REGULAR MEETING AGENDA
July 9, 2020
2:00 PM
County of Merced Board Chambers, Third Floor
2222 M Street, Merced, CA

Bob Kelley, Stevinson Water District
Chair
Nic Marchini, Western White Area Representative
Vice Chair

George Park, Lone Tree Mutual Water Company
Lloyd Pareira, County of Merced

Kole Upton, Le Grand-Athlone Water District
Michael Gallo, Eastern White Area Representative

1. CALL TO ORDER/ROLL CALL

2. PLEDGE OF ALLEGIANCE

3. PUBLIC COMMENT PERIOD
   Public opportunity to speak on any matter of public interest within the Board's jurisdiction including items on the Board's agenda. Testimony limited to three minutes per person.

4. APPROVAL OF MINUTES
   Action to approve the meeting minutes from the Governing Board meetings on January 9, 2020, March 24, 2020, June 12, 2020.

5. PROPOSITION 68 SUSTAINABLE GROUNDWATER MANAGEMENT GRANT UPDATE
   Informational update on the Proposition 68 Sustainable Groundwater Management Round 3 Grant award to the Merced Basin.

6. FISCAL YEAR 2020-2021 BUDGET AND LANDOWNER FEE APPROVAL
   Action to approve the Fiscal Year 2020-2021 GSA budget and approve the FY 2020-2021 SGMA Compliance Landowner Fee.

7. FIRST FIVE IMPLEMENTATION PROJECT/STUDIES
   Discussion and possible direction regarding next steps in the First Five Implementation Plan’s projects and studies.
8. AGREEMENT WITH MERCED COUNTY FOR SUPPORT SERVICES
   Action to approve and authorize the Chairman to sign an Agreement between the Merced Subbasin
   GSA and the County of Merced to provide staff support services to the GSA for Fiscal Year 2020-
   2021.

9. LEGAL COUNSEL CONTRACT EXTENSION
   Action to approve and authorize the Chairman to sign an amendment to Contract 2017-01 with
   Herum, Crabtree, Suntag to extend the term of the contract for legal services for one year.

10. AMSTERDAM WATER DISTRICT UPDATE PRESENTATION
    Brad Samuelson will provide an informational update on the formation of Amsterdam Water
    District.

11. IRRIGATION TRAINING AND RESEARCH CENTER (ITRC) PRESENTATION
    Dan Howes with California Polytechnic State University’s Irrigation Training and Research Center
    will provide an informational presentation on remote sensing of actual evapotranspiration using the
    ITRC-METRIC process.

12. STAFF REPORT

13. BOARD REPORTS

14. NEXT REGULAR MEETING

15. ADJOURNMENT
I. CALL MEETING TO ORDER

The special public meeting of the Merced Subbasin Groundwater Sustainability Agency Joint Powers Authority Governing Board was called to order at 2:00 p.m., on January 09, 2020, in the Board Chambers located at 2222 "M" Street, Third Floor, Merced, California.

II. PLEDGE OF ALLEGIANCE

III. ROLL CALL OF BOARD MEMBERS

Board Members
Present: Bob Kelley Chairman (Stevinson Water District)
    Nic Marchini Vice-Chair (Western White Area Rep.)
    Kole Upton (Le Grand-Athlone Water District)
    Michael Gallo (Eastern White Area Representative)
    George Park (Lone Tree Mutual Water Co.)
    Supervisor Lloyd Pareira (Merced County)

Board Members
Absent: None

Staff Present: Mark Hendrickson Secretary
    Ana Muniz-Laguna Recording Secretary
    Lacey McBride Merced County Water Resources Coordinator

IV. PUBLIC COMMENT PERIOD

No Public Comment

V. APPROVAL OF MINUTES

Action to approve the meeting minutes from the regular meeting on December 09, 2019.

No Public Comment.

VI. BUDGET UPDATE

Budget update on SGMA Compliance Landowner Fee Revenue and GSP Development costs.

Ms. Lacey McBride provided information and an update on SGMA compliance and the Landowner Fee adopted by the GSA Board on July 23, 2019 through a Proposition 218 proceeding. Ms. McBride informed that for the 2019-2020 budget, $392,000 is projected to be funded through the landowner fees collected through property tax bills sent by Merced and Mariposa Counties. Property tax bills were sent in August and Sept of 2019. Three water agencies opted to pay their member’s fees and these agencies were billed directly by the GSA. Merced County sent one installment of the tax fees due and collected $18,206.62, while Mariposa County is collecting $1,228.84 from tax bills. Ms. McBride continued to discuss the GSP development budget status, and costs and the first-year implementation. Ms. McBride shared that $413,038 has been collected from member agencies during 2018-2019 to cover cash flow anticipated for GSP Development and that MID has minimally invoiced the GSA and $388,000 still remains for Phase 2 of GSP Development expenses not grant funded. Ms. McBride further informed on the First Annual Report and GSA tasks. MID has minimally invoiced Merced Subbasin GSA.

Board member Park asked the amount of Coordination Committee and Stakeholder Meetings that are projected and Ms. McBride responded that there are (4) Stakeholder and Coordination Committee meetings planned quarterly for 2020 and four (4) public workshop meetings also planned. She stated that these could be modified as the GSA’s suggestion. Ms. McBride clarified that the term GDE in the Pulse Tool stood for Groundwater Dependent Ecosystems.

Chairman Kelley inquired about experience using the GDE tool which Ms. McBride informed that Woodard and Curran did not have direct experience using the tool, however, several environmental organizations have suggested using this tool in GSA’s continued work of GSP implementation.

Board member Park asked if the $50,000 mentioned on Task 6 was just for the first year and Ms. McBride responded that she would verify with Woodard and Curran if this amount would get GSP to approval.

Ms. McBride discussed Proposition 68 tasks set to be completed within the next two (2) years which included addressing data gaps and developing a remote sensing decision support tool. These tasks are expected to be funded by Prop 68 should the GSA receive the award through the Department of Water Resources (DWR). DWR will be announcing
their award decision around March of 2020. In the event that the GSA is not granted the funds, these tasks would still need to be completed and funded by the GSA.

Ms. McBride clarified that the basin-wide tasks on the First Year Implementation were provided by Woodard and Curran as a work scope for next steps on implementation of the GSP and the options provided are presented for discussion by the GSA.

Chairman Kelley inquired on an explanation of Grant Task 3 and Ms. McBride explained that it refers to a remote sensing decision support tool that uses satellite imagery to develop the water use and demand in the entire basin. She made clear that the expenses and grants shown on the table would be shared between the three GSAs.

Board member Park asked if Grant Task 2 was projected as a plan for installing new monitoring wells or planning for new monitoring wells. Ms. McBride relayed the $359,522 figure is for planning of new monitoring wells into the monitoring network, however this figure is not for the installation or drilling of new wells.

Ms. McBride clarified that this item requires no current action by the Board. She informed that by the 3rd or 4th quarter of 2020, the GSA will have a better idea of the true balance left from the current $388,000 figure remaining and the GSA Board may decide to take action regarding those funds at that time.

No public comment.

VII. **FIRST ANNUAL REPORT**

Action to approve a budget and scope of work for Woodard and Curran to proceed with preparing the first annual report due to the Department of Water Resources on April 1, 2020.

Ms. McBride presented on the First Annual Report and informed that the Sustainable Groundwater Management Act (SGMA) requires each GSA to submit an annual report by each April 1st of each year which includes information on the previous water year, general information, basin conditions, groundwater elevation, extraction information, water usage, annual water budget, land subsidence, groundwater quality and other info. The First Annual Report for this year is due by April 1st, 2020 and the cost to produce this is $147,804 of which Merced Subbasin GSA’s share would be $85,726.32. Ms. McBride pointed out a correction that the GDE Pulse tool is an option for evaluation and is not included in the first annual report.

Board member Marchini asked if the model would be updated in this first annual report and Ms. McBride stated this does not update or recalibrating the model. Data used will be from the existing model.
Board member Upton inquired about surface water supply and what would occur if one of the basins in the GSA decides to ship water out of basin, what would it do to the data.

Ms. McBride replied that she would check with Woodard and Curran if surface water exports outside basin have been calculated in the GSP.

Chairman Kelley suggested to have it mentioned by Woodard and Curran that if surface water does not stay in the basin somehow gets recognized.

Public Comment:

Mr. Keith Ensminger, Merced Resident, asked if this was a change order to the GSP.

Chairman Kelley responded that this action item is not a change order but a report required by DWR moving forward with the GSP.

**MOTION: M/S PAREIRA- PARK, AND CARRIED BY A VOTE OF 6-0, THE BOARD APPROVES A BUDGET AND SCOPE OF WORK FOR WOODARD AND CURRAN TO PROCEED WITH PREPARING THE FIRST ANNUAL REPORT DUE TO THE DEPARTMENT OF WATER RESOURCES ON APRIL 1, 2020.**

VIII. **STAFF REPORT**

Ms. McBride informed the Board members that Form 700’s are due by April 1, 2020 and staff member Ana Muniz-Laguna will be collecting these. The forms submitted will need to be signed originals.

Ms. McBride updated that Woodard and Curran is working on uploading the GSP to the SGMA portal in order to submit to DWR and this process includes not only uploading the GSP document, but additional supporting documentation before January 31, 2019.

IX. **BOARD REPORTS**

Ms. McBride informed that a Technical and Advisory Committee meeting is projected to take place in early February 2020 and a Stakeholder and Coordination Committee meeting is projected in the first quarter of 2020 before April's GSA meeting.

Chairman Kelley mentioned a satellite company that contacted him to discuss services about satellite imagery and consumptive use and he wanted to know what is the procedure about having conversations with providers of services in the future.

Mr. Mark Hendrickson replied that the GSA could do that by having the
Chairman and the Vice-Chair along with Staff meet with providers for information or the GSA could appoint an Ad-Hoc committee to take on that task. Lastly an option would be to do a two-by-two-by-two (2x2x2) option where two members meet with companies and report back to the group.

X. **NEXT REGULAR MEETING:**

Next meeting will be held on April 9, 2020.

XI. **ADJOURNMENT**

There being no further business, the meeting adjourned at 3:00 p.m.
I. CALL MEETING TO ORDER

The special public meeting of the Merced Subbasin Groundwater Sustainability Agency Joint Powers Authority Governing Board was called to order at 10:09 a.m., on March 24, 2020, via conference call due to the ongoing COVID-10 crisis and as authorized by the Governor’s Executive Order N-29-20.

II. ROLL CALL OF BOARD MEMBERS

Board Members Present:
Bob Kelley    Chairman (Stevinson Water District)
Nic Marchini   Vice-Chair (Western White Area)
Kole Upton   (Le Grand-Athlone Water District)
Michael Gallo   (Eastern White Area Representative)
George Park   (Lone Tree Mutual Water Co.)
Supervisor Lloyd Pareira  (Merced County)

Board Members absent:  None

Staff Present:
Mark Hendrickson   Secretary
Lacey McBride            Water Resources Coordinator
Kristin McHaney  Recording Secretary

III. PUBLIC COMMENT PERIOD

No Public Comment

VI. FIRST ANNUAL REPORT

Accept the first annual report to be submitted to the California Department of Water Resources on behalf of the three GSAs in the Merced Subbasin.

Lacey McBride provided a presentation regarding the Merced Groundwater Sustainability Plan First Annual Report for Water Years 2016-2019. Mrs. McBride informed that the First Annual Report is due on April 1, 2020, however, due to the COVID-19 Pandemic the California Department of Water Resources has indicated that they will accept annual reports past the April 1st 2020 deadline. At this time the Merced Subbasin is still on track to submit the First Annual Report by the April 1st 2020 deadline.

No public comment was received.
MOTION: M/S GALLO – PAREIRA, AND CARRIED BY A VOTE OF 6-0, THE BOARD APPROVES TO ACCEPT THE FIRST ANNUAL REPORT TO BE SUBMITTED TO THE CALIFORNIA DEPARTMENT OF WATER RESOURCES ON BEHALF OF THE THREE GSA'S IN THE MERCED SUBBASIN.

VII. LETTER OF SUPPORT FOR WATER RIGHTS APPLICATION

Action to approve a letter to the State of Water Resources Control Board from the Merced Subbasin GSA in conditional support of the Merced Irrigation District’s water rights application on behalf of the Merced Subbasin.

Lacey McBride provided a summary of the Letter of Support. Explaining that in December 2019 Merced Irrigation District (MID) submitted a water rights application for all of the unallocated flood waters on each of the streams of the Merced Subbasin as well as flood waters on the Merced River. The application was submitted to the California State Water Resource Control Board but has not yet been accepted by the Board. The original deadline for the application and supporting documents to be submitted was in March 2020. However, due to the COVID-19 Pandemic the California State Water Resource Control Board has allowed for a 60-day extension to submit.

Chairman Kelley asked what date the 60-day extension would bring the deadline to.

Lacey McBride informed Board that the extension would extend the deadline into late May.

Chairman Kelley suggested postponing the action and schedule an additional meeting so that better direction can be provided.

Nic Marchini asked about what, if any, other irrigation companies within the GSA considered co-applicant as well.

Mrs. McBride explained the only agency on the application is MID and the Merced Subbasin GSA has expressed interest in being a co-applicant but cannot speak on behalf of other agencies who are also working on this effort. Also, advised that she received confirmation that the extended deadline to submit will be May 28, 2020.

Nic Marchini asked when the next meeting would be or what the next step would be to move forward.

Lloyd Pereira recommended taking the 60-day extension and have additional dialogue to ensure everyone is on the same page.

Chairman Kelley stated that it would be beneficial to have the GSA listed as a supporting entity. Kole Upton supported Kelley’s statement. Hicham Eltal, Deputy General Manager of MID, emailed in a comment requesting for postponing consideration/possible approval of the support letter.

VIII. STAFF REPORT
Lacey McBride informed Board members that the Form 700’s are due by April 1, 2020.

IX. BOARD REPORT

None

X. NEXT MEETING

Next meeting will be held on April 9, 2020.

Chairman Kelley recommends rescheduling scheduled April meeting to a later date in April. Mark Hendrickson agreed with rescheduling.

Mark Hendrickson stated that any comments received once the meeting is adjourned would be included in the record.

XI. ADJOURNED

There being no further business, the meeting adjourned at 10:49am.
The agenda, original minutes, and all supporting documentation (for reference purposes only) of the Merced Subbasin Groundwater Sustainability Agency Governing Board meeting of June 12, 2020 are available online at www.countyofmerced.com/MercedSubbasinGSA.

I. CALL MEETING TO ORDER

The special public meeting of the Merced Subbasin Groundwater Sustainability Agency Joint Powers Authority Governing Board was called to order at 4:00 p.m., on June 12, 2020, via conference call due to the ongoing COVID-19 crisis and as authorized by the Governor’s Executive Order N-29-20.

II. ROLL CALL OF BOARD MEMBERS

Board Members Present:
Bob Kelley         Chairman (Stevinson Water District)
Nic Marchini      Vice-Chair (Western White Area)
Kole Upton        (Le Grand-Athlone Water District)
Michael Gallo     (Eastern White Area Representative)
George Park       (Lone Tree Mutual Water Co.)
Supervisor Lloyd Pareira (Merced County) (In Person)

Board Members absent: None

Staff Present:
Mark Hendrickson  Secretary
Lacey McBride     Water Resources Coordinator
Kim Zinke         Acting Recording Secretary

III. CLOSED SESSION - 3:30PM

The Chair reported the Board returned from closed session with no action taken.

IV. PUBLIC COMMENT PERIOD

No Public Comment

IV. WATER RIGHTS AGREEMENT

Consideration to approve an Agreement Regarding the Acquisition of Certain Flood Flow Water Rights and Water Supply Among the Merced Irrigation District, Merced Subbasin Groundwater Sustainability Agency, Turner Island Groundwater Sustainability Agency-1, Le Grand-Athlone Water District, Plainsburg Irrigation District, Amsterdam Water District, Sandy Mush Mutual Water Company, La Paloma Mutual Water Company and Lone Tree Mutual Water Company, and authorize the Chair to sign the Agreement.
Lacey McBride, Water Resources Coordinator, provided a summary of the key elements of the Water Rights Agreement.

George Park, Board Member, asked for an explanation on the timing of the expenses.

Lacey McBride, Water Resources Coordinator, explained that the first invoice will be due 30 days after Merced Irrigation District notifies the Water Board of the addition of the Parties to this Agreement as co-applicants.

No public comments were received.

MOTION: M/S PAREIRA - GALLO, FOR ROLL CALL TO VOTE:
BOARD MEMBER GALLO, YES
BOARD MEMBER PAREIRA, YES
BOARD MEMBER PARK, YES
BOARD MEMBER MARCHINI, YES
BOARD MEMBER KELLEY, YES
BOARD MEMBER UPTON, YES

CARRIED BY A VOTE OF 5-0, THE BOARD APPROVES ADOPTING A RESOLUTION TO APPROVE AND AUTHORIZE THE CHAIRMAN TO SIGN THE AGREEMENT REGARDING THE ACQUISITION OF CERTAIN FLOOD FLOO WATER RIGHTS AND WATER SUPPLY AMONG THE MERCED IRRIGATION DISTRICT, MERCED SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY, TURNER ISLAND GROUNDWATER WATER SUSTAINABILITY AGENCY-1, LE GRAND-ATHLONE WATER DISTRICT, PLAINSBURG IRRIGATION DISTRICT, AMSTERDAM WATER DISTRICT, SANDY MUSH MUTUAL WATER COMPANY, LA PALOMA MUTUAL WATER COMPANY AND LONE TREE MUTUAL WATER COMPANY.

V. BOARD REPORTS
None

VI. NEXT REGULAR MEETING
Next meeting will be held on July 9, 2020.

VII. ADJOURNMENT
There being no further business, the meeting adjourned at 4:20 p.m.
BOARD ACTION ITEM

TO: MEMBERS OF MERCED SUBBASIN GSA GOVERNING BOARD
FROM: MARK HENDRICKSON, SECRETARY
DATE: JULY 9, 2020

SUBJECT: PROPOSITION 68 SUSTAINABLE GROUNDWATER MANAGEMENT GRANT UPDATE

SUMMARY:

The Merced Basin GSA’s applied for and received a Proposition 68 Sustainable Groundwater Management Round 3 Grant from the California Department of Water Resources (DWR) in the amount of $500,000. The final awards for this grant were announced by DWR in March 2020, the basin is still in the process of finalizing the contract with DWR.

The objectives of this grant are to prioritize data gaps, as identified in the Merced Groundwater Sustainability Plan, increase the number of wells in the monitoring network, improve the understanding of current groundwater use in the Subbasin, quantify ongoing Subbasin water use to support the development of management actions and engage stakeholders in the SGMA process, data gathering and prioritization.

There are two main components of this project, the first is to address GSP data gaps by developing a Data Gaps Plan and enhancing the monitoring networks. The GSP calls for the development of a Data Gaps Plan. This Plan will prioritize locations for additional wells targeting data gap areas where no monitoring is currently taking place. Enhancing the monitoring networks for water levels and water quality will take place by identifying existing wells that can be brought into the networks and the installation of up to 3 new shallow monitoring wells or 1 deep well, in critical locations.

The second component is to develop a remote sensing decision support tool for the Merced Subbasin. This tool will provide immediate information about basin-wide groundwater use in a cost-effective manner. The tool will estimate net groundwater use based on the METRIC remote sensing evapotranspiration datasets developed by the Irrigation Training and Research Center at California Polytechnic State University. The decision support tool will allow for analysis to be completed at variable resolutions from GSA to parcel-level.

Stakeholder outreach will be included in both components of this project and will involve regular updates at GSP meetings on the progress developing the Data Gaps Plan and decision support tool, outreach will seek input on prioritizing data gaps and data gathering.

REQUEST/RECOMMENDATION/ACTION NEEDED:

Informational Update, no action required.
Prop 68 Grant Award
Merced Subbasin GSA Governing Board
July 9, 2020

Sustainable Groundwater Management Grant Program

- Merced Basin GSA’s submitted an application in November 2019
- Final award to the Merced Basin of $500,000 announced in March 2020
- Work plan focuses on two items: addressing data gaps and remote-sensing of basin water use
Project Components

- Grant Administration

- Addressing GSP Data Gaps
  - Developing a data gaps plan
  - Enhance monitoring networks
  - Installation of new monitoring wells
  - Stakeholder outreach

- Developing a Remote Sensing Decision Support Tool
  - Creating a spreadsheet and GIS-based tool that utilizes METRIC estimates of evapotranspiration across the basin in combination with local parcel maps and surface water supply delivery records to calculate net groundwater use in the Subbasin.
  - Stakeholder outreach

Proposal Summary
## Future Prop 68 SGM Implementation Grant

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Release Draft PSP</td>
<td>Early 2021</td>
</tr>
<tr>
<td>Release Final Implementation Grant PSP and Open Grant</td>
<td>Mid-to Late 2021</td>
</tr>
<tr>
<td>Solicitation</td>
<td></td>
</tr>
<tr>
<td>Implementation Grant Solicitation Closes</td>
<td>Late 2021</td>
</tr>
<tr>
<td>Implementation Grant Award List, Award Letters Released</td>
<td>Early 2022</td>
</tr>
</tbody>
</table>

At least $88 million will be available for competitive grants for projects that address drought and groundwater investments. More details to come.
BOARD ACTION ITEM

TO: MEMBERS OF MERCED SUBBASIN GSA GOVERNING BOARD
FROM: MARK HENDRICKSON, SECRETARY
DATE: JULY 9, 2020

SUBJECT: FISCAL YEAR 2020-2021 BUDGET AND LANDOWNER FEE APPROVAL

SUMMARY:

The Merced Subbasin GSA Joint Powers Authority Agreement requires the Governing Board approve a new operating budget at the beginning of each fiscal year.

The proposed budget for fiscal year 2020-2021 will fund the anticipated GSA administrative expenses, including staffing, legal counsel, engineering expenses, and office expenses. The GSA will be considering an agreement with the County of Merced regarding reimbursement of staff time for staff support services that the County provides in the amount of $65,000. The GSA has budgeted for these services in the past, but has not had an Agreement in place with the County of Merced.

Under Technical Services, the budget proposes $250,000 for Project Development. This encompasses projects, studies and analyses identified in the First Five Implementation Plan necessary to implement the GSP within the Merced Subbasin GSA’s jurisdictional boundaries. These expenses do not include shared basin-wide GSP expenses. Project Development may include acquiring data to prepare an aggregated or parcel based water use history, activities to increase the monitoring network, defining the parameters for sustainability zones and framing the conversations for demand reduction, among others.

Technical Services also includes budgeted funding for the Water Rights Agreement. The Merced Subbasin GSA approve the Water Rights Agreement in June and will be added to the Water Rights Application for Flood Waters within the Merced Basin. Among other parties to the Water Rights Agreement, the GSA will fund a share of 50% of the costs of the Water Rights Application. The Cost Share Agreement defining the breakdown of the 50% cost share is in negotiations among the parties at this time. Once a final cost share is determined, a Cost Share Agreement will be brought before this Board.

As discussed previously, funding for Groundwater Sustainability Plan (GSP) development was collected through member agency contribution in 2017, based on needed cash flow. At this time, the contract with Woodard and Curran for GSP development has $100,000 remaining that is not grant reimbursed. Setting aside the remaining anticipated GSP development costs, approximately $200,000 remains in the GSP development funds that may either be returned to the member agencies or reprogramed for other GSA expenses, depending on Board direction. Until the Board provides direction, that $200,000 remains only available to GSP development.

The proposed budget would require a SGMA Compliance Landowner Fee, as approved and
authorized under Proposition 218 in July 2019, in the approximate amount of $194,343 (this number may adjust minimally based on the end of year cash on hand on June 30, 2020 and pending invoices). A SGMA Compliance Landowner Fee with a target of collecting $194,343 would result in a per acre fee of $0.90 for irrigated acres and $0.13 for all remaining acres not exempt.

REQUEST/RECOMMENDATION/ACTION NEEDED:
Approval of the Fiscal Year 2020-2021 GSA budget and approval of the FY 2020-2021 SGMA Compliance Landowner Fee at a rate that funds the FY 2020-2021 approved budget and authorize staff to submit the fee to the appropriate entities for payment.
# FY 2020-2021 Proposed Budget

**Merced Subbasin GSA Governing Board**  
**July 9, 2020**

## OPERATING EXPENSES

<table>
<thead>
<tr>
<th>Expense Category</th>
<th>2020/21 Proposed Amount</th>
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<tbody>
<tr>
<td><strong>Legal Services</strong></td>
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<tr>
<td>General</td>
<td>75,000</td>
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<tr>
<td><strong>Total Legal Services</strong></td>
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<td><strong>Technical Services</strong></td>
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<tr>
<td>21B Election</td>
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<td>Hydrology/Modeling Update</td>
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<td>Project Development</td>
<td>250,000</td>
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<td>FloodMAR Water Rights Application</td>
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<td><strong>Total Technical Services</strong></td>
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<td><strong>Miscellaneous Expenses</strong></td>
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<td>Administrative Services</td>
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<td>Audits</td>
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<td>Office Expense</td>
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<td>Public Outreach</td>
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<td>Contingency/Reserve 10-15%</td>
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<td><strong>Total Miscellaneous Expenses</strong></td>
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<td><strong>TOTAL OPERATING EXPENSES</strong></td>
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## GROUNDWATER SUSTAINABILITY PLAN EXPENSES

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<td>GSP Development</td>
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<tr>
<td>GSP Dev Available to Reimburse to Agencies</td>
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<td>GSP Annual Report/Five Year Update Agencies</td>
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<td>GSP Implementation and Monitoring</td>
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<td><strong>TOTAL GROUNDWATER SUSTAINABILITY PLAN</strong></td>
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## REVENUE

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<th>Source</th>
<th>Amount</th>
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<tr>
<td>Carry Over from FY18-19</td>
<td>801,959</td>
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<tr>
<td>Prop. 21B Landowner Fee</td>
<td>294,343</td>
</tr>
<tr>
<td><strong>TOTAL GSA REVENUE</strong></td>
<td>996,302</td>
</tr>
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</table>

| TOTAL GSA EXPENSES      | 996,302 |
| **TOTAL GSA REVENUE**   | 996,302 |
FY 2020-2021 Proposed Budget Actions

• Approve the FY 2020-2021 Merced Subbasin GSA Budget

• Approve the FY 2020-2021 SGMA Compliance Landowner Fee at a rate that funds the FY 2020-2021 approved budget and authorize staff to submit the fee to the appropriate entities for payment.
BOARD ACTION ITEM

TO: MEMBERS OF MERCED SUBBASIN GSA GOVERNING BOARD
FROM: MARK HENDRICKSON, SECRETARY
DATE: JULY 9, 2020

SUBJECT: FIRST FIVE IMPLEMENTATION PROJECTS/STUDIES

SUMMARY:
In October 2020 the Board discussed a First Five Implementation Plan, developed in coordination with the Technical and Advisory Committees, outlining a strategy for project and studies to be undertaken during the first five years of GSP implementation.

This discussion will focus on next steps for implementing projects and studies identified in the First Five Implementation Plan. The Board may discuss recommendations for activities to consider during Fiscal Year 2020-2021 and as budgeted in the proposed FY 2020-2021 budget. Activities may include enhancing the monitoring network, collecting data sets for developing parcel based water use, and defining parameters for sustainability zones.

REQUEST/RECOMMENDATION/ACTION NEEDED:
Discussion and possible direction regarding next steps in the First Five Implementation Plan’s projects and studies.
Sustainability Zones to manage:
1. GW levels
2. Projects
3. Allocations?
4. Fees?
BOARD ACTION ITEM

TO: MEMBERS OF MERCED SUBBASIN GSA GOVERNING BOARD
FROM: MARK HENDRICKSON, SECRETARY
DATE: JULY 9, 2020

SUBJECT: AGREEMENT WITH MERCED COUNTY FOR SUPPORT SERVICES

SUMMARY:
The County of Merced has been providing support services to the GSA since its formation in 2017. The County has been providing staff support to the Merced Subbasin GSA in the form of daily administrative support, fiscal support as the GSA’s Treasurer and secretarial support as the GSA’s Secretary.

This item requests the Board consider an Agreement with Merced County to reimburse the County for staff support provided to the GSA starting in Fiscal Year 2020. The Agreement outlines the services to be provided by Merced County’s Community and Economic Development Department, including but not limited to preparing analysis, reports agenda and minutes, providing support for recommendations to implement provisions of the GSP, serving as Secretary, responding to inquiries, and serving Treasurer and providing fiscal support services.

The term of the Agreement would be for one year, to be considered for extension at the beginning of each fiscal year.

The payment for support services would be for actual services provided in the maximum amount of $65,000, to be invoiced quarterly. The Merced Subbasin GSA has been budgeting for this expense in preparation for an Agreement with Merced County. The $65,000 maximum cost is not anticipated to be the total cost of the support services, the County continues to subsidize staff support this year, however future amendments are anticipated to reflect step increases in the maximum cost until the GSA is reimbursing for total actual costs.

REQUEST/RECOMMENDATION/ACTION NEEDED:
Approve and authorize the Chairman to sign an Agreement between the Merced Subbasin GSA and the County of Merced to provide staff support services to the GSA for Fiscal Year 2020-2021.
BOARD ACTION ITEM

TO:        MEMBERS OF MERCED SUBBASIN GSA GOVERNING BOARD
FROM:      MARK HENDRICKSON, SECRETARY
DATE:      JULY 9, 2020

SUBJECT:   LEGAL COUNSEL CONTRACT EXTENSION

SUMMARY:
The Merced Subbasin GSA has been working with Jeanne Zolezzi and Karna Harrigfeld from the Office of Herum Crabtree Suntag for legal support services. The original contract with Herum Crabtree Suntag was executed in August 2017 for the term of one year and for the contract not to exceed amount of $100,000. The contract was extended in August 2018 and 2019 for one additional year each, with an amendment to the compensation in 2019 to not exceed $100,000.

Over the past three years Zolezzi and Harrigfeld have been providing valuable legal counsel on subjects such as GSP development and implementation, the water rights agreement and application, the Proposition 218 proceeding for landowner fee, Brown Act compliance, and other legal support services for the GSA.

This item requests Board consideration of an amendment to the contract with Herum Crabtree Suntag to extend the term of the agreement for another year through August 2021. Compensation under this contract would remain unchanged. The contract will be brought before the GSA next summer to extend the term again, should the Board choose.

REQUEST/RECOMMENDATION/ACTION NEEDED:
Approve and authorize the Chairman to sign an amendment to Contract 2017-01 with Herum, Crabtree, Suntag to extend the term of the contract for legal services for one year.
THIRD AMENDMENT TO CONTRACT NO. 2017-01 BETWEEN
MERCED SUBBASIN GROUNDWATER SUSTAINABILITY AGENCY
AND
HERUM CRABTREE SUNTAG

THE THIRD AMENDMENT TO CONTRACT NO. 2017-01 for Special Services to the to the Merced Subbasin Groundwater Sustainability Agency (GSA) is made and entered into by and between the Merced Subbasin GSA, a joint powers authority of the State of California, (hereinafter referred to as "GSA"), and Herum Crabtree Suntag, a California Professional Corporation, located at 5757 Pacific Avenue, #222, Stockton, CA 95207 (hereinafter referred to as "CONSULTANT").

WHEREAS, the parties entered into a contract for special services on August 18, 2017 to perform special services which consist of general counsel legal services including public agency governance and water law; and,

WHEREAS, the GSA and CONSULTANT approved a First Amendment to Contract No. 2017-01 to amend Section 2, entitled “TERM” on July 12, 2018 and a Second Amendment to amend Section 2, entitled “TERM” and Section 3, entitled “COMPENSATION” on July 11, 2019; and

WHEREAS, the GSA and CONSULTANT in this Third Amendment desire to amend Section 2, entitled “TERM,”; and,

WHEREAS, this Third Amendment is hereby annexed to and made part of the printed part of the Agreement to which it is attached, or modifies the existing Agreement between the parties. In each instance in which the provisions of this Amendment shall contradict or be inconsistent with the provisions of the printed portion of the original Agreement, the provisions of this Third Amendment shall prevail and govern and the contradicted or inconsistent provisions shall be deemed amended accordingly. Both parties agree that there is new and adequate consideration for this Third Amendment.

NOW, THEREFORE, in consideration of the mutual covenants and promises herein contained, the parties hereby agree to the following amendments to the contract:

MODIFICATIONS:

1) Section 2, entitled "TERM" is amended to read as follows:
The term of this Agreement shall commence on the 20th day of July 2017 and continue until the 1st day of August, 2021, unless sooner terminated in accordance with the sections entitled "TERMINATION FOR CONVENIENCE" or "TERMINATION FOR CAUSE" as specified elsewhere in this Agreement.

Except as herein modified, all terms and conditions in said Agreement as heretofore approved remain unchanged and in full force and effect.

GSA:
Merced Subbasin GSA

CONSULTANT:
Herum Crabtree Suntag

_________________________  ____________________________
Robert D. Kelley
Chairman

_________________________  ____________________________
Date  Date
BOARD ACTION ITEM

TO: MEMBERS OF MERCED SUBBASIN GSA GOVERNING BOARD
FROM: MARK HENDRICKSON, SECRETARY
DATE: JULY 9, 2020

SUBJECT: AMSTERDAM WATER DISTRICT UPDATE

SUMMARY:
Amsterdam Water District is a newly formed district in the Merced Subbasin, within the boundaries of the Merced Subbasin GSA. A representative from Amsterdam Water District will update the board on the activities of the water district and the district’s interest in joining the GSA.

REQUEST/RECOMMENDATION/ACTION NEEDED:
Informational update from a representative of Amsterdam Water District on the new water district’s formation and interest in joining the Merced Subbasin GSA. No action required.
Formed in 2019

Board of Directors:

Bert Crane Jr., President
Mary Crane Couchman, Vice President
Benjamin Crane, Secretary
Ed Spinardi, Treasurer
Karen Crane McNab, Director
Craig Johnson, Director
Land Uses:
- Almonds-1,552
- Grapes-1,876
- Walnuts 971
- Row Crops-405
- Undeveloped-1,805
- Other Land Use-53

- Total 6,662 Acres (10.4 square miles)

As White Area farmers, the Crane and Johnson Families were concerned about the implementation of SGMA so they hired Provost & Prichard to prepare a Water Supply Assessment in 2017.

The Assessment recommended several actions to provide resiliency:
- Form a California Water District so as to participate in SGMA and other regional planning efforts;
- Data Management
- Purchase as much out-of-district water from MID as possible;
- Pursue temporary and permanent water rights;
- Investigate groundwater recharge opportunities
Data Collection

- Deep well inventory (all wells are metered)
- Groundwater elevations (twice a year)
- Deep well pumping volume (monthly)
- Cropping information (yearly)
- Surface water deliveries (monthly)

WATER BALANCE

Merced Irrigation District Out-of-District Surface Water

- Prior to formation of AWD, surface water had not been purchased for the land.
- Since 2018, 5 new Points of Diversion have been or in the process of being built.
- Total Capacity of 10 cfs
Flood Water Rights

- AWD is currently working with the Merced Subbasin GSA, Merced Irrigation District (MID), and many of the agencies represented on this Board to secure temporary and permanent water rights.
- 10 Points of Diversions have been submitted for AWD

<table>
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<th>POD Number</th>
<th>POD Description</th>
<th>Source</th>
<th>Tributary to:</th>
<th>Thence:</th>
<th>Existing or Temporary Diversion Facility</th>
<th>Existing or Estimated Proposed Capacity (CFS)</th>
<th>Gravity (e.g., dam, pipe in channel, siphon, weir, gate, etc.)</th>
<th>Pump (e.g., lift pump, sump, offset well, etc.)</th>
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<td>Livingston Canal</td>
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<td>7 Channel</td>
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<td>6</td>
<td>Canal Creek at McNab</td>
<td>Canal Creek</td>
<td>Black Rascal Creek</td>
<td>Bear Creek</td>
<td>Existing/Temp</td>
<td>7 ~</td>
<td>150 HP Diesel</td>
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<td>Black Rascal Creek</td>
<td>Bear Creek</td>
<td>Existing/Temp</td>
<td>7 ~</td>
<td>200 HP Diesel</td>
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<td>Canal Creek at Crane</td>
<td>Canal Creek</td>
<td>Black Rascal Creek</td>
<td>Bear Creek</td>
<td>Existing</td>
<td>13 ~</td>
<td>2 @ 150 HP Each</td>
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<td>Canal Creek</td>
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<td>Existing</td>
<td>8 ~</td>
<td>200 HP</td>
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<td>Bear Creek</td>
<td>Existing</td>
<td>8 ~</td>
<td>200 HP</td>
<td></td>
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</table>

Groundwater Recharge

- Several backhoe pits were dug to try to identify potential recharge locations.
- 2 locations had sandy soil characteristics and were identified as candidates for further soil boring investigations.
- Next step is geotechnical borings and/or pilot project.
Summary

- Generational farming families
- Proactive in water management
- Willing to invest to become sustainable
- Participation in Merced Subbasin GSA, ideally as a Voting member
BOARD ACTION ITEM

TO:  MEMBERS OF MERCED SUBBASIN GSA GOVERNING BOARD
FROM:  MARK HENDRICKSON, SECRETARY
DATE:  JULY 9, 2020

SUBJECT:  IRRIGATION TRAINING AND RESEARCH CENTER (ITRC) PRESENTATION

SUMMARY:
Dan Howes with the California Polytechnic State University’s Irrigation Training and Research Center (ITRC) will provide an informational presentation on remote sensing of actual evapotranspiration using the ITRC-METRIC process.

REQUEST/RECOMMENDATION/ACTION NEEDED:
Informational presentation, no action required.
ALTERNATIVE TO WELL METERING

- For On-Farm Irrigation Management
  - Well flow and volume metering are important
    - Irrigation scheduling and well efficiency trending

- For GW Basin Sustainability Monitoring
  - Well flow and volume metering are misleading
  - Meters provide the GROSS amount pumped
  - They do not report how much groundwater was used

WATER RIGHTS AND GROUNDWATER

- Poor understanding of groundwater consumption...as opposed to gross pumping

Consumption vs. Availability of water

NEW CONCEPT
CONSUMPTIVE RIGHTS

- Consumptive Right = Surface Right + Net Sustainable Yield + Precipitation

- Ignore Irrigation Efficiency
ALTERNATIVE TO METERING GW PUMPING

Remote Sensing of actual consumption (ITRC METRIC Evapotranspiration)

Net to and from groundwater
- Surface deliveries, seepage, etc.
- Precipitation
- Compare to existing groundwater levels

Farm Level Monitoring of Net Groundwater Use

NET TO AND FROM GROUNDWATER

- Local evaluation of NET groundwater consumption
- Can be evaluated on a parcel level
- Used by GSAs to regulate and charge for groundwater use

REMOTE SENSING OF ACTUAL ETC

Modified METRIC™ algorithm with LandSAT images
- IS NOT NDVI based ET estimation!!
- Basic Principle – Evaporative cooling
- Cooler fields have higher ET
**APPLIED SURFACE WATER**

- Delivery records need to be provided at the beginning of the following month
- Converted to deliveries by parcel/group of fields
- Result is surface water applied spatially over the region
- We will need to work directly with GSA member units

**NET TO/FROM GW**

1. Evaluate precipitation, surface applications, ET to update the SMD.
2. If at the end of the month, surface applications and precip exceed ET
   - Deep Percolation (NET To GW)
3. If ET is greater than surface applications
   - Pumping (NET From GW)

**EXAMPLE NTFGW RESULTS**

- Light to Dark Blue = Net TO GW
- Beige and Brown = Net FROM GW

**TRACKING NTFGW ON A FARM BASIS**

[Maps showing NTFGW results for 2011 and 2014, with color-coded areas indicating net changes.]
WHY THE NEED FOR NET GW USE?

- Sustainable Yield is a NET value (no guessing at on-farm efficiency)
- GW sustainability has little to do with gross groundwater pumping
- GW use can be independently tracked and verified
- Historical and near real-time evaluations of conditions
- Variable Spatial Scales
  - Parcel level
  - GSA/District level

ESTIMATED COST FOR SERVICE

Options depending on needs
1. Historic (10+ year) ETc and NTFGW
   - 2008-2019 excluding 2012 (~$100,000)
   - For use in groundwater models and for calibration
   - Can cut this down, just an example

2. Continuous ETc and NTFGW –
   - 2020 and into the future ($50,000-$60,000 per year)
   - By the 15th of the following month
     - ETc and Net Groundwater Use by parcel
     - Over entire GSA and Subareas
     - Tabular and GIS format

THANK YOU

- Questions?

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