

Sierra Valley Basin  
Public Workshop  
October 25, 2018  
Sierra Valley Christian Church

*Sustainable Groundwater  
Management Act (SGMA)  
Implementation*

Presentation by:  
Tania Carlone  
Senior Associate  
Consensus Building Institute (CBI)

# Meeting Overview



- Welcoming Remarks- Supervisors Michael Sanchez and Paul Roen
- Agenda Overview & Introductions
- Sustainable Groundwater Management Act (SGMA) Background
- Sierra Valley Groundwater Basin Overview
- Groundwater Sustainability Agency Local Implementation
- Stakeholder Participation Opportunities
- Next Steps

# Facilitation Support Services (FSS) Program (DWR)



Consensus Building Institute (CBI) facilitator, Tania Carlone, provided to the basin through DWR FSS program funds to assist with:

- Agency coordination
- Groundwater planning requirements
- Stakeholder Communications & Engagement

CBI is a non-profit organization that provides third party, neutral facilitation and mediation services.

# SGMA Background

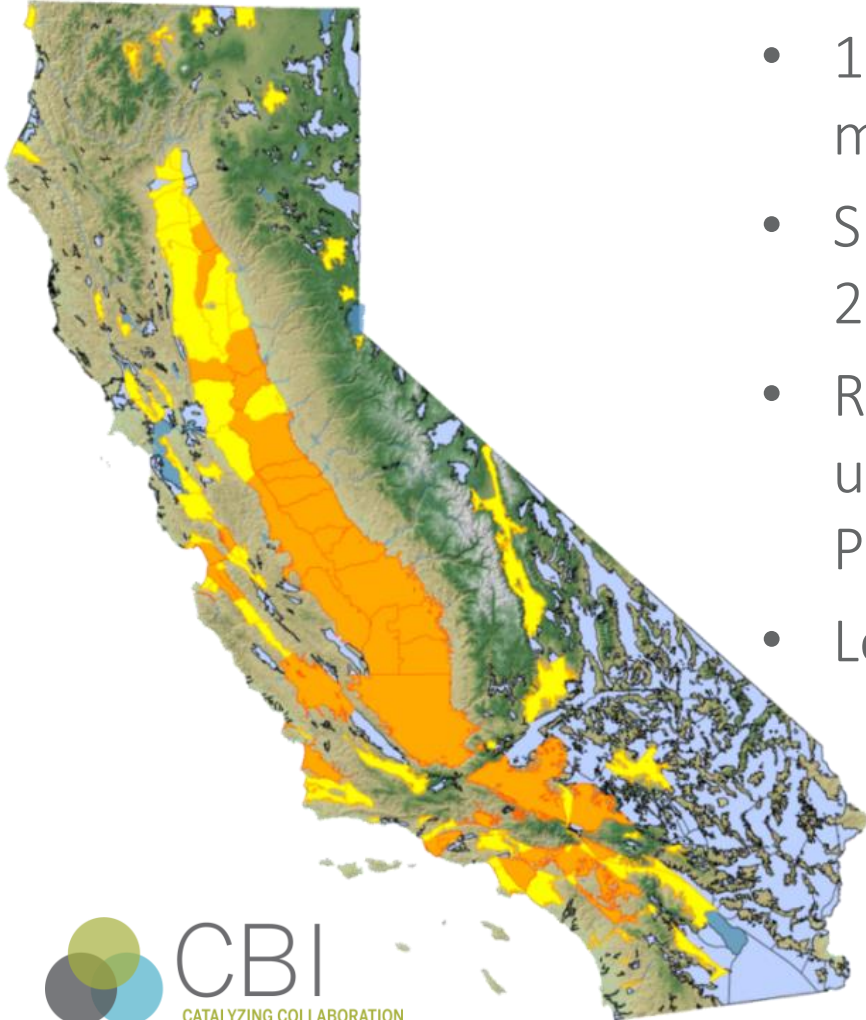


- The Sustainable Groundwater Management Act (SGMA) is a package of three bills (AB 1739, SB 1168, SB 1319) that was signed into law in 2014.

## Sustainability Defined

*The management and use of groundwater in a manner that can be maintained during the planning and implementation horizon (50 years) without causing undesirable results.*

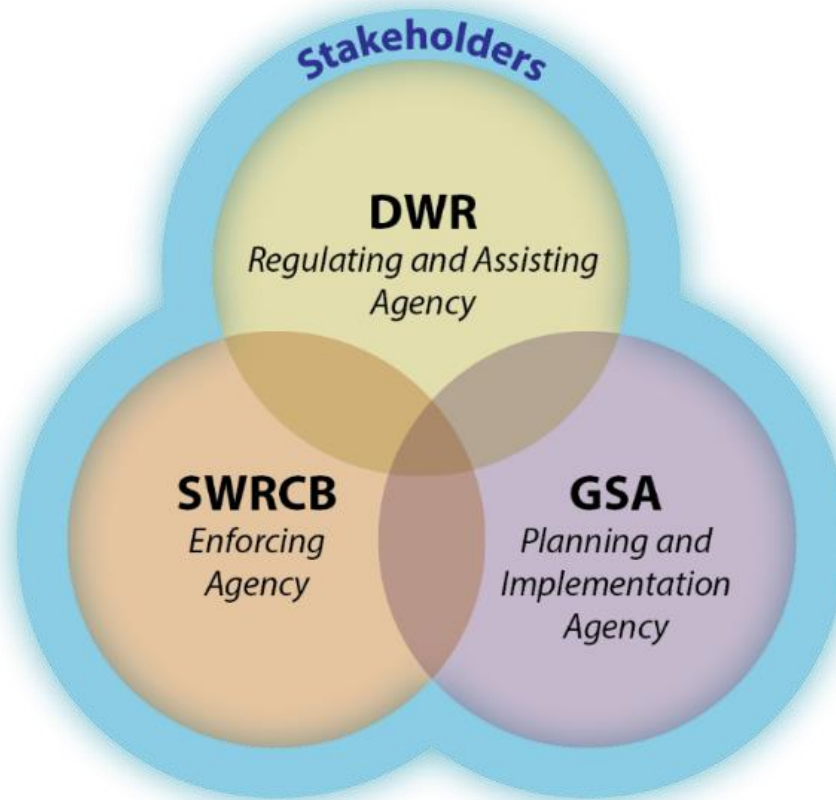
# SGMA Background



- 127 groundwater basins statewide must comply
- Sustainability must be achieved within 20 years
- Requirement to manage groundwater under a Groundwater Sustainability Plan (GSP)
- Local control is a hallmark of SGMA

# SGMA Background

## *Roles and Responsibilities*



# SGMA Background

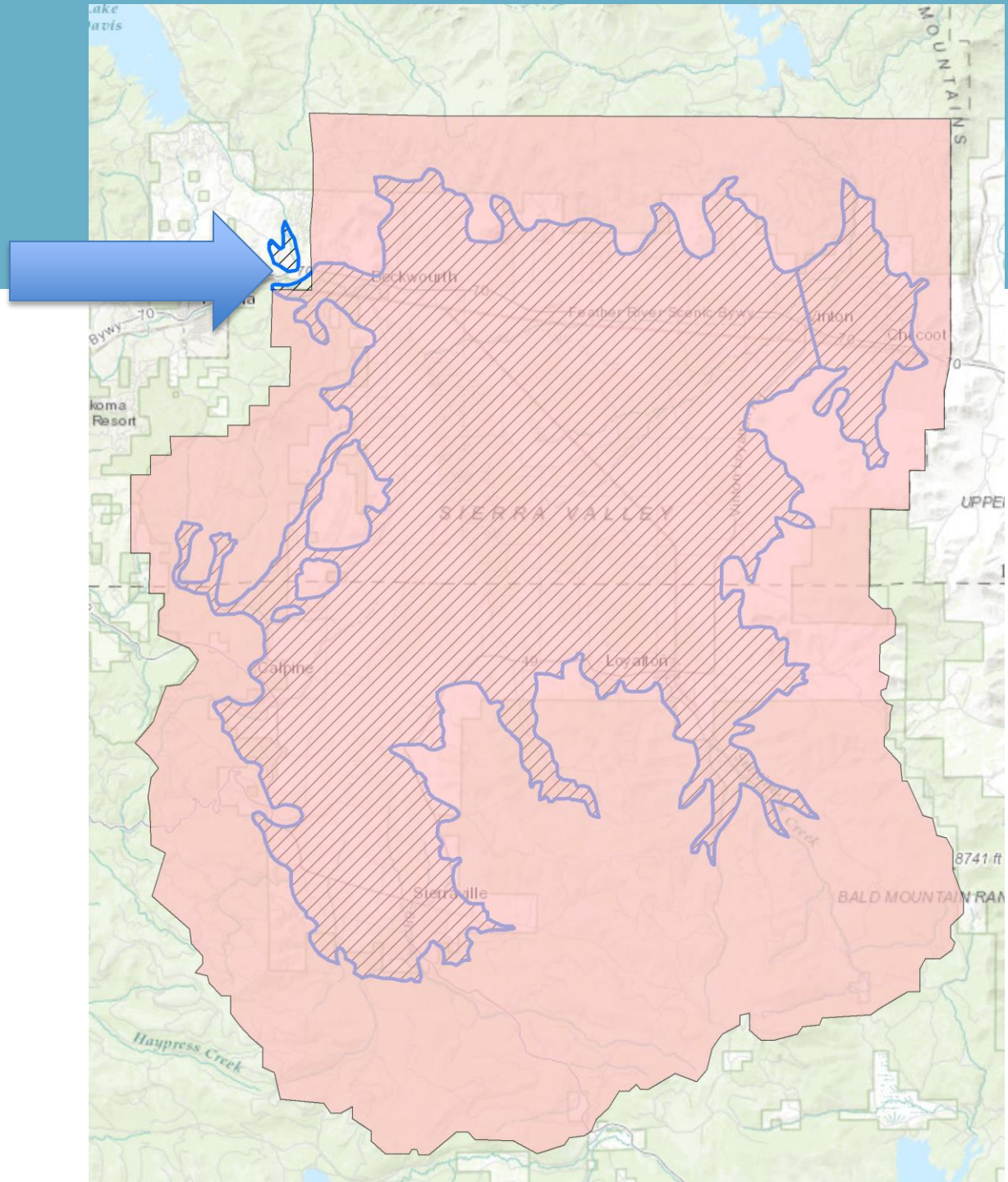
## *Groundwater Sustainability Agency (GSA) Eligibility*

- Any public agency with water supply, water management or land use responsibilities.
- GSA(s) must develop and implement a GSP to meet the locally defined sustainability goal and to engage stakeholders.
- Two GSAs in Sierra Valley Basin: Sierra Valley Groundwater Management District and Plumas County GSA for small area of the Sierra Valley Basin outside the jurisdiction of the District.

# SGMA Background

## Basin Map

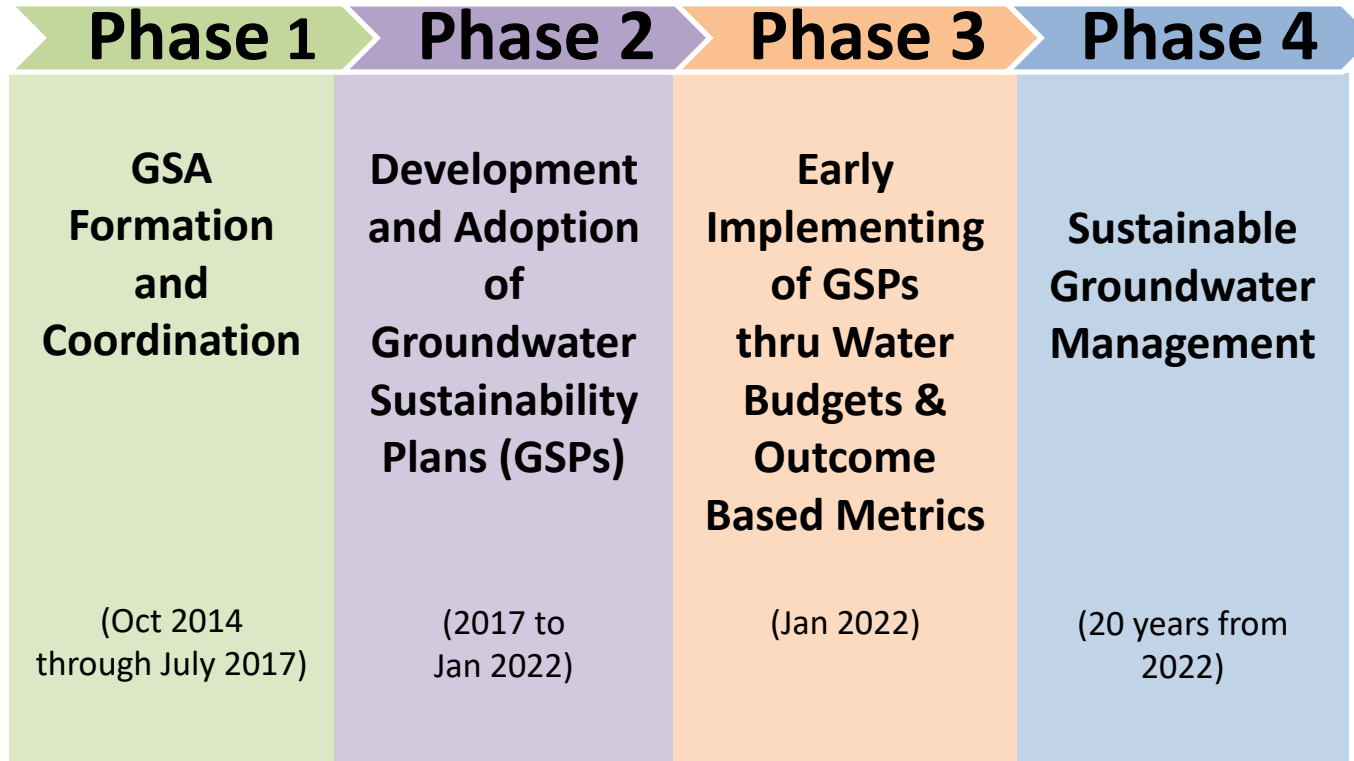
- Pink= Sierra Valley Groundwater Management District boundary
- Cross-Hatch= Sierra Valley Groundwater Basin as determined by the State of California
- Arrow= Small area of Basin in Plumas County but outside of the Groundwater Management District's Jurisdiction





# SGMA Background

## *SGMA Implementation Phases*



# SGMA Background

## *GSP Contents*

### 1. Administrative Information

§354.4. General Information

§354.6. Agency Information

§354.8. Description of Plan Area

§354.10. Notice & Communication

### 2. Basin Setting

- §354.14. Hydrogeologic Conceptual Model
- §354.16. Groundwater Conditions
- §354.18. Water Budget
- §354.20. Management Areas

### 3. Sustainable Management Criteria

- §354.24. Sustainability Goal
- §354.26. Undesirable Results
- §354.28. Minimum Thresholds
- §354.30. Measurable Objectives

### 4. Monitoring Networks

- §354.34. Monitoring Network
- §354.36. Representative Monitoring
- §354.38. Assessment & Improvement
- §354.40. Reporting Monitoring Data to the Department

### 5. Projects and Management Actions

- §354.44. Projects & Management Actions

# SGMA Background

## *354.10 Notice & Communications Requirements*



Each Plan shall include a summary of information relating to notification and communication by the Agency with other agencies and interested parties including the following:

- (a) A description of **beneficial uses and users of groundwater** in the basin potentially affected by the use of groundwater in the basin and nature of **consultation** with those parties.
- (b) A list of **public meetings** at which the Plan was discussed or considered by agency

# SGMA Background

## *354.10 Notice & Communications Requirements*



(c ) **Comments** regarding the Plan received by the Agency and a summary of any **responses** by the Agency.

(d) A communication section of the Plan that includes:

- An explanation of the Agency's **decision-making process**.
- Identification of **opportunities for public engagement** and a discussion of how public input and response will be used.
- A description of how the Agency **encourages the active involvement** of diverse groups within the basin.
- The method the Agency follows to **inform** the public.

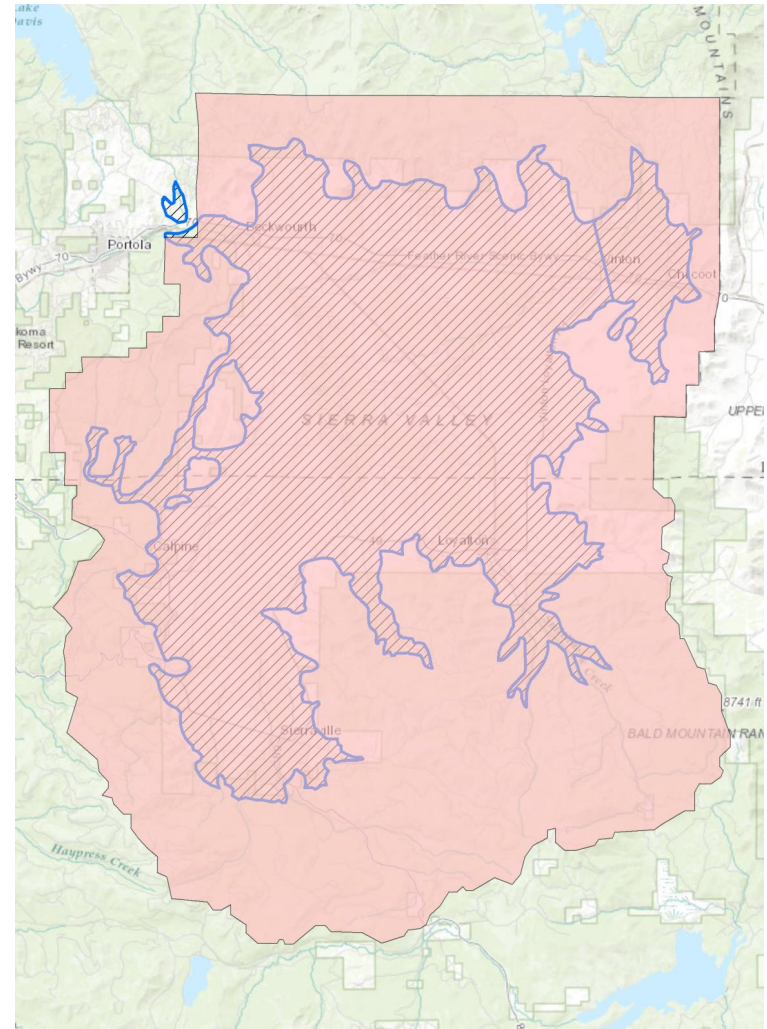


# Questions?

# Sierra Valley Basin Conditions Brief Overview

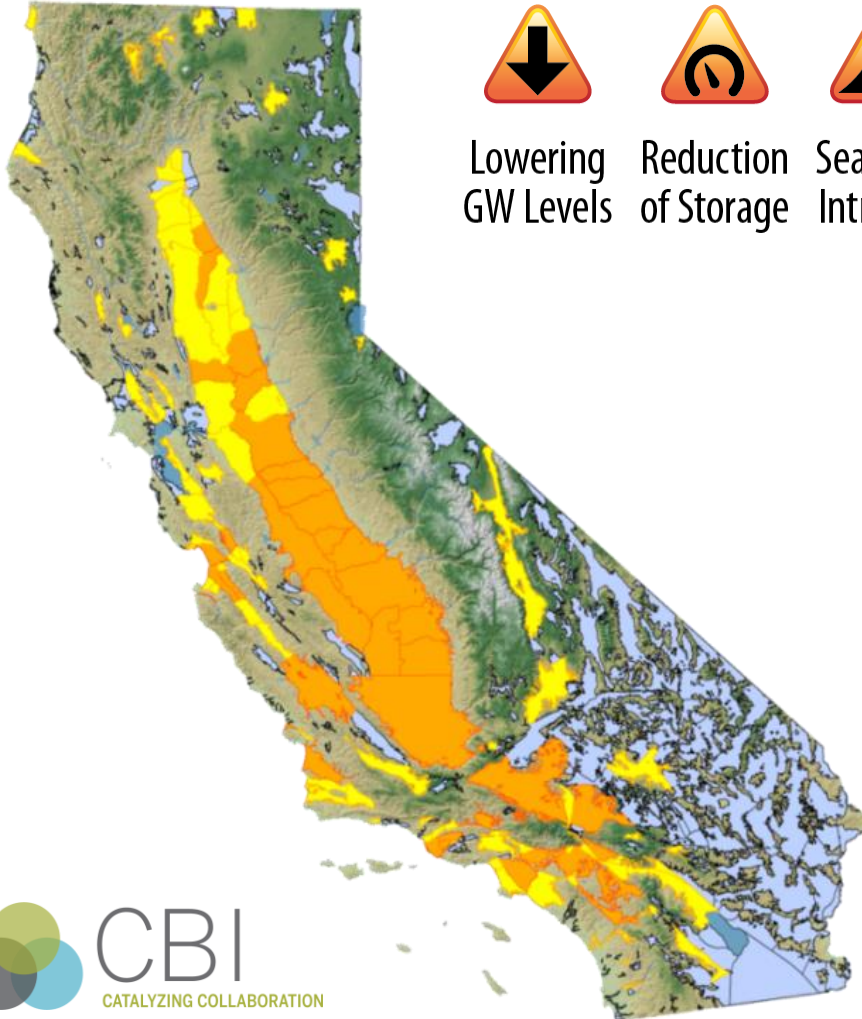
## *Introduction*

- Overview by:  
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Graeagle, CA 96103  
530-401-0000  
[greg@hindsengineering.com](mailto:greg@hindsengineering.com)



# Sierra Valley Basin Conditions Brief Overview

*Achieving Sustainability and Avoiding Undesirable Results*



Lowering  
GW Levels



Reduction  
of Storage



Seawater  
Intrusion



Degraded  
Quality



Land  
Subsidence



Surface Water  
Depletion



# Sierra Valley Basin Conditions Brief Overview

## *Summary of Interconnection Between Undesirable Results*



- Groundwater levels are directly impacted by pumping
- When pumping exceeds “recharge”, groundwater levels fall (known as “overdraft”)
- Extensive overdraft causes subsidence (collapse of soil structure evidenced by reduction in surface elevation)
- Subsidence is loss of storage capacity (reduced pore space)
- Overdraft causes “cone of depression” and migration of pollutants toward center of cone of depression
- Overdraft reduces quantity of water flowing from groundwater system to Feather River, affecting habitat and downstream users



# Sierra Valley Basin Conditions Brief Overview

## 1. Lowering Groundwater Levels – Pumping and Groundwater Level Monitoring

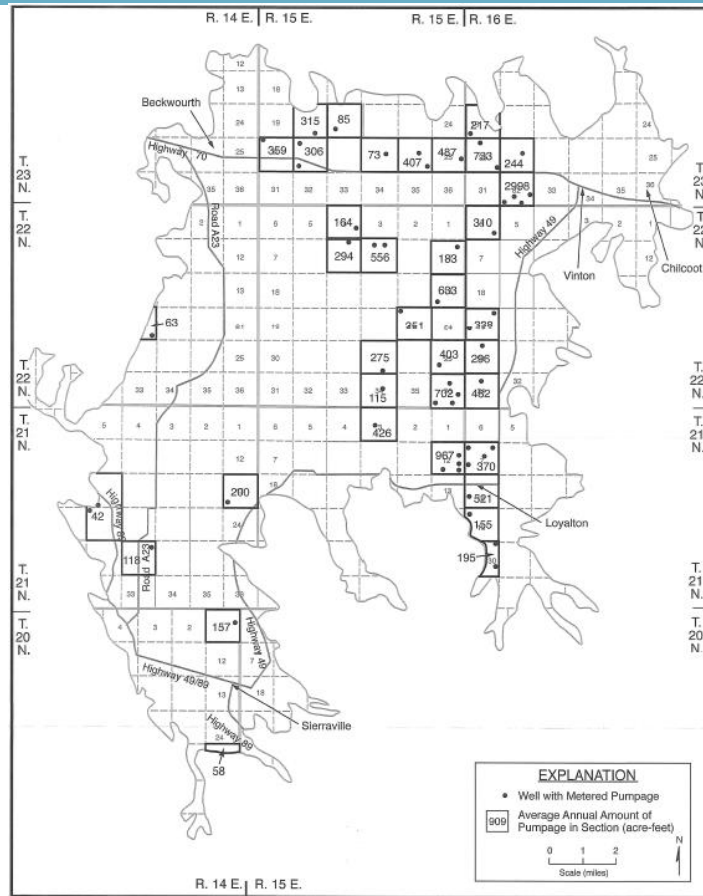


FIGURE 9 - ANNUAL METERED GROUNDWATER PUMPAGE FOR 2015

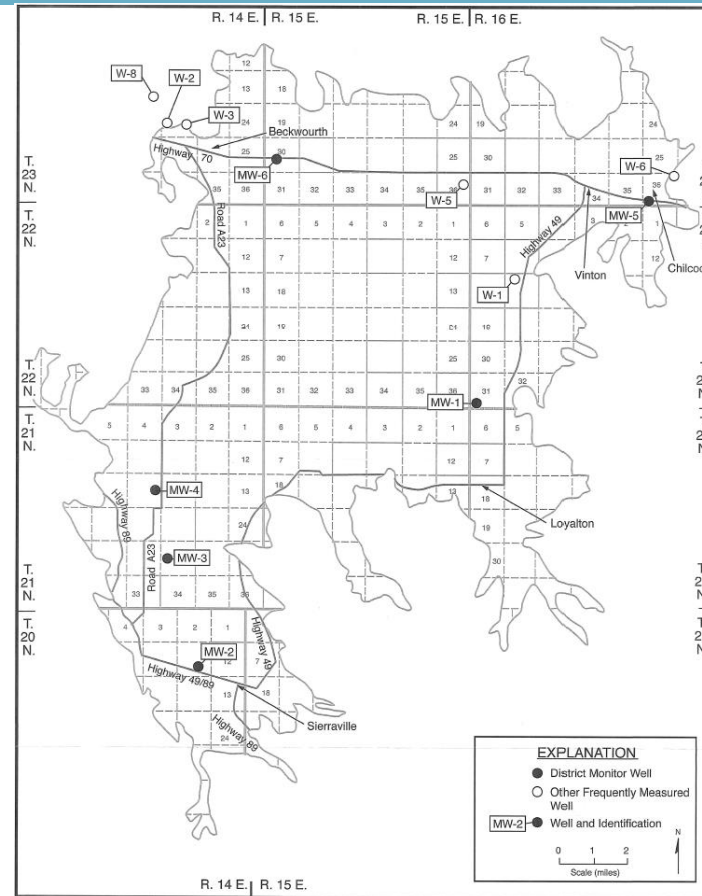


FIGURE 5 - LOCATION OF DISTRICT MONITOR WELLS AND OTHER FREQUENTLY MEASURED WELLS

# Sierra Valley Basin Conditions Brief Overview

## 1. Lowering Groundwater Levels – Loyalton Monitoring Data

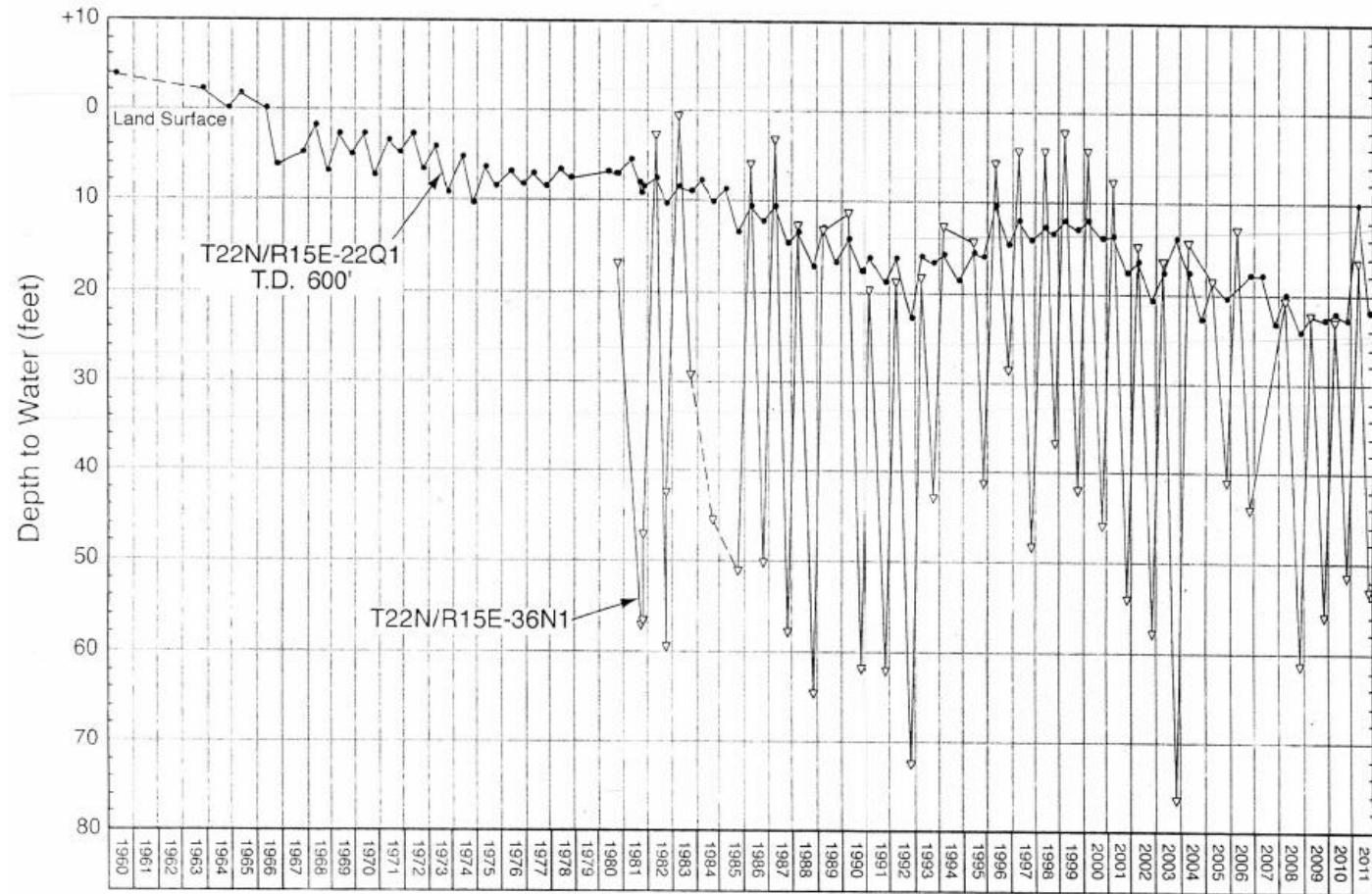


FIGURE 5- WATER-LEVEL HYDROGRAPHS FOR LOYALTON AREA

# Sierra Valley Basin Conditions Brief Overview

## 1. Lowering Groundwater Levels – Chilcoot Monitoring Data

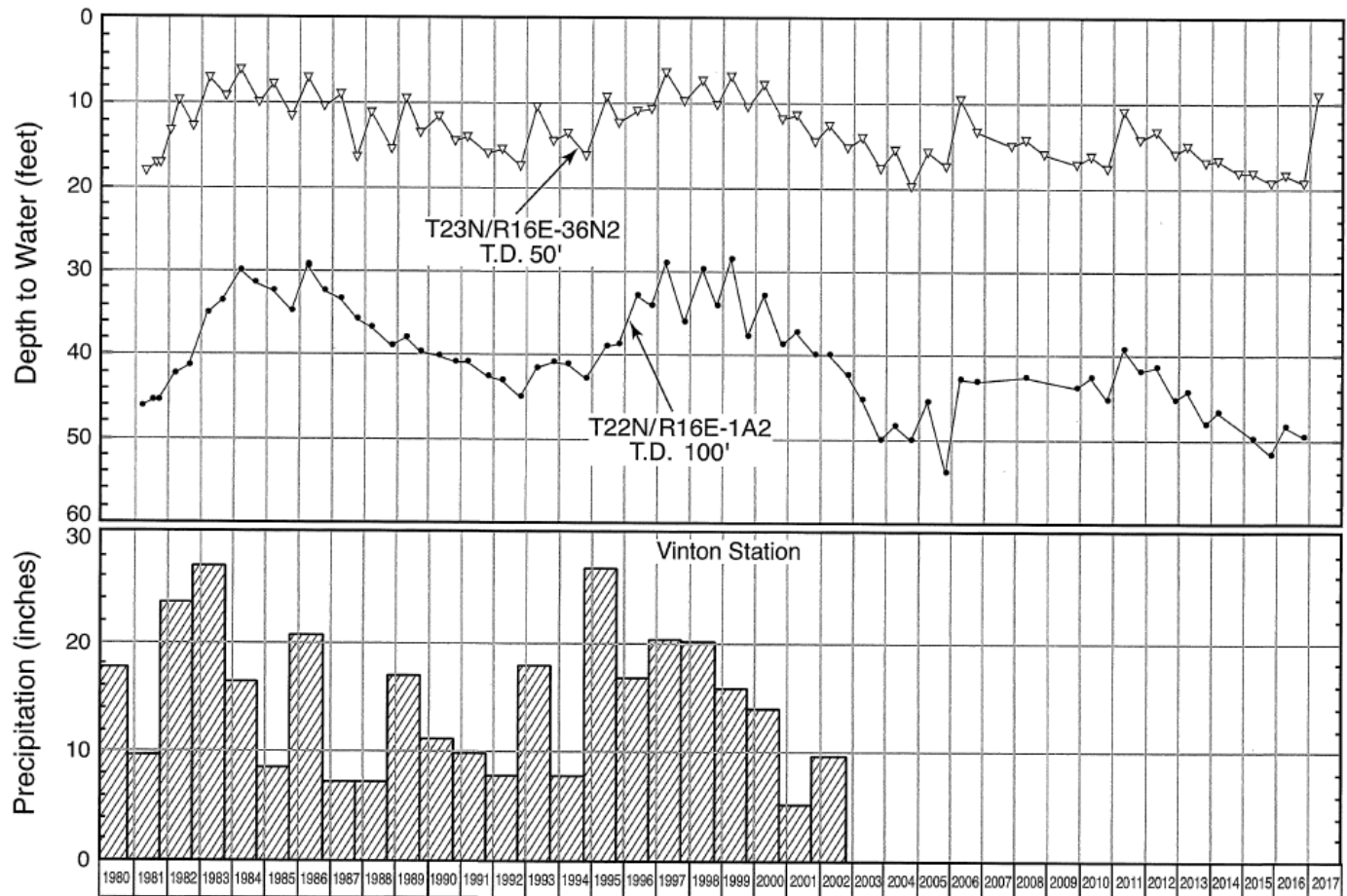


FIGURE 8 - WATER-LEVEL HYDROGRAPHS AND PRECIPITATION FOR CHILCOOT SUB-BASIN

# Sierra Valley Basin Conditions Brief Overview

## 1. Lowering Groundwater Levels – 2005 to 2016

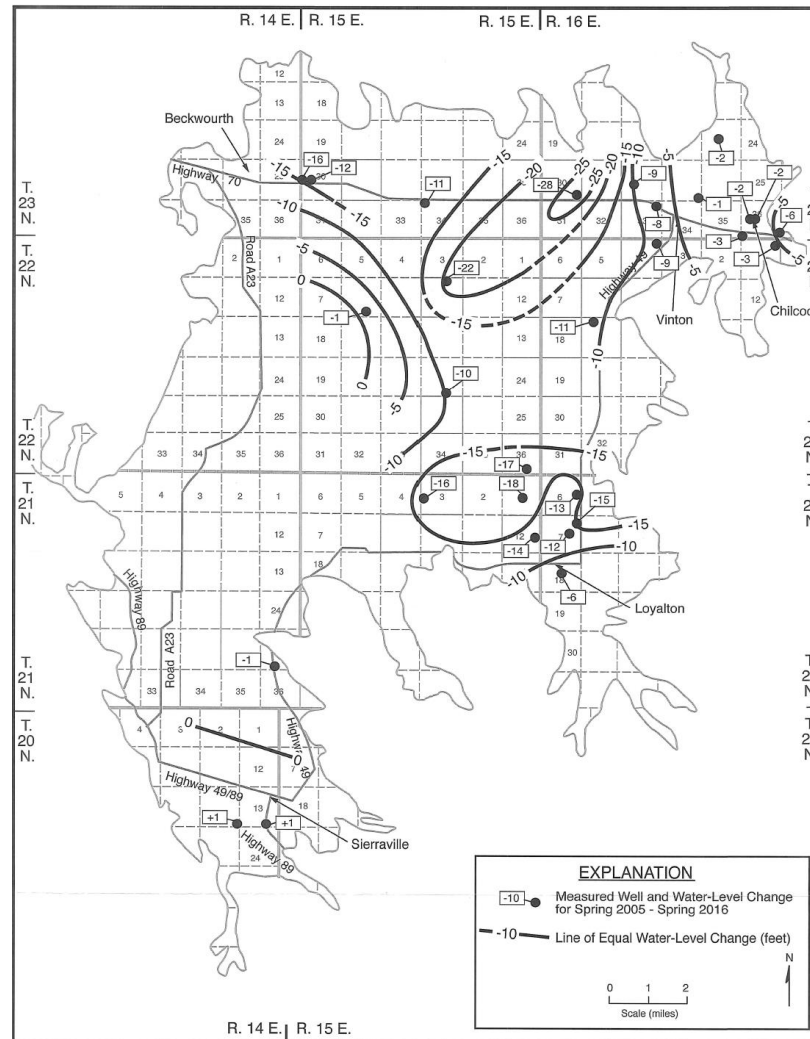


FIGURE 4 - WATER-LEVEL CHANGES FOR SPRING 2005-SPRING 2016

# Sierra Valley Basin Conditions Brief Overview

## 1. Lowering Groundwater Levels – Expanded Cone of Depression

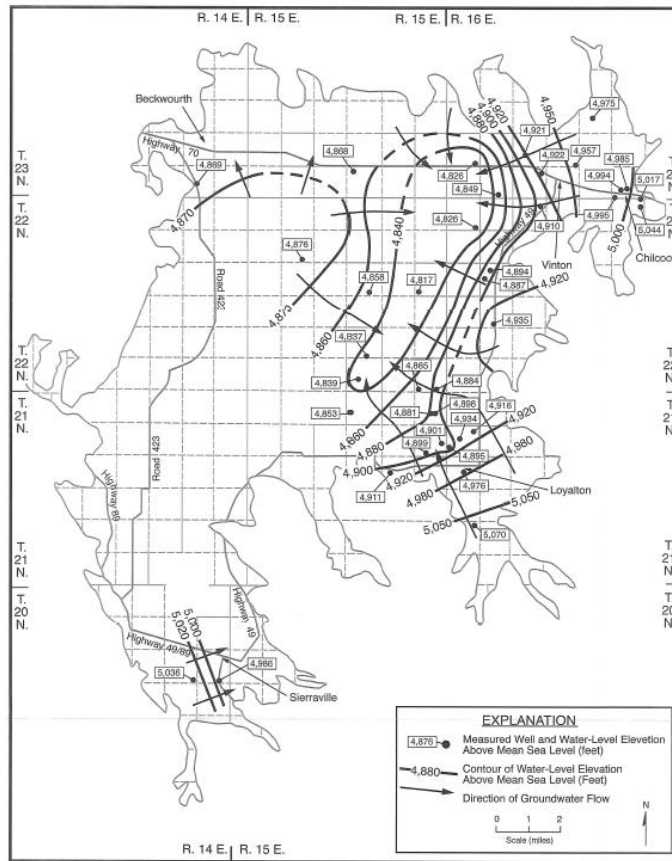


FIGURE 1 - WATER-LEVEL ELEVATIONS AND DIRECTION OF GROUNDWATER FLOW IN SPRING 2015

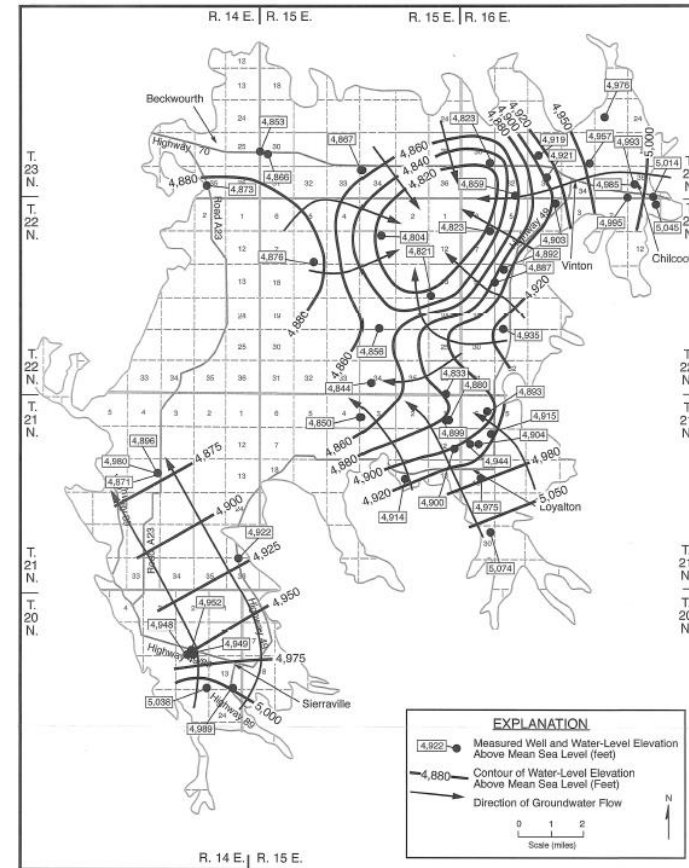
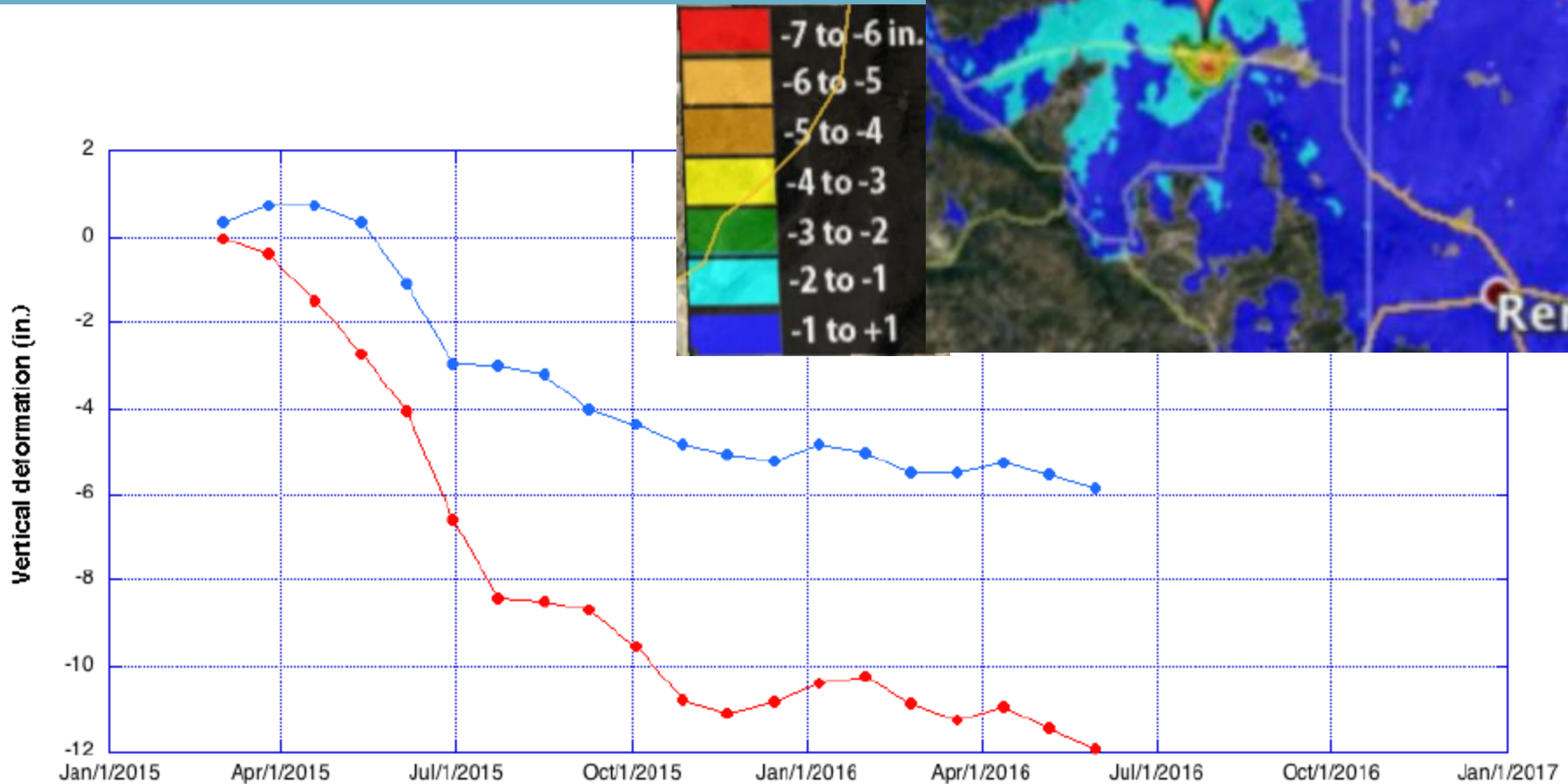


FIGURE 2 - WATER-LEVEL ELEVATIONS AND DIRECTION OF GROUNDWATER FLOW IN SPRING 2016

# Sierra Valley Basin Conditions Brief Overview

## 5. Land Subsidence



Source: Progress Report: Subsidence in California, March 2015 – September 2016. Tom G. Farr, Cathleen E. Jones, Zhen Liu. Jet Propulsion Laboratory. California Institute of Technology

# Sierra Valley Basin Conditions Brief Overview

## 1. Lowering Groundwater Levels – 2017 Recharge

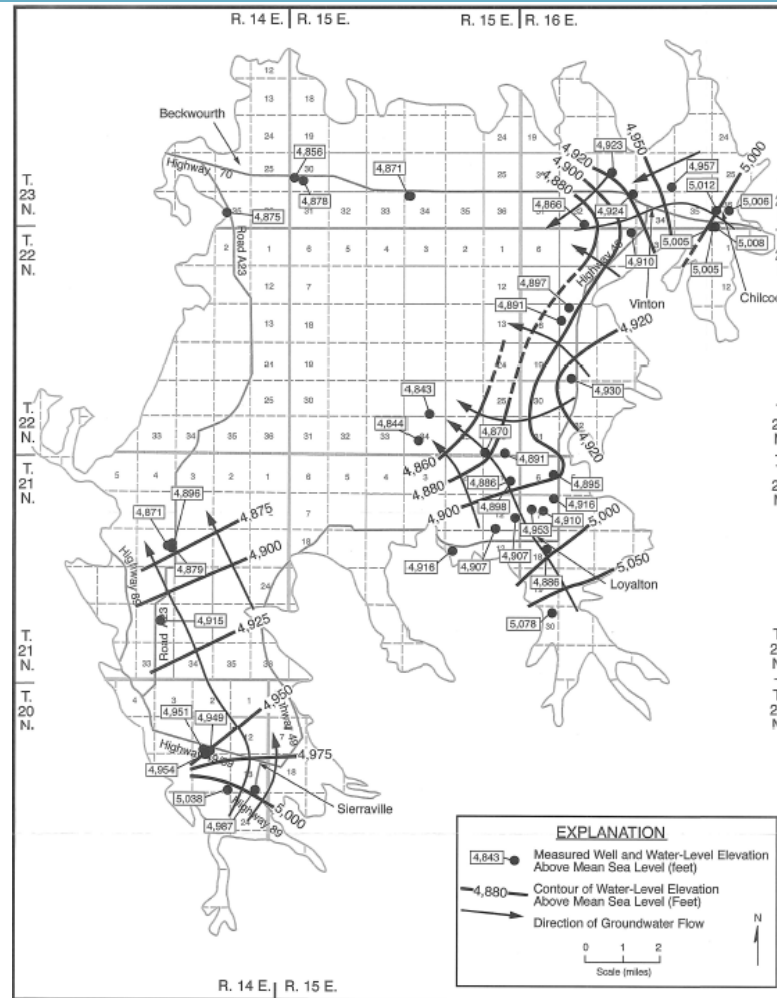
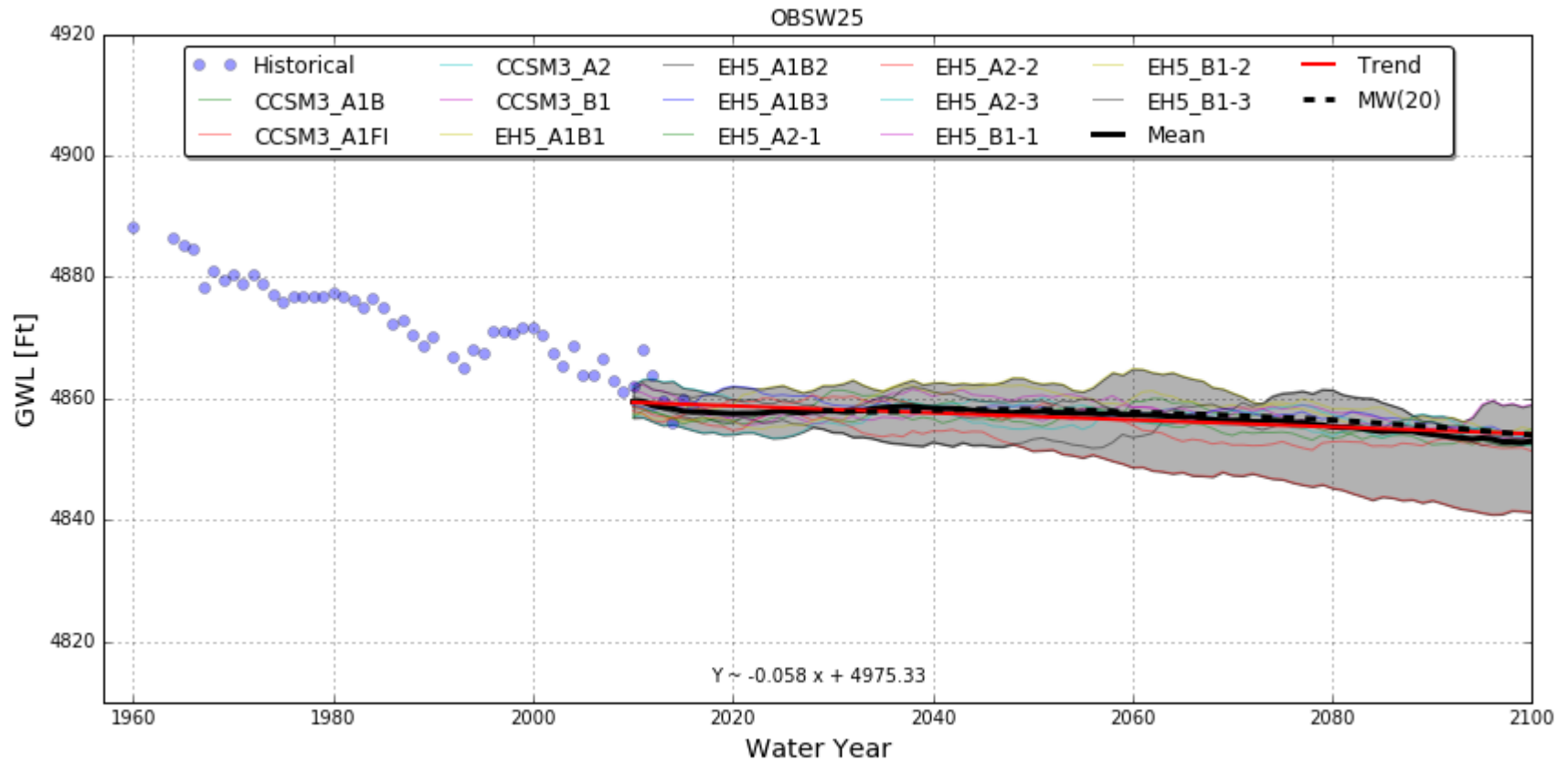


FIGURE 3 - WATER-LEVEL ELEVATIONS AND DIRECTION OF GROUNDWATER FLOW IN SPRING 2017

# Sierra Valley Basin Conditions Brief Overview

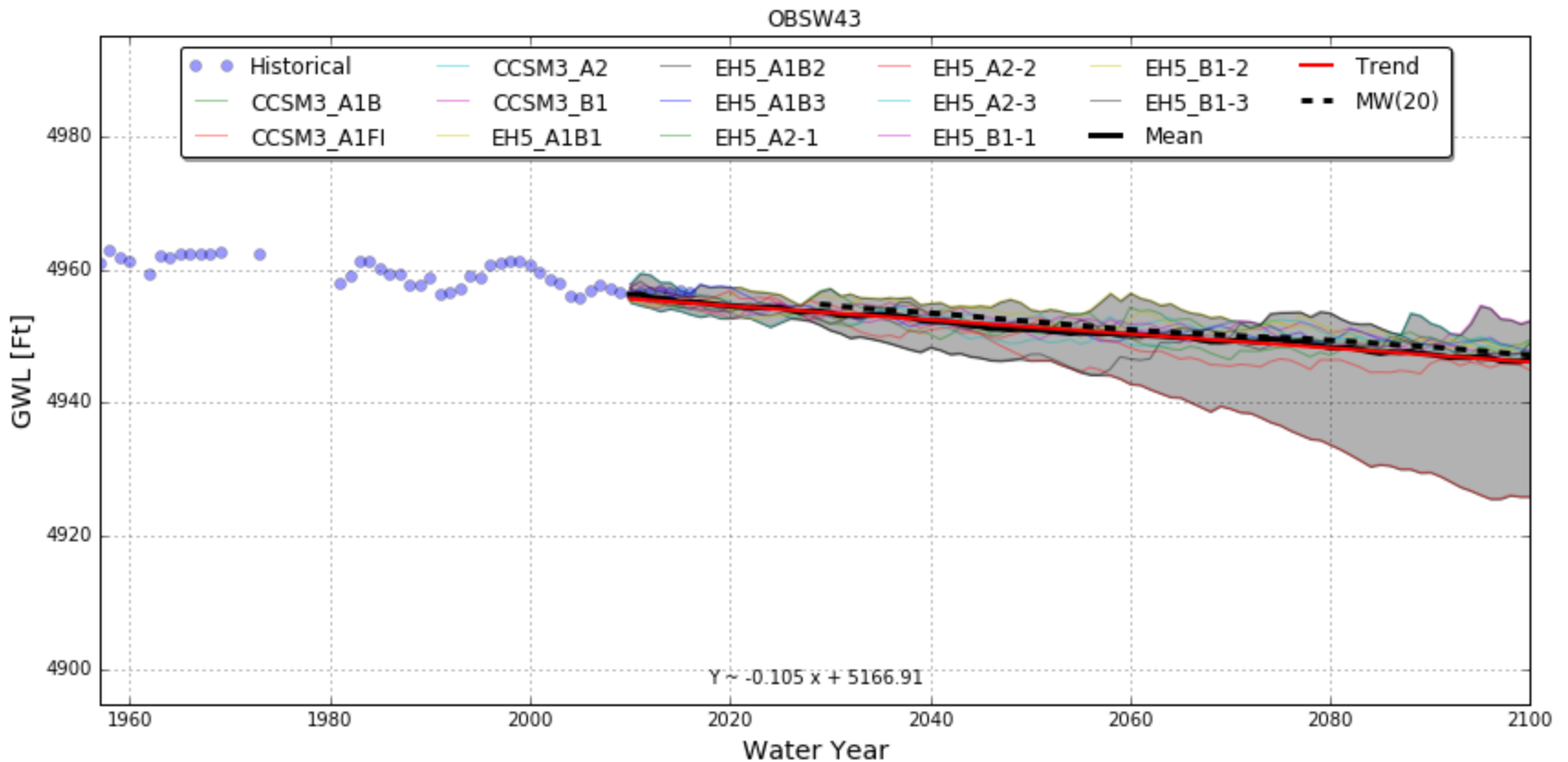
## 1. Lowering Groundwater Levels - Loyalton





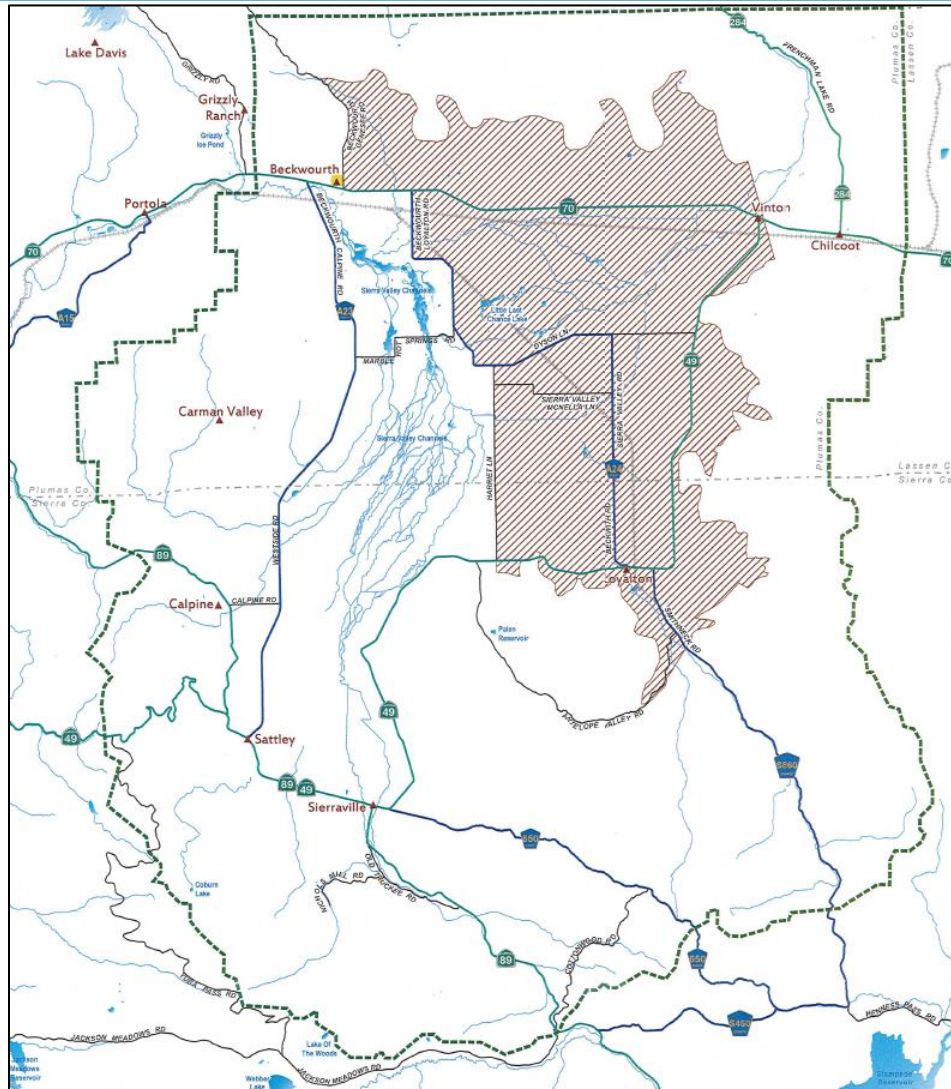
# Sierra Valley Basin Conditions Brief Overview

## 1. Lowering Groundwater Levels - Chilcoat



# Sierra Valley Basin Conditions Brief Overview

## 1. Lowering Groundwater Levels – Restricted Area



# Sierra Valley Basin Conditions Brief Overview

Q & A



# Questions?

# Groundwater Sustainability Agencies

## *Local SGMA Implementation*



Ongoing groundwater management efforts that comply with SGMA including:

- Technical reports and studies
- Groundwater model
- Inventory of inactive wells
- Monitoring wells
- DWR Technical Support Services (subsidence, level and quality monitoring)
- Sierra Valley Groundwater Management District and Plumas County Coordination
- Moratorium of large capacity wells in area of concern
- Community engagement – happening now and ongoing
- Ordinances (for more information visit Sierra Valley Groundwater Management District website)

# How to Get Involved

## *Opportunities for Participation in GSP Development*



- Sign up for Interested Parties List to receive notifications
- Sierra Valley Groundwater Management District Board Meetings (the second Monday of every month, 6-9 PM, Golden West Saloon, Loyalton)
- SGMA public workshops

# Next Steps

## *GSP Process Timeline*



# Contact Information



- Consensus Building Institute (Facilitator): Tania Carlone, [tcarlone@cbi.org](mailto:tcarlone@cbi.org), (510) 684-0504
- Sierra Valley Groundwater Management District: (530) 428-5002, [sierravalleygmd@sbcglobal.net](mailto:sierravalleygmd@sbcglobal.net); contact form via website at: <http://www.sierravalleygmd.org/contact-us>



## About CBI

CBI is a nonprofit organization with decades of experience helping leaders collaborate to solve complex problems.

Our staff are experts in facilitation, mediation, capacity building, citizen engagement, and organizational strategy and development. We are committed to using our skills to build collaboration on today's most significant social, environmental, and economic challenges. We work within and across organizations, sectors, and stakeholder groups.

FOR MORE INFORMATION: [CBI.ORG](http://CBI.ORG)

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