SOLANO
GROUNDWATER SUSTAINABILITY AGENCY

BOARD OF DIRECTORS MEETING

DATE: **Thursday, October 11, 2018**

TIME: **5:30 P.M.**

PLACE: **Berryessa Room**
Solano County Water Agency Office
810 Vaca Valley Parkway, Suite 203
Vacaville

1. CALL TO ORDER

2. PLEDGE OF ALLEGIANCE

3. APPROVAL OF AGENDA

4. PUBLIC COMMENT

Limited to 5 minutes for any one item not scheduled on the Agenda.

5. CONSENT ITEMS

(A) Minutes: Approval of the Minutes of the Board of Directors meeting of April 12, 2018.

(B) Pre-Approval of Fiscal Year 2018-2019 Payments: Pre-approval of specified categories of bills for fiscal year 2018-2019.

6. BOARD MEMBER REPORTS (*estimated time: 5 minutes*)

RECOMMENDATION: For information only.

7. SECRETARY/TREASURER REPORT *(estimated time: 5 minutes)*

RECOMMENDATION: For information only.

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http://www.scwa2.com/resources-management/ground-water/solano-gsa-bod

8. SOLANO GSA 2018/2019 BUDGET
(estimated time: 10 minutes)

RECOMMENDATION:

1. Review draft Fiscal Year 2018-2019 budget and adopt as presented or with modifications.

9. ACWA/JOINT POWERS INSURANCE AUTHORITY
(estimated time: 5 minutes)

RECOMMENDATION:

1. Adopt Resolution 2018-01, Election to enter the Joint Protection Program of the Association of California Water Agencies/Joint Powers Insurance Authority.

10. PROPOSITION 3
(estimated time: 5 minutes)

RECOMMENDATION:

1. Adopt Resolution 2018-02 in support of State Proposition 3, the California Infrastructure and Watershed Conservation Bond Initiative.

11. GROUNDWATER SUSTAINANABILITY PLAN
(estimated time: 30 minutes)

RECOMMENDATION:

1. Hear presentation from staff and technical experts on scope and schedule of Groundwater Sustainability Plan.

12. TIME AND PLACE OF NEXT MEETING

Thursday, December 13, 2018 at 5:30 p.m. at the SCWA offices.

The Full Board of Directors packet with background materials for each agenda item can be viewed on the Agency's website at
www.scwa2.com/resources-management/ground-water/solano-gsa-bod

Any materials related to items on this agenda distributed to the Board of Directors of Solano Subbasin Groundwater Sustainability Agency less than 72 hours before the public meeting are available for public inspection at the Agency's offices located at the following address: 810 Vaca Valley Parkway, Suite 203, Vacaville, CA 95688. Upon request, these materials may be made available in an alternative format to persons with disabilities.

SOLANO SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY
BOARD OF DIRECTORS MEETING MINUTES

MEETING DATE: June 14, 2018

The Solano Subbasin Groundwater Sustainability Agency Board of Directors met this evening at the Solano County Water Agency Offices. Present were:

Mayor Thom Bogue, City of Dixon
Mayor Ronald Kott, City of Rio Vista
Supervisor John Vasquez, Solano County District 4
Supervisor Skip Thomson, Solano County District 5
Director Jack Caldwell, Cal Water Services-Dixon
Director Dale Crossley, Reclamation District 2068
Director Al Medvitz, Solano County Agricultural Advisory Committee
Director Joe Martinez, Solano Resource Conservation District

CALL TO ORDER

The meeting was called to order at 5:35 p.m. by Chairman Thomson.

APPROVAL OF AGENDA

On a motion by Mayor Bogue and a second by Director Martinez, the Board unanimously approved the Agenda.

PUBLIC COMMENT

There were no public comments.

CONSENT ITEMS

On a motion by Mayor Kott and a second by Mayor Bogue, the Board approved the minutes from the April 12, 2018 Board meeting. Directors Caldwell and Medvitz abstained.

BOARD MEMBER REPORTS

There were no Board Member reports.

SECRETARY/TREASURER REPORT

In addition to the report in the packet, staff informed the Board that the North Delta Groundwater Sustainability Agency (ND GSA) group appears to be moving forward with formation of a JPA and intends to submit a Basin Boundary Modification (BBM) to the Department of Water Resources (DWR) to create an entirely new subbasin-the Northern Delta Subbasin.

The Agency's main concern was the possibility of this type of effort creating an island between the Solano Subbasin and the Yolo Subbasin, or between this new North Delta Basin, which could have caused some issues with the Groundwater Sustainability Plan (GSP) management.

Reclamation District 307 intends to join the ND GSA effort, this should alleviate concerns with the ND GSA BBM.

This is an information item only as the Board has previously granted staff authorization to submit a letter of opposition or support for this proposed BBM-depending on the content of the BBM. However, staff wanted to reiterate the intention here to submit a conditional letter of support. The Board agreed to move forward with the previous recommendation on this item.

Staff have also been in contact with the Yolo GSA. Both Reclamation District 150 and 999 had made intentions to join the Yolo groundwater subbasin, but the Agency took issue with regards to RD 307 potentially creating an island in the subbasin. That issue looks to be resolved. The Yolo GSA intends to also submit a BBM to include RD 150 and 999 into the Yolo groundwater subbasin.

As is the case with the ND GSA BBM, this is an information item only as the Board has previously granted staff authorization to submit a letter of opposition or support for this proposed BBM. The Board agreed to move forward with the previous recommendation on this item as well.

AGREEMENT WITH DEPARTMENT OF WATER RESOURCES FOR PROPOSITION 1: 2017 SUSTAINABLE GROUNDWATER PLANNING GRANT

On May 7, the Agency received a letter from DWR, stating that the Solano GSA has been conditionally recommended for funding in the amount of $1,000,000 under the Proposition 1 Sustainable Groundwater Planning Grant Program.

The award is conditioned upon the execution of a Grant Agreement between DWR and the Agency. There are three conditions for grant agreement execution. The first condition requires that the grantee submit a letter to DWR within 14 calendar days that they accept the grant award. Staff submitted an acceptance letter to DWR on May 15, within the allotted time frame.

The second condition requires that the Agency submit any changes to the work plan, budget, or schedule for the GSP within 45 days to DWR. Staff requested a meeting with DWR to discuss proposed changes in the acceptance letter.

The third condition requires that the Agency, prior to initiating the development of the GSP, make available to the public and DWR a written description of the means in which interested parties may participate in the development and implementation of the GSP. Staff submitted this Initial Notification to DWR on May 15.

On a motion by Director Martinez and a second by Mayor Bogue, the Board unanimously approved authorization for the Secretary to sign and execute an Agreement with DWR on behalf of the Agency to receive funds from the Proposition 1 Planning Grant.

AGREEMENT WITH LUHDORFF & SCALMANINI FOR DEVELOPMENT OF THE SOLANO SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

The Agency received three proposals during the RFP process to develop the GSP. Proposals were submitted by EKI Environment & Water, GHD Inc., and Luhdorff & Scalmanini. Through a collaborative process with a GSP subcommittee of the Solano GSA TAC and representatives from the other Groundwater Sustainability Agencies in the subbasin, the team of Luhdorff & Scalmanini (LSCE) was selected as the recommend team to develop a GSP.

The budget submitted by LSCE through the RFP process was $1.6 million dollars. This budget covers all of the necessary tasks required for a GSP. Staff has asked LSCE to revisit a number of these tasks for potential refinement and lowering of the overall budget.

The Solano County Water Agency and some of its Member Agencies have commissioned a number of groundwater studies over the past decade looking at the Solano Subbasin. Staff hope that some of this previously documented information can be used as part of the foundation for the GSP.

There are also some potential tasks detailed in the LSCE proposal that might be addressed by the Solano County Water Agency under its normal annual groundwater investigations as well as a potential county-wide agricultural water-supply study. Staff anticipates a revised budget and task list in the next few weeks. However, staff are not anticipating a significant change in the overall budget.

With the $1,000,000 planning grant award and the $350,000 gift from the Solano County Water Agency, there will likely be a need for $150-$200,000 to complete the GSP. Staff has asked LSCE to project costs over the next 4 years during development of the GSP to determine when this shortfall may occur, it will likely occur towards the end of the GSP process-sometime mid 2021.

On a motion by Mayor Kott and a second by Director Caldwell, the Board unanimously approved authorization for the Secretary to sign and execute an Agreement with Luhdortersff & Scalmanini on behalf of the Agency, not to exceed $1,350,000.

MEMORANDUM OF UNDERSTANDING FOR COOPERATIVE IMPLEMENTATION OF THE SOLANO SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

The purpose of the Memorandum of Understanding for Cooperative Implementation of the SGMA in the Solano Subbasin (SGMA MOU) was to have all of the GSAs in the subbasin collaborate on a single Groundwater Sustainability Plan (GSP).

The SGMA MOU was signed by the Solano Subbasin GSA, Solano Irrigation District GSA, Sacramento County GSA, and City of Vacaville GSA. The MOU is valid up to 24 months from the effective date and will expire on November 29, 2019.

This new MOU, the Memorandum of Understanding for Cooperative Implementation of the Solano Subbasin Groundwater Sustainability Plan (GSP MOU), will defines roles, responsibilities, and decision-making of the GSAs participating in the GSP development.

Staff is recommending the drafting of this MOU as soon as possible and that the Solano County Water Agency's counsel, Herum, Crabtree & Suntag, prepare an initial draft of the GSP MOU for discussion and review by the various parties to the GSP MOU.

On a motion by Director Crossley and a second by Director Caldwell, the Board unanimously authorized the Secretary to utilize the Solano County Water Agency Special Counsel to draft an Implementation MOU for the Solano GSP on behalf of the Agency.

SUSTAINABLE GROUNDWATER MANAGEMENT ACT DRAFT BASIN PRIORITIZATION

Following the release of the 2016 Basin Boundary Modifications, DWR began the 2018 SGMA prioritization of California's 517 groundwater basins (Water Code 12924(b)) defined in Bulletin 118.

Prioritization has changed for some basins due to the consideration of impacts from local habitat and local streamflows, the change in area of basin as a result of boundary modifications, and incorporation of newly available data sources. The draft recommendations from DWR affect two groundwater basins in Solano County.

The Solano Subbasin is recommended to change from a Medium Priority Basin to a High Priority Basin. If this change occurs, it does not affect any GSP timelines or requirements. However, a preliminary review of the priority point categories in the draft DWR recommendations seem to indicate some discrepancies. It appears the scoring is incorrect in both the Impacts and Habitat sections. Staff has contacted DWR for clarifications, the data used to make these priority point changes, and to set up a meeting to discuss these draft recommendations.

On a motion by Director Crossley and a second by Mayor Kott, the Board unanimously authorized the Secretary to sign and submit a Basin Prioritization comment letter to DWR on behalf of the Agency.

The second groundwater basin potentially affected by these draft Basin Prioritization recommendations is the Napa-Sonoma Lowlands Subbasin. This subbasin is partially in Solano County, but outside the jurisdiction of the Solano GSA and is presented for information purposes only.

This subbasin is recommended to become a Medium Priority subbasin and thereby subject to SGMA. It is currently prioritized as a Low Priority subbasin and not subject to SGMA. A preliminary review of the priority point categories seems to indicate discrepancies in multiple sections. If the recommend prioritization moves forward, it affects Solano County and the City of Vallejo, as well as Napa County.

Staff have set up a meeting between DWR, Solano County Staff, City of Vallejo staff, and Napa County staff on June 19 to discuss the draft recommended change for this subbasin and possible solutions.

TIME AND PLACE OF NEXT MEETING

The time and place of the next meeting was tentatively set for Thursday, August 9, 2018 at 5:30 p.m., at the SCWA offices. August 9, 2018 Meeting Cancelled.

ADJOURNMENT

This meeting of the Solano Subbasin Groundwater Sustainability Agency Board of Directors was adjourned at 6:10 p.m.

_____
Roland Sanford
Secretary to the Solano Subbasin
Groundwater Sustainability Agency

ACTION OF
SOLANO GROUNDWATER SUSTAINABILITY AGENCY

DATE: **October 11, 2018**

SUBJECT: **Pre-approval of Fiscal Year 2018-2019 Payments**

RECOMMENDATIONS:

1. Payments to Association of California Water Agencies/Joint Powers Insurance Authority for Association dues and liability insurance.
2. Payments to consultants and contractors with Board approved contracts.
3. Payments for expenses associated with Board approved Grants.

FINANCIAL IMPACT:

None.

BACKGROUND:

Each year staff requests that the Board authorize payments for items that are based on regular payment schedules and contractual obligations. Payment of these items will not require additional approval by the Board or purchase orders prior to payments. Payments made under this category will be reported back to the Board of Directors in arrears.

Recommended: _____
Roland Sanford, Secretary

☐ Approved as recommended	☐ Other (see below)	☐ Continued on next page

Modification to Recommendation and/or other actions:

I, Roland Sanford, Secretary to the Solano Groundwater Sustainability Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on October 11, 2018 by the following vote.

Ayes:

Noes:

Abstain:

Absent:

_____
Roland Sanford
Secretary to the
Solano Groundwater Sustainability Agency

SOLANO SUBBASIN
GROUNDWATER SUSTAINABILITY AGENCY

MEMORANDUM

TO: **Board of Directors**

FROM: **Roland Sanford, Secretary**

DATE: **October 11, 2018**

SUBJECT: **October 2018 Secretary Report**

Groundwater Sustainability Plan Presentation

Staff and technical experts have prepared an informational presentation on the Solano Subbasin Groundwater Sustainability Plan (GSP) for the October Board meeting (Agenda Item 10). The purpose of the presentation is to provide an overview of the GSP – the who, what, why, where and when, and more specifically, the timeline and work products that must ultimately be submitted to the Department of Water Resources (DWR) to comply with the Sustainable Groundwater Management Act. This presentation will also be given to the Solano Irrigation District Groundwater Sustainability Agency (GSA) Board of Directors at their October 16th meeting.

Basin Boundary Modifications

Both the Yolo GSA and the Northern Delta GSA have submitted Basin Boundary Modification (BBM) requests to DWR that if approved would modify the Solano Subbasin boundaries. Pursuant to Board direction, staff submitted letters of support to DWR for both proposed boundary modifications.

The Yolo GSA BBM would place Reclamation District 150 and Reclamation District 999 – both located in Yolo County - into the Yolo Subbasin. The North Delta GSA's BBM would create a new groundwater subbasin by cleaving portions of three existing groundwater subbasins; the South American Subbasin, the Solano Subbasin, and the Eastern San Joaquin Subbasin.

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Reclamation District 307, located in Yolo County, would be included in the new groundwater subbasin proposed by the North Delta GSA. In the event DWR does not approve the BBM proposed by the North Delta GSA, the Yolo GSA will request DWR include Reclamation District 307 in the Yolo Subbasin.

A 30-day public comment period for the proposed basin boundary modifications is underway and will end October 29, 2018. DWR is expected to release its initial recommendations regarding the proposed basin boundary modifications for public comment later this winter, followed by final recommendations in the spring of 2019.

Basin Prioritization Recommendations

Earlier this year DWR announced proposed reprioritizations of many groundwater basins across the state, including the Solano Subbasin – from "medium" to "high" - and the nearby Napa-Sonoma Lowlands Subbasin, a portion of which is located in western Solano County, from "low" to "medium" . In general, the proposed reprioritizations are reportedly based on information regarding groundwater extraction impacts to aquatic habitats, information pertaining to groundwater-surface water interactions, and as a result of previously approved basin boundary modifications.

Elevating the priority of the Solano Subbasin from medium to high would have no significant impact to the scope of the Solano Subbasin GSP or the deadline for adopting the Solano Subbasin GSP. However, characterizing the Solano Subbasin as a high priority basin could, in the future, subject the Solano Subbasin to additional regulatory oversight. Elevating the priority of the Napa-Sonoma Lowlands Subbasin from low to medium would necessitate formation of a GSA for that subbasin, and preparation of a GSP.

As discussed at previous Board meetings, staff believes DWR errored in their evaluation of the Solano Subbasin, as well as the Napa-Solano Lowlands Subbasin, and pursuant to Board direction, the Solano Subbasin GSA, as well as the Solano County Water Agency, submitted letters of opposition to the proposed reprioritization of the Solano Subbasin. The Solano County Water Agency also submitted a letter of opposition to the proposed reprioritization of the Napa-Sonoma Lowlands Subbasin.

Department of Water Resources Proposition 1 Grant Agreement

Staff has been working with DWR to finalize the Proposition 1 grant agreement for development of the Solano Subbasin GSP. DWR contract managers are reviewing a draft agreement and it is anticipated that a final agreement will be in place shortly.

Luhdorff & Scalmanini Agreement

Pursuant to Board direction, the Secretary has signed an agreement with Luhdorff &Scalmanini to begin work on the Solano Subbasin GSP. Sufficient funding - $350,000 provided by the Solano County Water Agency – is in place to move the project forward while the Proposition 1

grant agreement with DWR is being finalized. Luhdorff & Scalmanini will be invoicing the Solano Subbasin GSA quarterly, and the Solano Subbasin GSA will in turn be reimbursed by DWR as the project moves forward.

SOLANO SUBBASIN
GROUNDWATER SUSTAINABILITY AGENCY

October 2, 2018

Mr. Timothy O'Halloran,
General Manager
Yolo County Flood Control and Water Conservation District
34274 State Highway 16
Woodland, CA 95695

Subject: Letter of Support to the Yolo Groundwater Sustainability Agency's Basin Boundary Modification Request for the Solano Subbasin (5-021.66).

Dear Mr. O'Halloran:

We have received the Yolo Groundwater Sustainability Agency's (Yolo GSA) notice of request for a groundwater basin boundary modification (BBM) to the California Department of Water Resources (DWR), pursuant to the Basin Boundary Emergency Regulations for Bulletin 118. The Solano Subbasin Groundwater Sustainability Agency (Solano GSA) supports this request as it will move Reclamation Districts 150 and 999 from the Solano Subbasin (5-021.66) into the Yolo Groundwater Subbasin (5-021.67). The Yolo GSA would also incorporate Reclamation District 307 if the North Delta Subbasin is not approved by DWR, the Solano GSA also supports that effort.

As these two Reclamation Districts have worked with the Yolo agencies in the past, this proposed BMM would seem to continue that relationship and promote sustainable groundwater management in both subbasins by making monitoring, reporting, and overall management easier for both Groundwater Sustainability Plan efforts.

If you have any questions, please contact Chris Lee at 707-455-1105, or clee@scwa2.com, thank you.

Sincerely,

Roland Sanford,
General Manager, Solano County Water Agency
Secretary to Solano GSA

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SOLANO SUBBASIN
GROUNDWATER SUSTAINABILITY AGENCY

October 2, 2018

Mr. Dave Robinson
Chair, Board of Directors
North Delta Groundwater Sustainability Agency
1717 I Street, Suite A
Sacramento, CA 95811

Subject: Letter of Support to the North Delta Groundwater Sustainability Agency's Basin Boundary Modification Request for the Solano Subbasin (5-021.66).

Dear Mr. Ringelberg:

We have received the North Delta Groundwater Sustainability Agency's (ND GSA) notice of request for a groundwater basin boundary modification (BBM) to the California Department of Water Resources, pursuant to the Basin Boundary Emergency Regulations for Bulletin 118. The Solano Subbasin Groundwater Sustainability Agency supports this request as it will move Reclamation Districts 307 from the Solano Subbasin (5-021.66) into the proposed Northern Delta Subbasin.

As this Reclamation District has worked with the ND GSA in the past, this proposed BMM would seem to continue that relationship and promote sustainable groundwater management in both subbasins by making monitoring, reporting, and overall management easier for both Groundwater Sustainability Plan efforts.

If you have any questions, please contact Chris Lee at 707-455-1105, or clee@scwa2.com, thank you.

Sincerely,

Roland Sanford,
General Manager, Solano County Water Agency
Secretary to Solano GSA

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SOLANO SUBBASIN
GROUNDWATER SUSTAINABILITY AGENCY

August 14, 2018

California Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001
Attn: Bill Brewster
Submitted electronically through:
https://www.water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization

SUBJECT: Comments on Draft 2018 Basin Prioritization – Sacramento Valley Solano Subbasin (05-021.66)

Dear Mr. Brewster:

The Solano Groundwater Sustainability Agency (Solano GSA) has reviewed the Draft 2018 SGMA[1] Basin Prioritization (Draft Prioritization) and supporting information provided by the Department of Water Resources (DWR). We appreciate the efforts that you and others at DWR have made to provide additional information about the Draft Prioritization since its publication on May 18. This letter transmits comments from Solano GSA regarding the Draft Prioritization for the Sacramento Valley - Solano Subbasin (Basin ID 5-021.66) (**Figure A**).

While the online 2018 Basin Prioritization Dashboard and the "*2018 SGMA Basin Prioritization Process and Draft Results*" (Process and Draft Results) document provide some clarity as to DWR's approach to the Draft Prioritization Solano GSA believes that the prioritization process should be improved by closer adherence to the requirements of Water Code §10933 and consistent application of prioritization scoring methods between basins. Based on our review of the supporting documentation and data provided by DWR and alternative, equivalent data obtained in lieu of data from DWR, we find that the total Draft Priority Point score for the Sacramento Valley - Solano Subbasin (Solano Subbasin) is greater than is supported by available data. Revisions to the Priority Point scores for Components 3, 6, and 7, as described in the following paragraphs, result in score that is more consistent with the methods described in the Draft Process and Results document and more consistent with Water Code §10933.

The sections that follow focus on components of particular concern with respect to the Draft Prioritization of the Solano Subbasin. **Table 1** summarizes the Basin Priority scoring applied in 2014, the Draft 2018 scoring, and a modified 2018 scoring based on the review presented in this

[1] Sustainable Groundwater Management Act

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letter. The modified 2018 scoring results in a Total Priority Point score of 16.5, within the range defined as Medium Priority. As applicable, additional data referenced in the discussion below will accompany this letter as part of the submittal to the DWR Basin Prioritization webpage.

Table 1 - Basin Priority Comparison and Review SACRAMENTO VALLEY – SOLANO SUBBASIN (05-021.66)

	2014	2018 DWR Draft	2018 Review Results
COMPONENT 1 - POPULATION			
PRIORITY POINTS	1	1	1
COMPONENT 2 - POPULATION GROWTH			
PRIORITY POINTS	3	4	4
COMPONENT 3 - PUBLIC SUPPLY WELLS			
PRIORITY POINTS	2	2	2
COMPONENT 4 - TOTAL WELLS			
PRIORITY POINTS	3	3	3
COMPONENT 5 - IRRIGATED ACRES			
PRIORITY POINTS	5	4	4
COMPONENT 6 - GROUNDWATER RELIANCE			
PRIORITY POINTS	1.5	2.5	2.5
COMPONENT 7 – DOCUMENTED IMPACTS*			
OVERDRAFT (DECLINING GROUNDWATER LEVELS) IMPACT POINTS*		*7.5*	0
SALINE INTRUSION IMPACT POINTS*		*5*	0
SUBSIDENCE IMPACT POINTS*		*0*	0
WATER QUALITY DEGRADATION IMPACT POINTS*		*2*	***1***
PRIORITY POINTS	0	3	**0**
COMPONENT 8 A&B - HABITAT AND OTHER INFO.*			
PRIORITY POINTS	0	2	0
TOTAL PRIORITY POINTS	**15.5**	**21.5**	**16.5**
PRIORITY CLASSIFICATION	**Medium**	**High**	**Medium**

* See comments provided below.

COMPONENT 7.A - DOCUMENTED OVERDRAFT (DECLINING GROUNDWATER LEVELS)

Component 7.a of the DWR documented impact analyses states:

> *"The assessment of whether a basin is in overdraft required information that was not available for most basins, resulting in the reporting of trends that indicated declining groundwater levels...." "Water Code Section 10933(a)(7) [sic] identifies overdraft as one of the four documented impacts DWR needs to consider under Basin Prioritization." "Other factors that would be needed to determine overdraft include recharge information and water balance/budget details that are not available for all basins. DWR evaluated declining groundwater levels as a key indicator of overdraft. After reviewing hydrographs or similar data for each basin, groundwater levels were documented as being stable, rising, or declining. To make this determination, each piece of data was viewed back in time as far as possible." ... "No determination was made to differentiate between the severity of individual groundwater level impacts because there are too many variables to consider, and this differentiation is beyond the scope of basin prioritization, which only requires DWR to identify if the condition exists. As such, 7.5 points were assigned to any basin that exhibited declining groundwater levels." (pp. 20-21)*

For the Draft Prioritization, DWR concludes that groundwater levels declines have impacted the Solano Subbasin and comments as follows:

> *"1) CASGEM/WDL/GWIDS: Longterm hydrographs show groundwater level decline. Source: DWR*
>
> *2) The Solano Project was developed to help mitigate the declining groundwater elevations in Solano County. Source: http://www.scwa2.com/resources-management/local-conditions pg. 1*

The 2018 Draft Prioritization approach to evaluating groundwater overdraft as a documented impact is inconsistent with the Sustainable Groundwater Management Act (SGMA) and DWR's Bulletin 118 dating back to 1980. In addition, the conclusion of the evaluation of trends in groundwater levels (as an indicator of overdraft) in the 2018 Draft Prioritization for the Solano Subbasin is not supported by the sources referenced by DWR.

As part of SGMA, Water Code §10721(x) defines the term undesirable results, including chronic lowering of groundwater levels, as "effects caused by groundwater conditions occurring throughout the basin....". The 2018 Draft Basin Prioritization appears to make no distinction between groundwater level trends at one well or in a localized area as opposed to trends occurring throughout the Solano Subbasin. The Process and Results document instead states that "in most cases, multiple hydrographs were used to support the overall basin determination concerning the status of groundwater levels." (p. 20) If an analysis of groundwater levels is to be used in lieu of an assessment of overdraft, it is imperative that the groundwater level data reflect conditions occurring throughout a basin or subbasin.

The methodology and results of the 2018 Draft Prioritization scoring for Component 7a are inconsistent with the statewide analysis of groundwater overdraft and groundwater basins subject to critical conditions of overdraft, most recently published by DWR in Bulletin 118 – Interim Update 2016. In contrast to the approach applied for Bulletin 118 – Interim Update 2016, the 2018 Draft Prioritization considers groundwater level trends as an indicator of groundwater overdraft without regard to a hydrologic base period and without regard to recent prolonged drought conditions. On the contrary, DWR appears to have arbitrarily included any available data available for the Solano Subbasin from January 1, 1990 through January 1, 2017, including data from the recent prolonged drought that began in 2012 across much of the state.[2] In addition, 41 of 87 wells with hydrographs evaluated by DWR for the 2018 Draft Prioritization have periods of record of less than 10 years during the 1990 to 2017 "period of interest". Twenty-nine of the 87 have a period of record of less than 10 years that includes all or part of the drought conditions that began in 2012.

Solano County Water Agency, the designated California Statewide Groundwater Monitoring Program (CASGEM) monitoring entity for the Solano Subbasin, has produced reports relating to groundwater conditions in Solano County, including the Solano Subbasin, for several years. The most recent report includes data collected through calendar year 2017.[3] That report describes historical groundwater level declines in the Quaternary Alluvium and upper zone of the Tehama Formation from the 1940s to the early 1960s followed by a rise in groundwater levels as a result of surface water deliveries and reductions in pumping. In the deep, highly confined part of the groundwater system (i.e. the basal zone of the Tehama Formation), a cone of depression exists in the northern Solano County area. The location of this cone of depression has shifted somewhat with broader distribution of the City of Vacaville wells in the northern county area. The depth of the cone of depression has also decreased in response to the broader distribution of wells pumping from the basal zone of the Tehama Formation.

> *"Water levels in wells completed in Quaternary alluvium and the upper zone of the Tehama Formation (Figures 4-2, 4-3 and 4-4) show similar trends. Water levels in those zones generally show declining levels from the 1940s to the early 1960s during a period of increasing groundwater extraction.[4] Beginning in the 1960s, water levels rose following the delivery of surface water from the Solano Project and corresponding reductions in groundwater extraction. Water levels*

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[2] https://water.ca.gov/-/media/DWR-Website/Web-Pages/Water-Basics/Drought/Files/Resources/Californias-Emergency-Drought-Declaration-is-lifted.pdf

[3] Luhdorff & Scalmanini Consulting Engineers (LSCE). 2018. *Groundwater Conditions Report, Solano Subbasin and Suisun-Fairfield Valley Basin.*

[4] Thomasson, H.G., Jr., F.H. Olmsted, and E.F. LeRoux. 1960. *Geology, water resources and usable ground-water storage capacity of part of Solano County, California.* U.S. Geological Survey Water-Supply Paper 1464.

have remained stable and high relative to conditions prior to the start of surface water deliveries from the Solano Project, largely unaffected by wet or dry climatic periods, with depths to water often less than 10 feet in wells completed in these aquifer zones. As noted in prior groundwater conditions reports, a small number of wells completed in the upper zone of the Tehama Formation or undifferentiated portions of the Tehama Formation of the Solano Subbasin do show some declines that do not reflect meteorological patterns of wetter and drier periods.... It is important to recognize that declines observed in these wells are not consistent with conditions observed throughout the Solano Subbasin nor or they consistent with conditions observed in other wells in the vicinity of these wells with exposure to similar aquifer zones.

Across the Solano Subbasin ... groundwater levels in the Quaternary alluvium and upper zone of the Tehama Formation show small seasonal effects with slightly higher groundwater levels in the spring. Water levels in these relatively shallow aquifers appear to be unaffected by basal zone pumpage."

"Groundwater elevations in the basal zone of the Tehama Formation are much lower than in the upper zone in the northern Solano County area, ranging from about 40 feet above sea level in in the northwest (near Allendale) to 60 to 80 feet below sea level (spring and fall 2016, respectively) in the vicinity of the City of Vacaville (Figures 4-10 and 4-11). A pumping depression in the basal zone exists in the Vacaville area (Figures 4-10 and 4-11), and the gradient for groundwater flow is southerly toward this depression. The pumping depression represents a piezometric surface of the confined aquifer; it does not represent water table conditions or depletion of groundwater from the unconfined part of the groundwater system.... North of the City of Vacaville, the gradient has a magnitude of approximately 27 feet per mile which is much steeper than the gradient in the Quaternary alluvium (Figures 4-5 and 4-6). The gradient in the basal zone becomes less steep in the Elmira Road area, e.g., the gradient between City of Vacaville's Well 14 and the Elmira Road wells is only about 9 feet per mile. This is due to the northerly expansion of the cone of depression in the Elmira Road area as more City of Vacaville pumpage has been shifted to Wells 14 and 15 in the northeast sector."

Comments

- The methodology and results of the 2018 Draft Prioritization evaluation for Component 7a are inconsistent Water Code §10721, and the statewide analysis of groundwater overdraft and groundwater basins subject to critical conditions of overdraft conducted for Bulletin 118 – Interim Update 2016.

- The 2018 Draft Prioritization considers groundwater level trends as an indicator of groundwater overdraft without regard to a hydrologic base period and without regard to recent prolonged drought conditions. On the contrary, DWR appears to have arbitrarily included any available data from January 1, 1990 through January 1, 2017, including data from the recent prolonged drought that began in 2012 across much of the state.[5]
- Forty-one of 87 wells with hydrographs evaluated by DWR for the 2018 Draft Prioritization have periods of record of less than 10 years during the 1990 to 2017 "period of interest". Twenty-nine of the 87 have a period of record of less than 10 years that includes all or part of the span of drought conditions that began in 2012.
- The ongoing groundwater monitoring in the Solano Subbasin shows that groundwater levels are generally stable with the exception of some water level declines that have occurred during drought conditions.
- Historical groundwater levels in the Quaternary Alluvium and upper zone of the Tehama Formation stabilized decades ago in response to increased surface water deliveries and reduced groundwater pumping that occurred in response to the Solano Project.
- Groundwater level trends in the Solano Subbasin are not indicative of overdraft.
- DWR's assignment of 7.5 points "to any basin that exhibited declining groundwater levels" appears to overreach and result in an inconsistency with the purpose of identifying overdraft conditions.
- The Solano Subbasin should not be classified as having "declining groundwater levels" at the Subbasin scale and should receive 0 impact points for this subcomponent.

COMPONENT 7.B - DOCUMENTED SUBSIDENCE

DWR evaluated component 7.b by:

> *.... "Reviewing hydrographs, extensometer data, land use data, groundwater management plans, annual reports, grant applications, professional studies from the NASA Jet Propulsion Laboratory and United State Geological Survey (USGS), Interferometric synthetic aperture radar (InSAR) via Sentinel-1A satellite, UNAVCO Plate Boundary Observatory, Bulletin 118 – Update 2003, California Water Plan Update 2013, Alternative Plans submitted pursuant to SGMA, environmental documents, and professional correspondence." "When reviewing the subsidence data, data that were related to groundwater extractions were focused on and evaluated to determine if subsidence was current or historical." ... "No determination was made to differentiate between the severity of the individual subsidence impacts because there are too many variables to consider, and this differentiation is beyond the scope of basin*

[5] https://water.ca.gov/-/media/DWR-Website/Web-Pages/Water-Basics/Drought/Files/Resources/Californias-Emergency-Drought-Declaration-is-lifted.pdf

> *prioritization, which only requires DWR to identify that the condition exists in the basin. As such, 10.0 points were assigned to any basin that exhibited current subsidence, and 3.75 points were assigned to any basin where subsidence occurred in the past and there was no evidence that subsidence was still occurring." (p. 21)*

Solano County Water Agency, the designated California Statewide Groundwater Monitoring Program (CASGEM) monitoring entity for the Solano Subbasin, has produced reports relating to groundwater conditions in Solano County, including the Solano Subbasin, for several years. The most recent report includes data collected through calendar year 2017.[6] That report describes land surface elevations being monitored at two CGPS stations (Dixon and City of Vacaville sites) and also other nearby CGPS stations. Over the last almost six years of available record at these two sites, land subsidence at DIXN totaled 0.0507 feet (0.61 inches) and 0.0459 feet (0.55 inches) at VCVL. Throughout the period of record, DIXN experienced an average yearly rate of [downward] land subsidence of 0.0085 feet/year (or 0.102 inches/year) and VCVL experienced an average yearly rate of subsidence of 0.0077 feet/year (or 0.0924 inches/year). The report also states: Further evaluation would be needed to determine:

> *"a) whether this subsidence is elastic or inelastic, and*
>
> *b) which subsurface unit or units are responsible for the minimal amount of ongoing compaction.*
>
> *Additional investigation will also help assess what affects groundwater pumping activities are having on land subsidence. Continuous monitoring at SCWA's DIXN and VCVL subsidence monitoring stations provide a local source of data for management of the groundwater resource (in the Solano Subbasin). Nearby CGPS stations also provide useful land surface displacement (data), and an extensometer in nearby Yolo County provides further information on localized land subsidence and relationships between land surface displacement and groundwater levels."*

Comments

- DWR assigned an impact score of 0 for subsidence for the Solano Subbasin.
- Based on DWR's scoring approach, where any amount of current subsidence results in a score of 10, theoretically the Solano Subbasin should receive a score of 10, even though the measured amount of land subsidence is very small.

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[6] Luhdorff & Scalmanini Consulting Engineers (LSCE). 2018. *Groundwater Conditions Report, Solano Subbasin and Suisun-Fairfield Valley Basin.*

- It would be appropriate for DWR to give some credit to those subbasins that are monitoring and evaluating whether or not land subsidence is occurring and to consider some threshold that, at least in the interim (prior to GSP submittals), represents an amount of subsidence that is considered to be less than significant.

COMPONENT 7.C - DOCUMENTED SALINE INTRUSION

For Impact component 7.c, DWR states:

> *"Saline intrusion was evaluated by reviewing available data published over the last 20 years. Evaluation consisted of reviewing hydrographs, groundwater management plans, annual reports, grant applications, professional studies by USGS, Bulletin 118 – Update 2003, California Water Plan Update 2013, Alternative Plans submitted pursuant to SGMA, county hazards reports, and environmental documents."*
>
> *"Saline intrusion in the coastal and Delta groundwater basins, as defined in Bulletin 118 – Interim Update 2016, was determined by researching available documents for references of past or present excess salinity problems.*
>
> *The primary source of information used was local reports and studies that focused on the challenges of saline intrusion within individual basins. The reports and studies directed at managing or preventing saline intrusions were related to:*
>
> - *Water quality analyses.*
> - *Projects designed to stop or reverse current or past intrusions.*
> - *Groundwater management re-operation that reduced or shifted current operations to other parts of the basin, or invested in enhanced groundwater and surface water conjunctive management.*
>
> *No determination was made to differentiate between the severity of individual saline intrusion impacts because there are too many variables to consider and this differentiation is beyond the scope of basin prioritization, which only requires DWR to identify that the condition exists in the basin. As such, 5.0 points were assigned to any basin that exhibited impacts of saline intrusion." (pp.21-22)*

This approach appears not only to avoid "differentiation between the severity of individual saline intrusion impacts" but also any consideration of the conditions that can result in elevated salinity in coastal and Delta groundwater basins, whether they are a result of groundwater use in the basin or not. The application of this approach for the 2018 Draft Prioritization also appears to be very

inconsistent from basin to basin. For example, DWR has assigned a Saline Intrusion Impact Score of 0 to the Eel River Valley Basin (Basin ID 1-010), while describing conditions in the basin as follows:

> *"1) Seawater Intrusion Conditions: The principal aquifers within the Basin are in good hydrologic connection with the ocean along approximately 10 miles of coastline. The westernmost portion of the valley consists of a broad, low-lying coastal plain within intertidal/brackish marsh and wetlands. The tidal influence within the Eel River extends upstream of Fernbridge approximately 12 miles inland from the mouth. Source: EelRiverGWAltPlan-rpt-Final-20161230.pdf 2) Chloride concentrations in excess of the 250 milligrams per liter drinking-water recommendation are reported in water from wells near the Eel River as much as 4 miles inland from the Pacific Ocean, suggesting that the source of the chloride is brackish water from the tidal reaches of the river. Source: CoastalBasins-USGS_GW_Atlas1995(HA730-B_CoastalBasinsAquifers).pdf"*

DWR also assigned a Saline Intrusion Impact Score of 0 to the Carpinteria Basin (Basin ID 3-018), while describing conditions in the basin as follows:

> *"1) Groundwater quality is generally good for municipal and agricultural uses. There are localized areas with high TDS near the Pacific Ocean due to seawater intrusion (DWR 2004an, 2004ao, 2004ap, 2004aq, 2004ar, 2013e; GWD and LCMWC 2010). Source: LTO-EIS_USBR-Chapter7-GWResources.pdf 2) Groundwater levels in most of the basin, based on springtime measurements of water levels in qualified wells, are above sea level. A pumping depression exists in the central portion of the basin, with water levels as deep as about 15 feet below sea level and several feet below sea level at the coast, a condition that could allow sea water intrusion; however, there has been no documented evidence of seawater intrusion in the basin. Based on current data (Fugro, 2011), and CVWD?s ability to conjunctively use imported surface water from the Central Coast Water Authority (i.e., State Water Project), and local surface water from Lake Cachuma, annual groundwater demand is, on average, about 1,400 AFY less than the estimated safe yield of 5,000 AFY. Source: SantaBarbaraCountyGWReport-2011.pdf"*

For the Solano Subbasin, DWR assigned a Saline Intrusion Impact Score of 5 with the following rationale:

> *" 1) Numerous upstream storage facilities, together with diversions of water from the Delta and the tributary streams of the Delta have substantially reduced the amount of fresh water flowing into the Delta with a resultant increase in salinity intrusion into the Marsh and Delta. ...The following policies represent the County's intent in preserving water quality and reducing flood hazards in*

> *the Suisun Marsh: SM.P-11: Projects designed to import or redistribute the fresh water in the Marsh for salinity control should be planned carefully so that the expected benefits are realized. SM.P-12: To prevent crop damage in some areas, the withdrawal of groundwater from the underground aquifers surrounding the Marsh may be desirable. Withdrawal should not be so extensive as to allow the salt water of the Marsh to intrude into fresh water aquifers, or to disrupt the natural subsurface flow of groundwater into the Marsh. Source: SuisunMarsh-EXHIBIT I LPP Final Draft 2008 General Plan Suisun Marsh Policies 3 20 12.pdf"*

Notably, DWR Bulletin 118: Interim Update (2016) provides this context for conditions of impacts of overdraft:

> *"The deciding factor for the identification of groundwater basins subject to critical conditions of overdraft was the documented observation of one or more adverse impacts of overdraft, including:*
>
> - *Land subsidence.*
> - *Sea water intrusion into a coastal basin aquifer.*
> - *Water of unusable quality being caused to migrate and make a groundwater supply unusable.*
> - *Groundwater levels declining during a period of normal or above-normal water supply."*

With respect to "salt water intrusion", the focus is on intrusion into a coastal basin aquifer. However, the document DWR cites related to the Suisun Marsh is in regard to surface water flows. The Suisun Marsh document also states: "Water quality in the Marsh today is generally adequate, in terms of salinity, turbidity, temperature of pollution levels. The salinity level, however, is almost totally dependent upon the amount of fresh water flowing in from the Delta since it is inflow that limits the intrusion of saline ocean waters."

DWR does not cite to the above Suisun Marsh General Plan exhibit for DWR's assessment of the Suisun Fairfield Valley Subbasin.

Based on Geotracker data for well SL186022960_62MW-1, groundwater level data for the southern Solano Subbasin exhibit stable groundwater levels. There is no indication that groundwater level trends are contributing to salt water intrusion in the southern part of the Solano Subbasin, where a small segment of the Subbasin is adjacent to the Suisun Bay.

Comments

- Salt water intrusion into the coastal basin aquifer is not supported by the document cited by DWR.
- Stable groundwater levels in the alluvium and upper zone of the Tehama formation do not support a finding of salt water intrusion in the southern part of the Solano Subbasin, where a small segment of the Subbasin is adjacent to the Suisun Bay.
- The impact point score should be changed from 5 to 0 for the salt water intrusion impact component.

COMPONENT 7.D - DOCUMENTED WATER QUALITY DEGRADATION

The Process and Results document describes a two-part analysis of water quality data for Component 7d to evaluate "both the magnitude of documented groundwater contamination and extent of impact to public drinking water" (p. 22). Data sources referenced include:

- SWRCB, Division of Drinking Water – Public Supply Database, all active wells (March 2016)
- SWRCB – GeoTracker Groundwater Ambient Monitoring and Assessment (GAMA) secure database (Division of Drinking Water, reported Water Quality results (as of April 4, 2017), and
- SWRCB – Maximum Contaminant Level (MCL) list (as of November 2017).

For this review, both the Component 7.d.1 Magnitude of Water Quality Degradation analysis and Component 7.d.2 Extent of Documented Groundwater Contamination analyses were replicated using the methods described in the Process and Results document. Water quality data were obtained for the analyses through a query of the GeoTracker GAMA secure database. The query was run in May 2018, prior to DWR releasing the Component 7d water quality records used in the Draft Prioritization analyses. Results are presented in **Table 2**.

The Magnitude of Water Quality Degradation analysis used by DWR for Component 7.d.1 applies equal consideration to exceedances of naturally-occurring constituents and anthropogenic constituents. The methods used for the Component 7.d.1 analysis also provide no consideration of whether MCL exceedances occur throughout a basin or in localized areas within a basin, and no consideration of any trends in water quality over time. All three of these aspects of the method applied for the 2018 Draft Prioritization are inconsistent with the charge in Water Code §10933(b)(7) to evaluate "water quality degradation".

Concentration of naturally-occurring constituents that exceed regulated drinking water standards are a relevant consideration for water system operators responsible for developing supplies of adequate quantity and quality to serve their users; however, DWR is charged with evaluating "water quality degradation" for the purposes of prioritizing groundwater elevation monitoring and SGMA implementation. For example, Iron (Fe) and Manganese (Mn) both naturally occur at high concentrations in groundwater in the region. The analysis conducted for this review found that

24.1% of the MCL exceedances used in the data dataset analysis by DWR were exceedances of either Iron of Manganese.[7] It is incorrect to include these in an assessment of "impacts" in the context of anthropogenic degradation.

Table 2 shows a slightly greater number of MCL exceedances when including all chemical constituents with an MCL as of November 2017 (i.e., 1,727 exceedances compared to 1,706 in the results in the Draft Prioritization); however, the number of wells with an MCL exceedance is equivalent between the Draft Prioritization and this review. The increased number of MCL exceedances may be the result of additional data having been added to the GAMA secure database between April 2017 when DWR queried the database and May 2018 when the database was queried for the review analysis. **Table 2** also shows that, for the review analysis for the Magnitude of Water Quality Degradation analysis, excluding naturally-occurring Iron and Manganese results in a Component 7.d.1 score of 2. The Extent of Contamination score for Component 7.d.2 is reduced to a value of 1, when accounting for the 67 wells with any exceedance of a water quality standard for constituents other than Iron and Manganese. Based on the sum of the two sub-component scores, the Component 7.d Water Quality Documented Impacts Point score is reduced from 2 in the Draft Prioritization to 1.

Accounting for the revised Impact Point scores for saline intrusion and water quality degradation, the Priority Point score for Component 7 is reduced from 3 to 0 (**Table 3**).

[7] 411 of 1706 MCL exceedances provided in the Draft Prioritization dataset (https://data.cnra.ca.gov/dataset/sgma-basin-prioritization-2018/resource/267e2f02-d7c8-4d7b-a4d1-a8c1e60ec861, accessed 7 June 2018).

Table 2. Solano Subbasin Water Quality Degradation Review

	2018 DWR DRAFT	2018 Review Results	
Water Quality Impacts Assessment Steps	Considering All Chemicals [1]	Considering All Chemicals [1]	Considering All Chemicals [1] Except Mn and Fe
Count of Exceedances	1,706	1,727	1,307
Average Relative MCL Exceedance (ARME)	3.47	3.42	2.64
Component 7.d.1 ARME Points	*3*	*3*	*2*
Count of Wells Analyzed for WQ	unknown	187	
Count of Wells Used for Extent	152		
Count of Wells with Exceedances	80	80	67
Extent of Groundwater Contamination (ECG)	0.53	0.53	0.44
Component 7.d.2 EGC Points	*2*	*2*	*1*
WQ Related Degradation Points (Sum of ARME and EGC Points)	5	5	3
Component 7.d Water Quality Documented Impacts Points	**2**	**2**	**1**

1 All chemicals with a primary Maximum Contaminant Level (MCL), secondary MCL, of Public Health Goal established as of November 2017, per the Draft Prioritization Process and Results document.

Table 3. Solano Subbasin Documented Impacts Review

COMPONENT 7 – DOCUMENTED IMPACTS	2018 DWR DRAFT	2018 Review Results
GROUNDWATER OVERDRAFT (DECLINING GROUNDWATER LEVELS)	7.5	0
SALINE INTRUSION IMPACT POINTS	5	0
SUBSIDENCE IMPACT POINTS	0	0
WATER QUALITY IMPACT POINTS	2	1
PRIORITY POINTS	**3**	**0**

Comments

- Inclusion of all naturally-occurring constituents (such as iron and manganese) as part of the basin prioritization water quality analysis is not consistent with Water Code §10933, which requires prioritization that includes "impacts on the groundwater basin, including… water quality degradation."
- MCLs for naturally-occurring constituents are relevant for drinking water system operations, but do not necessarily reflect an "impact" relevant to the groundwater basin prioritization established in the Water Code.
- The methods used for the Draft Prioritization do not consider the spatial distribution of water quality exceedances nor temporal trends. On the contrary, the methods give equal weight to any single result that occurred in a well at any time over a 17-year period, regardless of when it occurred, regardless of the number of times that an MCL exceedance occurred at a given well or across the Subbasin, and even regardless of whether another result from the same well with the same sample date found no MCL exceedance.
- The Component 7.d impact score for water quality degradation should be revised to a score of 1.
- The Component 7 Priority Point score for Documented Impacts should be revised to a score of 0.

COMPONENTS 8.A & 8.B - DOCUMENTED ADVERSE IMPACTS ON LOCAL HABITAT AND STREAMFLOWS

For Component 8, DWR states:

> *"Water Code section 10933(b)(8) was amended in 2014 by the same legislation that created SGMA to include, under other information, the specific example of adverse impacts on local habitat and local streamflows. DWR had not evaluated this sub-component during the development of the 2014 CASGEM prioritization, and determined that because of a lack of reliable state-wide data, there was insufficient information available to include this sub-component in the initial SGMA prioritization in 2015. Subsequent to that prioritization, DWR has developed a statewide Natural Communities database that assembles information on the location of springs, lakes, rivers, species, and habitat from multiple sources. Utilizing that database, DWR included impacts to local habitat and local streamflows as a new sub-component."*
>
> *"For the 2018 SGMA Basin Prioritization, DWR evaluated if habitat or streamflow exists in the basin. To do so, DWR used the Natural Communities and National Hydrography datasets to determine if one or more habitats commonly associated with groundwater or streamflow exist within a groundwater basin. No statewide measure of adverse impacts to habitat or*

stream flow exists that would allow DWR to rank the severity of those impacts. Habitat and streamflow were identified within the basins using the following method:

- *After consulting the Natural Communities dataset, if it was determined that there are one or more polygons representing vegetation, wetland, seep, or spring habitat in the basin the basin was assigned one point for habitat.*
- *After consulting the NHD dataset, if it was determined that one or more perennial or permanent streams were located within or adjacent to the basin, the basin was assigned on point for streamflow." (p.25)*

In the Solano Subbasin, DWR assigned a score of 1 for Streamflow and also a score of 1 for local habitat because of the presence of these features in the Subbasin.

Further, to determine if there was a possible adverse impact to habitats and streamflows, DWR reviewed 1) the ratio of pumping to volume to basin acreage, 2) whether groundwater levels had been determined to be declining, and 3) whether groundwater level monitoring is being performed. Because DWR's assessment had concluded groundwater level declines are occurring (see above), DWR retained the impact points as priority points. So, the Component 8 score was two priority points.

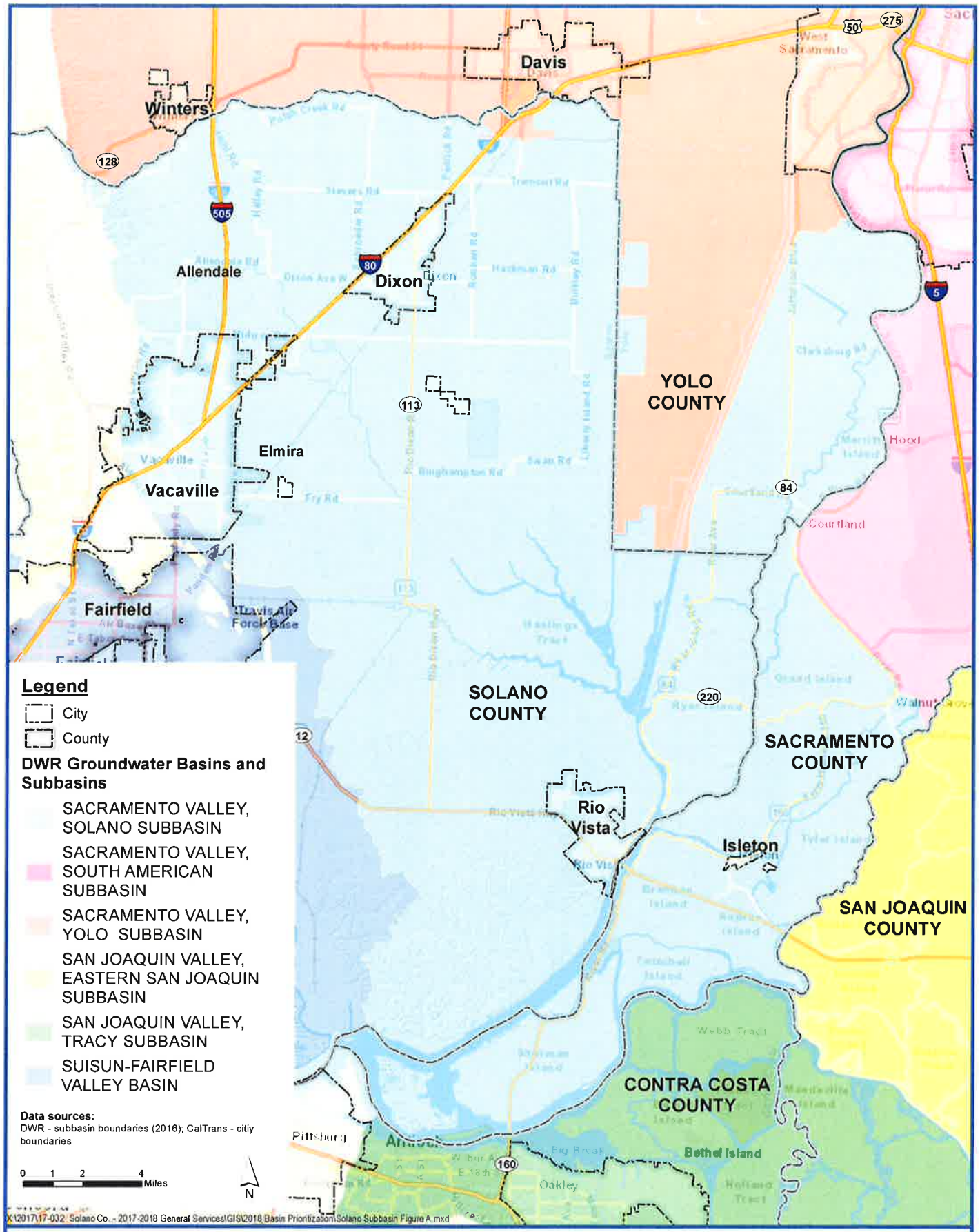
Comments

- The ongoing groundwater monitoring in the Solano Subbasin shows that groundwater levels are generally stable with the exception of some water level decline due to drought conditions.
- Historical groundwater levels in the Quaternary Alluvium and upper zone of the Tehama Formation stabilized decades ago in response to increased surface water deliveries and reduced groundwater pumping.
- Groundwater level trends in the Solano Subbasin are not indicative of overdraft.
- The Solano Subbasin should not be classified as having "declining groundwater levels" and Component 8 should receive 0 priority points.

Thank you for reviewing these comments. If you have any questions, please contact Chris Lee on my staff at (707) 455-1105 or via email at clee@scwa2.com.

Sincerely,

Roland Sanford,
Secretary to Solano GSA



Luhdorff & Scalmanini
Consulting Engineers

Solano Subbasin Location Reference

2018 SGMA Draft Basin Prioritization Public Comment
Solano Subbasin

Figure A

ACTION OF
SOLANO GROUNDWATER SUSTAINABILITY AGENCY

DATE: **October 11, 2018**

SUBJECT: **Fiscal Year 2018-2019 Budget**

RECOMMENDATION:

Review draft Fiscal Year 2018-2019 budget and adopt as presented or with modifications.

FINANCIAL IMPACT:

None.

BACKGROUND:

The proposed Fiscal Year 2018-2019 budget was postponed due to the timing of the final agreement with the Department of Water Resources (DWR) for the Proposition 1: 2017 Sustainable Groundwater Planning Grant. Staff have been working closely with DWR and the draft agreement is now being reviewed by senior contract mangers and should be ready for signature shortly. Staff have also been working with the consulting firms developing the Groundwater Sustainability Plan (GSP) to revisit the schedule and break-down of costs over the next several years.

The Agency budget has been simplified since many of the typical expenses associated with a new Agency are covered at no expense by the Solano County Water Agency, such as payroll and office costs. The only anticipated costs for the Agency this fiscal year would be for liability insurance, GSP costs, and possibly for applying for additional grant funds (attachment 1). Projected costs for GSP development over the next four years are also included (attachment 2).

Staff are recommending adoption of the budget as presented or with modifications.

Recommended: _____
Roland Sanford, Secretary

☐ Approved as recommended ☐ Other (see below) ☐ Continued on next page

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Modification to Recommendation and/or other actions:

I, Roland Sanford, Secretary to the Solano Groundwater Sustainability Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on October 11, 2018 by the following vote.

Ayes:

Noes:

Abstain:

Absent:

_____
Roland Sanford
Secretary to the
Solano Groundwater Sustainability Agency

Solano GSA
FY 2018-2019 Budget

Estimated Revenue				Total
Initial GSA Contributions	$46,538			
SCWA Contribution	$350,000			
Prop 1 Grant	$576,586 *			$973,124

Estimated Expenses				Total
GSP Development	$576,586			$576,586
ACWA Membership	$203			$203
JPIA Liability Insurance	$1,609			$1,609
JPIA RAP Deposit	$2,500			$2,500
Grant Preperation Subcontracts				
Future Grant	$30,000			$30,000
Future Grant	$30,000			$30,000
Total Expenses	$640,898			$640,898
Estimated Reserves				$332,226

* Grant funds are reimbursed in arrears.

Estimated Annual Budget for GSP Development, July 2018 to January 2022
Solano Subbasin

TASK	Year 1 July 2018-June 2019	Year 2 July 2019-June 2020	Year 3 July 2020-June 2021	Year 4 (first 1/2) July 2021-Jan 2022	Task Totals
Task 1 - Direct Project Administration	$41,512	$41,512	$41,512	$20,756	$145,292
Task 2 - Annotated Outline, Chapter 1.0 and Executive Summary	$28,014		$14,007		$42,021
Task 3 - Chapters 2, 3, 4, 5, and 10 (Plan Area, Basin Setting, Water Supply, Water Budget, and References)	$340,000	$225,791	$225,000		$790,791
Task 4 - Chapter 6 and 7 (Sustainability Goal, Undesirable Results, Minimum Threshold, and Measurable Objectives; Monitoring Data Management & Reporting)	$75,000	$75,000	$19,490		$169,490
Task 5 - Chapter 8 Projects and Management Actions to Achieve Sustainability Goal		$49,435	$49,435		$98,871
Task 6 - Chapter 9 Plan Implementation			$33,518		$33,518
Task 7 - Plan Preparation: Administrative Draft, Draft and Final GSP	$42,098	$42,098	$42,098	$21,049	$147,342
Task 8 - Stakeholder Outreach (Technical Support)	$49,962	$49,962	$49,962	$24,981	$174,868
Tasks 1-8 TOTAL	$576,586	$483,798	$475,022	$66,786	**$1,602,191**

ACTION OF
SOLANO GROUNDWATER SUSTAINABILITY AGENCY

DATE: **October 11, 2018**

SUBJECT: **Association of California Water Agencies Membership and Liability Insurance with Association of California Water Agencies Joint Powers Insurance Authority**

RECOMMENDATION:

Adopt Resolution 2018-01, Election to enter the Joint Protection Program of the Association of California Water Agencies/Joint Powers Insurance Authority.

FINANCIAL IMPACT:

Membership dues for the Association of California Water Agencies through the 2018-2019 fiscal year will be approximately $203. Liability insurance through the ACWA-JPIA will be approximately $1,609 through the 2018-2019 fiscal year. There is adequate funding in the current budget for these expenses.

BACKGROUND:

The Association of California Water Agencies (ACWA) is the largest statewide coalition of public water agencies in the country. ACWA's mission is to help members promote the development, management and use of good quality water at the lowest practical cost and in an environmentally responsible manner. ACWA serves the water industry and the public by promoting local agencies as the most efficient means of providing water service; sharing reliable scientific and technical information; tracking and shaping state and federal water policy; advocating for sound legislation and regulation; and cooperation and consensus amongst all interest groups.

ACWA, through the Joint Powers Insurance Authority (JPIA) can provide liability insurance to its members. Liability insurance would protect the Agency against personal injury, errors and omissions, cyber liability, employment practices, and bodily injury and property damage type claims.

Staff recommend the Board of Directors adopt Resolution 2018-01, electing to join the Joint Powers Insurance Authority.

Recommended: _____
Roland Sanford, Secretary

☐ Approved as recommended ☐ Other (see below) ☐ Continued on next page

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Modification to Recommendation and/or other actions:

I, Roland Sanford, Secretary to the Solano Groundwater Sustainability Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on October 11, 2018 by the following vote.

Ayes:

Noes:

Abstain:

Absent:

_____
Roland Sanford
Secretary to the
Solano Groundwater Sustainability Agency

RESOLUTION 2018-01

A RESOLUTION OF THE SOLANO GROUNDWATER SUSTAINABILITY AGENCY ELECTING TO ENTER THE JOINT PROTECTION PROGRAMS OF THE ASSOCIATION OF CALIFORNIA WATER AGENCIES/ JOINT POWERS INSURANCE AUTHORITY

WHEREAS, pursuant to the provisions of Section 990, 990.4, 990.8 and 6500 of the Government Code, the Agency wishes to enter into an agreement with various other districts entitled "Joint Powers Agreement: Creating the Association of California Water Agencies/Joint Powers Insurance Authority" (the Authority), for the purposes of participating in the Joint Powers Insurance Authority created thereby, which since its formation has provided for and administered joint protection programs as more fully set forth in said agreement; and

WHEREAS, said joint protection programs offer significant advantages to this Agency in terms of cost, liability protection, property protection, workers' compensation protection, and services, and entering such programs, on the conditions hereinafter set forth, appears to be in the best interest of the Agency.

NOW, THEREFORE, BE IT RESOLVED, ORDERED, AND DIRECTED THAT:

1. The Agency hereby consents pursuant to the above-mentioned Joint Powers Agreement, and the resolutions and policies enacted in implementation of such Agreements, to enter said joint protection programs.

2. The Agency hereby elects to join the **Liability Program** sponsored by the Authority.

3. The Agency hereby selects $250 as its Retrospective Allocation Point (RAP) for the first partial year of participation under the Authority's cost allocation formula for liability exclusive of Dam Failure Liability.

4. The Secretary of the Agency is hereby authorized to pay to the ACWA/Joint Powers Insurance Authority its first deposit premium.

5. The Secretary of the Board of Directors of the Agency is directed to certify a copy of this resolution and to forward the same resolution and the signed Joint Powers Agreement promptly by mail to the Association of California Water Agencies/Joint Powers Insurance Authority, P.O. Box 619082, Roseville, CA, 95661, at which time coverage will commence the 11th day of October, 2018.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of the Agency on the 11th day of October, 2018, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

DATED: October 11, 2018

_____
Chair, Board of Directors
Solano GSA

ATTEST

_____
Roland Sanford,
Secretary to the Board of Directors

ACTION OF
SOLANO GROUNDWATER SUSTAINABILITY AGENCY

DATE: **October 11, 2018**

SUBJECT: **Adoption of Resolution 2018-02 in support of State Proposition 3, California Infrastructure and Watershed Conservation Bond Initiative**

RECOMMENDATION:

Adopt Resolution 2018-02 in support of State Proposition 3, the California Infrastructure and Watershed Conservation Bond Initiative.

FINANCIAL IMPACT:

None.

BACKGROUND:

Proposition 3, which will be on the November 6, 2018 ballot, includes $675 million dollars for local entities to develop Groundwater Sustainability Plans and more generally, to comply with the Sustainable Groundwater Management Act of 2014. The Solano Groundwater Sustainability Agency is actively seeking additional funds to prepare a Groundwater Sustainability Plan for the Solano Subbasin. Proposition 3, like the predecessor Proposition 1 bond measure of 2014, is a potential source of funding for preparation of the Solano Subbasin Groundwater Sustainability Plan.

Recommended: _____
Roland Sanford, Secretary

☐ Approved as recommended ☐ Other (see below) ☐ Continued on next page

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Modification to Recommendation and/or other actions:

I, Roland Sanford, Secretary to the Solano Groundwater Sustainability Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on October 11, 2018 by the following vote.

Ayes:

Noes:

Abstain:

Absent:

_____
Roland Sanford
Secretary to the
Solano Groundwater Sustainability Agency

RESOLUTION 2018-02

A RESOLUTION OF THE SOLANO GROUNDWATER SUSTAINABILITY AGENCY IN SUPPORT OF STATE PROPOSITION 3, CALIFORNIA INFRASTRUCTURE AND WATERSHED CONSERVATION BOND INITIATIVE

WHEREAS, the Sustainable Groundwater Management Act became law in 2014, and;

WHEREAS, Solano Subbasin, as defined by the California Department of Water Resources in Bulletin 2018, is subject to the Sustainable Groundwater Management Act, and;

WHEREAS, the Solano Groundwater Sustainability Agency has been formed and is preparing a Groundwater Sustainability Plan for the Solano Subbasin, pursuant to the Sustainable Groundwater Management Act, and;

WHEREAS, preparation of the Solano Subbasin Groundwater Sustainability Plan is estimated to cost in excess of 1.2 million dollars, and;

WHEREAS, State Proposition 3, more formally known as the California Infrastructure and Watershed Conservation Bond Initiative, which includes 675 million dollars to assist local entities with preparation of Groundwater Sustainability Plans and more generally, compliance with the Sustainable Groundwater Management Act, will be before the California voters on November 6, 2018, and;

WHEREAS, the Solano Groundwater Sustainability Agency is actively seeking additional funds to complete the Solano Subbasin Groundwater Sustainability Plan mandated by the Sustainability Groundwater Management Act;

NOW THEREFORE BE IT RESOLVED that the Solano Groundwater Sustainability Agency supports Proposition 3, the California Infrastructure and Watershed Conservation Bond Initiative.

Approved and adopted the 11th day of October, 2018. I, the undersigned, hereby certify that the foregoing Resolution was duly adopted by the Solano Groundwater Sustainability Agency following Roll Call Vote:

PASSED AND ADOPTED at a regular meeting of the Board of Directors of the Agency on the 11th day of October, 2018, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

DATED: October 11, 2018

_____
Chair, Board of Directors
Solano GSA

ATTEST

_____
Roland Sanford,
Secretary to the Board of Directors

ACTION OF
SOLANO GROUNDWATER SUSTAINABILITY AGENCY

DATE: **October 11, 2018**

SUBJECT: **Solano Subbasin Groundwater Sustainability Plan**

RECOMMENDATION:

Hear presentation from staff and technical experts on scope and schedule of Groundwater Sustainability Plan.

FINANCIAL IMPACT:

None.

BACKGROUND:

The 2014 Sustainable Groundwater Management Act (SGMA) requires local public agencies and Groundwater Sustainability Agencies (GSAs) in high- and medium-priority basins to develop and implement Groundwater Sustainability Plans (GSPs) or Alternatives to GSPs. GSPs are detailed road maps for how groundwater basins will reach long term sustainability. One or more GSPs must be developed for the Solano Subbasin by January 31, 2022; and collectively, these plans must encompass the entire subbasin.

The Board of Directors has previously authorized staff to work with the staff of the other Groundwater Sustainability Agencies (GSAs) in the subbasin. Collectively, this group is called the Solano Collaborative (attachment 1). One of the work products of this group was to develop the Memorandum of Understanding (MOU) for the Cooperative Implementation of the Sustainable Groundwater Management Act in the Solano Subbasin. All GSAs, including the Solano GSA, have signed this MOU to work together on a single GSP for the Solano Subbasin.

Recommended: _____
Roland Sanford, Secretary

[ ]	Approved as recommended	[ ]	Other (see below)	[X]	Continued on next page

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Modification to Recommendation and/or other actions:

I, Roland Sanford, Secretary to the Solano Groundwater Sustainability Agency, do hereby certify that the foregoing action was regularly introduced, passed, and adopted by said Board of Directors at a regular meeting thereof held on October 11, 2018 by the following vote.

Ayes:

Noes:

Abstain:

Absent:

_____
Roland Sanford
Secretary to the
Solano Groundwater Sustainability Agency

The purpose of this presentation is to give the Board of Directors an overview of the GSP, including the overarching timeline (attachment 2) and overall products that are required to be submitted to the Department of Water Resources under the Proposition 1 Grant (attachment 3). A draft Table of Contents is also included as a general guideline for required sections of the GSP (attachment 4).

The outline of the presentation is as follows (all slides are included in attachment 5):

- Introductory Remarks
- Objectives of the GSP
- Technical Team Organization/Coordination
- GSP Schedule
- Current Groundwater Conditions
- Hydrogeologic Conceptual Model
- Groundwater Basins
- Groundwater Monitoring
- Groundwater Levels
- Water Budgets
- Groundwater-Surface Water Interactions
- GSP Outline
- Inter-Agency Coordination
- Stakeholder Outreach & Communication
- Parallel Processes
- Questions

There are parallel processes, the previously discussed Basin Boundary Modifications, and to a lesser extent, the Draft Basin Prioritizations, that may affect the overall make-up of the Solano Collaborative. The Northern Delta GSA (ND GSA) is requesting a new groundwater subbasin be created, the Northern Delta Basin. If that request is granted, the ND GSA would not participate directly in the Solano GSP or join the Collaborative. If the ND GSA BBM request is denied, they may ask to formally join the Solano Collaborative and participate in the Solano GSP. This would likely require an amendment to the MOU if all other GSAs agree to the change. Currently, the ND GSA staff are participating in the Solano Collaborative meetings.

Because of this potential change as to the make-up of the Solano Collaborative, staff are recommending holding off on a general stakeholder GSP kick-off meeting until next spring as DWR should be finalizing its BBM recommendations at that time. Once DWR finalizes its recommendations, we will have a better sense of GSA participation in the Solano GSP and will be able to fully engage all stakeholders at that time.

Solano GSA Collaborative is composed of 5 Groundwater Sustainability Agencies (GSAs)

Goal: To develop a Groundwater Sustainability Plan by January 31, 2022

City of Vacaville GSA

Board of Directors
Vacaville City Council

Staff Contact
Justen Cole (707) 469-6404

Northern Delta GSA

Board of Directors
Reclamation District 3
Reclamation District 307
Reclamation District 317
Reclamation District 349
Reclamation District 369
Reclamation District 407
Reclamation District 501
Reclamation District 554
Reclamation District 556
Reclamation District 744
Reclamation District 755
Reclamation District 813
Reclamation District 1002
Reclamation District 2067
Reclamation District 2110
Reclamation District 2111

Staff Contact
Erik Ringelberg (916) 668-7345

Sacramento County GSA

Board of Directors
County of Sacramento Board of Supervisors

Staff Contact
Linda Dorn (916) 341-9138

Solano Subbasin GSA

Board of Directors
Solano Supervisorial District
Solano Supervisorial District
City of Rio Vista Mayor
City of Dixon Mayor
Dixon Resource Conservation District
Solano Resource Conservation District
Maine Prairie Water District
Reclamation District 2068
Cal Water Services
Solano Farm Bureau
Solano Agricultural Advisory Committee

Fiscal Agent for Prop 1 GSP Grant
Plan Manager for Solano GSP

Staff Contact
Chris Lee (707) 455-1105

Solano Irrigation District GSA

Board of Directors
Solano Irrigation District Board of Directors

Staff Contact
Cary Keaten (707) 455-4000

SOLANO COLLABORATIVE

SOLANO GROUNDWATER SUSTAINABILITY PLAN

Freshwater Trust
SDAC Outreach/BasinScout

Ag Innovations
Stakeholder Outreach/Facilitation

Luhdorff & Scalmanini
GSP Development

Kennedy/Jenks
Davids Engineering
West Yost
ERA Economics

Inter-basin Coordination

Schedule: Solano Subbasin GSP

Prop 1 Solano GSP Grant Deliverables

Project Administration (Category A)

- Project Work Plan, Schedule and Budget Updates for Solano GSP
- Stakeholder Outreach Schedule
- Draft/Final Grant Completion Report
- Final Amended MOU

Stakeholder Engagement (Category B)

- GSP Collaborative Webpage
- Stakeholder Outreach Plan
- Stakeholder Outreach Contact/Participation List
- Outreach Materials and Notices
- Continually Updated Schedule of Public Meetings, Workshops, and Webinars
- Public Meeting/Workshop Materials, Including Agendas, Presentation Slides, and Minutes

GSP Development (Category C)

- Draft GSP Executive Summary
- Draft GSP Outline
- Draft GSP Section 1.0: Introduction
- GW-SW Flow Model Development Report and Model Code
- Draft GSP Section 2.0: Plan Area & Basin Setting
- Draft GSP Section 6.0: References
- Draft GSP Section 3.0: Sustainability Goal, Undesirable Results, Minimum Threshold, & Measurable Objectives
- Web-Based Decision Support Tool for Agricultural Landowners
- Draft GSP Section 4.0: Projects & Management Actions to Achieve Sustainability Goal
- Draft GSP Section 5.0: Plan Implementation
- Administrative Draft GSP
- Draft GSP
- Final GSP

Solano Subbasin Groundwater Sustainability Plan
Draft Table of Contents