Groundwater in the Eel River Valley: Responding to the New State Groundwater Legislation

April 27, 2015

Public Works Department
Hank Seemann

UC-Cooperative Extension
Yana Valachovic

Today's Schedule

1. Overview of new state groundwater legislation	Hank Seemann *Humboldt County Public Works*
2. Overview of hydrogeology in the Eel River Basin	Gary Simpson *SHN Consulting Engineers/Geologists*
3. Invited statements	John Vevoda, *Ferndale dairyman* Merritt Perry, *City of Fortuna* Brad Job, *Pacific Watershed Associates* David Spinosa, *Humboldt County Division of Environmental Health*
4. Facilitated discussion, question/answer, feedback survey	Yana Valachovic *UC-Cooperative Extension*

Overview of the Sustainable Groundwater Management Act

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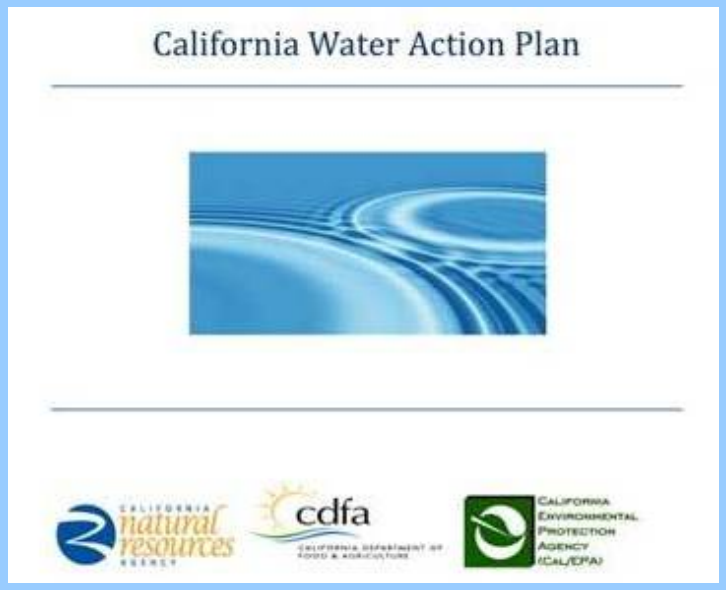
Signed by Governor Brown
September 16, 2014



Element of California Water Action Plan

New Addition to State Water Policy:

Water Code Section 113

It is the policy of the state that groundwater resources be managed sustainably for long-term reliability and multiple economic, social, and environmental benefits for current and future beneficial uses. Sustainable groundwater management is best achieved locally through the development, implementation, and updating of plans and programs based on the best available science.

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Key Aspects of Sustainable Groundwater Management Act

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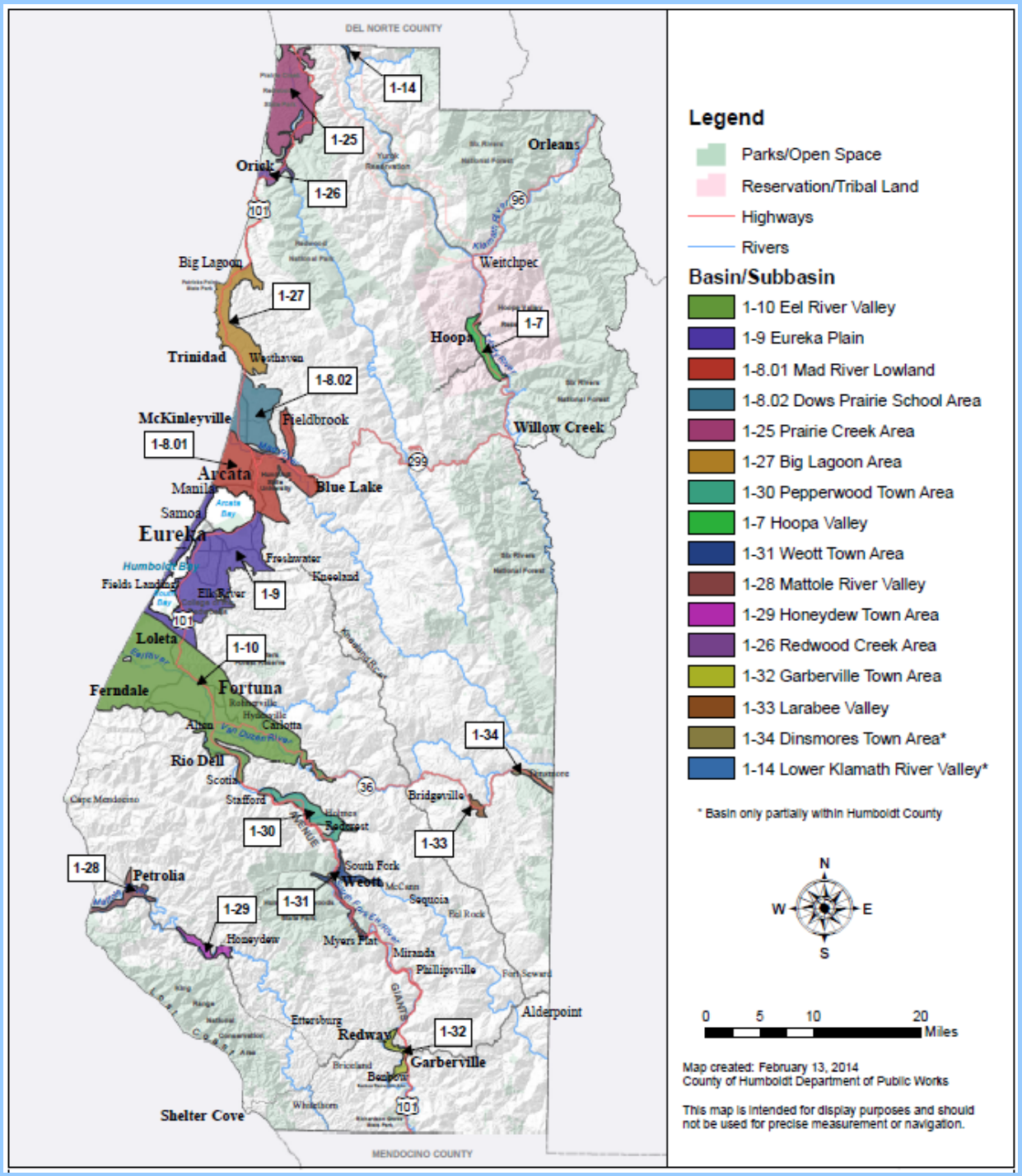
1. Organized around designated alluvial groundwater basins and their prioritization rankings

Humboldt County Designated Alluvial Groundwater Basins and Sub-basins



Source:
DWR Bulletin 118

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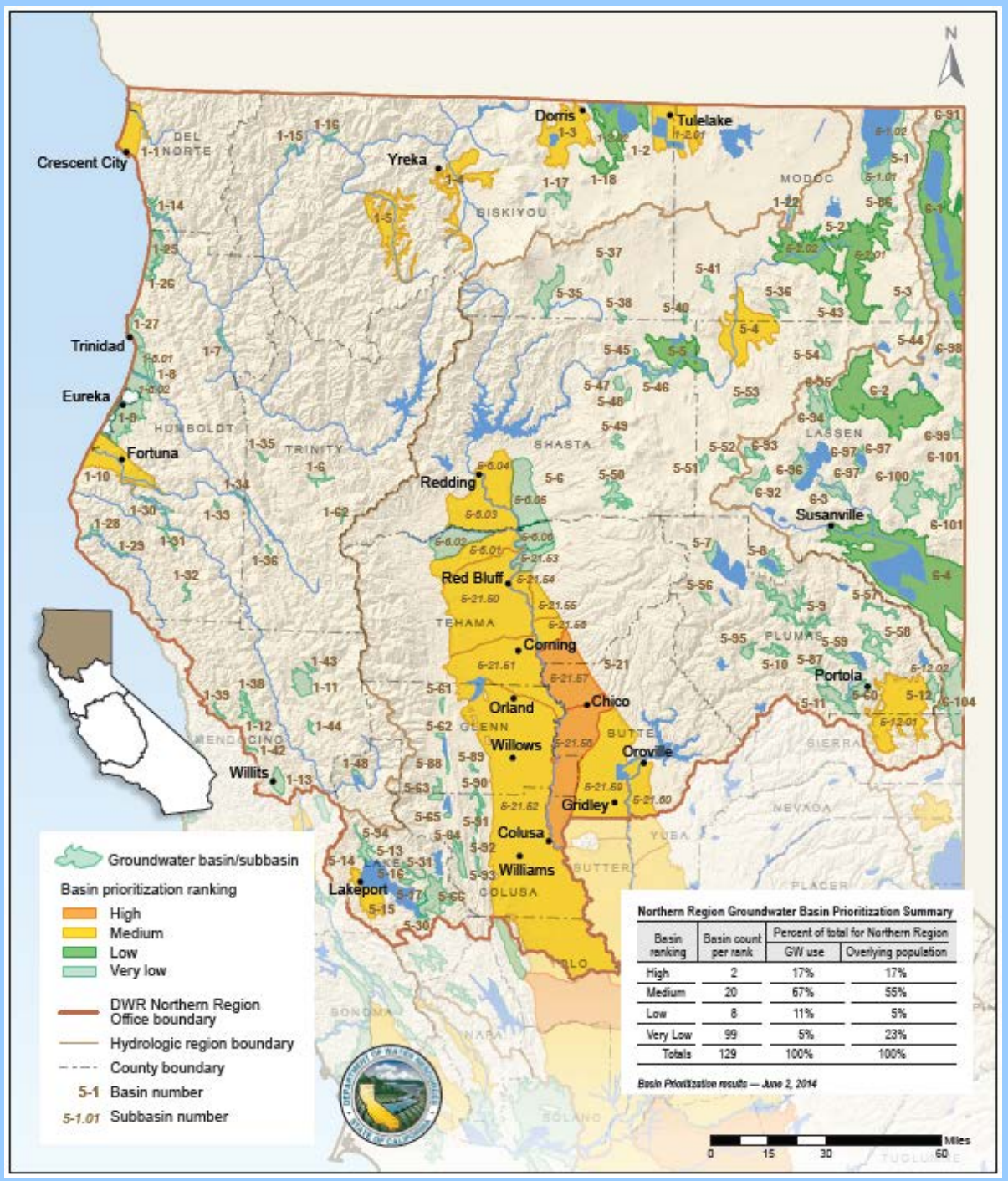
2. Requires groundwater sustainability plans for high- and medium-priority basins

Ranking of Groundwater Basin Importance – Northern California



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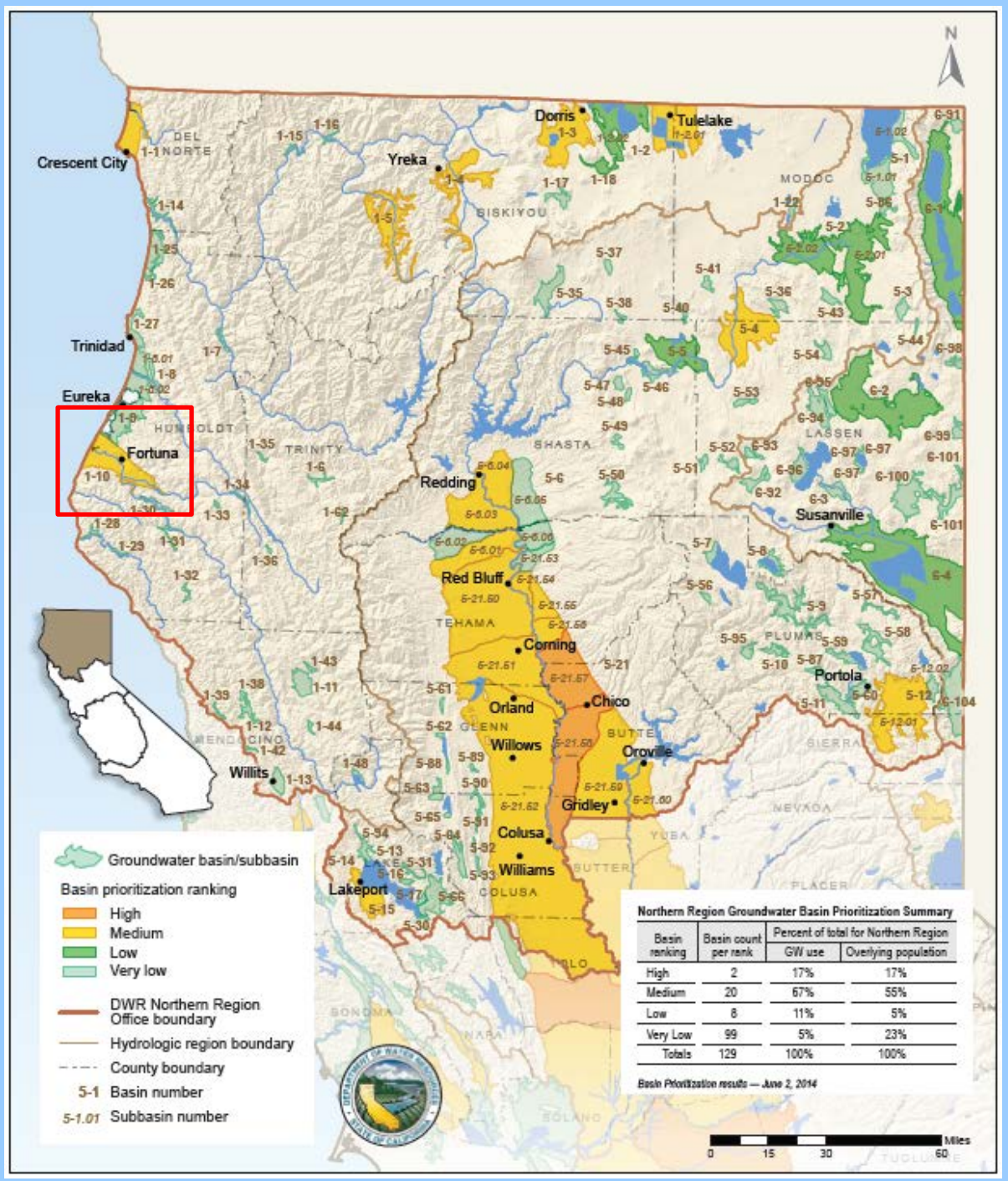
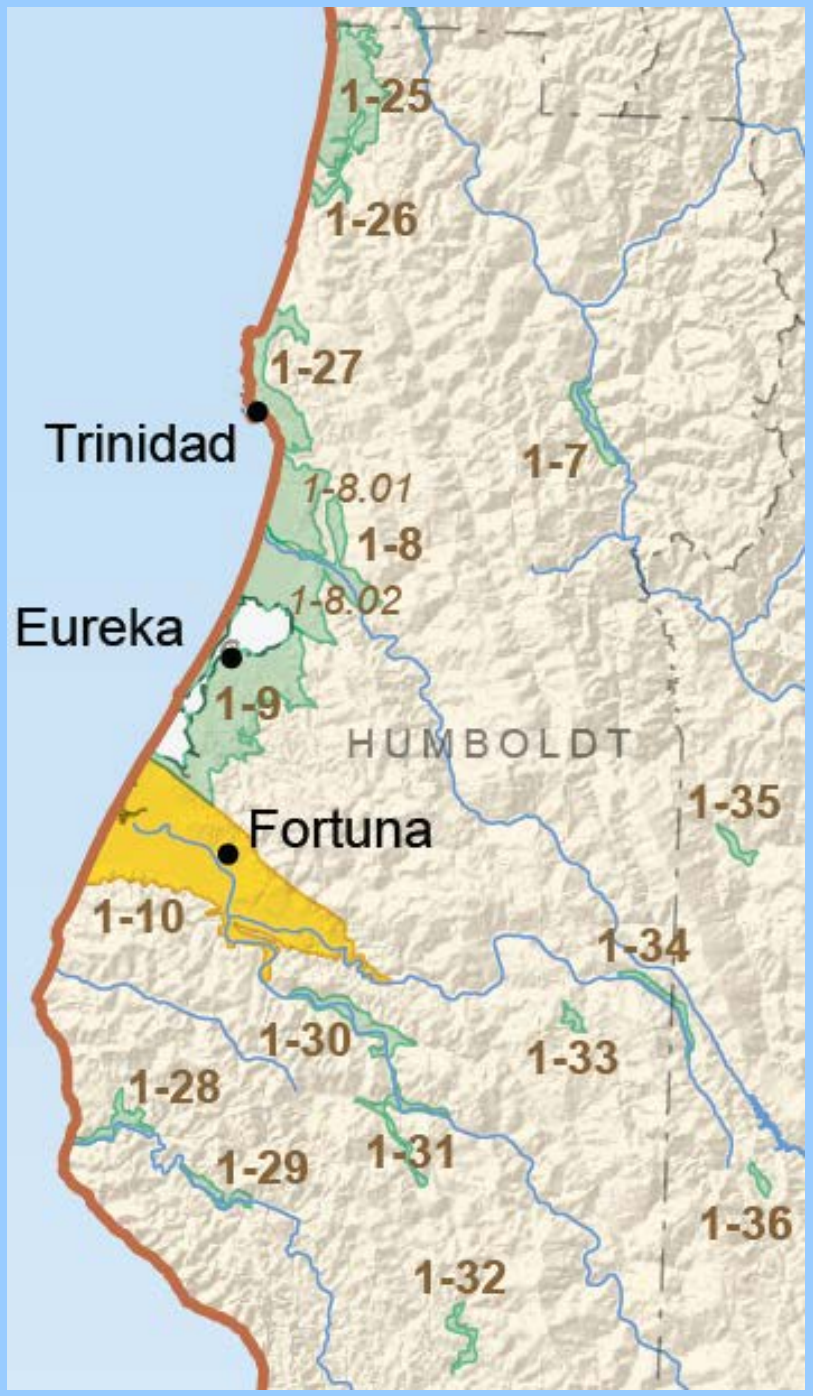


Northern Region Groundwater Basin Prioritization Summary

Basin ranking	Basin count per rank	Percent of total for Northern Region	
		GW use	Overlying population
High	2	17%	17%
Medium	20	67%	55%
Low	8	11%	5%
Very Low	99	5%	23%
Totals	129	100%	100%

Basin Prioritization results — June 2, 2014

Ranking of Groundwater Basin Importance – Humboldt County



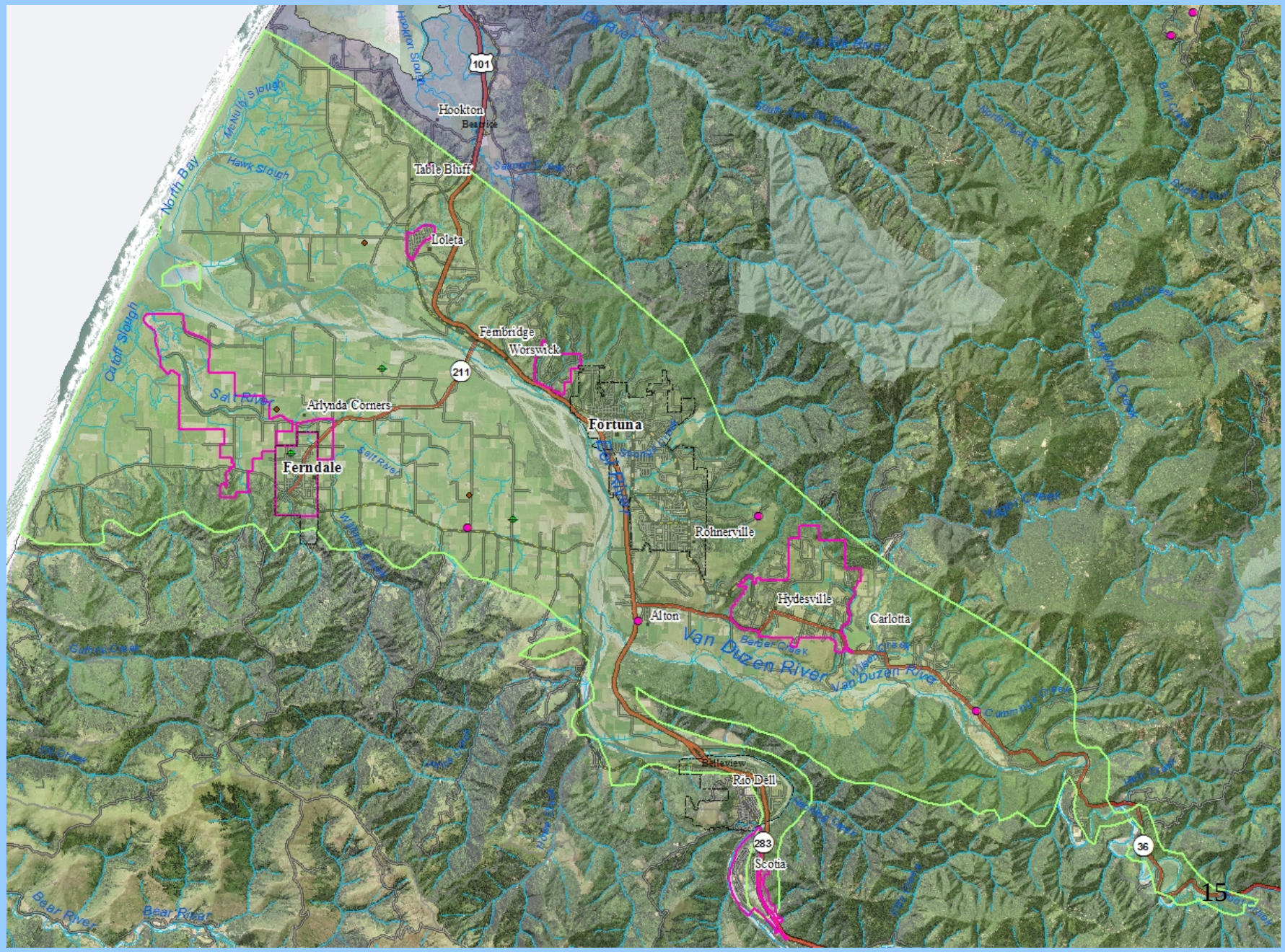
Groundwater basin/subbasin

Basin prioritization ranking

- High
- Medium
- Low
- Very low

Source:
DWR Bulletin 118

Eel River Valley Groundwater Basin



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2. Requires groundwater sustainability plans for high- and medium-priority basins
3. Requires formation of local groundwater sustainability agencies
4. Overall goal is to operate within sustainable yield: maximum quantity of water that can be withdrawn annually without causing an undesirable result
5. Undesirable results include:
    - Lowering of groundwater levels and depletion of supply
    - Reduction of groundwater storage
    - Seawater intrusion
    - Degraded water quality
    - Subsidence
    - Depletions of interconnected surface waters with adverse impacts on beneficial uses of the surface water

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   - Registration
   - Fees
   - Inspections
   - Measuring devices

   (not de minimis extractors)
   - Spacing
   - Control extractions (regulate/limit/suspend)
   - Reporting
   - Enforcement

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7. Groundwater sustainability plans require:
   - Advisory committee and maintenance of interested persons list
   - Description of the basin
   - Measurable objectives to achieve the sustainability goal
   - Implementation measures (monitoring and management components, as applicable)

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8. Groundwater plans will not establish or determine groundwater rights, but will govern how those rights are exercised

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9. The groundwater sustainability agency shall consider the interests of all beneficial uses and users of groundwater. These interests include, but are not limited to:

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   - Holders of overlying groundwater rights, including agricultural users and domestic well owners
   - Municipal well operators and public water systems
   - Local land use planning agencies
   - Environmental users of groundwater
   - Surface water users, if there is a hydrologic connection between surface and groundwater bodies
   - Federal and tribal lands
   - Economically disadvantaged communities

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10. State can intervene if local agency is not managing its groundwater sustainably or not complying with the Act

Conceptual Options for Groundwater Sustainability Agency

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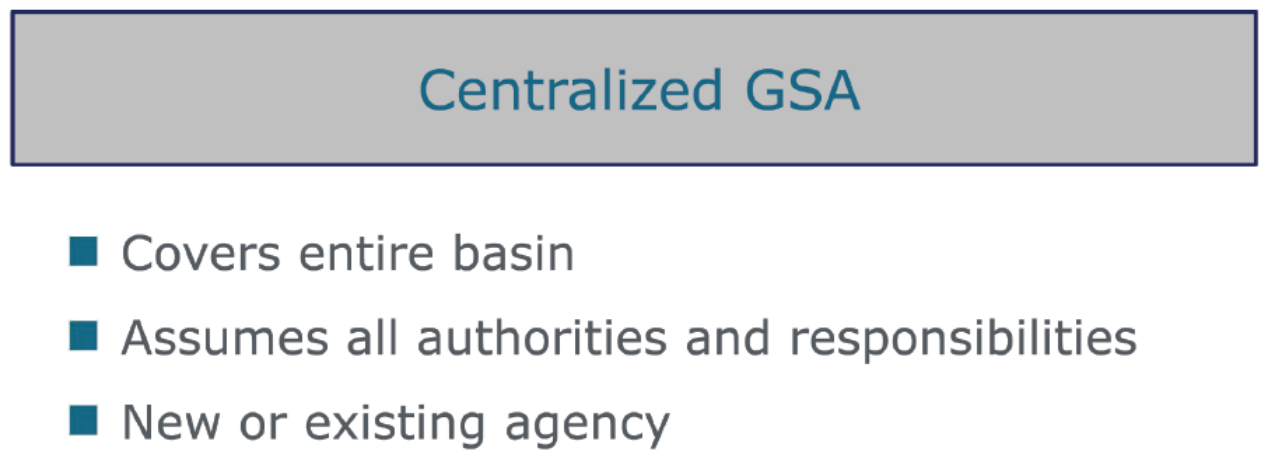
Option 1



Source:
WEF, 2015

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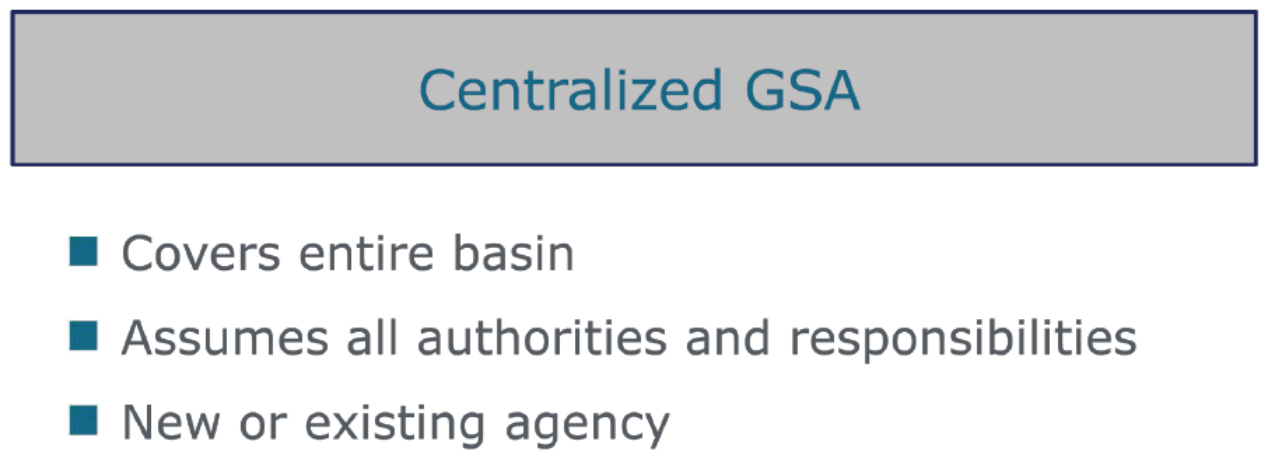


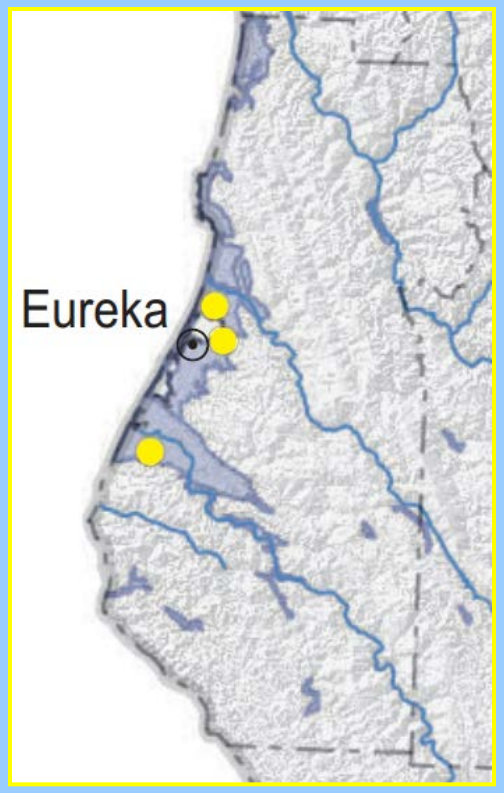
Option 2

Source:
WEF, 2015

General Timeline for Sustainable Groundwater Management Act

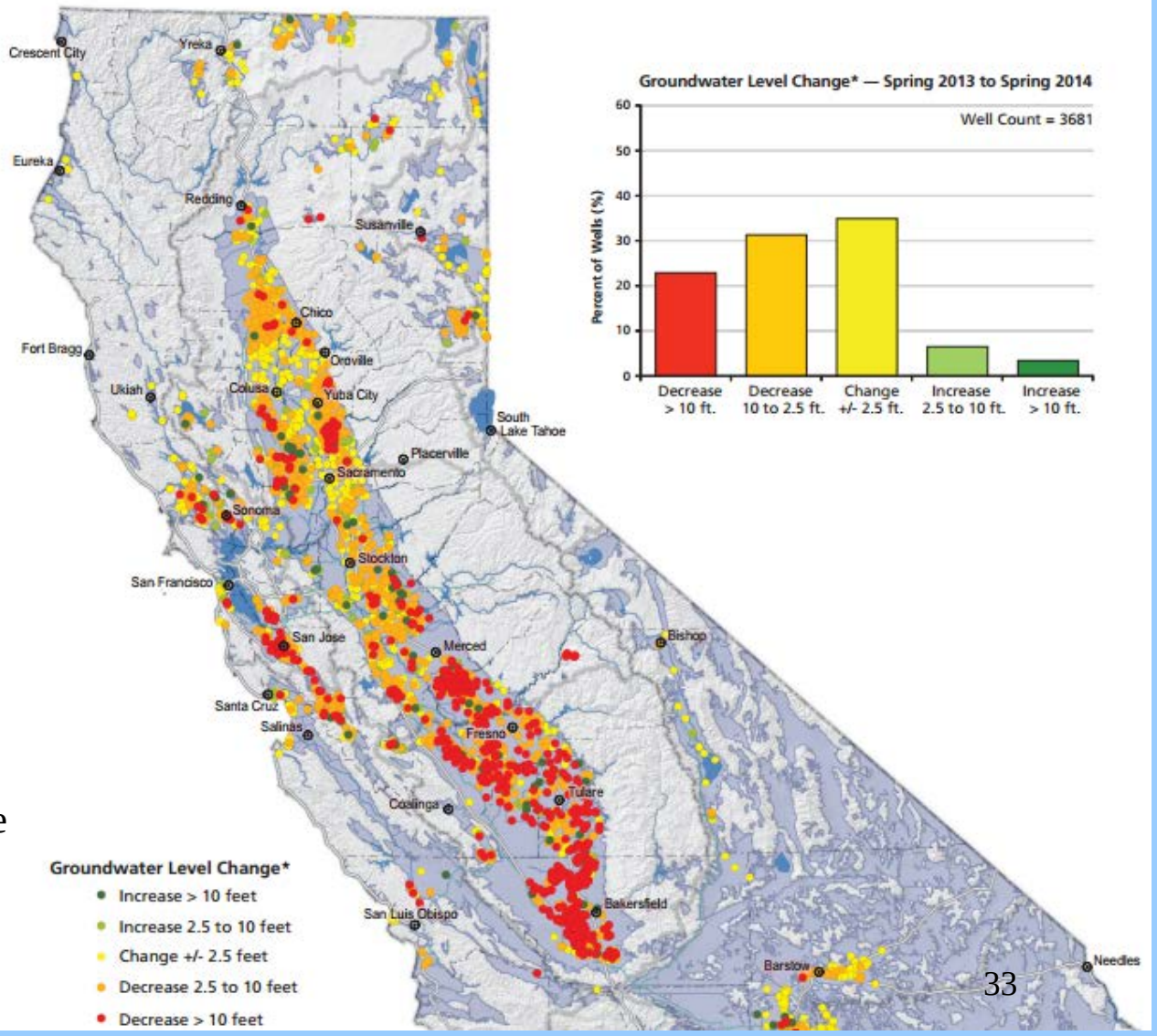
	State	Local
Late 2015/ Early 2016	Funding program for local agencies to develop groundwater plans (from Prop. 1)	
2016	June 1: DWR to adopt regulations for implementing program	
2017	DWR to publish Bulletin 118 – Interim Update (boundaries, prioritization)	Jan. 1: Due date for "alternative submittals" June 30: Groundwater sustainability agencies established for all high- and medium-priority basins
2018		
2019		
2020		
2021		
2022		Jan 31: Groundwater sustainability plans adopted for high- and medium-priority basins not in critical overdraft
2042		Achieve sustainability goal

Change in Groundwater Levels – Spring 2013 to Spring 2014

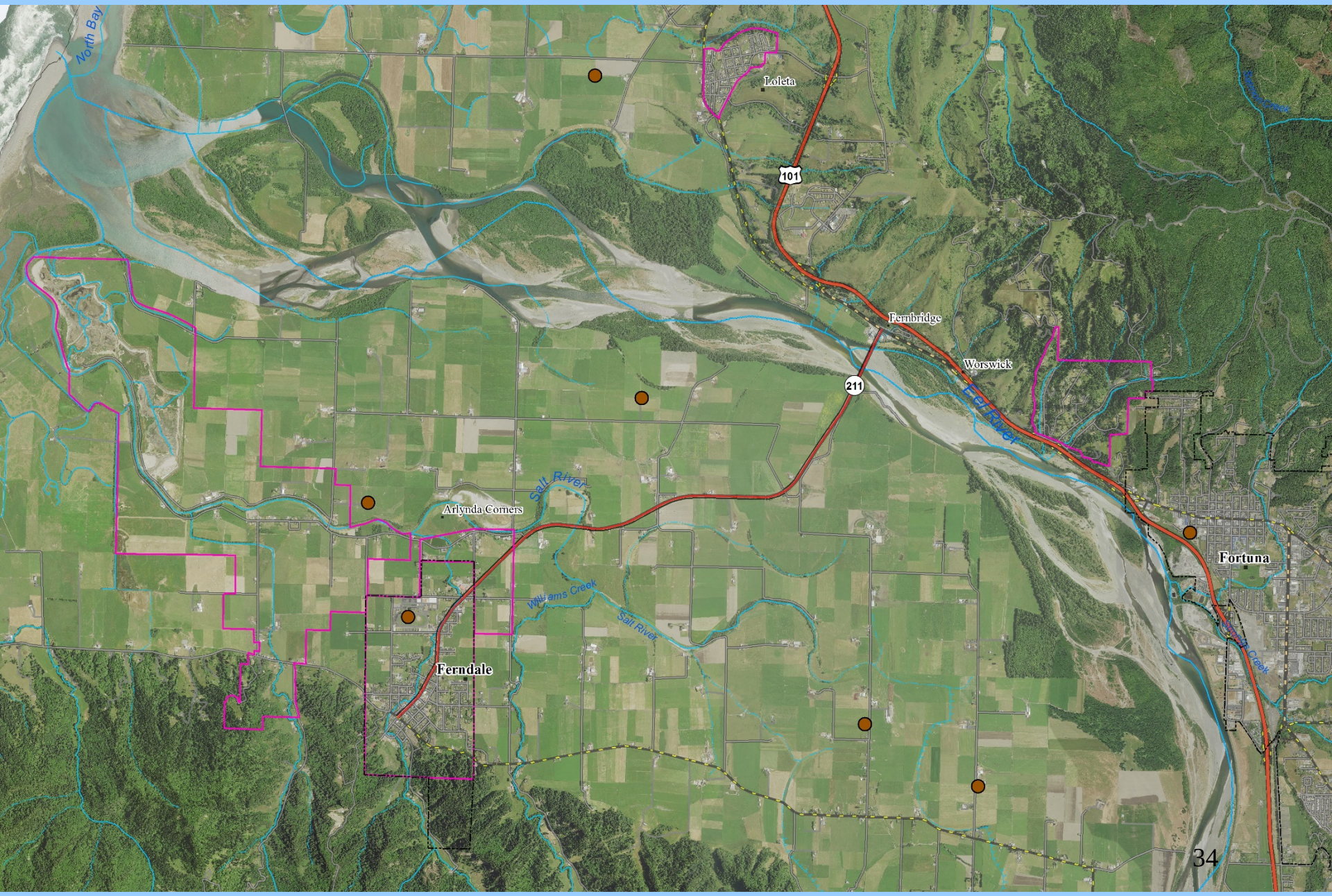


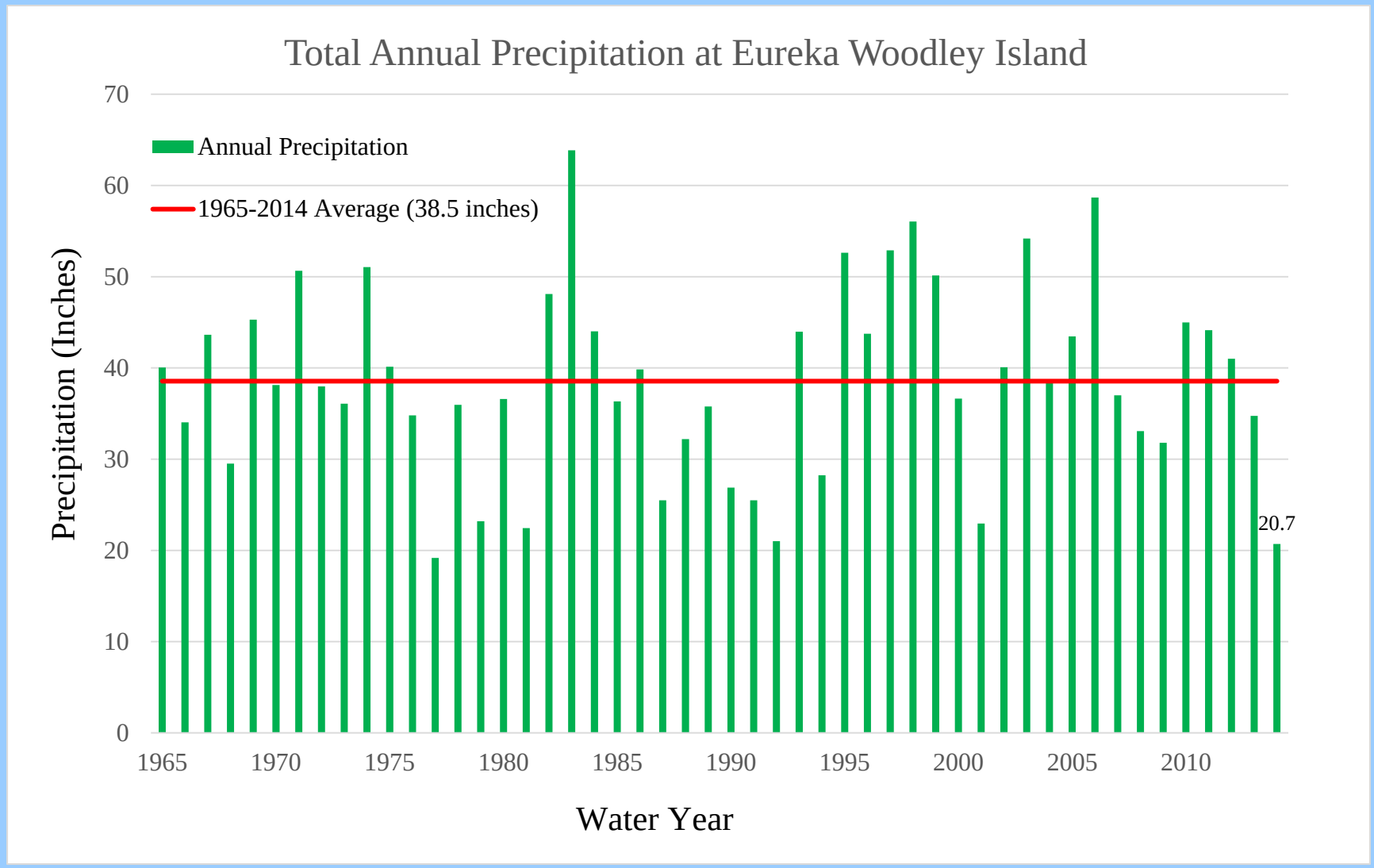
Source:
Public Update for Drought Response
(DWR, Nov. 2014)

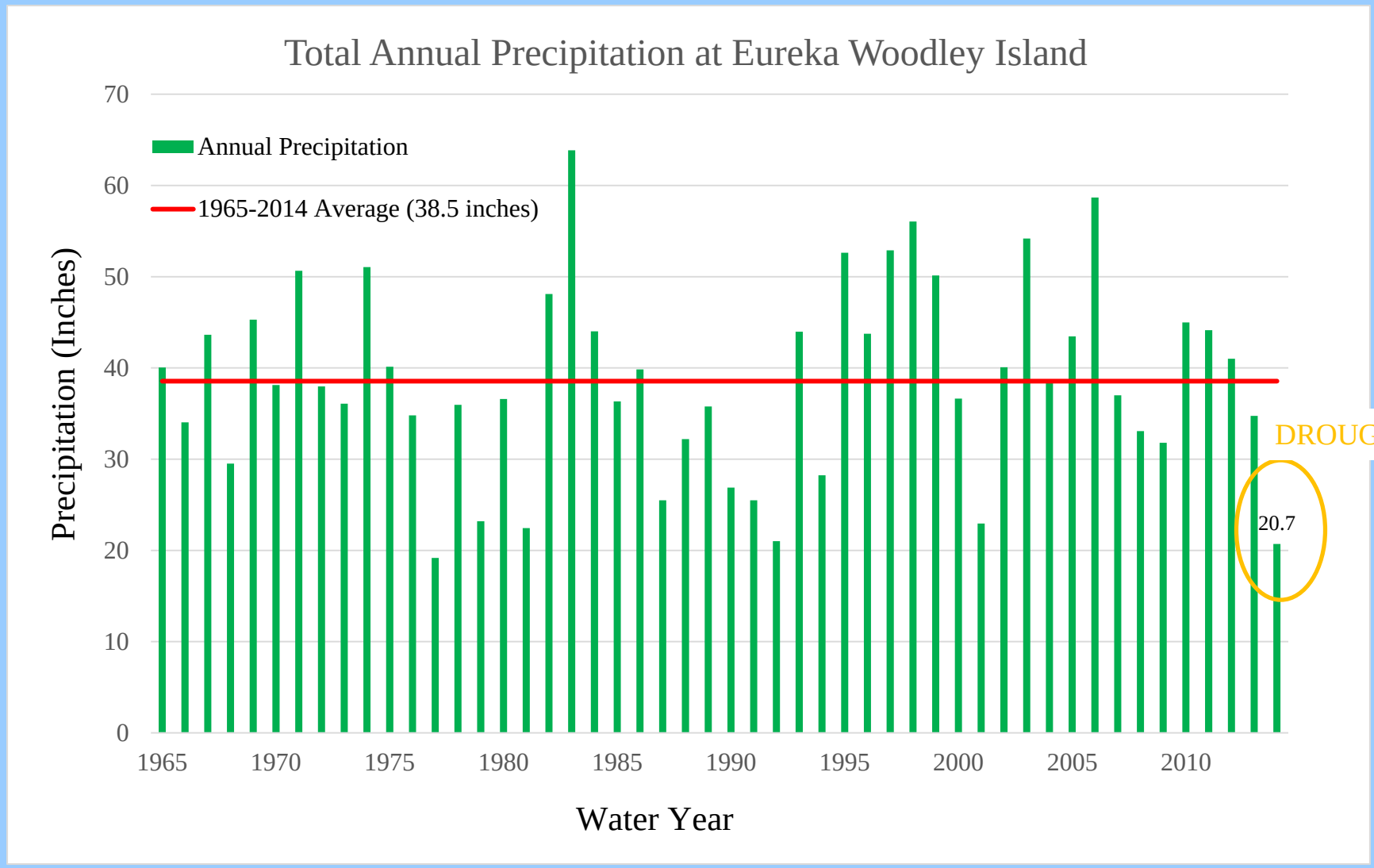
Figure 5: Change in Groundwater Levels in Wells - Spring 2013 to Spring 2014



DWR Monitoring Wells in Eel River Basin




Total Annual Precipitation at Eureka Woodley Island
Annual Precipitation
1965-2014 Average (38.5 inches)
Precipitation (Inches)
70
60
50
40
30
20
10
0
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
20.7
Water Year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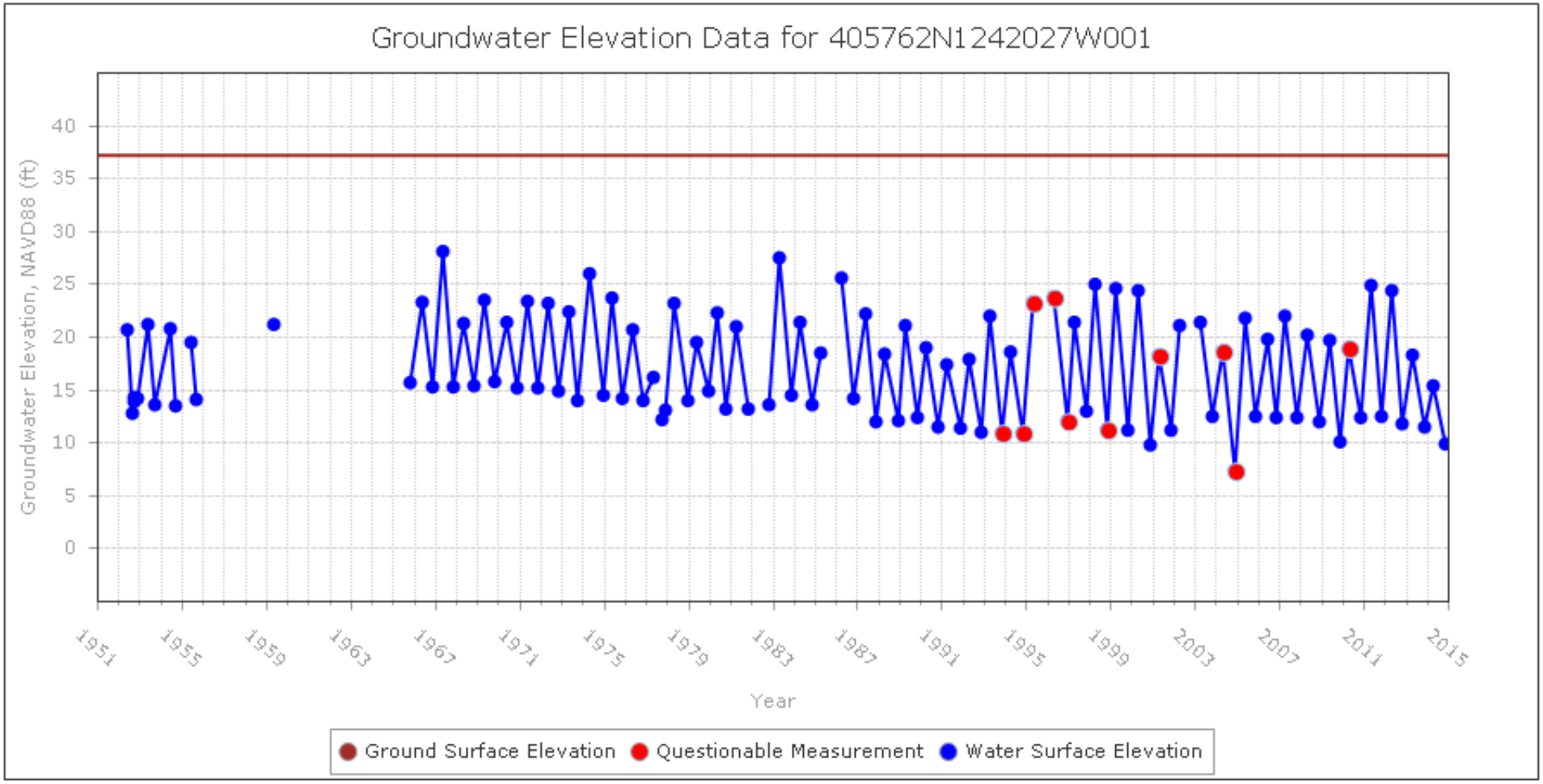
Well near Waddington Road, Eel River Valley



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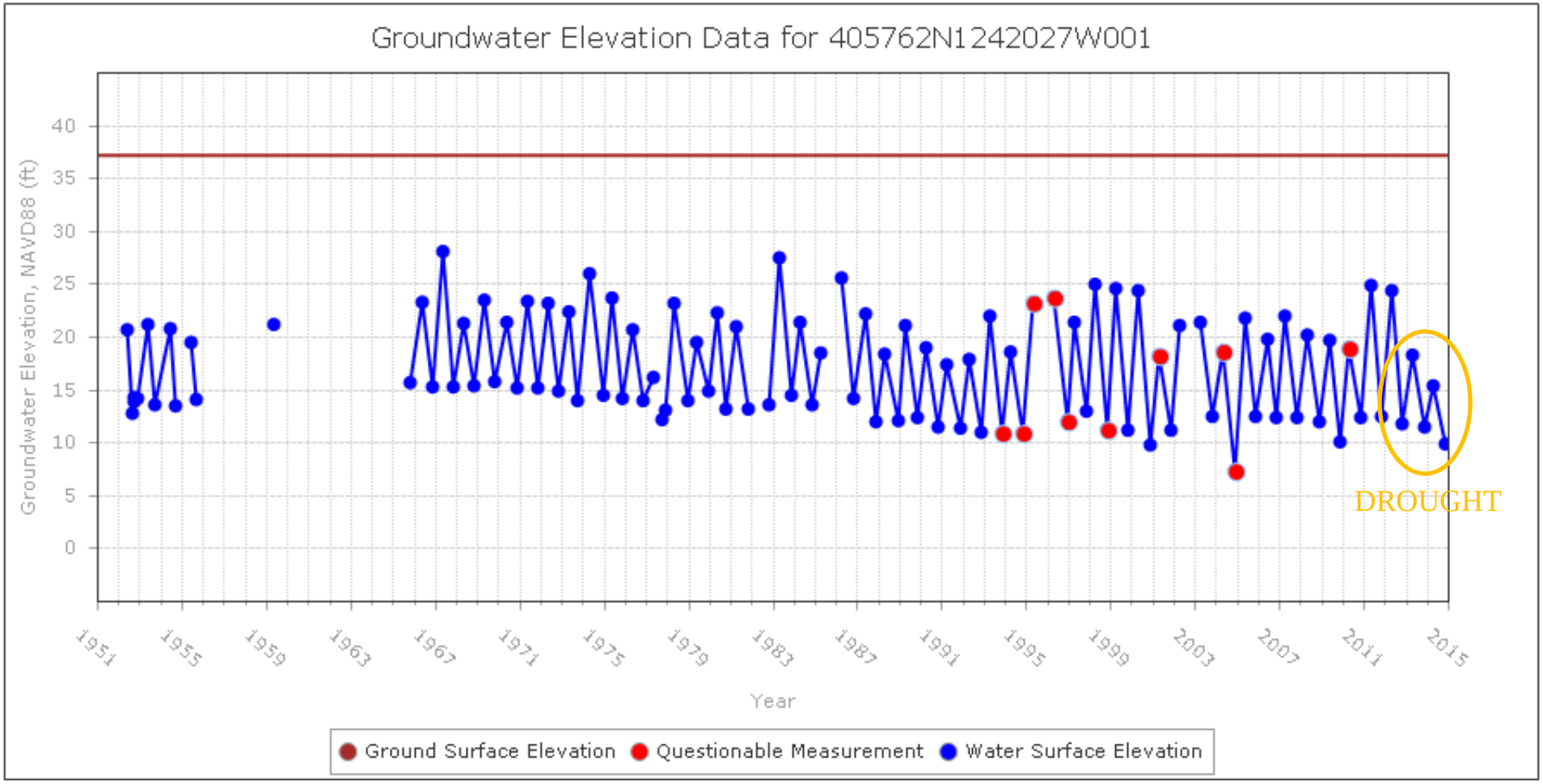

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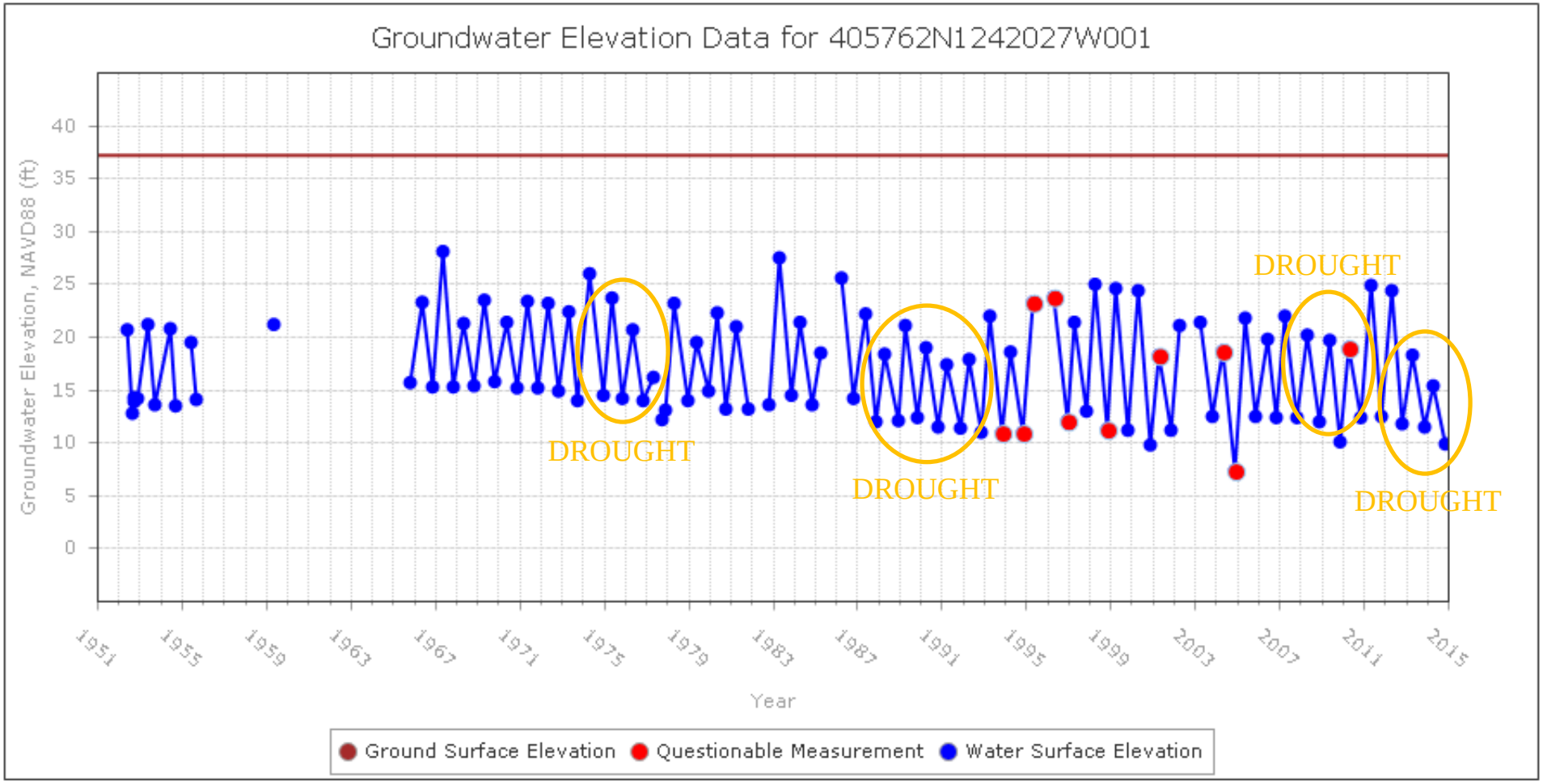
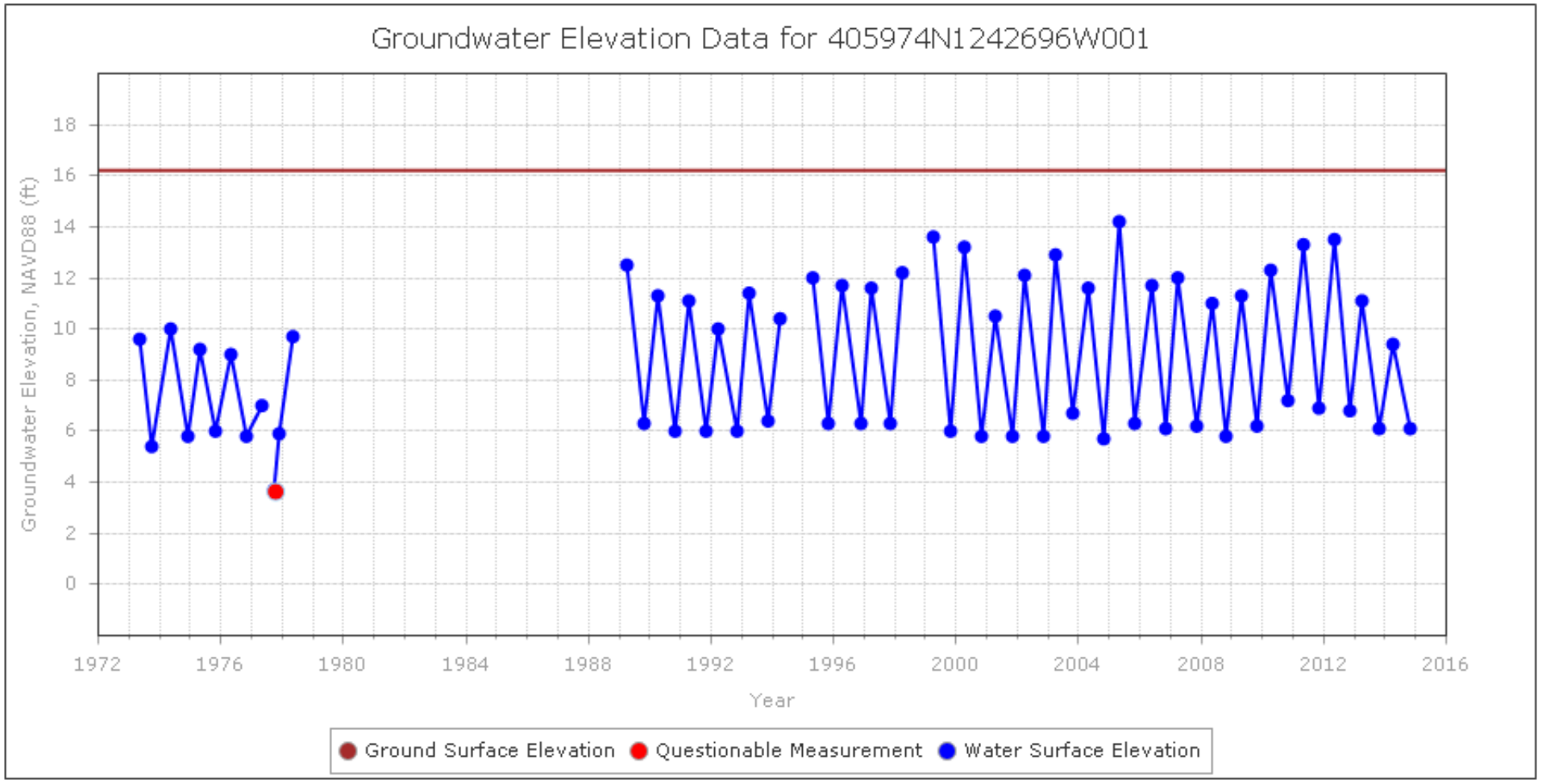
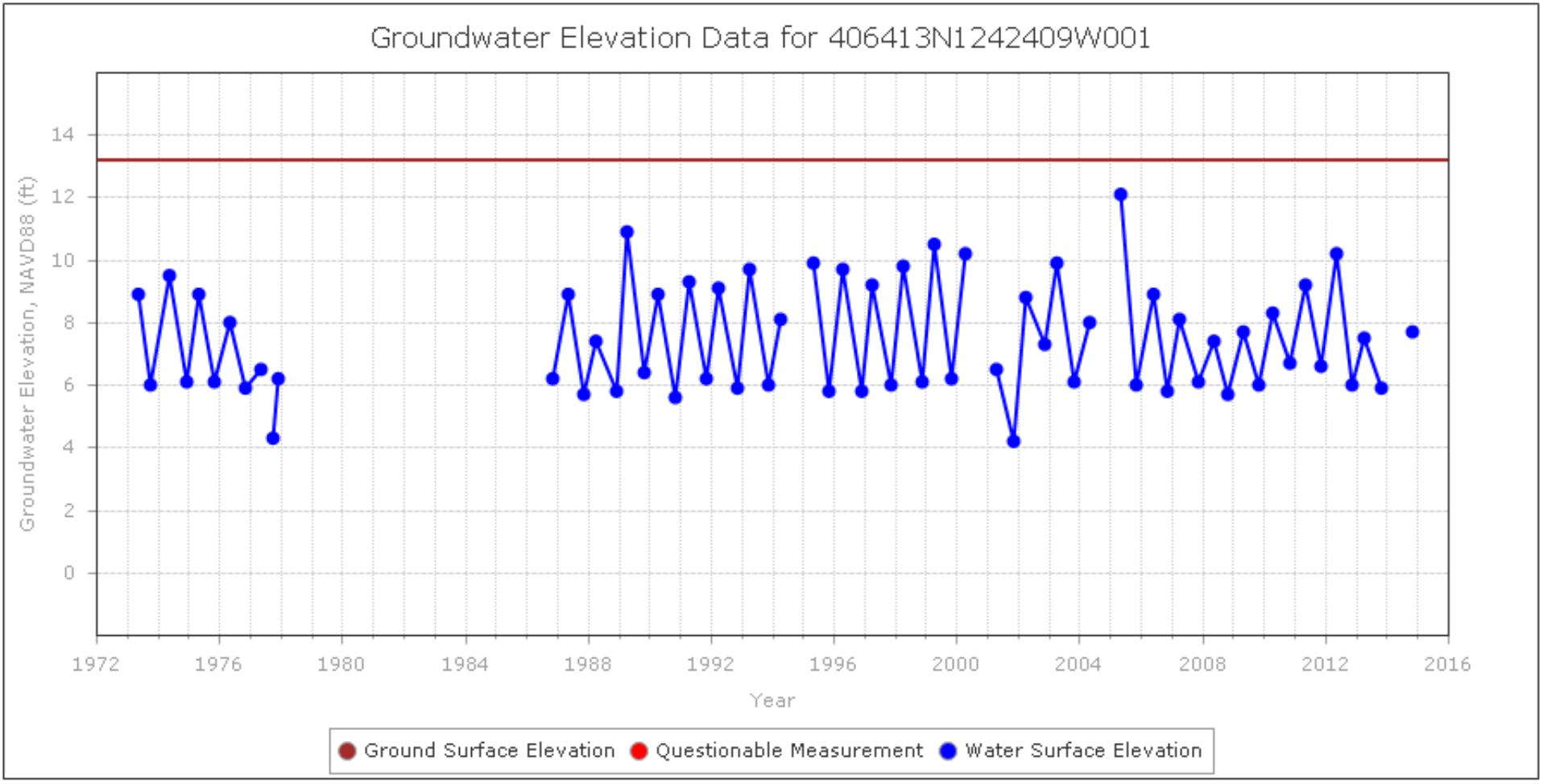


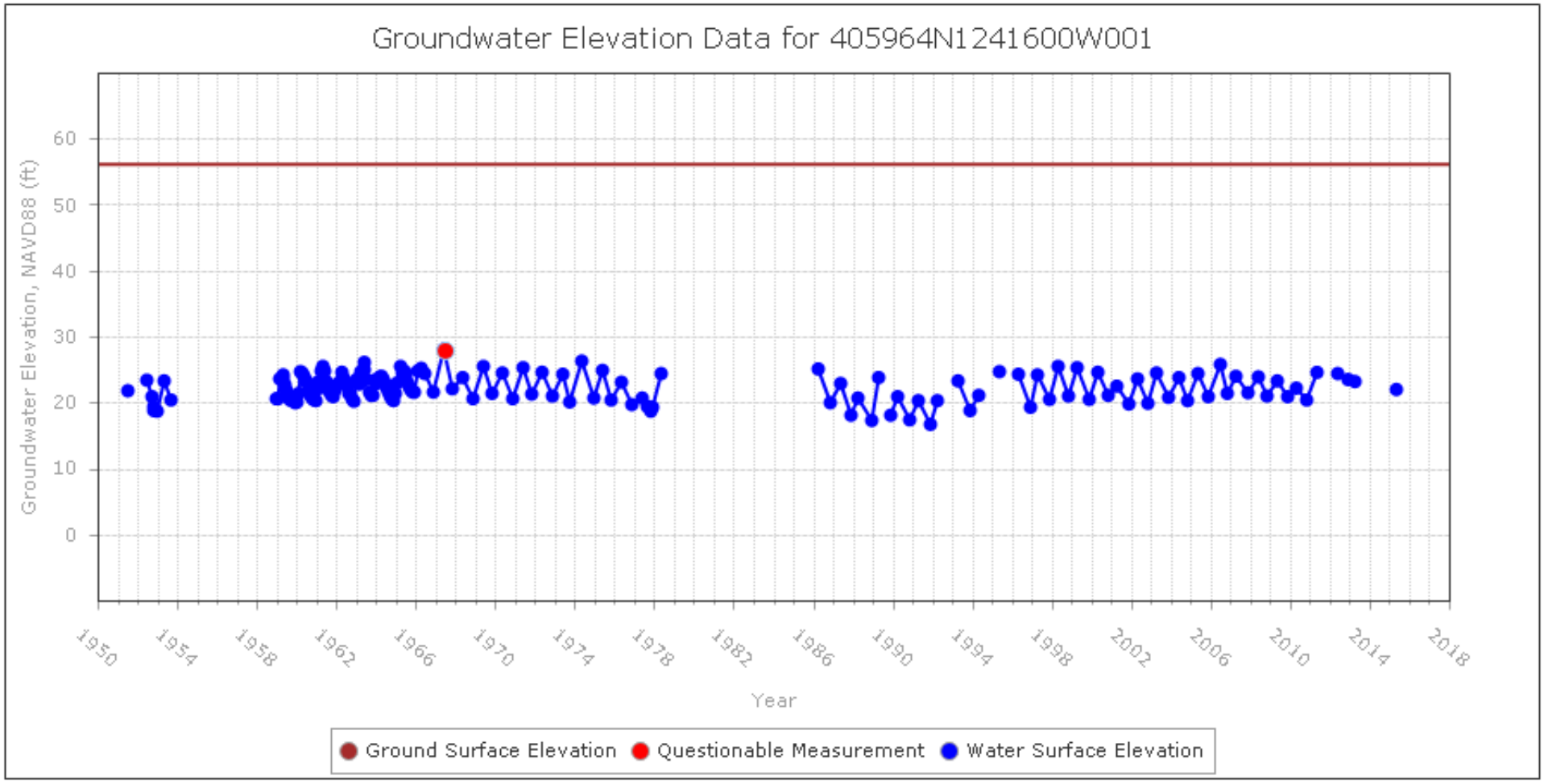
Well near Dillon Road, Eel River Valley



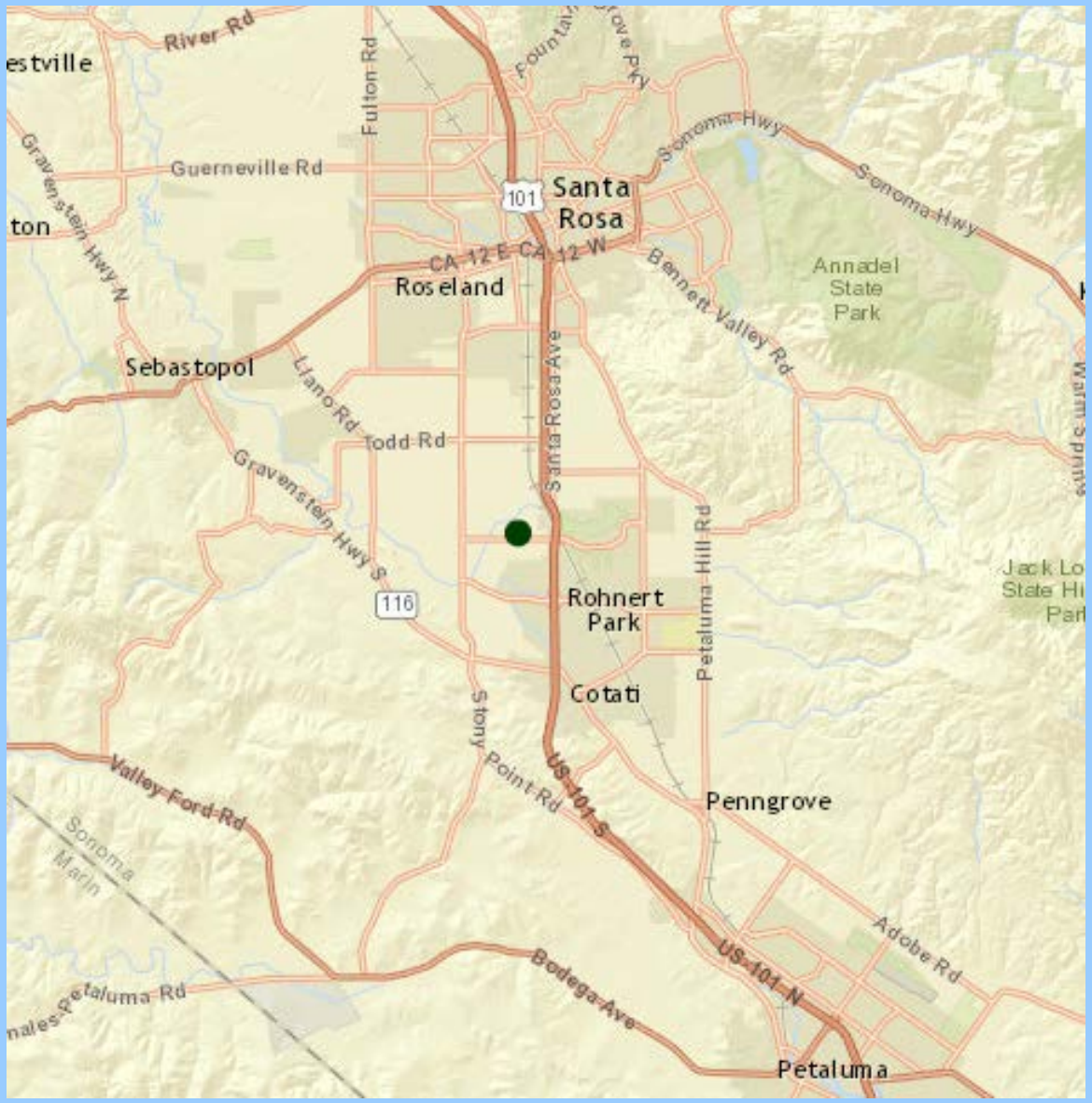
Well near Cannibal Island Road, Eel River Valley



Well near 7th and K Streets, Fortuna



Example of overdraft:
Well near Rohnert Park in Santa Rosa Plain Watershed



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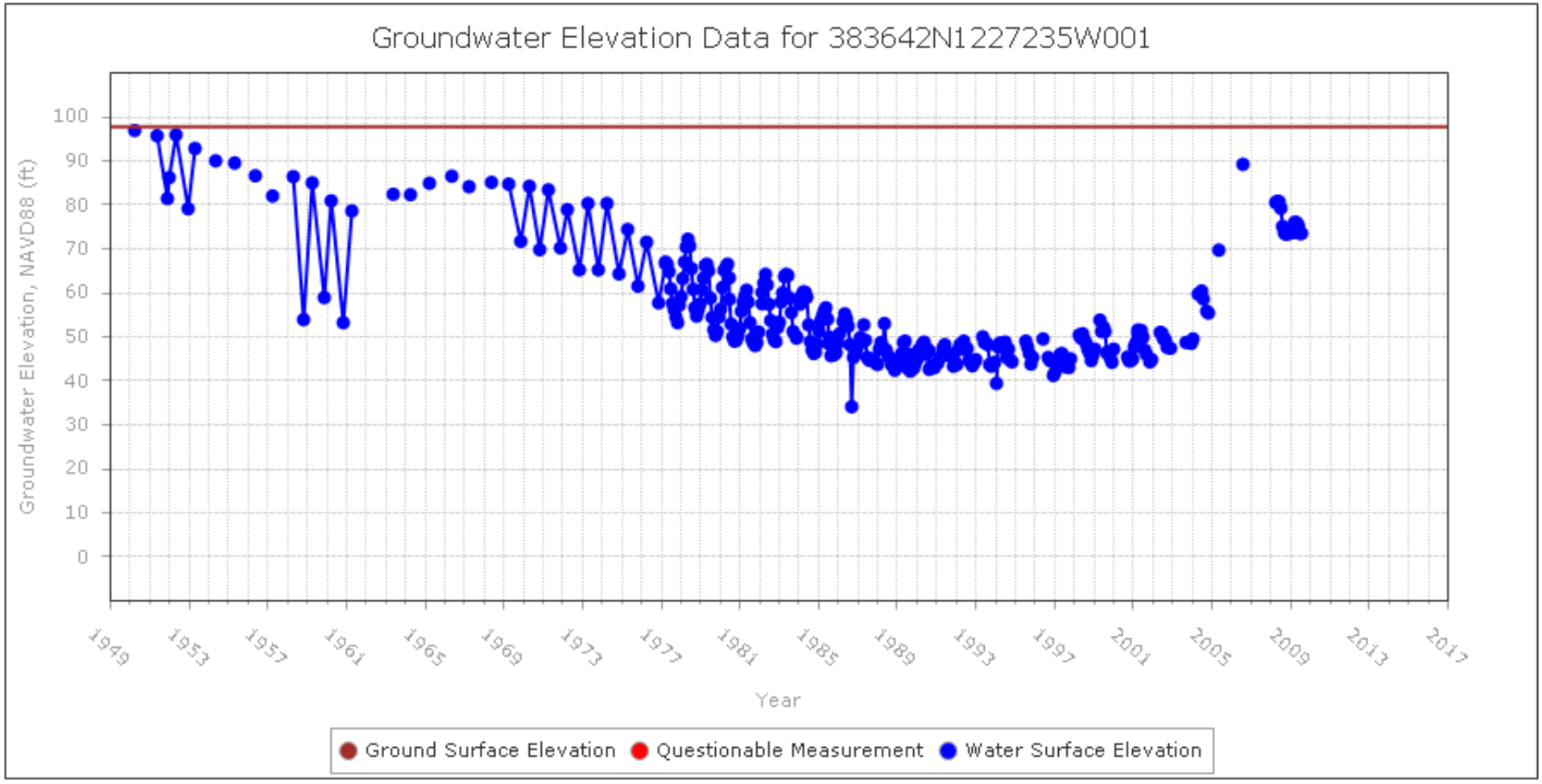

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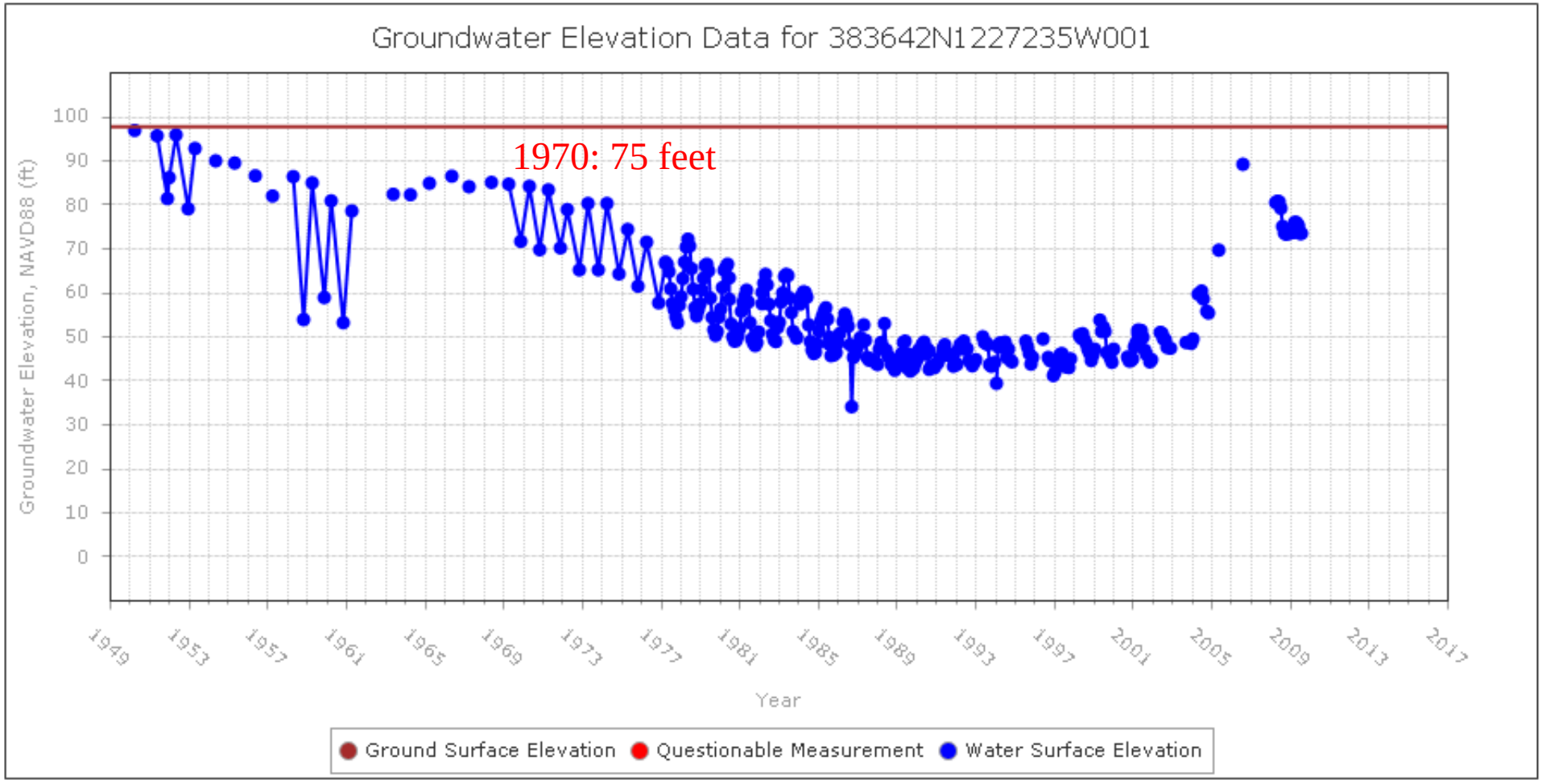

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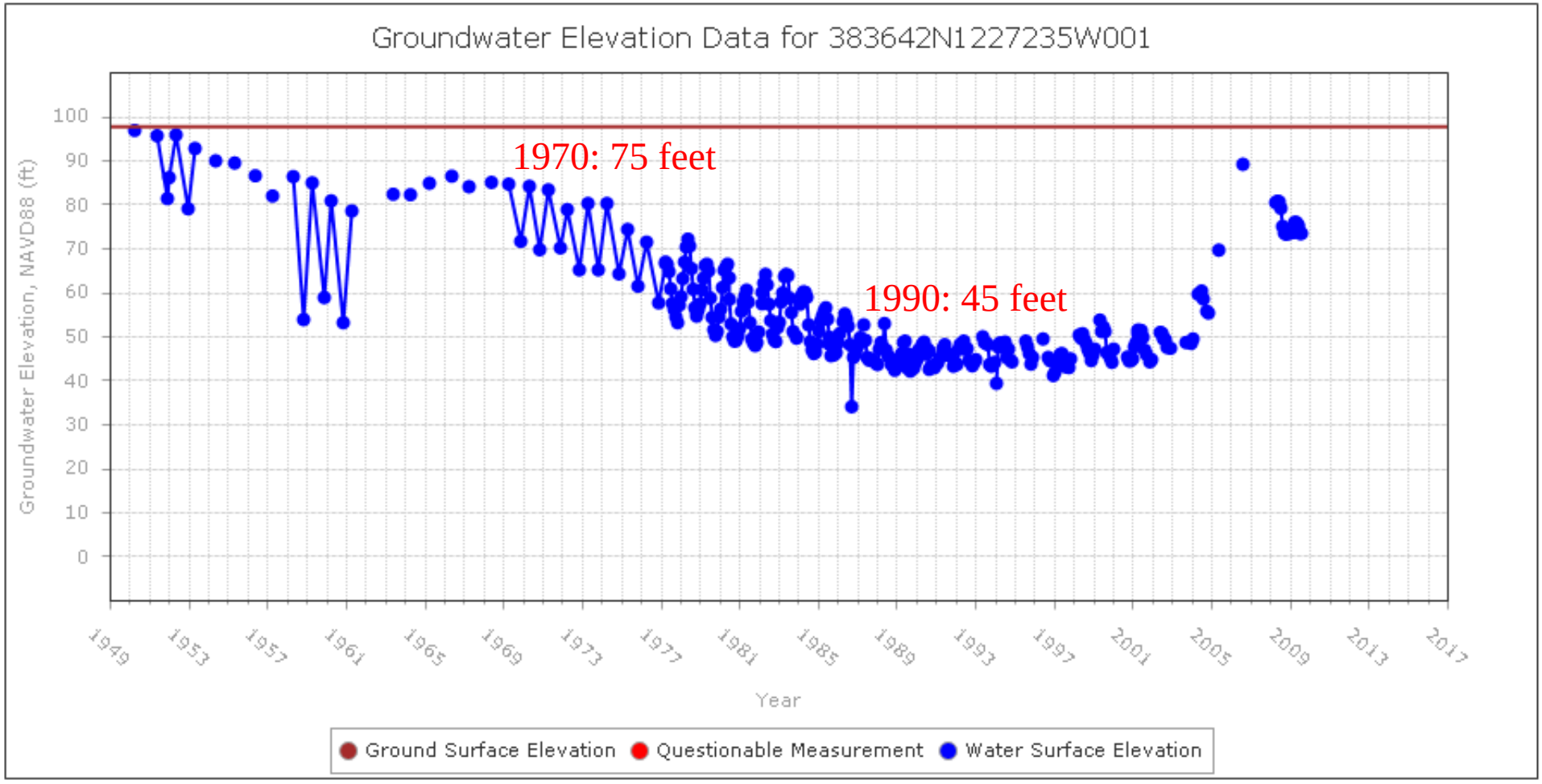

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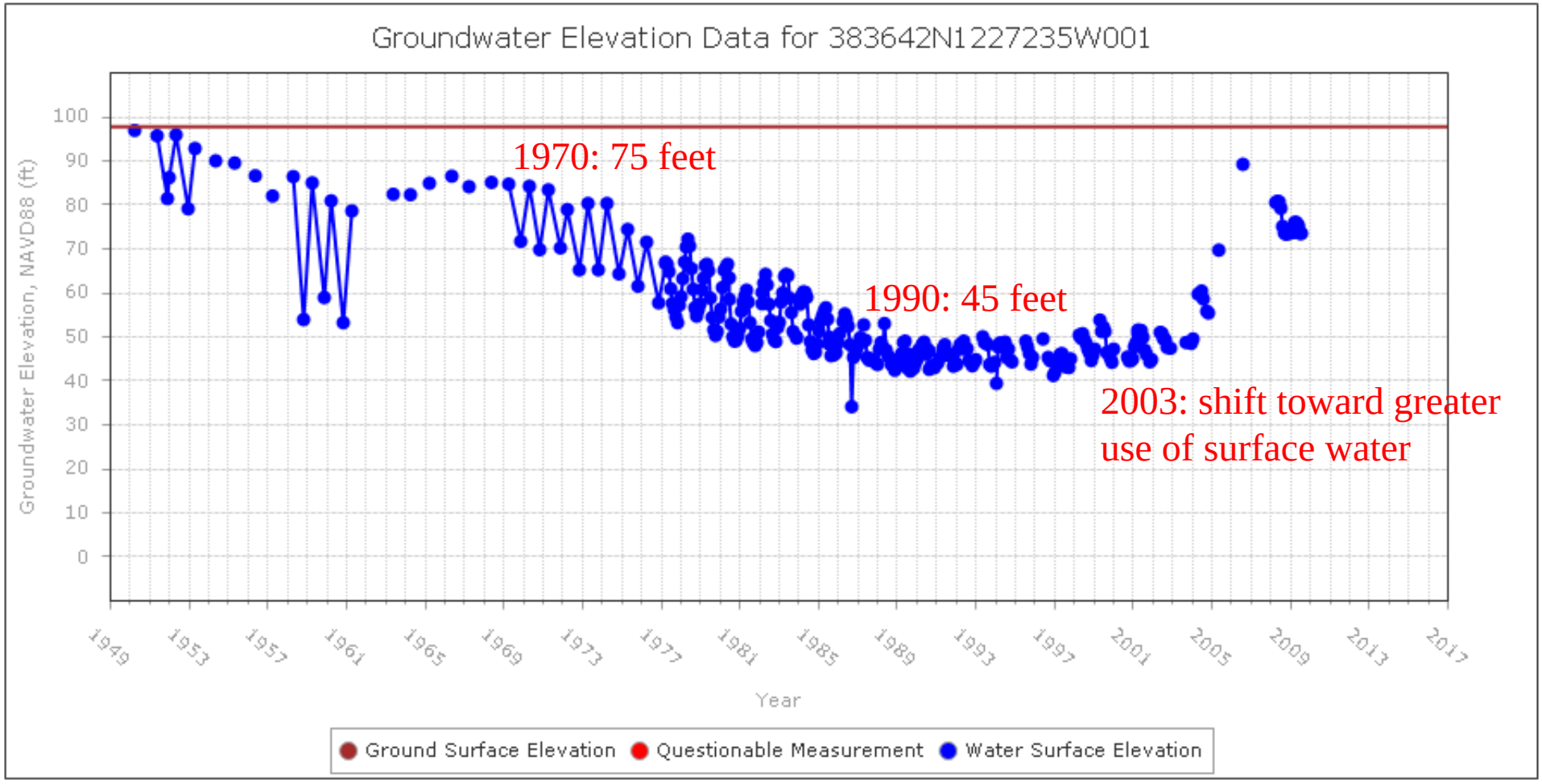
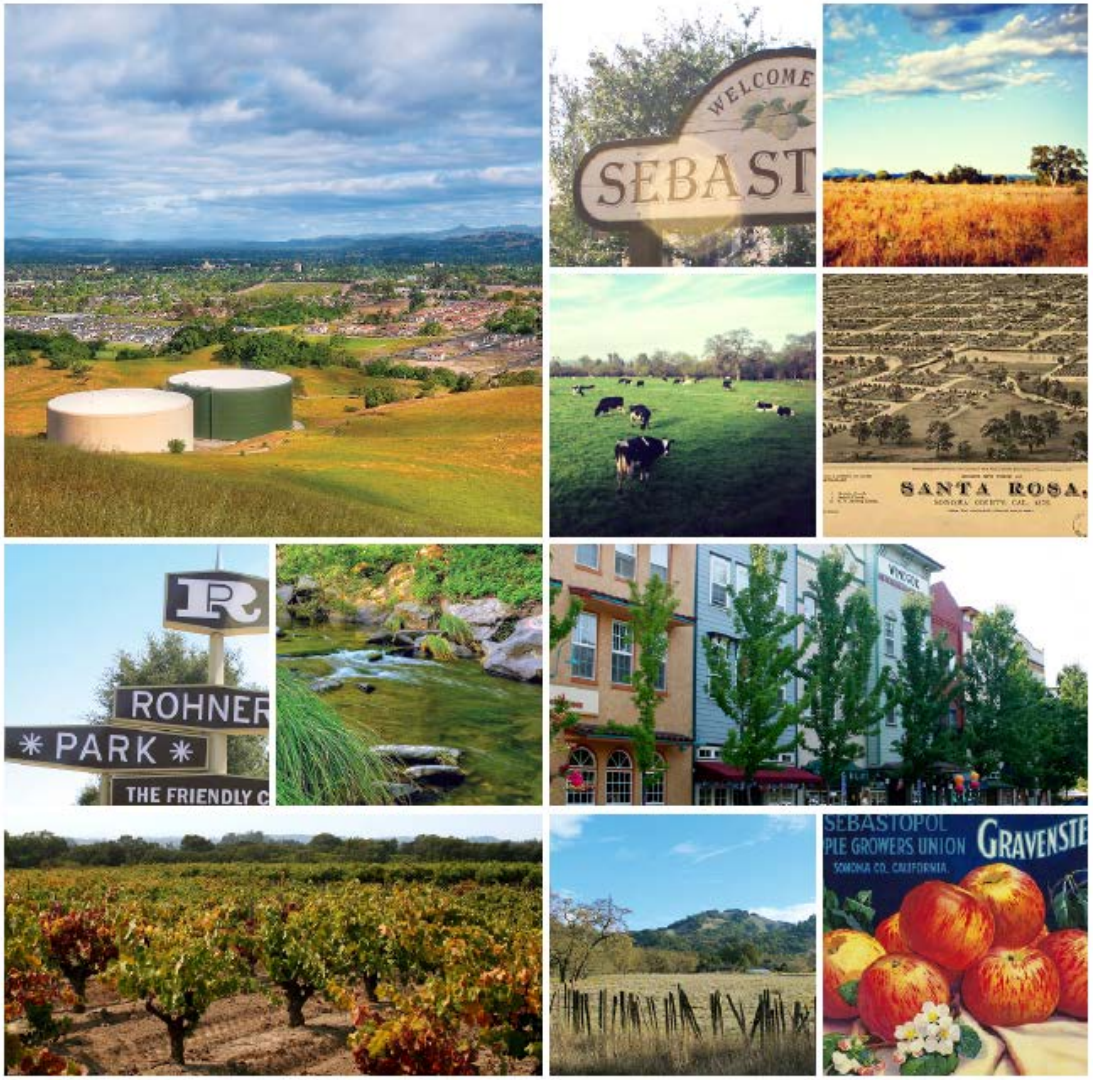


Final Draft Santa Rosa Plain Watershed Groundwater Management Plan

October 2014 | Prepared by the Santa Rosa Plain Basin Advisory Panel



Water Agency Board of Directors:

- Susan Gorin, 1st District
- David Rabbitt, 2nd District
- Shirlee Zane, 3rd District
- Mike McGuire, 4th District
- Efren Carrillo, 5th District

Santa Rosa Plain Groundwater Management Plan Basin Advisory Panel:

- Garrett Broughton (alternate Toni Bertolero), Town of Windsor
- Michael Burns, Resident Santa Rosa
- Mark Calhoon, Fircrest Mutual Water Company
- Elizabeth Cargay, Well Owner & Foothills of Windsor Homeowners Association
- Margaret DiGenova, Cal American Water Company
- Rue Furch, Sebastopol Water Information Group (SWIG) and Sierra Club
- Joe Gaffney, Sonoma County Alliance
- Dawna Gallagher, Santa Rosa Plain Well Owner & Clean Water Sonoma Marin
- Maureen Geary, Federated Indians of Graton Rancheria
- Norman Gilroy, Community Alliance of Family Farmers
- Edward Grossi, Sweet Lane Wholesale Nursery
- John Guardino, Laguna de Santa Rosa Foundation
- Kara Heckert (alternate Valerie Minton), Sonoma Resource Conservation District
- Jay Jasperse, Sonoma County Water Agency
- Bill Keene, Sonoma County Agricultural Preservation & Open Space District
- Sue Kelly, City of Sebastopol
- Melissa Lema, Western United Dairymen's Association
- John McArthur (alternate Darrin Jenkins), City of Rohnert Park
- Gary Mickelson, California Groundwater Association
- John Nagle, Sonoma County Winegrape Commission
- Curt Nichols, Carlile Macy Landscape Architects and Civil Engineers, for the Construction Coalition
- Jane Nielson, Sonoma County Water Coalition and O.W.L. Foundation
- Damien O'Bid, City of Cotati
- Pete Parkinson (retired), County of Sonoma
- Daniel Sanchez, North Bay Association of Realtors
- Tito Sasaki, Sonoma County Farm Bureau
- Rocky Vogler (alternate Jennifer Burke), City of Santa Rosa

Technical Advisory Committee:

- Bob Anderson, United Wine Growers
- Garrett Broughton, Town of Windsor
- Michael Burns, ESA | Water
- Mark Calhoon, Fircrest Mutual Water Company
- Kevin Cullinen, Sonoma Resource Conservation District
- Brock Dolman, Occidental Arts & Ecology Center
- Joe Gaffney, Sonoma County Alliance
- Dawna Gallagher, Santa Rosa Plain Well Owner & Clean Water Sonoma Marin
- Lloyd Iversen, Santa Rosa Plain Well Owner
- Jay Jasperse, Sonoma County Water Agency
- Lisa Micheli, Pepperwood Foundation
- Gary Mickelson, California Groundwater Association
- Jane Nielson, Sonoma County Water Coalition
- Matt O'Connor, O'Connor Environmental
- Rocky Vogler, City of Santa Rosa

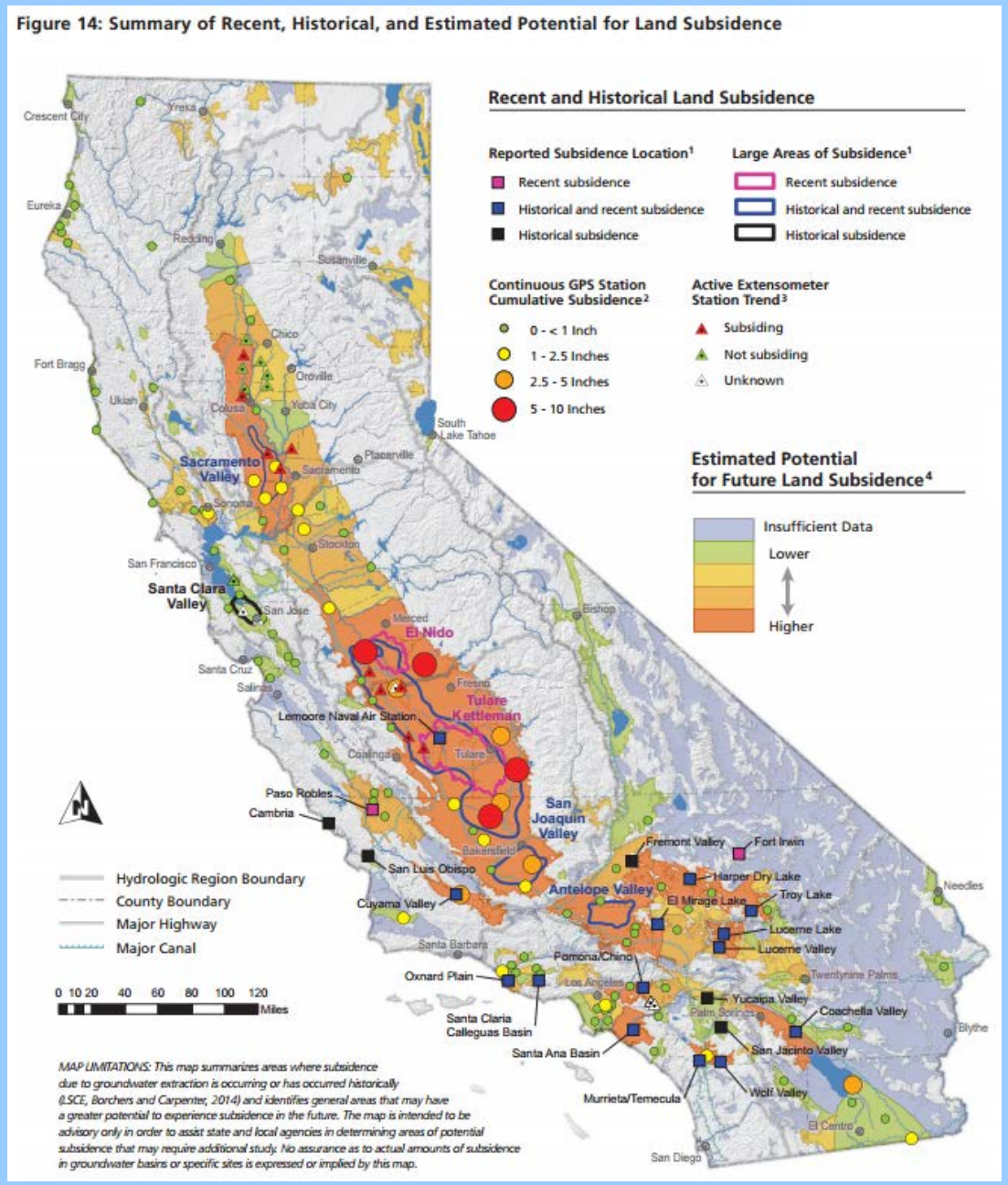
Interested Parties:
In addition to the Panel and Technical Advisory Committee, many members of the community participated in meetings and attended community forums on a regular basis, contributing to and reviewing the Groundwater Management Plan.

Staff to the Panel:
Marcus Trotta, Project Manager - Sonoma County Water Agency
Tim Parker, Technical Consultant – Parker Groundwater
Gina Bartlett, Facilitator - Center for Collaborative Policy
Marci DuPraw, Facilitator - Center for Collaborative Policy
Rich Wilson, Facilitator - Center for Collaborative Policy

DWR Staff:
Mark Nordberg – California Department of Water Resources

Prepared by:
Parker Groundwater

Estimated Potential for Land Subsidence



Source:
Public Update for Drought Response
(DWR, Nov. 2014)

Analysis Summary

1. Local control – with state oversight, ability to intervene
2. Discretionary powers and authorities
3. Existing data and information gaps for Eel River Valley
   - Recharge rates, aggregate pumping rates, surface water interactions
   - Sustainable yield, undesirable results
4. Local cost burden to implement legislation
   - Opportunity to apply for Prop. 1 grant funds in late 2015/early 2016
   - Legislative intent is for local management to be funded in part through fees
5. Timeline:
   - Determine groundwater sustainability agency by June 30, 2017
   - Adopt groundwater sustainability plan by January 31, 2022
   - Achieve sustainability goals by 2042

Initial Questions

1. Who are the stakeholders? How should stakeholders be engaged?
2. What are the key issues and concerns? Are there existing or imminent problems?
3. What data exist? What are the important data gaps?
4. Who should serve as the groundwater sustainability agency?
5. How will groundwater management integrate with existing County department functions?
6. How will groundwater management be funded?

Next Steps

1. Staff to summarize today's feedback to Board of Supervisors (target: June 2015)
2. Proposal: formation of a working group to meet quarterly and help formulate a groundwater program for the Eel River Valley

Initial topics

- Groundwater sustainability agency
- Community interests
- Potential management objectives
- Data and information
- Prop. 1 grant application
- Future funding mechanisms

→ Contact Hank Seemann if you are interested in participating in the working group

- Provide contact information today
- hseemann@co.humboldt.ca.us
- 445-7741