

2013 Groundwater Levels

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CA Department of Water Resources



County of
GLENN

Agenda

- Understanding GWL Change
- Spring Measurement Glenn County Area Maps
- Spring Measurement Statistics
- Fall Measurement Glenn County Area Maps
- Fall Measurement Statistics
- Select Hydrographs

Understanding GWL Change

2013 v 2012

2013 v 2004



Understanding GWL Change

- Precipitation Amount and Timing
 - Previous season - Very little and early in season
- Land Use
 - Truck crops to orchards, new orchards
- Source
 - GW, SW or Mix
- Location of measurement
- Irrigation Methods and Timing
 - Flood or (micro) drip
- Timing of measurements - results could be lower or higher...
 - but never below the low or above the high
- Transfers

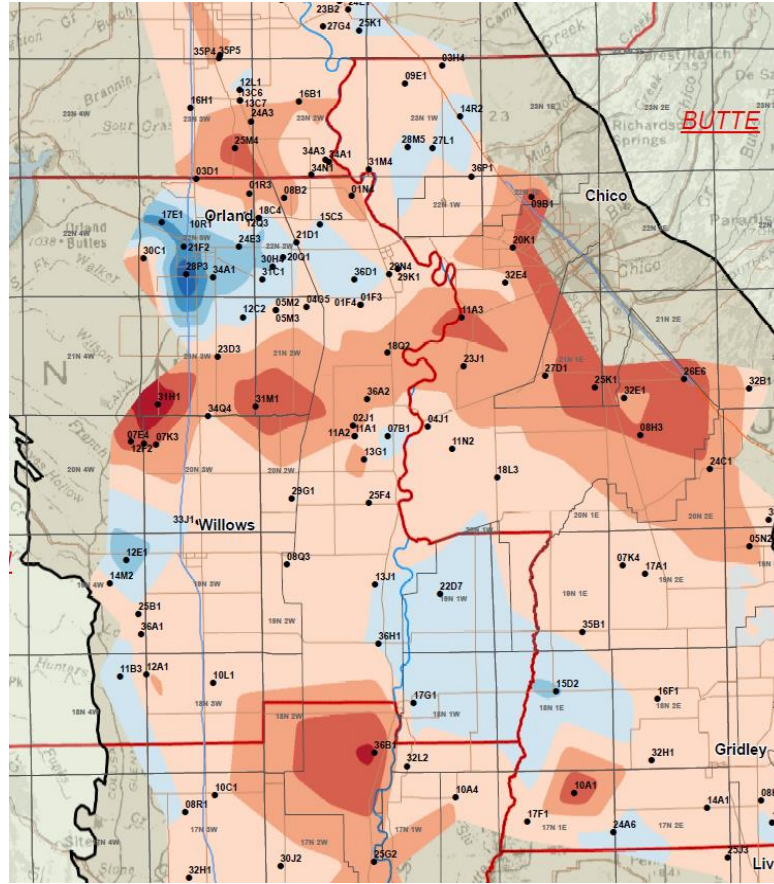
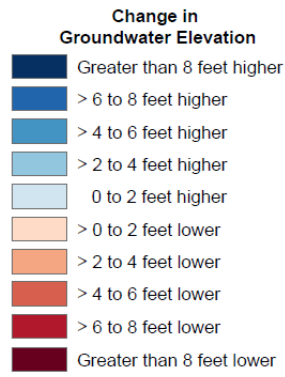
Spring Shallow

1ft

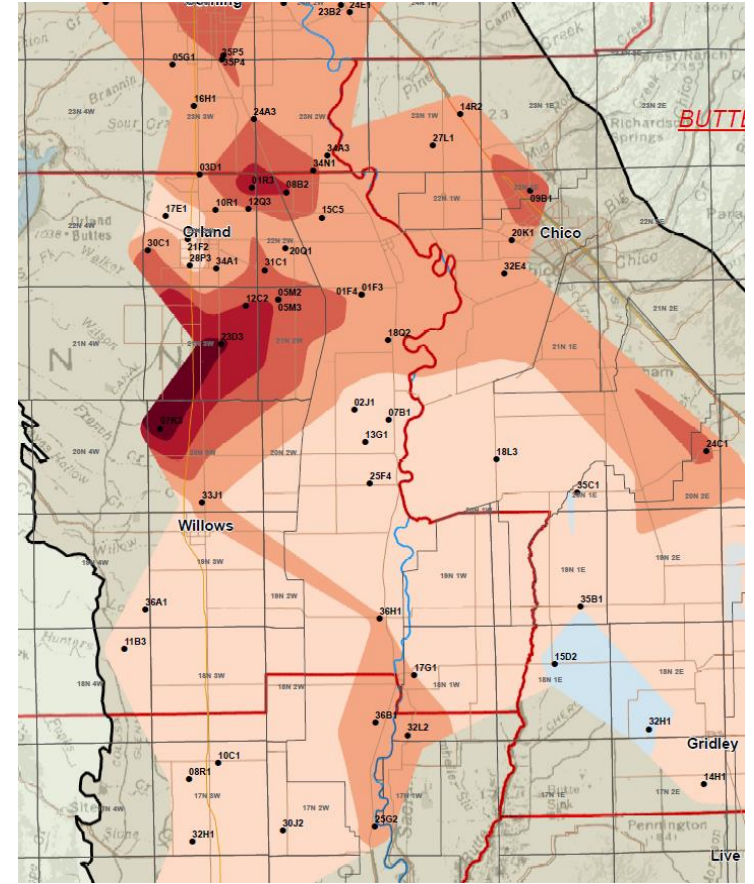
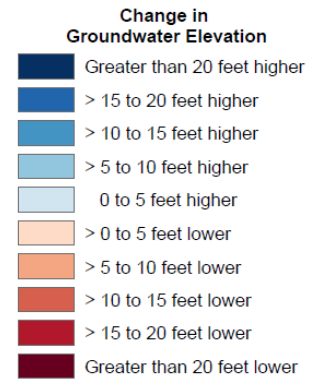


200ft

2012 V 2013 Annual



2004 V 2013 Long-Term



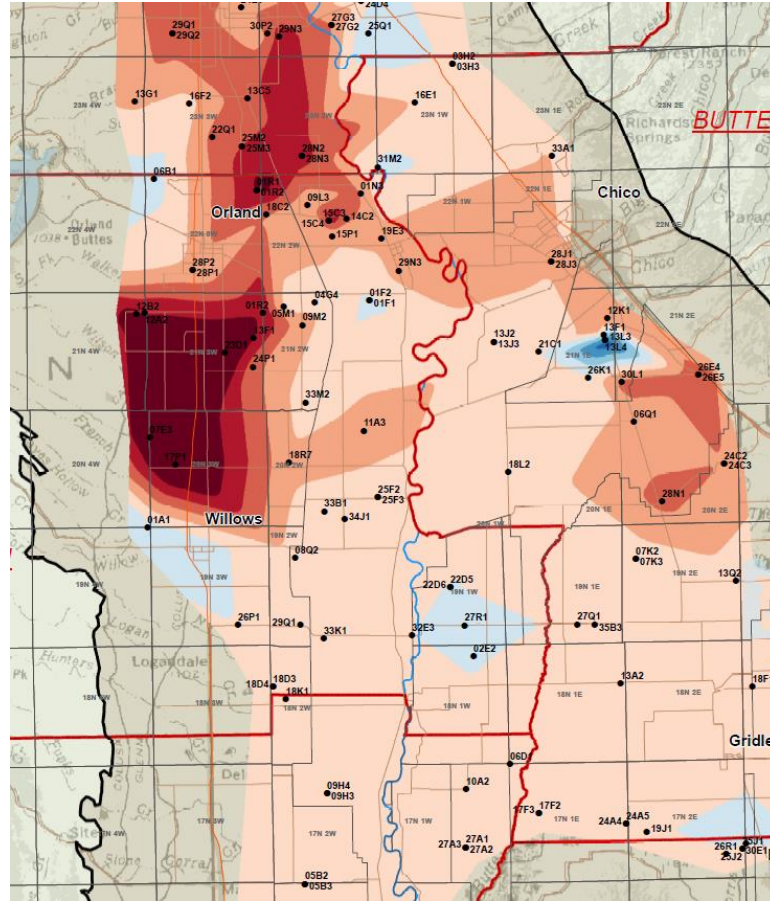
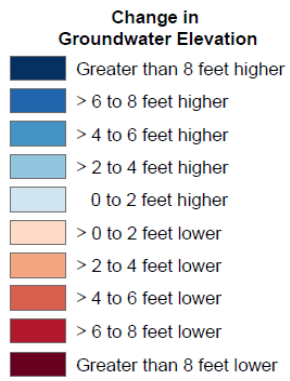
Spring
Intermediate

200ft

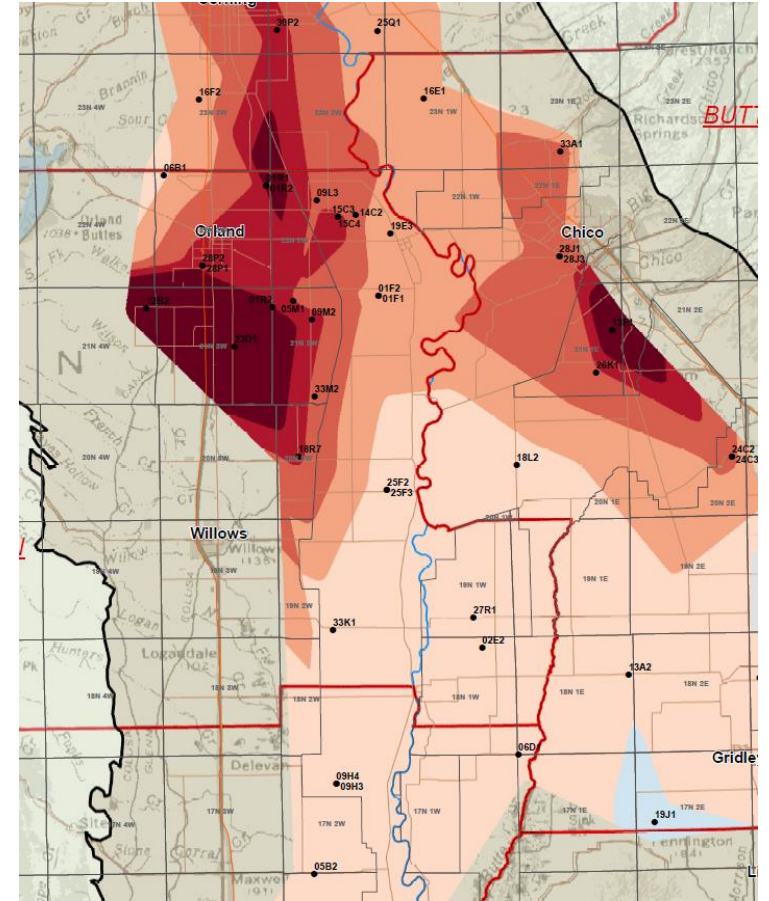
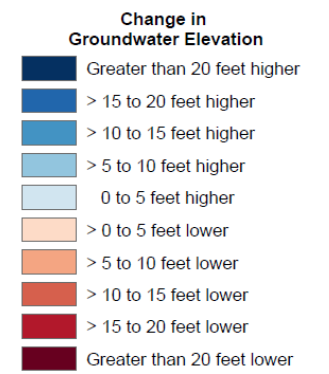


600ft

2012 V 2013 Annual

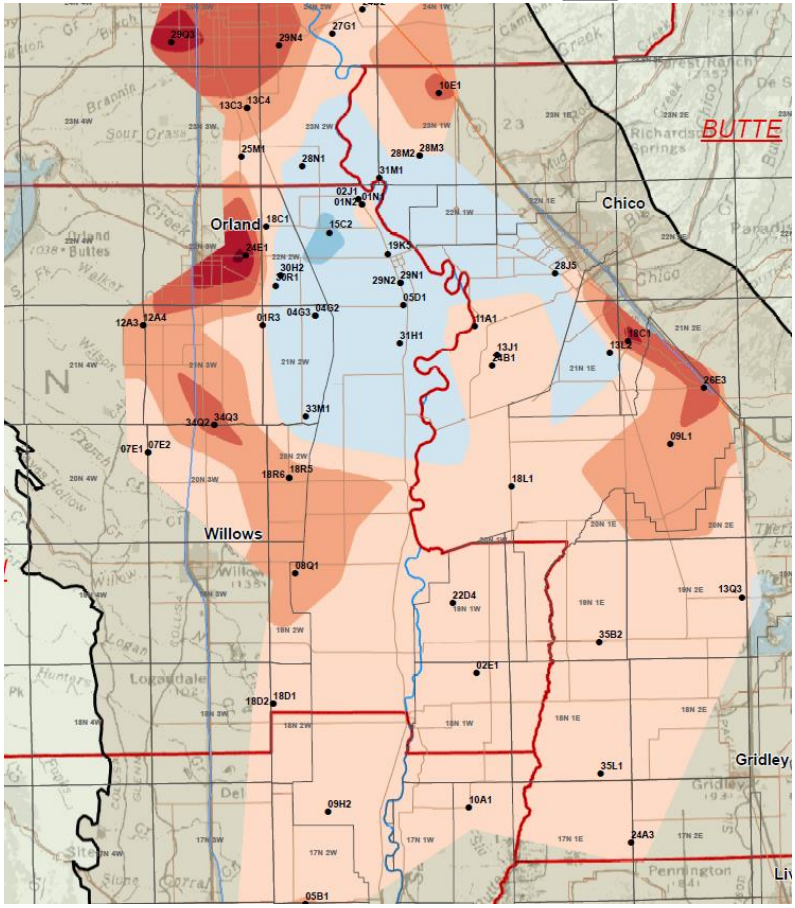
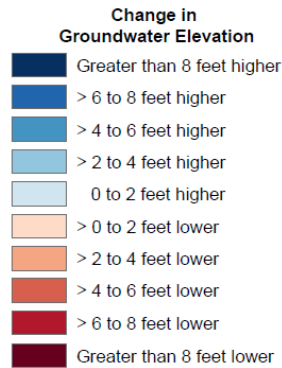


2004 V 2013 Long-Term

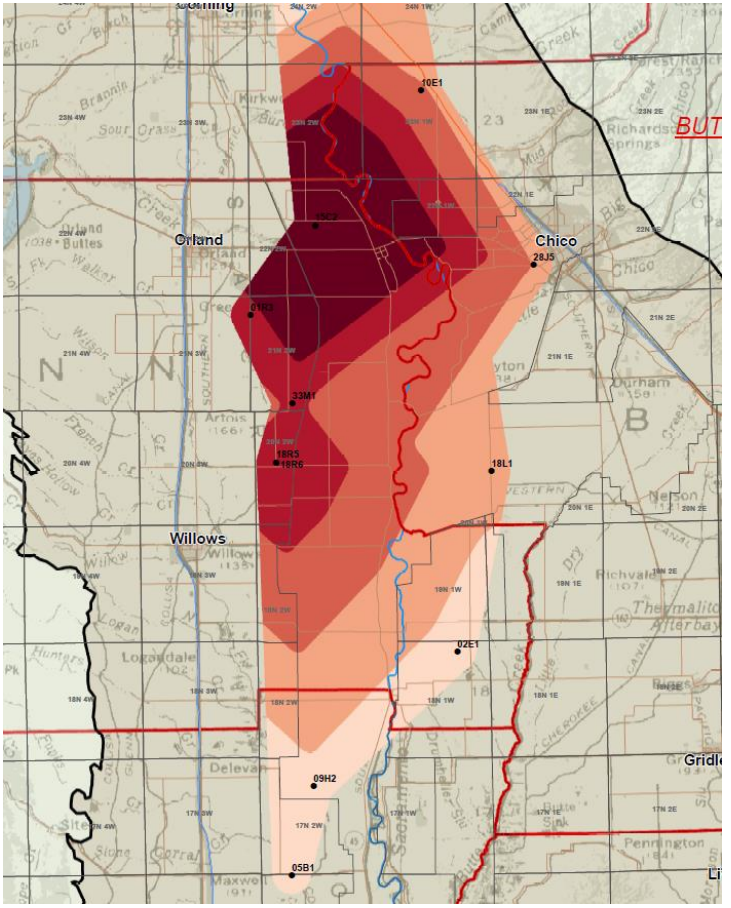
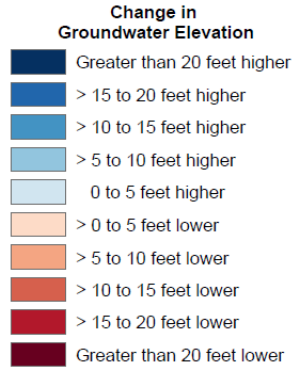


Spring
Deep
600ft
↓
> 1000ft

2012 V 2013
Annual



2004 V 2013
Long-Term



Spring Statistics

Glenn Co

2012 V 2013 Annual

Shallow	Max Increase	9.1
*	Max Decrease	-8.3
*	Avg. Change	-0.7
Intermediate	Max Increase	1.2
*	Max Decrease	-12.2
*	Avg. Change	-3.3
Deep	Max Increase	3.6
*	Max Decrease	-15.6
*	Avg. Change	-1.3

2004 V 2013 Long-Term

Shallow	Max Increase	NA
*	Max Decrease	-23.9
*	Avg. Change	-8.3
Intermediate	Max Increase	NA
*	Max Decrease	-44.9
*	Avg. Change	-13.8
Deep	Max Increase	NA
*	Max Decrease	-36.2
*	Avg. Change	-19.9

Spring Statistics

North Sac Valley

(Shasta, Tehama, Glenn, Butte, and Colusa)

2012 V 2013 Annual

Shallow	Max Increase	9.1
*	Max Decrease	-8.3
*	Avg. Change	-1
Intermediate	Max Increase	8.7
*	Max Decrease	-12.5
*	Avg. Change	-2.6
Deep	Max Increase	3.6
*	Max Decrease	-15.6
*	Avg. Change	-1.5

2004 V 2013 Long-Term

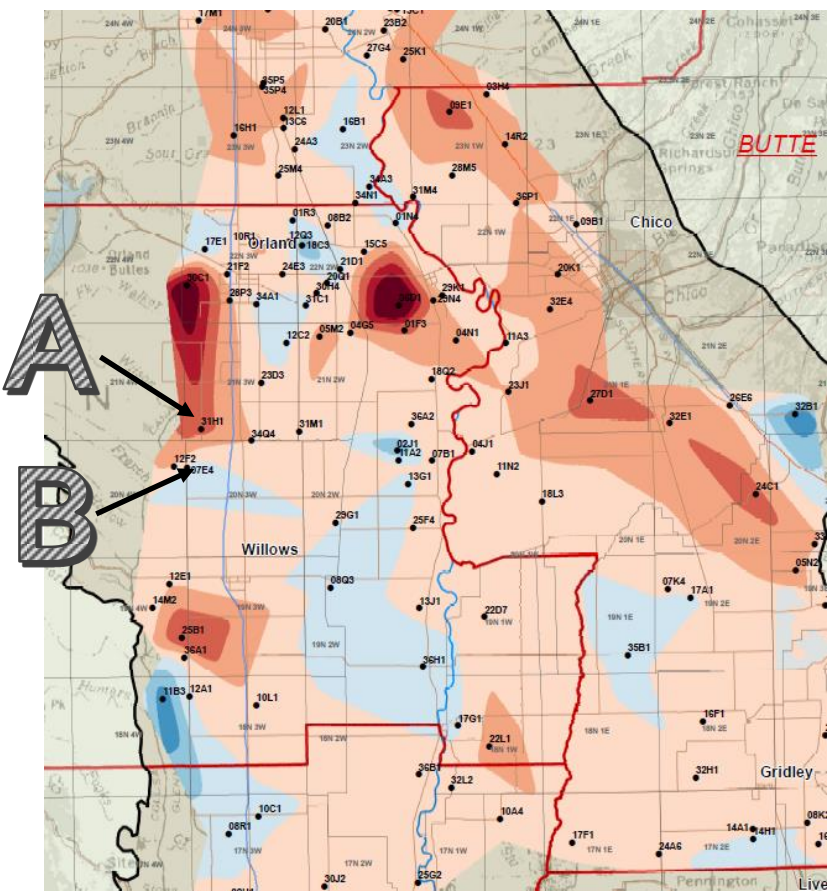
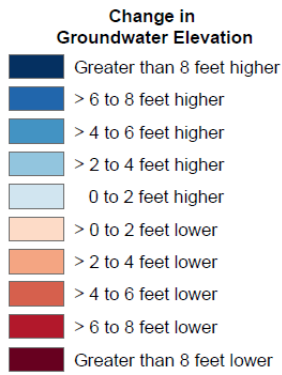
Shallow	Max Increase	2.1
*	Max Decrease	-23.9
*	Avg. Change	-5.9
Intermediate	Max Increase	13.1
*	Max Decrease	-44.9
*	Avg. Change	-8.7
Deep	Max Increase	NA
*	Max Decrease	-36.2
*	Avg. Change	-11.3

Fall Shallow

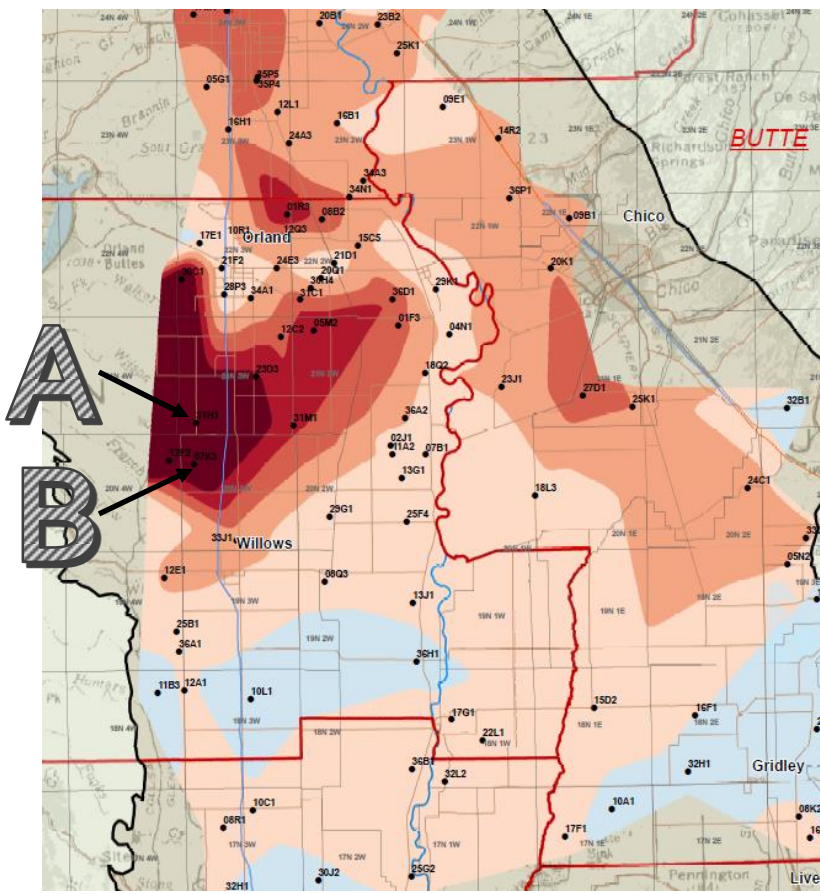
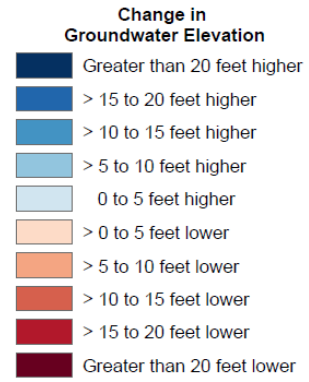
1ft

200ft

2012 V 2013
Annual

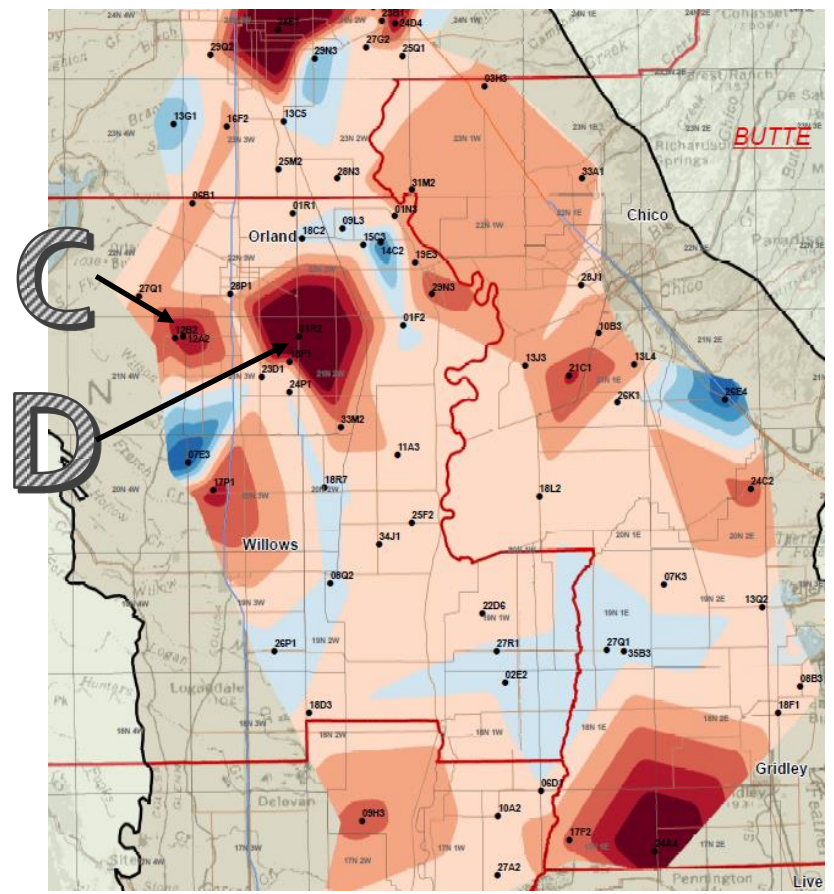
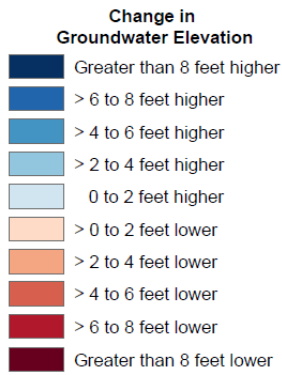


2004 V 2013
Long-Term

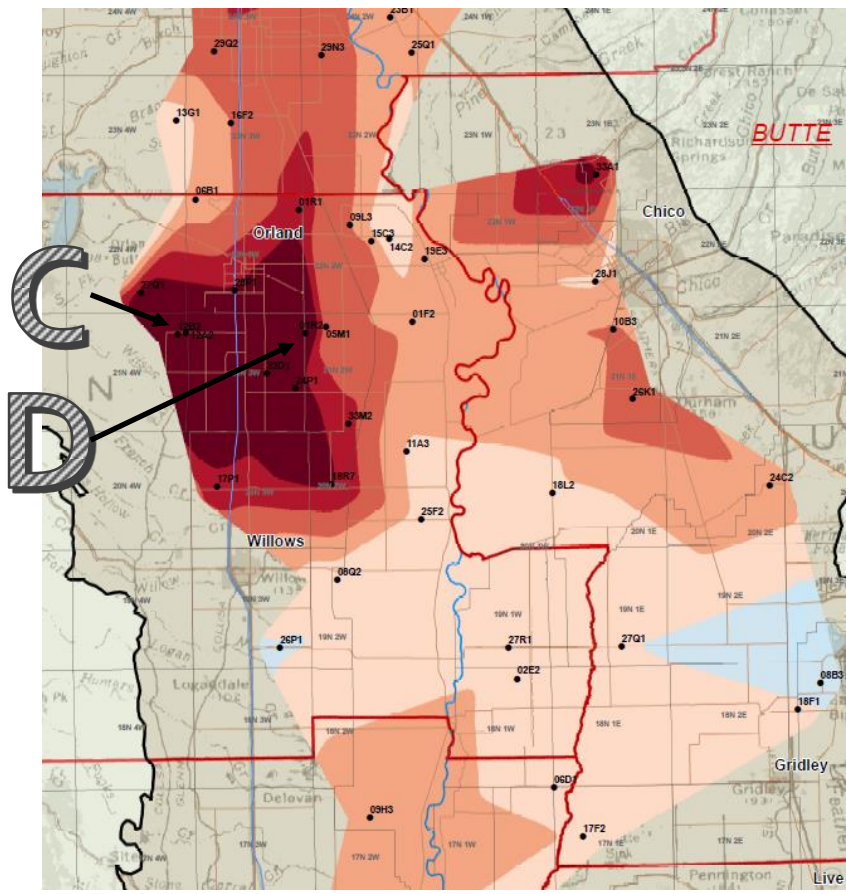
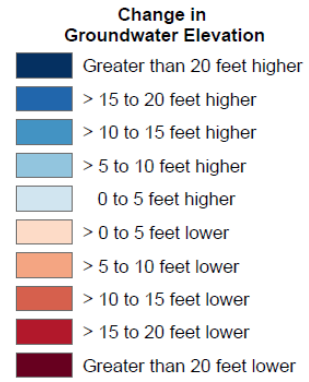


Fall
Intermediate
200ft
600ft

2012 V 2013
Annual

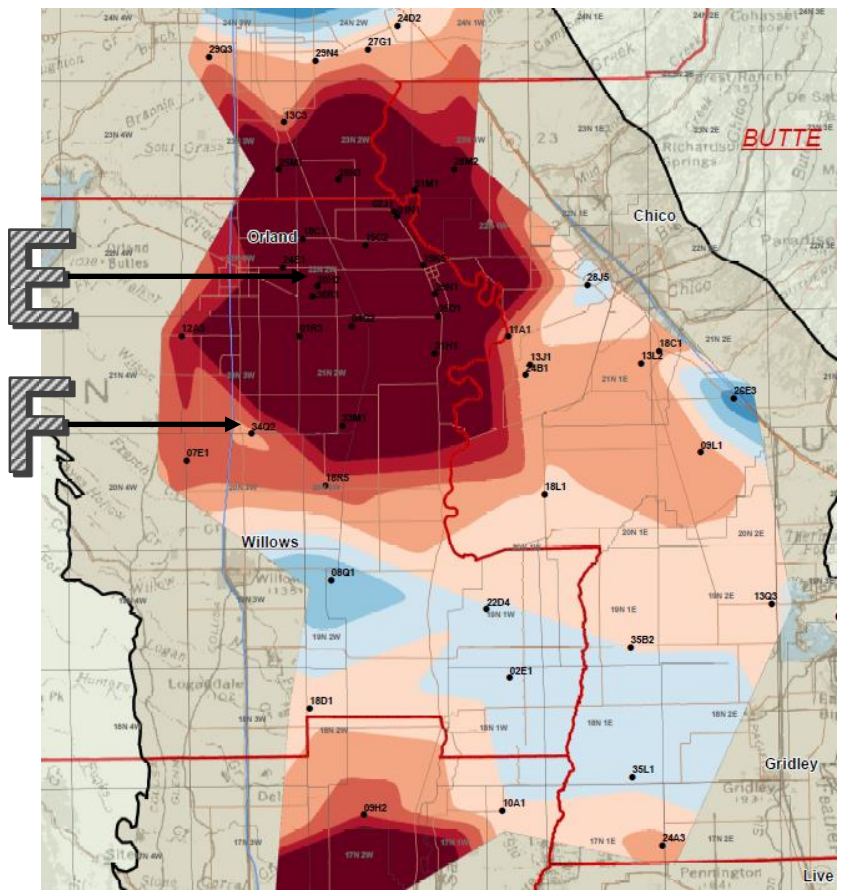
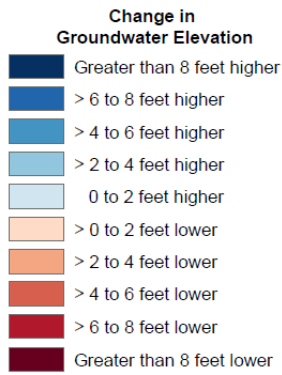


2004 V 2013
Long-Term

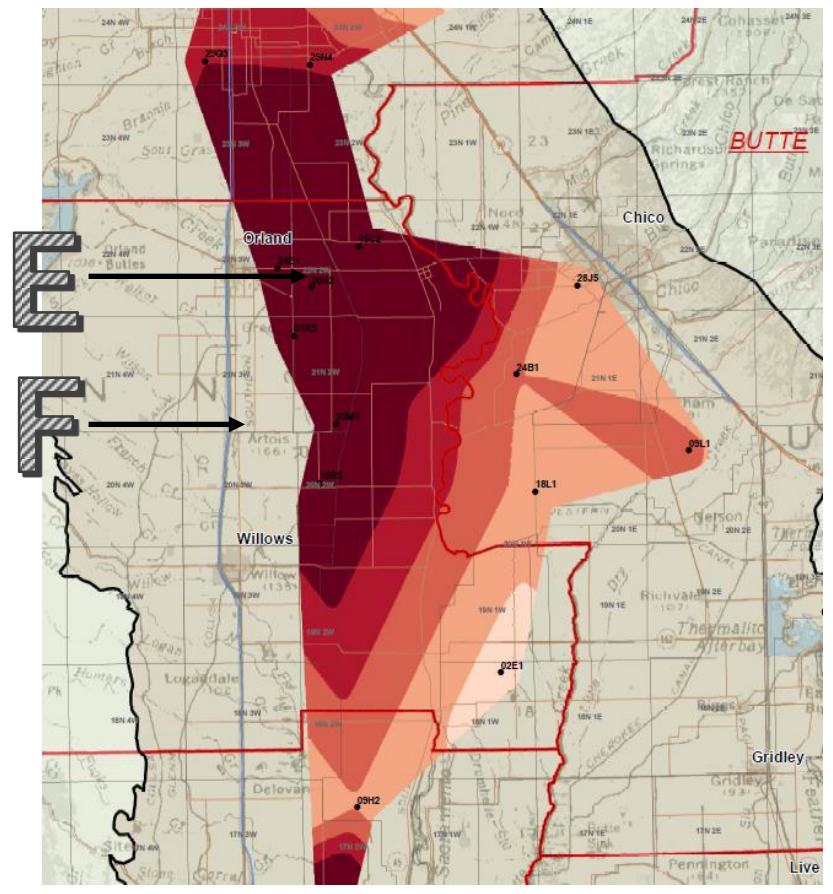
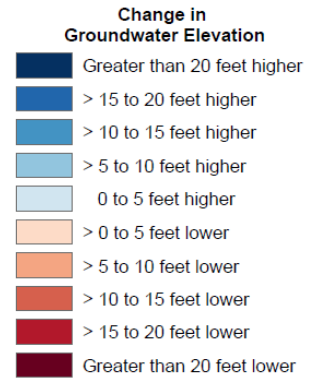


Fall
Deep
600ft
↓
> 1000ft

2012 V 2013 Annual



2004 V 2013 Long-Term



Fall Statistics

Glenn Co

2012 V 2013 Annual

Shallow	Max Increase	6.0
*	Max Decrease	-14.3
*	Avg. Change	-1.2
Intermediate	Max Increase	9.3
*	Max Decrease	-17.6
*	Avg. Change	-1.5
Deep	Max Increase	4.3
*	Max Decrease	-32.1
*	Avg. Change	-15.1

2004 V 2013 Long-Term

Shallow	Max Increase	2.7
*	Max Decrease	-44.4
*	Avg. Change	-8.1
Intermediate	Max Increase	1.2
*	Max Decrease	-40.2
*	Avg. Change	-14.5
Deep	Max Increase	NA
*	Max Decrease	-60.7
*	Avg. Change	-37.7

Fall Statistics

North Sac Valley

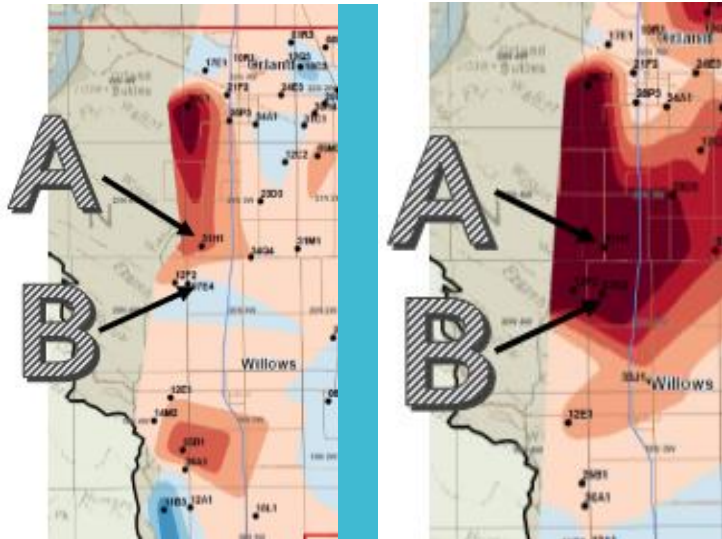
(Shasta, Tehama, Glenn, Butte, and Colusa)

2012 V 2013 Annual

Shallow	Max Increase	6.0
*	Max Decrease	-14.3
*	Avg. Change	-1
Intermediate	Max Increase	9.3
*	Max Decrease	-18.2
*	Avg. Change	-1.6
Deep	Max Increase	25.7
*	Max Decrease	-32.1
*	Avg. Change	-7.2

2004 V 2013 Long-Term

Shallow	Max Increase	7.6
*	Max Decrease	-44.4
*	Avg. Change	-5.8
Intermediate	Max Increase	6.8
*	Max Decrease	-40.2
*	Avg. Change	-9.9
Deep	Max Increase	5.6
*	Max Decrease	-60.7
*	Avg. Change	-18.2

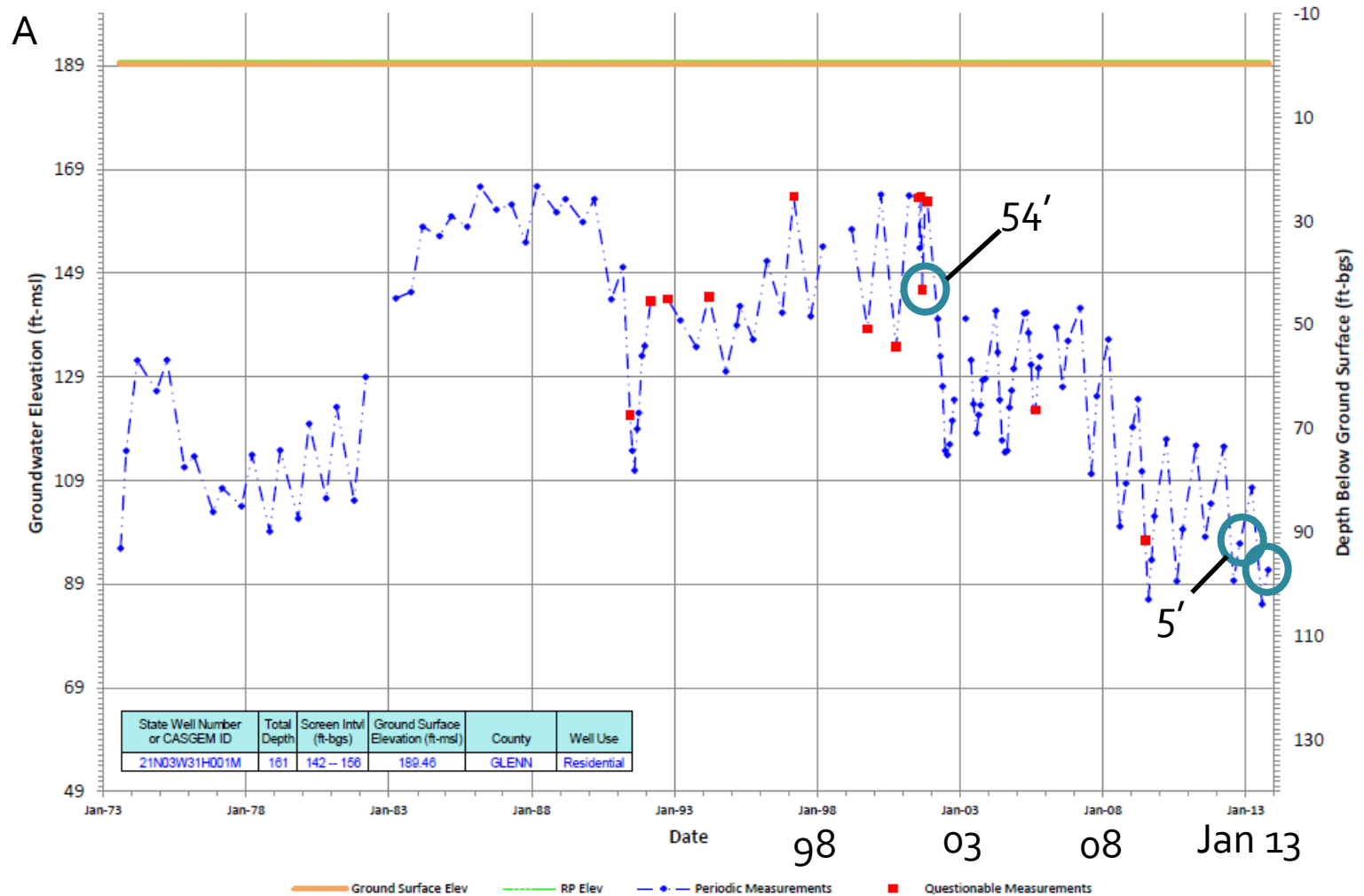


Shallow Hydrograph

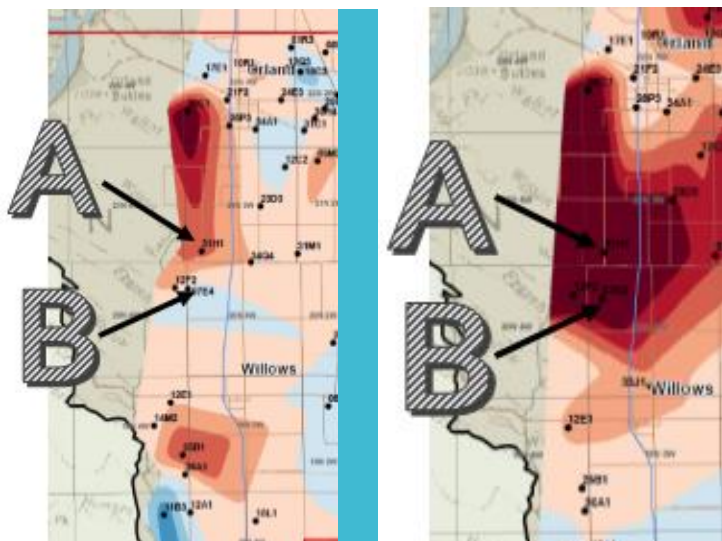
7' below 70's drought low

Fall Reference

21N03W31H001M
 Period Of Record: 08/10/1973 to 10/15/2013



— Ground Surface Elev - - - - RP Elev - ♦ - Periodic Measurements ■ Questionable Measurements

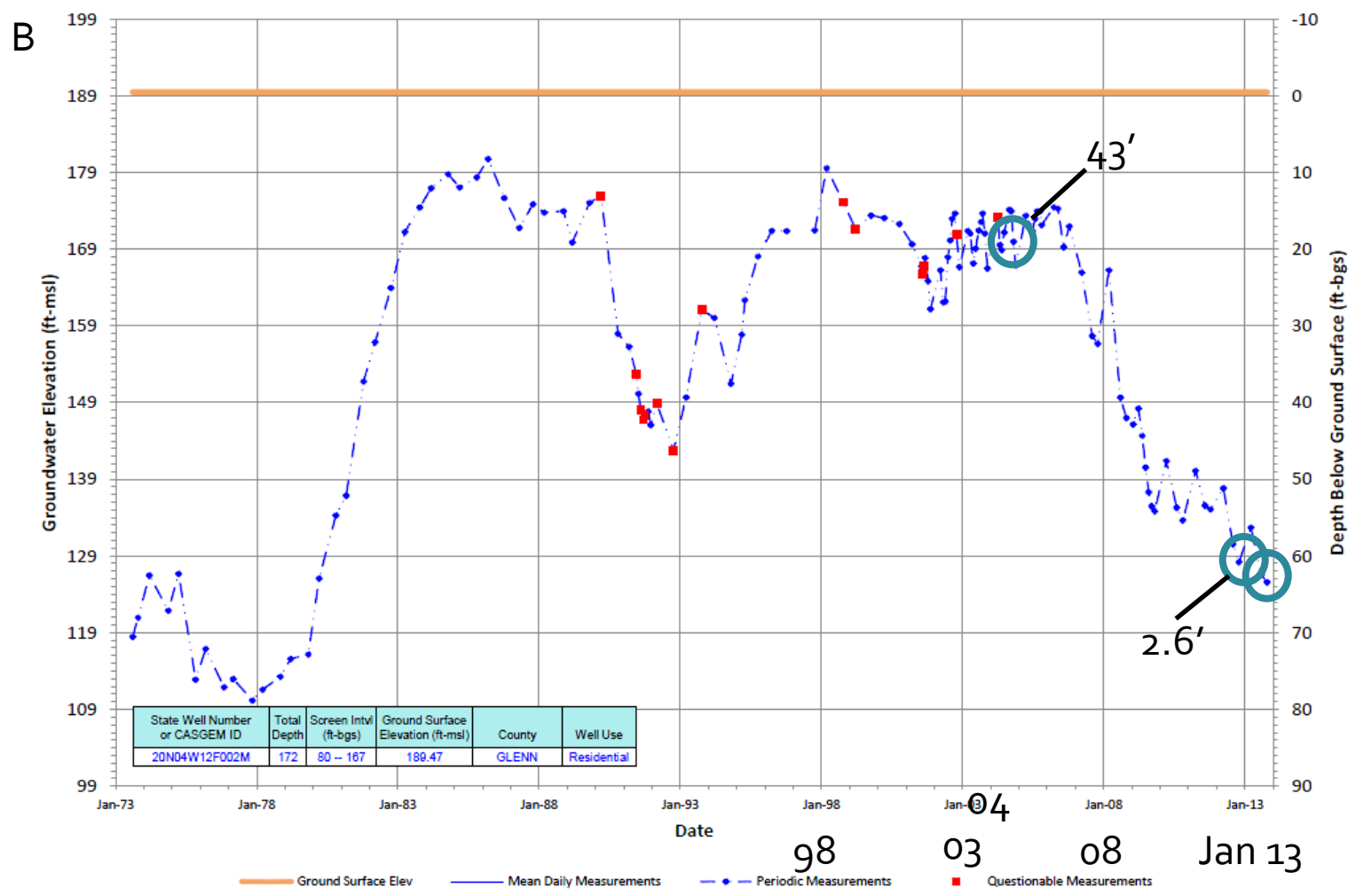


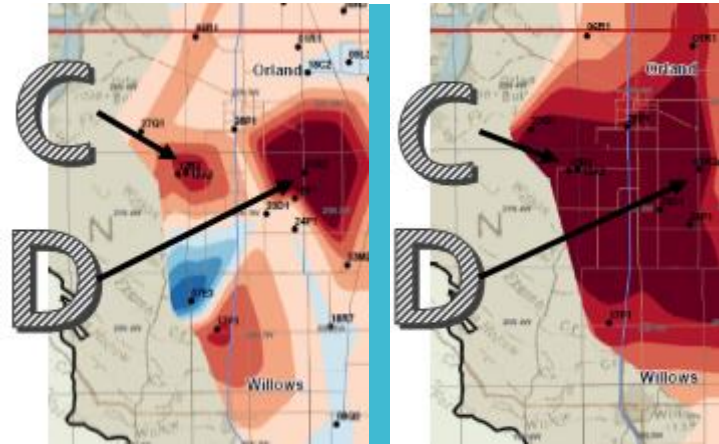
Shallow Hydrograph

25' above 70's drought low

Fall Reference

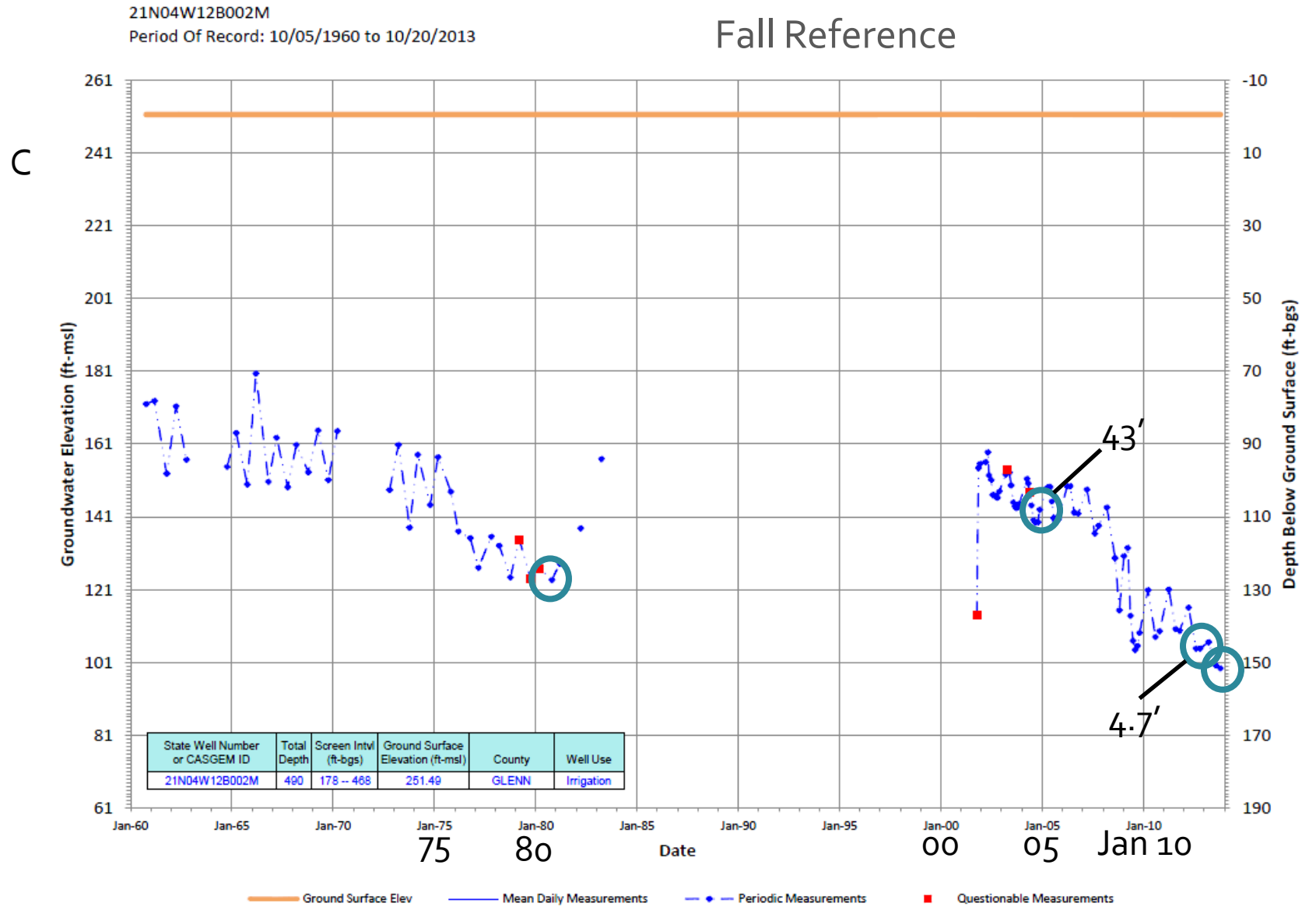
20N04W12F002M
Period Of Record: 08/10/1973 to 10/15/2013

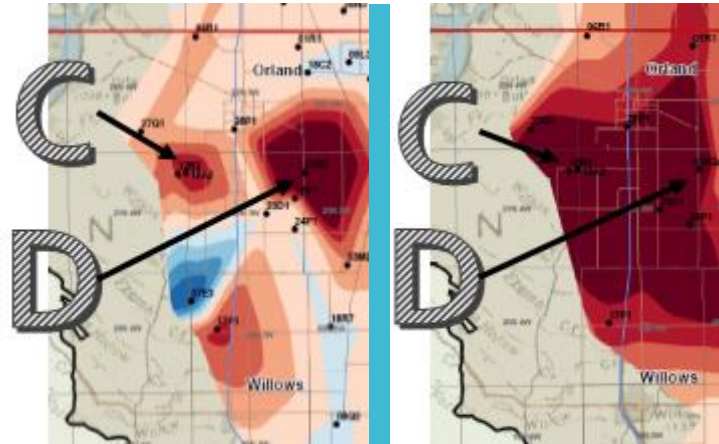




Intermediate Hydrograph

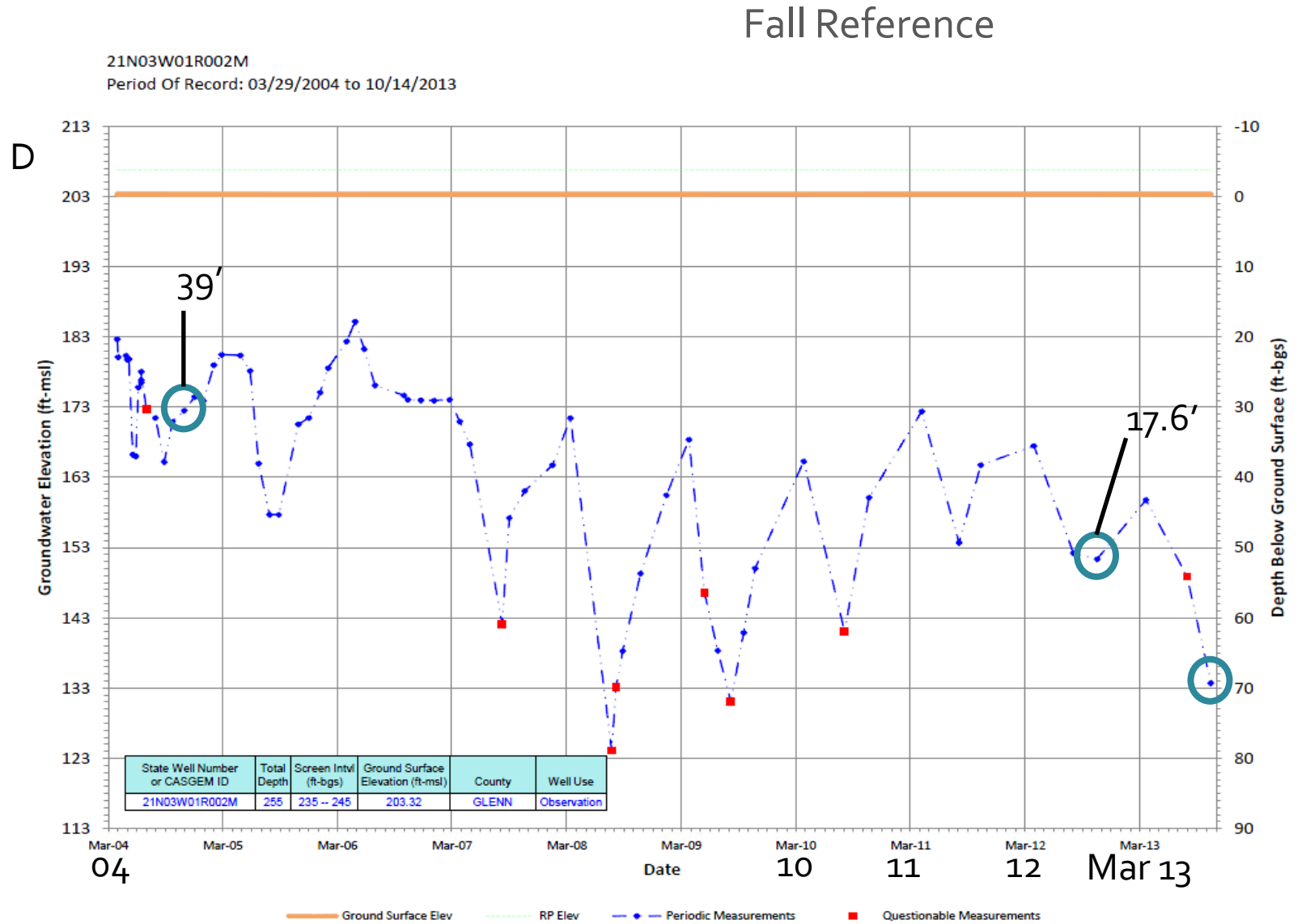
23' below 70's drought low

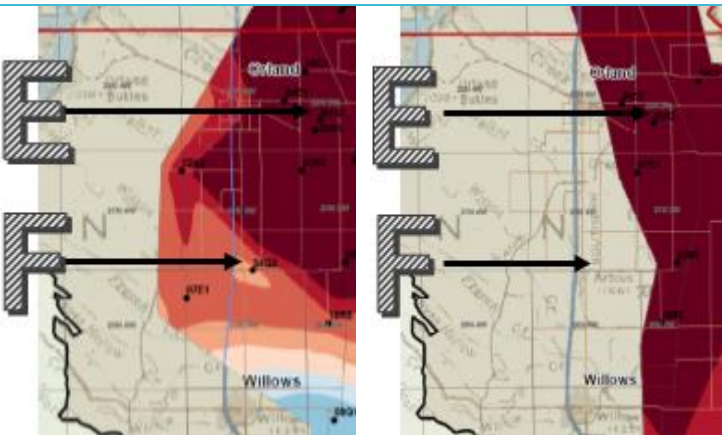




Intermediate Hydrograph

Summer was annual low until 2012



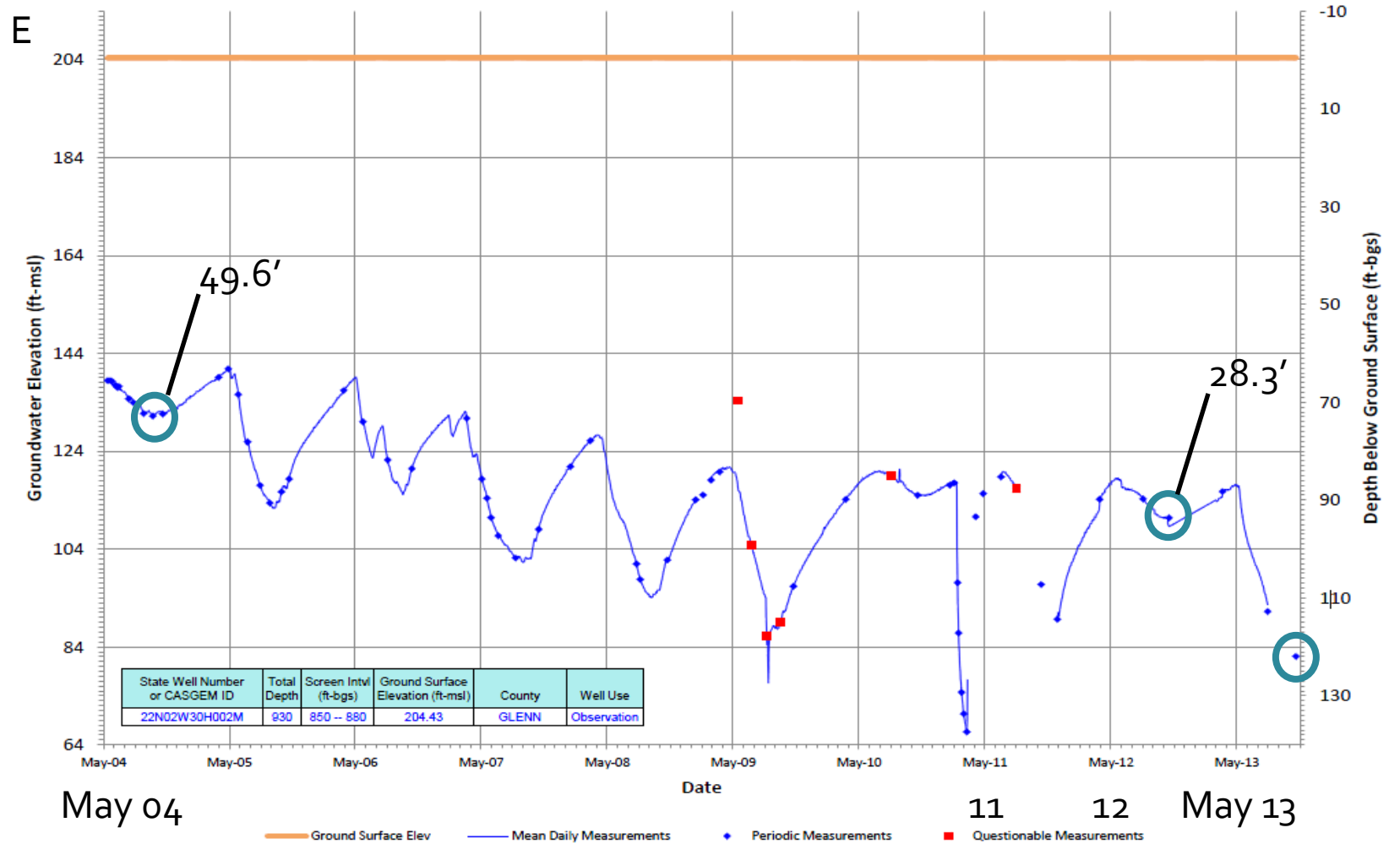


Deep Hydrograph

Fall Reference

22N02W30H002M
 Period Of Record: 05/13/2004 to 10/20/2013

Hydrograph Criteria
 County Name is 'GLENN'
 Total Depth is at or greater than 600



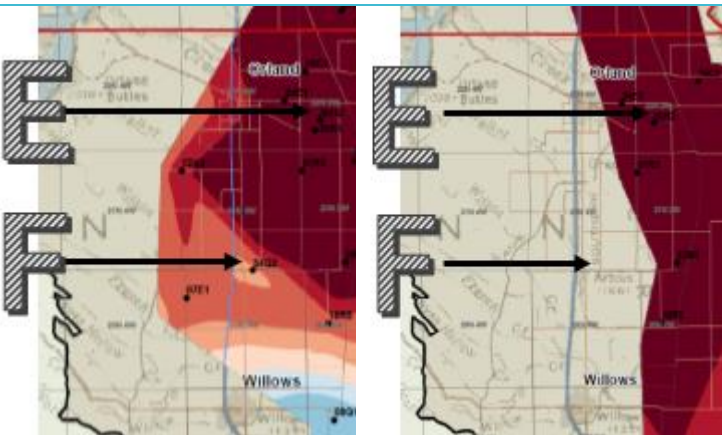
May 04

11

12

May 13

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



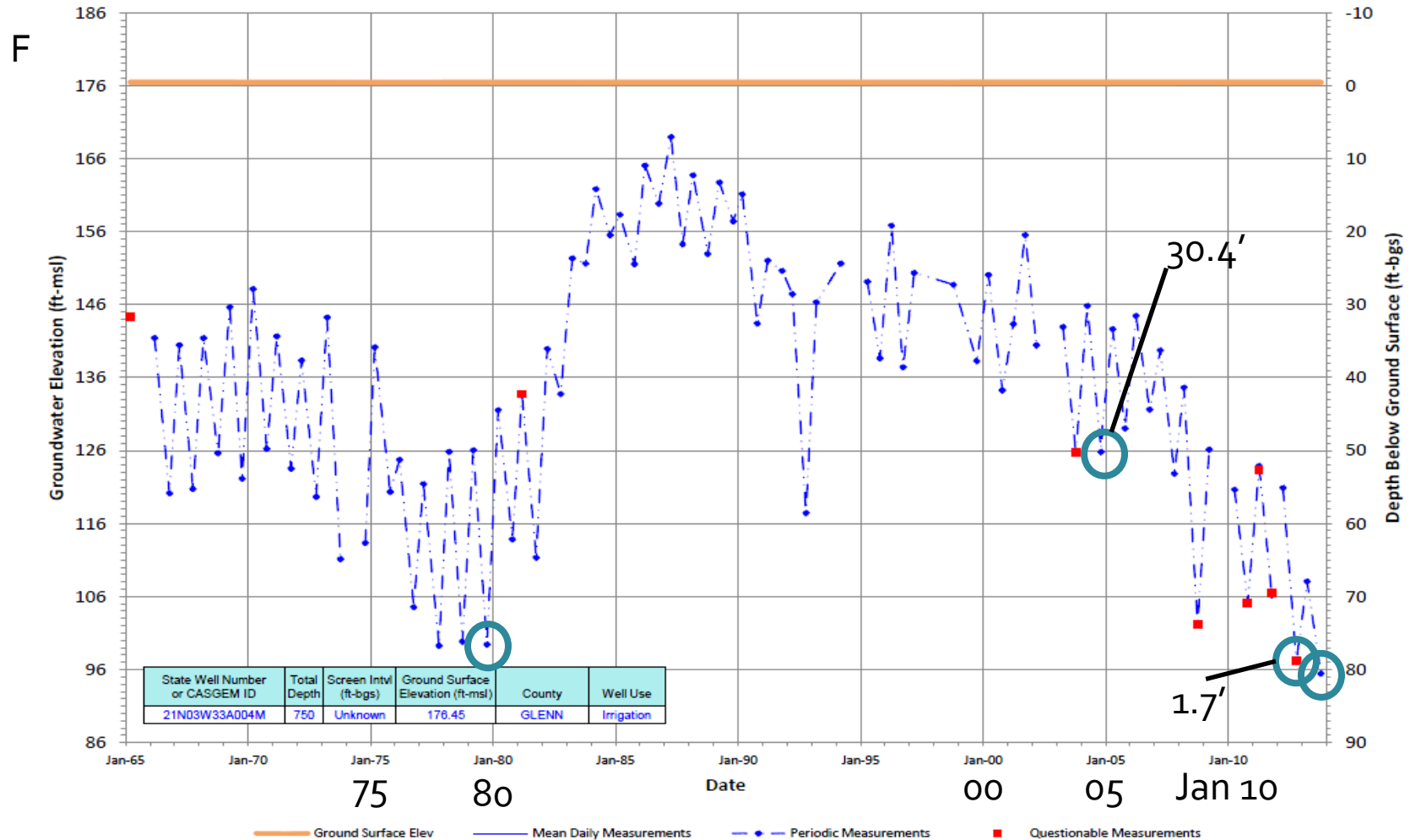
Deep
Hydrograph

4' below 70's drought low

Fall Reference

21N03W33A004M
Period Of Record: 03/17/1965 to 10/14/2013

Hydrograph Criteria
County Name is 'GLENN'
Total Depth is at or greater than 600



Thank you

