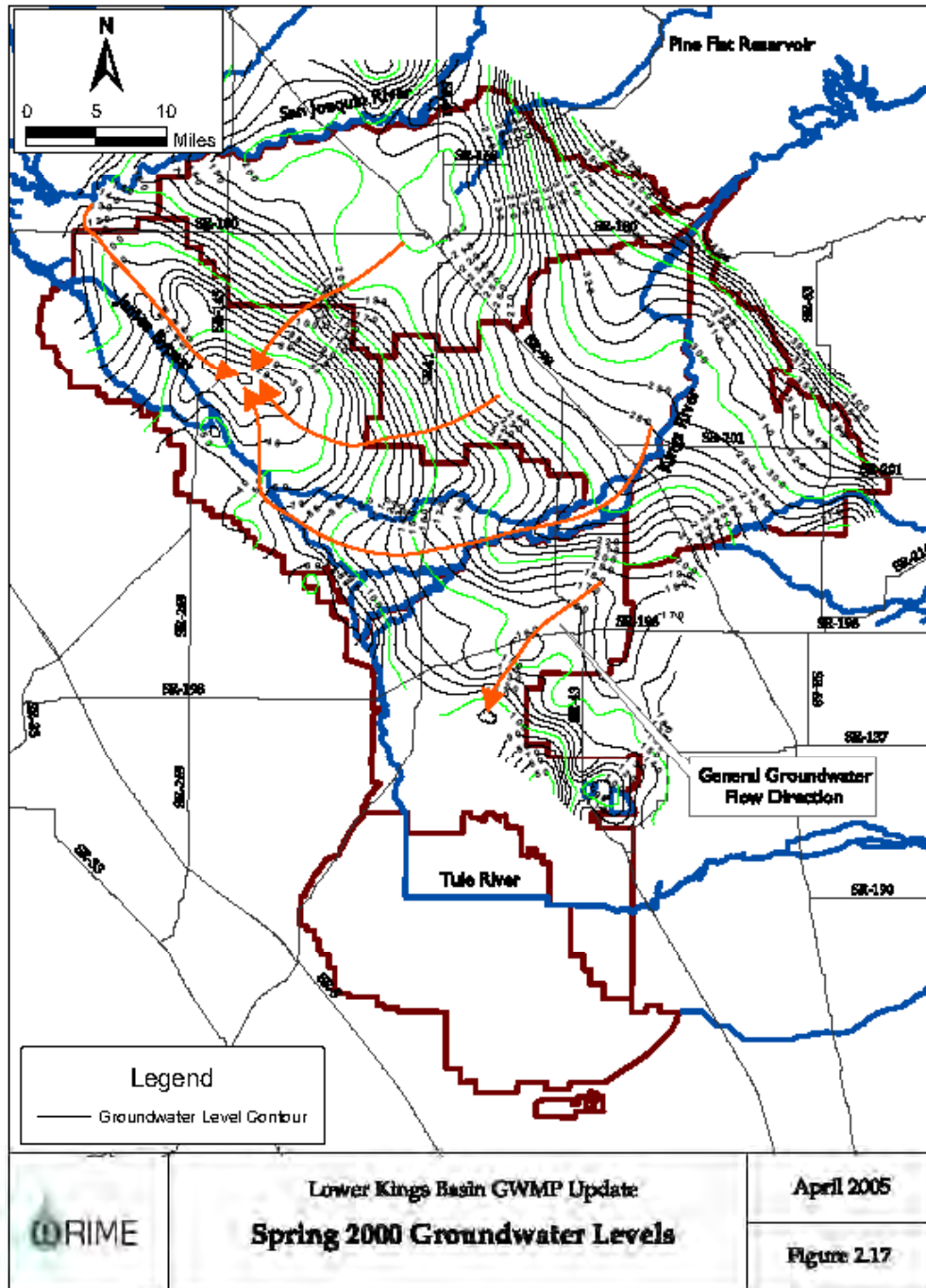
# KRCDD Role in GW Management

- Assist Local Agencies in developing AB3030 and SB1938 GWMP's
- Developed and Implementing Coordinated GWMP for Area within KRCDD Service area
- Developed and Implementing Upper Kings IRWMP
- Periodic Reporting of GW Elevations
- Lead Role in Irrigated Lands Regulatory Program



**Figure 4**  
Depth to Groundwater  
Spring 2006

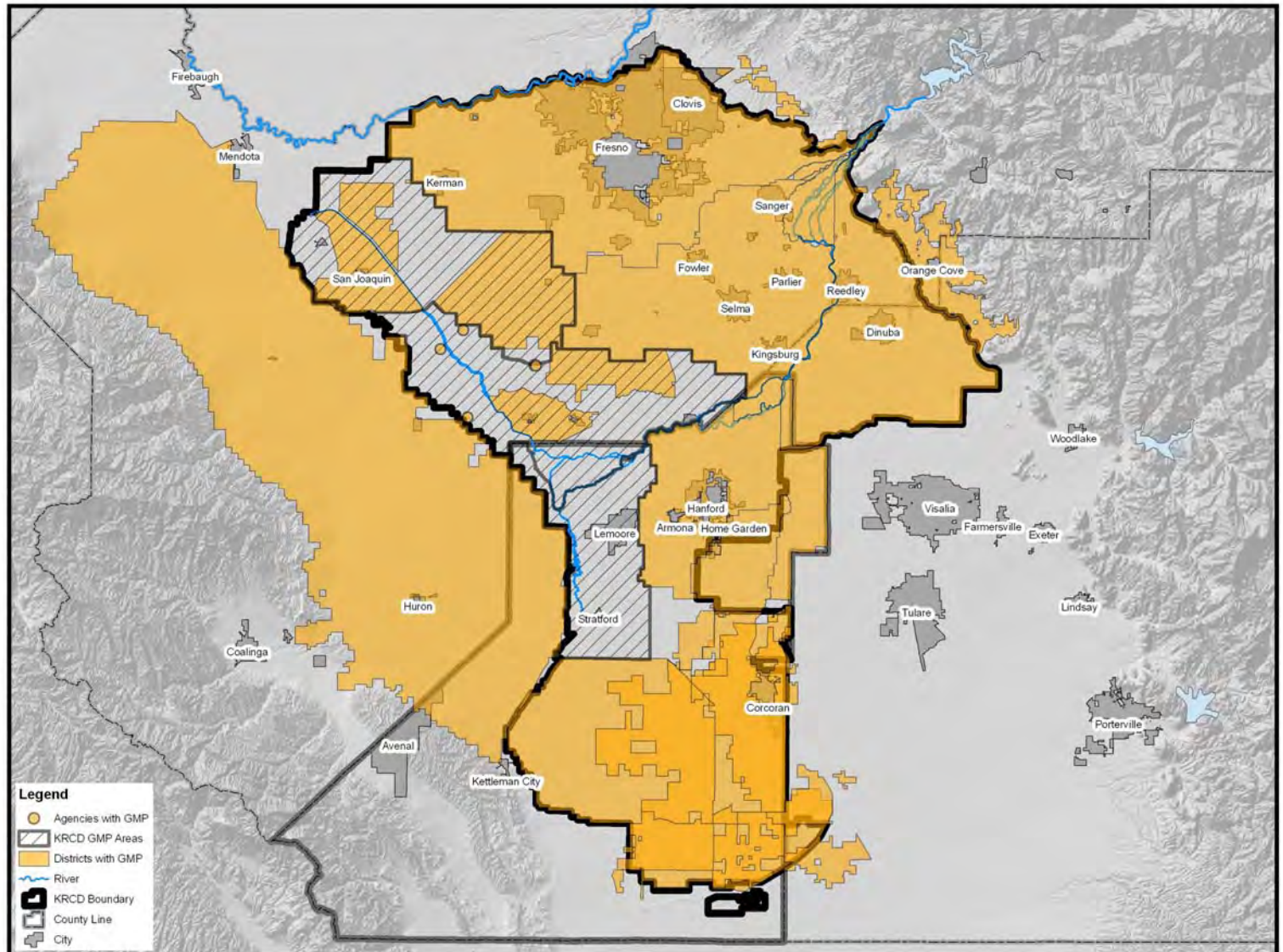
# Depth to Groundwater Spring 2006



# Kings Basin Groundwater Flow Patterns



# Groundwater Management Plans in the Region





# SB1938 GW Management Plan Requirements

- Public Process
- Establish Basin Management Objectives
- Monitor for Quantity, Quality, Subsidence and Surface – Groundwater relationships
- Implement certain management components (recharge, conjunctive use, wellhead protection, etc)

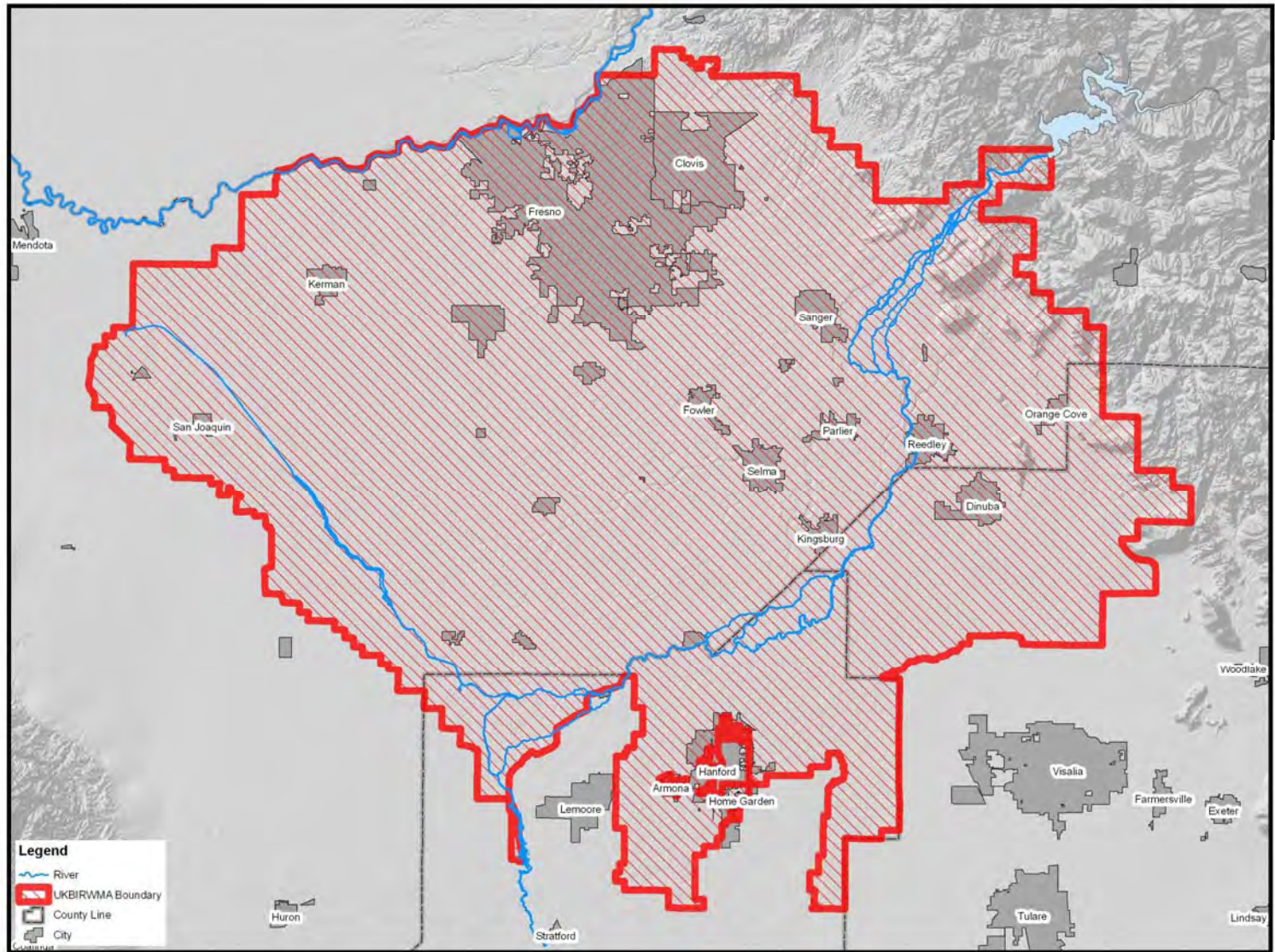


# Upper Kings Water Forum

- Formation of Basin Advisory Panel in 2001
- Creation of the “Forum” in 2004
- Supported by DWR
- Development of IRWMP
- Development of Interactive GW Model
- Adoption of IRWMP in 2007
- Formation of JPA in 2009



# Map of Upper Kings IRWMP



# Forum Membership is Diverse

Kings River Conservation District

Alta Irrigation District

Consolidated Irrigation District

Fresno Irrigation District

Kings River Water Association

Raisin City Water District

Fresno Audubon Society

California Native Plant Society

Kings River Fisheries Management Program Public  
Advisory Group

California Water Institute

Department of Water Resources

Center for Collaborative Policy

California Department of Fish & Game

Regional Water Quality Control Board

**Kings County Water District**

Kings River Conservancy

Self-Help Enterprises

City of Clovis

City of Kingsburg

City of Reedley

City of Sanger

City of Selma

City of Kerman

City of Parlier

City of Fowler

City of Fresno

City of Dinuba

County of Fresno

**County of Kings**

County of Tulare

El Rio Reyes Conservation Trust

Sierra Club

Tulare Basin Wildlife Partners



# Upper Kings IRWMP

- Project Priorities
  - Increase water supply reliability
  - Improve and protect water quality
  - Provide additional flood protection
  - Protect and enhance aquatic ecosystems and wildlife habitat



# Groundwater Projects

- Prop 13 - \$7.5 million
  - Fresno ID Waldron Pond
  - Alta ID/Dinuba ponding basins
- Prop 50 - \$6 million
  - Fresno ID recharge facilities/City of Fresno water meters
  - Alta ID groundwater banking facility – includes benefits to Cutler/Orosi CSD



# SB7x 6

## LEGISLATIVE INTENT

- Elevations in all groundwater basins and sub basins (as defined in Bulletin 118) are regularly and systematically monitoring locally
- monitoring information be made readily and widely available
- DWR continues to maintain current network of monitoring wells (elevation and water quality)
- DWR continues to coordinate monitoring with local entities



# Monitoring

- DWR to work cooperatively with each entity to determine manner in which elevation information is reported
- DWR to defer to existing programs if such programs provide seasonal and long-term trends
- DWR must collaborate with State Dept of Public Health – confidentiality



# Review

- DWR may recommend improvements to existing programs
- DWR may not require additional monitoring wells unless funds are provided
- On or before 1/1/12, DWR shall prioritize basins
  - Prioritization criteria includes Overdraft, subsidence, saline intrusion, other water quality degradation



# DWR Action for Unmonitored Basins

- Contact all well owners
- Seek to form any of the following
  - GWMP
  - IRWMP
  - Monitoring Association
  - County monitoring
- If none, then DWR monitors



# Investigation

- DWR in conjunction with other agencies shall conduct investigation of state's groundwater basins
  - Geological and hydrological conditions
  - Political boundaries
  - Existing patterns of pumping and recharge
  - Identify basins subject to critical conditions of overdraft

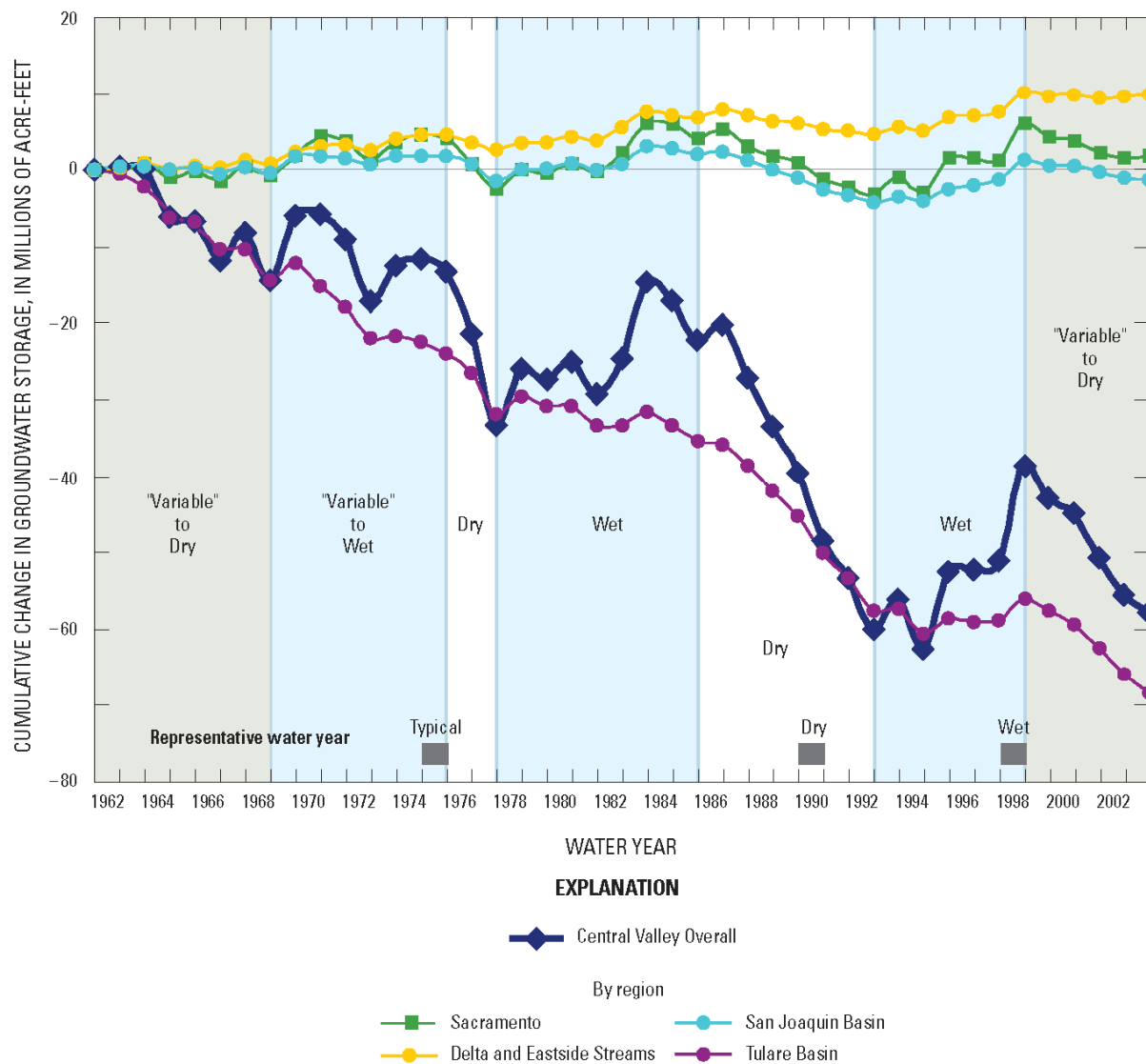


# GW Quality

- SB1938 GWMP Requirements
- Irrigated Lands Regulatory Program
- CVRWQCB Groundwater Strategy



# Cumulative Annual Changes in Aquifer-System Storage (1962-2002)





- A GLIMPSE OF OUR FUTURE



# More Collaboration is Needed

- Supply side management unlikely to support future water demands
- Better integration with land use planning
- Ag/Urban/Environmental needs assessment and prioritization
- Increased emphasis on conservation, measurement, efficiency



# In Conclusion

- Sustainability can be reached IF:
  - Surface supply reliability is enhanced
  - Sizable investment/increase in recharge
  - Aggressive conservation
  - Aggressive recycling
  - Support from land use community