

**GLENN COUNTY  
WATER ADVISORY COMMITTEE**

Glenn County Department of Agriculture  
720 North Colusa St., Willows, CA 95988  
Phone: 530.934.6501 FAX: 530.934.6503  
Email: [wateradv@countyofglenn.net](mailto:wateradv@countyofglenn.net)  
Website: <http://www.glenncountywater.org/>

**AGENDA**

**MEETING DATE:** Tuesday, November 10, 2015  
**TIME:** 1:30 P.M.  
**PLACE:** Glenn-Colusa Irrigation District  
344 East Laurel Street  
Willows, CA 95988

**I. INTRODUCTIONS:**

**Water Advisory Committee Members:**

David Alves	Central River Irrigation Districts
Terry Bressler	East County Reclamation and Irrigation Districts
Ted Trimble	East County Reclamation and Irrigation Districts
Sandy Willard Denn	Glenn-Colusa Irrigation District
Larry Domenighini	Glenn County Farm Bureau
Ken Sullivan	Orland Unit Water Users Association
Bruce Roundy	Resource Conservation District
Mike Vereschagin	Tehama Colusa Canal Authority Districts
Mike Alves	Tehama Colusa Canal Authority Districts
Mark Lohse	At-Large Private Pumpers (Agricultural/Municipal/Industrial)
Rob Vlach	At-Large Private Pumpers (Agricultural/Municipal/Industrial)
Darin Titus	At-Large Private Pumpers (Agricultural/Municipal/Industrial)
Del Reimers	At-Large Private Pumpers (Agricultural/Municipal/Industrial)

**Technical Advisory Committee Members:**

Lance Boyd	At-Large, South Area
Roy Hull	Department of Water Resources
Allan Fulton	UC Cooperative Extension
Matt Gomes	Glenn County Planning and Public Works
Kevin Backus	Glenn County Environmental Health
Ben Pennock	At-Large, Central Area
Marcie Skelton	Glenn County Department of Agriculture
Anjanette Shadley	At-Large, East Area
John Brooks	At-Large, North Area
Leigh McDaniel	Board of Supervisors (ex-officio)

**II. APPROVAL OF MINUTES:**

- A. Consider approval of the Minutes from the meeting of June 9, 2015.
- B. Consider approval of the Minutes from the meeting of August 25, 2015.

C. Consider approval of the Minutes from the meeting of September 24, 2015.

### **III. AGENDA ITEMS:**

#### **A. Public Comment:**

Any person wanting to address the Water Advisory Committee on any item NOT ON TODAY'S AGENDA may do so at this time. The Water Advisory Committee will not be making decisions or determinations on items brought up during Public Comment.

#### **B. Discussion and/or Action Items:**

1. DWR update

- a) Summer Groundwater Levels
- b) Results of the spring 2015 subsidence survey

2. Reports

- a) Education/Outreach Committee
- b) Legislation Committee
- c) TAC
  - i. Receive update on BMO revisions
  - ii. Discussion and possible actions regarding BMO revision process and provide direction to TAC.

3. Sustainable Groundwater Management Act

- a) DWR facilitation services
- b) Roundtable discussion

4. Election of Officers for the 2016/2017 term

- a) Selection of nomination committee

5. Other Topics of Interest

#### **C. Communications:**

#### **D. Member Reports:**

At this time WAC members are encouraged to discuss upcoming or ongoing activities that may be of interest to the committee.

### **IV. NEXT MEETINGS:**

The next WAC meeting will be tentatively scheduled at this meeting.

The next TAC meeting will be scheduled at a later date.

**V. ADJOURN:**

Any documents related to agenda items that are made available to the Water Advisory Committee before the meeting shall be available for review during regular business hours at 720 North Colusa Street, Willows, California, 95988.

In compliance with the Americans with Disabilities Act, if you need special assistance or accommodations to participate in this meeting, please contact Lisa Hunter at the Glenn County Department of Agriculture at 530-934-6501. Notification at least 48 hours prior to the meeting will enable the Glenn County Water Advisory Committee to make reasonable arrangements to ensure accessibility to this meeting. (28 CFR 35.101-35.164 ADA Title II.)

# GLENN COUNTY WATER ADVISORY COMMITTEE

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## MINUTES

Meeting Date: Tuesday, June 9, 2015

Time: 1:30 pm

Place: Glenn-Colusa Irrigation District  
344 East Laurel Street  
Willows, CA 95988

### Water Advisory Committee Members Present:

Sandy Willard-Denn	GCID
Larry Domenighini	Glenn County Farm Bureau
Mark Lohse	Private Pumper
Mike Vereschagin	TC Canal Authority Districts
Ken Sullivan	Orland Water Users Association
Mike Alves	TC Canal Authority Districts
Rob Vlach	Private Pumper

### Water Advisory Committee Members Absent:

David Alves	Central River Irrigation Districts
Bruce Roundy	Resource Conservation District
Del Reimers	Private Pumper
Terry Bressler	East County Rec & Irr Districts
Ted Trimble	Western Canal Water District
Darin Titus	Private Pumper

### Technical Advisory Committee Members Present:

Ben Pennock	At-Large, Central Area
Anjanette Shadley	At-Large, East Area
John Brooks	At-Large, North Area

### Others in Attendance:

Lisa Hunter	Glenn Co. Ag Dept.
Mary Fahey	Colusa County
Barbara Hennigan	BSBAGU
Michael Billiou	Private
Geoff Fulks	Cal Water
Zac Dickens	GCID
Sharron Ellis	Orland Farmer
George Pendell	Stony Creek
Jason Beauchamp	Glenn County Ag Dept.
Doug Ross	Valley Mirror
Michael Larsen	Kearns & West
Bob O'Sullivan	
Erin Smith	DWR

## I. INTRODUCTIONS:

Those in attendance are shown above.

## II. APPROVAL OF MINUTES:

A. The minutes from the February 10, 2015 meeting were unanimously approved as presented.

## III. AGENDA ITEMS:

### A. Public Comment:

None.

### B. Discussion & Action Items:

#### 1. Update on member vacancies

The Board of Supervisors appointed Del Reimers as an at-large private pumper representative at the June 2, 2015 meeting. There are no vacancies at this time.

## 2. Reports

- a) **TAC**—The TAC has not met since the last WAC meeting. The TAC has an ad hoc committee working on BMO revisions. The ad hoc committee will be meeting soon in order to review the work being done.
- b) **Education/Outreach Committee**—The outreach meetings were held in February/March in Willows, Orland, and Ord Bend. The meetings were well attended with over 200 attendees total. Topics included WAC history, hydrology, and new state laws with a question/answer portion following with good participation. In addition to these meetings, Larry Domenighini and Lisa Hunter also provided a presentation to the Glenn County Rangeland Association in Elk Creek reaching an additional 30-35 people. Mr. Domenighini recommended holding another set of outreach meeting next winter.
- c) **Legislation Committee**—The legislation committee has not met since last winter. The committee was originally formed to help gather the information to provide an update on the groundwater legislation to the Board of Supervisors. The WAC held discussion regarding the role of the committee. The committee members were adjusted to include Larry Domenighini, Sandy Denn, Mark Lohse, David Alves, and Anjanette Shadley. Sharron Ellis also requested to be included in the meetings. The committee will remain in place to discuss issues that may come up.

## 3. DWR update

Erin Smith provided an update on spring 2015 groundwater levels. Her presentation included the water year index from 1971 to 2014, the Northern Sierra Precipitation: 8-station index, spring 2015 contour maps, and groundwater change maps indicating the change in groundwater between the spring of 2004 to 2015, 2011 to 2015, and 2014 to 2015. She also highlighted the DWR groundwater website. The presentation will be made available on the WAC website.

## 4. Review Spring BMO conditions

Lisa Hunter reviewed the handouts provided. Spreadsheets and maps were included depicting both the current BMO configuration, and the new proposed BMO configuration. Sixty-three wells are considered BMO wells. Eleven wells are in a stage 3 alert. Sixteen wells are in a stage 1 or 2. Wells with no measurement were not included in the count of wells in a stage alert.

Anjanette Shadley shared that Western Canal Water District in coordination with DWR is taking additional groundwater measurements this year.

A discussion took place regarding the proposed BMO areas that the WAC previously approved. Some members would like to see more discussion regarding these areas.

## 5. Sustainable Groundwater Management Act

The scope of work included in the agenda packet was briefly reviewed. The Board of Supervisors approved the scope of work for Kearns and West funded by the California Water Foundation in March. The purpose of the work is to provide facilitation in Glenn and Colusa Counties in the Colusa subbasin for SGMA governance. The work is being conducted by a neutral third party facilitator.

Michael Larsen, from Kearns and West provided an overview of the facilitation process and further clarified the purpose of the scope of work and the role of Kearns and West.

The WAC reviewed the status of potential GSAs within the County area. Currently, PID, PCGID, Kanawha and Glide Water Districts have elected to become GSAs. OAWD will consider GSA options at their next meeting. The City of Orland will hold a public hearing at their next meeting. Garner Law Firm provided a letter advising of a potential private pumper group GSA. GCID is considering their options and will be preparing to hold a public hearing. OUWUA and Cal Water (Willows and Hamilton City) do not qualify to become stand-alone GSAs under the current law, but would like to participate in the process. Western Canal is in the process of reviewing their options. Glenn County will have a discussion at the Board of Supervisors at their next meeting in order to discuss options hear direction from the Board. City of Willows has not yet discussed their options. Their preference at this time would be to have Cal Water participate for the city.

Anjanette Shadley provided an update on activities within Butte County. Mary Fahey provided an update on Colusa County progress.

**6. Drought**

District representatives and private pumpers shared current drought challenges, responses, and impacts to their operations.

**7. Meeting schedule**

The WAC is required to meet 3 times per year. The last few years the group has met about 5 times per year. The WAC held discussion regarding a meeting schedule. The next meeting will be held November 10.

**8. Other Topics of Interest**

Larry Domenighini reminded the WAC that according to the bylaws, a new chairman and vice chairman will need to be selected for the 2016/2017 term.

The WAC should provide an update to the Board of Supervisors as required in the ordinance. Send suggestions for topics to be included to Larry or Lisa.

**C. Communications:**

None discussed.

**D. Member Reports:**

None.

**IV. NEXT MEETINGS:**

The next WAC meeting is tentatively scheduled for November 10, 2015. The next TAC meeting is tentatively scheduled for July 2015. The date for this meeting has yet to be determined.

The meeting was adjourned at 3:45 p.m.

# GLENN COUNTY JOINT WATER ADVISORY COMMITTEE/ TECHNICAL ADVISORY COMMITTEE

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## MINUTES

Meeting Date: Tuesday, August 25, 2015

Time: 1:30 pm

Place: Willows City Council Chambers  
201 North Lassen Street  
Willows, CA 95988

### Water Advisory Committee Members Present:

Larry Domenighini	Glenn County Farm Bureau
Ted Trimble	Western Canal Water District
Mike Alves	TC Canal Authority Districts
Darin Titus	Private Pumper
Bruce Roundy	Resource Conservation District
Mike Vereschagin	TC Canal Authority Districts
David Alves	Central River Irrigation Districts
Terry Bressler	East County Rec & Irr Districts
Rob Vlach	Private Pumper
Del Reimers	Private Pumper

### Water Advisory Committee Members Absent:

Mark Lohse	Private Pumper
Sandy Willard-Denn	GCID
Ken Sullivan	Orland Water Users Association

### Technical Advisory Committee Members Present:

Ben Pennock	Central Area
Matt Gomes	Glenn County PPWA
Marcie Skelton	Glenn Co. Ag Dept.
John Brooks	North Area
Lance Boyd	South Area
Allan Fulton	UC Cooperative Extension
Kevin Backus	Glenn County Environmental Health
Anjanette Shadley	East Area
Leigh McDaniel	Board of Supervisors (ex-officio)

### Others in Attendance:

Lisa Hunter	Glenn Co. Ag Dept.
Betsy Karle	UCCE
Hank Wallace	
Sharron Ellis	SOWR
Ray Collette	SOWR
Rick Massa	Ouwua
Pete Carr	Orland
Thad Bettner	GCID
Emil Cavagnolo	OAWD
Lizandro Magana	Cal Olive
Charles Garcia	Cal Olive
Ryan Teubert	TCFCWCD
Wallis Cramer	Grower
George Pendell	Stony Creek
Paddy Turnbull	Public
Zac Dickens	GCID
Dan Gamon	Kleinfelder
Jon Anderson	Driscoll Strawberry
Doug Ross	
Pat Kennedy	
Gary Enos	
Mary Fahey	
Alan Schauer	
Leila Titus	
Jeff Sutton	
Geoff Fulks	

I. INTRODUCTIONS: Those in attendance introduced themselves.

II. AGENDA ITEMS:

A. **Public Comment**: None.

**B. Discussion & Action Items:**

**1. Consider response to Board of Supervisors regarding exemptions to well permit moratorium.**

Mr. Domenighini reviewed the draft exemptions. He mentioned that two comment letters were received by the committee from Provident Irrigation District and Princeton-Codora-Glenn Irrigation District, and Glide Water District and Kanawha Water District.

Each item on the draft recommendation was discussed and public comments were received.

On a motion by David Alves, seconded by Darin Titus, item 4b was approved as presented. (9-1)

On a motion by Bruce Roundy, seconded by Rob Vlach, item 4c was changed to read “A new Public Water System well, State Water System well, or Cal Code well when it complies with the State Water Resource Control Board, Division of Drinking Water, Safe Water Drinking Act and related laws.” (Unanimous)

On a motion by Mike Vereschagin and seconded by Del Reimers, item 4a was changed to read “The new well does not extract groundwater, or does not extract groundwater for any purpose other than sampling to comply with monitoring requirements. Non-producing test holes are exempt from the moratorium.” (Unanimous)

On a motion by Del Reimers, seconded by Rob Vlach, item 5 was accepted as presented. (Unanimous)

On a motion by Del Reimers, seconded by Darin Titus, item 6 was amended to read, “Per existing policy, an approved well permit prior to August 19, 2015 that has not yet expired may be extended one time for a 12 month period.” (9-1)

On a motion by Darin Titus, seconded by Rob Vlach, items 1 and 3 were combined and item 2 deleted and amended to read, “Repairs or replacement of existing water wells.” (Unanimous)

Discussion was also held regarding the desire to create exemptions based upon geographic areas; however, not enough time or information is available during this short time frame in order to provide a recommendation to the Board of Supervisors by the appointed date. The WAC expressed a desire to continue to look into that option and perhaps provide additional recommendation to the Board as it is developed.

**III. NEXT MEETINGS:**

The next WAC meeting is scheduled for November 10, 2015.

**IV. ADJOURN**

The meeting was adjourned at 4:12 p.m.



# GLENN COUNTY JOINT WATER ADVISORY COMMITTEE/ TECHNICAL ADVISORY COMMITTEE

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## MINUTES

Meeting Date: Thursday, September 24, 2015

Time: 1:30 pm

Place: Glenn County Department of Agriculture  
720 North Colusa Street  
Willows, CA 95988

### Water Advisory Committee Members Present:

Sandy Willard-Denn	GCID
Ted Trimble	Western Canal Water District
Mark Lohse	Private Pumper
Darin Titus	Private Pumper
Bruce Roundy	Resource Conservation District
Ken Sullivan	Orland Water Users Association
Terry Bressler	East County Rec & Irr Districts
Del Reimers	Private Pumper

### Others in Attendance:

Lisa Hunter	Glenn Co. Ag Dept.
Hank Wallace	
Thad Bettner	GCID
Erin Smith	DWR
Chip Meriam	County Assessor
Trish Saint-Evens	SOWR

### Water Advisory Committee Members Absent:

David Alves	Central River Irrigation Districts
Rob Vlach	Private Pumper
Larry Domenighini	Glenn County Farm Bureau
Mike Alves	TC Canal Authority Districts
Mike Vereschagin	TC Canal Authority Districts

### Technical Advisory Committee Members Present:

Kevin Backus	Glenn County Environmental Health
Leigh McDaniel	Board of Supervisors (ex-officio)

I. INTRODUCTIONS: Those in attendance are shown above.

II. AGENDA ITEMS:

A. **Public Comment:** Hank Wallace addressed the committee regarding suggestions to fund water studies in Glenn County including a land tax on acres that are irrigated agriculture. He also suggested that the County link with other counties to form a larger subbasin oriented SGMA program.

**B. Discussion & Action Items:**

**1. Consider response to Board of Supervisors regarding exemptions to well permit moratorium.**

Ms. Denn reviewed the Well Permit Moratorium Exemptions that the Board of Supervisors (Board) previously approved and the draft language to clarify exemption number 1 as requested by the Board. Additional discussion took place on item 2b in the previously approved exemptions regarding cable rig drilling, casing sizes, pump size regulation.

The response to exemption 1 (repairs and replacement wells) was discussed in detail. On a motion by Darin Titus, seconded by Del Reimers, the Response to Exemption Number 1 was approved as presented. (7-1)

**III. NEXT MEETINGS:**

None discussed.

**IV. ADJOURN**

The meeting was adjourned at 2:23 p.m.

DRAFT

**DEPARTMENT OF WATER RESOURCES**

NORTHERN REGION OFFICE  
2440 MAIN STREET  
RED BLUFF, CA 96080-2356



August 17, 2015

Glenn County Board of Supervisors  
525 West Sycamore Street, Suite B1  
Willows, California 95988

Glenn County Water Advisory Committee  
Post Office Box 351  
Willows, California 95988

Dear Supervisors and Committee members:

This letter is a follow up to your a request from late 2014 for the Department of Water Resources (DWR) to review and compare two Global Positioning System (GPS) survey datasets (2004 and 2008) within Glenn County.

The objective of the comparison was to identify any inelastic subsidence that may have occurred within the County over the four-year time period. At the conclusion of the analysis, DWR reported to the Glenn County Board of Supervisors and the Water Advisory Committee (WAC) in a letter dated February 3, 2015 that there are two areas within the County that show signs of inelastic subsidence between 2004 and 2008. The recommendation by DWR was to resurvey, using Global Positioning System (GPS), those monuments within the two areas of concern to confirm the findings and determine if the inelastic subsidence persisted or has been abated. The recommendations were accepted by the County WAC and DWR performed the resurvey in April 2015. This letter details the methods and results of the resurvey.

In April 2015, DWR reoccupied the established monuments within the two areas of concern in Glenn County:

1. West side of Glenn County, south of Orland
2. Northeastern area of Glenn County, south of Hamilton City

One of the objectives was to identify if any trends exist by comparing the results from the 2015 survey and the earlier surveys done in 2004 and 2008. The second objective was to determine relative ground surface elevations from each of the three surveys at each of the re-occupied monuments.

The data included in this analysis consists of GPS measurements taken in 2004 for the Glenn County Subsidence Network survey, GPS measurements taken in 2008 for the Sacramento Valley Subsidence Network survey, and GPS measurements taken in 2015 for the two areas of concern in Glenn County.

**Methods**

All three surveys were performed at approximately the same time of year to obtain comparable results and to minimize potential influence of elastic changes to surface elevations that may occur over the course of a typical year due to soil expansion or compaction. For this analysis, we established a single monument in each of the two areas as “fixed.” All neighboring monuments were measured against the single fixed point for elevation change.

**Results**

The accuracy of GPS vertical elevation surveys are affected by errors or “noise.” This “noise” can influence survey results by as much as 0.13 to 0.16 feet (1.5 to 1.9 inches). When working with small changes that might not individually exceed this error margin, trends were looked at over time to help identify potential subsidence. For this survey, differences greater than 1.9 inches are identified as statistically significant, while differences greater than 1.5 inches, but less than 1.9 inches, are identified as potentially statistically significant.

The results of the surveys for this area are summarized below and shown in Table 1 and Figure 1 (enclosed).

West side of Glenn County, south of Orland

The previously reported ground surface elevation change in this area, between 2004 and 2008, indicated potentially statistically significant (greater than 1.5 inches, but less than 1.9 inches) and warranted further monitoring. The results from this year’s resurvey indicate that between 2004 and 2015 the area subsided a total of 3.24 inches. The greatest amount of change relative to the fixed monument Y380 was recorded at monument AGUI. The amount of change and the continuous decreasing ground surface trend since 2004 supports the conclusion that the area has continued to subside through March 2015. The amount of change measured at monuments AGUI and K852 is now great enough to be considered statistically significant (greater than 1.9 inches). Monument CHER has a measured 1.8 inches of subsidence, which is still within the potentially statistically significant range (greater than 1.5 inches, but less than 1.9 inches) and will need to be monitored in the future for any additional change. It is also noted that the amount and annual rate of change have increased significantly since 2008.

**Table 1: West side of Glenn County, south of Orland**

Monument	2004 GS Elevation (ft.) <sup>2</sup>	2008 GS Elevation (ft.) <sup>2</sup>	2015 GS Elevation (ft.) <sup>2</sup>	Diff 2004-2008 (in)	Per year 2004-2008 (in)	Diff 2008-2015 (in)	Per year 2008-2015 (in)	Total Diff 2004-2015 (in)	Per year 2004-2015 (in)
ORLA	267.58	267.58	267.58	0	0.00	0	0.00	0	0.00
K852	230.71	230.74	230.55	0.36	0.09	-2.28	-0.33	-1.92	-0.18
AGUI	274.45	274.39	274.18	-0.72	-0.18	-2.52	-0.36	-3.24	-0.30
CHER	230.11	230.15	229.96	0.48	0.12	-2.28	-0.33	-1.80	-0.16
BIGW	457.72	457.77	457.71	0.6	0.15	-0.72	-0.10	-0.12	-0.01
Y380 <sup>1</sup>	462.79	462.79	462.79	0	0.00	0	0.00	0	0.00

Notes:

GS Ground Surface

1 – Monument held fixed

2 – North American Vertical Datum of 1988 (NAVD88)

3 – Per year rates rounded to hundredths

Northeastern area of Glenn County, south of Hamilton City

The results reported in February 2015 indicated that subsidence in this area was statistically significant. However, when comparing 2004 with 2015, the area shows very little overall subsidence (Figure 1, enclosed). The greatest change in elevation is 1.32 inches at the point near the Sacramento River (WILD). The remaining points in the area have very little change in elevation.

In the earlier analysis, the comparison was done on the reported values which yielded different results than the current method holding a single monument fixed. The current method allowed us to focus on the areas with potential change by holding a point fixed and determining the point's elevation relative to the fixed point. This enabled us to process the three sets of GPS data consistently.

The assumption being made about holding monument HAMI fixed is that it has not moved horizontally or vertically. The remaining monuments are measured for change relative to the held monument. In the Hamilton City area resurvey, all points, including the monument held fixed, may have moved in similar rates, thus reporting small or no changes in ground surface elevation. This issue may be exposed when the survey of a larger area is done. This would indicate that the area impacted by inelastic subsidence is greater than the 2015 resurvey area.

It is recommended to continue monitoring the two areas detailed above. It is important to expand the areas and hold only those monuments that are expected to be fixed. These monuments can be found on the hard rock fringes of the Sacramento Valley. DWR recommends performing a full Sacramento River Valley GPS survey during the spring 2016.

A formal presentation of the results will be provided by DWR to the Glenn County Water Advisory Committee at a future date.

If you have any questions or need additional information, please contact me at (530) 528-7403, or Roy Hull, Engineering Geologist, at (530) 529-7337.

Sincerely,



Bill Ehorn, Acting Chief  
Regional Planning Branch

Enclosure

ec: (See attached list.)

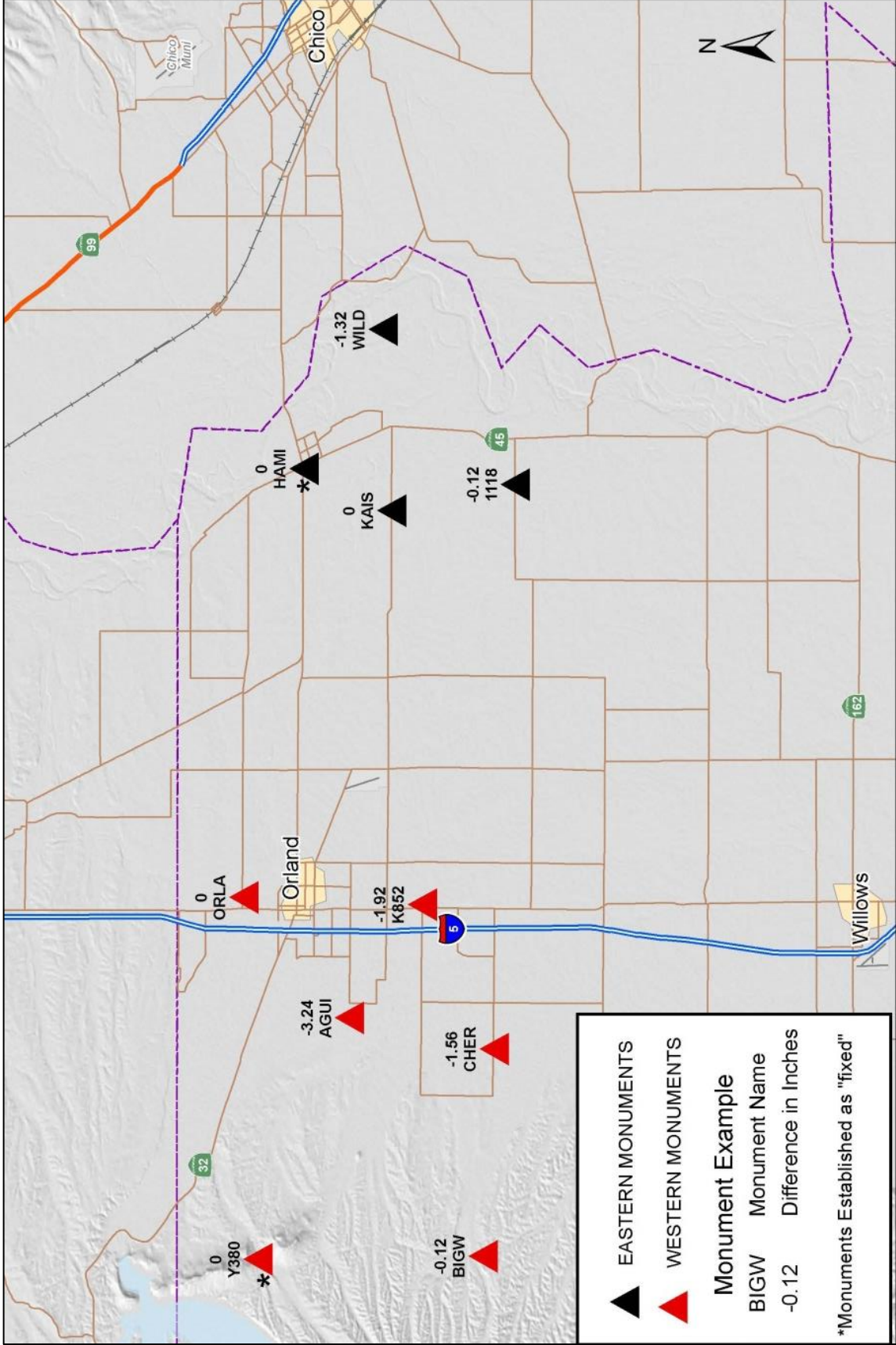
Ms. Lisa Hunter, Glenn County  
Water Resources Coordinator  
[LHunter@countyofglenn.net](mailto:LHunter@countyofglenn.net)

Mr. Paul Gosselin, Butte County  
Director, Water and Resource Conservation  
[PGosselin@buttecounty.net](mailto:PGosselin@buttecounty.net)

Ms. Mary Fahey, Colusa County  
Water Resources Coordinator  
[mfahey@countyofcolusa.com](mailto:mfahey@countyofcolusa.com)

Mr. Gary Antone, Tehama County  
Tehama County Public Works Director  
[gantone@tcpw.ca.gov](mailto:gantone@tcpw.ca.gov)

Mr. Ryan Teubert, Tehama County  
Tehama County Flood Control & Water Resource Manager  
[rteubert@tcpw.ca.gov](mailto:rteubert@tcpw.ca.gov)



GROUND ELEVATION CHANGE  
BETWEEN SPRING 2004 AND SPRING 2015

STATE OF CALIFORNIA  
CALIFORNIA NATURAL RESOURCES AGENCY  
DEPARTMENT OF WATER RESOURCES  
NORTHERN REGION

Map created by: Roy Hull & April Scholzen  
July 16, 2015

**FIGURE 1**



Miles



N



Monument Example

BIGW Monument Name

-0.12 Difference in Inches

\*Monuments Established as "fixed"

