Water and Resource Conservation Paul Gosselin, Director

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Butte County
Groundwater Pumpers Advisory Committee

Meeting Agenda

Meeting Date: June 19, 2017

Time: 8:30AM

Place: Chico State University Farm, Room A009 & 0010, Chico, CA

Agenda Items

1. Welcome – Chair Heringer
2. Roll Call – Chair Heringer
3. *Review and approval of the May 15, 2017 GPAC minutes
4. Overview and discussion of the agenda (Paul Gosselin, Water and Resource Conservation)
5. *Presentation on 2017 Spring Groundwater Contour Maps (Bill Ehorn, DWR-NRO)
6. *Presentation on the Interbasin Groundwater Flow Project (Christina Buck, Water and Resource Conservation)
7. *Update on GSA Formation Process and Status (Vickie Newlin, Water and Resource Conservation)
8. Discussion of Non-Public Groundwater Users Participation Options (Paul Gosselin, Water and Resource Conservation and Rich McGowan)

9. *Discussion and possible recommendation on the guiding principles for SGMA governance framework (Paul Gosselin, Water and Resource Conservation)

10. Update of other SGMA issues – Staff & GPAC

11. GPAC members wishing to address items not listed on the agenda. (The GPAC is prohibited by state law from taking action on any item presented if it is not listed on the agenda).

12. Public members wishing to address the Commission on items not listed on the agenda. (The GPAC is prohibited by State law from taking action on any item presented if it is not listed on the agenda. Comments will be limited to five minutes per person)

13. Next meeting – July 17, 2017, 8:30AM, CSU Chico Farm.

14. Adjournment

*Materials attached

Agenda Item #3

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Butte County
Groundwater Pumpers Advisory Committee

Meeting Minutes
May 15, 2017

Time: 8:30AM

Place: Chico State University Farm, Room A009 & 0010, Chico, CA

Agenda Items

1. Welcome – Chair Heringer

2. Roll Call

   Members present: Heringer, Cole, Daly, Lavy, Rice, Schooling and Strachan.
   Members absent: Edgar and Sohnrey

3. Review and approval of the April 17, 2017 GPAC minutes
   Motion by Strachan and seconded by Rice subject to amending Item 7 to begin, "The GPAC raised issues about the Guiding Principles and suggested…"

4. Presentation on DWR Land Use Survey
   Tito Cervantes, Department of Water Resources, Northern Regional Office, provided an overview of DWR's land use survey and methodology.

5. Update on GSA Formation Process and Status
   Staff gave an overview of the GSA formation status. The department will provide the GPAC with shapefile maps showing the Butte County GSA areas in each subbasin.

6. Discussion and Consideration of a Letter of Support for Butte County Obtaining a Grant to Develop Groundwater Sustainability Plans
   Vickie Newlin gave an overview of the GSP Grant Application process and the interest of getting letters of support. The department provided a template letter of support to the GPAC.

   <u>Motion</u> by Strachan and seconded by Schooling that the GPAC submit a letter of support for Butte County obtaining a grant to develop groundwater sustainability plans. Motion passed 7-0.

   The department will send the template letter to groundwater users.

7. Discussion and possible appointment of a subcommittee to review guiding principles for SGMA governance framework.
   Vickie Newlin presented the guiding principles for SGMA governance framework. The GPAC discussed issues with basin boundary adjustments and whether it should be limited to "where appropriate". The GPAC will continue to discuss guiding principles.

8. Update on Spring 2017 Groundwater Conditions
   Christina Buck presented the spring 2017 groundwater elevation monitoring results.

9. Discussion of Non-Public Groundwater Users Participation Options
   Paul Gosselin gave an overview of the options for non-public agency groundwater users to participate in SGMA processes.

10. Update of other SGMA issues
    The GPAC By-laws will be going to the Board of Supervisors for approval on May 23, 2017.

11. GPAC members wishing to address items not listed on the agenda. (The GPAC is prohibited by state law from taking action on any item presented if it is not listed on the agenda)
    None

12. Public members wishing to address the Commission on items not listed on the agenda. (The GPAC is prohibited by State law from taking action on any item presented if it is not listed on the agenda. Comments will be limited to five minutes per person)

None

13. Next meeting – June 19, 2017, 8:30AM, CSU Chico Farm.

14. Adjournment

Agenda Item #5

Shasta County - Redding GW Basin

Maximum Increase GWE (ft)	20.5
Maximum Decrease GWE (ft)	-1.6
Average Change GWE (ft)	4.4
Average Well Depth (ft)	381
Number of Wells Monitored	7

Tehama County - Redding GW Basin

Maximum Increase GWE (ft)	2.7
Maximum Decrease GWE (ft)	NA
Average Change GWE (ft)	1.9
Average Well Depth (ft)	335
Number of Wells Monitored	4

Tehama County - Sacramento Valley GW Basin

Maximum Increase GWE (ft)	9.7
Maximum Decrease GWE (ft)	-8.4
Average Change GWE (ft)	3.1
Average Well Depth (ft)	398
Number of Wells Monitored	39

Glenn County - Sacramento Valley GW Basin

Maximum Increase GWE (ft)	23.1
Maximum Decrease GWE (ft)	-1.5
Average Change GWE (ft)	6.7
Average Well Depth (ft)	419
Number of Wells Monitored	47

Butte County - Sacramento Valley GW Basin

Maximum Increase GWE (ft)	12.2
Maximum Decrease GWE (ft)	-2.3
Average Change GWE (ft)	3.7
Average Well Depth (ft)	451
Number of Wells Monitored	27

Colusa County - Sacramento Valley GW Basin

Maximum Increase GWE(ft)	14.6
Maximum Decrease GWE (ft)	-0.4
Average Change GWE (ft)	5.2
Average Well Depth (ft)	404
Number of Wells Monitored	30

Summary Results for Spring 2016 to Spring 2017 Change in Groundwater Elevation

Maximum Increase GWE (ft)	23.1
Maximum Decrease GWE (ft)	-8.4
Average Change GWE (ft)	4.7
Average Well Depth (ft)	413
Number of Wells Monitored	154

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

N

5 0 5 10
Miles

Groundwater Elevation Change

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

Redding
Cottonwood
Red Bluff
Tehama
Corning
Orland
Chico
Willows
Gridley
Oroville
Live Oak
Colusa
Williams
SHASTA
TEHAMA
BUTTE
GLENN
COLUSA

NOTES

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

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

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

Note 4: Groundwater level changes are based on groundwater level measurements taken from wells constructed in the intermediate aquifer zone at similar dates of different years. These wells include those that have screened intervals and well depths that are generally greater than 200 ft and less than 600 ft.

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

Note 6: GWE - Groundwater Elevation
bgs - below ground surface

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
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NORTHERN SACRAMENTO VALLEY CHANGE IN GROUNDWATER ELEVATION MAP SPRING 2016 TO SPRING 2017

INTERMEDIATE AQUIFER ZONE

(Well depths generally greater than 200 ft and less than 600 ft deep bgs)

PLATE 1I-A

Date: May 2017

BY: G. Gordon

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http://www.water.ca.gov/groundwater/data_and_monitoring/northern_region/GroundwaterLevel/gw_level_monitoring.cfm

Shasta County - Redding GW Basin	
Maximum Increase GWE (ft)	5.9
Maximum Decrease GWE (ft)	-8.4
Average Change GWE (ft)	1.0
Average Well Depth (ft)	336
Number of Wells Monitored	6

Tehama County - Redding GW Basin	
Maximum Increase GWE (ft)	2.4
Maximum Decrease GWE (ft)	-3.2
Average Change GWE (ft)	-0.5
Average Well Depth (ft)	296
Number of Wells Monitored	3

Tehama County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	1.5
Maximum Decrease GWE (ft)	-17.2
Average Change GWE (ft)	-6.2
Average Well Depth (ft)	390
Number of Wells Monitored	24

Butte County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	1.5
Maximum Decrease GWE (ft)	-21.4
Average Change GWE (ft)	-6.5
Average Well Depth (ft)	454
Number of Wells Monitored	18

Glenn County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	3.0
Maximum Decrease GWE (ft)	-64.3
Average Change GWE (ft)	-14.5
Average Well Depth (ft)	423
Number of Wells Monitored	28

Colusa County - Sacramento Valley GW Basin	
Maximum Increase GWE(ft)	4.4
Maximum Decrease GWE (ft)	-58.3
Average Change GWE (ft)	-12.7
Average Well Depth (ft)	418
Number of Wells Monitored	20

Summary Results for Spring 2004 to Spring 2017 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	5.9
Maximum Decrease GWE (ft)	-64.3
Average Change GWE (ft)	-9.3
Average Well Depth (ft)	411
Number of Wells Monitored	99

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

N

5 0 5 10
Miles

Groundwater Elevation Change

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

NOTES

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NORTHERN SACRAMENTO VALLEY CHANGE IN GROUNDWATER ELEVATION MAP SPRING 2004 TO SPRING 2016

INTERMEDIATE AQUIFER ZONE

(Well depths generally greater than 200 ft and less than 600 ft deep bgs)

PLATE1I-B

Date: May 2017

BY: G. Gordon

http://www.water.ca.gov/groundwater/data_and_monitoring/northern_region/GroundwaterLevel/gw_level_monitoring.cfm

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Shasta County - Redding GW Basin	
Maximum Increase GWE (ft)	2.2
Maximum Decrease GWE (ft)	-8.0
Average Change GWE (ft)	-1.2
Average Well Depth (ft)	381
Number of Wells Monitored	7

Tehama County - Redding GW Basin	
Maximum Increase GWE (ft)	0.1
Maximum Decrease GWE (ft)	-0.3
Average Change GWE (ft)	-0.2
Average Well Depth (ft)	356
Number of Wells Monitored	3

Tehama County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	12.4
Maximum Decrease GWE (ft)	-17.2
Average Change GWE (ft)	-3.3
Average Well Depth (ft)	400
Number of Wells Monitored	29

Butte County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	4.1
Maximum Decrease GWE (ft)	-11.8
Average Change GWE (ft)	-2.5
Average Well Depth (ft)	459
Number of Wells Monitored	23

Glenn County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	7.3
Maximum Decrease GWE (ft)	-40.8
Average Change GWE (ft)	-6.0
Average Well Depth (ft)	417
Number of Wells Monitored	44

Colusa County - Sacramento Valley GW Basin	
Maximum Increase GWE(ft)	1.5
Maximum Decrease GWE (ft)	-49.5
Average Change GWE (ft)	-9.5
Average Well Depth (ft)	408
Number of Wells Monitored	29

Summary Results for Spring 2011 to Spring 2017 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	12.4
Maximum Decrease GWE (ft)	-49.5
Average Change GWE (ft)	-5.2
Average Well Depth (ft)	416
Number of Wells Monitored	135

Monitoring Well

County Boundaries

Redding GW Basin

Sacramento Valley GW Basin

N

5 0 5 10

Miles

Groundwater Elevation Change

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

NOTES

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NORTHERN SACRAMENTO VALLEY CHANGE IN GROUNDWATER ELEVATION MAP SPRING 2011 TO SPRING 2017

INTERMEDIATE AQUIFER ZONE

(Well depths generally greater than 200 ft and less than 600 ft deep bgs)

PLATE 1I-C

Date: May 2017

BY: G. Gordon

http://www.water.ca.gov/groundwater/data_and_monitoring/northern_region/GroundwaterLevel/gw_level_monitoring.cfm

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Shasta County - Redding GW Basin	
Maximum Increase GWE (ft)	5.9
Maximum Decrease GWE (ft)	-8.6
Average Change GWE (ft)	0.0
Average Well Depth (ft)	239
Number of Wells Monitored	15

Tehama County - Redding GW Basin	
Maximum Increase GWE (ft)	2.4
Maximum Decrease GWE (ft)	-12.6
Average Change GWE (ft)	-3.1
Average Well Depth (ft)	239
Number of Wells Monitored	6

Tehama County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	5.2
Maximum Decrease GWE (ft)	-29.9
Average Change GWE (ft)	-8.1
Average Well Depth (ft)	244
Number of Wells Monitored	48

Butte County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	6.5
Maximum Decrease GWE (ft)	-20.8
Average Change GWE (ft)	-4.7
Average Well Depth (ft)	216
Number of Wells Monitored	36

Glenn County - Sacramento Valley GW Basin	
Maximum Increase GWE (ft)	4.5
Maximum Decrease GWE (ft)	-60.4
Average Change GWE (ft)	-9.7
Average Well Depth (ft)	244
Number of Wells Monitored	44

Colusa County - Sacramento Valley GW Basin	
Maximum Increase GWE(ft)	4.4
Maximum Decrease GWE (ft)	-56.2
Average Change GWE (ft)	-10.0
Average Well Depth (ft)	244
Number of Wells Monitored	26

Summary Results for Spring 2004 to Spring 2017 Change in Groundwater Elevation	
Maximum Increase GWE (ft)	6.5
Maximum Decrease GWE (ft)	-60.4
Average Change GWE (ft)	-7.2
Average Well Depth (ft)	238
Number of Wells Monitored	175

Monitoring Well

County Boundaries

Redding GW Basin

Sacramento Valley GW Basin

N

5 0 5 10

Miles

Groundwater Elevation Change

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

NOTES

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Note 4: Groundwater level changes are based on groundwater level measurements taken from wells constructed in the intermediate aquifer zone at similar dates of different years. These wells include those that have depths greater than 100 ft and less than 450 ft at similar dates of different years.

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NORTHERN SACRAMENTO VALLEY CHANGE IN GROUNDWATER ELEVATION MAP SPRING 2004 TO SPRING 2017

100 to 450 ft WELL DEPTHS

(Well depths greater than 100 ft and less than 450 ft deep bgs)

PLATE 1C-B

Date: May 2017

BY: G. Gordon

http://www.water.ca.gov/groundwater/data_and_monitoring/northern_region/GroundwaterLevel/gw_level_monitoring.cfm

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Agenda Item #6

Addressing Interconnected Subbasins under SGMA

The Sustainable Groundwater Management Act (SGMA) requires groundwater sustainability agencies (GSAs) to develop groundwater sustainability plans (GSPs) that achieve sustainable groundwater management within 20 years of adoption. Since many subbasins are hydrologically connected to adjoining subbasins, sustainable groundwater management will require accounting for interactions with adjoining subbasins. Groundwater pumping in one subbasin could bring the groundwater levels down resulting in the gradient at the boundary to be towards the pumping area and increase interbasin flow to this subbasin. Other processes such as artificial recharge, irrigation, and changes in climate could result in changing the gradient at the boundary and interbasin flow rates. Understanding and quantifying these dynamics will be an important component of successfully implementing sustainable groundwater management in the Northern Sacramento Valley (NSV) region.

Groundwater Models will be a Part of Our Future

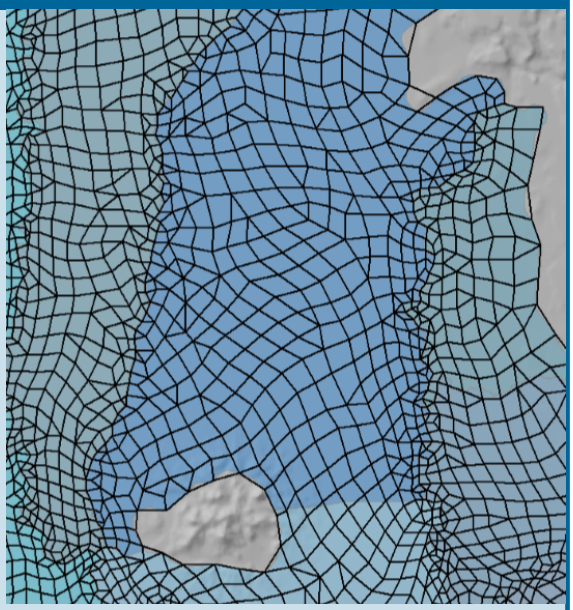
The complexity of processes affecting interbasin groundwater flows make groundwater models effective and necessary tools for quantifying these flows. Local investment has been made in technical tools such as surface layer models (accounting for agricultural and urban water use) and other water budget approaches. While these are valuable planning and operations tools for local agencies, they typically do not calculate interbasin flows or groundwater-surface water interaction and are generally not well suited for predictive simulation. SGMA does not legally require the use of a groundwater model. Yet, successfully avoiding the 6 Undesirable Results defined by SGMA will require accounting for a complete surface water and groundwater budget and the ability to evaluate the effects of changes in the water budget (i.e. increased pumping or increased recharge) on groundwater conditions over time. Water budgets must account for interbasin flows and groundwater-surface water interaction. Since groundwater modeling will be a part of our future under SGMA, it will be key to leverage local data sets and knowledge to improve existing groundwater models or to develop new ones.

WATER BUDGETS and MODELING

A water budget takes into account the storage and movement of water between the four physical systems of the hydrologic cycle: the atmospheric system, the land surface system, the river and stream system, and the groundwater system. It is an accounting of the total groundwater and surface water entering and leaving a basin or other user-defined area over a defined period of time (DWR Water Budgets BMP 2016).

A model is any computational method that represents an approximation of the hydrologic system. While models are, by definition, a simplification of a more complex reality, they have proven to be useful tools over several decades for addressing a range of groundwater management challenges and supporting the decision-making process. Models can be useful tools for estimating the potential hydrologic effects of proposed water management activities (DWR Modeling BMP 2016).

In a numerical groundwater-surface water model, data and parameters are specified for accounting units that make up a model grid. Groundwater and surface water processes are simulated at this scale. A model organizes and incorporates available data from a wide variety of sources and presents approaches to quantify the major flow paths. With a calibrated model (i.e. results simulate historical data reasonably well), scenarios representing changes in water demands, land use changes, or recharge projects can be run to understand the possible range of system responses to changes in processes.



Example of a model grid for a numerical groundwater model, area just north of the Sutter Buttes

"Special thanks to the Technical Collaborators who generated these recommendations."

For the full Report, Assessment of Interconnected Subbasins, and list of Technical Collaborators visit: https://www.buttecounty.net/waterresourceconservation/SpecialProjects/InterbasinGroundwaterFlowProject.aspx

Butte County Department of Water & Resource Conservation

- Paul Gosselin, Director
- Vickie Newlin, Assistant Director
- Christina Buck, Water Resource Scientist
- Autum Thomas, Administrative Analyst

Butte County
WATER & RESOURCE CONSERVATION

RMC water and environment
WOODARD &CURRAN
National Experience. Local Focus.

WATER FOUNDATION

Existing Tools and Model Selection

The Northern Sacramento Valley (NSV) project area is covered by three regional models including two Central Valley-wide models: 1) C2VSim developed by the Department of Water Resources (DWR), and 2) CVHM developed by the United States Geological Survey (USGS). These models are both undergoing significant updates. Another regional, Sacramento Valley-wide model is currently being developed by DWR called SVSim. Local groundwater models also exist and are currently being updated by Butte County and Yuba County, for example. None of the existing regional or local groundwater models were specifically developed for SGMA. The regional models were developed prior to SGMA for other purposes and as such, they have limitations, yet also provide opportunities. Although they provide a valuable starting point, they have significant differences in both approach to simulating hydrological processes and inputs developed from different data sources. This results in significant differences in water budget results in some cases and differing results in simulating groundwater level conditions.

Given these differences, GSAs should consider the following question when considering which groundwater model to select for GSP development: **How well does the model match my current understanding of the surface layer and groundwater budgets in my area?** This question can be answered by considering the quality and amount of data, supply and demand, boundary conditions, water budget results, and calibration, including whether aquifer parameters are realistic. Since there is not an obvious choice of one of the regional models for the NSV, each subbasin should compare the model inputs and results to locally available historical data, if possible. An existing surface layer model or other water budget datasets should be used only to assist in selecting the appropriate groundwater model. It is not appropriate to mix output from the groundwater model with other local water budget sources. Groundwater model results should be presented in full to keep the results internally consistent. In addition, simulated groundwater elevations near the boundaries have the most effect on quantifying interbasin groundwater flows. Therefore, evaluating a model's representation of groundwater levels in comparison to historical data is important, particularly in the areas along subbasin boundaries.

Cooperation and Uncertainty

The most critical factor to address interbasin conditions will not come from a pure technical remedy, but rather from cooperation. Early cooperation with neighboring subbasins to compare interbasin flow estimates is very important. Although the exact values may be different, the interbasin flow magnitude and direction should be similar. The differences in part reflect the uncertainty in the modeled systems.

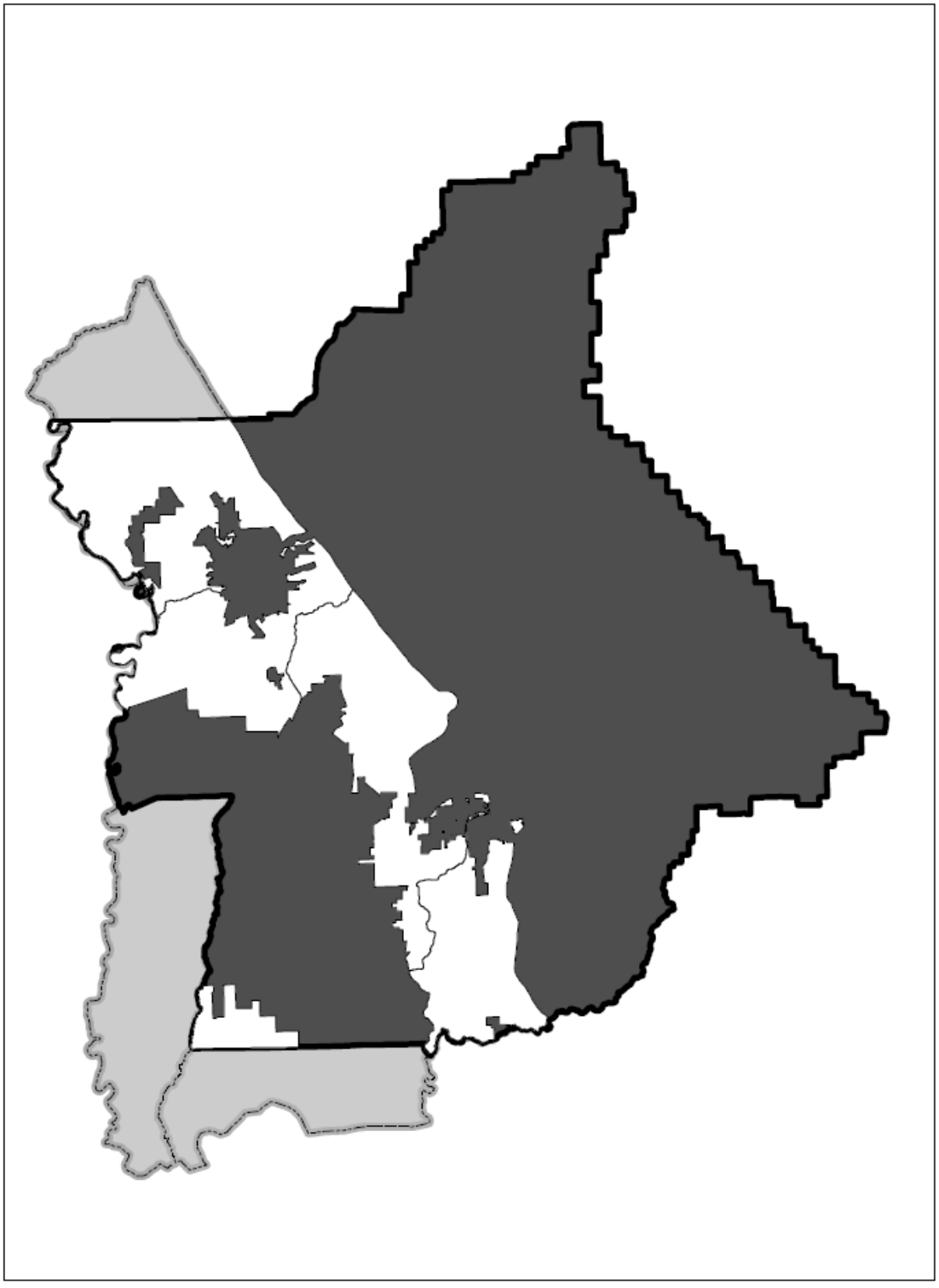
As knowledge of the system and data improves, models are updated to better represent the system. A long term commitment is needed to develop these tools to help us better understand the dynamics of the groundwater system. As a result, promising management actions can more effectively be identified to solve problems and achieve sustainability. The existing tools may provide a reasonable starting point but local knowledge and data will make them better. GSPs should address how they would anticipate and incorporate model updates or new models into resource management. Inevitably, updates or new models will generate different results to some degree. The key is to allow for incorporation of the new information without resulting in sudden and disruptive shifts in management actions. In the end, the model is a tool to achieve objectives based on real data. Proper planning can allow for using the best available science while maintaining a groundwater management structure that is not destabilized by changes in the model and its results.

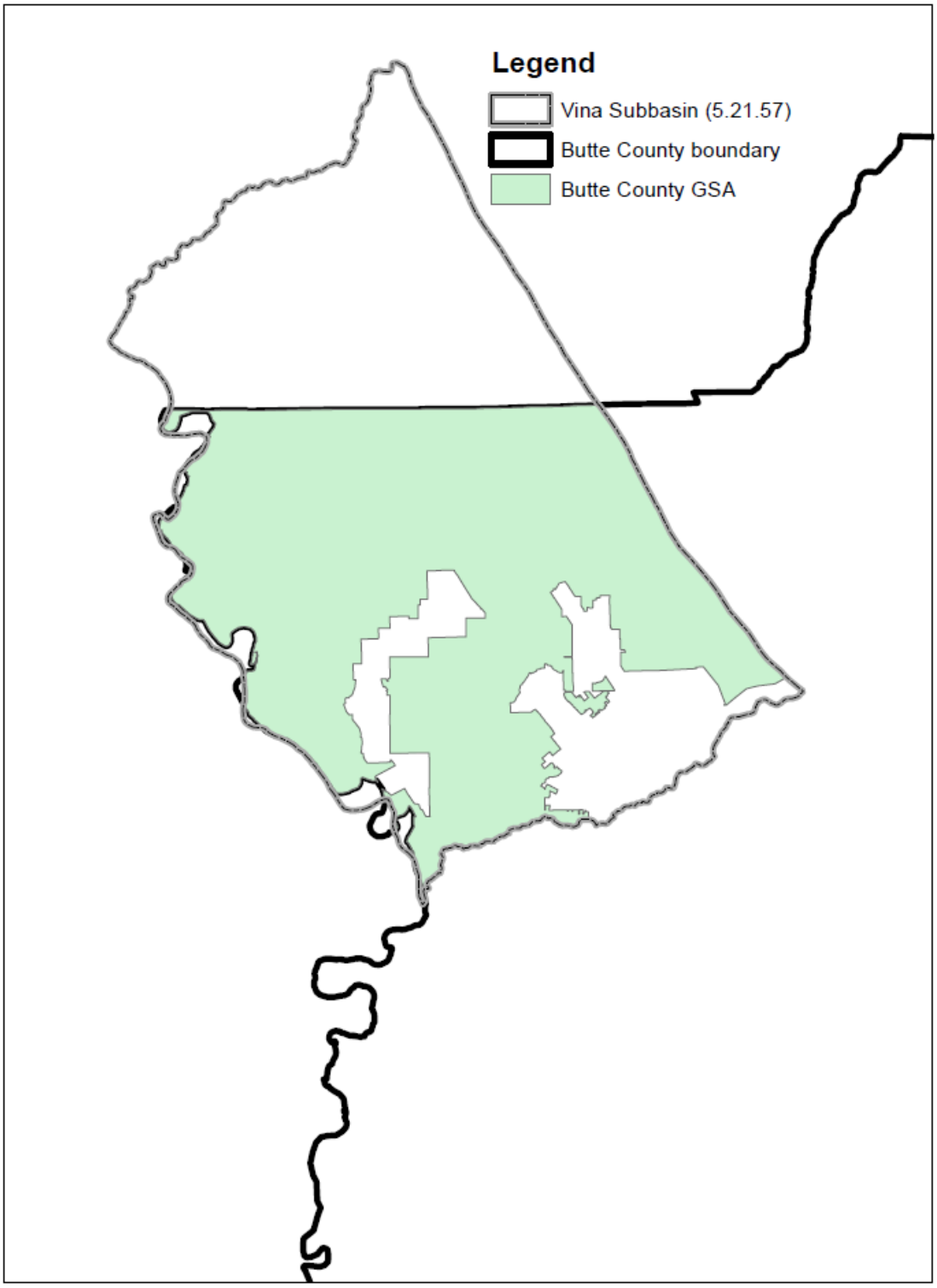
The Project was made possible through the Water Foundation Program of the Resources Legacy Fund

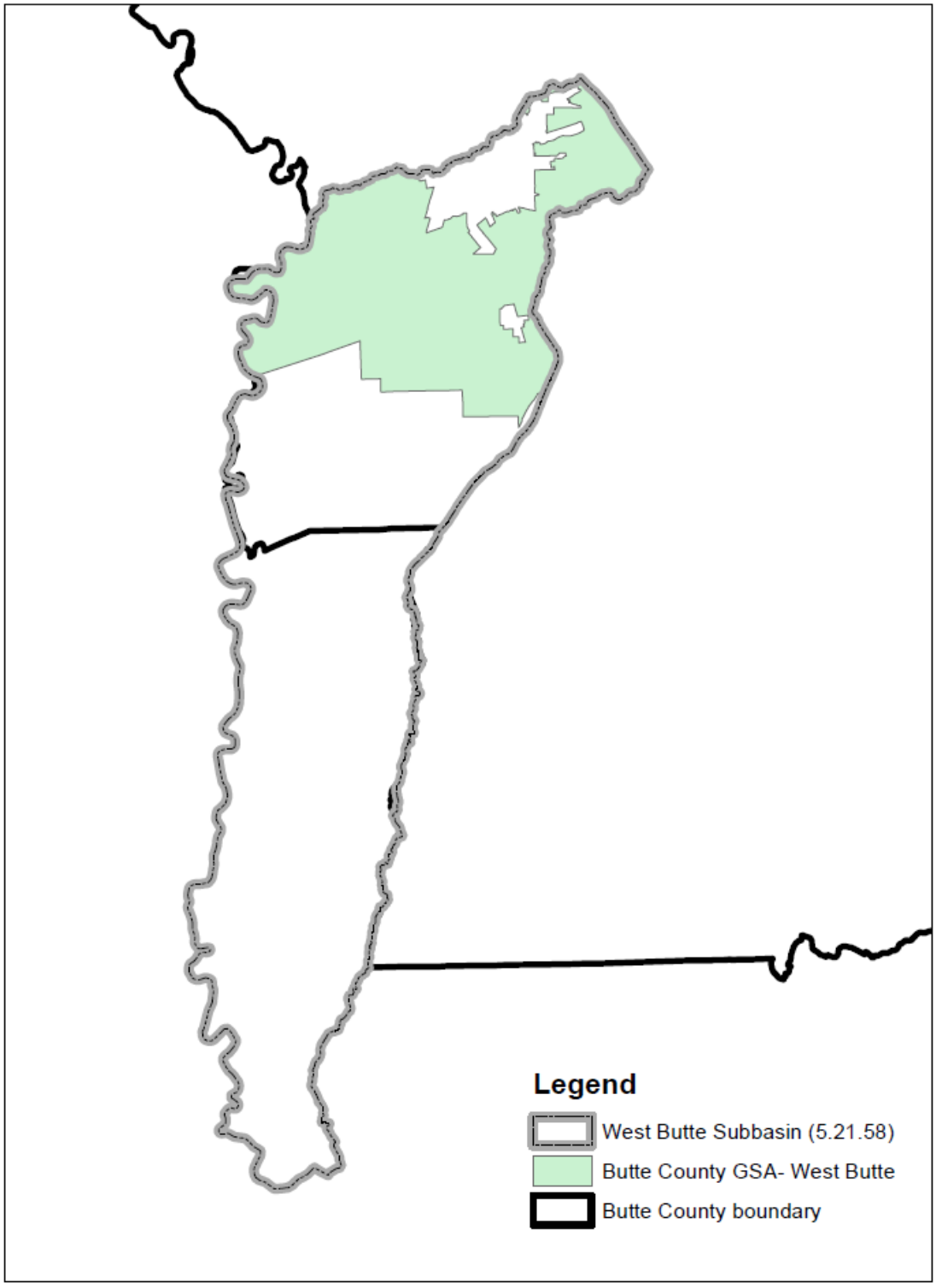
Agenda Item #7

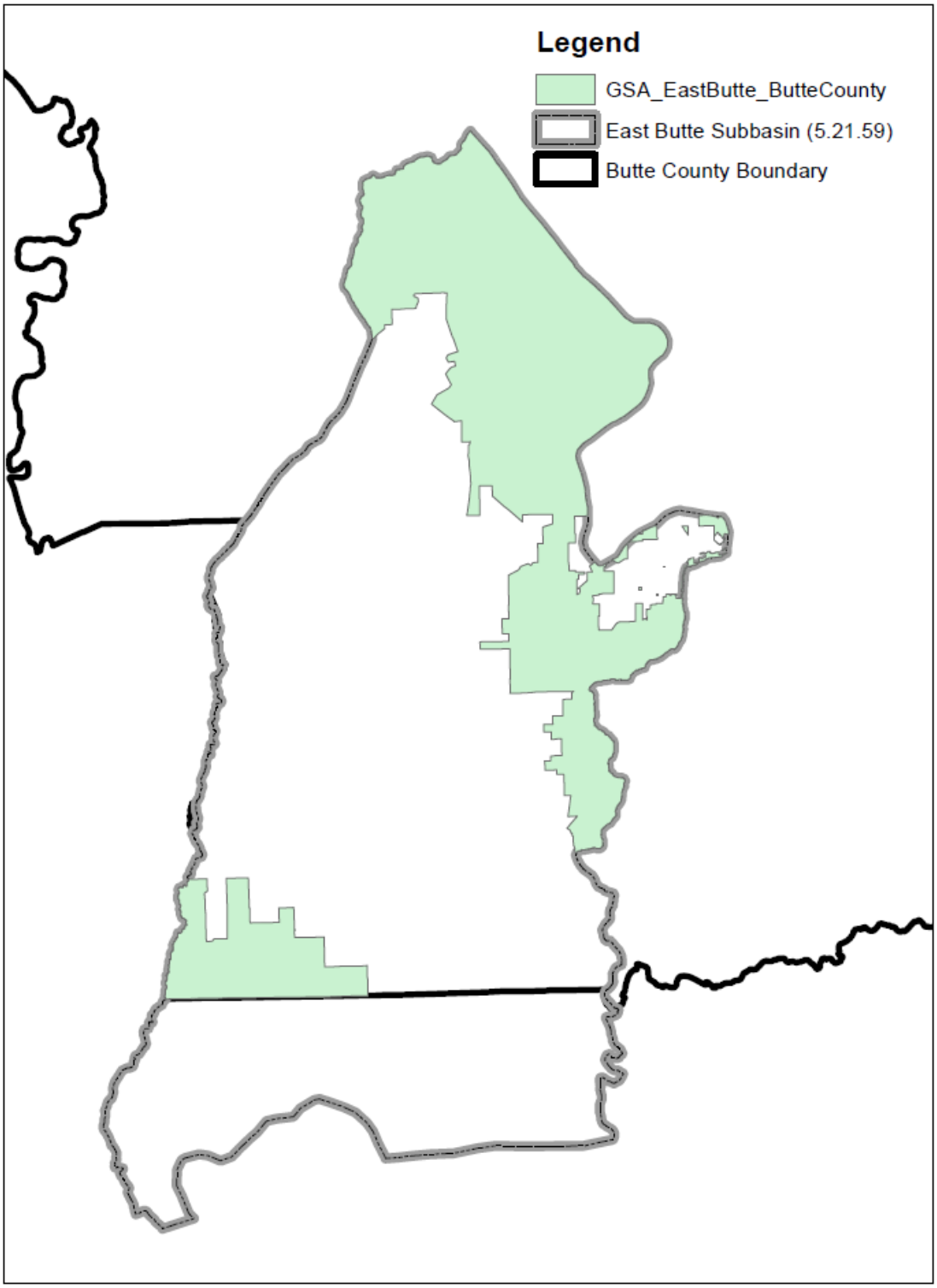
BUTTE COUNTY

GROUNDWATER SUSTAINABILITY AREAS




Legend
Vina Subbasin (5.21.57)
Butte County boundary
Butte County GSA


Legend
West Butte Subbasin (5.21.58)
Butte County GSA- West Butte
Butte County boundary


Legend
GSA_EastButte_ButteCounty
East Butte Subbasin (5.21.59)
Butte County Boundary


Legend
Butte County boundary
Butte County GSA
Wyandotte Creek Subbasin (5.21.69)

Agenda Item #9a

Guiding Principles for SGMA Governance – Version 1

The following are potential principles to guide future SGMA governance by Eligible Local Agencies (ELAs) for sub-basins lying within Butte County. These proposed principles are derived from the 2016 Butte County SGMA stakeholder assessment report feedback (https://www.buttecounty.net/wrcdocs/planning/SGWMA/GWAssess/SGMAAssessFinalRpt.pdf). They are intended as a starting point for ELAs to discuss, add to, and modify as decisions are made about GSA formation and future SGMA governance. The goal is to define a set of working principles that are shared among ELAs and that consistently and constructively shape SGMA interactions and decision making.

- Maximize value of familiar structures and relationships
- Acknowledge all key interests of eligible local agencies
- Respect legally recognized rights
- Anticipate GSP requirements
- Make use of basin boundary adjustments
- Comply with SGMA and regulations
- Identify opportunities to address interest of non-GSA stakeholders
- Distribute costs equitably and avoid fees if possible
- Respect mutual interests in maintaining independent decision making

Agenda Item #9b

June 9, 2017

TO: Groundwater Pumpers Advisory Committee

FM: Susan Strachan, Environmental Representative

RE: Proposed revisions to guiding principles

Following for consideration by the GPAC are some suggestions for changes to the draft guiding principles that have been presented at the last few GPAC meetings. The changes are tracked and a short rationale is provided for each proposed change. Following the list of proposed changes is the original language from the May 2, 2016 document titled Assessment of Stakeholder Perspectives: Options for Implementing the Sustainable Groundwater Management Act in Butte County. Thank you for your consideration of these changes.

Guiding Principles for SGMA Governance

- Maximize value of familiar and effective structures and relationships
  - Rationale: original language from stakeholder assessment report
- ~~Acknowledge all key~~Address interests of eligible local agencies~~-~~ to promote opportunities for integration, efficiency, and cost-effectiveness
  - Rationale: "address" indicates identifying, analyzing, and implementing actions concerning "interests". Remainder of language from stakeholder assessment report.
- Respect legally recognized rights of all stakeholders.
  - Rationale: water issues raise legal rights of many stakeholders.
- Anticipate GSP requirements
- ~~Make use of basin boundary adjustments~~ Utilize SGMA's tools that address geographic variation when supported by science and stakeholders.
  - Rationale: SGMA provides management areas and basin boundary adjustments as tools and both should be utilized when appropriate.
- Comply with SGMA and regulations
- ~~Identify opportunities to~~Ensure public participation and address interest of non-GSA stakeholders.
  - Rationale: "identify opportunities" is not the appropriate action.
- Distribute costs equitably and avoid fees if possible.
- Respect mutual interests in maintaining independent decision making.
- Provide flexibility to adapt to future circumstances
  - ~~●~~○Rationale: original language from stakeholder assessment report.
- Use science-based information/research to monitor and understand groundwater.
  - ~~●~~○Rationale: Butte County monitoring program is critical to implement SGMA.
- Plan for a sustainable future by employing conservation efforts and innovative solutions.
  - Rationale: conservation can address shortages and sustain the environment; innovation (e.g. hybrid surface-groundwater for orchards) will be necessary to address our challenges.

Excerpt beginning page 28
PRELIMINARY CRITERIA FOR GSA FORMATION

The following are preliminary criteria identified through the assessment interviews that could inform discussions and decision-making about a GSA structure involving one or more GSAs.

1. Maximize the value of familiar and effective regional structures and relationships
2. Acknowledge all key interests of eligible local agencies related to SGMA implementation to promote opportunities for integration, efficiency, and cost-effectiveness
3. Respect legally recognized rights, including water rights, and interests in protecting those rights
4. Anticipate and integrate GSP requirements into decision making
5. Make use of basin boundary adjustments and address service area overlaps
6. Comply with SGMA and regulations
7. Provide flexibility to adapt to future circumstances
8. Identify opportunities to address interests of non-GSA stakeholders
9. Ensure that any costs are distributed equitably and avoid fees if at all possible
10. Respect mutual interests in maintaining independent decision making that reflects expertise and experience, both agricultural and urban, to the greatest extent possible.