

# DWR Update: Groundwater Conditions Glenn County

June 9<sup>th</sup>, 2015



Erin Smith, Engineering Geologist  
CA Department of Water Resources  
Red Bluff



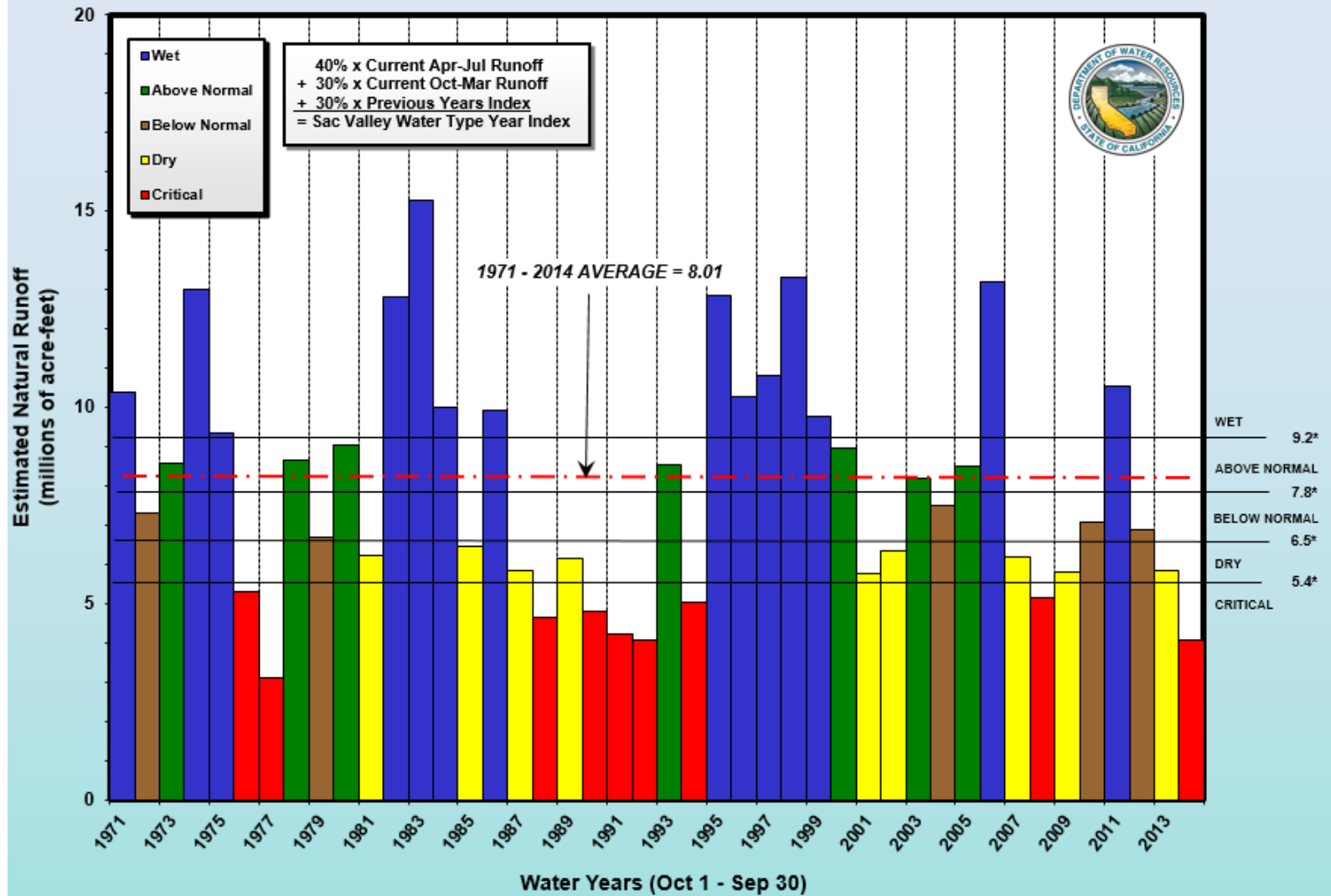
# Agenda

- Water Year
- Spring 2015 GW change maps
  - Glenn County with select hydrographs
  - North Sacramento Valley
  - Statewide information
- DWR GW Information Center

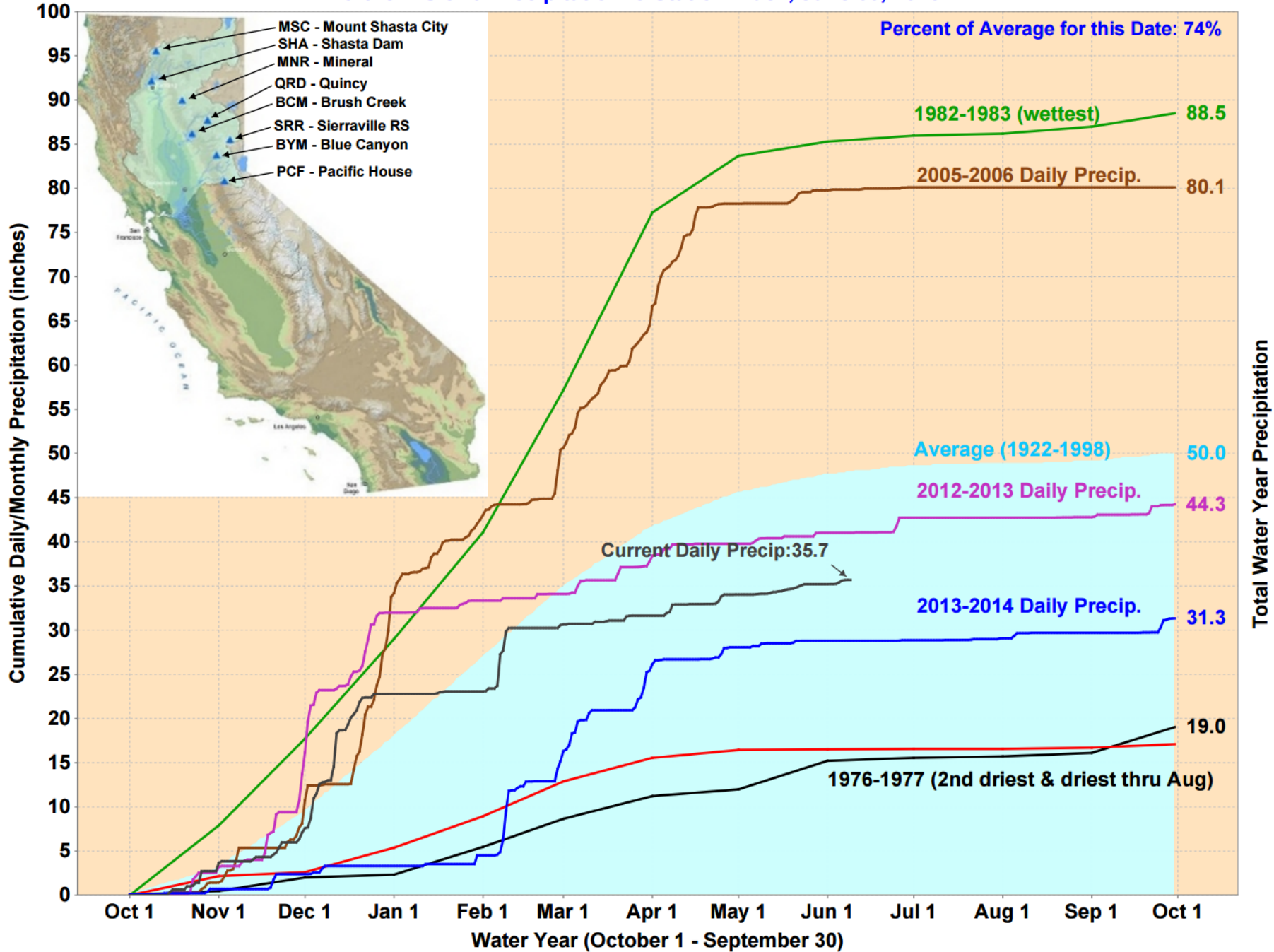


# Water Year Index 1971-2014

SACRAMENTO VALLEY WATER YEAR TYPE INDEX  
1971-2014



# Northern Sierra Precipitation: 8-Station Index, June 09, 2015



# Snow Pack



Key for April – July runoff numbers

# Groundwater Change in Elevation Maps and Hydrographs

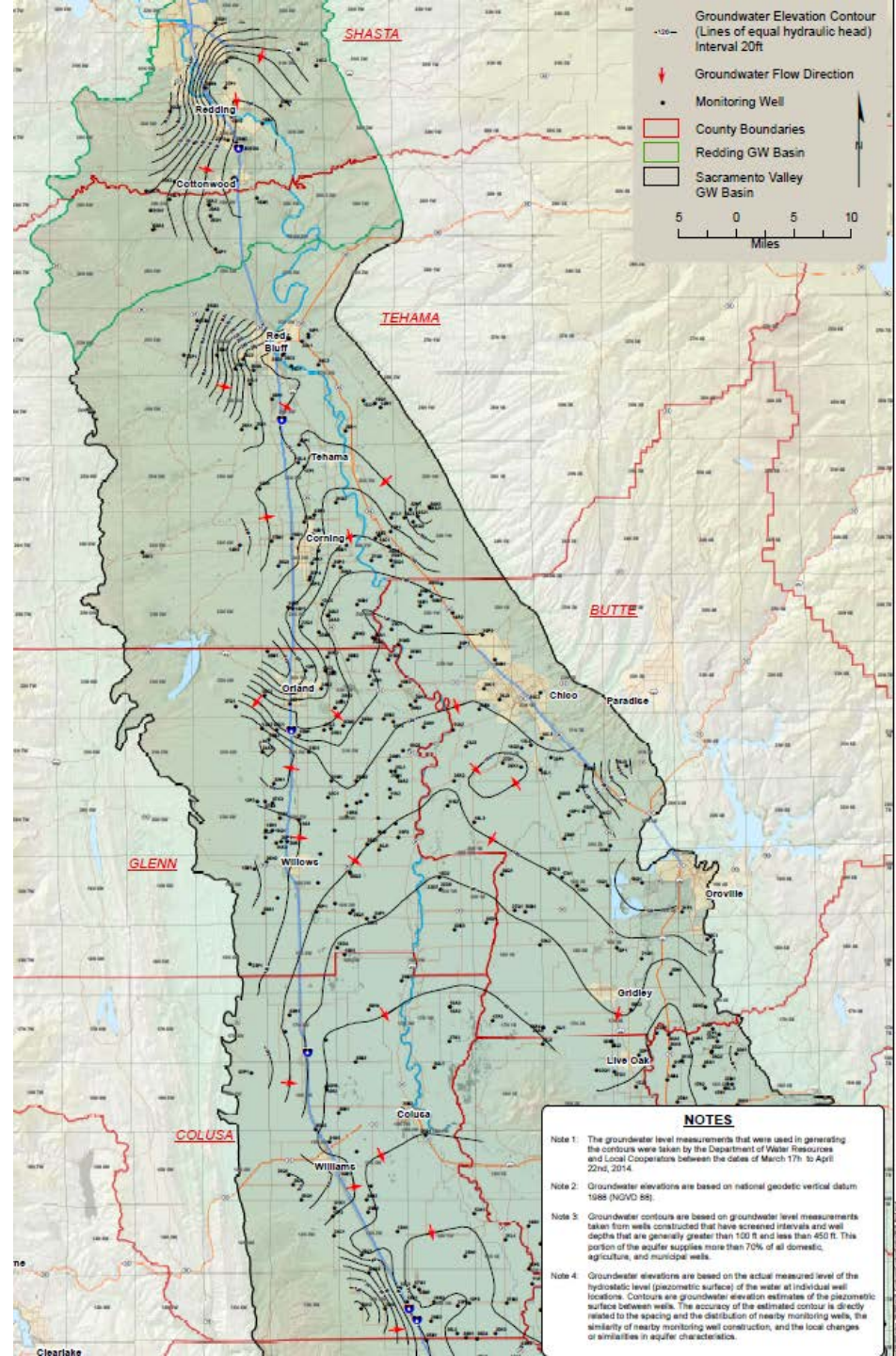
- Glenn County
- Sacramento River Valley
- Statewide groundwater status



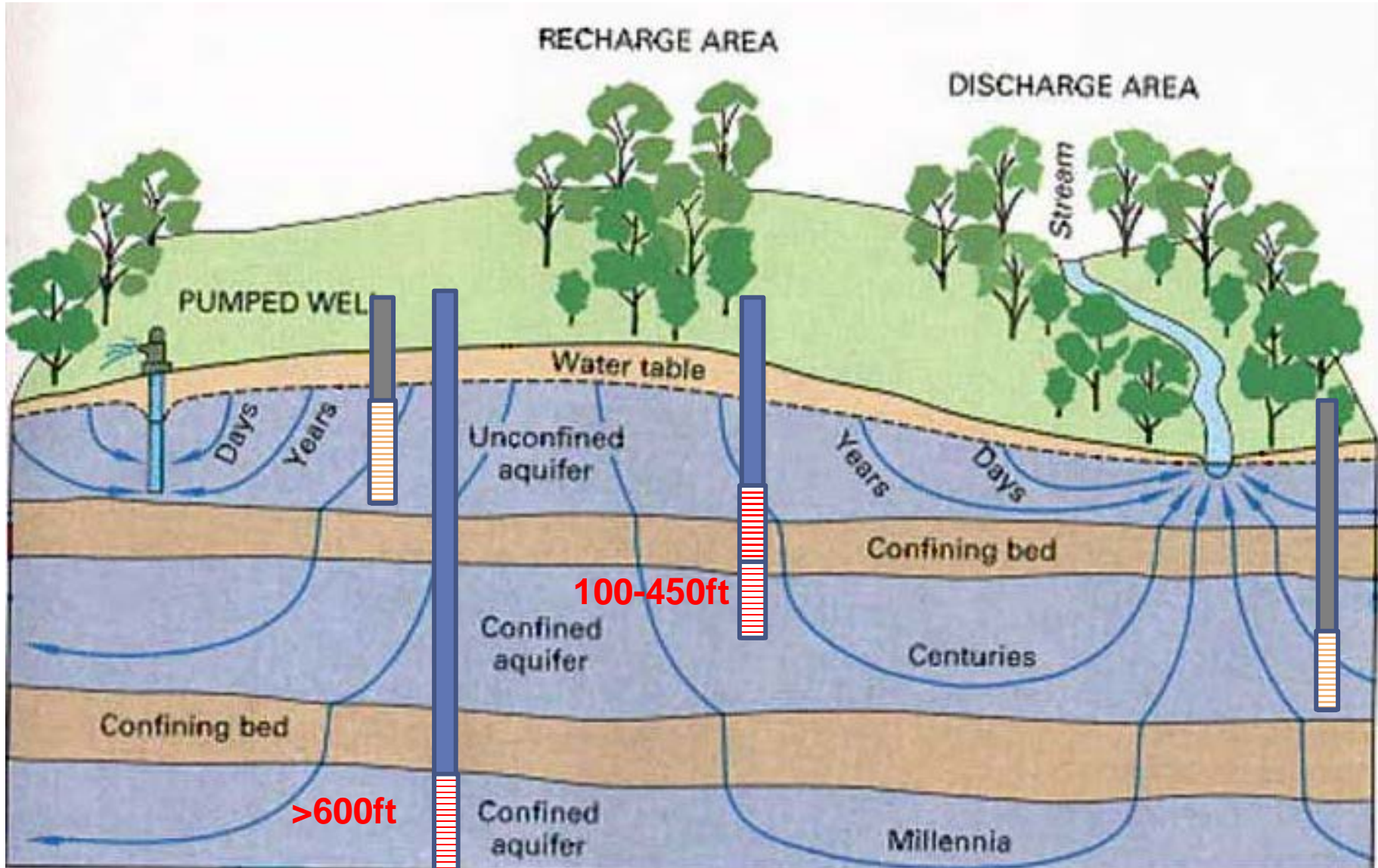
# Groundwater Elevation Contour Map

Spring 2015

Average Well Depths:  
100 to 450 feet  
below ground surface



Groundwater level data are then grouped for analysis by well depth

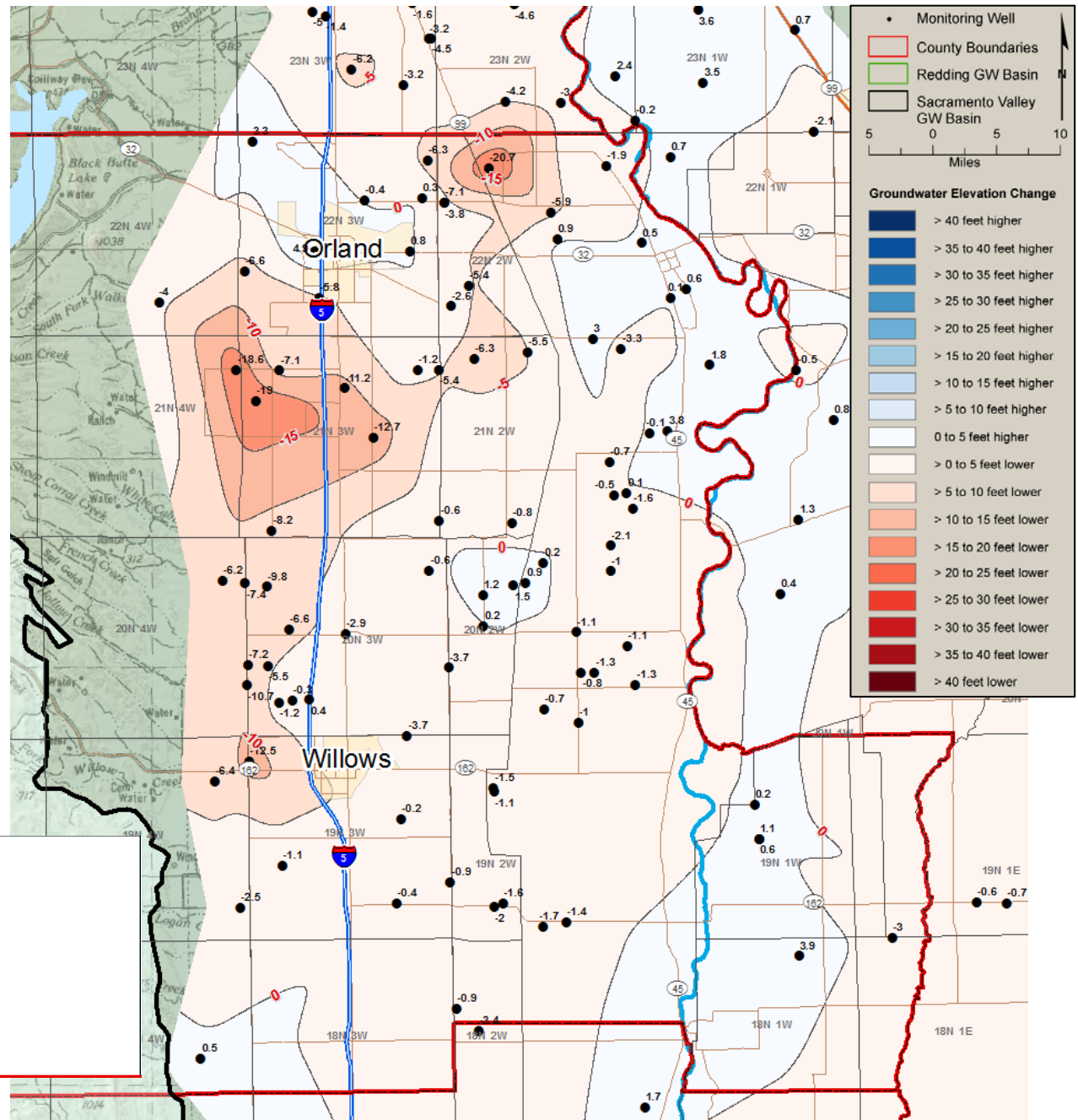




# Groundwater Elevation Change Map Glenn County

Spring 2014 to 2015

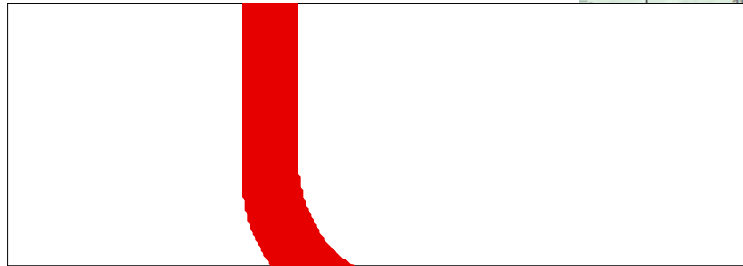
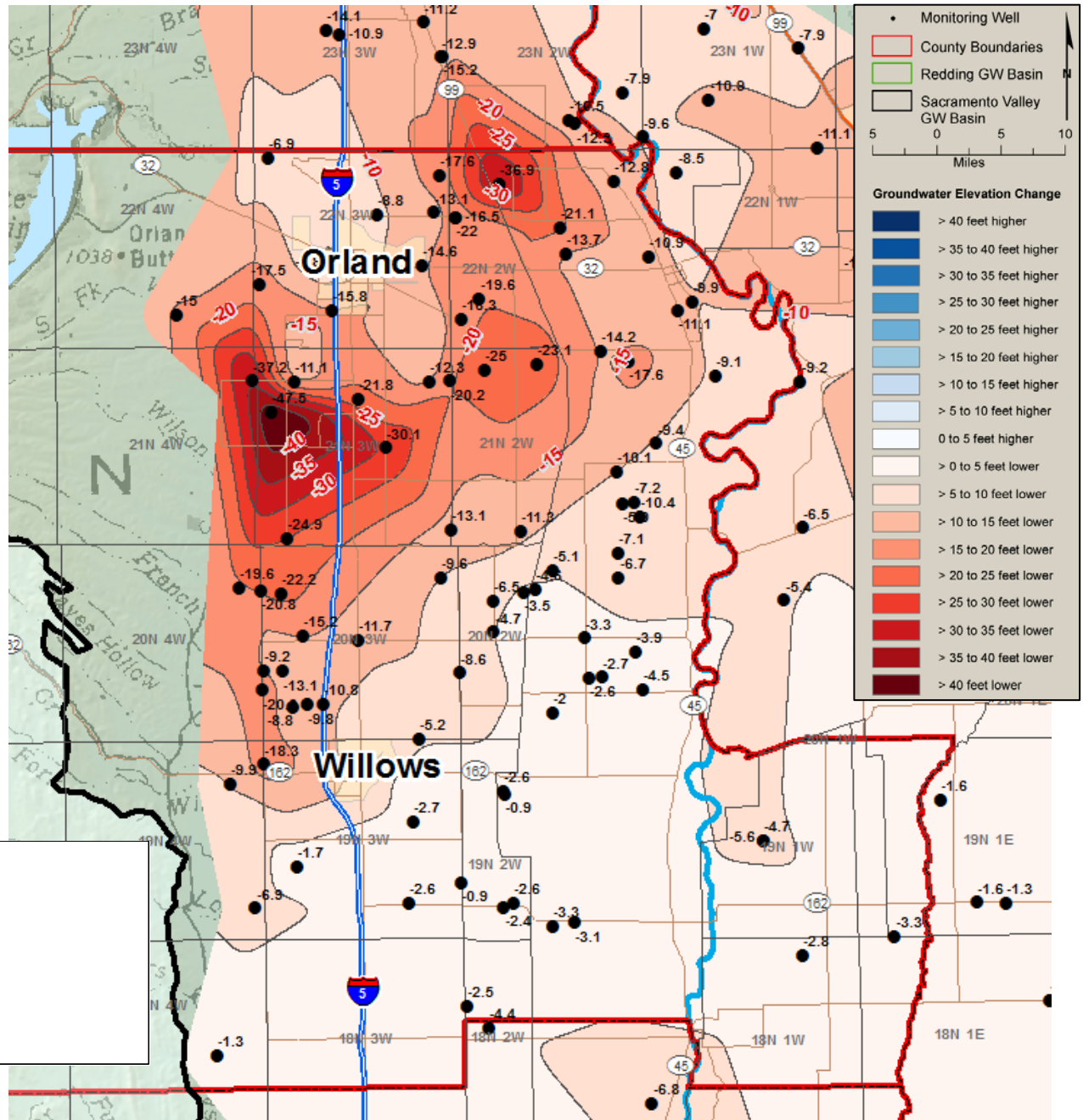
Well Depth:  
100 to 450 feet  
below ground surface



# Groundwater Elevation Change Map Glenn County

Spring 2011 to 2015

Well Depth:  
100 to 450 feet  
below ground surface

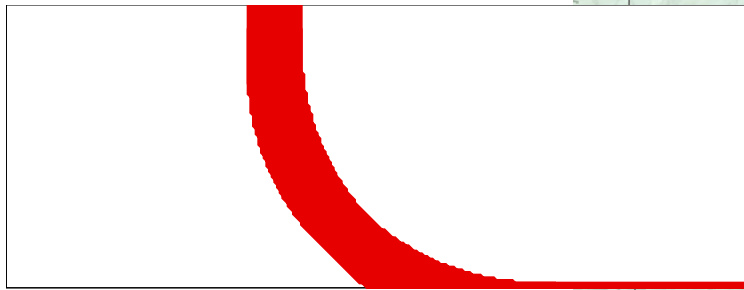
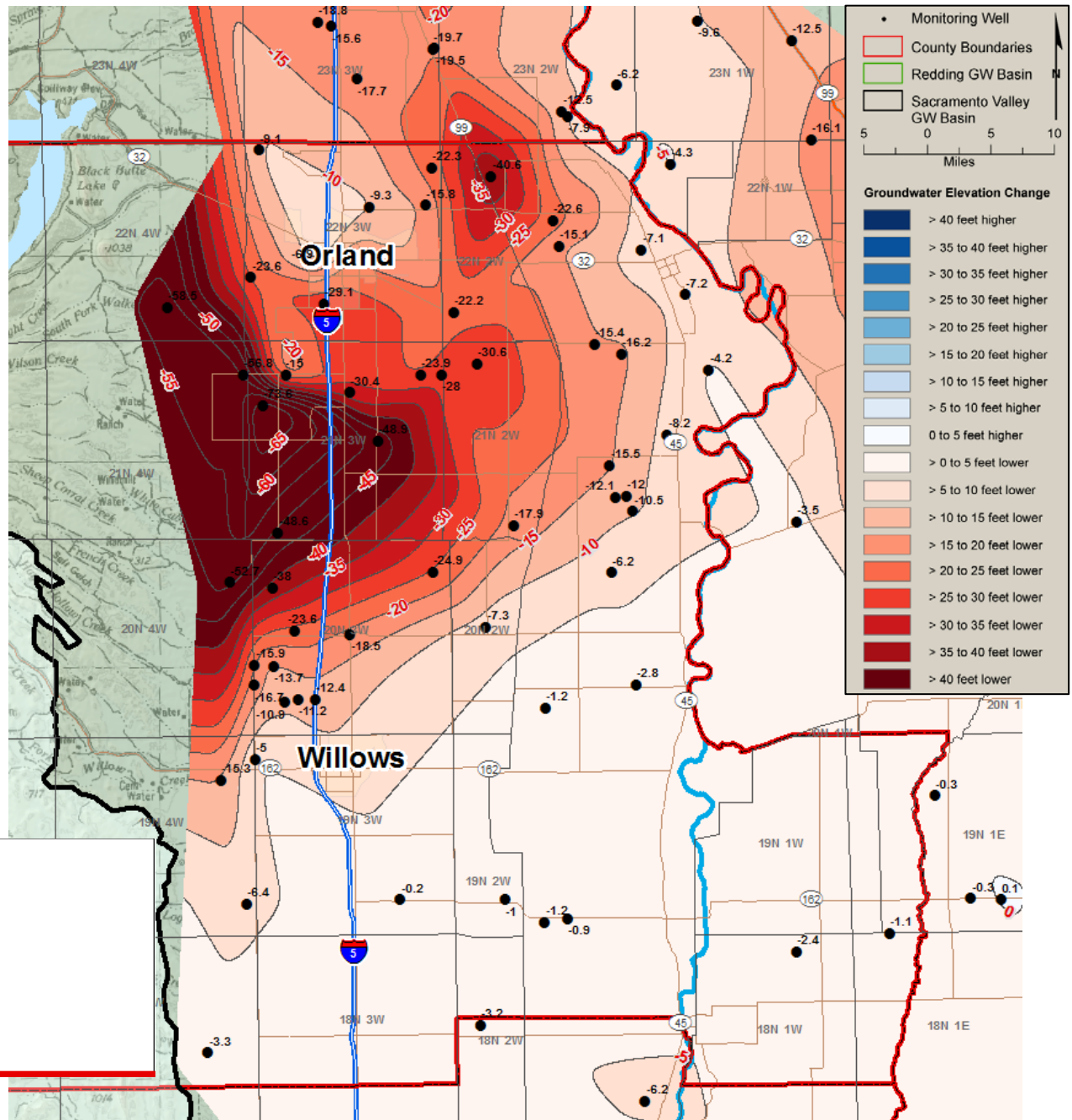




# Groundwater Elevation Change Map Glenn County

Spring 2004 to 2015

Well Depth:  
100 to 450 feet  
below ground surface

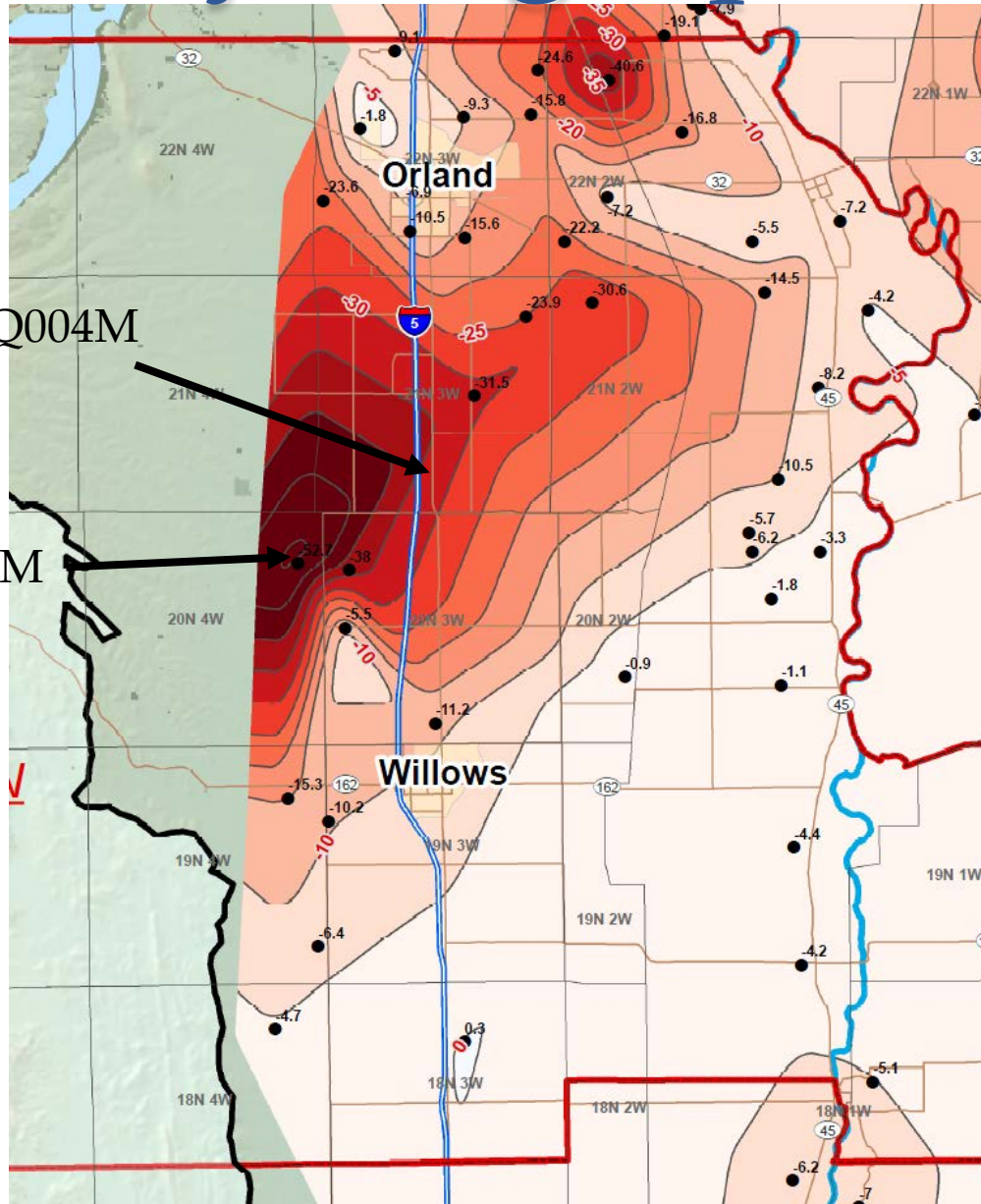


# Hydrographs

#1 - 21N03W34Q004M



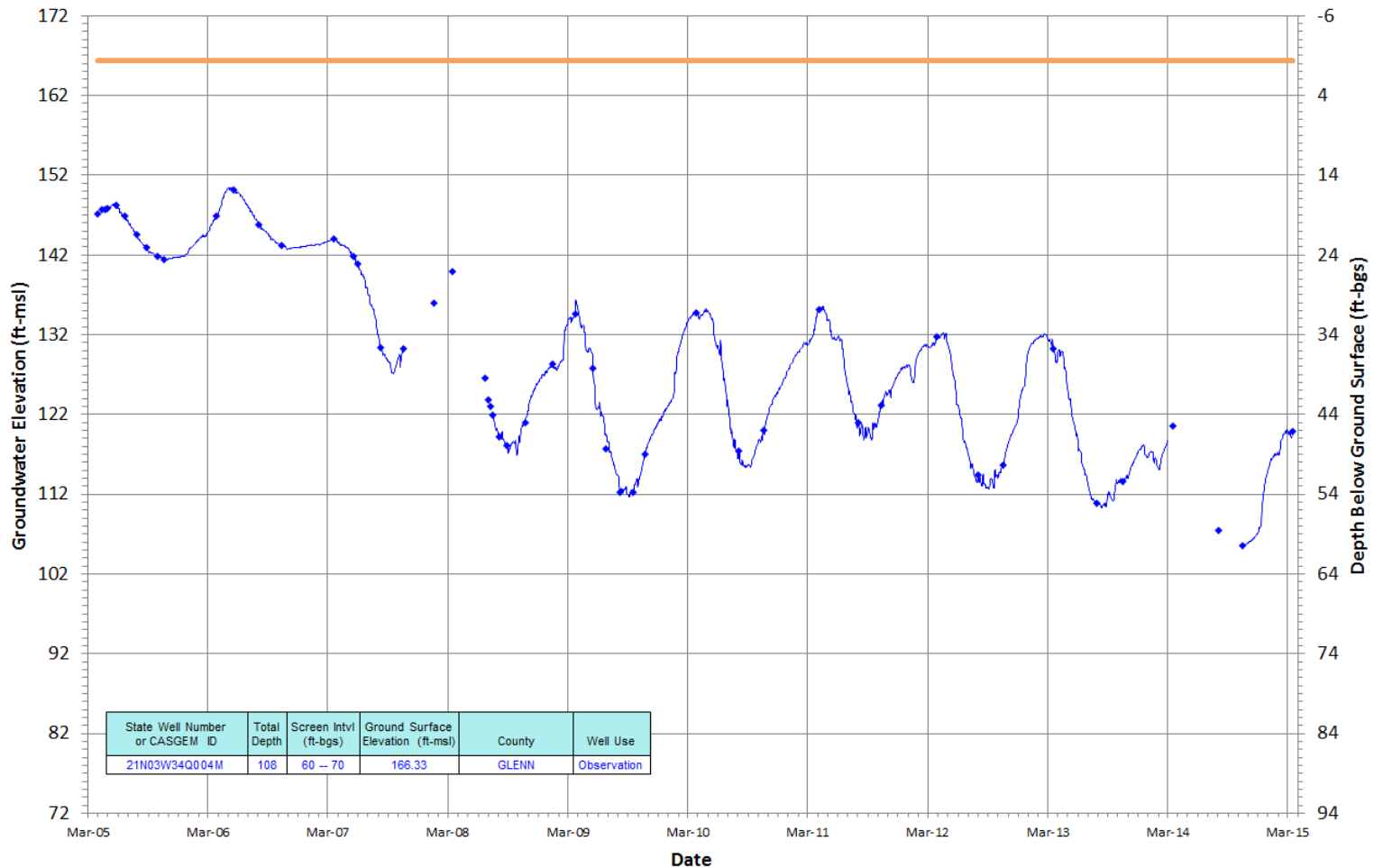
#2 - 20N04W12F002M



# 21N03W34Q004M

21N03W34Q004M  
 Period Of Record: 03/31/2005 to 03/16/2015

Hydrograph Criteria  
 Field Book Name is 'Glenn County-Book 2'

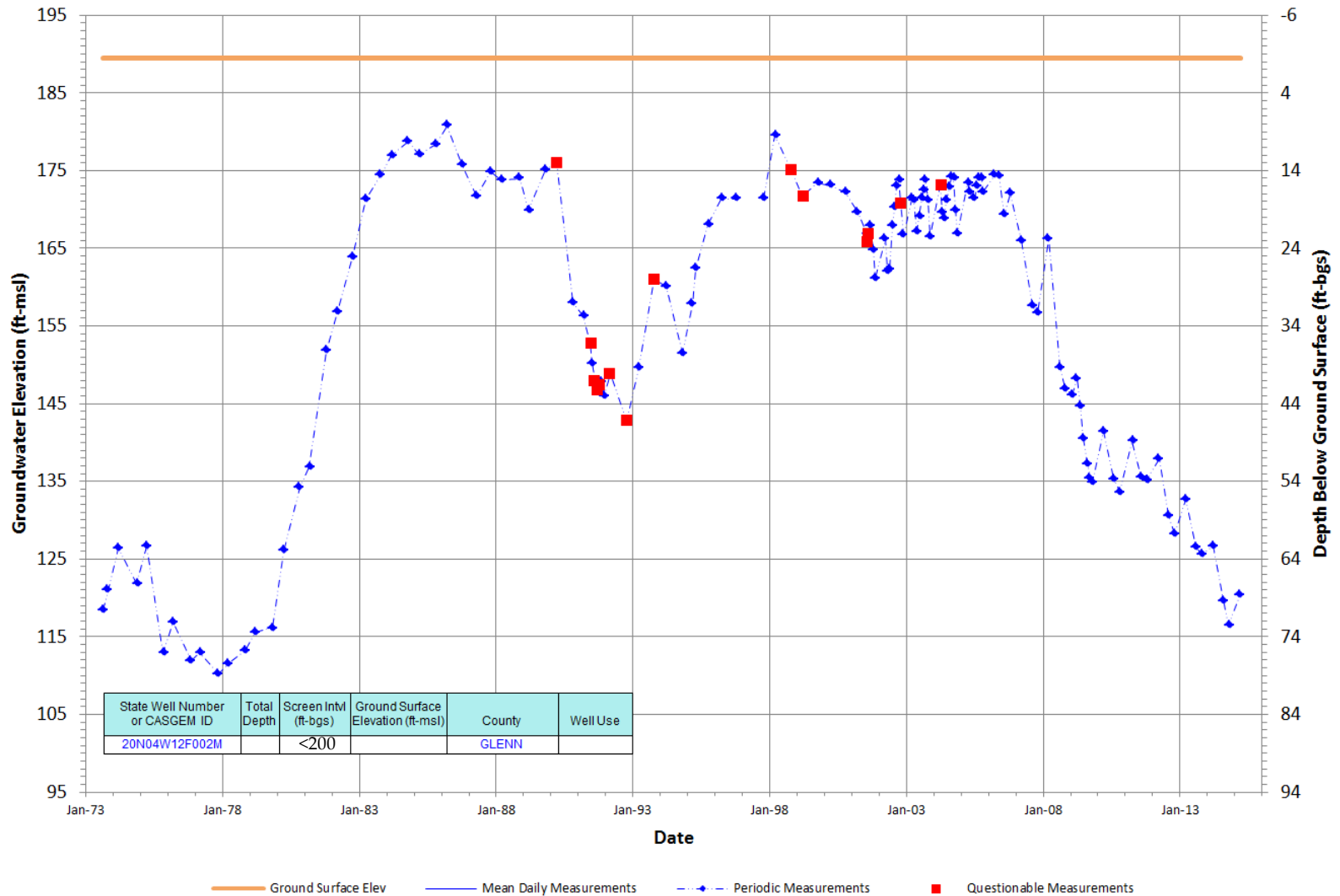


— Ground Surface Elev    — Mean Daily Measurements    ◆ Periodic Measurements    ■ Questionable Measurements

# 20N04W12F002M

20N04W12F002M  
 Period Of Record: 08/10/1973 to 03/16/2015

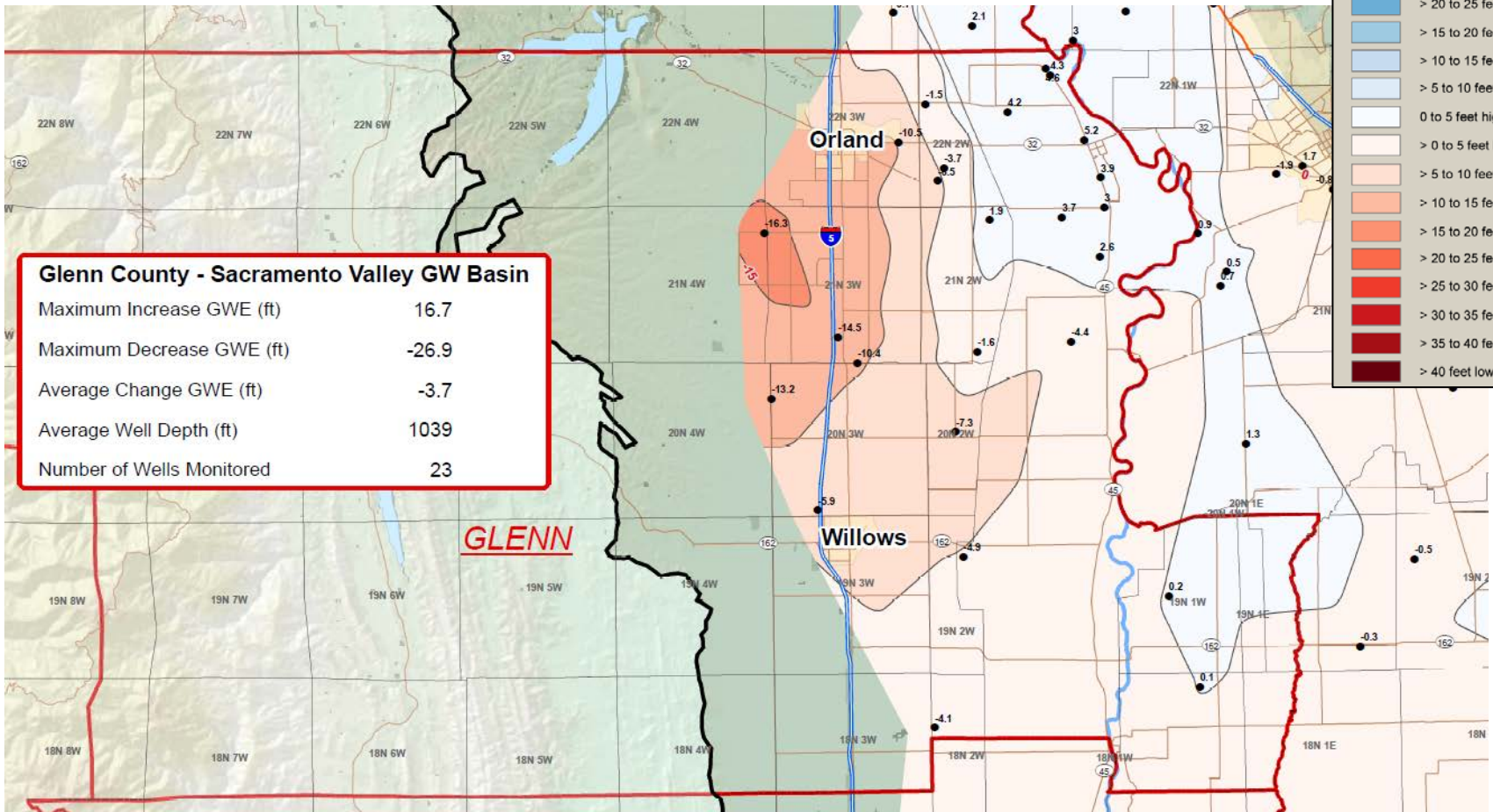
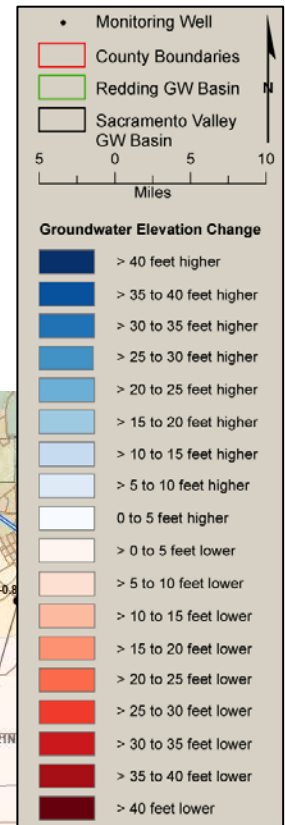
Hydrograph Criteria  
 Field Book Name is 'Glenn County-Book 2'





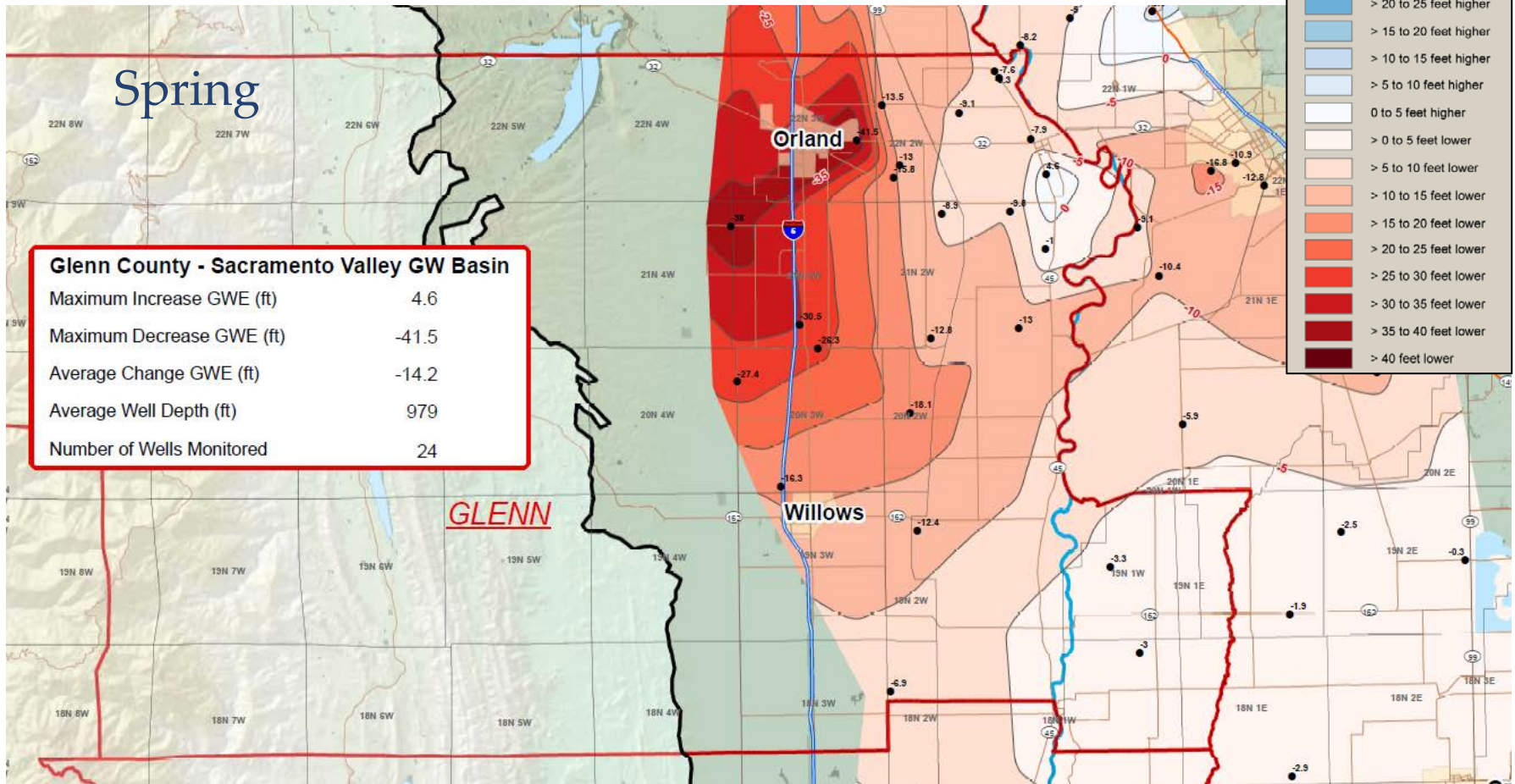
# Groundwater Elevation Change Map Glenn County

Spring 2014 to 2015  
Well Depth: > 600 feet  
below ground surface



# Groundwater Elevation Change Map Glenn County

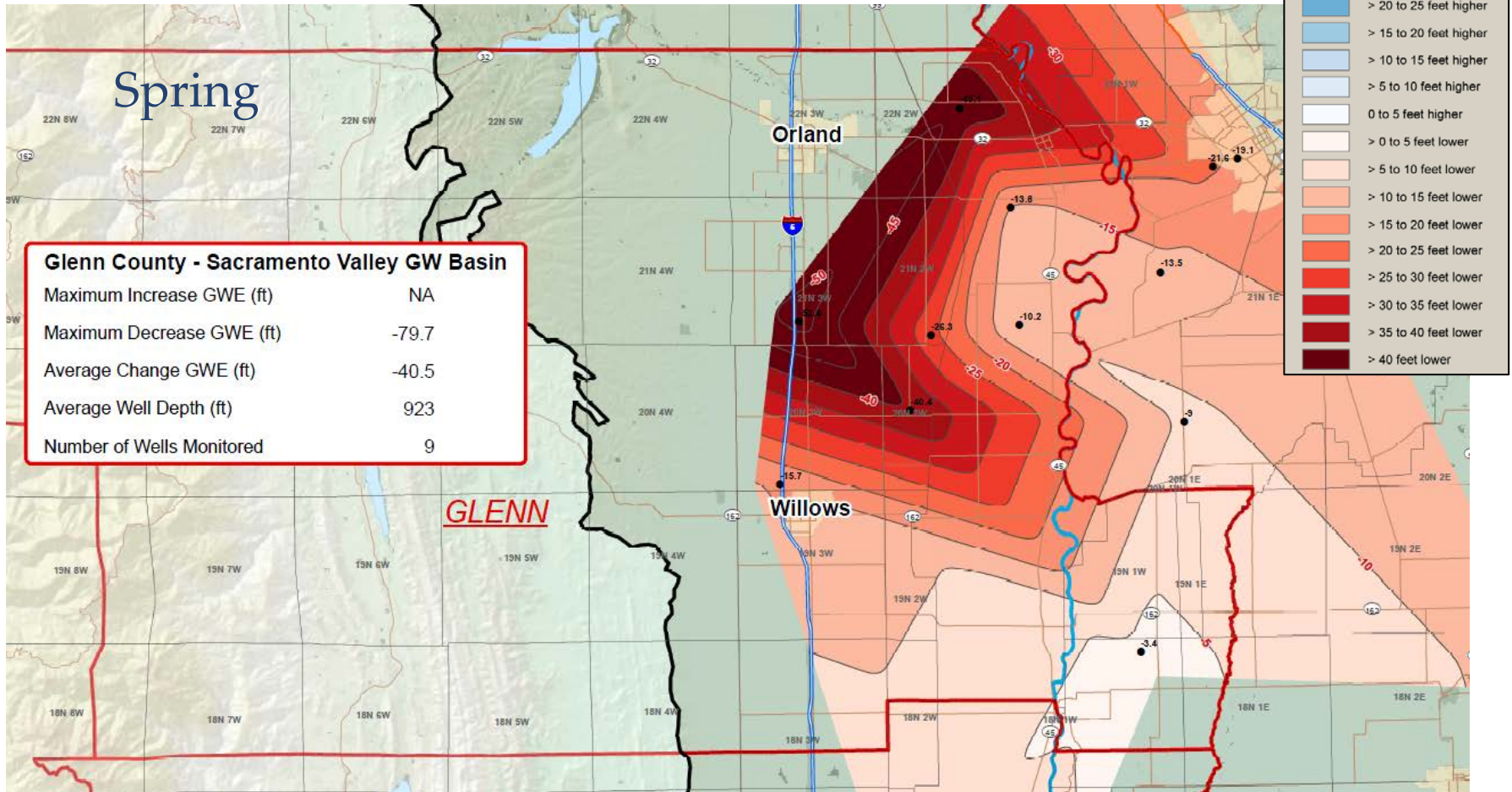
Spring 2011 to 2015  
Well Depth: > 600 feet  
below ground surface





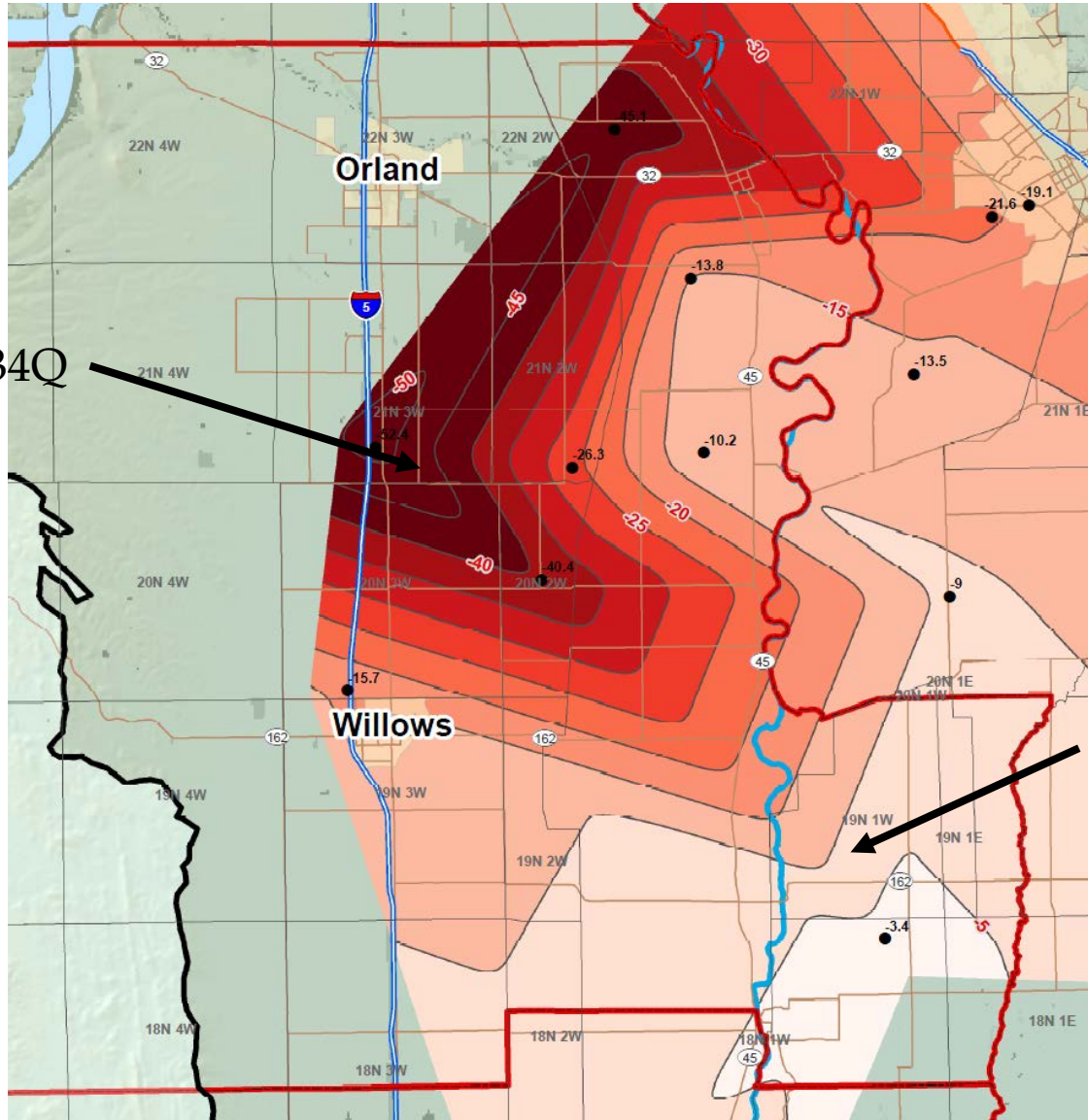
# Groundwater Elevation Change Map Glenn County

Spring 2004 to 2015  
Well Depth: > 600 feet  
below ground surface



# Hydrographs

#1 – 21N03W34Q



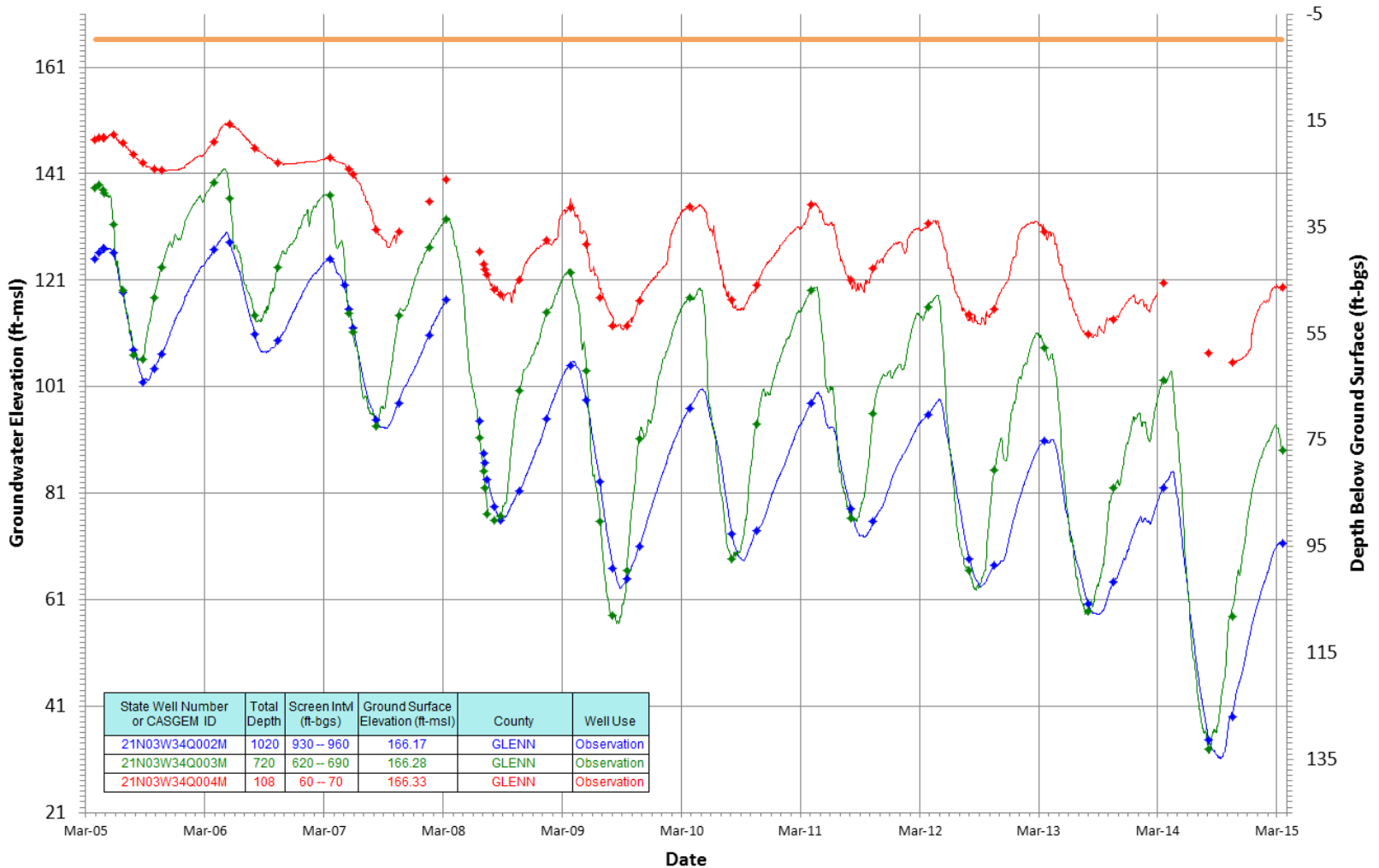
#2 - 19N01W22D



# 21N03W34Q002 – 004M

Clustered Well Hydrograph  
 Period Of Record: 03/31/2005 to 03/16/2015

Hydrograph Criteria  
 Field Book Name is 'Glenn County-Book 2'

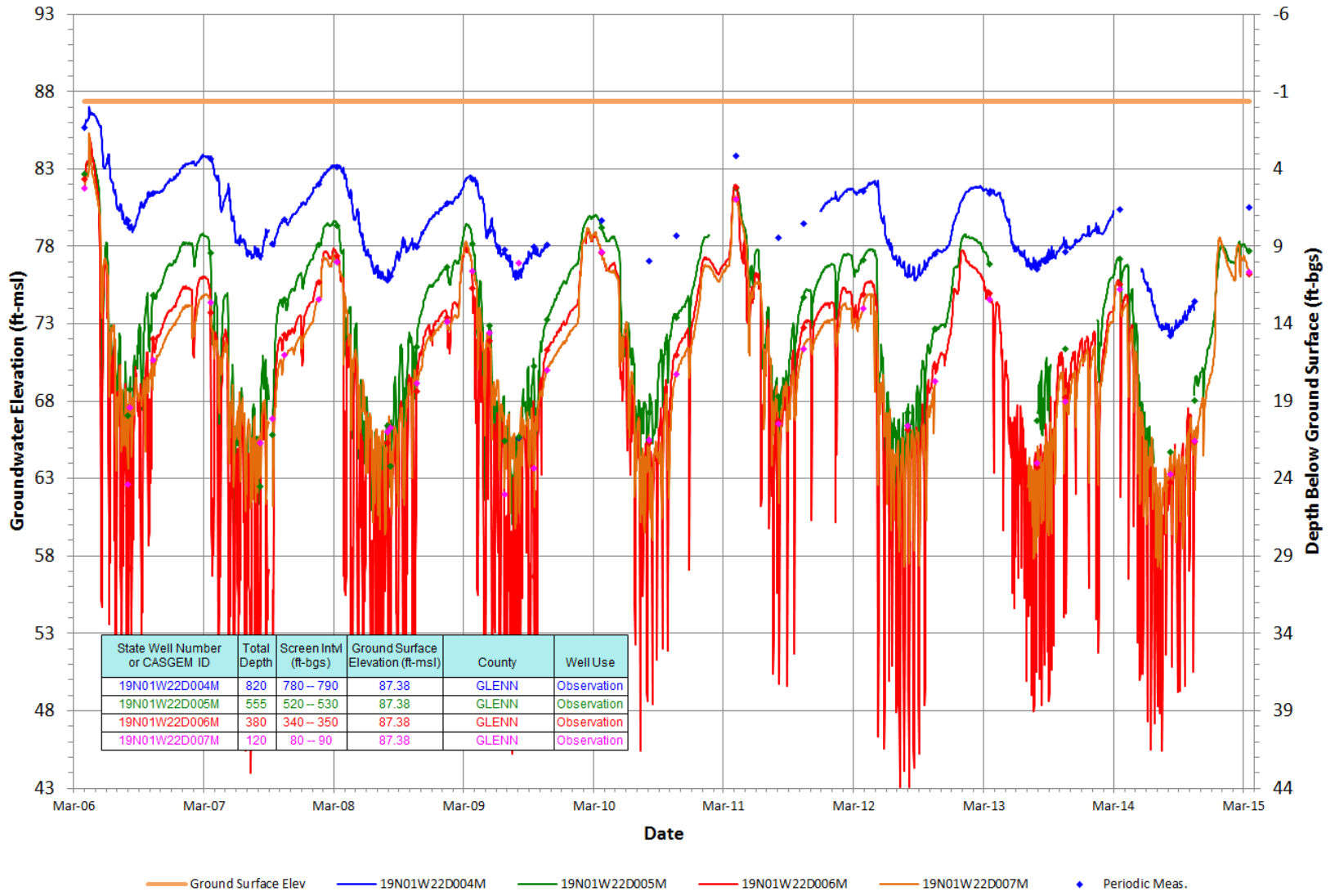


— Ground Surface Elev    — 21N03W34Q002M    — 21N03W34Q003M    — 21N03W34Q004M    ◆ Periodic Meas.

# 19N01W22D004 – 007M

Clustered Well Hydrograph  
 Period Of Record: 03/31/2006 to 03/16/2015

Hydrograph Criteria  
 Field Book Name is 'Glenn County-Book 1'



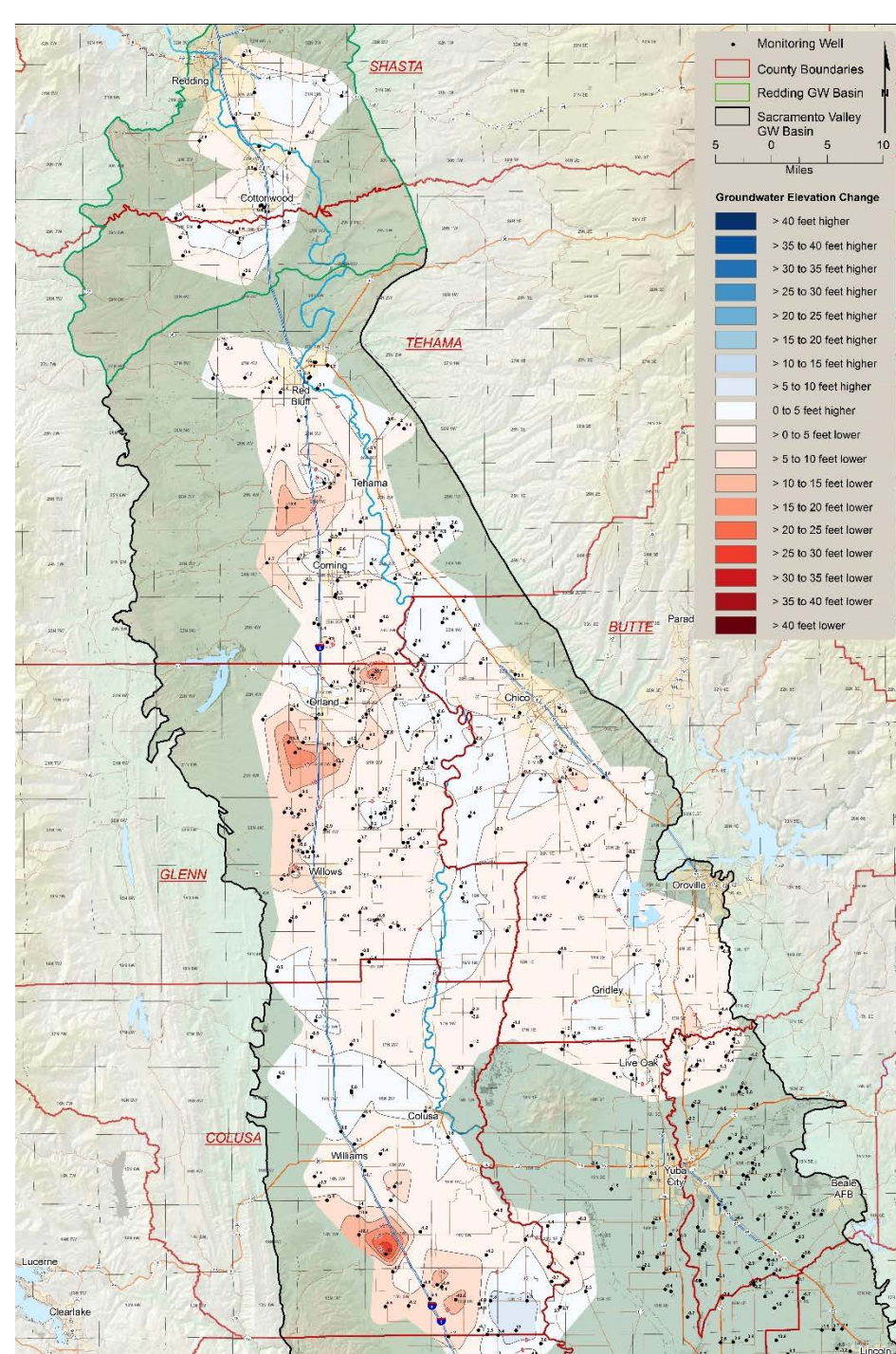
# Groundwater Elevation Change Map Sacramento River Valley

Spring 2014 to 2015

Average:  
100 to 450 feet  
below ground surface

## Summary Results for Spring 2014 to Spring 2015 Change in Groundwater Elevation

Maximum Increase GWE (ft)	10.0
Maximum Decrease GWE (ft)	-33.0
Average Change GWE (ft)	-1.9
Average Well Depth (ft)	268
Number of Wells Monitored	282





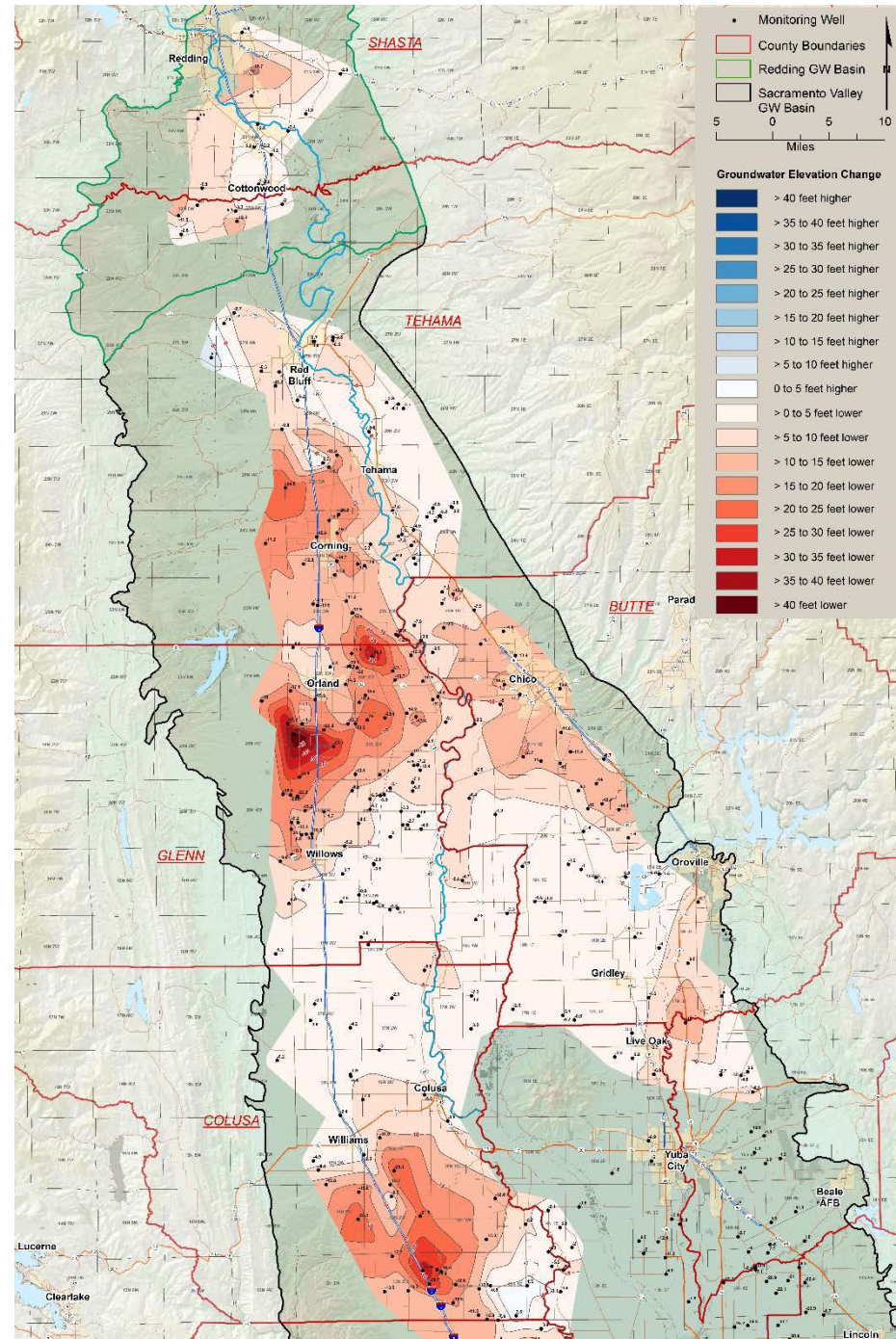
# Groundwater Elevation Change Map Sacramento River Valley

Spring 2011 to 2015

Average:  
100 to 450 feet  
below ground surface

## Summary Results for Spring 2011 to Spring 2015 Change in Groundwater Elevation

Maximum Increase GWE (ft)	8.1
Maximum Decrease GWE (ft)	-47.5
Average Change GWE (ft)	-9.3
Average Well Depth (ft)	264
Number of Wells Monitored	260





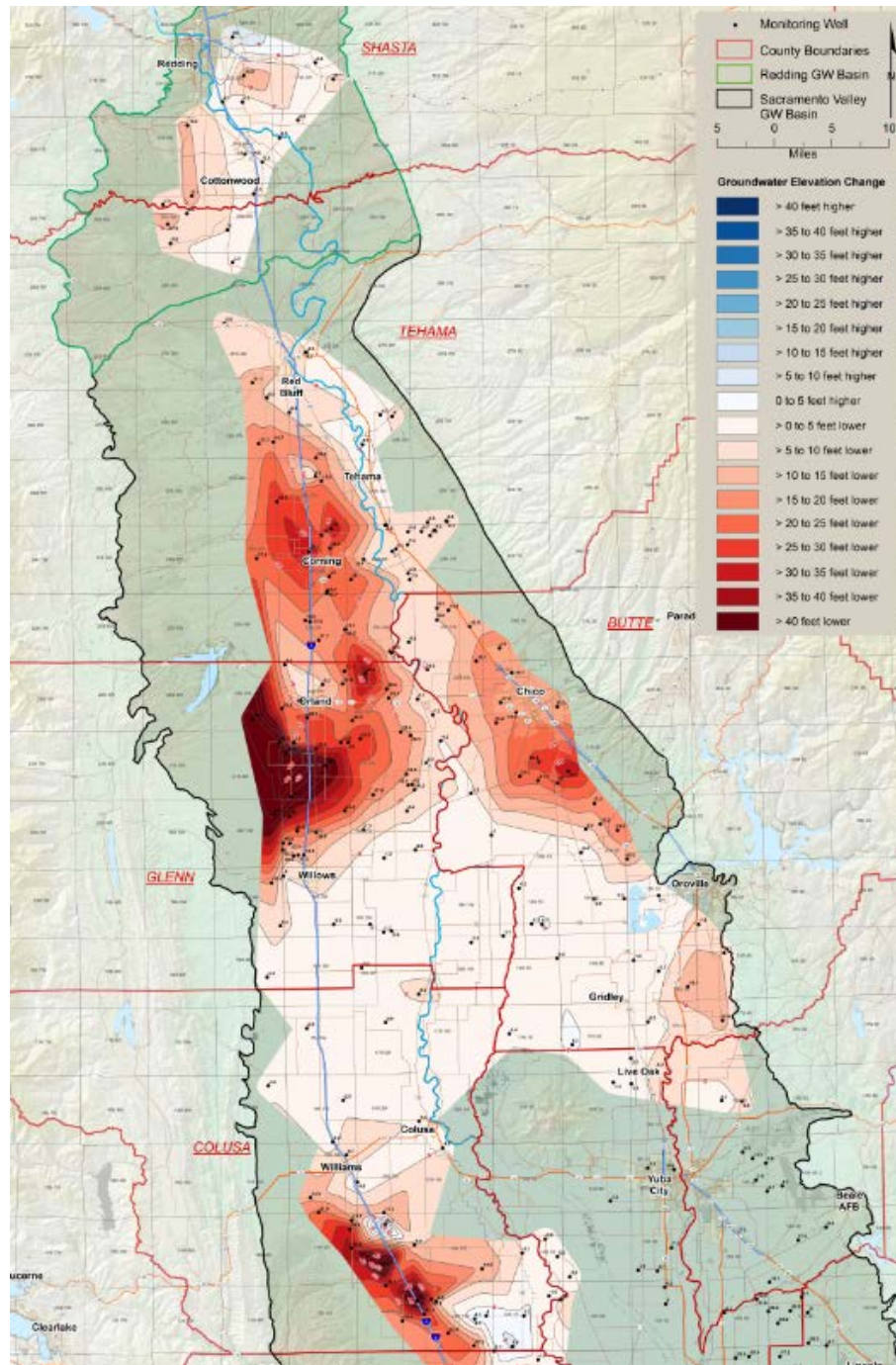
# Groundwater Elevation Change Map Sacramento River Valley

Spring 2004 to 2015

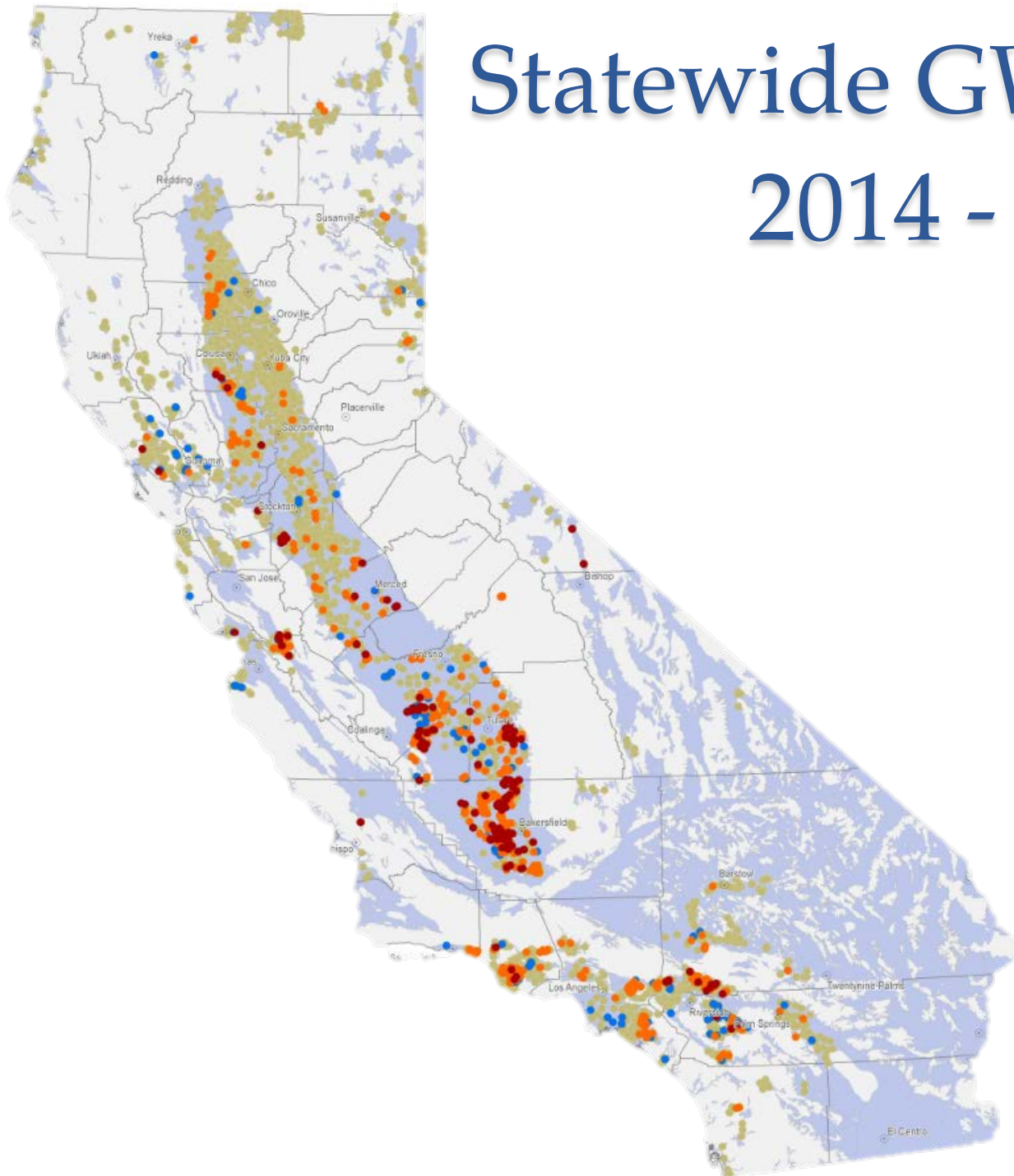
Average:  
100 to 450 feet  
below ground surface

## Summary Results for Spring 2004 to Spring 2015 Change in Groundwater Elevation

Maximum Increase GWE (ft)	20.1
Maximum Decrease GWE (ft)	-73.6
Average Change GWE (ft)	-13.2
Average Well Depth (ft)	254
Number of Wells Monitored	201



# Statewide GWL Change 2014 - 2015



## Legend:

### Groundwater Level Change

- > 10 ft increase
- +/- 10 ft change
- > 10 to 25 ft decrease
- > 25 ft decrease

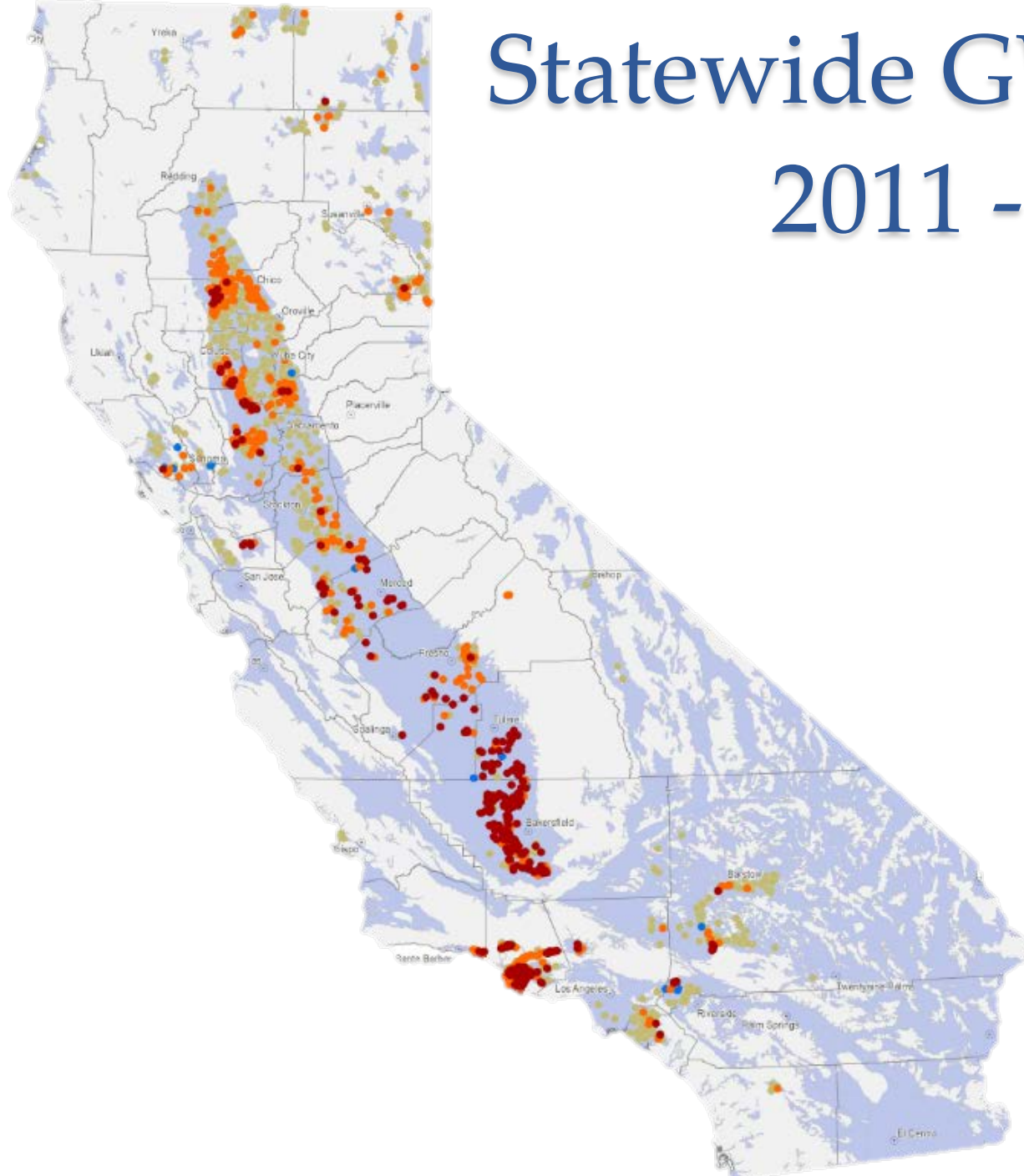
Groundwater Basin

County Boundary

\*Data is subject to change without notice



# Statewide GWL Change 2011 - 2015



## Legend:

### Groundwater Level Change

- > 10 ft increase
- +/- 10 ft change
- > 10 to 25 ft decrease
- > 25 ft decrease

- Groundwater Basin
- County Boundary

\*Data is subject to change without notice

# DWR Groundwater Information Center



## Groundwater Information Center

### Maps and Reports

Groundwater data and related information can be reported in a variety of formats, including maps, figures, and written reports.

This page provides access to PDF documents which report groundwater conditions in a variety of formats. Documents are organized by report type (for example, "Groundwater Level Change Maps") and by region. Statewide reports, or reports that cover large regions of the state are found on this page, whereas local reports are available at Region Office Regions and Data below. Please note that data reports and other information is being added to this page regularly.

#### Statewide and Regional Maps

- + Groundwater Level Change Maps (click here to view)

#### Statewide and Regional Reports

- + Selected Report Figures (click here to view)

#### Reports and Data Organized by Regional Office

Groundwater data collection, management, and reporting typically occurs at a regional level, and is conducted by staff at one of the four Department Region Offices.

- + Northern Region
- + North Central Region
- + South Central Region
- + Southern Region

#### Download Geospatial Data

Use the Groundwater Information Center Interactive Map to view and download selected groundwater related GIS data.

## SGM Sustainable Groundwater Management

### GSA Notifications

**Where Do I Submit My GSA Notification?**

- **Mark Nordberg** - GSA Project Manager  
Senior Engineering Geologist  
California Department of Water Resources  
901 P Street, Room 213A  
P.O. Box 942936  
Sacramento, CA 94236  
Mark.Nordberg@water.ca.gov
- **DWR Region Office Groundwater Contact**  
- If your GSA covers more than one DWR region, please send your GSA notification to staff in both region offices.

#### Groundwater Sustainability Agency Notifications Received by DWR

Show 10 entries Search: glenn

Name of Local Agency	Basin/Subbasin Name	Basin/Subbasin Number	County(s) the Basin is Located	Date of GSA Notification Posting
President ID and Princeton-Codora-Glenn ID	Colusa	5-21-52	Colusa	04/16/2015
Glide Water District	Colusa	5-21-52	Glenn	05/05/2015
Kanaasha Water District	Colusa	5-21-52	Glenn	05/05/2015
President ID and Princeton-Codora-Glenn ID	Colusa	5-21-52	Glenn	04/16/2015

## SGM Sustainable Groundwater Management

### Resources

- California's Groundwater Update 2013**  
Published April 2015  
California's Groundwater Update 2013: A Compilation of Enhanced Context for California Water Plan Update 2013 compiles and analyzes readily-available groundwater information to characterize California's groundwater basins.
- Groundwater Sustainability Program Draft Strategic Plan**  
Published March 2015  
The Groundwater Sustainability Program Strategic Plan describes the Department of Water Resources' roles and responsibilities under the Sustainable Groundwater Management Act and outlines related actions from the California Water Action Plan.
- Interagency Sustainable Groundwater Management Brochure**  
Published January 2015  
The Natural Resources Agency and California Groundwater Management Agency created a brochure to highlight the Sustainable Groundwater Management Act.
- Sustainable Groundwater Management Timeline**  
Published December 2014

### GROUNDWATER HOME

#### SUSTAINABLE GROUNDWATER MANAGEMENT

- Basin Boundaries
- Public List
- Groundwater Agencies
- GSA Notifications
- Initial Basin Prioritization
- Communication and Outreach
- Advisory Groups
- Statewide SGMA Calendar
- Region Office Contacts
- Subscribe for Email Updates
- Resources
- Facilitation Support Services
- SGMA Database
- Water Mgmt. Planning Tool
- Related Links

#### GROUNDWATER INFORMATION CENTER

- BULLETIN 118

### California Department of Water Resources Groundwater Information Center Map Interface

Data Boundaries Disclaimer Help!

**Groundwater Level Measurements**

Select Data Type:

- Depth Below Ground
- Groundwater Elevation
- Change in Groundwater Level

Choose Time Period:

2014 Select Year  
Spring Select Season  
2004 to 2014 Select Range  
(Change in Groundwater Level Only)

Show Data Layers:

- Measurements
- Contours
- Color Ramp

Legend:

- Measurements
  - ▲ Depth Below Ground
- Contours
  - Ground Surface
  - Primary Contour
  - Secondary Contour
- Color Ramp
  - 0 feet (ground surface)
  - 400 feet below ground surface

Subsidence



# Thank-you! Questions?

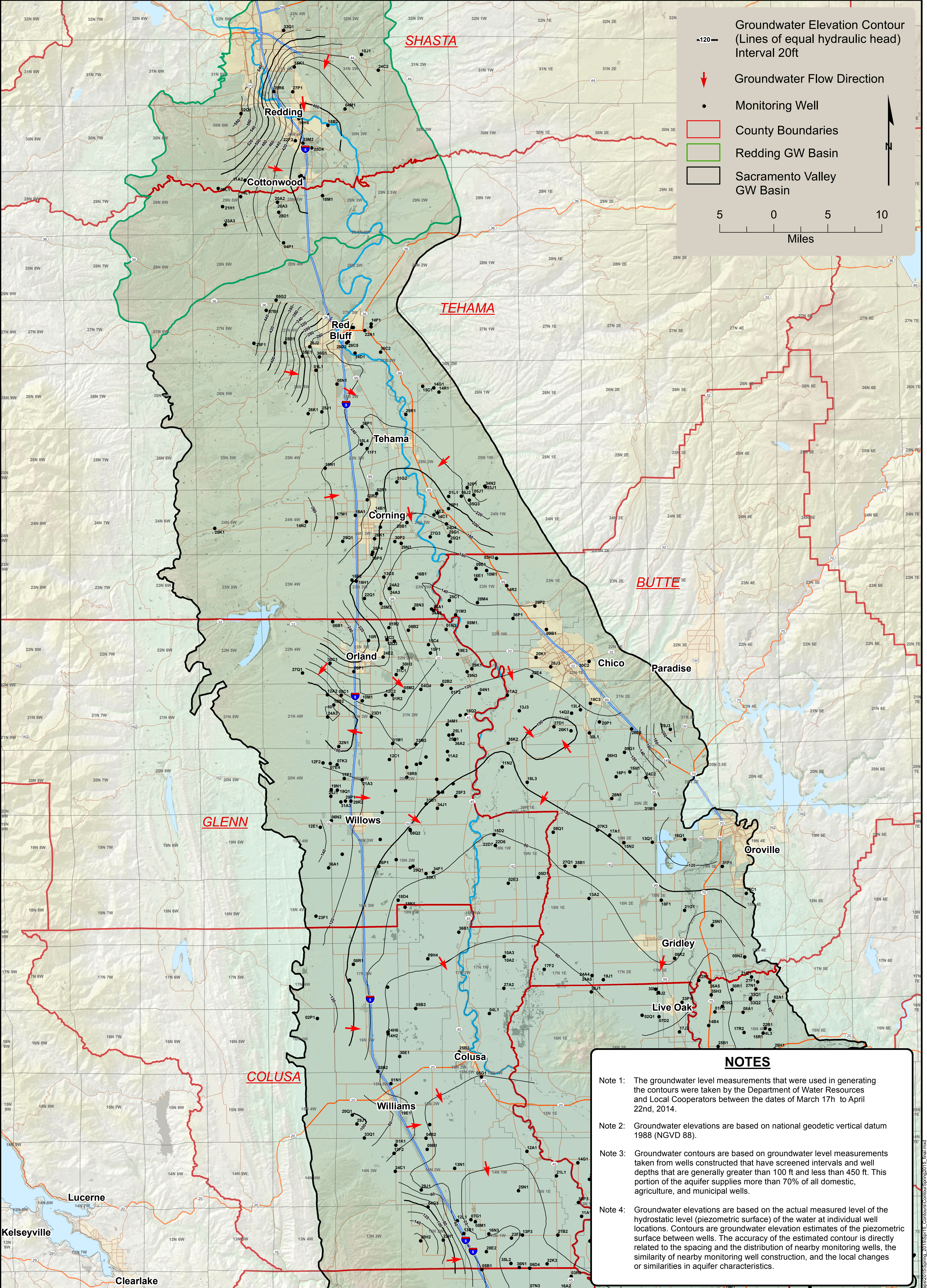
Erin Smith  
Engineering Geologist

2440 Main Street  
Red Bluff, CA 96080

Office: (530) 529-7314  
Email: [Erin.Smith@water.ca.gov](mailto:Erin.Smith@water.ca.gov)







Groundwater Elevation Contour  
(Lines of equal hydraulic head)  
Interval 20ft

↓ Groundwater Flow Direction

• Monitoring Well

County Boundaries

Redding GW Basin

Sacramento Valley GW Basin

5 0 5 10  
Miles

**NOTES**

Note 1: The groundwater level measurements that were used in generating the contours were taken by the Department of Water Resources and Local Cooperators between the dates of March 17th to April 22nd, 2014.

Note 2: Groundwater elevations are based on national geodetic vertical datum 1988 (NGVD 88).

Note 3: Groundwater contours are based on groundwater level measurements taken from wells constructed that have screened intervals and well depths that are generally greater than 100 ft and less than 450 ft. This portion of the aquifer supplies more than 70% of all domestic, agriculture, and municipal wells.

Note 4: Groundwater elevations are based on the actual measured level of the hydrostatic level (piezometric surface) of the water at individual well locations. Contours are groundwater elevation estimates of the piezometric surface between wells. The accuracy of the estimated contour is directly related to the spacing and the distribution of nearby monitoring wells, the similarity of nearby monitoring well construction, and the local changes or similarities in aquifer characteristics.

STATE OF CALIFORNIA  
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**NORTHERN SACRAMENTO VALLEY  
GROUNDWATER ELEVATION MAP  
Spring 2015**

**PLATE 1**

Date: May 2015  
BY: G. Gordon





Shasta County - Redding GW Basin	
Maximum Increase GWE (ft)	4.0
Maximum Decrease GWE (ft)	-2.9
Average Change GWE (ft)	0.0
Average Well Depth (ft)	235
Number of Wells Monitored	18

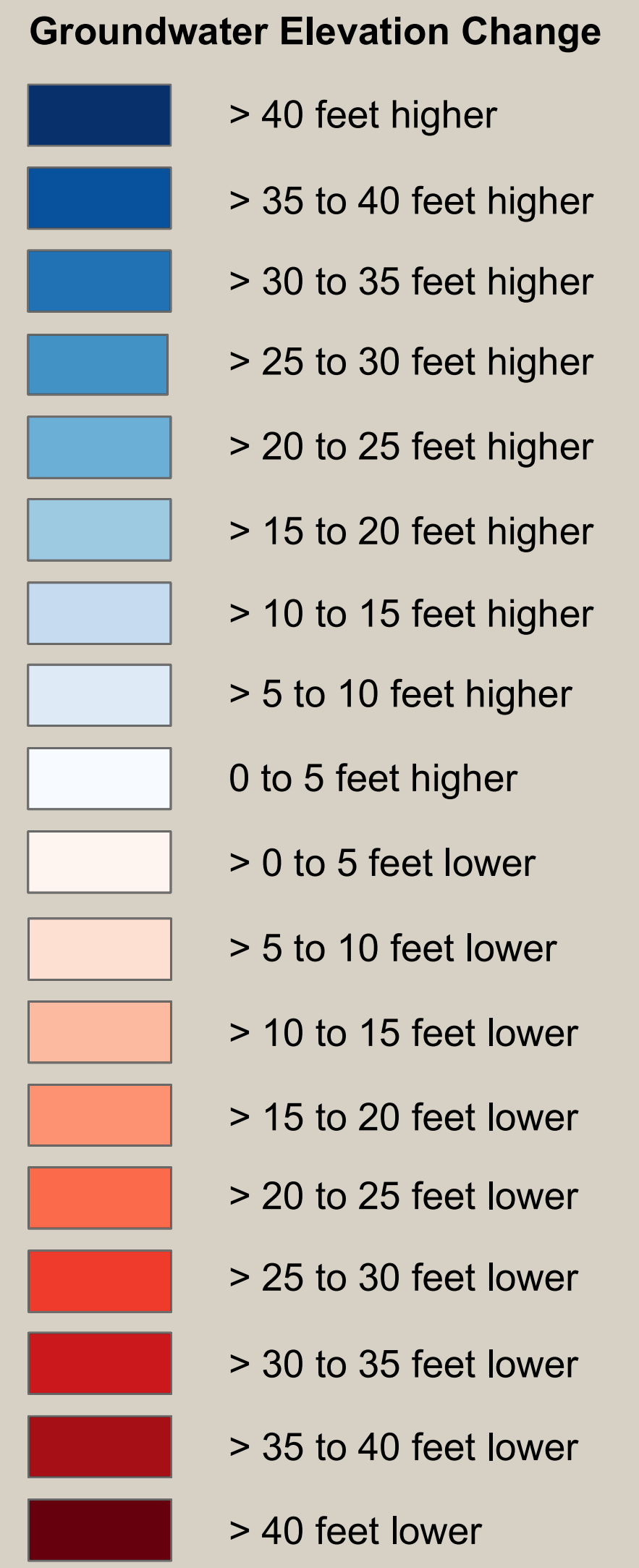
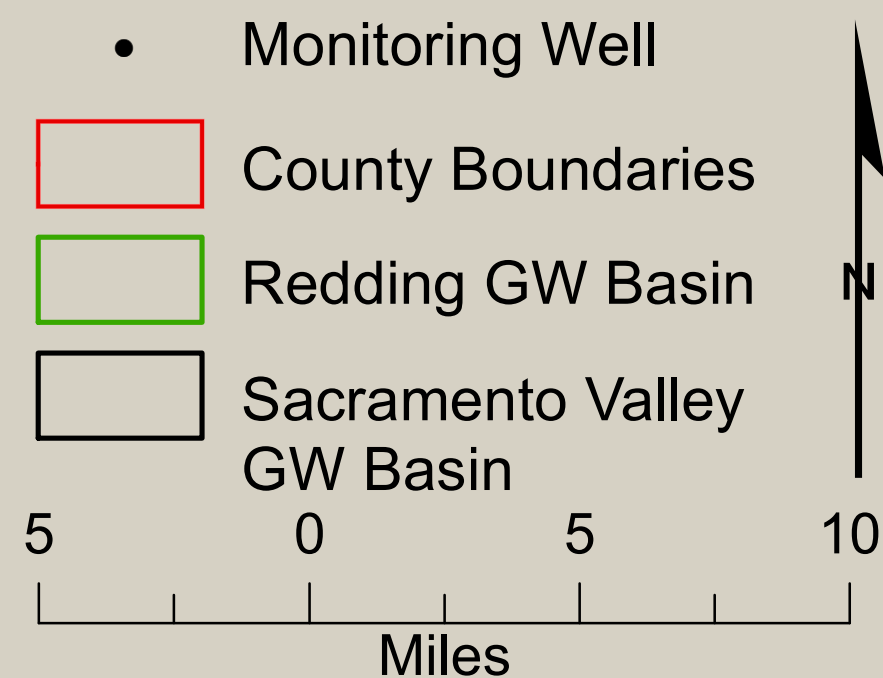
Tehama County - Redding GW Basin	
Maximum Increase GWE (ft)	2.0
Maximum Decrease GWE (ft)	-1.5
Average Change GWE (ft)	-0.2
Average Well Depth (ft)	261
Number of Wells Monitored	8

Tehama County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	9.0
Maximum Decrease GWE (ft)	-15.5
Average Change GWE (ft)	-1.6
Average Well Depth (ft)	259
Number of Wells Monitored	64

Glenn County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	4.9
Maximum Decrease GWE (ft)	-20.7
Average Change GWE (ft)	-2.9
Average Well Depth (ft)	270
Number of Wells Monitored	89

Colusa County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	10.0
Maximum Decrease GWE (ft)	-33.0
Average Change GWE (ft)	-3.0
Average Well Depth (ft)	290
Number of Wells Monitored	51

Summary Results for Spring 2014 to Spring 2015 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	10.0
Maximum Decrease GWE (ft)	-33.0
Average Change GWE (ft)	-1.9
Average Well Depth (ft)	268
Number of Wells Monitored	282



Butte County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	7.3
Maximum Decrease GWE (ft)	-8.4
Average Change GWE (ft)	-0.5
Average Well Depth (ft)	268
Number of Wells Monitored	52

- NOTES**
- Note 1: A positive number indicates that groundwater elevations were higher in the current year than in the previous year. A negative number indicates that groundwater elevations were lower in the current year than in the previous year.
  - Note 2: Statistical analysis is based on the number of wells monitored within each county. Summary results are based on the total number of wells monitored, not averages of the statistical analysis of individual counties.
  - Note 3: This map may not use all the color ranges shown in table above. Some wells may not be visible on map due to the close proximity to each other.
  - Note 4: Groundwater level changes are based on groundwater level measurements taken from wells that have screened intervals greater than 100 ft and less than 450 ft at similar dates of different years.
  - Note 5: Change in groundwater elevations are based on the actual measured levels of the hydrostatic level (piezometric surface) of the groundwater at individual well locations. Contoured color ramping is interpolated from these measurements and should be considered approximate. The accuracy of the estimated contour is directly related to the timing of the measurements, spacing and the distribution of nearby monitoring wells, well construction, and aquifer characteristics.
  - Note 6: GWE - Groundwater Elevation  
bgs - below ground surface

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**NORTHERN SACRAMENTO VALLEY  
CHANGE IN GROUNDWATER ELEVATION MAP  
SPRING 2014 TO SPRING 2015  
100 to 450 ft Well Depths**  
(Well depths greater than 100 ft and less than 450 ft deep bgs)

**PLATE 1C-A**

Date: May 2015  
BY: G. Gordon





Shasta County - Redding GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-16.7
Average Change GWE (ft)	-4.7
Average Well Depth (ft)	237
Number of Wells Monitored	14

Tehama County - Redding GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-12.3
Average Change GWE (ft)	-6.1
Average Well Depth (ft)	259
Number of Wells Monitored	7

Tehama County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	8.1
Maximum Decrease GWE (ft)	-24.5
Average Change GWE (ft)	-8.5
Average Well Depth (ft)	263
Number of Wells Monitored	53

Glenn County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-47.5
Average Change GWE (ft)	-11.5
Average Well Depth (ft)	268
Number of Wells Monitored	86

Colusa County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	3.5
Maximum Decrease GWE (ft)	-32.6
Average Change GWE (ft)	-9.8
Average Well Depth (ft)	288
Number of Wells Monitored	48

Summary Results for Spring 2011 to Spring 2015 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	8.1
Maximum Decrease GWE (ft)	-47.5
Average Change GWE (ft)	-9.3
Average Well Depth (ft)	264
Number of Wells Monitored	260

- Monitoring Well
- County Boundaries
- Redding GW Basin
- Sacramento Valley GW Basin

5 0 5 10  
Miles

**Groundwater Elevation Change**

- > 40 feet higher
- > 35 to 40 feet higher
- > 30 to 35 feet higher
- > 25 to 30 feet higher
- > 20 to 25 feet higher
- > 15 to 20 feet higher
- > 10 to 15 feet higher
- > 5 to 10 feet higher
- 0 to 5 feet higher
- > 0 to 5 feet lower
- > 5 to 10 feet lower
- > 10 to 15 feet lower
- > 15 to 20 feet lower
- > 20 to 25 feet lower
- > 25 to 30 feet lower
- > 30 to 35 feet lower
- > 35 to 40 feet lower
- > 40 feet lower

Butte County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	0.6
Maximum Decrease GWE (ft)	-16.5
Average Change GWE (ft)	-7.5
Average Well Depth (ft)	248
Number of Wells Monitored	52

- NOTES**
- Note 1: A positive number indicates that groundwater elevations were higher in the current year than in 2011. A negative number indicates that groundwater elevations were lower in the current year than in 2011.
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  - Note 4: Groundwater level changes are based on groundwater level measurements taken from wells constructed in the intermediate aquifer zone at similar dates of different years. These wells include those that have depths greater than 100 ft and less than 450 ft at similar dates of different years.
  - Note 5: Change in groundwater elevations are based on the actual measured levels of the hydrostatic level (piezometric surface) of the groundwater at individual well locations. Contoured color ramping is interpolated from these measurements and should be considered approximate. The accuracy of the estimated contour is directly related to the timing of the measurements, spacing and the distribution of nearby monitoring wells, well construction, and aquifer characteristics.
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**NORTHERN SACRAMENTO VALLEY  
CHANGE IN GROUNDWATER ELEVATION MAP  
SPRING 2011 TO SPRING 2015  
100 to 450 ft WELL DEPTHS**  
(Well depths greater than 100 ft and less than 450 ft deep bgs)

**PLATE 1C-C**  
Date: May 2015  
BY: G. Gordon





Shasta County - Redding GW Basin	
Maximum Increase GWE (ft)	9.6
Maximum Decrease GWE (ft)	-14.8
Average Change GWE (ft)	-4.1
Average Well Depth (ft)	236
Number of Wells Monitored	15

Tehama County - Redding GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-12.9
Average Change GWE (ft)	-7.3
Average Well Depth (ft)	241
Number of Wells Monitored	5

Tehama County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	2.1
Maximum Decrease GWE (ft)	-36.0
Average Change GWE (ft)	-13.4
Average Well Depth (ft)	254
Number of Wells Monitored	46

Glenn County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-73.6
Average Change GWE (ft)	-18.4
Average Well Depth (ft)	253
Number of Wells Monitored	57

Colusa County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	20.1
Maximum Decrease GWE (ft)	-68.8
Average Change GWE (ft)	-12.6
Average Well Depth (ft)	276
Number of Wells Monitored	36

Summary Results for Spring 2004 to Spring 2015 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	20.1
Maximum Decrease GWE (ft)	-73.6
Average Change GWE (ft)	-13.2
Average Well Depth (ft)	254
Number of Wells Monitored	201

- Monitoring Well
- County Boundaries
- Redding GW Basin
- Sacramento Valley GW Basin

5 0 5 10  
Miles

**Groundwater Elevation Change**

- > 40 feet higher
- > 35 to 40 feet higher
- > 30 to 35 feet higher
- > 25 to 30 feet higher
- > 20 to 25 feet higher
- > 15 to 20 feet higher
- > 10 to 15 feet higher
- > 5 to 10 feet higher
- 0 to 5 feet higher
- > 0 to 5 feet lower
- > 5 to 10 feet lower
- > 10 to 15 feet lower
- > 15 to 20 feet lower
- > 20 to 25 feet lower
- > 25 to 30 feet lower
- > 30 to 35 feet lower
- > 35 to 40 feet lower
- > 40 feet lower

Butte County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	0.3
Maximum Decrease GWE (ft)	-33.5
Average Change GWE (ft)	-10.5
Average Well Depth (ft)	246
Number of Wells Monitored	42

- NOTES**
- Note 1: A positive number indicates that groundwater elevations were higher in the current year than in 2004. A negative number indicates that groundwater elevations were lower in the current year than in 2004.
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  - Note 3: This map may not use all the color ranges shown in table above. Some wells may not be visible on map due to the close proximity to each other.
  - Note 4: Groundwater level changes are based on groundwater level measurements taken from wells constructed in the intermediate aquifer zone at similar dates of different years. These wells include those that have depths greater than 100 ft and less than 450 ft at similar dates of different years.
  - Note 5: Change in groundwater elevations are based on the actual measured levels of the hydrostatic level (piezometric surface) of the groundwater at individual well locations. Contoured color ramping is interpolated from these measurements and should be considered approximate. The accuracy of the estimated contour is directly related to the timing of the measurements, spacing and the distribution of nearby monitoring wells, well construction, and aquifer characteristics.
  - Note 6: GWE - Groundwater Elevation  
bgs - below ground surface

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**NORTHERN SACRAMENTO VALLEY  
CHANGE IN GROUNDWATER ELEVATION MAP  
SPRING 2004 TO SPRING 2015  
100 to 450 ft WELL DEPTHS**  
(Well depths greater than 100 ft and less than 450 ft deep bgs)

**PLATE 1C-B**

Date: May 2015  
BY: G. Gordon





Shasta County - Redding GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-1.6
Average Change GWE (ft)	-1.6
Average Well Depth (ft)	917
Number of Wells Monitored	1

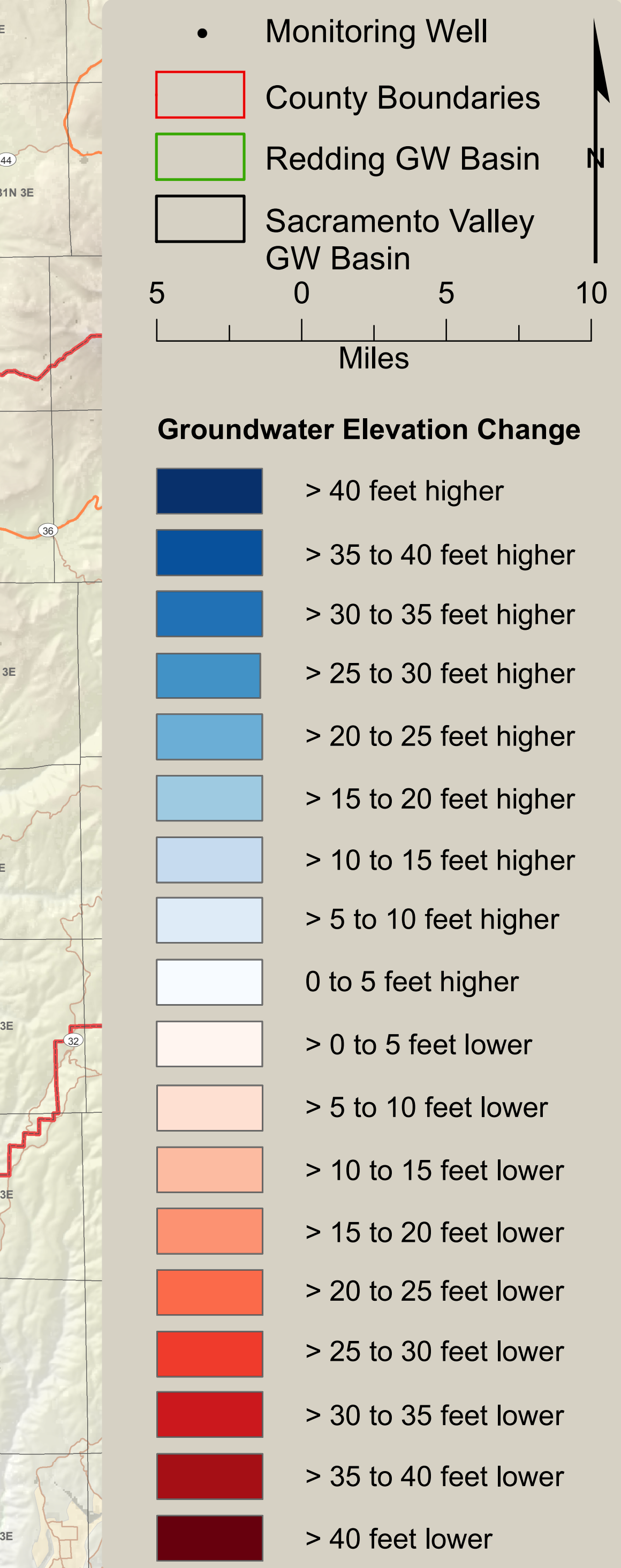
Tehama County - Redding GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-0.9
Average Change GWE (ft)	-0.7
Average Well Depth (ft)	750
Number of Wells Monitored	3

Tehama County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	6.0
Maximum Decrease GWE (ft)	-15.1
Average Change GWE (ft)	-4.7
Average Well Depth (ft)	880
Number of Wells Monitored	15

Glenn County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	16.7
Maximum Decrease GWE (ft)	-26.9
Average Change GWE (ft)	-3.7
Average Well Depth (ft)	1039
Number of Wells Monitored	23

Colusa County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-42.2
Average Change GWE (ft)	-11.6
Average Well Depth (ft)	769
Number of Wells Monitored	11

Summary Results for Fall 2013 to Fall 2014 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	16.7
Maximum Decrease GWE (ft)	-42.2
Average Change GWE (ft)	-4.4
Average Well Depth (ft)	897
Number of Wells Monitored	74



Butte County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	10.7
Maximum Decrease GWE (ft)	-16.8
Average Change GWE (ft)	-1.7
Average Well Depth (ft)	841
Number of Wells Monitored	21

**NOTES**

Note 1: A positive number indicates that groundwater elevations were higher in the current year than in the previous year. A negative number indicates that groundwater elevations were lower in the current year than in the previous year.

Note 2: Statistical analysis is based on the number of wells monitored within each county. Summary results are based on the total number of wells monitored, not averages of the statistical analysis of individual counties.

Note 3: This map may not use all the color ranges shown in table above. Some wells may not be visible on map due to the close proximity to each other.

Note 4: Groundwater level changes are based on groundwater level measurements taken from wells constructed in the deep aquifer zone at similar dates of different years. These wells include those that have depths that are greater than 600 ft.

Note 5: Change in groundwater elevations are based on the actual measured levels of the hydrostatic level (piezometric surface) of the groundwater at individual well locations. Contoured color ramping is interpolated from these measurements and should be considered approximate. The accuracy of the estimated contour is directly related to the timing of the measurements, spacing and the distribution of nearby monitoring wells, well construction, and aquifer characteristics.

Note 6: GWE - Groundwater Elevation  
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**NORTHERN SACRAMENTO VALLEY  
CHANGE IN GROUNDWATER ELEVATION MAP  
SPRING 2014 TO SPRING 2015  
DEEP AQUIFER ZONE  
(Well depths deeper than 600 ft bgs)**

**PLATE 1D-A**

Date: April 2015  
BY: G. Gordon





**Shasta County - Redding GW Basin**

Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-3.0
Average Change GWE (ft)	-3.0
Average Well Depth (ft)	917
Number of Wells Monitored	1

**Tehama County - Redding GW Basin**

Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-16.3
Average Change GWE (ft)	-7.2
Average Well Depth (ft)	747
Number of Wells Monitored	3

**Tehama County - Sacramento Valley GW Basin**

Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-18.8
Average Change GWE (ft)	-6.8
Average Well Depth (ft)	860
Number of Wells Monitored	13

**Glenn County - Sacramento Valley GW Basin**

Maximum Increase GWE (ft)	4.6
Maximum Decrease GWE (ft)	-41.5
Average Change GWE (ft)	-14.2
Average Well Depth (ft)	979
Number of Wells Monitored	24

**Colusa County - Sacramento Valley GW Basin**

Maximum Increase GWE (ft)	3.0
Maximum Decrease GWE (ft)	-48.0
Average Change GWE (ft)	-12.7
Average Well Depth (ft)	774
Number of Wells Monitored	13

**Summary Results for Spring 2011 to Spring 2015  
Change in Groundwater Elevation**

Maximum Increase GWE (ft)	6.5
Maximum Decrease GWE (ft)	-48.0
Average Change GWE (ft)	-10.4
Average Well Depth (ft)	864
Number of Wells Monitored	73

● Monitoring Well

County Boundaries

Redding GW Basin

Sacramento Valley GW Basin

5 0 5 10  
Miles

**Groundwater Elevation Change**

- > 40 feet higher
- > 35 to 40 feet higher
- > 30 to 35 feet higher
- > 25 to 30 feet higher
- > 20 to 25 feet higher
- > 15 to 20 feet higher
- > 10 to 15 feet higher
- > 5 to 10 feet higher
- 0 to 5 feet higher
- > 0 to 5 feet lower
- > 5 to 10 feet lower
- > 10 to 15 feet lower
- > 15 to 20 feet lower
- > 20 to 25 feet lower
- > 25 to 30 feet lower
- > 30 to 35 feet lower
- > 35 to 40 feet lower
- > 40 feet lower

**Butte County - Sacramento Valley GW Basin**

Maximum Increase GWE (ft)	6.5
Maximum Decrease GWE (ft)	-16.9
Average Change GWE (ft)	-7.6
Average Well Depth (ft)	813
Number of Wells Monitored	19

**NOTES**

Note 1: A positive number indicates that groundwater elevations were higher in the current year than in 2011. A negative number indicates that groundwater elevations were lower in the current year than in 2011.

Note 2: Statistical analysis is based on the number of wells monitored within each county. Summary results are based on the total number of wells monitored, not averages of the statistical analysis of individual counties.

Note 3: This map may not use all the color ranges shown in table above. Some wells may not be visible on map due to the close proximity to each other.

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Note 5: Change in groundwater elevations are based on the actual measured levels of the hydrostatic level (piezometric surface) of the groundwater at individual well locations. Contoured color ramping is interpolated from these measurements and should be considered approximate. The accuracy of the estimated contour is directly related to the timing of the measurements, spacing and the distribution of nearby monitoring wells, well construction, and aquifer characteristics.

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**NORTHERN SACRAMENTO VALLEY  
CHANGE IN GROUNDWATER ELEVATION MAP  
SPRING 2011 TO SPRING 2015  
DEEP AQUIFER ZONE  
(Well depths greater than 600 ft bgs)**

**PLATE 1D-C**

Date: May 2015  
BY: G. Gordon





Shasta County - Redding GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	NA
Average Change GWE (ft)	NA
Average Well Depth (ft)	NA
Number of Wells Monitored	NA

Tehama County - Redding GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-5.3
Average Change GWE (ft)	-4.2
Average Well Depth (ft)	687
Number of Wells Monitored	2

Tehama County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-34.6
Average Change GWE (ft)	-13.0
Average Well Depth (ft)	829
Number of Wells Monitored	10

Glenn County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-79.7
Average Change GWE (ft)	-40.5
Average Well Depth (ft)	923
Number of Wells Monitored	9

Colusa County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-59.5
Average Change GWE (ft)	-40.3
Average Well Depth (ft)	769
Number of Wells Monitored	3

Summary Results for Fall 2004 to Fall 2014 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-79.7
Average Change GWE (ft)	-22.6
Average Well Depth (ft)	835
Number of Wells Monitored	31

- Monitoring Well
- County Boundaries
- Redding GW Basin
- Sacramento Valley GW Basin

5 0 5 10  
Miles

**Groundwater Elevation Change**

- > 40 feet higher
- > 35 to 40 feet higher
- > 30 to 35 feet higher
- > 25 to 30 feet higher
- > 20 to 25 feet higher
- > 15 to 20 feet higher
- > 10 to 15 feet higher
- > 5 to 10 feet higher
- 0 to 5 feet higher
- > 0 to 5 feet lower
- > 5 to 10 feet lower
- > 10 to 15 feet lower
- > 15 to 20 feet lower
- > 20 to 25 feet lower
- > 25 to 30 feet lower
- > 30 to 35 feet lower
- > 35 to 40 feet lower
- > 40 feet lower

Butte County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	NA
Maximum Decrease GWE (ft)	-15.5
Average Change GWE (ft)	-11.0
Average Well Depth (ft)	800
Number of Wells Monitored	7

- NOTES**
- Note 1: A positive number indicates that groundwater elevations were higher in the current year than in 2004. A negative number indicates that groundwater elevations were lower in the current year than in 2004.
  - Note 2: Statistical analysis is based on the number of wells monitored within each county. Summary results are based on the total number of wells monitored, not averages of the statistical analysis of individual counties.
  - Note 3: This map may not use all the color ranges shown in table above. Some wells may not be visible on map due to the close proximity to each other.
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  - Note 6: GWE - Groundwater Elevation  
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**NORTHERN SACRAMENTO VALLEY  
CHANGE IN GROUNDWATER ELEVATION MAP  
SPRING 2004 TO SPRING 2015  
DEEP AQUIFER ZONE  
(Well depths greater than 600 ft bgs)**

**PLATE 1D-B**

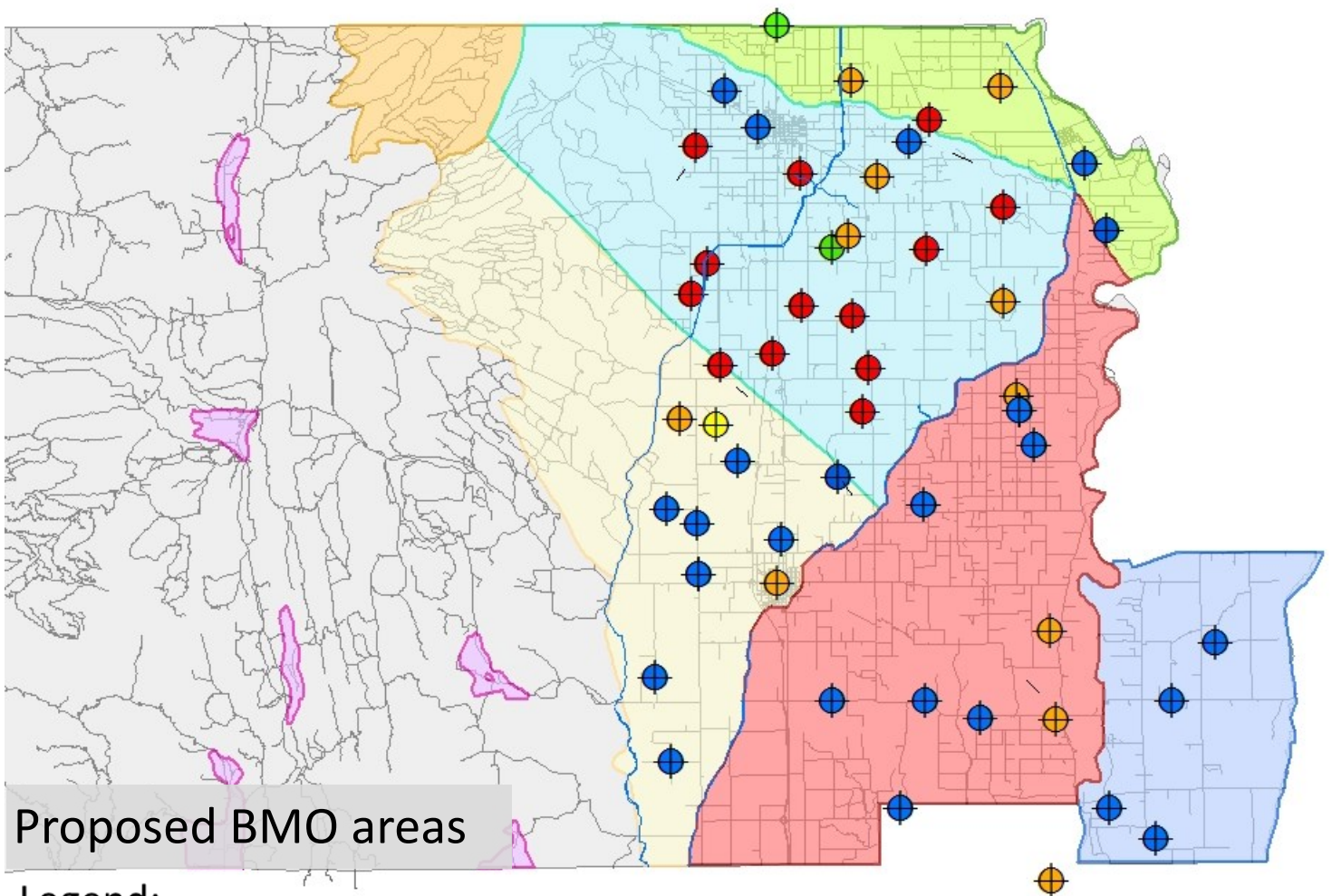
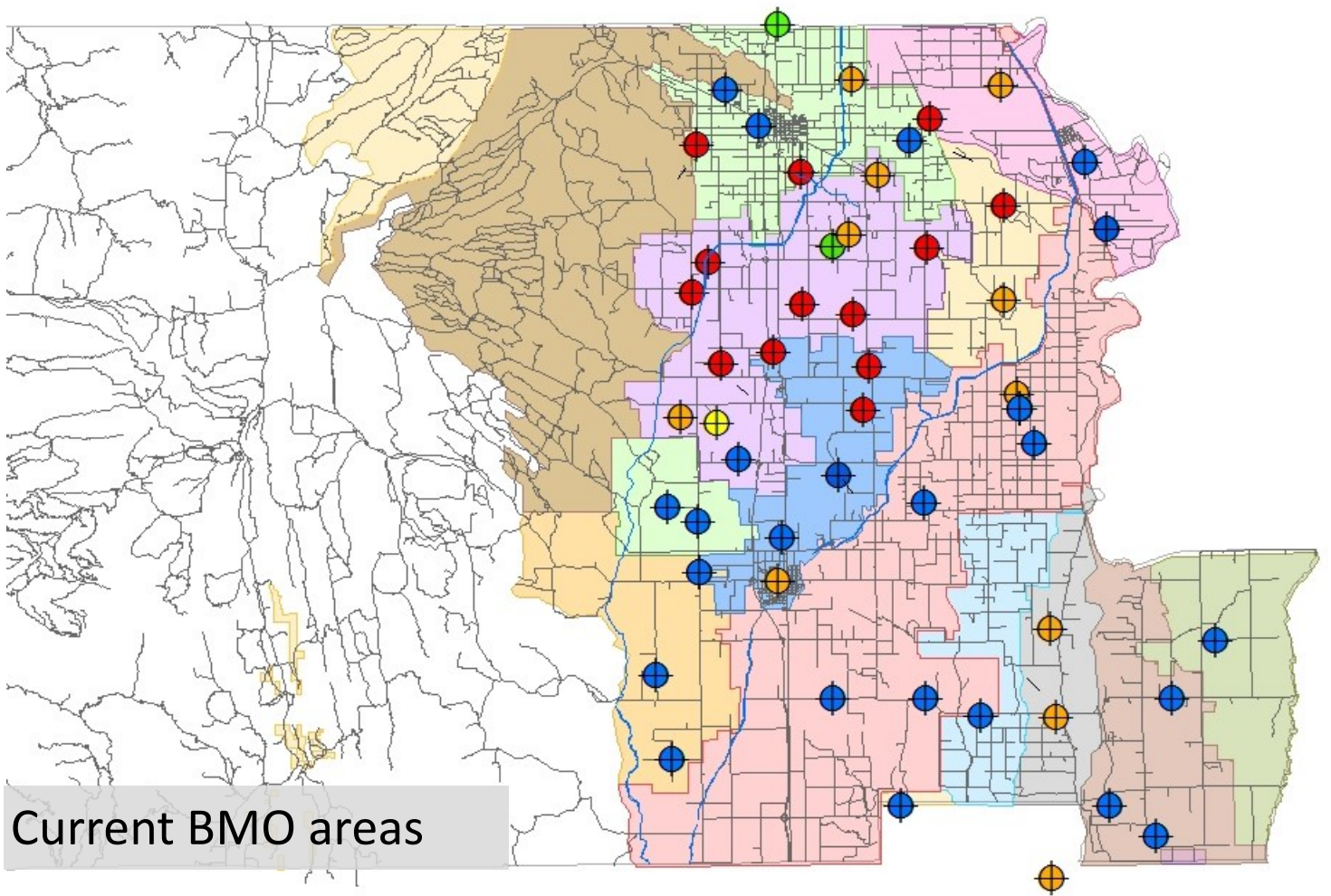
Date: May 2015  
BY: G. Gordon





# Spring 2015 Groundwater Level

## Basin Management Objective Stage Alert



### Legend:

- Discontinued
- Stage 1 Alert
- Stage 2 Alert
- Stage 3 Alert
- No Stage Alert

**GLENN COUNTY SPRING BMO STAGE ALERTS 2015**

State Well Number	Road Location	Subarea	Current Year Measurement Date	Current Year Reference Point to Water Surface	Current Reference Point Elevation	Ground Surface Elevation	2015 Water Surface Elevation	2014 Water Surface Elevation	2013 Water Surface Elevation	Stage 1 & 2 Alert	Stage 3 Alert	Difference from 2014 to 2015	Difference from 2013 to 2014
21N03W33A04M	Rd 31 & Hwy 99W	10; BOS Dist 3	3/20/2015	83.01	176.45	176.45	93.44	107.98	108.09	131	119.5	-14.5	-0.1
21N02W31M01M	Rd P & N/Rd 33	10; BOS Dist 3	3/18/2015	45.85	164.53	163.43	118.68	119.33	123.93	131.2	123.8	-0.6	-4.6
20N03W12C01M	Rd 35 & Rd P	10; BOS Dist 3	3/18/2015	46.1	162.43	161.43	116.33	116.93	124.43	124.6	117	-0.6	-7.5
20N03W23G02M	S/Rd 39 & W/Rd P	10; BOS Dist 3	3/16/2015	30.9	149.43	148.43	118.53	117.39	121.98	118	112	1.1	-4.6
20N03W33J01M	Rd J & S/Rd 45	10; BOS Dist 3	3/16/2015	17.35	139.74	138.44	122.39	123.02	128.02	113.6	104.7	-0.6	-5.0
CALWater 002-01	Willows	10; BOS Dist 3	Mar-15	20	134	134	114.00	115.00	119.33	116.1	111.4	-1.0	-4.3
21N02W02B02M	Rd V V & Rd 24	9; BOS Dist 5	3/17/2015	34.8	163.01	162.56	128.21	125.18	136.57	136.1	130.23	3.0	-11.4
21N02W09M02M	Rd S & S/Rd 25	9; BOS Dist 5	3/18/2015	NM	181.92	181.42	NM	131.42	140.82	142	132.8	NA	-9.4
21N02W23G01M	Rd 29 & Rd V	9; BOS Dist 5	3/18/2015	35.3	154.9	154.4	119.60	117.10	NM	125.1	118.7	2.5	NA
21N01W04N01M	S/Rd 23 & Rodgers Ranch Road	8; East Corning Basin	3/18/2015	21.29	137.68	137.38	116.39	114.60	117.38	115.6	112.2	1.8	-2.8
22N02W11Q01M	Rd 9 & Btwn 1st & 2nd Aves	8; East Corning Basin	3/17/2015	32.73	166.8	166.4	134.07	135.69	137.43	139.6	133.8	-1.6	-1.7
22N01W29K01M	Rd 206 & S/Hamilton City	8; East Corning Basin	3/17/2015	20.02	144.88	144.38	124.86	124.29	126.52	119.9	112.7	0.6	-2.2
21N03W31H01M	Rd F & S/Rd 31	5; Orland/Artois	3/16/2015	100.84	189.94	189.46	89.10	101.00	107.64	123.8	106.3	-11.9	-6.6
20N03W07K03M	Rd D & Rd 35	5; Orland/Artois	3/30/2015	58.5	168.46	168.46	109.96	119.73	124.06	118.5	99.9	-9.8	-4.3
20N03W17P01M	Rd 39 & Rd H	5; Orland/Artois	3/16/2015	30.9	156.95	155.45	126.05	132.65	123.95	125	110.2	-6.6	8.7
20N04W12F02M	Rd D & S/Rd 35	5; Orland/Artois	3/16/2015	69.49	189.97	189.47	120.48	126.7	132.69	136.3	115.2	-6.2	-6.0
21N03W18B02M	Rd 28 & Rd F	5; Orland/Artois	3/16/2015	160.28	224.48	224.08	64.20	83.22	NM	132.7	113.2	-19.0	NA
21N04W24A02M	Rd 25 & Rd D	5; Orland/Artois	DISCONTINUED		230.5	230	NM	NM	NM	125.1	107.4	NA	NA
21N04W24A03M	Rd 25 & Rd D	5; Orland/Artois	3/16/2015	159.63	231.5	230	71.87	86.700	95.620	125.1	107.4	-14.8	-8.9
22N02W31C01M	Rd 20 & Rd P	5; Orland/Artois	3/17/2015	33.31	206.43	205.43	173.12	175.71	183.42	180.1	171.7	-2.6	-7.7
21N03W12C02M	Rd 25 & Rd NN	5; Orland/Artois	3/18/2015	44.03	206.44	204.44	162.41	163.64	170.84	171	163	-1.2	-7.2
21N03W11G01M	Rd 25 & W/Rd N	5; Orland/Artois	DISCONTINUED		202.74	202.44	NM	NM	166.62	170.1	161.5	NA	NA
22N03W34A01M	Rd 20 & Rd M	5; Orland/Artois	3/17/2015	24.7	235.95	235.45	211.25	213	220.84	217.8	213.5	-1.8	-7.8
21N03W22H01M	N/ Rd 30 & W/Rd M	5; Orland/Artois	3/18/2015	90.16	204.45	204.45	114.29	NM	145.55	149.9	139.1	NA	NA
21N02W09M02M	Rd S & S/Rd 25	5; Orland/Artois	3/18/2015	NM	181.92	181.42	NM	131.42	140.82	142	132.8	NA	-9.4
21N03W24P01M	N/Rd 30 & W/Rd P	5; Orland/Artois	3/18/2015	NM	181.08	180.43	NM	122.08	129.58	135.8	123.7	NA	-7.5
22N03W03D01M	Rd 3 & Hwy 99W	4; Orland Unit Water Users A	DISCONTINUED		270.97	270.47	NM	NM	190.78	188.7	182.5	NA	NA
22N03W17E01M	N/Rd 200 & Cedar Ave	4; Orland Unit Water Users A	3/17/2015	14	284.99	285.49	270.99	265.29	270.19	267.2	263.7	5.7	-4.9
22N03W12Q03M	Rd O & Rd 9	4; Orland Unit Water Users A	3/17/2015	42.9	232.94	232.44	190.04	189.74	196.35	195.1	188.3	0.3	-6.6
22N03W21F02M	Rd 14 & Rd HH	4; Orland Unit Water Users A	3/17/2015	25.2	265.47	264.47	240.27	235.41	243.32	238.7	234.5	4.9	-7.9
22N03W30C01M	Rd DD & Btwn Rds 15 & 17	4; Orland Unit Water Users A	3/17/2015	125.29	287.99	287.49	162.70	169.34	174.79	186.6	176.8	-6.6	-5.4
22N02W20Q01M	Rd 16 & Rd XX	4; Orland Unit Water Users A	3/17/2015	17.86	201.93	201.43	184.07	175.02	186.28	183.8	179.2	9.0	-11.3
22N02W21D01M	6th Ave & N/Hwy 32	4; Orland Unit Water Users A	3/17/2015	NM	200.92	200.42	NM	158.92	174.46	170.8	164.9	NA	-15.5
22N03W34A01M	Rd 20 & Rd M	4; Orland Unit Water Users A	3/17/2015	24.7	235.95	235.45	211.25	213.00	220.84	217.8	213.5	-1.8	-7.8
19N02W29Q01M	Rd 60 & Rd SS	11; Glenn-Colusa	3/16/2015	4.38	92.42	92.42	88.04	89.61	88.27	85.1	75.1	-1.6	1.3
19N03W26P01M	Rd 60 & E/Hwy 99W	11; Glenn-Colusa	3/16/2015	5	103.43	100.43	98.43	98.83	100.43	94.7	89.2	-0.4	-1.6
20N02W02J01M	Rd 34 & Rd W	11; Glenn-Colusa	3/16/2015	13.19	127.9	127.4	114.71	115.89	117.48	115.9	112.4	-1.2	-1.6
20N02W11A01M	Rd 35 & Rd W	11; Glenn-Colusa	3/16/2015	11.7	125.9	125.4	114.20	116.15	115.88	114.6	108	-2.0	0.3
20N02W11A02M	Rd 35 & Rd W	11; Glenn-Colusa	3/16/2015	15.98	125.4	125.4	109.42	110.43	111.57	108.7	88.8	-1.0	-1.1
20N02W11A03M	Rd 35 & Rd W	11; Glenn-Colusa	3/16/2015	26.6	125.9	125.4	99.30	105.48	104.39	96.5	72.7	-6.2	1.1



**GLENN COUNTY SPRING BMO STAGE ALERTS 2015**

State Well Number	Road Location	Subarea	Current Year Measurement Date	Current Year Reference Point to Water Surface	Current Reference Point Elevation	Ground Surface Elevation	2015 Water Surface Elevation	2014 Water Surface Elevation	2013 Water Surface Elevation	Stage 1 & 2 Alert	Stage 3 Alert	Difference from 2014 to 2015	Difference from 2013 to 2014
20N02W13G01M	Rd 37 & Rd W W	11; Glenn-Colusa	3/16/2015	6.28	115.8	115.4	109.52	110.72	110.06	107.5	105.6	-1.2	0.7
20N02W29G01M	Rd S & Rd 44	11; Glenn-Colusa	3/16/2015	7.68	119.92	119.42	112.24	112.09	113.12	109.2	107.5	0.2	-1.0
19N02W13J01M	Rd 56 & Btwn Hwy 45 & Rd WW	12; Provident ID	3/16/2015	12.03	88.99	88.39	76.96	76.80	75.85	78	72	0.2	1.0
18N02W36B01M	Dodge Road & W/Hwy 45 (South of)	12; Provident ID	3/16/2015	12.4	76	75.4	63.60	61.90	63.30	65	60	1.7	-1.4
19N02W34F01M	Rd 61 & Rd U	12; Provident ID	3/16/2015	6.01	86.9	85.4	80.89	82.32	80.69	79	76	-1.4	1.6
19N02W36H01M	Rd 61 & Btwn Hwy 45 & Rd WW	12; Provident ID	3/16/2015	10.4	84.79	83.79	74.39	74.15	73.40	75	70	0.2	0.8
19N02W13J01M	Rd 56 & Btwn Hwy 45 & Rd WW	14; Princeton-Codora-Glenn	3/16/2015	12.03	88.99	88.39	76.96	76.80	75.85	78	72	0.2	1.0
18N02W36B01M	Dodge Road & W/Hwy 45 (South of)	14; Princeton-Codora-Glenn	3/16/2015	12.4	76	75.4	63.60	61.90	63.30	65	60	1.7	-1.4
19N02W34F01M	Rd 61 & Rd U	14; Princeton-Codora-Glenn	3/16/2015	6.01	86.9	85.4	80.89	82.32	80.69	79	76	-1.4	1.6
19N02W36H01M	Rd 61 & Btwn Hwy 45 & Rd WW	14; Princeton-Codora-Glenn	3/16/2015	10.4	84.79	83.79	74.39	74.15	73.4	75	70	0.2	0.8
KWD-1		7; Kanawha Water District	3/2/2015	24	154.3	154	130.30	137.3	141.3	None	None	-7.0	-4.0
KWD-2		7; Kanawha Water District	3/2/2015	18	161.35	160	143.35	145.35	149.35	None	None	-2.0	-4.0
KWD-3		7; Kanawha Water District	3/2/2015	14	140.4	139	126.40	115.4	123.4	None	None	11.0	-8.0
GWD-1		6; Glide Water District	3/2/2015	49	156.75	156	107.75	125.75	128.75	None	None	-18.0	-3.0
GWD-2		6; Glide Water District	3/2/2015	32	158.2	158	126.20	132.2	138.2	None	None	-6.0	-6.0
GWD-3		6; Glide Water District	3/2/2015	29	174.75	174	145.75	151.75	154.75	None	None	-6.0	-3.0
19N01W15D01M	Rd Y & S/Rd 50	15 & 16; RD 2106 & 1004	3/16/2015	NM	95.73	93.38	NM	NM	NM	78	75	NA	NA
19N01W27R01M	Hwy 162 & Rd Y	15 & 16; RD 2106 & 1004	3/16/2015	10	83.88	83.38	73.88	72.18	71.78	67	63	1.7	0.4
18N01W17G01M	Levee Rd & S/Rd 67	15 & 16; RD 2106 & 1004	3/16/2015	17.85	81.39	81.39	63.54	62.29	63.65	61	55	1.3	-1.4
18N01W22L01M	Rd 69 & Rd Y	15 & 16; RD 2106 & 1004	3/16/2015	NM	72.89	72.39	NM	66.39	NM	63	61	NA	NA
18N01E05D01M	S/Hwy 162 & E/Rd Z	17; Western Canal	3/16/2015	7.03	77.66	77.36	70.63	73.61	73.44	64	62	-3.0	0.2
19N01W13Q01M	Hwy 162 & Rd Z	17; Western Canal	3/16/2015	3.5	85.9	85.9	82.40	82.90	80.90	65	60	-0.5	2.0
18N02W18K01M	Norman Rd & Lambert Lane	13; Willow Creek Mutual	3/17/2015	10.3	83.22	83.42	72.92	76.32	75.42	72.2	70.7	-3.4	0.9
												Max decrease	-19.0
												Max increase	11.0

**GLENN COUNTY SPRING BMO STAGE ALERTS 2015--Organized in Proposed BMO subareas**

State Well Number	Road Location	Proposed Subarea	Current Year Measurement Date	Current Year Reference Point to Water Surface	Current Reference Point Elevation	Ground Surface Elevation	2015 Water Surface Elevation	2014 Water Surface Elevation	2013 Water Surface Elevation	Stage 1 & 2 Alert	Stage 3 Alert	Difference from 2014 to 2015	Difference from 2013 to 2014
19N02W29Q01M	Rd 60 & Rd SS	EAST COLUSA BASIN	3/16/2015	4.38	92.42	92.42	88.04	89.61	88.27	85.1	75.1	-1.6	1.3
19N03W26P01M	Rd 60 & E/Hwy 99W	EAST COLUSA BASIN	3/16/2015	5	103.43	100.43	98.43	98.83	100.43	94.7	89.2	-0.4	-1.6
20N02W02J01M	Rd 34 & Rd W	EAST COLUSA BASIN	3/16/2015	13.19	127.9	127.4	114.71	115.89	117.48	115.9	112.4	-1.2	-1.6
20N02W11A01M	Rd 35 & Rd W	EAST COLUSA BASIN	3/16/2015	11.7	125.9	125.4	114.20	116.15	115.88	114.6	108	-2.0	0.3
20N02W11A02M	Rd 35 & Rd W	EAST COLUSA BASIN	3/16/2015	15.98	125.4	125.4	109.42	110.43	111.57	108.7	88.8	-1.0	-1.1
20N02W11A03M	Rd 35 & Rd W	EAST COLUSA BASIN	3/16/2015	26.6	125.9	125.4	99.30	105.48	104.39	96.5	72.7	-6.2	1.1
20N02W13G01M	Rd 37 & Rd W W	EAST COLUSA BASIN	3/16/2015	6.28	115.8	115.4	109.52	110.72	110.06	107.5	105.6	-1.2	0.7
20N02W29G01M	Rd S & Rd 44	EAST COLUSA BASIN	3/16/2015	7.68	119.92	119.42	112.24	112.09	113.12	109.2	107.5	0.2	-1.0
19N02W13J01M	Rd 56 & Btwn Hwy 45 & Rd WW	EAST COLUSA BASIN	3/16/2015	12.03	88.99	88.39	76.96	76.80	75.85	78	72	0.2	1.0
18N02W36B01M	Dodge Road & W/Hwy 45 (South of)	EAST COLUSA BASIN	3/16/2015	12.4	76	75.4	63.60	61.90	63.30	65	60	1.7	-1.4
19N02W34F01M	Rd 61 & Rd U	EAST COLUSA BASIN	3/16/2015	6.01	86.9	85.4	80.89	82.32	80.69	79	76	-1.4	1.6
19N02W36H01M	Rd 61 & Btwn Hwy 45 & Rd WW	EAST COLUSA BASIN	3/16/2015	10.4	84.79	83.79	74.39	74.15	73.40	75	70	0.2	0.8
19N02W13J01M	Rd 56 & Btwn Hwy 45 & Rd WW	EAST COLUSA BASIN	3/16/2015	12.03	88.99	88.39	76.96	76.80	75.85	78	72	0.2	1.0
18N02W36B01M	Dodge Road & W/Hwy 45 (South of)	EAST COLUSA BASIN	3/16/2015	12.4	76	75.4	63.60	61.90	63.30	65	60	1.7	-1.4
19N02W34F01M	Rd 61 & Rd U	EAST COLUSA BASIN	3/16/2015	6.01	86.9	85.4	80.89	82.32	80.69	79	76	-1.4	1.6
19N02W36H01M	Rd 61 & Btwn Hwy 45 & Rd WW	EAST COLUSA BASIN	3/16/2015	10.4	84.79	83.79	74.39	74.15	73.4	75	70	0.2	0.8
21N01W04N01M	S/Rd 23 & Rodgers Ranch Road	EAST CORNING BASIN	3/18/2015	21.29	137.68	137.38	116.39	114.60	117.38	115.6	112.2	1.8	-2.8
22N02W11Q01M	Rd 9 & Btwn 1st & 2nd Aves	EAST CORNING BASIN	3/17/2015	32.73	166.8	166.4	134.07	135.69	137.43	139.6	133.8	-1.6	-1.7
22N01W29K01M	Rd 206 & S/Hamilton City	EAST CORNING BASIN	3/17/2015	20.02	144.88	144.38	124.86	124.29	126.52	119.9	112.7	0.6	-2.2
22N03W03D01M	Rd 3 & Hwy 99W	EAST CORNING BASIN	DISCONTINUED		270.97	270.47	NM	NM	190.78	188.7	182.5	NA	NA
22N03W12Q03M	Rd O & Rd 9	EAST CORNING BASIN	3/17/2015	42.9	232.94	232.44	190.04	189.74	196.35	195.1	188.3	0.3	-6.6
22N02W21D01M	6th Ave & N/Hwy 32	EAST CORNING BASIN	3/17/2015	NM	200.92	200.42	NM	158.92	174.46	170.8	164.9	NA	-15.5
21N03W33A04M	Rd 31 & Hwy 99W	NW COLUSA BASIN	3/20/2015	83.01	176.45	176.45	93.44	107.98	108.09	131	119.5	-14.5	-0.1
21N02W31M01M	Rd P & N/Rd 33	NW COLUSA BASIN	3/18/2015	45.85	164.53	163.43	118.68	119.33	123.93	131.2	123.8	-0.6	-4.6
20N03W12C01M	Rd 35 & Rd P	NW COLUSA BASIN	3/18/2015	46.1	162.43	161.43	116.33	116.93	124.43	124.6	117	-0.6	-7.5
21N02W02B02M	Rd V V & Rd 24	NW COLUSA BASIN	3/17/2015	34.8	163.01	162.56	128.21	125.18	136.57	136.1	130.23	3.0	-11.4
21N02W09M02M	Rd S & S/Rd 25	NW COLUSA BASIN	3/18/2015	NM	181.92	181.42	NM	131.42	140.82	142	132.8	NA	-9.4
21N02W23G01M	Rd 29 & Rd V	NW COLUSA BASIN	3/18/2015	35.3	154.9	154.4	119.60	117.10	NM	125.1	118.7	2.5	NA
21N03W18B02M	Rd 28 & Rd F	NW COLUSA BASIN	3/16/2015	160.28	224.48	224.08	64.20	83.22	NM	132.7	113.2	-19.0	NA
21N04W24A02M	Rd 25 & Rd D	NW COLUSA BASIN	DISCONTINUED		230.5	230	NM	NM	NM	125.1	107.4	NA	NA
21N04W24A03M	Rd 25 & Rd D	NW COLUSA BASIN	3/16/2015	159.63	231.5	230	71.87	86.700	95.620	125.1	107.4	-14.8	-8.9
22N02W31C01M	Rd 20 & Rd P	NW COLUSA BASIN	3/17/2015	33.31	206.43	205.43	173.12	175.71	183.42	180.1	171.7	-2.6	-7.7
21N03W12C02M	Rd 25 & Rd NN	NW COLUSA BASIN	3/18/2015	44.03	206.44	204.44	162.41	163.64	170.84	171	163	-1.2	-7.2
21N03W11G01M	Rd 25 & W/Rd N	NW COLUSA BASIN	DISCONTINUED		202.74	202.44	NM	NM	166.62	170.1	161.5	NA	NA
22N03W34A01M	Rd 20 & Rd M	NW COLUSA BASIN	3/17/2015	24.7	235.95	235.45	211.25	213	220.84	217.8	213.5	-1.8	-7.8
21N03W22H01M	N/ Rd 30 & W/Rd M	NW COLUSA BASIN	3/18/2015	90.16	204.45	204.45	114.29	NM	145.55	149.9	139.1	NA	NA
21N02W09M02M	Rd S & S/Rd 25	NW COLUSA BASIN	3/18/2015	NM	181.92	181.42	NM	131.42	140.82	142	132.8	NA	-9.4
21N03W24P01M	N/Rd 30 & W/Rd P	NW COLUSA BASIN	3/18/2015	NM	181.08	180.43	NM	122.08	129.58	135.8	123.7	NA	-7.5
22N03W17E01M	N/Rd 200 & Cedar Ave	NW COLUSA BASIN	3/17/2015	14	284.99	285.49	270.99	265.29	270.19	267.2	263.7	5.7	-4.9
22N03W21F02M	Rd 14 & Rd HH	NW COLUSA BASIN	3/17/2015	25.2	265.47	264.47	240.27	235.41	243.32	238.7	234.5	4.9	-7.9
22N03W30C01M	Rd DD & Btwn Rds 15 & 17	NW COLUSA BASIN	3/17/2015	125.29	287.99	287.49	162.70	169.34	174.79	186.6	176.8	-6.6	-5.4
22N02W20Q01M	Rd 16 & Rd XX	NW COLUSA BASIN	3/17/2015	17.86	201.93	201.43	184.07	175.02	186.28	183.8	179.2	9.0	-11.3
22N03W34A01M	Rd 20 & Rd M	NW COLUSA BASIN	3/17/2015	24.7	235.95	235.45	211.25	213.00	220.84	217.8	213.5	-1.8	-7.8



