

**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
Website: <http://www.glenncountywater.org/>

AGENDA

MEETING DATE: Tuesday, May 6, 2014
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
Vacant	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)
Vacant	At-Large Private Pumpers (Agricultural/Municipal/Industrial)
Darin Titus	At-Large Private Pumpers (Agricultural/Municipal/Industrial)
John Garner	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
Vacant	Glenn County Planning and Public Works
Kevin Backus	Glenn County Environmental Health
Ben Pennock	At-Large, Central Area
Jim Donnelly	Glenn County Department of Agriculture
Anjanette Shadley Martin	At-Large, East Area
Vacant	At-Large, North Area
Leigh McDaniel	Board of Supervisors (ex-officio)

II. APPROVAL OF MINUTES:

- A. Consider approval of the Minutes from the WAC meeting of February 11, 2014.
- B. Consider approval of the Minutes from the joint WAC/TAC meeting of July 8, 2013.
- C. Consider approval of the Minutes from the meeting of June 11, 2013.

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. Update on member vacancies/review applications received
 - a) Consider recommendation to Board of Supervisors for appointments to the WAC and TAC
- 2. Drought Conditions update
 - a) Water/Irrigation Districts
- 3. Spring 2014 Groundwater Level Measurements
 - a) Review groundwater level measurements and change maps
 - b) Consider recommendations from the TAC
- 4. Reports
 - a) TAC Report
 - b) Western Glenn County ad hoc committee draft report
 - i. Consider approval of the report
 - ii. Consider making recommendation that the Board of Supervisors adopt the report
 - iii. Consider approval of the "Action List"
- 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 has not been scheduled at this time.

Any documents related to agenda items that are made available to the Water Advisory Committee before the meeting shall be available for review by the public 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
May 6, 2014

II. APPROVAL OF MINUTES

- A. Consider approval of the Minutes from the WAC meeting of February 11, 2014.
- B. Consider approval of the Joint WAC/TAC July 8, 2013 Minutes.
- C. Consider approval of the June 11, 2013 Minutes.

GLENN COUNTY WATER ADVISORY COMMITTEE

Glenn County Department of Agriculture
720 North Colusa St., P.O. Box 351, Willows, CA 95988
Phone: (530) 934-6501 Fax: (530) 934-6503

E-mail: wateradv@countyofglenn.net Web Page: www.glenncountywater.org

MINUTES

Meeting Date: February 11, 2014

Time: 1:30 pm

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

Water Advisory Committee Members Present:

Larry Domenighini	Glenn County Farm Bureau
Ken Sullivan	Orland Water Users Association
Mike Alves	TC Canal Authority Districts
Mark Lohse	At-large Private Pumper
Bruce Roundy	Resource Conservation District
David Alves	Central River Irrigation Districts
Sandy Willard-Denn	GCID

Water Advisory Committee Members Absent:

Mike Vereschagin	TC Canal Authority Districts
Darin Titus	At-large Private Pumper
Ted Trimble	Western Canal Water District
John Garner	At-large Private Pumper

Technical Advisory Committee Members Present:

Roy Hull	Department of Water Resources
Lance Boyd	At-large, South Area
Kevin Backus	GC Environmental Health
Anjanette Shadley-Martin	At-large, East Area
Jim Donnelly	Glenn County Ag Commissioner
Ben Pennock	At-large, Central Area

Others in Attendance:

John D. Brooks	
Lisa Hunter	Glenn Co. Ag Dept.
Rich Warren	OES
Heather Hacking	Chico ER
Del Reimers	
David Toney	Glenn Co. Farm Bureau
Lisa Humphreys	Glenn Co. Farm Bureau
Will Martin	
John K. Viegas	BOS
Rosanna Marino	City of Willows, Cal Water
Matthew Gomes	Glenn Co. Planning & Public Works
Jeff Sutton	TCCA
Doug Ross	Valley Mirror
Pat Kennedy	GCID
Rick Massa	Ouwua
John Ayres	GEI Consultants
Brian Taylor	Glenn Co. Ag Dept.
Lester Messina	
Mike Billiou	

- I. **INTRODUCTIONS:** Those in attendance introduced themselves.
- II. **APPROVAL OF MINUTES:** Draft minutes from the December 10, 2013 meeting were reviewed and a motion to approve the minutes was initiated by Bruce Roundy; the motion was seconded by Sandy Willard Denn. The minutes were approved unanimously. Minutes for the previous meetings from July 8, 2014 and June 11, 2014 were not available.

III. AGENDA ITEMS:

A. **Public Comment:** None.

B. **Discussion & Action Items:**

1. **Election of Chairperson and Vice Chairperson, 2014/2015 term**

Bruce Roundy made a motion to retain the current Chairperson and Vice Chairperson (Larry Domenighini and Sandy Willard Denn, respectively); David Alves seconded the motion. The motion was unanimously approved.

2. **Update on member vacancies**

Lisa Hunter addressed the current vacancies on the Water Advisory Committee, which consist of one position for the East County Reclamation and Irrigation Districts and another representing At-Large Private Pumpers. Two positions on the TAC are also open, one for a member of Planning and Public Works and another for At-Large, North Area. Interested parties were encouraged to apply.

3. **Drought Conditions**

Both the county and the state as a whole recently declared a state of emergency due to the prolonged drought conditions. Both declarations were disseminated as attachments to the agenda packets. Discussion of the drought's impact on water supply and irrigation was incorporated into agenda item #4 (see below).

4. **Water/Irrigation Districts**

Pat Kennedy discussed the submission of a CEQA emergency exemption submitted by the Glenn-Colusa Irrigation District and the district's intention to sell groundwater to distressed orchard owners within the district. Approximately 250 acre-feet have been pumped. There were also some water transfers into GCID totaling approximately 1500 acre-feet. Rick Massa from the Orland Unit gave updates regarding the water levels and inflow rates of the Stony Gorge and East Park Reservoirs, both of which were well below capacity. Jeff Sutton from the Tehama-Colusa Canal Authority discussed the upcoming allocation announcement from the Bureau of Reclamation, which is predicted to be 0%, and the expectations that a large amount of annual crops in the region will not be planted in the upcoming year in response to the limited water supply. Others that provided updates include Anjanette Shadley Martin for WCWD, Lance Boyd for PCGID and PID, and Mike Alves for Glide and Kanawha.

5. **Reports**

a) TAC Report: There were no updates from the Technical Advisory Committee at this time.

b) Paso Robles Groundwater Basin –San Luis Obispo County: Brian Taylor summarized the groundwater supply issues currently being experienced by San Luis Obispo County and the county's efforts at mitigating the problem, in contrast to local groundwater issues and management strategies.

c) Western Glenn County Ad Hoc Committee Draft Report: A draft copy of the Ad Hoc Committee's report, which was delivered to the Board of Supervisors on Feb. 4th, was included in the agenda packets. A brief summary of the general topics was given by Larry Domenighini, which included discussion of modeling, cost and recharge studies, the need for surface water use to supplement groundwater use and increased coordination, outreach and education, a recapitulation of existing Basin Management Objectives and a description of the data collected thus far regarding the "area of concern" in the western portion of the county. Potential county governance options were also reviewed. Ideas were discussed including economics, coordination, funding mechanisms, well drilling moratorium complications and well permits, recharge studies, and groundwater and surface water modeling. Lisa Hunter requested comments on the draft report be sent to her.

6. Other Topics of Interest

An update was provided regarding an Abnormal Groundwater Level Report from 2012 and current well issues for the individual. It is anticipated that more Abnormal Groundwater Level Reports will be received this year.

An announcement was made at the end of the meeting that Term 91 restrictions have been lifted until March 15th.

C. Communications: None

D. Member Reports: None

The next WAC meeting was tentatively scheduled for June or July. The next TAC meeting has not been scheduled. The meeting was adjourned at 3:15 p.m.

DRAFT

GLENN COUNTY WATER ADVISORY COMMITTEE

Glenn County Department of Agriculture
720 North Colusa St., P.O. Box 351, Willows, CA 95988
Phone: (530) 934-6501 Fax: (530) 934-6503

E-mail: wateradv@countyofglenn.net Web Page: www.glenncountywater.org

MINUTES

Meeting Date: June 11, 2013

Time: 1:30 pm

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

Water Advisory Committee Members Present:

Mike Alves	KWD & GWD (TCCA)
Donnan Arbuckle	Resource Conservation District
Kelly Boyd	RD #1004 (East Co Rec & Irrigation Dist.)
Sandy Denn	Glenn Colusa Irrigation District
Larry Domenighini	Glenn County Farm Bureau
John Garner	At-Large Private Pumper
Ken Sullivan	Orland Unit Water Users Association
Ted Trimble	WCWD (East Co Rec & Irrigation District)
Mark Lohse	BOS District 5 Private Pumpers (At-Large PP)
Mike Vereschagin	Tehama Colusa Canal Authority District

Technical Advisory Committee Members Present:

Kevin Backus	Glenn Co. Health Dept.
Lance Boyd	South Area
Jim Donnelly	Glenn Co. Ag Dept.
Roy Hull	DWR
Anjanette Shadley Martin	WCWD (East Area)

Water Advisory Committee Members Absent:

David Alves	Central River Irrigation Districts
Bruce T. Roundy	City of Orland (At-Large Private Pumper)
Darin Titus	At-Large Private Pumper

Others in Attendance:

Tina Brothers	Glenn Co. Ag Dept.
Christina Buck	Butte DW&RC
Grant Davids	Davids Engineering
Lisa Hunter	Glenn Co. Ag Dept.
Eric Miller	MPM Engineering
Rick Massa	Ouwua
Doug Ross	Sac Valley Mirror

- I. INTRODUCTIONS: Those in attendance introduced themselves.

- II. APPROVAL OF MINUTES: The minutes for February 12, 2013 were approved as mailed.

- III. AGENDA ITEMS:
 - A. **Public Comment:** None.

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

1. **TAC Report**-Lisa mentioned the TAC met on May 28, 2013 and they went over a lot of the things the WAC is going to go over today. Lisa presented the recommendations from the TAC to the WAC is as follows:
 - a.) Spring groundwater levels-recommend that Larry Domenighini presents this item to the Glenn County Farm Bureau.
 - b.) Recommend the WAC/TAC begin outreach and education program in cooperation with the Glenn County Farm Bureau.
2. **Announcements**-
 - a.) Policies and Procedures Board of Supervisors Approval-The Glenn County Board of Supervisors approved the Policies and Procedures at the April 2, 2013 meeting.
 - b.) Glenn County Groundwater Reliability and Recharge Pilot Project Completion-The project is now complete and you can find the final report, newsletters and landowner monitoring guide on the WAC website at: www.glenncountywater.org
3. **Potential Water Transfer for 2013**-GCID and RD 1004 have submitted their proposals to transfer water out of the basin during the 2013 season from July to September. GCID has posted their environmental documents which can be found on their website at: www.gcid.net

The Reclamation District No. 1004 has posted their Petition for Change Involving Water Transfers on their website at:
www.waterboards.ca.gov/waterrights/waterissues/programs/applications/transferstonotices/index.shtml

4. **Spring Groundwater Levels**-Lisa presented the groundwater levels that were collected in March 2013. The data compiled show the BMO stage alerts. The results are provided in the meeting packet. DWR will be collecting more data in July 2013. Larry and Lisa will be presenting this data to Farm Bureau next month.
5. **Western Glenn County Water Level Declines**-Lisa put together a PowerPoint which showed the changes in groundwater flows, levels and water well development. Lisa mentioned the TAC has been discussing this issue a lot and it also ties into the TAC recommendation that was presented at the beginning of this meeting.

C. Communications: Lisa mentioned that she received a letter in February 2013 from Tony St. Amant regarding Conjunctive Water Management. Larry asked that it be emailed to the WAC.

D. Member Reports: John Garner mentioned that he participated in the Farm Bureau's Annual event at the Capital. The main topics were water and labor.

IV. NEXT MEETINGS:

The next WAC meeting will be Monday, July 8, 2013 at 1:30pm at GCID, 344 East Laurel Street, Willows, CA 95988.

The next TAC meeting will be Tuesday, June 25, 2013 at 1:30pm at the Glenn County Department of Agriculture, 720 N. Colusa Street, Willows, CA 95988.

Meeting adjourned at 2:45pm

Respectfully submitted by,
Tina Brothers

Glenn County Water Advisory Committee

May 6, 2014

Agenda Item B.1

Subject: Update of member vacancies/review applications received

Discussion:

The WAC currently has two vacancies, one representing the East County Reclamation and Irrigation Districts and one representing at-large private pumpers.

The TAC also has two vacancies, one representing the Glenn County Planning and Public Works and one representing the At-Large, North Area.

Three applications have been received (see attached).

Consider making a recommendation to the Board of Supervisors regarding the appointments to the WAC and TAC.



County of Glenn
APPOINTMENT APPLICATION

Clerk of the Board of Supervisors
 P.O. Box 391, 526 West Sycamore Street
 Willows, CA 95988
 (530) 934-6400 * Fax (530) 934-6419

Name of Commission/Committee/Board or Special District you are applying for: WATER ADVISORY COMMITTEE		Area of Representation: (if applicable) AT LARGE - NORTH
Name (Last, First, Middle) RABBIT KENNEDY H.		
Address (Number, Street, City, State, Zip Code) 25245 POST AVE		Telephone Home: 530 865 9302 Business:
Current occupation and employer: SELF - RETIRED WALNUT GROWER		
District Appointments: Do you reside within the District? No <input type="checkbox"/> Yes <input type="checkbox"/> Are you a registered voter within the District? No <input type="checkbox"/> Yes <input type="checkbox"/>		Commission/Board Appointments: If applicable, do you reside in the Supervisorial District in which you will represent? No <input type="checkbox"/> Yes <input type="checkbox"/> (Dist. #)
Volunteer work: CURRENTLY SERVE ON TAC FOR NSV JRWV, TEHAMA COUNTY BOARD OF DIRECTORS CAPAN LANGRISHES ASSN		
Are you presently serving on a County Commission/Committee/Board or Special District? If so, which one? SEE ABOVE		
Why do you want to be a member of this County Commission/Committee/Board or Special District? INTEREST IN WATER ALLOCATION IN STATE NORTHERN CALIFORNIA - DESIRE TO INCREASE STORAGE IN OUR AREA		
Briefly, what do you believe are the most important issues facing the Glenn County Community at this time, and how do you believe this County Commission/Committee/Board or Special District can play a role in addressing each issue? DEVELOP, ENHANCE GROUND WATER STORAGE IN OUR AREA BEYOND SITES AND DEVELOP RETENTION OF OUR RUN OFF - REGULATE OUR RESOURCES TO PROTECT NORTHERN CALIFORNIA		
Please specify any activities in which you are presently engaged or in which you plan to be engaged which might create a serious conflict of interest if you should be appointed to this County Commission/Committee/Board or Special District. ENCOURAGE LOCAL RETENTION OF OUR WATER RESOURCE EFFECTIVELY RELEASE WATER TO OTHER AREAS OF NEED WHEN AVAILABLE & ECONOMICALLY FEASIBLE.		

County of Glenn APPOINTMENT APPLICATION

Statement of qualifications: List any abilities, skills, licenses, certificates, specialized training, or interests you have which are applicable to this County Commission/Committee/Board or Special District.

INTEREST IN DEVELOPING CO-ORDINATED & EFFICIENT USE
OF OUR RESOURCES FOR OUR ECONOMIC & SOCIAL BENEFIT

(See Clerk of the Board for necessary qualifications specific to the Commission/Committee/Board or Special District you are applying for)

Certification:

I certify that the information contained in this application is true and correct. I authorize the verification of the information in this application.



Signature

2/11/14
Date

This application is provided to you by the Glenn County Clerk of the Board to assist you in providing background information to be considered by the Board of Supervisors when making appointments to various County Commissions/Committees/Boards and Special Districts. If you need additional space, please attach extra sheets. Upon review by the Board of Supervisors, appointments will be made as appropriate and you will be notified by letter. Thank you for your interest in serving the Glenn County community.

For Official Use Only:

District Appointments:

Committee Appointments:

Reside within District? No Yes In Supervisorial District? No Yes

Registered Voter within District? No Yes

Qualifications Verified by: Clerk Elections

Notes: _____



County of Glenn
APPOINTMENT APPLICATION

Clerk of the Board of Supervisors
 P.O. Box 391, 526 West Sycamore Street
 Willows, CA 95988
 (530) 934-6400 * Fax (530) 934-6419

Name of Commission/Committee/Board or Special District you are applying for: Water Advisory Technincal Advisory Committee	Area of Representation: (if applicable)									
Name (Last, First, Middle) Vlach, Robert, Jason										
Address (Number, Street, City, State, Zip Code) 132 North Enright Ave., Suite B, Willows, Ca, 95988	Telephone Home : (530) 934-4601x101 Business :									
Current occupation and employer: USDA Natural Resources Conservation Service District Conservationist, Glenn County NRCS Field Office										
<table style="width: 100%; border: none;"> <tr> <td style="text-align: center; border: none;"><u>District Appointments:</u></td> <td style="border: none;"></td> <td style="text-align: center; border: none;"><u>Commission/Board Appointments:</u></td> </tr> <tr> <td style="border: none;">Do you reside within the District?</td> <td style="border: none;">No <input type="checkbox"/> Yes <input checked="" type="checkbox"/></td> <td style="border: none;">If applicable, do you reside in the Supervisorial District in</td> </tr> <tr> <td style="border: none;">Are you a registered voter within the District?</td> <td style="border: none;">No <input type="checkbox"/> Yes <input checked="" type="checkbox"/></td> <td style="border: none;">which you will represent? No <input type="checkbox"/> Yes <input type="checkbox"/> (Dist. #)</td> </tr> </table>		<u>District Appointments:</u>		<u>Commission/Board Appointments:</u>	Do you reside within the District?	No <input type="checkbox"/> Yes <input checked="" type="checkbox"/>	If applicable, do you reside in the Supervisorial District in	Are you a registered voter within the District?	No <input type="checkbox"/> Yes <input checked="" type="checkbox"/>	which you will represent? No <input type="checkbox"/> Yes <input type="checkbox"/> (Dist. #)
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Are you a registered voter within the District?	No <input type="checkbox"/> Yes <input checked="" type="checkbox"/>	which you will represent? No <input type="checkbox"/> Yes <input type="checkbox"/> (Dist. #)								
Volunteer work: Glenn County Farm Bureau Director										
Are you presently serving on a County Commission/Committee/Board or Special District? If so, which one? No. N/A										
Why do you want to be a member of this County Commission/Committee/Board or Special District? I was contacted by Lisa Hunter, Water Advisory Coordinator regarding the TAC vaccancy.										
Briefly, what do you believe are the most important issues facing the Glenn County Community at this time, and how do you believe this County Commission/Committee/Board or Special District can play a role in addressing each issue?										
Please specify any activities in which you are presently engaged or in which you plan to be engaged which might create a serious conflict of interest if you should be appointed to this County Commission/Committee/Board or Special District.										

County of Glenn
APPOINTMENT APPLICATION

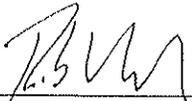
Statement of qualifications: List any abilities, skills, licenses, certificates, specialized training, or interests you have which are applicable to this County Commission/Committee/Board or Special District.

14 years working for the USDA NRCS, 8 in Glenn County as the District Conservationist, responsible for the oversight of technical and financial Farm Bill Programs. The NRCS provides technical assistance to farmers interested in addressing soil, water, plant, air, and wildlife resource concerns. I am a NRCS certified Planner.

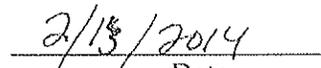
(See Clerk of the Board for necessary qualifications specific to the Commission/Committee/Board or Special District you are applying for)

Certification:

I certify that the information contained in this application is true and correct. I authorize the verification of the information in this application.



Signature



Date

This application is provided to you by the Glenn County Clerk of the Board to assist you in providing background information to be considered by the Board of Supervisors when making appointments to various County Commissions/Committees/Boards and Special Districts. If you need additional space, please attach extra sheets. Upon review by the Board of Supervisors, appointments will be made as appropriate and you will be notified by letter. Thank you for your interest in serving the Glenn County community.

For Official Use Only:

District Appointments:

Committee Appointments:

Reside within District? No Yes In Supervisorial District? No Yes

Registered Voter within District? No Yes

Qualifications Verified by: Clerk Elections

Notes: _____



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APPOINTMENT APPLICATION

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P.O. Box 391, 526 West Sycamore Street
Willows, CA 95988
(530) 934-6400 * Fax (530) 934-6419

Name of Commission/Committee/Board or Special District you are applying for: <i>Water Advisory Committee</i>	Area of Representation: (if applicable) <i>Technical Advisory Committee At-Large</i>
Name (Last, First, Middle) <i>Brooks, John P</i>	
Address (Number, Street, City, State, Zip Code) <i>642 Glenwood Lane Willows, CA 95988</i>	Telephone Home: <i>530-361-9170</i> Business:
Current occupation and employer: <i>Non-Applicable</i>	
<p><u>District Appointments:</u> Do you reside within the District? No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Are you a registered voter within the District? No <input type="checkbox"/> Yes <input checked="" type="checkbox"/></p> <p><u>Commission/Board Appointments:</u> If applicable, do you reside in the Supervisorial District in which you will represent? No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> (Dist. #)</p>	
Volunteer work: <i>Lions Club until 2012. Membership allowed to lapse in 2012. Kennydale Homeowners Association Washington U.S. Army Reserve</i>	
Are you presently serving on a County Commission/Committee/Board or Special District? If so, which one? <i>No</i>	
Why do you want to be a member of this County Commission/Committee/Board or Special District? <i>Currently the geologic problems and concerns are not being adequately addressed. Currently non-geologists or out-of-county are providing input.</i>	
Briefly, what do you believe are the most important issues facing the Glenn County Community at this time, and how do you believe this County Commission/Committee/Board or Special District can play a role in addressing each issue? <i>More water is being used than is available in the various sub-watersheds</i>	
Please specify any activities in which you are presently engaged or in which you plan to be engaged which might create a serious conflict of interest if you should be appointed to this County Commission/Committee/Board or Special District. <i>none</i>	

County of Glenn
APPOINTMENT APPLICATION

Statement of qualifications: List any abilities, skills, licenses, certificates, specialized training, or interests you have which are applicable to this County Commission/Committee/Board or Special District.

*Fellow of the American Association for the Advancement
Registered Geologist, Arkansas (lapsed)
Various U.S. Forest Service training dating from 1972 dealing with Geology
and hydrology. Retired (About 2010) Resume Available - Will be provided
under separate cover*

(See Clerk of the Board for necessary qualifications specific to the Commission/Committee/Board or Special District you are applying for)

Certification:

I certify that the information contained in this application is true and correct. I authorize the verification of the information in this application.

John P. Brooke
Signature

14 February 2017
Date

This application is provided to you by the Glenn County Clerk of the Board to assist you in providing background information to be considered by the Board of Supervisors when making appointments to various County Commissions/Committees/Boards and Special Districts. If you need additional space, please attach extra sheets. Upon review by the Board of Supervisors, appointments will be made as appropriate and you will be notified by letter. **Thank you for your interest in serving the Glenn County community.**

For Official Use Only:

District Appointments:

Committee Appointments:

Reside within District? No Yes In Supervisorial District? No Yes

Registered Voter within District? No Yes

Qualifications Verified by: Clerk Elections

Notes: _____

Glenn County Water Advisory Committee

May 6, 2014

Agenda Item B.2

Subject: Drought Conditions update

Discussion:

On April 25, 2014, the governor issued an Executive Order to proclaim a continued State of Emergency. See attached.

This will also provide an opportunity for water/irrigation districts and users to discuss their current challenges and outlooks for the upcoming year.

Executive Department

State of California

A PROCLAMATION OF A CONTINUED STATE OF EMERGENCY

WHEREAS on January 17, 2014, I proclaimed a State of Emergency to exist in the State of California due to severe drought conditions; and

WHEREAS state government has taken expedited actions as directed in that Proclamation to minimize harm from the drought; and

WHEREAS California's water supplies continue to be severely depleted despite a limited amount of rain and snowfall since January, with very limited snowpack in the Sierra Nevada mountains, decreased water levels in California's reservoirs, and reduced flows in the state's rivers; and

WHEREAS drought conditions have persisted for the last three years and the duration of this drought is unknown; and

WHEREAS the severe drought conditions continue to present urgent challenges: water shortages in communities across the state, greatly increased wildfire activity, diminished water for agricultural production, degraded habitat for many fish and wildlife species, threat of saltwater contamination of large fresh water supplies conveyed through the Sacramento-San Joaquin Bay Delta, and additional water scarcity if drought conditions continue into 2015; and

WHEREAS additional expedited actions are needed to reduce the harmful impacts from the drought as the state heads into several months of typically dry conditions; and

WHEREAS the magnitude of the severe drought conditions continues to present threats beyond the control of the services, personnel, equipment, and facilities of any single local government and require the combined forces of a mutual aid region or regions to combat; and

WHEREAS under the provisions of section 8558(b) of the Government Code, I find that conditions of extreme peril to the safety of persons and property continue to exist in California due to water shortage and drought conditions with which local authority is unable to cope; and

WHEREAS under the provisions of section 8571 of the Government Code, I find that strict compliance with the various statutes and regulations specified in this proclamation would prevent, hinder, or delay the mitigation of the effects of the drought.

NOW, THEREFORE, I, EDMUND G. BROWN JR., Governor of the State of California, in accordance with the authority vested in me by the Constitution and statutes of the State of California, including the Emergency Services Act and in particular Government Code section 8567, do hereby issue this Executive Order, effective immediately, to mitigate the effects of the drought conditions upon the people and property within the State of California.

IT IS HEREBY ORDERED THAT:

1. The orders and provisions contained in Proclamation No. 1-17-2014, dated January 17, 2014, remain in full force and effect except as modified herein.
2. The Department of Water Resources and the State Water Resources Control Board (Water Board) will immediately and expeditiously process requests to move water to areas of need, including requests involving voluntary water transfers, forbearance agreements, water exchanges, or other means. If necessary, the Department will request that the Water Board consider changes to water right permits to enable such voluntary movements of water.

3. Recognizing the tremendous importance of conserving water during this drought, all California residents should refrain from wasting water:
 - a. Avoid using water to clean sidewalks, driveways, parking lots and other hardscapes.
 - b. Turn off fountains and other decorative water features unless recycled or grey water is available.
 - c. Limit vehicle washing at home by patronizing local carwashes that use recycled water.
 - d. Limit outdoor watering of lawns and landscaping to no more than two times a week.

Recreational facilities, such as city parks and golf courses, and large institutional complexes, such as schools, business parks and campuses, should immediately implement water reduction plans to reduce the use of potable water for outdoor irrigation.

Commercial establishments such as hotel and restaurants should take steps to reduce water usage and increase public awareness of the drought through measures such as offering drinking water only upon request and providing customers with options to avoid daily washing of towels or sheets.

Professional sports facilities, such as basketball arenas, football, soccer, and baseball stadiums, and hockey rinks should reduce water usage and increase public awareness of the drought by reducing the use of potable water for outdoor irrigation and encouraging conservation by spectators.

The Water Board shall direct urban water suppliers that are not already implementing drought response plans to limit outdoor irrigation and other wasteful water practices such as those identified in this Executive Order. The Water Board will request by June 15 an update from urban water agencies on their actions to reduce water usage and the effectiveness of these efforts. The Water Board is directed to adopt emergency regulations as it deems necessary, pursuant to Water Code section 1058.5, to implement this directive.

Californians can learn more about conserving water from the Save Our Water campaign (SaveOurH2O.org).

4. Homeowners Associations (commonly known as HOAs) have reportedly fined or threatened to fine homeowners who comply with water conservation measures adopted by a public agency or private water company. To prevent this practice, pursuant to Government Code section 8567, I order that any provision of the governing document, architectural or landscaping guidelines, or policies of a common interest development will be void and unenforceable to the extent it has the effect of prohibiting compliance with the water-saving measures contained in this directive, or any conservation measure adopted by a public agency or private water company, any provision of Division 4, Part 5 (commencing with section 4000) of the Civil Code notwithstanding.
5. All state agencies that distribute funding for projects that impact water resources, including groundwater resources, will require recipients of future financial assistance to have appropriate conservation and efficiency programs in place.
6. The Department of Fish and Wildlife will immediately implement monitoring of winter-run Chinook salmon in the Sacramento River and its tributaries, as well as several runs of salmon and species of smelt in the Delta as described in the April 8, 2014 Drought Operations Plan.
7. The Department of Fish and Wildlife will implement projects that respond to drought conditions through habitat restoration and through water infrastructure projects on property owned or managed by the Department of Fish and Wildlife or the

Department of Water Resources for the benefit of fish and wildlife impacted by the drought.

8. The Department of Fish and Wildlife will work with other state and federal agencies and with landowners in priority watersheds to protect threatened and endangered species and species of special concern and maximize the beneficial uses of scarce water supplies, including employment of voluntary agreements to secure instream flows, relocation of members of those species, or through other measures.
9. The Department of Water Resources will expedite the consideration and, where appropriate, the implementation, of pump-back delivery of water through the State Water Project on behalf of water districts.
10. The Water Board will adopt statewide general waste discharge requirements to facilitate the use of treated wastewater that meets standards set by the Department of Public Health, in order to reduce demand on potable water supplies.
11. The Department of Water Resources will conduct intensive outreach and provide technical assistance to local agencies in order to increase groundwater monitoring in areas where the drought has significant impacts, and develop updated contour maps where new data becomes available in order to more accurately capture changing groundwater levels. The Department will provide a public update by November 30 that identifies groundwater basins with water shortages, details remaining gaps in groundwater monitoring, and updates its monitoring of land subsidence and agricultural land fallowing.
12. The California Department of Public Health, the Office of Emergency Services, and the Office of Planning and Research will assist local agencies that the Department of Public Health has identified as vulnerable to acute drinking water shortages in implementing solutions to those water shortages.
13. The Department of Water Resources and the Water Board, in coordination with other state agencies, will provide appropriate assistance to public agencies or private water companies in establishing temporary water supply connections to mitigate effects of the drought.
14. For the protection of health, safety, and the environment, CAL FIRE, the Office of Emergency Services, the Department of Water Resources, and the Department of Public Health, where appropriate, may enter into contracts and arrangements for the procurement of materials, goods, and services necessary to quickly mitigate the effects of the drought.
15. Pursuant to the drought legislation I signed into law on March 1, 2014, by July 1, 2014, the California Department of Food and Agriculture, in consultation with the Department of Water Resources and Water Board, will establish and implement a program to provide financial incentives to agricultural operations to invest in water irrigation treatment and distribution systems that reduce water and energy use, augment supply, and increase water and energy efficiency in agricultural applications.
16. To assist landowners meet their responsibilities for removing dead, dying and diseased trees and to help landowners clear other trees and plants close to structures that increase fire danger, certain noticing requirements are suspended for these activities. Specifically, the requirement that any person who conducts timber operations pursuant to the exemptions in Title California Code of Regulations sections 1038 (b) and (c) submit notices to CAL FIRE under the provisions of Title 14, California Code of Regulations, section 1038.2 is hereby suspended. Timber operations pursuant to sections 1038(b) and (c) may immediately commence operations upon submission of the required notice to CAL FIRE and without a copy of the Director's notice of acceptance at the operating site. All other provisions of these regulations will remain in effect.

17. The Water Board will adopt and implement emergency regulations pursuant to Water Code section 1058.5, as it deems necessary to prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water, to promote water recycling or water conservation, and to require curtailment of diversions when water is not available under the diverter's priority of right.
18. In order to ensure that equipment and services necessary for drought response can be procured quickly, the provisions of the Government Code and the Public Contract Code applicable to state contracts, including, but not limited to, advertising and competitive bidding requirements, are hereby suspended for directives 7 and 14. Approval by the Department of Finance is required prior to the execution of any contract entered into pursuant to these directives.
19. For several actions called for in this proclamation, environmental review required by the California Environmental Quality Act is suspended to allow these actions to take place as quickly as possible. Specifically, for actions taken by state agencies pursuant to directives 2, 3, 6–10, 13, 15, and 17, for all actions taken pursuant to directive 12 when the Office of Planning and Research concurs that local action is required, and for all necessary permits needed to implement these respective actions, Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division are hereby suspended. The entities implementing these directives will maintain on their websites a list of the activities or approvals for which these provisions are suspended. This suspension and that provided in paragraph 9 of the January 17, 2014 Proclamation will expire on December 31, 2014, except that actions started prior to that date shall not be subject to Division 13 for the time required to complete them.
20. For several actions called for in this proclamation, certain regulatory requirements of the Water Code are suspended to allow these actions to take place as quickly as possible. Specifically, for actions taken pursuant to directive 2, section 13247 of the Water Code is suspended. The 30-day comment period provided in section 1726(f) of the Water Code is also suspended for actions taken pursuant to directive 2, but the Water Board will provide for a 15-day comment period. For actions taken by state agencies pursuant to directives 6 and 7, Chapter 3 of Part 3 (commencing with section 85225) of the Water Code is suspended. The entities implementing these directives will maintain on their websites a list of the activities or approvals for which these provisions are suspended.

I FURTHER DIRECT that as soon as hereafter possible, this Proclamation shall be filed in the Office of the Secretary of State and that widespread publicity and notice be given to this Proclamation.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 25th day of April, 2014



Edmund G. Brown Jr.
EDMUND G. BROWN JR.
Governor of California

ATTEST:

Debra Bowen
DEBRA BOWEN
Secretary of State

Glenn County Water Advisory Committee

May 6, 2014

Agenda Item B.3

Subject: Spring 2014 Groundwater Level Measurements and Change Maps

Discussion:

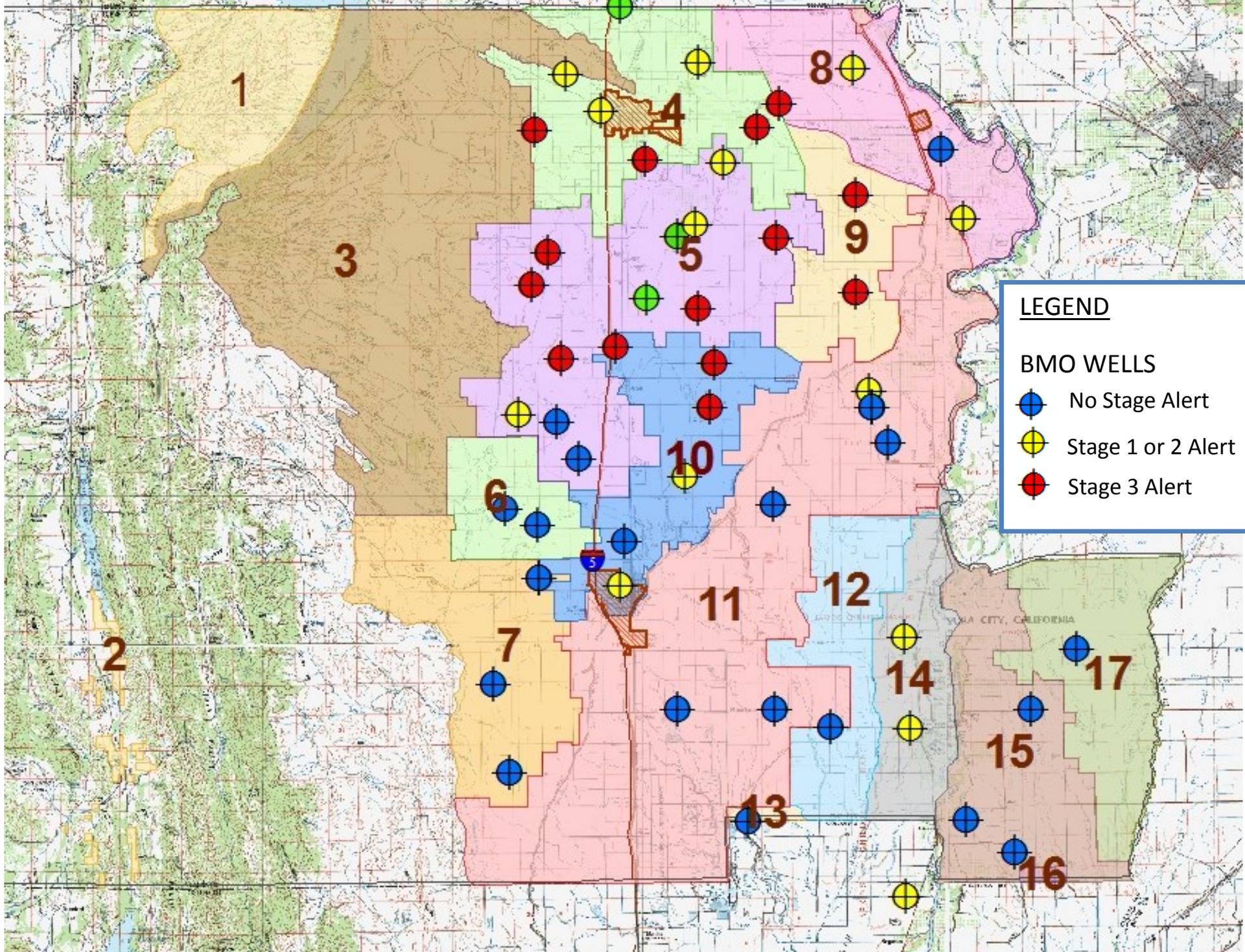
Spring groundwater level measurements were generally taken during the week of March 17-21, 2014. Groundwater level measurements will be presented as well as Basin Management Objectives compliance levels. Change maps provided by Department of Water Resources will also be presented.

Recommendations from the Technical Advisory Committee will also be discussed and considered.

GLENN COUNTY SPRING BMO'S STAGE ALERTS

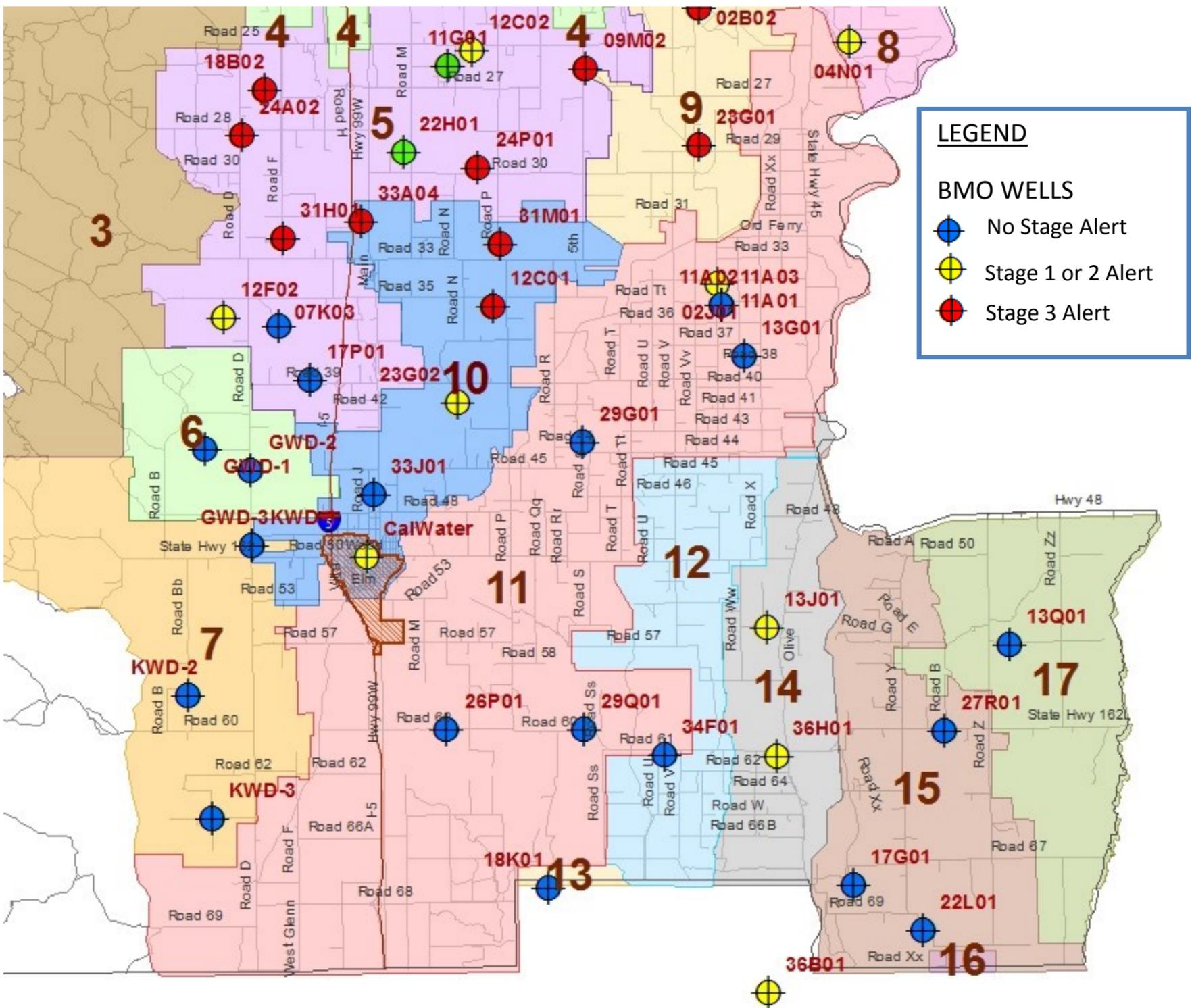
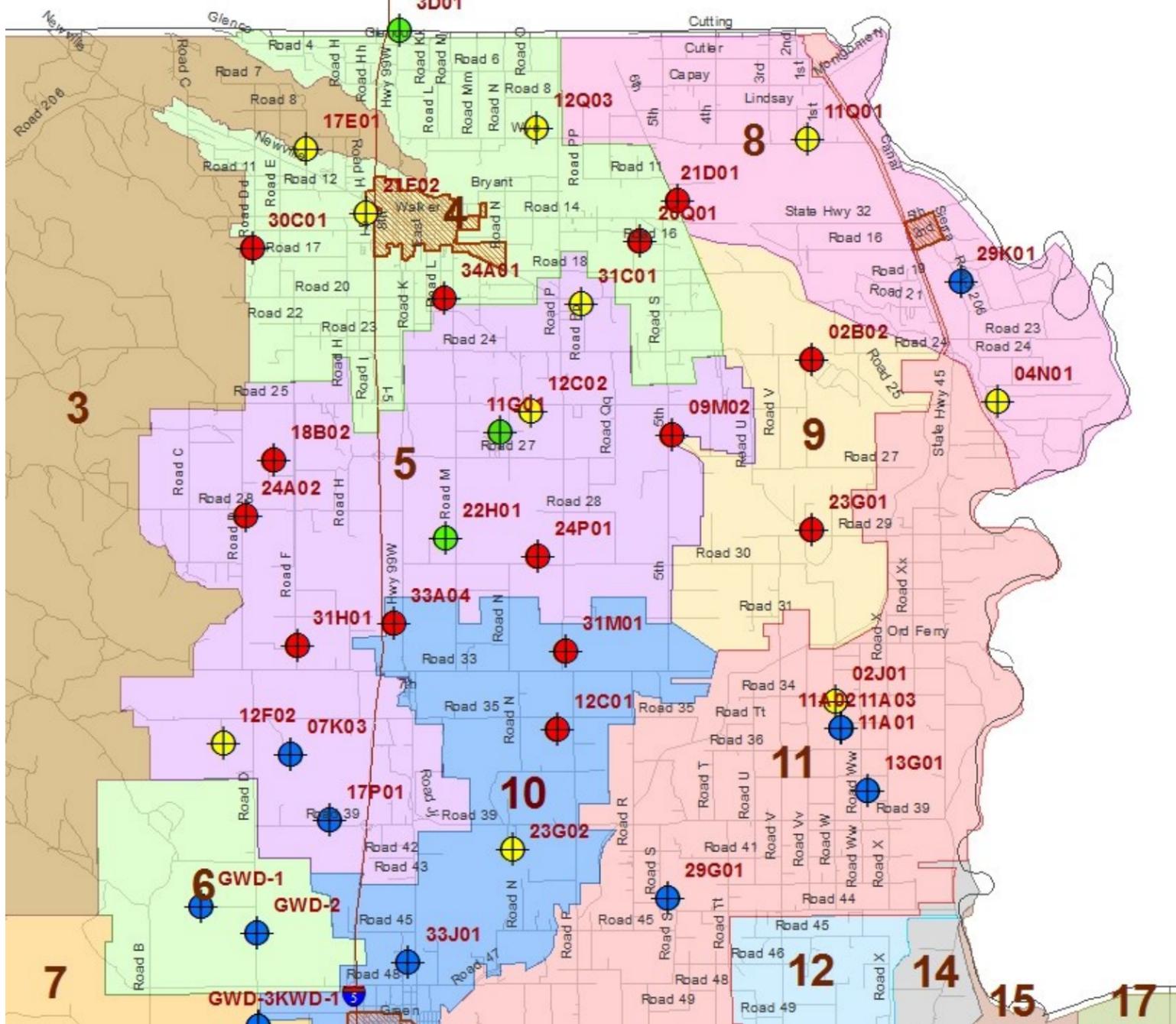
State Well Number	Subarea	Current Year RP to WS	Current RP Elevation	GS Elevation	2014 WSE	2013 WSE	2012 WSE	Stage 1 & 2 Alert	Stage 3 Alert	Difference from 2013 to 2014	Difference from 2012 to 2013
21N03W33A04M	10; BOS Dist 3	68.47	176.45	176.45	107.98	108.09	120.90	131	119.5	-0.1	-12.8
21N02W31M01M	10; BOS Dist 3	45.2	164.53	163.43	119.33	123.93	129.92	131.2	123.8	-4.6	-6.0
20N03W12C01M	10; BOS Dist 3	45.5	162.43	161.43	116.93	124.43	127.53	124.6	117	-7.5	-3.1
20N03W23G02M	10; BOS Dist 3	32.04	149.43	148.43	117.39	121.98	123.15	118	112	-4.6	-1.2
20N03W33J01M	10; BOS Dist 3	16.72	139.74	138.44	123.02	128.02	128.31	113.6	104.7	-5.0	-0.3
CALWater 002-01	10; BOS Dist 3	19	134	134	115	119.33	114	116.1	111.4	-4.3	5.3
21N02W02B02M	9; BOS Dist 5	37.83	163.01	162.56	125.18	136.57	137.01	136.1	130.23	-11.4	-0.4
21N02W09M02M	9; BOS Dist 5	50.5	181.92	181.42	131.42	140.82	143.52	142	132.8	-9.4	-2.7
21N02W23G01M	9; BOS Dist 5	37.8	154.9	154.4	117.1	NM	128.5	125.1	118.7	NA	NA
21N01W04N01M	8; East Corning Basin	23.08	137.68	137.38	114.6	117.38	NM	115.6	112.2	-2.8	NA
22N02W11Q01M	8; East Corning Basin	31.11	166.8	166.4	135.69	137.43	140.9	139.6	133.8	-1.7	-3.5
22N01W29K01M	8; East Corning Basin	20.59	144.88	144.38	124.29	126.52	126.88	119.9	112.7	-2.2	-0.4
21N03W31H01M	5; Orland/Artois	88.94	189.94	189.46	101	107.64	115.54	123.8	106.3	-6.6	-7.9
20N03W07K03M	5; Orland/Artois	48.73	168.46	168.46	119.73	124.06	128.160	118.5	99.9	-4.3	-4.1
20N03W17P01M	5; Orland/Artois	24.3	156.95	155.45	132.65	123.95	136.15	125	110.2	8.7	-12.2
20N04W12F02M	5; Orland/Artois	63.27	189.97	189.47	126.7	132.69	137.84	136.3	115.2	-6.0	-5.2
21N03W18B02M	5; Orland/Artois	141.26	224.48	224.08	83.22	NM	103.960	132.7	113.2	NA	NA
21N04W24A02M	5; Orland/Artois	NM	230.5	230	NM	NM	NM	125.1	107.4	NA	NA
21N04W24A03M	5; Orland/Artois	144.8	231.5	230	86.7	95.62	105.350	125.1	107.4	-8.9	-9.7
22N02W31C01M	5; Orland/Artois	30.72	206.43	205.43	175.71	183.42	181.73	180.1	171.7	-7.7	1.7
21N03W12C02M	5; Orland/Artois	42.8	206.44	204.44	163.64	170.84	170.04	171	163	-7.2	0.8
21N03W11G01M	5; Orland/Artois	NM	202.74	202.44	NM	166.62	166.64	170.1	161.5	NA	0.0
22N03W34A01M	5; Orland/Artois	22.95	235.95	235.45	213	220.84	217.74	217.8	213.5	-7.8	3.1
21N03W22H01M	5; Orland/Artois	NM	204.45	204.45	NM	145.55	149.55	149.9	139.1	NA	-4.0
21N02W09M02M	5; Orland/Artois	50.5	181.92	181.42	131.42	140.82	143.52	142	132.8	-9.4	-2.7
21N03W24P01M	5; Orland/Artois	59	181.08	180.43	122.08	129.58	134.28	135.8	123.7	-7.5	-4.7
22N03W03D01M	4; Orland Unit Water Users Association	NM	270.97	270.47	NM	190.78	193.37	188.7	182.5	NA	-2.6
22N03W17E01M	4; Orland Unit Water Users Association	19.7	284.99	285.49	265.29	270.19	265.39	267.2	263.7	-4.9	4.8
22N03W12Q03M	4; Orland Unit Water Users Association	43.2	232.94	232.44	189.74	196.35	197.29	195.1	188.3	-6.6	-0.9
22N03W21F02M	4; Orland Unit Water Users Association	30.06	265.47	264.47	235.41	243.32	238.37	238.7	234.5	-7.9	4.9
22N03W30C01M	4; Orland Unit Water Users Association	118.65	287.99	287.49	169.34	174.79	178.19	186.6	176.8	-5.4	-3.4
22N02W20Q01M	4; Orland Unit Water Users Association	26.91	201.93	201.43	175.02	186.28	184.71	183.8	179.2	-11.3	1.6
22N02W21D01M	4; Orland Unit Water Users Association	42	200.92	200.42	158.92	174.46	174.63	170.8	164.9	-15.5	-0.2
22N03W34A01M	4; Orland Unit Water Users Association	22.95	235.95	235.45	213	220.84	217.74	217.8	213.5	-7.8	3.1
19N02W29Q01M	11; Glenn-Colusa	2.81	92.42	92.42	89.61	88.27	89.67	85.1	75.1	1.3	-1.4
19N03W26P01M	11; Glenn-Colusa	4.6	103.43	100.43	98.83	100.43	100.47	94.7	89.2	-1.6	0.0
20N02W02J01M	11; Glenn-Colusa	12.01	127.9	127.4	115.89	117.48	120.78	115.9	112.4	-1.6	-3.3
20N02W11A01M	11; Glenn-Colusa	9.75	125.9	125.4	116.15	115.88	116.64	114.6	108	0.3	-0.8
20N02W11A02M	11; Glenn-Colusa	14.97	125.4	125.4	110.43	111.57	113.48	108.7	88.8	-1.1	-1.9
20N02W11A03M	11; Glenn-Colusa	20.42	125.9	125.4	105.48	104.39	107.31	96.5	72.7	1.1	-2.9
20N02W13G01M	11; Glenn-Colusa	5.08	115.8	115.4	110.72	110.06	112.82	107.5	105.6	0.7	-2.8

2014 Spring Groundwater Level — Basin Management Objectives



Spring 2014 Groundwater Levels

Basin Management Objectives



Technical Advisory Committee recommendations to the Water Advisory Committee—May 6, 2014

The Technical Advisory Committee (TAC) reviewed and discussed the Spring 2014 groundwater levels as described in County Code 20.03 at their April 23, 2014 meeting. Upon reviewing the continuing decline of groundwater levels in areas in the County, and an increase in the number of wells in a stage alert level, the TAC is requesting input from the Water Advisory Committee (WAC).

1. Is the WAC comfortable with the Basin Management Objectives as currently set?
2. Does the WAC prefer to direct the TAC in addressing the groundwater levels as set forth in the BMO document, or does the WAC prefer that the TAC make suggestions to the WAC?
3. What type of action does the WAC suggest?
4. Consider BMO revisions mentioned in the Ad Hoc Committee Report

It is the TAC's recommendation that these questions be answered to provide clear direction and input to address the areas that are currently (and some that have been) in stage alert levels.

Glenn County Water Advisory Committee

May 6, 2014

Agenda Item B.4.b

Subject: Western Glenn County ad hoc committee draft report

Discussion:

The ad hoc committee was formed at the July 8, 2013 WAC/TAC joint meeting. The committee met July 18 and November 7, 2013, and January 10, February 27, and April 17, 2014. The committee has discussed many topics that have been broken down into eight general categories in relation to the groundwater levels in western Glenn County. The general topics are as follows:

1. Groundwater/Surface Water Modeling and Water Budget
2. Cost Study Analysis
3. Recharge Activities
4. Surface Water Use
5. Coordination, Outreach, and Education
6. Mapping
7. Basin Management Objectives
8. County Governance Options

A draft report has been developed. A preliminary draft report was brought to the Board of Supervisors on February 4, 2014. A revised draft was also discussed at the Technical Advisory Committee meeting April 23, 2014.

The ad hoc committee will continue to meet and is requesting that the WAC:

1. Consider approval of the ad hoc committee report
2. Consider making a recommendation that the Board of Supervisors adopt the ad hoc committee report
3. Consider approval of the associated "Action List"

DRAFT

Glenn County Water Advisory Committee-Ad hoc Committee Report on Groundwater Level Declines in Western Glenn County

"It is the desire of the people of Glenn County that sufficient and affordable water of good quality be available on a sustainable basis to meet the needs of agricultural, industrial, recreational, environmental, residential and municipal users within the county, both now and in the future."—Goal of the Glenn County Water Advisory Committee

The ad hoc committee was formed at the July 8, 2013 Water Advisory Committee (WAC)/Technical Advisory Committee (TAC) joint meeting. The committee met July 18, 2013, November 7, 2013, January 10, 2014, February 27, 2014, and April 17, 2014. The purpose of this committee is to:

1. Research the declining groundwater levels observed on the west side of Glenn County.
2. Develop potential solutions including stabilizing and/or reversing the downward groundwater level trend in that area.
3. Develop a list of projects.
4. Determine potential funding opportunities.
5. Develop additional ideas to investigate.
6. Make recommendations to the WAC.

It is the intention that the committee will develop an "Action List" to present to the Water Advisory Committee. The committee's expectation is to develop potential solutions, actions, and additional ideas to investigate that will help maintain a reliable water source for the people in Glenn County (County).

The committee has discussed many topics that have been broken down into eight general categories in relation to the groundwater levels in western Glenn County. The general topics are as follows:

1. Groundwater/Surface Water Modeling and Water Budget
2. Cost Study Analysis
3. Recharge Activities
4. Surface Water Use
5. Coordination, Outreach, and Education
6. Mapping
7. Basin Management Objectives
8. County Governance Options

Recommendations and work completed by the committee under these general topics are discussed below.

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Modeling and Water Budget

Use of groundwater and surface water modeling is suggested for Glenn County. It would also be reasonable to include Tehama and/or Colusa Counties if funding is available due to the similarities in hydrology and location. An end result of the modeling effort would be a county-wide water budget.

It is this committee's opinion that surface and groundwater modeling that is coupled with other types of field monitoring is one element of a cost-effective approach to managing water supplies in Glenn County. It is the recommendation of this committee that the WAC and TAC seek funding for this item. While funding is being sought, the committees should research and investigate the types of models available, the extent of field calibration that has already been completed, and the appropriateness of their application to Glenn County and the surrounding northern Sacramento Valley area. A summary report should be encouraged. In addition, the committees must determine the criteria to be used and what questions the model should seek to answer (e.g. best places for recharge, water flow, sustainability at current use). The ultimate goal of modeling would be to establish a water budget in Glenn County in order to make more informed management decisions based upon good science. This should be considered a foundational item.

Cost Study Analysis

A cost study analysis to determine the cost of groundwater use versus the cost of surface water use would help understand incentives and constraints to improving coordinated use of surface and groundwater resources. This would entail total costs of groundwater use including fixed capital costs and variable operating costs. Capital costs would include the cost of drilling, well construction, well development, power transmission costs, and costs for the pumping plant. Variable operating costs would include energy costs giving consideration to Time of Use (TOU) rates for electric motors and alternative fuels for engines, maintenance, and filtration. In a similar way, total costs of surface water will be evaluated to include operation, maintenance, wheeling charges, and water charges. Additional costs of filtration and treatment so water is of suitable quality for use in drip and microsprinkler irrigation will be included.

It is the recommendation of this committee to further improve the concept of this study and develop a plan to implement the study. Funding options should also be evaluated. Statewide specialists from University of California should be engaged in the development and execution of this study with Allan Fulton, TAC representative for the UC Cooperative Extension, being the lead for the TAC. The cost study would be designed upfront with direction from the TAC so that it would produce a cost range recognizing that each area would be different based on a variety of inputs such as groundwater levels, desired pumping capacity, well and pumping plant design, etc. A preliminary estimate of groundwater costs is \$60-120 per acre-foot which would be confirmed and further refined from this study.

Previous cost studies should also be researched in conjunction with this project such as the study used for the cost analysis presented in the Department of Water Resources, California Water Plan.

DRAFT

Recharge Activities

The committee recommends continued investigation of potential recharge activities including in-lieu recharge, active recharge, and detention basins. It is this committee's opinion that active or in-lieu recharge with surface water is a critical piece of stabilizing groundwater levels and improving the overall water supply reliability in the area of concern. If successful, it could lessen the need for some of the measures described in the "County Governance Options".

A summary report of previous local studies should be developed. This report would include studies by the Colusa Basin Drainage District, the WAC's Stony Creek Pulse Flow study, the Stony Creek Fan Project Recharge study that was done by GCID, OAWD, AND OUWUA, and others. Areas summarized would include Wilson Creek, Walker Creek, gravel pits, ponding areas, and Stony Creek. Funding opportunities for project implementation would be researched.

New potential studies and sites should also be evaluated and funding researched. This would also include incorporating the possible reoperation of the T-C project to potentially make more water available for recharge. This would require coordination with water districts and water users in the areas being researched. In addition, naturally occurring groundwater recharge areas in the County should be identified and steps taken to protect them from future threats.

Surface Water Use

A fundamental objective is to use all available surface water supplies for beneficial uses within our area. By doing this, there is potential to lessen demand on groundwater during wet and normal hydrologic years and reserve groundwater for when surface water is critically short in supply. Although this may have a higher up-front cost to the water users, it will help ensure long-term sustainability of the groundwater supplies. The committee recommends continuing to investigate the ways in which all the available supplies can be utilized in an efficient manner. This includes a vast amount of outreach and coordination with both districts and landowners, which is also included in the outreach section.

Many of these tasks include coordination and cooperation with other agencies, water districts, and water managers. This could include inter-district transfers locally within the basin, potential transfer from a district to local groundwater-dependent landowners outside of the district, possible expansion of a current water district, or formation of a new district.

A list of possible water sources should be developed. It could include Orland-Unit Water Users, Orland-Artois Water District, Glenn-Colusa Irrigation District, regional or out-of-area suppliers, and others. Types of water must also be considered such as Central Valley Project contract water, base supplies, winter water, etc. Obstacles should be researched and noted as well. This could include water availability, infrastructure capacity, legal and political hurdles including state-wide actions, environmental interests, cost, district policies, timing, as well as others. A list of water uses (irrigation, domestic, recharge, etc.) should accompany these items as well. A report detailing these items is recommended.

DRAFT

One example of these types of surface water use and recharge activities was the Glenn County Groundwater Reliability and Recharge Pilot Project. Developed as a response to public concern, the County applied for and obtained a grant to investigate the opportunity for in-lieu recharge in the groundwater dependent area in the Capay region in North-eastern Glenn County. This study investigated the potential to purchase surface water to irrigate the area's crops leaving the groundwater available for years in which the surface water was not available. This would create a more reliable water system that could use both surface water and groundwater as needed. The end result indicated that it is not currently feasible to move forward with the project due to cost, but now there is a plan that can be built upon in the future if some hurdles are minimized or removed to bring the cost down. It also provided an excellent opportunity for outreach in that area.

Coordination, Outreach, and Education

It is essential for water management throughout the County to include a robust coordination, outreach, and education program. Partnerships need to be developed and maintained for the ultimate good of the citizens in this County. These partnerships should be considered a long-term investment in the resources as the partnerships created should be maintained indefinitely. It is recommended that a coordination, outreach, and education program be formulated and implemented.

A list of potential partners should be developed including state agencies, local agencies, regional partners, and potentially other counties with similar resources and challenges. Examples are the Glenn County Farm Bureau, the Cities of Willows and Orland, local and regional water districts, managers, and users, the general public, the Glenn County Resource Conservation District, neighboring counties, the University of California and other academia, the California Public Utilities Commission (CPUC), the U.S. Bureau of Reclamation, the USDA's Natural Resource Conservation Service, and others. This could provide for increased coordination in a multi-faceted approach to locally managing our precious water resources. The knowledge base and understanding between the groups would grow and also provide an increased level of outreach.

In addition to creating a list of partners, it should be considered fundamental to provide more information and ask for increased participation from our partners. This would also include more informational reports given by the WAC to groups such as the Glenn County Board of Supervisors, local City Councils, Farm Bureau, and other interested groups. It would also include creating more outreach materials in the form of articles in existing newsletters, such as Farm Bureau newsletters, and local newspapers. Additionally, the WAC website should also be updated on a regular basis. Examples of some topics could include efficiency versus conservation, encouraging surface water use to the extent possible in order to reserve groundwater use in areas with surface water availability for times in which surface water is not available, and the WAC and its role and the public's ability to participate.

Some additional areas of coordination include working with the University of California to develop potential studies that would benefit the management of water resources in the County. An example of a potential study is discussed previously under the Cost Study Analysis section.

DRAFT

Outreach to the groundwater-dependent, private pumper areas should include information regarding protection of the groundwater, coordination throughout the area and the County, potential district formation or other formal organization, the idea of a water users' cooperative in which there could be a voluntary cooperative pumping schedule to minimize the interference from one well to another, and other ideas as they become relevant.

It may become necessary to coordinate with California's Public Utilities Commission (CPUC) regarding "time of use" incentives and the unintended consequences it has on other natural resources. Due to people generally being conscious of spending, they tend to pump their water when the rates are less expensive. Because everyone tends to pump at the same time, it seems to create a regional cone of depression causing some wells to operate inefficiently or cause them to dewater for a period of time. It also increases pumping costs since the water table is lowered at those times. Perhaps coordinating with the CPUC would lessen the impacts of the "time of use" issues.

Mapping

This section will address the importance of creating resource mapping. It is essential to have the ability to manage the County, area by area, depending on the particular needs of that area recognizing that each is unique. One task the committee completed was a draft map of the County indicating areas that have reached historic lows in groundwater levels. It is the recommendation of this committee that mapping of wells and associated data continue and expand. The following will summarize the efforts that have taken place so far.

Data in reference to groundwater levels has been collected from both private and dedicated monitoring wells located within Glenn County, in some cases dating as far back as the 1920's. The lowest levels in these wells were most frequently associated with measurements from the 1976-77 monitoring period, which coincided with one of the more severe droughts in California's history. In the years following the 76-77 drought, groundwater levels often approached these historic lows but rarely fell below them. However, recent (2012-13) data indicate levels in many wells have declined below those historic thresholds and are now at the lowest levels observed since monitoring began. It is important to note that the period of record for each well is different and not all wells include the previous drought years. Some of the newer monitoring wells may have less than ten years of data.

Although these declining water levels have been observed to some extent throughout the county, the effect seems to be somewhat regionalized, with the highest density of low-level wells concentrated in the Orland and Artois areas. This clustering of low-level wells has led to the region being recognized as an "area of concern" that will be of particular interest for monitoring, and potential efficiency and management strategies. To more fully assess the extent and severity of the issue, a preliminary review of available data concerning the area was conducted.

The area, as defined for the preliminary review, contains most of the area south of Orland and west of Road M, extending as far west as Road B, as far north as Wyo Road, and as far south as Road 48, with its southeastern portion between Roads 27 and 45 extending as far east as Road T (a map is included in the

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attachments). These borders are not presented as conclusive, but are intended to encompass most of the affected area based on the initial review of the available well data. The County's well database is a combined effort of the Department of Water Resources (DWR) well completion reports and County well drilling permit information. The database shows over 1000 total wells in the area, mostly domestic or irrigation wells, and the most common depth being 100-200 feet.

Readily available monitoring data obtained through DWR's California Statewide Groundwater Elevation Monitoring (CASGEM) is available for 100 wells, and of those 100, 21 still show their lowest levels as occurring in 1977, while 21 had an all-time low water surface elevation level in 2013, and an additional 15 wells reached their lowest point in 2009-2012. Therefore, one out of every five monitored wells in the area was at its lowest-ever recorded level in 2013, and one out of every three wells monitored in the area was at its lowest-ever recorded level between 2009 and 2013. Decade-by-decade comparisons using this data are problematic due to inconsistencies in monitoring records, depth, well design and timing. The data suggests that the area identified is suffering from a regional depression in groundwater levels.

This scenario is not unexpected given the information provided by large-scale groundwater monitoring programs already underway within the state. Given the increased demand in the area, a general decline in groundwater levels in the absence of precipitation has been anticipated. However, area-specific information detailing the effects of the current water shortage on a regional or even individual level will identify the areas of greatest concern, and will be useful in developing and promoting local management strategies. It is the recommendation of this committee to produce a more thorough summary of available data and incorporate that information into a comprehensive and ongoing discussion of water resources in the county.

Basin Management Objectives

This section discusses the Basin Management Objectives (BMOs) set forth in Glenn County Ordinance 1237 adopted in 2012, which replaces Ordinance 1115 adopted in 2000. This ordinance is the Glenn County Groundwater Management Plan and stands as the backbone to managing our groundwater. It is essential to continually review and update the plan as new information becomes available and new or unusual situations arise.

It is the recommendation of this committee that the WAC direct the TAC to review the current BMOs and update if necessary. It will be important for these levels to accurately represent the wells and conditions in the area to best manage the groundwater.

New ways to view water management may become necessary to keep the aquifers of Glenn County healthy and sustainable. Some ideas to further investigate while reviewing the BMOs could be:

- a. Are the current BMO groundwater levels set at the appropriate levels?
- b. How do we distinguish different aquifer zones (shallow, intermediate, deep)?
- c. Do we need BMO zones?

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- d. Should the BMOs be based on the current political boundaries or is it time to manage the groundwater more cooperatively with neighboring entities and “blur” the BMO lines to better reflect the conditions of the aquifer in that region?
- e. Are the wells selected for BMOs representative of the area? Do they provide useful data?
- f. Should only dedicated monitoring wells be used rather than including irrigation and domestic wells?
- g. Consider using the cumulative frequency curve and well data to analyze the level of risk associated with BMO levels.

County Governance Options

The County has many potential opportunities to help ensure long-term sustainability of groundwater, the encouragement of using groundwater and surface water most efficiently, and has the ability to reach out broadly to the public and other entities. This committee chose to look at many potential government actions that can be taken if it becomes necessary. It is the committee’s desire that these ideas be thoroughly vetted at the WAC and the Board of Supervisors as well as through outreach to others while being more thoroughly developed.

County Efforts in Other Regions

San Luis Obispo County is currently dealing with severely declining groundwater levels in the Paso Robles Groundwater basin. A summary of the challenges and the actions occurring in that county were presented to the committee. It is this committee’s recommendation that the actions occurring in other counties be considered and evaluated informally while evaluating Glenn County’s position on groundwater management.

San Luis Obispo’s management strategy for the Paso Robles groundwater basin presents an interesting case study for other primarily agricultural counties contemplating emergency water conservation measures. The basin is an 800 square mile area in San Luis Obispo County, which provides the sole source of water for a significant portion of the county’s residents and an estimated 40% of its agricultural production. Monitoring data, modeling studies, and numerous reports of dry wells in the area all indicate that the basin is being drawn down beyond its ability to recharge. Faced with the prospect of a continually diminishing groundwater supply and no other major water source, the county was compelled to initiate a number of aggressive conservation and management strategies.

A Blue Ribbon Steering Committee, consisting of municipal water companies and governmental agencies along with several public organizations and landowner groups, was formed in 2011 to develop and implement the county’s basin management plan. As part of the development process, the committee collected and reviewed a number of proposed solutions, ranging from immediate emergency measures to long-term solutions, determining the best submissions by means of a weighted point system. The committee released a list of its top ranked solutions in August 2013 (see attachment).

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The county also adopted an urgency ordinance in August 2013. The ordinance is intended to minimize additional water use from the basin by prohibiting new or expanded crop production or the conversion of dry farmland into irrigated crop production, requiring all new wells to be metered, and requiring new development to be water neutral (via offset clearances issued by the department of planning). This ordinance provides for the immediate implementation of some of the adopted solutions, while others (such as the creation of a water district) are being phased in incrementally, with a large emphasis on education, outreach, and involvement of all affected parties.

While the effectiveness of these management efforts will not be apparent for some time, the process itself may be informative for other counties anticipating similar water issues. In the absence of existing emergency measures, outreach efforts and organizational structures, counties may find themselves inadequately prepared for severe water shortages. But pre-emptive discussion of such strategies, referencing the ones established in other areas but modified to reflect local needs, may minimize the damages if such shortages were to occur locally, and allow water use apportionment to occur cooperatively though defined parameters rather than through litigation.

Glenn County Options

While considering actions being taken in other regions, it is imperative that Glenn County actively engage in managing the resources that exist within our County. This is a cooperative effort between other water managers, such as water districts and municipalities, as well as private well owners. It is important that all involved are aware of the value of our resources and do what we can to protect them. While some of these ideas will not be popular and will be controversial, to benefit the citizens of this County, an open discussion should ensue. The ideas presented in this section must be further developed and vetted through the WAC, the Glenn County Board of Supervisors, and the public.

It is the intent of this committee to present a wide variety of potential ideas and solutions to the issues of declining groundwater levels. Not all may be feasible in the short-term, but should be considered to more fully discuss the options. Generally these options include changes to the County Ordinance governing water management, changes in well permitting, updating the water element in the Glenn County's General Plan, and addition of fees for management, coordination, and programs, or programs that could potentially be implemented. In reality, it should be a combination of the above listed factors to most effectively manage the resource.

The current County ordinance or a separate ordinance could be developed to include additional management strategies and clarify and update the adaptive management procedures. The updated ordinance could also include "emergency measures" similar to those used in San Luis Obispo County. It may become essential to stop using additional groundwater resources until some potential solutions can be implemented. This could potentially include a moratorium on new wells drilled with specific exemptions.

In conjunction with potential ordinance actions, well drilling permits issued by the Glenn County Environmental Health Department should be updated to include more information and potentially more requirements. Additional information or requirements that should be collected through permitting

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could include pumping test data, water quality testing, including testing for saline water intrusion, whether the well is a replacement well or new, and potential additional requirements if drilling is occurring in an area of concern or a BMO area that is in a Stage Alert status. The permits should also include an updated mapping interface which builds upon the current mapping that the County has already developed. This would provide for more easily collected and accurate data.

Additional possible revisions in an updated well drilling permit in areas of concern could include such things as requiring meters on new wells, with data being submitted to the County, higher fees for monitoring, studying, and oversight of areas with groundwater decline and sustainability of water throughout the County, restrictions on well locations (well spacing), requiring mitigation plans, and/or additional monitoring requirements. It is also suggested to consider types of use such as domestic wells versus production wells when determining potential requirements for each.

In addition to the updated ordinance and well permitting requirements, it would be beneficial to update the water element in Glenn County's General Plan. This would allow for greater coordination between land use decisions and water resource decisions, which is essential to Glenn County's economy. A stronger water element coupled with the additional changes mentioned would allow for a more robust analysis of water resources and developing responsibly while protecting the current users of groundwater.

Generating local revenues to support local water resource management is a concern. Financial resources are necessary to support real-time monitoring and reporting of water resource conditions. Currently, Glenn County is under-funded to support the level of water resource management that is in the interest of the county as a whole. Potential fees for water management should be considered. It is crucial to the well-being of this County to provide funding to support the management of water county-wide. Fees could potentially include a county-wide water assessment for Water Protection per parcel, fees based on public benefit in areas of concern, revisit the water transfer fees in the Export Water Transfer Guidelines, in addition to well drilling permit fees. These ideas would need to be vetted more fully to determine the potential for these or other fee types to be implemented.

Monies collected through these venues should be used to fund a water coordinating department whose responsibilities would include data collection and management, implementation of the Groundwater Management Plan, and coordination of water programs. Some of these programs are state mandated, while others may be voluntary.

One potential program that could be implemented include the development of a mapping based Local Groundwater Users Program (Cooperative) for pumpers to voluntarily coordinate their pumping with others in the area. Another might be to create a program to help water users control and coordinate their costs (energy costs) associated with water use, for both surface water and groundwater. This could include projects to help fund alternative energy such as solar projects, or surface water filtration projects for micro and drip irrigation. Another potential program could be outreach and organizational efforts in groundwater dependent areas. This could initiate either informal or formal organization, such

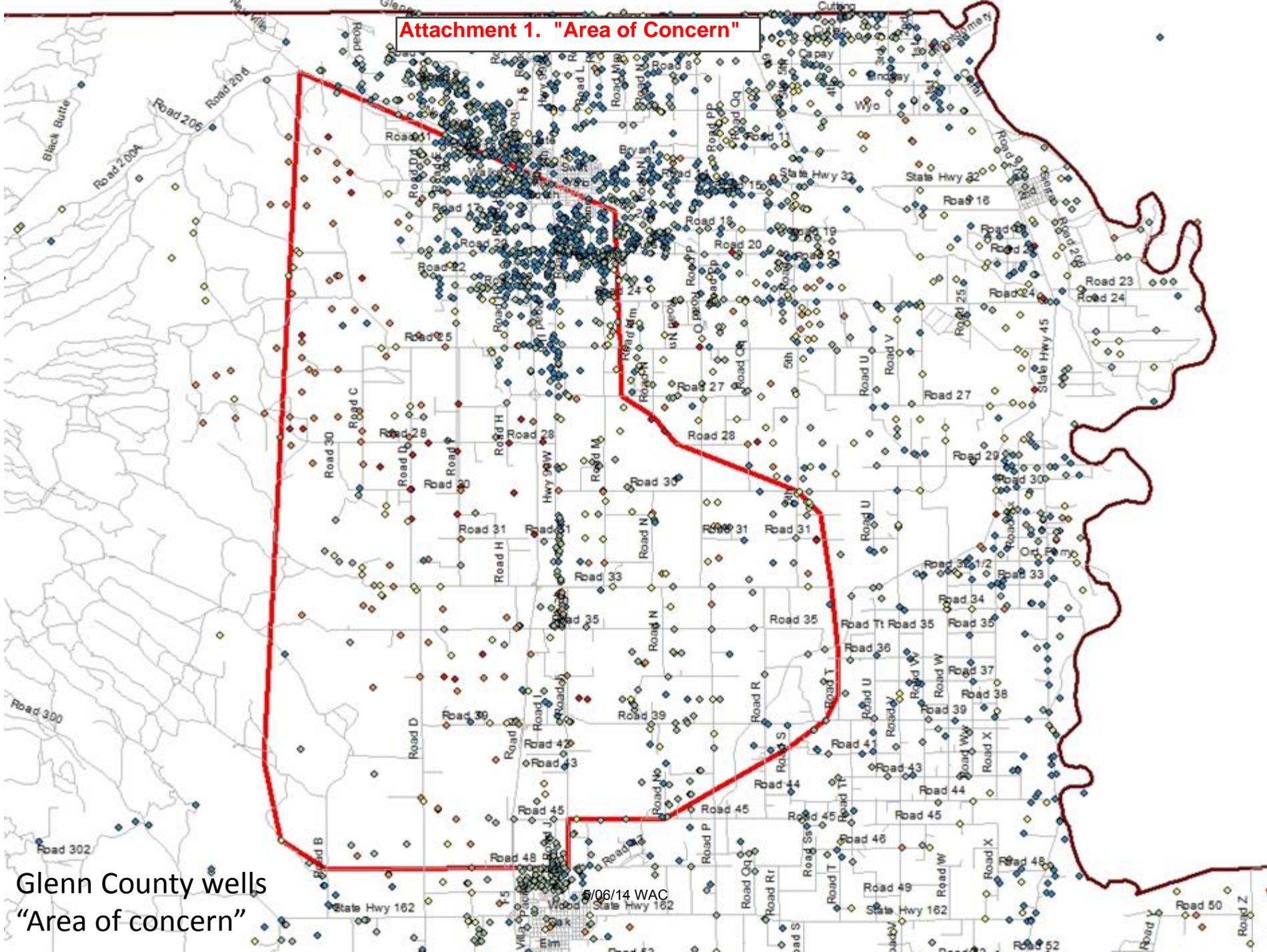
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as a district, by the group. This would give groundwater users a collective voice for their region allowing for more local control.

Summary

It is the hope of this committee that the ideas discussed in this report be a beginning point for an open discussion and potential updating of the management of water within Glenn County, especially in the western area exhibiting signs of groundwater decline. This report summarized several general categories and will be used to create an “Action List” through the listed recommendations. Many of the ideas must be further developed and will need to be prioritized. Most have restrictions on implementation due to funding constraints. The committee introduced the draft report to the Water Advisory Committee on February 11, 2014, and the Technical Advisory Committee on April 23, 2014. It is the intent of this committee to present a final draft of this report to the Water Advisory Committee at the May 6, 2014 special meeting for additional discussion and potential approval.

Attachment 1. "Area of Concern"



Glenn County wells
"Area of concern"

**Attachment 2. Paso Robles Groundwater Basin--
Blue Ribbon Steering Committee Top Ranked Solutions**

**Paso Robles Groundwater Basin Management Plan
Blue Ribbon Steering Committee
Top Ranked Solutions
August 21, 2013**

Solution Number	Solution Category	Water User	Solution
Emergency Solutions			
E-1	Management	Rural Residential	Provide a potable water source for use in trucking water to homes for emergency purposes.
E-2	Management	All areas	Create a structure to achieve an equitable allocation of safe yield for all Basin water users.
Short Term Solutions (Implementation in 1 to 5 years)			
ST-1	Management	All areas	Create a Basin-wide groundwater management structure(s). Create water districts or other management authorities to convey water to agricultural users and create small community systems for rural communities.
ST-2	Conservation	All areas	Identify, implement, and make available appropriate Best Management Practices.
ST-3	Management	Rural Residential, Agriculture and Rural Non-Domestic	Encourage projects that detain or slow runoff to recharge the Basin.
ST-4	Conservation	Rural Residential and Rural Non-Domestic	Maximize water use efficiency as appropriate to achieve water use reduction.
ST-5	Conservation	All areas	Meter all new and replacement wells and measure all well outputs and report.
ST-6	Conservation	Urban - Templeton and San Miguel	Participate in California Urban Water Conservation Council policies and practices as appropriate.
ST-7	Conservation	Rural Residential, Agriculture and Rural Non-Domestic	Conduct regular outreach activities.
ST-8	Management	Rural Residential, Agriculture and Rural Non-Domestic	Require new development to be water neutral.
ST-9	Management	All areas	Annually monitor status of Basin to determine whether solutions are effective.
ST-10	Management	Rural Residential	Require disclosure when land is sold that Basin is in decline and may not be suitable to rely on for intensive use.
ST-11	Conservation	Urban – Paso Robles, Atascadero, Templeton, San Miguel	Reduce per capita consumption to offset growth in service area where appropriate.
ST-12	Supplemental	All areas	Exchange or bank Nacimiento water with Santa Margarita Lake to benefit Basin.
ST-13	Supplemental	Paso Robles	Structure operations to use alluvial water first, Nacimiento water second and Basin last.
Medium and Long Term Solutions (Implementation in 6-10 years (Medium) and greater than 10 years (Long Term))			
MLT-1	Supplemental	All Areas	Implement water supply options associated with State Water and the Salinas River Corridor (may include use of Nacimiento & other areas of Basin & increasing the capacity of Santa Margarita Lake).
MLT-2	Supplemental	Monterey County	Explore opportunities with Monterey County including Lake Nacimiento / Lake San Antonio intertie (tunnel).
MLT-3	Supplemental	All areas	Direct delivery of unsubscribed Nacimiento or State Water Project allocation water.
MLT-4	Management	All areas	Prohibit groundwater exports from the Basin.
MLT-5	Management	All areas	Establish mechanisms to protect recharge areas and maximize watersheds.
MLT-6	Recycling	All areas	Incentivize the installation of grey water reuse systems onsite.
Completed or Already in Progress Solutions			
C-1	Supplemental	Atascadero	Utilize the full allocation (2,000 AFY) by fully utilizing the existing percolation ponds.
C-2	Conservation	Urban – Paso Robles and Atascadero	Participate in California Urban Water Conservation Council policies and practices.
C-3	Conservation	Agriculture – Irrigated Crops	Conduct outreach for County's groundwater level monitoring program.
C-4	Management	Agriculture & Rural Residential	Implement ordinances to prohibit subdivisions of land or General Plan Amendments in the Basin.
C-5	Management	Rural Residential	Implement landscaping ordinance.
C-6	Management	All areas	Establish baseline conditions of Basin through updated model.
C-7	Management	All areas	Implement landscaping ordinance (ag processing).
C-8	Management	Rural Residential	Implement Low Impact Development standards.
C-9	Supplemental	Templeton	Maximize or increase the use of the full Nacimiento allocation (250 AFY).
C-10	Supplemental	Shandon	Connect Shandon to State Water Project and set up distribution system (100 AFY).

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Glenn County Water Advisory Committee-Ad hoc Committee Groundwater Level Declines in Western Glenn County

Action List

"It is the desire of the people of Glenn County that sufficient and affordable water of good quality be available on a sustainable basis to meet the needs of agricultural, industrial, recreational, environmental, residential and municipal users within the county, both now and in the future."—Goal of the Glenn County Water Advisory Committee

Modeling/Water Budget (foundational)

- Pursue the use of groundwater and surface water modeling for Glenn County (possibly include Tehama and/or Colusa Counties).
 - Research and investigate the types of models available
 - Research the extent of field calibration that has already been completed
 - Research the appropriateness of their application to Glenn County
 - Determine the criteria to be used
 - Develop questions the model should seek to answer (e.g. best places for recharge, water flow, sustainability at current use).
- Develop county-wide water budget
- Couple modeling with other types of field monitoring
- Seek funding
- Summary report

Cost Study Analysis (moderate)

- Further improve the concept of this study
- Develop a plan to implement the study
- Evaluate funding options
- Engage statewide specialists from University of California in the development and execution of this study with Allan Fulton, TAC representative for the UC Cooperative Extension, being the lead for the TAC.
- Research previous cost studies
- Summary report

Recharge Activities (critical)

- Continued investigation of potential recharge activities
 - In-lieu recharge
 - Active recharge

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- Detention basins
- Develop summary report of previous local studies
- Research funding opportunities for project implementation
- Evaluate new potential studies and sites
 - Research funding
- Coordinate with water districts and water users
- Identify naturally occurring groundwater recharge areas in the County
 - Take steps to actively protect them from future threats
- Summary report

Surface Water Use (critical)

- Continuing to investigate ways in which all available surface water supplies can be utilized in the region efficiently
 - Outreach, coordination, cooperation
 - Water districts, other agencies, water managers, landowners
 - Examples: Inter-district transfers locally within the basin, potential transfer from a district to local groundwater-dependent landowners outside of the district, possible expansion of a current water district, or formation of a new district.
- Develop a list of possible water sources
- Consider types of water such as Central Valley Project contract water, base supplies, winter water, etc.
- Research and note potential obstacles including water availability, infrastructure capacity, legal and political hurdles including state-wide actions, environmental interests, cost, district policies, timing, as well as others.
- Develop a list of water uses (irrigation, domestic, recharge, etc.)
- Summary report

Coordination, Outreach, and Education (foundational)

- Formulate and implement a robust coordination, outreach, and education program
 - Develop a list of potential partners
 - Provide more information and ask for increased participation from our partners.
 - Provide informational reports
 - Create outreach materials
 - Update the WAC website
- Specific coordination: University of California - develop potential studies that would benefit the management of water resources in the County.
- Specific outreach: Groundwater-dependent, private pumper areas - include information regarding protection of the groundwater, coordination throughout the area and the County,

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potential district formation or other formal organization, the idea of a water users' cooperative in which there could be a voluntary cooperative pumping schedule to minimize the interference from one well to another, and other ideas as they become relevant.

- Specific coordination: California's Public Utilities Commission (CPUC) - "time of use" incentives and the unintended consequences it has on other natural resources.

Mapping (critical)

- Prepare draft map of the County indicating areas that have reached historic lows in groundwater levels. (Complete)
- Continue, expand mapping of wells and associated data
 - Location
 - Depth, screening
 - Drill date
 - Capacity
 - Construction details
- Produce summary of available well data

Basin Management Objectives (foundational)

- Request the WAC direct the TAC to review and update the current BMOs
- Ideas to further investigate while reviewing the BMOs could be:
 - a. Are the current BMO groundwater levels set at the appropriate levels?
 - b. How do we distinguish different aquifer zones (shallow, intermediate, deep)?
 - c. Do we need BMO zones?
 - d. Should the BMOs be based on the current political boundaries or is it time to manage the groundwater more cooperatively with neighboring entities and "blur" the BMO lines to better reflect the conditions of the aquifer in that region?
 - e. Are the wells selected for BMOs representative of the area? Do they provide useful data?
 - f. Should only dedicated monitoring wells be used rather than including irrigation and domestic wells?
 - g. Consider using the cumulative frequency curve and well data to analyze the level of risk associated with BMO levels.

County Governance Options (foundational to moderate)

County Efforts in Other Regions

- Evaluate and consider actions occurring in other counties
 - San Luis Obispo County summary (Initial complete, ongoing)
 - Blue Ribbon Steering Committee

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- Urgency ordinance adopted - August 2013
- Stanislaus County

Glenn County Options

- Actively engage, further develop and vet through the WAC, the Glenn County Board of Supervisors, and the public.
- Develop options to consider changes to the County Ordinance governing water management
 - Current ordinance
 - New ordinance
 - emergency measures
 - moratorium on new wells
 - specific exemptions
- Develop options to consider changes in well permitting
 - update well drilling/abandonment permit form
 - additional requirements for all new well permits
 - additional requirements for wells in areas of concern
 - mapping interface
 - fee update (in areas of concern)
 - restrictions on location, size, or screening
- Develop options to consider update of water element in Glenn County General Plan
- Develop options for addition of fees for management, coordination, and programs
 - county-wide assessment for Water Protection per parcel
 - Public benefit assessment
 - Water transfer fees in Export Water Transfer Guidelines
 - Well drilling permit fees
- Develop programs that could potentially be implemented
 - Development of a mapping based Local Groundwater Users Program (Cooperative) for pumpers to voluntarily coordinate their pumping with others in the area.
 - Development of a program to help water users control and coordinate their costs (energy costs) associated with water use, for both surface water and groundwater such as projects to help fund alternative energy such as solar projects, or surface water filtration projects for micro and drip irrigation.
 - Develop outreach and organizational efforts in groundwater dependent areas. This could initiate either informal or formal organization, such as a district, by the group.