

Yolo Subbasin Groundwater Agency Board of Directors Meeting Agenda

**Monday, June 18, 2018
3:30 to 5 p.m.**

**Meeting Location: Woodland Community and Senior Center
2001 East Street, Woodland, Rooms 1 & 2**

NOTICE TO PUBLIC

Public documents relating to any open session item listed on this agenda that are distributed to all or most of the members of the Board of Directors less than 72 hours before the meeting are available for public inspection in the customer service area of the Yolo Subbasin Groundwater Agency's Administrative Office at 34274 State Highway 16, Woodland 95695.

In compliance with the Americans with Disability Act, if you have a disability and need a disability-related modification or accommodation to participate in this meeting please contact Donna Gentile at (530) 662-3211. Requests must be made as early as possible, and at least one full business day before the start of the meeting.

All items on the agenda will be open for the public comment before final action is taken. Speakers are requested to restrict comments to the item as it appears on the agenda and stay within a three-minute time limit. The Chair has the discretion of limiting the total time for an item.

3:30 1. CALL TO ORDER and DETERMINATION OF QUORUM

3:33 2. APPROVE AGENDA and ADDING ITEMS TO THE POSTED AGENDA – In order to add an agenda item, it must fit into one of the following categories: a) A majority determination that an emergency (as designed by the Brown Act) exists; or b) A 4/5ths determination that the need to take action arose subsequent to the agenda being posted.

3:35 3. PUBLIC FORUM – The Public may address the Yolo Subbasin Groundwater Agency Board of Directors on any item of interest not appearing on the agenda that is within the subject matter of the Yolo Subbasin Groundwater Agency.

3:40 4. REPORT OF THE CHAIR AND EXECUTIVE OFFICER, pages 3 - 13

3:50 5. CONSENT ITEMS, pages 14 - 26

- a. Approve March 19, 2018 Board of Directors meeting minutes, pages 14 - 19
- b. Receive Fiscal Year 2017-2018 Financial Statements: March to May 2018, pages 20 - 23
- c. Approve Fiscal Year 2017-2018 Budget Amendments, Executive Committee Report and Budget, pages 24 - 25
- d. Adopt Board Policy on Cash Reserves, Executive Committee Report, page 26

3:52 6. DWR UPDATE – Report from DWR on programs of interest to the YSGA, Barrett Kaasa

- 3:57 7. **CONSIDERATION: DWR'S SGMA PROGRAM**, pages 27 - 30
- a. Basin Boundary Modification to Yolo Subbasin
 - b. Technical Support Services Application
 - c. Acceptance of Proposition 1 Grant Funding
- 4:20 8. **RECEIVE MEMORANDA ON GSP COMPONENTS**, pages 31 - 47
- 4:35 9. **INTER-BASIN COORDINATION WITH ADJACENT SUBBASINS**, page 48
- 4:45 10. **MEMBERS' REPORTS and FUTURE AGENDA ITEMS** – Yolo Subbasin Groundwater Agency Members are invited to briefly report on current issues and recommended topics for future Yolo Subbasin Groundwater Agency Board of Directors meetings.
- a. Establishment of Subcommittee for Reconsideration of Voting Structure and Expense Allocation (Agreement Section 5.11)
 - b. "Gray" Area Annexation
 - c. White Paper on Areas of Special Concern
- 4:59 11. **NEXT MEETING** – Monday, September 17, 2018
- 5:00 12. **ADJOURNMENT**

Consideration of items not on the posted agenda, items in the following categories: 1) majority determination that an emergency (as defined by the Brown Act) exists; or 2) a 4/5ths determination that the need to take action arose subsequent to posting of the agenda. I declare under penalty of perjury that the foregoing agenda for the June 18, 2018 meeting of the Board of Directors of the Yolo Subbasin Groundwater Agency (YSGA) was posted by June 15, 2018 and made available to the public during normal business hours at the following locations: Woodland Community and Senior Center, 2001 East Street, Woodland 95776 and the YSGA's office at 34274 State Highway 16, Woodland 95695.



Donna L. Gentile
Board Secretary

**Yolo Subbasin Groundwater Agency Board of Directors
Meeting Agenda Report**

MEETING DATE: June 18, 2018

AGENDA ITEM NO. 4

SUBJECT: Report of the Chair and Executive Officer

INITIATED OR ☐ BOARD
REQUESTED BY: ☒ STAFF
 ☐ OTHER _____

☒ INFORMATION
☐ ACTION: ☐ MOTION
 ☐ RESOLUTION

ATTACHMENT ☒ YES ☐ NO

BACKGROUND

The Chair and Executive Officer will provide either an oral or written report on recent activities. A written report from the Executive Officer is attached.

RECOMMENDATION

This agenda item is for informational purposes only. No Board action is required.

Date: June 18, 2018
To: YSGA Board and Alternates
From: Tim O'Halloran, Executive Officer
Subject: Report of the Executive Officer

Recommendation

For informational purposes only. No Board action required.

Background

Following is an update to the Board of Directors of the YSGA on activities and issues related to the ongoing implementation of the Sustainable Groundwater Management Act (SGMA). This report should be considered as a summary document so that Board Members and other interested parties can quickly read about the general activities taking place between YSGA Board meetings. Board members should feel free to contact me at any time for more detail or with ideas and/or questions that they might have regarding the program.

Since the March 19, 2018 meeting of the YSGA the following activities have taken place;

Program Administration

Two meetings (April 26 and May 29, 2018) were held by the YSGA Executive Committee (EC). The EC, consisting of Chair Sandeen, Vice-Chair Cornwell, Lynnel Pollock, Kurt Balasek, and Executive Officer O'Halloran, discussed logistical issues related to the establishment of a new JPA and the development of the Groundwater Sustainability Plan (GSP). The next meeting of the EC is scheduled for July 23, 2018 from 12:00 to 1:00 p.m. at the Yolo County Flood Control and Water Conservation District (YCFC&WCD) Headquarters in Woodland.

One YSGA Entity Working Group Meeting was held on May 3, 2018. This meeting was held for Entity representatives to review the data needs for Stockholm Environment Institute (SEI) to complete the Entities' water budgets (the Table of Contents of the *Representation of Entities in the Yolo SGA Model* is attached). These water budgets will be critical for developing the Yolo Subbasin Groundwater Sustainability Plan (GSP). A follow-up meeting was held on May 23, 2018 with the urban entities (Cities of Woodland, Davis, and West Sacramento, and UC Davis) to discuss and clarify the data they have submitted. A similar data review meeting will be held with the agricultural water-based entities soon.

Staff continued to engage in discussions with the Solano Subbasin GSA, the Freshwater Trust, two reclamation districts, and the Department of Water Resources (DWR) on a proposed basin boundary modification. This modification, if approved, would bring the interested agencies into the Yolo Subbasin.

Additionally, staff continued to communicate with Colusa Groundwater Authority and the Solano Subbasin GSA.

The <http://yologroundwater.org> website was maintained and updated to reflect current activities.

Program Implementation

Water Budgets: As noted above, SEI continued developing the regional and entity-specific water budgets. All JPA members (water purveyors) are represented in the model. Next steps after the conclusion of the data gathering include calibration and documentation. While these model water budgets will be continually updated

and refined, the vast majority of the work involved in building the program structure and initial data sets should conclude by the end of summer.

Grant Application and Award: On behalf of the YSGA the YCFC&WCD submitted the Yolo Subbasin Groundwater Sustainability Plan Proposition 1 grant application in November. On May 7, 2018, grant funding in the amount of \$1,000,000 was announced as a conditional final award to the Yolo Subbasin Groundwater Agency for developing the Yolo Subbasin GSP. The Executive Officer and YCFC&WCD staff confirmed the award with DWR and worked towards entering into an agreement. The final agreement template should be available by the end of June 2018, with grant execution expected in September 2018.

Groundwater Monitoring: The groundwater monitoring program continues to track groundwater elevations through the year. Three new real-time groundwater level monitoring sites have been, or will be soon, installed. The first was placed in a “white area” in a groundwater well in the Golden Bear Estates – an area of critical concern. A second was installed adjacent to Cache Creek near the Moore Siphon, which will assist in analyzing surface water-groundwater interactions. A third level-sensor will be installed in a well provided be River Garden Farms. All real-time groundwater level information can be viewed on the YSGA’s website at <http://yologroundwater.org>.

Technical discussions continue to determine how to expand and enhance the groundwater monitoring program once the GSP grant agreement is finalized. Hydrographs are included below illustrating the biannual groundwater level recordings from the WRID wells, along with the real-time continuous groundwater level recordings from a single well.

Program Outreach

Staff participated in a number of meetings/workshops/conferences related to SGMA and groundwater recharge and protection. These meetings included;

1. Meeting with Jay Ziegler and Sandi Matsumoto to discuss The Nature Conservancy’s Groundwater-Dependent Ecosystem Database (March 19, 2018; O’Halloran, Sicke)
2. Attended Anne Schneider Lecture on Surface Water-Groundwater Interaction featuring Kevin O’Brien and Maurice Hall (April 4, 2018; Director Ramos, Director Brice, Sicke)
3. Attended The Nature Conservancy’s unveiling of their new Groundwater Resources Hub (a tool designed to help in analyzing surface/groundwater interactions. <https://groundwaterresourcehub.org/>) (April 16, 2018; O’Halloran)
4. Participated in the ACWA Groundwater Committee (May 8, 2018; O’Halloran, Sicke)
5. Attended Colusa Groundwater Authority Board Meeting (May 22, 2018; O’Halloran, Sicke)
6. Spoke on the Yolo SGMA process at the Northern California Water Leaders’ program (May 24, 2018; O’Halloran, Sicke, Stevenson)
7. Attended and Presented (twice) at the Groundwater Resources Association’s GSA Summit (June 6-7, 2018; O’Halloran, Sicke)
8. Participation in NCWA Groundwater Management Task Force to discuss local SGMA implementation (June 11, 2017; Director Brice, O’Halloran, Sicke)
9. Hosted Water Find USA to review their SGMA-related data management platform. (June 14, 2018; O’Halloran, Sicke)
10. Provided comments on fee increase for excess flows to groundwater recharge permits at State Water Board Water Rights Fees Stakeholder Meeting (June 14, 2018; Sicke)
11. Multiple meetings with SEI and member entity representatives on GSP related issues. (O’Halloran, Sicke, Stevenson)

12. Various discussions were held regarding the basin boundary modification potential (O'Halloran, Sicke)

Other Items of Note

A water bond has qualified for the November ballot, which includes \$640 million for implementation of GSP projects.

Current Groundwater Conditions

Groundwater levels continue to be monitored. Now that the irrigation season is in full swing, groundwater levels have been declining (as expected). Given the below-average rainfall received this past Winter, groundwater levels remain relatively high. In fact, when compared to last year's elevations (as shown on the historical groundwater level table below) there is less than an average seven-foot difference between the two years.

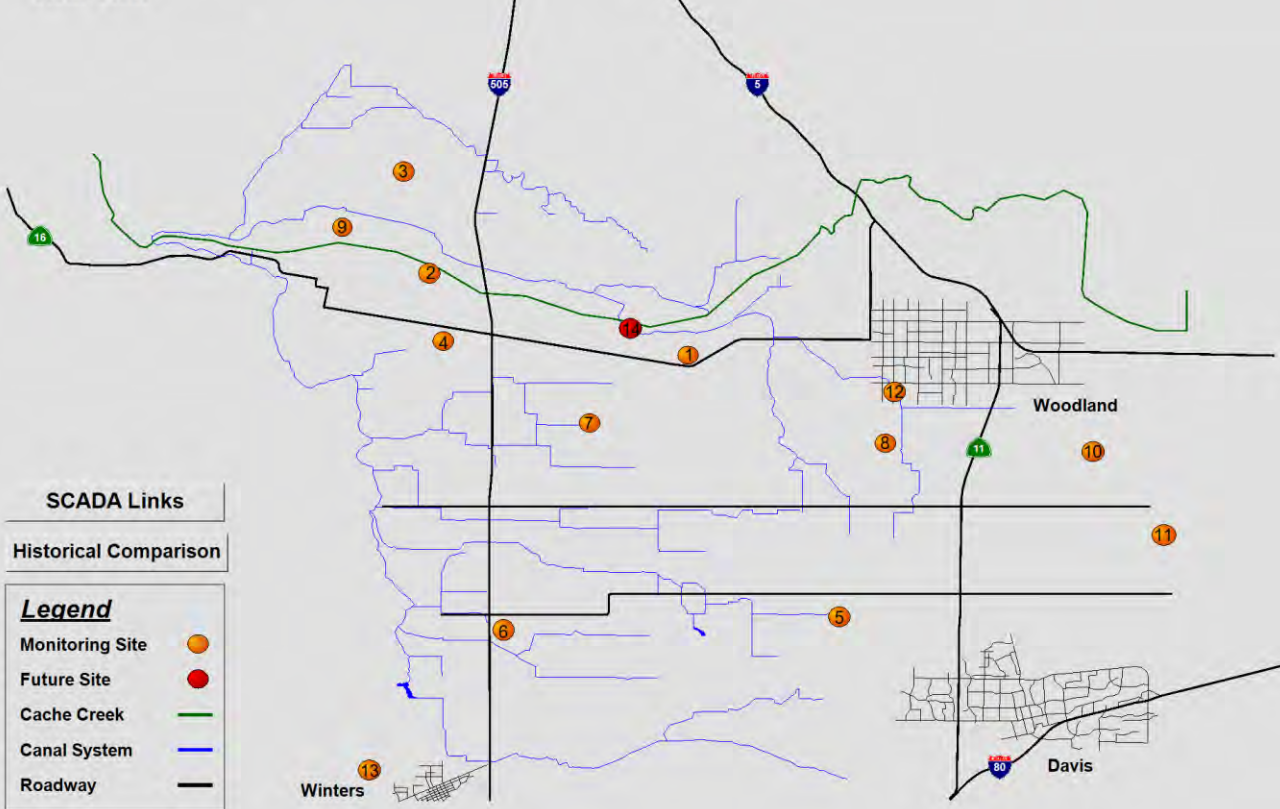
Included below are the following graphics that illustrate the current groundwater conditions and monitoring efforts.

1. A location map of the 15 real-time monitoring locations currently operating (or operating soon) in Western Yolo County. We hope to expand this network to include representative points throughout the Yolo Subbasin.
2. A table showing historical groundwater elevations on a specific date (June 14, 2018 in this example).
3. A hydrograph of the average groundwater level based on 117 monitored wells throughout Western Yolo County. These measurements are taken twice annually, once in the spring when groundwater levels are at their highest and again in the fall when groundwater levels are at their lowest.
4. A hydrograph showing continuous (real-time) measurements from a single well. The particular well shown is located at the YCFC&WCD headquarters west of Woodland. The pattern of the hydrograph shows the typical rise in water level during the winter and the decline in water level during the summer months.
5. Two bar-charts showing the number of groundwater well permits that have been issued by the Yolo County. The top chart shows the **total** number of groundwater well permits issued, while the bottom chart shows agricultural wells only. The 2018 numbers are through May 31, 2018.

This data is current as of June 14, 2018. Visit <http://yologroundwater.org> for more detailed information.

Well Monitoring

Real-Time



Well Monitoring

Depth to Water Historical Comparison

(Daily Average DTW in feet)

SCADA Links

Select Date

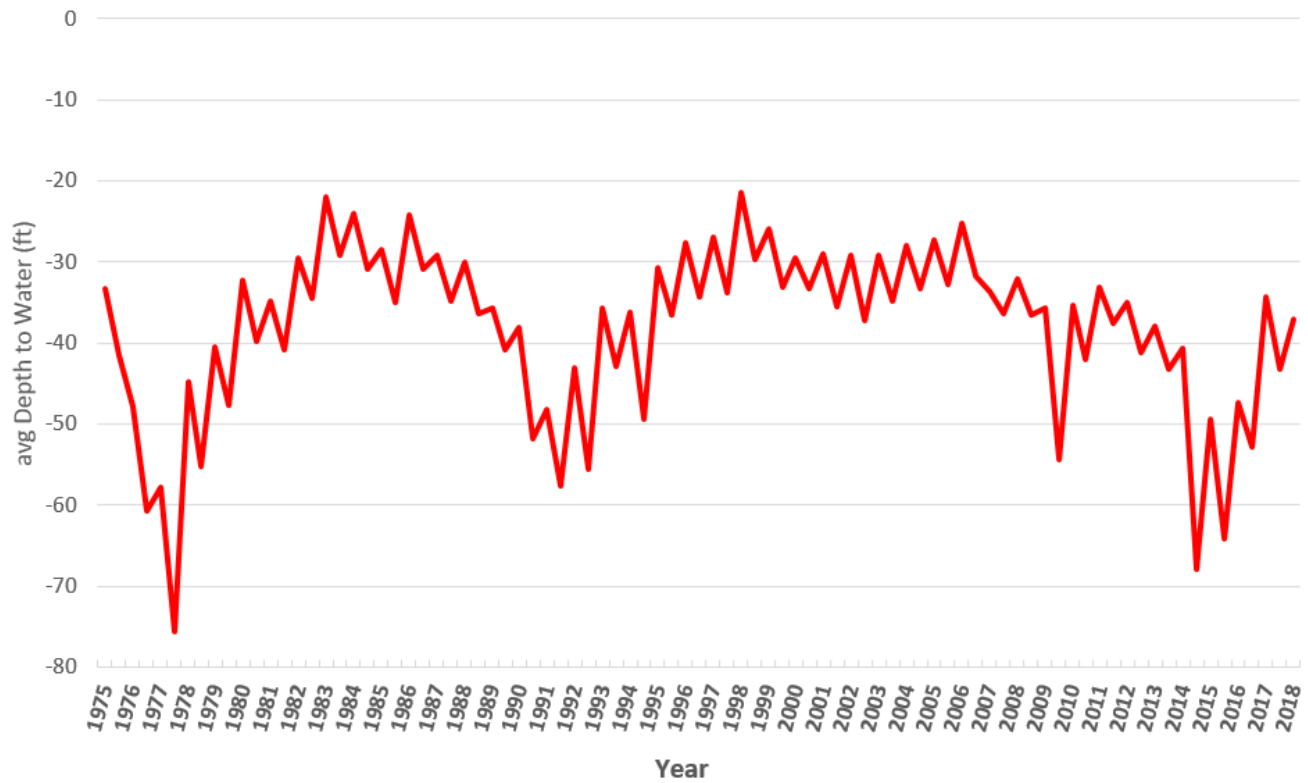
Well Map

06/14/18

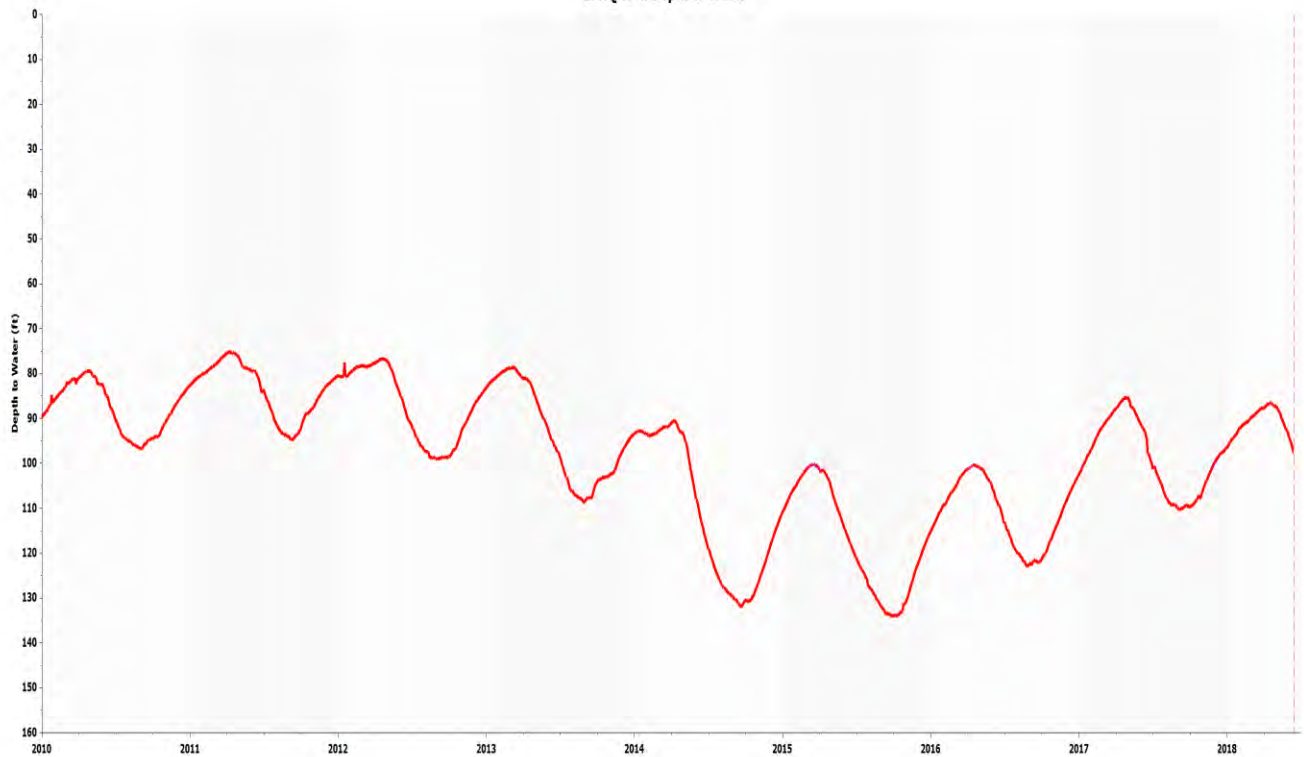
Well	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	<u>Δ 2017</u> <u>- 2018</u>
1.		88.0	80.5	88.3	95.8	113.7	117.8	109.2	93.6	97.5	-4.0
2.		48.3	39.9	44.9		49.7	46.2	43.6	27.8	32.8	-5.1
3.			38.6	41.8	46.7	70.9	71.6	58.2	36.7	42.3	-5.6
4.			36.0	37.4	44.3	56.0	59.2	53.2	30.6	38.4	-7.8
5.			14.6	18.7	17.1	32.6	33.6	36.7	20.4	28.2	-7.8
6.				57.3	62.4	87.2	84.4	68.3	38.0	51.4	-13.4
7.						29.3	40.2	28.5	15.2	18.4	-3.2
8.						87.7	88.6	84.5	61.2	66.9	-5.7
9.						64.1	64.7	55.0	38.0	43.1	-5.1
10.							125.6	71.1	44.3	50.6	-6.3
11.							31.0	22.6	15.0	17.6	-2.6
12.										103.8	

YCFCWCD Average Groundwater

Depth by Season (spring 2018 is 112 wells)

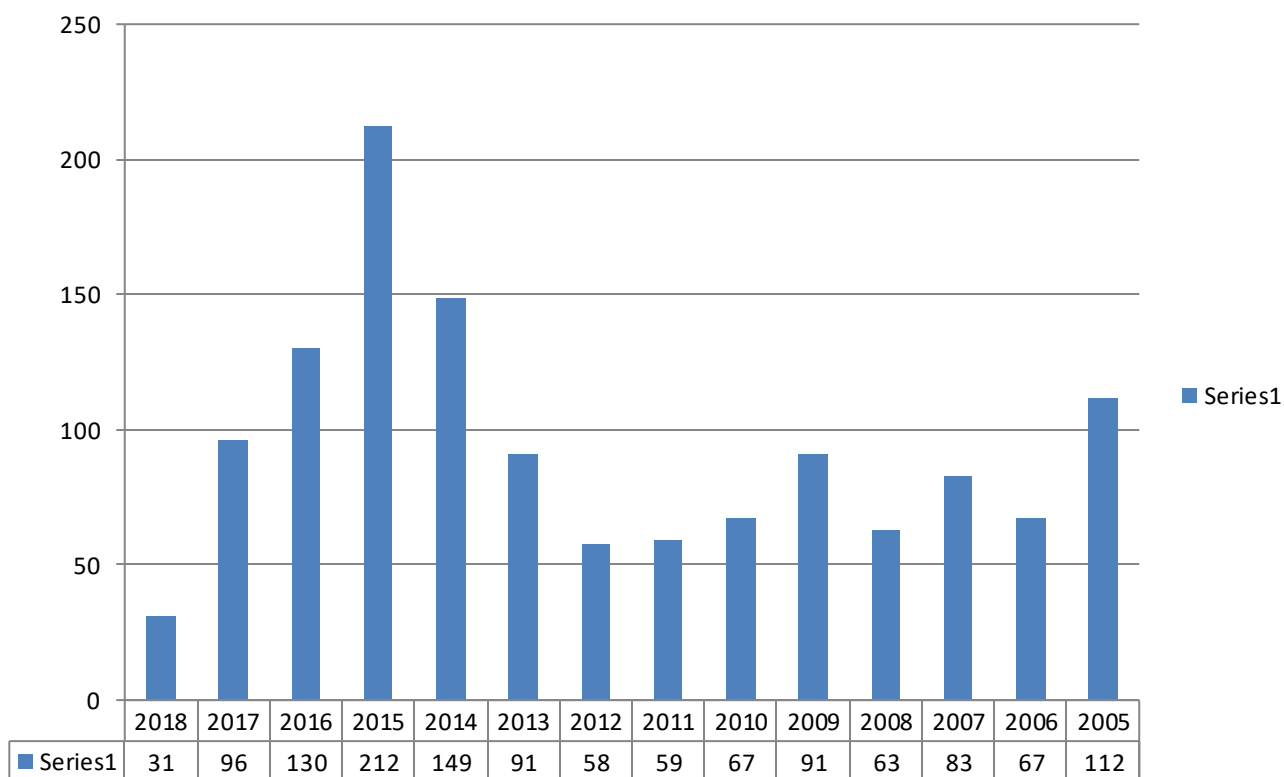


1. HQ Well Depth to Water

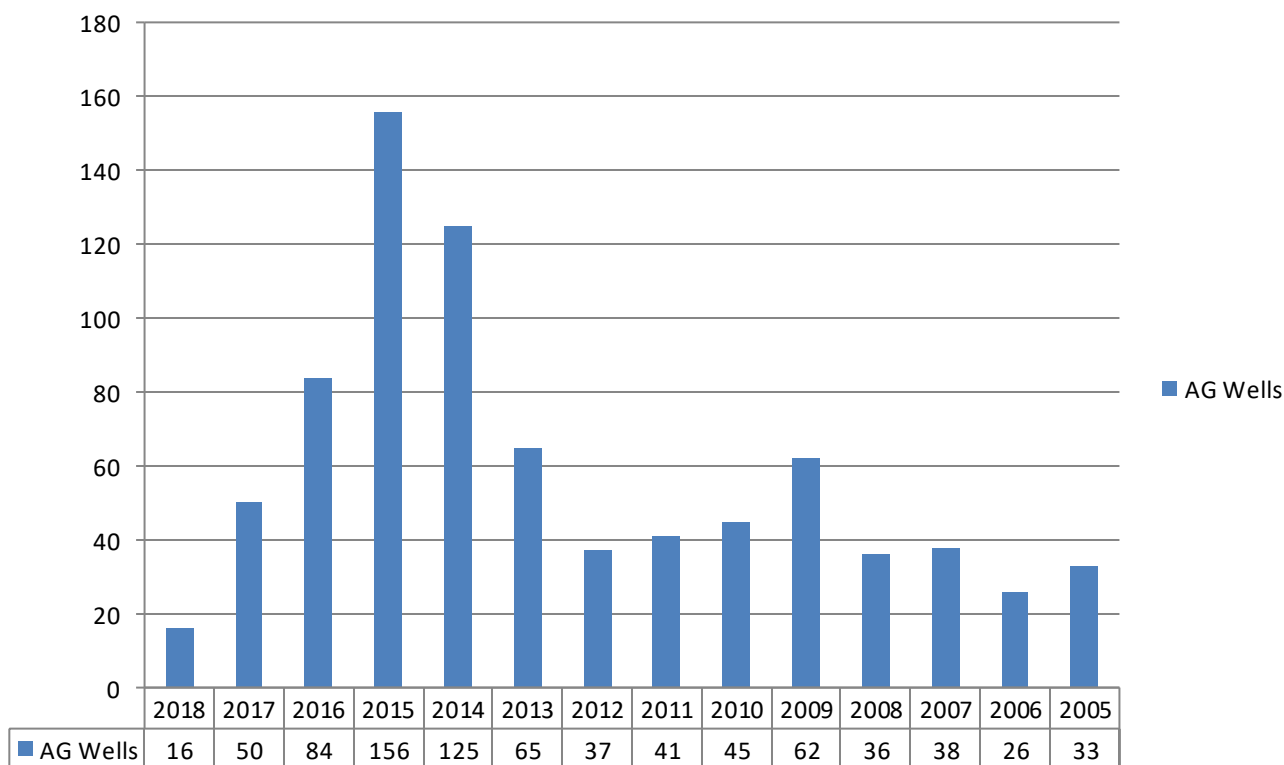


Time: 6/12/2018 3:52:54/05 PM 47.88
 1. HQ Well Depth to Water - Raw (Missing channels...)

Well Totals



AG Wells



REPRESENTATION OF ENTITIES IN THE YOLO SGA MODEL

Schematic representation, Data sources, and Questions

Acronyms

AF	-	Acre Feet
CFS	-	Cubic Feet per second
CWA	-	Clean Water Agency
RD	-	Reclamation District
UCD	-	University of California Davis
USBR	-	U.S. Bureau of Reclamation
UWMP	-	Urban Water Management Plan
WY	-	Water year
YCFC	-	Yolo County Flood Control and Water Conservation District
GPD	-	Gallons per day

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(Document history: May 8, 2017 updated May 2, 2018)

1.1 Representation of entities within the WEAP model

Each entity is represented by at least one catchment object, which represents the physical area of the entity. Figure 1 shows the catchment boundaries and names in the model. Catchment boundaries were developed using the entities' boundaries, CASGEM area boundaries and USGS HUC 8 area boundaries. Some entities' area is divided into multiple catchments (e.g., YCFC), and some are fully contained in only one catchment. The catchment contains land use information and, if irrigation occurs within the entity's boundary, the catchment is connected to at least one water source.

Rainfall-runoff calculations occur within the catchments, so volumes of runoff and infiltration from the catchment area are generated for each time step based on precipitation information, irrigation (based on crop type), land use, and soil parameters. Each catchment is connected to at least one surface water and groundwater object, representing the runoff and infiltration sinks respectively. Some catchments runoff to more than one water body because the catchment area overlies two watersheds.

If the entity has water demands other than irrigation (e.g. cities), the entity is also represented by a demand object. The demand object is connected to at least one water supply. Each entity is further outlined below. All catchments and demand objects are set up such that they use surface water primarily, **if it is available**, and only use groundwater when there is not sufficient surface water to meet the demand.

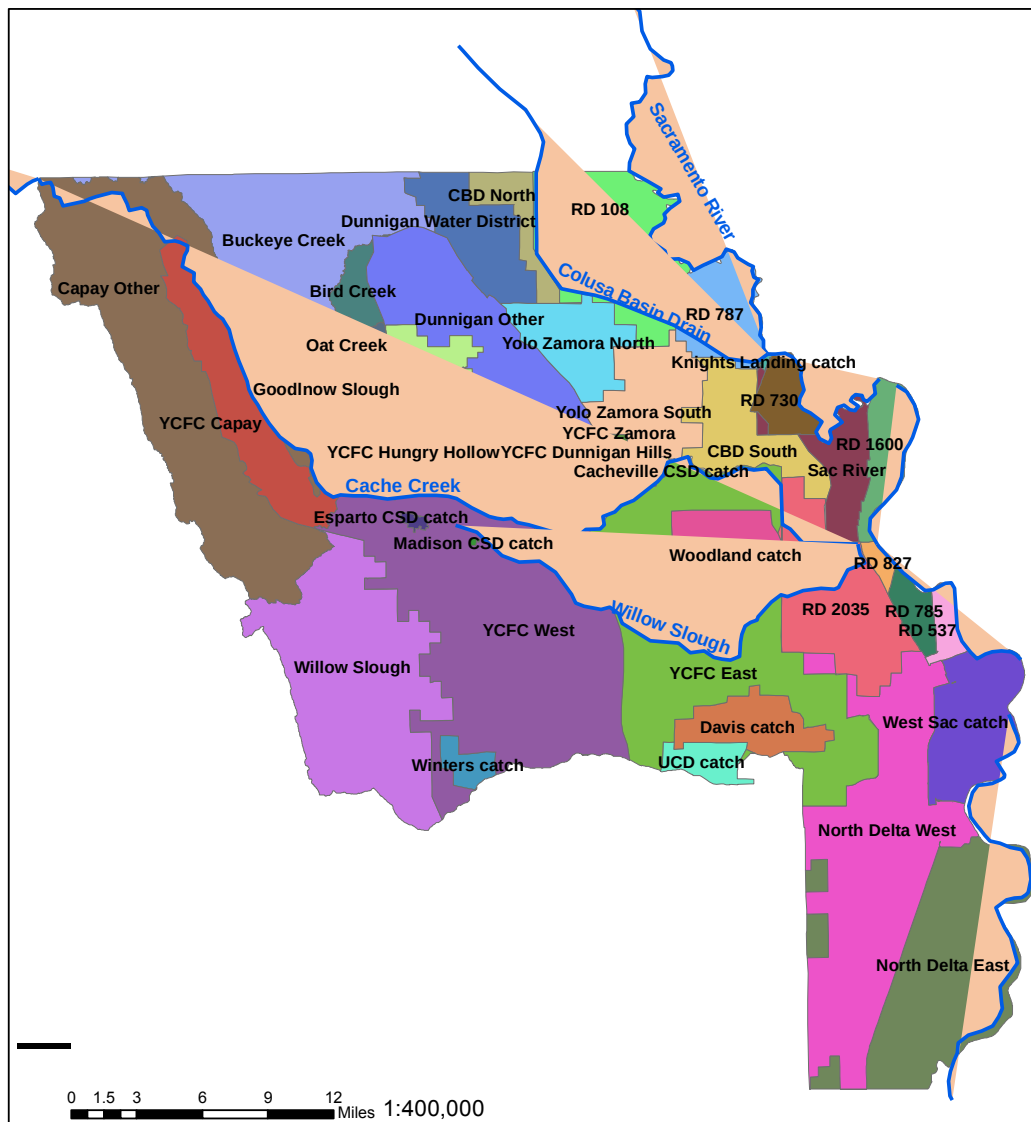


Figure 1 Catchment boundaries and names in the WEAP model built for Yolo SGA use

Yolo Subbasin Groundwater Agency Board of Directors Meeting Agenda Report

MEETING DATE: June 18, 2018

AGENDA ITEM NO. 5

SUBJECT: Consideration: Consent Items

INITIATED OR ☐ BOARD
REQUESTED BY: ☒ STAFF
☐ OTHER _____

☐ INFORMATION
☒ ACTION: ☒ MOTION
☐ RESOLUTION

ATTACHMENT ☒ YES ☐ NO

BACKGROUND

- a. *Approve March 19, 2018 Board of Directors Meeting Minutes*
Pursuant to Section 54957.5 of the Brown Act, copies of the draft minutes are available to the public at the Board meetings prior to their approval.
- b. *Receive Fiscal Year 2017-2018 Financial Statements: March to May 2018*
Financial statements are included for March 1, 2018 to May 31, 2018.
- c. *Receive Fiscal Year 2017-2018 Budget Amendments, Executive Committee Report and Budget*
Fiscal Year 2017-2018 budget amendments recommended by the Executive Committee.
- d. *Adopt Board Policy on Cash Reserves, Executive Committee Report*
Executive Committee recommends establishing a cash reserves policy.

RECOMMENDATION

- a. Recommend the adoption of the attached March 19, 2018 Board meeting minutes with any corrections.
- b. This agenda item is for informational purposes only. No Board action is required.
- c. Recommend approval of Fiscal Year 2017-2018 budget amendments.
- d. Recommend the adoption of a cash reserves policy.

Yolo Subbasin Groundwater Agency
Board of Directors' Meeting Minutes (DRAFT)

Monday, March 19, 2018, 3:30 p.m.

Woodland Community and Senior Center, 2001 East Street, Woodland, CA 95776

1. **CALL TO ORDER and DETERMINATION OF QUORUM:** Meeting called to order at 3:30 p.m. by Beverly Sandeen, Chair.

Executive Officer O'Halloran conducted a roll call and determined a quorum was present.

The following Board members and (alternates) were in attendance:

California American Water Company Dunnigan: Evan Jacobs
City of West Sacramento: Beverly Sandeen, Board Chair
City of Winters: Jesse Loren, (Kurt Balasek)
City of Woodland: Skip Davies
Colusa Drain Mutual Water Company: Lynnel Pollock
Dunnigan Water District: George Burger, (Donita Hendrix)
Reclamation District (RD)108: Hilary Reinhard
RD 537: Tom Ramos (arrived after roll call)
RD 730: Jim Heidrick
RD 787: Roger Cornwell, Board Vice-chair
RD 827: Dan Ramos (arrived after roll call)
RD 1600: Michele Clark
University of California Davis (UCD): Camille Kirk
Yocha Dehe Wintun Nation: (Marc Fawns)
Yolo County: (Jim Provenza)
Yolo County Farm Bureau: (Denise Sagara)
Yolo County Flood Control & WCD: Tom Barth, (Tim O'Halloran, Executive Officer)

ABSENT: City of Davis, Esparto CSD, Madison CSD, RD 765, RD 785, RD 2035

2. **APPROVE AGENDA:** The Board approved the March 19, 2018 agenda as posted. Motioned by City of Woodland to approve the agenda, seconded by UCD and unanimously approved.
Absent: City of Davis, Esparto CSD, Madison CSD, RD 765, RD 785, RD 2035
3. **PUBLIC FORUM:** No comments from the public.
4. **REPORT OF THE VICE-CHAIR and EXECUTIVE OFFICER:** Executive Officer O'Halloran referenced the written report summarizing activities since the last Board meeting (Agenda pages 3 – 8). He did not provide any additional comments.
5. **CONSENT ITEMS:** Motioned by Colusa Drain MWC to approve all consent items, seconded by City of Winters and unanimously approved. *Absent:* City of Davis, Esparto CSD, Madison CSD, RD 765, RD 785, RD 2035
 - a. *Approve November 13, 2017 Board of Directors meeting minutes*
 - b. *Receive final Conflict of Interest Code adopted by the Fair Political Practices Commission (FPPC)*
 - c. *Receive FY2017-18 Financial Statements: July 2017 to February 2018*

6. **DEPARTMENT OF WATER RESOURCES (DWR) UPDATE**

Barrett Kaasa, DWR, introduced himself as the point-of-contact for the Yolo Subbasin. He gave an update on items related to the Sustainable Groundwater Management Act (SGMA) program. His summary notes are included at the end of these minutes.

- 7. RECEIVE CANDIDATE RECOMMENDATION for the Board of Directors' Environmental Affiliate Representative,** Elisa Sabatini, Subcommittee Co-chair, gave a summary of the subcommittee's process to develop a short description of the duties and qualities of the environmental affiliate representative. They considered various individuals and environmental groups as potential candidates. The subcommittee recommended Ann Brice as a suitable candidate for this seat. The YSGA Executive Committee also agreed with the subcommittee's recommendation to the Board. The subcommittee also recommended that the Board defer discussion of the Environmental Affiliate's YSGA membership fee until the Board's fiscal year 2019-20 budget adoption process in June 2019.

- 1) Motioned by Yolo County to defer discussion of YSGA membership fee for the Environmental Affiliate Representative Board seat until June 2019, seconded by City of Woodland and unanimously approved.
- 2) Motioned by the Yolo County Flood Control & WCD to approve the recommendation appointing Ann Brice to the Environmental Affiliate Representative Board seat, seconded by RD 787 and unanimously approved.

Absent: City of Davis, Esparto CSD, Madison CSD, RD 765, RD 785, RD 2035

- 8. CONSIDERATION: NOTICE OF INTENT TO DEVELOP THE YOLO SUBBASIN GROUNDWATER SUSTAINABILITY PLAN (GSP),** Kristin Sicke, YCFC&WCD, reported that a purpose of the initial notification process is to establish a list of persons interested in receiving notices regarding the development of the YSGA's GSP. The YSGA is also required to provide a formal written notification to the Yolo County cities, the County and the California Public Utilities Commission. DWR will post the initial notification to their website for a 60-day comment period.

Motioned by City of Woodland to adopt Resolution 2018-01 formally initiating the development of the YSGA GSP and authorize the Executive Officer or Kristin Sicke to submit the YSGA's notice of intent to DWR, seconded by City of Winters and unanimously approved.

Absent: City of Davis, Esparto CSD, Madison CSD, RD 765, RD 785, RD 2035

9. PRESENTATION: GROUNDWATER SUSTAINABILITY PLAN DEVELOPMENT

Tim O'Halloran summarized the overall goal of developing a Groundwater Sustainability Plan (GSP). Primarily each basin needs to achieve "sustainable groundwater management" by avoiding the "six undesirable results" detailed in the Sustainable Groundwater Management Act (SGMA). Those undesirable results are chronic lowering of groundwater levels, reduction of groundwater storage, seawater intrusion, degraded water quality, land subsidence, and depletions of interconnected surface water. He gave an example of how these sustainability criteria might be applied to the five management areas defined in the Yolo GSA organizational structure. A question was raised about how depletion of interconnected surface water can be avoided if someone is pumping groundwater from a well. Tim explained DWR will likely provide more guidance on how to address this issue and what will constitute a significant and unreasonable impact on beneficial users. He gave his viewpoint that it is not the expectation to restrict well pumping, but other factors will need to be considered, such as habitat management.

Kristin Sicke summarized the Proposition 1 grant request submitted to DWR to develop the GSP. DWR announced a draft award for the YCFC&WCD on behalf of the YSGA for a \$1 million grant with an agreement execution anticipated in Summer 2018. She outlined the four main tasks of the GSP work

plan and the associated cost estimates.

Max Stevenson gave a presentation describing the existing groundwater monitoring program. There are two types of monitoring for water level and water quality. Max focused on the historical data collected on groundwater level monitoring in Yolo County. He gave an overview of groundwater monitoring program activities. About one-third of the \$1 million GSP grant funds will support monitoring program improvements. The GSP Development PowerPoint including Tim, Kristin, and Max's presentations will be posted online: <http://yologroundwater.org/index.php/ysga-board-meetings/>.

Tim introduced David Gutierrez, GEI Consultants, who was intricately involved in the development of the SGMA Program during his tenure at DWR. He reflected on the growth of the implementation of this program in Yolo County since he first attended a WRA Board meeting in 2014. DWR intended for SGMA implementation to be managed locally. David commended the excellent leadership and stakeholder involvement in Yolo County, which is making successful implementation a reality today. David addressed some of the concerns mentioned earlier, such as, how the mathematical model will be used and will help with future project development. Although SGMA regulations require modeling that does not dictate compliance. Compliance is dictated by monitoring and Yolo County is very fortunate to have a strong monitoring program that was established long before SGMA. He is encouraged to see that we are continuing to invest in our monitoring program as part of the GSP development. He touched on a question that was raised about depletion of interconnected surface water: moving forward, the guidance documents provided by DWR will be more clearly defined on this challenging topic. It was never the intent of the regulations to not allow groundwater pumping around a river or stream. However, the pumper needs to understand the interconnected nature of this activity, while paying attention to the potential creation of undesirable results.

Tim thanked Max, Kristin, and David for their presentations. Chair Sandeen asked Tim what information the Board can expect at the June meeting. By June, many of the individual YSGA entities will meet with Stockholm Environment Institute (SEI) to develop their draft water balances. And the Working Group will meet a couple of times to review the preliminary results of the modeling information.

10. MEMBERS' REPORTS and FUTURE AGENDA ITEMS – YSGA Members were invited to briefly report on current issues and recommended topics for future YSGA Board of Directors meetings.

- a. Establishment of Subcommittee for Reconsideration of Voting Structure and Expense Allocation (Agreement Section 5.11)
- b. Brown Act training for the Agency Board of Directors
- c. White Area Annexation
- d. Basin Boundary Modification
- e. Board Policy on Reserve Funding

11. NEXT MEETING – Monday, June 18, 2018

12. ADJOURNMENT – Motion to adjourn by the City of Winters, seconded by RD108 and was unanimously approved. Meeting was adjourned at 4:30 p.m.

Absent: City of Davis, Esparto CSD, Madison CSD, RD 765, RD 785, RD 2035

Respectfully submitted,

Donna L. Gentile,
Board Secretary & Administrative Coordinator



**California Department of Water Resources
Division of Integrated Regional Water Management
North Central Region Office**

Prepared for **Yolo GSA** Board Meeting,
Wednesday, March 19, 2018.

North Central Regional Office Contact:

Barrett Kaasa, Engineering Geologist
E-mail: bkaasa@water.ca.gov
Phone: (916) 376-9618

Office Address:

3500 Industrial Blvd, Room 131
West Sacramento, CA 95691
Office Phone: (916) 376-9600

A. Prop 1 Sustainable Groundwater Planning Grant Program

DWR Financial Assistance Branch (water.ca.gov/funding)

Financial Assistance Mailing List Subscription: <http://www.water.ca.gov/funding/subscription.cfm>

→ Groundwater Planning Grant Program

Program Website: water.ca.gov/irwm/grants/sgwp/

- Draft funding recommendations: <http://www.water.ca.gov/irwm/grants/sgwp/solicitation.cfm>
- Public comment ended on February 28th. DWR is currently reviewing the public comments.
- Yolo tentatively awarded \$1 million based on draft recommendations
- Final funding awards announced early April
- Grant agreements with COBs spring/early summer, High and Med basins late summer, early fall
- Must submit GSP initial notification before finalizing agreement

Groundwater Planning Grant Program Contact:

Jason Brabec
E-mail: Jason.Brabec@water.ca.gov
Phone: (916) 657-4893

B. Sustainable Groundwater Management (SGM) Updates

DWR Sustainable Groundwater Management Branch (water.ca.gov/groundwater/sgm)

SGM Mailing List Subscription: water.ca.gov/groundwater/sgm/subscribe.cfm

→ Basin Boundary Modifications

- http://www.water.ca.gov/groundwater/sgm/basin_boundaries.cfm
- Basin boundary modification submission period opened on January 1, 2018 and closes on June 30, 2018
- Public comment period is open from June 30 to July 30, 2018

→ GSP Initial Notification System

- http://water.ca.gov/groundwater/sgm/gsp_in.cfm

- <http://sgma.water.ca.gov/portal/>
- As required by the GSP emergency regulations, GSAs must notify the department prior to initiating the development of a GSP.
- Notification should describe the manner in which interested parties can become involved in GSP development.

→ DWR is offering Facilitation Support Services for GSP Development

- http://www.water.ca.gov/groundwater/sgm/facilitation_services.cfm
- Available until funding runs out. Priority goes to critically overdrafted basins.
- Online application and map of basins receiving FSS
- Can be used for stakeholder identification and engagement, meeting facilitation, and public outreach
- Funding is used for this fiscal year, but more can become available next fiscal year if you let DWR know you're interested

→ SGMA Technical Support Services

- Services may include monitoring well construction, video logging, geophysical logging, geologic logging, groundwater data collection, C2VSIM/IWFM model training and support, mapping/GIS support
- Application period expected spring 2018
- Must submit GSP initial notification before applying
- Priority to filling data gaps
- Similar application to FSS, will be online, but is not available yet.
- Initial funding of: 2 million, priority to COB with data gaps, then high/med with data gaps
- Future funding of: 12 million if SB 5 passes

SGMA Regional Coordinator:

Paul Wells, Senior Engineer

E-mail: Paul.Wells@water.ca.gov

Phone: (916) 376-9656

Yolo Subbasin Groundwater Agency

Balance Sheet

As of May 31, 2018

	<u>May 31, 18</u>
ASSETS	
Current Assets	
Checking/Savings	
1000 · 1st Northern-Checking	888.85
1010 · 1st Northern-Savings	99,500.46
1020 · Yolo County Treasury	234,161.22
Total Checking/Savings	<u>334,550.53</u>
Total Current Assets	<u>334,550.53</u>
TOTAL ASSETS	<u><u>334,550.53</u></u>
LIABILITIES & EQUITY	
Equity	
Net Income	334,550.53
Total Equity	<u>334,550.53</u>
TOTAL LIABILITIES & EQUITY	<u><u>334,550.53</u></u>

**Yolo Subbasin Groundwater Agency
FY2017-2018 Budget vs. Actual
July 2017 through May 2018**

	Jul '17 - May 18	Budget	% of Budget
Income			
4000 · Member Contributions-Municipal	160,000.00	160,000.00	100.0%
4100 · Member Contributions-Rural	221,874.00	221,874.00	100.0%
4200 · Member Contributions-Affiliates	65,000.00	65,000.00	100.0%
4300 · Direct Contribution-White Areas	0.00	20,000.00	0.0%
4400 · Interest Income	998.23	0.00	100.0%
Total Income	447,872.23	466,874.00	95.93%
Expense			
5100 · Bank & Other Fees	259.82	0.00	100.0%
5300 · Insurance-General & Auto	1,969.00	0.00	100.0%
5500 · Membership Dues	579.38	0.00	100.0%
7000 · Admin. Services/Expenses (WRA)	100,000.00	120,000.00	83.33%
7100 · Project Mgmt-SGMA Implementatio	0.00	110,000.00	0.0%
7200 · Consultant Services	0.00	20,000.00	0.0%
7300 · Legal Services	10,513.50	20,000.00	52.57%
7500 · Groundwater Monitoring	0.00	80,000.00	0.0%
Total Expense	113,321.70	350,000.00	32.38%
Net Income	334,550.53	116,874.00	

Yolo Subbasin Groundwater Agency

Profit & Loss

July 2017 through May 2018

	<u>Jul - Sep 17</u>	<u>Oct - Dec 17</u>	<u>Jan - Mar 18</u>	<u>Apr - May 18</u>	<u>TOTAL</u>
Income					
4000 · Member Contributions-Municipal	0.00	160,000.00	0.00	0.00	160,000.00
4100 · Member Contributions-Rural	0.00	221,874.00	0.00	0.00	221,874.00
4200 · Member Contributions-Affiliates	0.00	65,000.00	0.00	0.00	65,000.00
4400 · Interest Income	0.00	0.01	0.45	997.77	998.23
Total Income	<u>0.00</u>	<u>446,874.01</u>	<u>0.45</u>	<u>997.77</u>	<u>447,872.23</u>
Expense					
5100 · Bank & Other Fees	0.00	149.27	0.00	110.55	259.82
5300 · Insurance-General & Auto	0.00	1,969.00	0.00	0.00	1,969.00
5500 · Membership Dues	46.88	187.50	0.00	345.00	579.38
7000 · Admin. Services/Expenses (WRA)	0.00	0.00	70,000.00	30,000.00	100,000.00
7300 · Legal Services	0.00	9,060.00	598.50	855.00	10,513.50
Total Expense	<u>46.88</u>	<u>11,365.77</u>	<u>70,598.50</u>	<u>31,310.55</u>	<u>113,321.70</u>
Net Income	<u><u>-46.88</u></u>	<u><u>435,508.24</u></u>	<u><u>-70,598.05</u></u>	<u><u>-30,312.78</u></u>	<u><u>334,550.53</u></u>

Yolo Subbasin Groundwater Agency
Transaction List by Date
March through May 2018

Type	Date	Num	Name	Memo	Account	Clr	Split	Amount
Payment	03/05/2018	276614	City of Woodland		1200 · Undeposited Funds	√	1100 · Accounts Receivable	40,000.00
Deposit	03/06/2018			Deposit	1020 · Yolo County Treasury	√	-SPLIT-	66,600.00
Bill Pmt -Check	03/06/2018	106	Downey Brand		1000 · 1st Northern-Checking	√	2000 · Accounts Payable	-598.50
Payment	03/28/2018	ACH-#687	Reclamation District 537		1200 · Undeposited Funds	√	1100 · Accounts Receivable	2,600.00
Deposit	03/28/2018	EFT		Direct Deposit from Yolo County Treasury	1000 · 1st Northern-Checking	√	1200 · Undeposited Funds	2,600.00
Deposit	03/30/2018			Interest	1010 · 1st Northern-Savings	√	4400 · Interest Income	0.45
Check	04/01/2018			Service Charge	1020 · Yolo County Treasury	√	5100 · Bank & Other Fees	-110.55
Deposit	04/01/2018			Interest	1020 · Yolo County Treasury	√	4400 · Interest Income	997.77
Bill	04/23/2018		Yolo County Flood Control & WCD		2000 · Accounts Payable		5500 · Membership Dues	-345.00
Bill	04/24/2018	2018-05	Water Resources Association of Yolo Cty		2000 · Accounts Payable		7000 · Admin. Services/Expenses (WRA)	-30,000.00
Transfer	04/24/2018			Funds Transfer	1010 · 1st Northern-Savings	√	1000 · 1st Northern-Checking	-30,000.00
Bill Pmt -Check	04/26/2018	107	Water Resources Association of Yolo Cty		1000 · 1st Northern-Checking	√	2000 · Accounts Payable	-30,000.00
Bill Pmt -Check	04/26/2018	108	Yolo County Flood Control & WCD		1000 · 1st Northern-Checking	√	2000 · Accounts Payable	-345.00
Transfer	04/26/2018				1020 · Yolo County Treasury	√	1000 · 1st Northern-Checking	-91,000.00
Transfer	05/04/2018			Funds Transfer	1000 · 1st Northern-Checking	√	1010 · 1st Northern-Savings	-93,000.00
Bill	05/17/2018	524441	Downey Brand		2000 · Accounts Payable		7300 · Legal Services	-855.00
Bill Pmt -Check	05/29/2018	109	Downey Brand		1000 · 1st Northern-Checking		2000 · Accounts Payable	-855.00

Yolo Subbasin Groundwater Agency

Groundwater Sustainability Agency

34274 State Highway 16 Woodland, CA 95695 530.662.3211 www.yologroundwater.org

EXECUTIVE COMMITTEE REPORT

Date: June 18, 2018
To: YSGA Board of Directors
From: Executive Committee and Donna Gentile, Administrative Coordinator
Re: **AMENDMENT OF FISCAL YEAR 2017-2018 BUDGET**

Recommendation:

That the Board approve the proposed amended Fiscal Year 2017-2018 operating budget (attached). This amended budget will be the operating budget for Fiscal Year 2018-2019.

Background:

The YSGA Board adopted a two-year operating budget on June 17, 2017 for fiscal years July 2017 to June 2018 and July 2018 to June 2019. Since this was the inaugural budget of this newly formed agency, there were some income and expense amounts that were not known until operations were established. This proposed amendment is adjusting for these budget changes. Those changes are noted with an asterisk in the attached spreadsheet, which are:

Interest Income (line 31): Estimated interest to be received from all cash accounts with First Northern Bank and the Yolo County Treasury.

Bank & Other Fees (line 37): Estimated expenses for bank fees from First Northern Bank and the Yolo County Treasury.

Insurance - General & Auto (line 38): Annual expense to provide general liability and auto insurance from Association of California Water Agencies (ACWA) JPIA for the YSGA.

Membership Dues (line 39): Expenses anticipated for joining affiliated professional agencies. Agencies currently joined include ACWA and the Groundwater Resources Association of California.

Yolo County Groundwater Monitoring Program (line 45): Administrative costs to maintain the Yolo County Groundwater Monitoring Program. Program historically funded by WRA Member Agencies from July 2009 to June 2017. The historical cost of the Program was \$89,000 with the YCFC&WCD providing \$46,936 in cost share. For the first two years of the YSGA, the YCFC&WCD will continue to provide \$46,936 in cost share towards the Program.

The YSGA Board will be reviewing the budget after the first two years of operations to discuss and recommend potential revisions.

Yolo Subbasin Groundwater Agency
Fiscal Year July 1, 2017 to June 30, 2018
Budget Adopted 6/19/17
Proposed Amendment for Board Adoption - 6/18/18

	Adopted 6-19-17	Proposed Amendment
Revenue	FY2017-18	FY2017-18
City of Davis	40,000	40,000
City of West Sacramento	40,000	40,000
City of Woodland	40,000	40,000
City of Winters	20,000	20,000
Yocha Dehe Wintun Nation	10,000	10,000
Esparto Community Services District	5,000	5,000
Madison Community Services District	5,000	5,000
Subtotal Municipal Agencies Revenue	\$160,000	\$160,000
Yolo County Flood Control & WCD (200,000 acres)	100,000	100,000
Yolo County (White Areas) (160,000 acres)	40,000	40,000
Direct Contributions (White Areas) (40,000 acres)	20,000	20,000
Other Contributions from Rural Agencies ¹	40,000	40,000
Dunnigan Water District (10,700 acres)	5,350	5,350
Reclamation District 108 (23,200 acres)	11,600	11,600
Reclamation District 2035 (18,000 acres)	9,000	9,000
Reclamation District 537 (5,200 acres)	2,600	2,600
Reclamation District 730 (4,498 acres)	2,249	2,249
Reclamation District 765 (1,400 acres)	700	700
Reclamation District 785 (3,200 acres)	1,600	1,600
Reclamation District 787 (9,400 acres)	4,700	4,700
Reclamation District 827 (1,225 acres)	613	613
Reclamation District 1600 (6,924 acres)	3,462	3,462
Subtotal Rural Agencies Revenue	\$241,874	\$241,874
University of California Davis	40,000	40,000
Colusa Drain Mutual Water Company	10,000	10,000
California American Water Company - Dunnigan	5,000	5,000
Yolo County Farm Bureau (private pumpers)	10,000	10,000
Environmental Party Representative (Ann Brice)	0	0
Subtotal Affiliated Parties Revenue	\$65,000	\$65,000
Interest Income	0	2,000 *
Other Income	0	0
Subtotal Other Revenue	\$0	\$2,000
TOTAL REVENUE	\$466,874	\$468,874
EXPENDITURES	FY2017-18	FY2017-18
Bank & Other Fees	0	500 *
Insurance - General & Auto	0	2,000 *
Membership Dues	0	1,000 *
Administrative Services/Expenses (WRA)	120,000	120,000
Project Management, SGMA Implementation (YCFCWCD)	110,000	110,000
Consultant Services	20,000	20,000
Legal Services	20,000	20,000
Real-time Groundwater Monitoring Sensors (x6)	80,000	80,000
Yolo County Groundwater Monitoring Program (administrator-YCFCWCD) ²	0	42,064 *
TOTAL EXPENDITURES	\$350,000	\$395,564
Net Income (Estimated)	\$116,874	\$73,310

* - Amendment changes

1 - RD 108, RD 787, RD 2035, and YCFC&WCD (\$10,000 each)

2 - Program historically funded by WRA Member Agencies from July 2009 to June 2017. The historical cost of the Program was \$89,000 with the YCFC&WCD providing \$46,936 in cost share. For the first two years of the YSGA, the YCFC&WCD will continue to provide \$46,936 in cost share towards the Program.

Yolo Subbasin Groundwater Agency

Groundwater Sustainability Agency

34274 State Highway 16 Woodland, CA 95695 530.662.3211 www.yologroundwater.org

EXECUTIVE COMMITTEE REPORT

Date: June 18, 2018
To: YSGA Board of Directors
From: Executive Committee
Re: **ADOPT BOARD POLICY ON CASH RESERVES**

Recommendation:

That the Board adopt a policy on cash reserves as recommended below.

Background:

The YSGA Board has not established a cash reserves policy to-date. The Executive Committee is recommending the following policy for Board adoption:

The formal policy of the Yolo Subbasin Groundwater Agency (YSGA) Board is to maintain a cash reserve to cover approximately three months of estimated operating expenses, with the following provisions:

- If the YSGA Board authorizes expenditures in excess of income during a specific fiscal year for an agreed-to purpose, the cash reserve may go below the policy level.
- If the end-of-year cash reserve is in excess of the policy level, the Board can allocate the funds for an agreed-to purpose in the next fiscal year.

Yolo Subbasin Groundwater Agency Board of Directors
Meeting Agenda Report

MEETING DATE: June 18, 2018

AGENDA ITEM NO. 7

SUBJECT: Consideration: DWR's SGMA Program

INITIATED OR ☐ BOARD
REQUESTED BY: ☒ STAFF
☐ OTHER _____

☐ INFORMATION
☒ ACTION: ☒ MOTION
☒ RESOLUTION

ATTACHMENT ☒ YES ☐ NO

BACKGROUND

a. Basin Boundary Modification to Yolo Subbasin

During DWR's 2016 Basin Boundary Modification Request process, the Yolo County Flood Control and Water Conservation District submitted a basin boundary modification for consolidation of the Yolo Subbasin on behalf of the Water Resources Association of Yolo County and the Yolo County Farm Bureau. At the time, three reclamation districts in the Clarksburg area were not interested in participating in the formation of a Yolo Subbasin GSA. Since then, two of the three reclamation districts have requested to join the Yolo Subbasin: Reclamation Districts 150 and 999.

To enhance collaboration and encourage consolidation, YSGA staff think it would be best to incorporate Reclamation Districts 150 and 999 into the Yolo Subbasin with the goal of having them join the YSGA JPA. A map of the proposed basin boundary modification request is attached for review.

b. Technical Support Services Application

DWR is currently offering Technical Support Services (TSS) to provide education, data, and tools to GSAs to build the capacity needed to achieve sustainability. Services offered include monitoring well installing, groundwater level monitoring training, borehole video logging, subsidence network development, and modeling training and support. YSGA staff would like to apply with DWR to provide these services to the Yolo Subbasin. DWR is requiring a single point of contact for the Yolo Subbasin, known as the basin coordinator, for TSS requests.

The initial step in DWR's system is to submit a TSS General Application to DWR, which DWR will review over a 2-week period and determine whether a GSA is eligible for the project-specific application submittals. YSGA staff have been working with DWR staff to determine the logistics on moving forward with a TSS application. Potential services of interest to YSGA staff includes conversion of abandoned wells to monitoring wells, borehole video logging monitoring wells with inadequate construction information, and establishment of subsidence benchmarks for a comprehensive subsidence network.

c. Acceptance of Proposition 1 Grant Funding

Since the March 2018 Board meeting, DWR has requested that Proposition 1 grant awardees provide a resolution of acceptance and a determination of authorized project representatives. The Yolo County Flood Control and Water Conservation District (YCFC&WCD) submitted the Proposition 1 GSP application on behalf of the YSGA and is serving as the fiscal agent for the YSGA. At the YCFC&WCD's June Board meeting, a resolution was approved. Prior to submittal to DWR, the YCFC&WCD is requesting formal acceptance from the YSGA of Proposition 1 grant funding and approval of YCFC&WCD continuing to serve as fiscal agent and grant manager for Yolo Subbasin GSP development.

RECOMMENDATION

- a. Recommend the approval of Resolution 2018-2 Submitting a Basin Boundary Modification to the California Department of Water Resources to Modify Bulletin 118 Basin Boundaries in the Yolo and Solano Subbasin located in Yolo County.
- b. Recommend the approval of Kristin Sicke serving as the Basin Coordinator and applying for Technical Support Services in the Yolo Subbasin.
- c. Recommend the acceptance of Proposition 1 grant funding and approval of YCFC&WCD continuing to serve as fiscal agent and grant manager for developing Yolo Subbasin GSP.

RESOLUTION NO. 2018-2

**A RESOLUTION OF THE BOARD OF DIRECTORS OF THE YOLO SUBBASIN
GROUNDWATER AGENCY (YSGA) TO SUBMIT A BASIN BOUNDARY
MODIFICATION TO THE CALIFORNIA DEPARTMENT OF WATER RESOURCES
TO MODIFY BULLETIN 118 BASIN BOUNDARIES IN THE YOLO AND SOLANO
SUBBASINS LOCATED IN YOLO COUNTY**

WHEREAS, current groundwater management in Yolo County includes all or part of three basins identified in the California Department of Water Resources (DWR) Bulletin No. 118: Colusa (5-21.52), Solano (5-21.66), and Yolo (5-21.67) subbasins;

WHEREAS, the Yolo Subbasin Groundwater Agency (YSGA) is the Groundwater Sustainability Agency (GSA) for the Yolo Subbasin and is responsible for developing and submitting the Yolo Subbasin Groundwater Sustainability Plan (GSP);

WHEREAS, the Sustainable Groundwater Management Act (SGMA) requires a basin's boundaries to be defined as identified in DWR's Bulletin No. 118;

WHEREAS, the SGMA establishes a process for local agencies to request that DWR revise the boundaries of existing groundwater basins and subbasin;

WHEREAS, YSGA plans to submit a jurisdictional basin boundary modification involving an internal adjustment of the boundary between the Yolo (5-21.67) and Solano (5-21.66) subbasins that lie within Yolo County and a boundary adjustment along the Yolo County line; and

WHEREAS, requesting a Basin Boundary Modification is exempt from the California Environmental Quality Act (CEQA) because such modification is not a project under CEQA;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the YSGA that the YSGA hereby initiates the basin boundary modification request and directs the Executive Officer or his designee to work with DWR representatives to modify the existing Bulletin No. 118 boundaries as allowed by Title 23 of the California Code of Regulations to create a modified basin in Yolo County.

PASSED AND ADOPTED at a meeting of the Board of Directors of the Yolo Subbasin Groundwater Agency on June 18, 2018 by the following vote:

AYES:

NOES:

ABSTAIN:

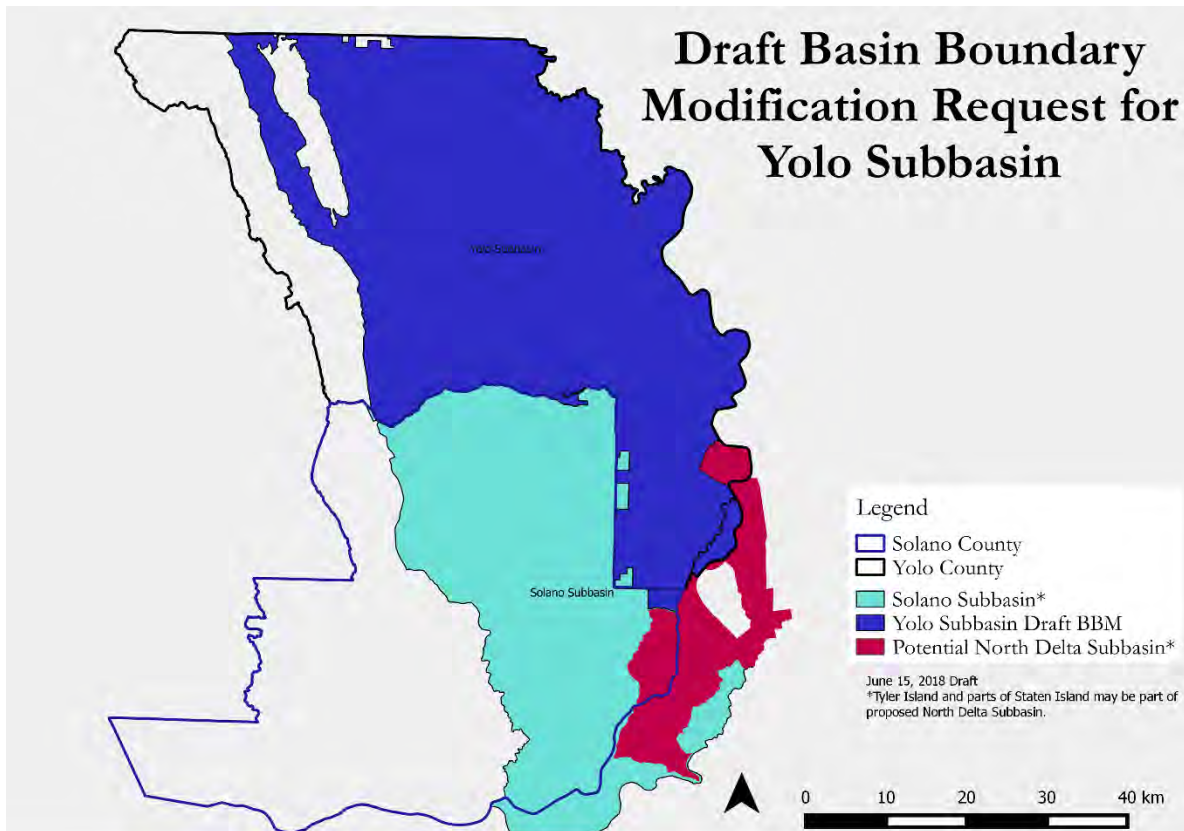
ABSENT:

Signed by me after its passage this 18th day of June 2018.

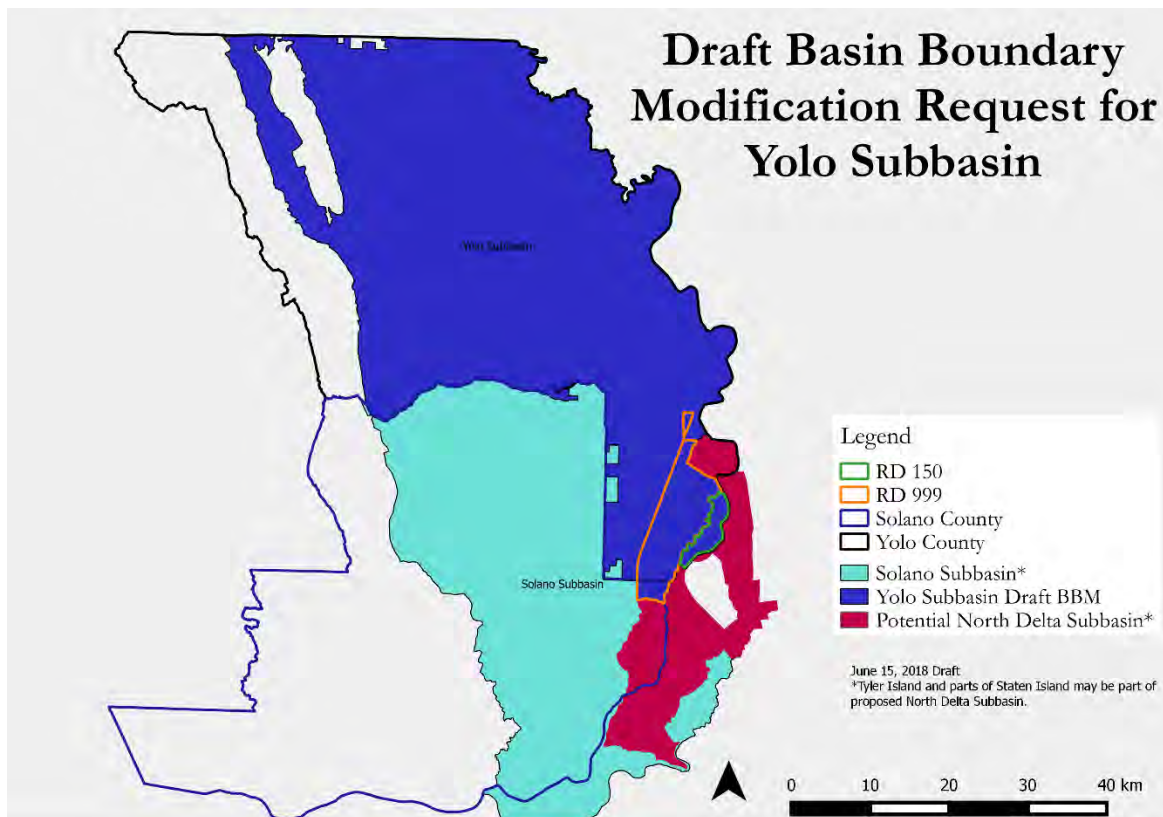
Beverly Sandeen, Chair

ATTEST:

Donna L. Gentile, Board Secretary



Draft Yolo Subbasin Basin Boundary Modification Request



Draft Yolo Subbasin Basin Boundary Modification Request with Reclamation Districts

Yolo Subbasin Groundwater Agency Board of Directors Meeting Agenda Report

MEETING DATE: June 18, 2018

AGENDA ITEM NO. 8

SUBJECT: Presentation: Receive Memoranda on GSP Components

INITIATED OR ☐ BOARD
REQUESTED BY: ☒ STAFF
☐ OTHER _____

☐ INFORMATION
☒ ACTION: ☐ MOTION
☒ RESOLUTION

ATTACHMENT ☒ YES ☐ NO

BACKGROUND

In order to provide a simple reference document for the Board and interested parties, YSGA staff have summarized the major components of the Yolo Subbasin GSP planning process and documented them in memoranda. The major components of the GSP planning process are as follows:

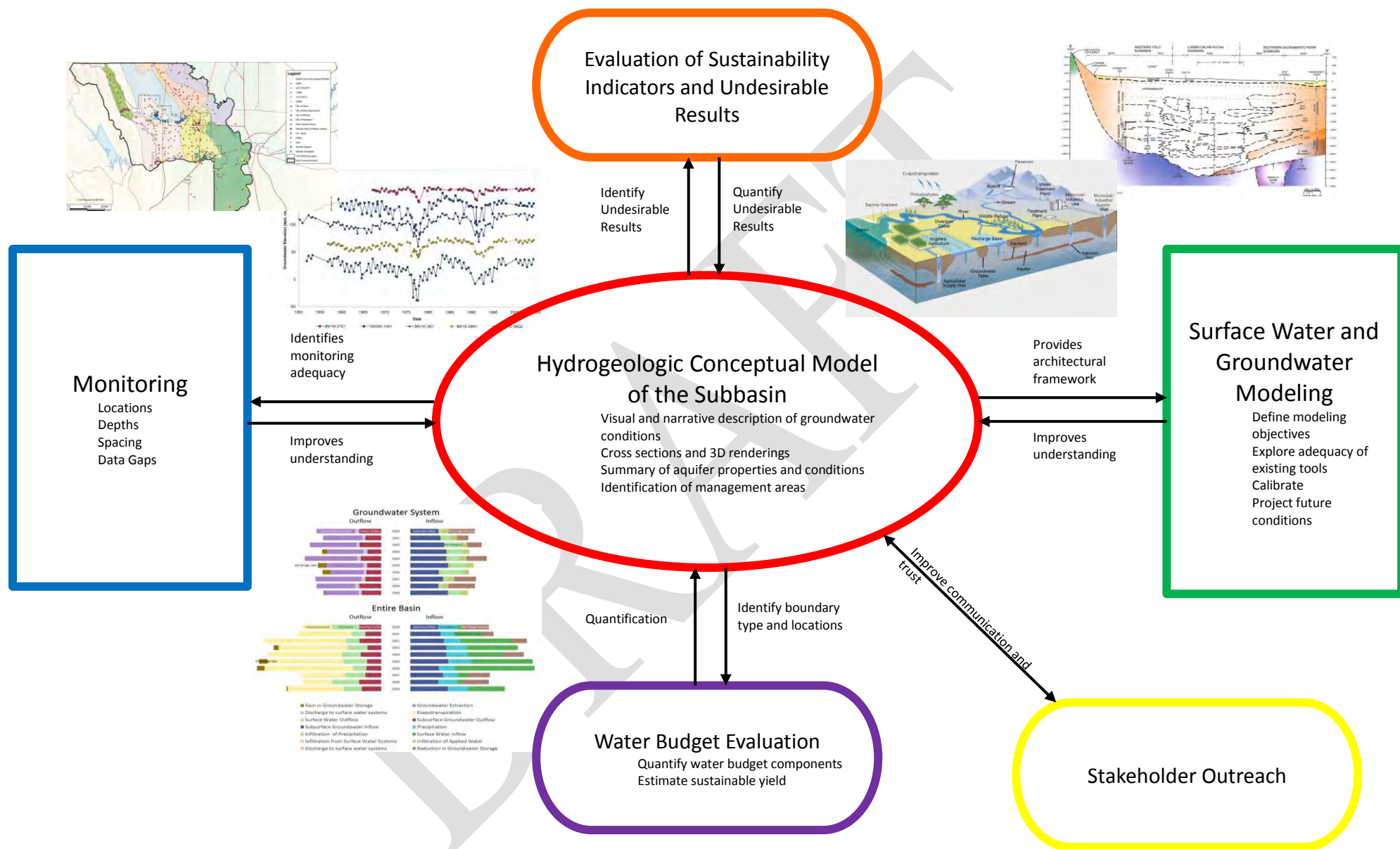
1. Water Budget
2. Hydrogeologic Conceptual Model
3. Stakeholder Communication and Engagement
4. Groundwater Modeling and Reporting
5. Surface Water and Groundwater Modeling
6. Sustainable Management Criteria

A schematic illustrating the relational aspect of each GSP component and memoranda on individual GSP components are provided for Board review. Each component memorandum includes 1) background information, 2) required DWR GSP Regulations, and 3) a draft scope, schedule, and budget for the Yolo Subbasin GSP planning process. A smaller version of the draft schedule as submitted in the DWR Proposition 1 GSP proposal is included and can be accessed on DWR's website at the following link: <https://d3.water.ca.gov/owncloud/index.php/s/7xJWyOAFxtyLiHs>.

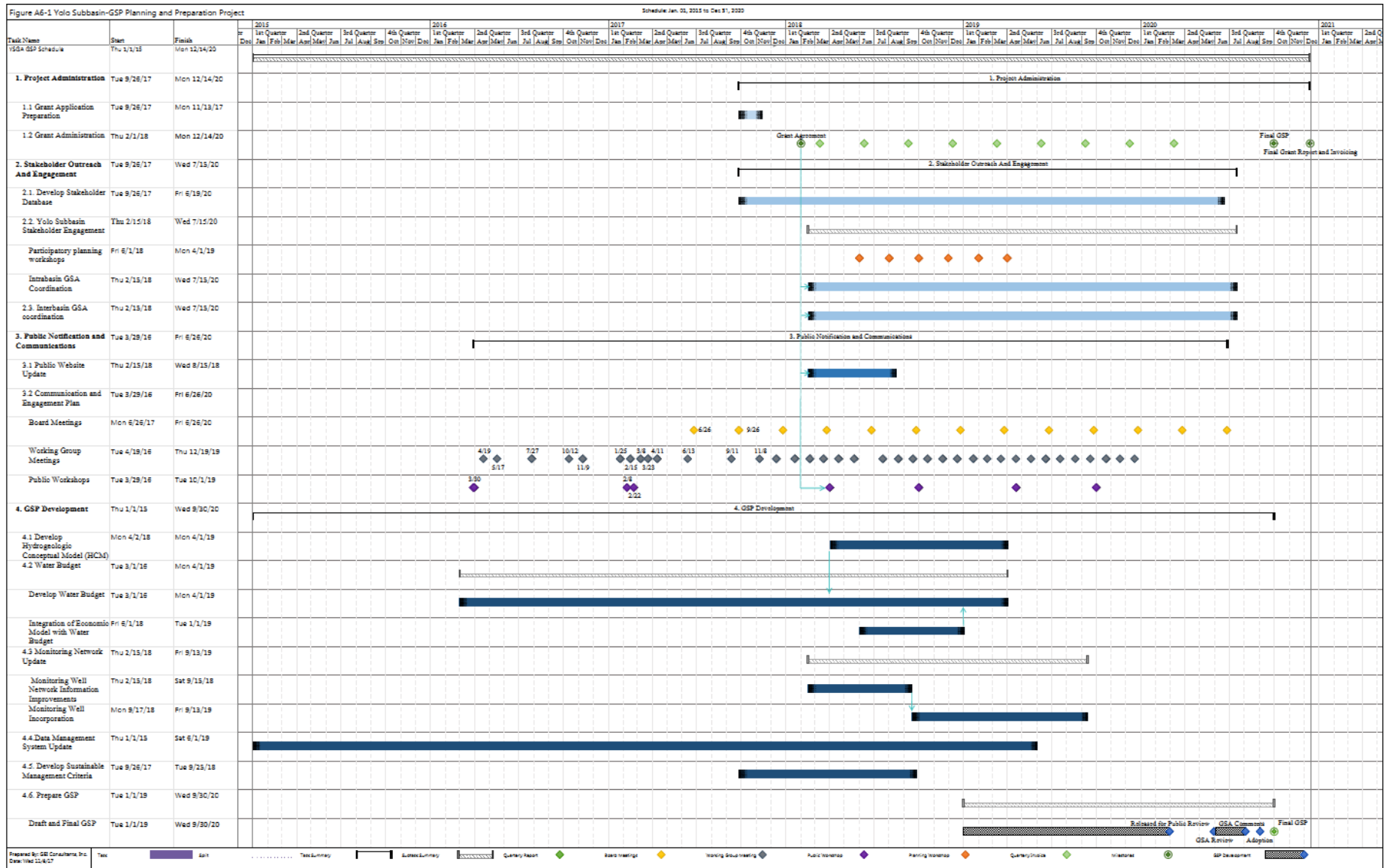
YSGA staff will provide a brief presentation on the critical elements required in a GSP and an update on the status of the development of the Yolo Subbasin GSP.

RECOMMENDATION

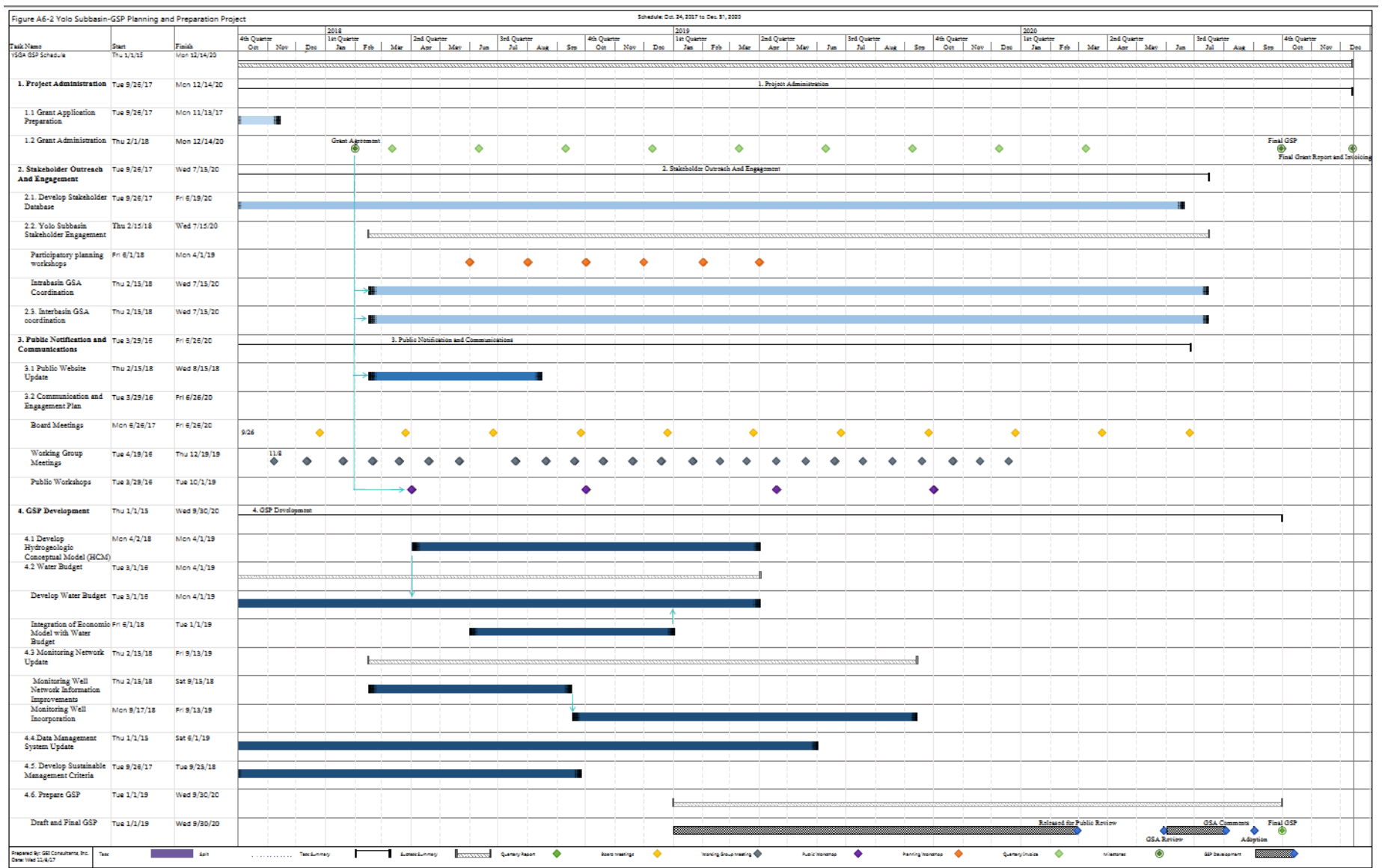
This agenda item is for informational purposes only. No Board action is required.



Relational Schematic of GSP Components



Proposition 1 Yolo Subbasin GSP Planning Grant Schedule (1 of 2)



Proposition 1 Yolo Subbasin GSP Planning Grant Schedule (2 of 2)

MEMORANDUM

TO: YSGA BOARD OF DIRECTORS

FROM: YSGA STAFF

SUBJECT: WATER BUDGET

DATE: JUNE 15, 2018

CC: YSGA WORKING GROUP

BACKGROUND

A Water Budget considers the storage and movement of water between the four physical systems of the hydrologic cycle: atmospheric system, land surface system, river and stream system, and groundwater system. A Water Budget is a foundational tool used to account for the total groundwater and surface water entering, being stored, or leaving a basin (DWR HCM BMP, 2016). Additionally, water budget accounting assists water agencies in understanding individual water budget components necessary to support resource decision making.

GSP REGULATIONS

DWR's Groundwater Sustainability Plan (GSP) Regulations require that the GSP include a tabular and graphical form of a Water Budget that provides an accounting and assessment of the total annual volume of groundwater and surface water entering and leaving the basin, including **historical**, **current**, and **projected** water budget conditions, and the change in the volume of water stored (GSP Regs §354.18(a)). The Water Budget shall quantify the following:

1. Total surface water entering and leaving a basin by water source type.
2. Inflow to the groundwater system by water source type, including subsurface inflow and infiltration of precipitation, applied water, and surface water systems.
3. Outflows from the groundwater system by water use sector, including evapotranspiration, groundwater extraction, groundwater discharge to surface water sources, and subsurface groundwater outflow.
4. The change in the annual volume of groundwater in storage between seasonal high conditions.
5. An estimate of sustainable yield for the basin.

YOLO SUBBASIN GSP PLANNING PROCESS

The YSGA has chosen to work with the Stockholm Environment Institute (SEI) to develop the Yolo Subbasin Water Budget. SEI's Water Evaluation and Planning model (WEAP) is an excellent (and used by DWR) platform for developing the Water Budget since it is built on a basic principle of water balance accounting. All the processes in the hydrologic cycle can be simulated by WEAP, and as a database, WEAP provides a system for maintaining and updating water demand and supply information. The current model that has been modified for use in the Yolo Subbasin is an enhancement of a published Cache Creek model built by SEI with the YCFC&WCD in 2011.

With groundwater being a critical component of the Water Budget, it is necessary to simulate respective groundwater balances and their spatial impacts. WEAP on its own simply simulates an aquifer as an underground tank, and when coupled with MODFLOW it is enhanced to more accurately simulate the groundwater system. MODFLOW is the USGS modular finite-difference flow model that is widely used by hydrogeologists around the world to simulate the flow of groundwater through aquifers.

As part of this effort, SEI has culled as much data and information as possible and is currently reaching out to member agencies to obtain the missing details for comprehensively developing the Yolo Subbasin Water Budget. The water budget information will include the quantification of current, historical, and projected water budgets at the subbasin-level (potentially management area-levels); an estimate of sustainable yield; and description of inflows, outflows, and change in storage. The model will also be used to evaluate candidate sustainable management criteria and projects and management actions to assess measure performance for achieving basin-wide sustainability. The Water Budget will take into consideration projected changes in climate, land use, and population, and will be calculated into the future for 50 years under several projections.

Cost Estimate: \$443,452 (\$208,719 Proposition 1 Grants Funds/\$234,733 USDA Grant Funds)

Schedule: January – December 2018

MEMORANDUM

TO: YSGA BOARD OF DIRECTORS

FROM: YSGA STAFF

SUBJECT: HYDROGEOLOGIC CONCEPTUAL MODEL

DATE: JUNE 15, 2018

CC: YSGA WORKING GROUP

BACKGROUND

A Hydrogeologic Conceptual Model (HCM) provides a general understanding of the physical setting, characteristics, and processes that govern groundwater occurrence within the basin. Specifically, an HCM provides 1) an understanding of the general physical characteristics related to regional hydrology, land use, geology and geologic structure, water quality, principal aquifers, and principal aquitards of the basin setting; 2) the context to develop water budgets, mathematical (analytical or numerical) models, and monitoring networks; and 3) a tool for stakeholder outreach and communication (DWR HCM BMP, 2016).

GSP REGULATIONS

DWR's Groundwater Sustainability Plan (GSP) Regulations require that the GSP include a narrative and graphical form of an HCM that provides an overview of the physical basin characteristics and uses of groundwater in the basin and sets the stage for the basin setting (GSP Regs §354.14(a)). The two main types of information that must be included in the HCM:

1. The narrative and graphical representation must clearly portray the **geographic setting, regional geology, basin geometry, general water quality, and consumptive uses** in the basin.
2. A series of geographic maps and scaled cross-sections to provide a vertical layering representation and a geographic view of individual datasets including the **topography, geology, soils, recharge and discharge areas, source and point of delivery of imported water supplies, and surface water systems** that are significant to management of the basin (DWR HCM BMP, 2016).

YOLO SUBBASIN GSP PLANNING PROCESS

The YSGA has a significant amount of historical data, and numerous technical reports that were produced on behalf of the member agencies. Historical reports and empirical data that have been gathered will be the main source of information used to develop the HCM. A search of reports that have been created in the different parts of the Yolo Subbasin will be conducted during the development of the HCM and Water Budget.

Cost Estimate: \$54,000 (\$50,000 Proposition 1 Grants Funds/\$4,000 Agency Cost Share)

Schedule: May – September 2018

DRAFT

MEMORANDUM

TO: YSGA BOARD OF DIRECTORS

FROM: YSGA STAFF

SUBJECT: STAKEHOLDER COMMUNICATION AND ENGAGEMENT

DATE: JUNE 15, 2018

CC: YSGA WORKING GROUP

BACKGROUND

Under the requirements of SGMA, Groundwater Sustainability Agencies (GSAs) must consider interests of all beneficial uses and users of groundwater. As a result, the GSP development needs to consider effects to other stakeholder groups in or around the groundwater basin with overlapping interests (DWR Guidance Document for GSP Stakeholder Communication and Engagement, 2018).

GSP REGULATIONS

DWR's Groundwater Sustainability Plan (GSP) Regulations require that GSAs document in a communication section of the GSP the opportunities for public engagement and active involvement of diverse social, cultural, and economic elements of the population within the subbasin (GSP Regs §354.10). A description of the beneficial uses and users of groundwater in the subbasin, including the land uses and property interests potentially affected by the use of groundwater in the basin, the types of parties representing those interests, and the nature of consultation with those parties must be documented in the GSP. Additionally, the GSP must include a list of public meetings, and all comments received and responses provided during GSP development.

GSP's Regulations require a communication section to include the following:

6. An explanation of the YSGA's decision-making process.
7. Identification of opportunities for public engagement and a discussion of how public input and response will be used.
8. A description of how the YSGA encourages the active involvement of diverse social, cultural, and economic elements of the population within the subbasin.
9. The method the YSGA shall follow to inform the public about progress implementing the Yolo Subbasin GSP, including the status of projects and actions.

YOLO SUBBASIN GSP PLANNING PROCESS

In addition to the members of the YSGA, all the landowners/groundwater users in the subbasin are considered stakeholders. During the formation of the YSGA, member agencies worked together to develop a list of interested parties/stakeholders who were notified of meetings and workshops. Since the development of this stakeholder database, the YSGA has updated information on stakeholder participation and scheduled meetings.

Throughout the GSA formation process, stakeholder involvement was facilitated through conducting farmer surveys, information gathering meetings with YSGA entities, public SGMA workshops, and the development of groundwater management case studies. Additionally, the <http://yologroundwater.org> website has been and continues to be updated with pertinent meeting information.

The stakeholder communication and engagement portion of the Yolo Subbasin GSP is captured in two tasks of the GSP Work Plan: 1) Stakeholder Outreach and Engagement and 2) Public Notification and Communications.

1. The Stakeholder Outreach and Engagement task includes developing a stakeholder database, hosting participatory planning workshops, and coordinating with neighboring GSAs.
2. The Public Notification and Communications task includes updating the public website, developing a Communication and Engagement Plan, and conducting public workshops.

The YSGA will host six participatory planning workshops to facilitate the development and articulation of sustainable management criteria and the respective thresholds, along with projects and management actions that will be necessary for successful local management of the Yolo Subbasin.

The YSGA's Communication and Engagement Plan (Plan) will capture work that has already begun and will build upon previous progress to improve public understanding of the SGMA legislation. The Plan will also present opportunities for public involvement and the dissemination of information to the public. The Plan will likely elaborate on the outline below:

1. Set goals and desired outcomes
2. Identify audiences
3. Audience survey and mapping
4. Message and talking points
5. Venues for engaging
6. Implementation timeline
7. Evaluation and assessment (DWR Guidance Document for GSP Stakeholder Communication and Engagement, 2018).

Cost Estimate: \$482,890

\$93,281 Proposition 1 Grants Funds

\$228,215 USDA Grant Funds

\$161,394 Agency Cost Share = \$90,794 Historical + \$70,600 Future

Schedule: June 2017 – July 2020; Communication and Engagement Plan Draft expected *March 2019*

MEMORANDUM

TO: YSGA BOARD OF DIRECTORS

FROM: YSGA STAFF

SUBJECT: GROUNDWATER MONITORING AND REPORTING

DATE: JUNE 15, 2018

CC: YSGA WORKING GROUP

BACKGROUND

A monitoring network should promote the collection of data of sufficient quality, frequency, and distribution to characterize groundwater and related surface water conditions in the basin and evaluate changing conditions that occur through implementation of the GSP.

GSP REGULATIONS

DWR's Groundwater Sustainability Plan (GSP) Regulations require that the GSP include monitoring protocols adopted by the YSGA for data collection and management, as follows:

10. Monitoring protocols shall be developed according to best management practices.
11. The YSGA may rely on DWR's Monitoring Best Management Practices or may adopt similar monitoring protocols that will yield comparable data.
12. Monitoring protocols shall be reviewed at least every five years as part of the periodic evaluation of the Yolo Subbasin GSP, and modified as necessary. (GSP Regs § 352.2).
13. Monitoring protocols shall include a description of technical standards, data collection methods, and other procedures for monitoring sites (GSP Regs § 354.34).

Additionally, DWR's GSP Regulations require development of monitoring objectives and data reporting requirements for a monitoring network. The monitoring network should be capable of collecting sufficient data to demonstrate short-term, season, and long-term trends in groundwater and relates surface water conditions and yield representative information about groundwater conditions as necessary to evaluate GSP implementation (GSP Regs § 354.32 and § 354.34). The monitoring network objectives shall be implemented to accomplish the following:

1. Demonstrate progress towards achieving measurable objectives described in the GSP.
2. Monitor impacts to the beneficial uses and users of groundwater.
3. Monitor changes in groundwater conditions relative to measurable objectives and minimum thresholds.
4. Quantify annual changes in water budget components.

The YSGA shall determine the density of monitoring sites and frequency of measurements required to demonstrate short-term, seasonal, and long-term trends based on the following factors:

1. Amount of current and projected groundwater use.
2. Aquifer characteristics.
3. Impacts to beneficial uses and users of groundwater and land uses and project interests affected by groundwater production, and adjacent subbasins that could affect the ability of the subbasin to meet the sustainability goal.
4. Whether the YSGA has adequate long-term existing monitoring results to demonstrate an understanding of aquifer response. (GSP Regs § 354.34).

The Yolo Subbasin GSP shall describe the following information about the monitoring network:

1. Scientific rationale for the monitoring site selection process.
2. Consistency with data and reporting standards described in GSP Regs § 352.4 (Data and Reporting Standards).
3. For each sustainability indicator, the quantitative values for the minimum threshold, measurable objective, and interim milestone that will be measured at each monitoring site (or representative site). (GSP Regs § 354.34).

Each monitoring site shall be documented in the GSP on a map, and reported in tabular format, documenting the monitoring site type, frequency of measurement, and purposes for which the monitoring site is being used. The monitoring network must be designed to effectively monitor the sustainability indicators (GSP Regs § 354.34). If desired, the YSGA may designate representative monitoring sites based on requirements discussed in GSP Regulations § 354.36.

An evaluation of the monitoring network must be included in the GSP and each five-year assessment, including determination of uncertainty and whether data gaps affect the GSP in achieving the sustainability goal for the subbasin. The YSGA shall describe measures to fill data gaps before the next five-year assessment and shall adjust the monitoring frequency and distribution to provide an adequate level of detail about site-specific surface water and groundwater conditions and to assess the effectiveness of management actions discussed in GSP Regulations § 354.38.

The YSGA shall develop and maintain a data management system that that can store and report information relevant to the development or implementation of the GSP and monitoring of the Yolo Subbasin (GSP Regs § 352.6).

YOLO SUBBASIN GSP PLANNING PROCESS

The members of the YSGA have an extensive groundwater level monitoring network that has been utilized for over 60 years comprising over 450 monitoring, agricultural, and domestic wells. There are also 12 wells that are outfitted with continuous, real-time telemetry. The data gathered from each agency is currently reported to Max Stevenson (as administrator for the YSGA) and included in the Water Resources Information Database (WRID).

The groundwater monitoring and reporting portion of the Yolo Subbasin GSP is captured in two tasks of the GSP Work Plan: 1) Monitoring Network Update and 2) Data Management System Update.

1. The Monitoring Network Update task involves evaluating and comparing the Yolo Subbasin network wells to the Hydrogeologic Conceptual Model; this comparison will confirm whether the wells provide quality data for development of the sustainable management criteria and for monitoring of measurable objectives. This information will determine how best to upgrade the monitoring network and perform the monitoring required to implement the Yolo Subbasin GSP. Methods to gather missing information will consist of videoing wells, using Real Time Kinetic surveying, and gathering required data for wells missing identification numbers. To address existing data gaps, the YSGA will incorporate up to four real-time monitoring wells and up to ten bi-annual monitoring wells.
2. The Data Management System Update task involves updating the WRID to meet criteria required by SGMA and to enhance WRID functionality. The current WRID interface will be improved to facilitate public dissemination of data and to support the Public Notification and Communication task. The system will be updated to streamline data reporting to DWR for the Yolo Subbasin GSP.

Cost Estimate: \$632,500

\$386,000 Proposition 1 Grants Funds

\$246,500 Agency Cost Share = \$222,500 Historical + \$24,000 Future

Schedule: February 2018 – September 2019

MEMORANDUM

TO: YSGA BOARD OF DIRECTORS

FROM: YSGA STAFF

SUBJECT: SURFACE WATER AND GROUNDWATER MODELING

DATE: JUNE 15, 2018

CC: YSGA WORKING GROUP

BACKGROUND

Sustainable groundwater management and policy decisions must be based on knowledge of the past and present behavior of the surface and groundwater system, the likely response to future changes and management actions, and the understanding of the uncertainty in those responses. Models provide an important framework that brings together conceptual understanding, data, and science in a hydrologically and geologically consistent manner. Constructing and calibrating the model improves understanding of the critical processes that influence sustainability indicators within the subbasin. In addition, models can estimate and reasonably bound future groundwater conditions, support decision-making about monitoring networks and management actions, and allow the exploration of alternative management approaches. (DWR's Modeling BMP, 2016).

GSP REGULATIONS

The use of models for developing a GSP is highly recommended, but not required. The use of a model will depend on the individual characteristics and complexity of the basin setting, the presence or absence of undesirable results, and the presence or absence of interconnected surface water systems. If a numerical groundwater and surface water model is not used to assess the depletions of interconnected surface water, the GSP must use and describe an equally effective method, tool, or analytical model to identify the location, quantity, and timing of depletions of interconnected surface water (GSP Regs § 354.28).

YOLO SUBBASIN GSP PLANNING PROCESS

As discussed in the Yolo Subbasin GSP: Water Budget Memo, the YSGA has chosen to work with the Stockholm Environment Institute (SEI) to develop the Yolo Subbasin Water Budget. SEI's Water Evaluation and Planning model (WEAP) simulates all processes in the hydrologic cycle and has been coupled with MODFLOW to more accurately simulate the groundwater system. MODFLOW is the USGS modular finite-difference flow model that is widely used by hydrogeologists around the world to simulate the flow of groundwater through aquifers.

The model and participatory workshops will also be used to evaluate candidate sustainable management criteria and projects and management actions to assess how suggested measures may perform as tools for achieving basin-wide sustainability. The water budget simulations for future conditions will consider projected changes in climate, land use, and population for 50 years from present.

YSGA staff plan to work closely with DWR and The Nature Conservancy for determining the best model and representation of groundwater-surface water interaction in the Yolo Subbasin

Cost Estimate: Embedded in the Water Budget, HCM, Monitoring Network Update, and Stakeholder Communication and Engagement tasks.

Schedule: January 2018 – March 2020

DRAFT

MEMORANDUM

TO: YSGA BOARD OF DIRECTORS

FROM: YSGA STAFF

SUBJECT: SUSTAINABLE MANAGEMENT CRITERIA

DATE: JUNE 15, 2018

CC: YSGA WORKING GROUP

BACKGROUND

The Sustainable Management Criteria term collectively refers to the Sustainability Goal, Undesirable Results, Minimum Thresholds, and Measurable Objectives and is an assessment of sustainability indicators, significant and unreasonable conditions, management areas, and representative monitoring sites. Development of the Sustainable Management Criteria relies upon information about the subbasin developed in the hydrogeologic conceptual model, the description of current and historical groundwater conditions, and the water budget (DWR SMC BMP, 2017).

GSP REGULATIONS

DWR's Groundwater Sustainability Plan (GSP) Regulations contain specific requirements and metrics for each sustainability indicator (GSP Regs §354.28). GSP Regulations require six components of information be documented for each minimum threshold¹, and three components of information be documented for each undesirable result².

Specific requirements for the minimum threshold metrics used to quantify each sustainability indicator are listed below:

1. **Chronic lowering of groundwater levels:** a groundwater elevation measured at the representative monitoring site.
2. **Reduction of groundwater storage:** a volume of groundwater that can be withdrawn from the basin or management area, based on measurements from multiple representative monitoring sites, without leading to undesirable results.
3. **Degraded water quality:** water quality measurements that indicate degradation at the monitoring site (can be defined at a site, along the isocontour line, or as a calculated volume).

¹ A minimum threshold is the quantitative value that represents the groundwater conditions at a representative monitoring site that, when exceeded individually or in combination with minimum thresholds at other monitoring sites, may cause an undesirable result(s) in the subbasin.

² Undesirable results occur when conditions related to any of the six sustainability indicators become significant and unreasonable.

4. **Land subsidence:** a rate and the extent of land subsidence.
5. **Depletion of interconnected surface waters:** a rate or volume of surface water depletion.

All undesirable results will be based on minimum threshold exceedances and the Yolo Subbasin GSP must define when an undesirable result is triggered. Avoidance of the defined undesirable results must be achieved within 20 years of GSP implementation. (GSP Regs 354.26).

Measurable objectives³ are set for each sustainability indicator at the same representative monitoring sites and using the same metrics as minimum thresholds. In addition, interim milestones must be defined in five-year increments. Interim milestones must be coordinated with projects and management actions proposed by the YSGA to achieve the sustainability goal. (GSP Regs 354.30).

As one of the final components of GSP development, the YSGA must define the sustainability goal for the entire Yolo Subbasin. The YSGA must succinctly state the objectives and desired conditions of the Yolo Subbasin, how the Subbasin will get to that desired condition, and why the measures planning will lead to success. The sustainability goal is supported by the locally-defined minimum thresholds and undesirable results. Demonstration of the absence of undesirable results supports a determination that the Subbasin is operating within its sustainable yield, and therefore, the sustainability goal has been achieved.

YOLO SUBBASIN GSP PLANNING PROCESS

The development of the Sustainable Management Criteria is a culmination of the Hydrogeologic Conceptual Model, Water Budget, Monitoring Network Update, Data Management System Update, and Stakeholder Communication and Engagement tasks. The results of the WEAP/MODFLOW model, the hydrogeologic conceptual model, and data collected from the monitoring network will be used to inform the stakeholders of current conditions within the subbasin and to provide input for the development of measurable objectives and minimum thresholds for each sustainability indicator.

The criteria will also be based on the information gathered during working group, committee, and entity meetings. After the measurable objectives and minimum thresholds have been established, it may be necessary for the YSGA to develop surface water and groundwater management actions designed to enable the YSGA to achieve its sustainability objectives and avoid the occurrence of undesirable results. These management actions will be evaluated by the YSGA members and may not be necessary for each management area.

Cost Estimate: \$197,000 (work is also embedded in other tasks)

\$75,000 Proposition 1 Grants Funds

\$122,000 Agency Cost Share = \$74,000 Historical (subsidence survey) + \$48,000 Future

Schedule: September 2017 – September 2019 (originally estimated September 2017 – September 2018)

³ Measurable objectives are quantitative goals that reflect the subbasin's desired groundwater conditions and allow the YSGA to achieve the sustainability goal.

Yolo Subbasin Groundwater Agency Board of Directors Meeting Agenda Report

MEETING DATE: June 18, 2018

AGENDA ITEM NO. 9

SUBJECT: Presentation: Inter-basin Coordination with Adjacent Subbasins

INITIATED OR ☐ BOARD
REQUESTED BY: ☒ STAFF
☐ OTHER _____

☒ INFORMATION
☐ ACTION: ☐ MOTION
☐ RESOLUTION

ATTACHMENT ☐ YES ☒ NO

BACKGROUND

SGMA requires coordination agreements for subbasins with multiple GSPs and *recommends* coordination agreements for subbasins with multiple GSAs preparing a single GSP, which are both known as intra-basin coordination. The coordination between two or more subbasins that are hydraulically connected, known as inter-basin coordination, is considered *voluntary* under SGMA.

Even though SGMA does not require formal coordination agreements for inter-basin activities, YSGA staff believe it will be beneficial to coordinate with adjacent basins to share data and information, understand the groundwater connection between Bulletin 118 basin boundaries, and strengthen relationships with partner GSAs in the Sacramento Valley. YSGA staff will provide a summary of ongoing efforts to coordinate with adjacent, hydrologically-connected groundwater basins.

RECOMMENDATION

This agenda item is for informational purposes only. No Board action is required.