Committee Members
Leticia Gonzalez
Robert Macaulay

Any individual with a disability may request special assistance by contacting the chief clerk to the board of supervisors (acting on behalf of the Madera County GSAs).

Madera County
Groundwater Sustainability Agency
(in the Madera, Chowchilla, and Delta-Mendota Subbasins)
Committee Meeting
August 5, 2025
1:30 p.m.

Meeting Location
Madera County Government Center
200 W. 4th Street, Madera CA 93637
Board of Supervisors Chambers

REMOTE PARTICIPATION
https://zoom.us/j/89876438188

Supporting documents relating to the items on this agenda are available through the County of Madera websites at www.maderacounty.com and maderacountywater.com. These documents are also available at the Office of the Clerk of the Board of Supervisors (acting on behalf of the Madera County GSAs), 200 West 4th Street, 4th Floor, Madera, CA 93637. Supporting documents relating to the items on this agenda that are not listed as 'Closed Session' may be submitted after the posting of the agenda and are available at the Office of the Clerk of the Board of Supervisors (acting on behalf of the Madera County GSAs). Please visit the Office of the Clerk of the Board of Supervisors (acting on behalf of the Madera County GSAs) for updates.

1. Flag Salute

2. Public Comment – This is an opportunity for comment on items not on this agenda. This is also a place to suggest topics for future meetings. Comments can be five minutes or less.

Committee Members
Leticia Gonzalez
Robert Macaulay

3. Action Item: Approval of the Madera County Groundwater Sustainability Agency Committee Meeting Minutes from July 1, 2025.

4. Informational Item: Measurement Methods (and Accounting Platform) RFP Update

5. Action Item: Consideration and recommendation to the Board of Directors to enter into a Memorandum of Understanding between Valley Water Collaborative (VWC) and the 23 Groundwater Sustainability Agencies (GSAs) in the Delta-Mendota Subbasin, regarding water quality testing for domestic wells and replacement water supplies.

6. Action Item: Consideration and recommendation to the Board of Directors to enter into an Amendment to MCC No.11686F-24 with Davids Engineering, Inc. for an amount not to exceed $975,270.50 and amending the scope for professional engineering services associated with grant-funded recharge projects with a term date of June 30, 2027. All costs are reimbursed by a grant.

7. Directors' Reports

8. Adjourn

Committee Members
Leticia Gonzalez
Robert Macaulay

ITEM 3

Madera County
Groundwater Sustainability Agency
(in the Madera, Chowchilla, and Delta-Mendota Subbasins)
Committee Meeting
July 1, 2025 @ 1:30 p.m.

Meeting Location: Madera County Government Center
200 W. 4th Street, Madera CA 93637
Board of Supervisors Chambers

REMOTE PARTICIPATION
https://zoom.us/j/83035126482

Attendance:
County GSA Directors: Leticia Gonzalez, Robert Macaulay

County GSA Staff: Stephanie Anagnoson, Jeannie Habben, Allison Medley, Tukta Phetasa, Aleta Allen, Emily Garcia

County staff attending on behalf of the GSA: Tatiana Echevarria, Regina Garza

20 members of public in person; 26 members of the public on Zoom

1. Flag Salute – This was led by Director Gonzalez.

2. Public Comment – This is an opportunity for comment on items not on this agenda. This is also a place to suggest topics for future meetings. Comments can be five minutes or less – There were no public comments.

3. Action Item: Approval of the Madera County Groundwater Sustainability Agency Committee Meeting Minutes from June 3, 2025 – There were no public comments

Result: Motion passed
Moved: Director Macaulay
Second: Director Gonzalez
Ayes: Director Gonzalez; Director Macaulay

Committee Members
Leticia Gonzalez
Robert Macaulay

ITEM 3

4. Informational Item: Measurement Method and/or Groundwater Platform Presentations:
    a. Hydrosat (Measurement data)
    Presentation by Brett Blom

    b. Land IQ (Measurement data)
    Presentation by Joel Kimmelshue

    c. California Water Data Consortium (Measurement data + platform)
    Presentation by John Burns

    d. 4 Creeks with Basinsafe (platform)
    Presentation by Victor Lopez

    e. Davids Engineering and H2oTech with RemoteTracker (platform)
    Presentation by John Davids/Jeff Davids

    f. MLJ with Watermark (platform)
    Presentation by Robert Cima

    g. United Water Tracking Systems with the Water Dashboard Accounting Platform (platform)
    Presentation by Scott Steinbeck

Recess

5. Action Item: Consideration and Recommendation to the Board of Directors to approve a resolution amending Resolution 2022-086 and repealing and replacing resolution 2022-198 establishing revised fees for Domestic Well Mitigation Program for the Madera Subbasin – This was presented by Ms. Anagnoson with support from Kevin Kostiuk of Raftelis. There were 5 public comments.

Result: Motion passed
Moved: Director Macaulay
Second: Director Gonzalez
Ayes: Director Gonzalez; Director Macaulay

6. Action Item: Consideration and Recommendation to the Board of Directors to approve a resolution repealing Resolution No. 2025-004 and reinstating Resolution No. 2022-072 which outlines procedures for the review of new or altered groundwater wells and verification of consistency with adopted groundwater sustainability plans – This was presented by Ms. Habben. There were no public comments.

Result: Motion passed Moved: Director Macaulay Second: Director Gonzalez Ayes: Director Gonzalez; Director Macaulay

7. Directors' Reports – Ms. Anagnoson provided some updates on recent activities.

8. Adjourn: 3:45 pm

Committee Members
Leticia Gonzalez
Robert Macaulay

ITEM 4

Date: August 1, 2025

To: Madera County Groundwater Sustainability Agency (GSA) Committee
Leticia Gonzalez, Robert Macaulay

From: Stephanie Anagnoson, Director of Water and Natural Resources

Subject: Informational Item: Measurement Methods (and Accounting Platform) RFP Update

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DISCUSSION:

Background

Madera County Groundwater Sustainability Agency (Madera County GSA) tracks water use for irrigated acres within its boundaries using satellite measurements or meters. The choice of measurement is a grower decision. Two separate existing contracts for satellite measurement expire in 2025 at the end of the calendar year. The Madera County GSA has discussed evaluating options for satellite measurement repeatedly at the GSA Committee level as well as Board of Directors level.

On May 15, 2025, staff issued a request for proposals (RFP) for measurement method(s) as well as an accounting platform to operate in conjunction with measurement methods. Questions on the RFP were due on May 30, 2025. Over 30 questions were received and responded to by June 3, 2025, primarily related to measurement methods.

Seven proposals were received and are summarized below (in no particular order).

a. Hydrosat (Measurement data) – This is a satellite measurement method, which provides an online portal and daily ET measurement and ETAW calculation. The effective precipitation is calculated using the IDC model. Annual costs for 2026 are $182,600 with discounts for longer subscriptions. Hydrosat is used internationally in more than 50 countries.

b. Land IQ (Measurement data) – This is a satellite measurement method with an optional online portal. The service provides ET and precipitation measurements. It includes on-ground weather stations. Annual costs for 2026 are $131,393 plus an online portal fee of $66,368 (optional) with discounts for longer subscriptions. Land IQ is used in 40 GSAs.
c. California Water Data Consortium with Groundwater Accounting Platform (Measurement data + platform) – This is a grower-facing platform for accessing data that can integrate Open ET or other measurement data sources. This would be a total cost in the first year of $123,000 with reduced rates at years two and three. This platform was originally developed for Rosedale-Rio Bravo Water Storage District.
d. 4 Creeks with Basinsafe (platform) – This is grower-facing platform for accessing data that can integrate different measurement sources. The platform currently serves six GSAs and seven water districts. Costs for year one is $156,500 with a reduced rate at years two and three.
e. Davids Engineering and H2OTech (platform) – This is a grower-facing platform for accessing data that can integrate different measurement sources. This platform was originally developed for surface water accounting with Richvale Irrigation District and Reclamation District No. 108. Costs for one year are $100,000 with discounted rates at years two and three.
f. United Water Tracking Systems with the Water Dashboard Accounting Platform (platform) – This is a grower-facing platform for accessing data that can integrate different measurement sources. Private meter data can be accepted through a structured appeals process. Costs for one year are $122,415.
g. MLJ with Watermark (platform) – This is a grower-facing platform for accessing data that can integrate different measurement sources. This is used by North Fork Kings GSA, South Fork Kings GSA and El Rico GSA. Costs for one year are $121,709 with a discounted rate at years two and three.

Presentations were conducted at the GSA Committee on July 1, 2025, with questions collected afterward in writing and via email. Questions were emailed to the respondents, and their responses posted on-line on maderacountywater.com/measurement. On July 11, 2025, a questionnaire was mailed to growers on their preferences with links to the presentations and proposals and with responses due by the end of the month.

All seven vendors had reference checks done, three per each vendor. References for

satellite measurement methods were consistently positive. References for the groundwater accounting platforms expressed that there were sometimes gaps between the services initially offered and the evolving needs of the growers.

FISCAL IMPACT:

There is a significant fiscal impact with awarding a contract or contracts for measurement methods and a groundwater accounting platform. The estimate of costs is somewhere between $125,000 - $500,000 depending on the number of measurement methods and accounting platform.

ATTACHMENTS:

N/A

Water and Natural Resources
200 West Fourth Street • Madera, CA 93637 • 559.662.8015 • maderacountywater.com • maderacounty.com

Committee Members
Leticia Gonzalez
Robert Macaulay

ITEM 5

Date: August 1, 2025

To: Madera County Groundwater Sustainability Agency (GSA) Committee
Leticia Gonzalez, Robert Macaulay

From: Stephanie Anagnoson, Director of Water and Natural Resources

Subject: Action Item: Consideration and recommendation to the Board of Directors to enter into a Memorandum of Understanding between Valley Water Collaborative (VWC) and the 23 Groundwater Sustainability Agencies (GSAs) in the Delta-Mendota Subbasin, regarding water quality testing for domestic wells and replacement water supplies.

DISCUSSION:

Background: The Sustainable Groundwater Management Act (SGMA) was signed into law on September 16, 2014. SGMA requires local agencies to form Groundwater Sustainability Agencies (GSAs), with the intent to create local control of groundwater management for the Subbasins. Furthermore, through the implementation of Groundwater Sustainability Plans (GSPs), the GSAs are required to meet sustainability goals for groundwater.

On May 13, 2017, Madera County became the GSA for the portion of the Delta-Mendota Subbasin, within the County of Madera, not already covered by another agency. The County of Madera GSA-Delta-Mendota is one of 23 GSAs in the basin. Currently, the 23 GSAs make up seven GSA Groups. Out of the seven GSA Groups in the Delta-Mendota, the County of Madera GSA-Delta-Mendota is part of the San Joaquin River Exchange Contractors GSA Group (SJREC), which includes eleven other GSAs.

In 2024, the 23 GSAs in the Delta-Mendota Subbasin collaborated and created a single GSP (2024 GSP). The 2024 GSP has been submitted to the State Water Resource Control Board (SWRCB) and the Department of Water Resources (DWR) for review. The Delta-Mendota Subbasin GSP is currently under review by SWRCB.

Proposed Memorandum of Understanding: The 2024 GSP included a Domestic Well Mitigation Policy, which the 23 GSAs are actively working to implement. As part of implementation and to strengthen Delta-Mendota Subbasin's commitment to addressing

groundwater quality, the 23 GSAs in the Delta-Mendota Subbasin are entering into a Memorandum of Understanding (MOU), with Valley Water Collaborative (VWC). In accordance with the Delta-Mendota 2024 GSP Domestic Well Mitigation Policy, the MOU describes terms to coordinate efforts related to domestic well quality testing and assist with providing replacement water, as determined necessary.

VWC is a non-profit that is known for providing nitrate and other contaminant testing for domestic wells. Through VWC Early Action Plans, efforts have been made in the Delta-Mendota, Eastern San Joaquin, Merced, Madera and Yolo groundwater subbasins, to offer well testing for contaminants and provide replacement water to those whose wells have exceeded the state's primary maximum contaminant levels for the constituents tested. VWC will be coordinating similar efforts with the Delta-Mendota Subbasin with the following summary of terms listed in the MOU:

- VWC and Delta-Mendota 23 GSAs will work collaboratively to avoid duplication of efforts and to share data concerning groundwater monitoring wells, groundwater data, testing domestic wells, mitigation of dry wells, and replacement drinking water.

- VWC and Delta-Mendota 23 GSAs mutually express interest in ensuring that all residents in the Delta-Mendota Subbasin have access to safe and affordable drinking water.

- Consistent with VWC Early Action Plans, VWC will conduct outreach, free domestic well testing for contaminants (including nitrates), and provide replacement water in the Delta-Mendota Subbasin.

- Delta-Mendota Subbasin 23 GSAs will identify a single point of contact to work with VWC concerning the Delta-Mendota GSP Domestic Well Mitigation Policy.

- VWC agrees to notify Delta-Mendota point of contact concerning dry wells and inform residents of the Delta-Mendota Subbasin GSP Domestic Well Mitigation Policy.

- In accordance with the Domestic Well Mitigation Policy, if installation of a replacement well is the chosen mitigation measure, Delta-Mendota Subbasin 23 GSAs agree to take all reasonable efforts to install replacement wells that are

perforated at a level where groundwater meets primary drinking water standards.

- Delta-Mendota Subbasin 23 GSAs agree that if replacement wells through the Delta-Mendota GSP Domestic Well Mitigation Policy, do not meet drinking water standards, the Subbasin will work with VWC to provide replacement water.

- Delta-Mendota Subbasin 23 GSAs agree to develop future agreements or amendments to this agreement with VWC, that may give the 23 GSAs ability to provide funding annually to the VWC for domestic well testing and replacement water in the Delta-Mendota Subbasin in association with the 2024 GSP implementation.

- VWC and the Delta-Mendota 23 GSAs will collaborate on the development of a Preliminary Management Zone Implementation Plan, and future plans as appropriate and applicable.

No fiscal impact. Currently the County of Madera GSA-Delta-Mendota, has no domestic wells located within the boundaries and has no funding source for domestic well mitigation.

Link to the final Delta-Mendota Subbasin Groundwater Sustainability Plan
https://deltamendota.org/final-gsp-documents/

Link to the Delta-Mendota Subbasin Domestic Well Mitigation Policy- Appendix N
https://deltamendota.org/wp-content/uploads/2024/0729GSPDocs/Appendices.pdf

VWC website
https://valleywaterc.org/

FISCAL IMPACT:

No fiscal impact. Currently the County of Madera GSA-Delta-Mendota, has no domestic wells located within the boundaries and has no funding source for domestic well mitigation.

Committee Members
Leticia Gonzalez
Robert Macaulay

ITEM 5

ATTACHMENTS:

1. MOU Between Valley Water Collaborative and Delta Mendota GSAs

JC

MEMORANDUM OF UNDERSTANDING BETWEEN VALLEY WATER COLLABORATIVE AND GROUNDWATER SUSTAINABILITY AGENCIES IN THE DELTA MENDOTA SUBBASIN

RECITALS

WHEREAS, the Valley Water Collaborative (VWC) is a nonprofit public benefit corporation created to maintain and improve the quality of life within the Modesto, Turlock, Delta-Mendota, Eastern San Joaquin, Merced, Madera and Yolo groundwater basins/subbasins (collectively referred to as "Region") located within the Central Valley by providing groundwater testing and free drinking water to residents in the Region who are impacted by nitrate contamination;

WHEREAS, the VWC also seeks to improve the quality of life in the Region by identifying long-term drinking water needs for those in the Region that are impacted by nitrate contamination;

WHEREAS, starting on or about May 8, 2021, the VWC began implementing an Early Action Plan for the Modesto and Turlock subbasins, which advertises widely across the subbasins of the VWC's willingness to test domestic wells for nitrate, and if the well exceeds the nitrate drinking water standard of 10 mg/L, then the VWC will provide alternative drinking water supplies;

WHEREAS, starting on or about January 1, 2022, the VWC began testing domestic wells in the Modesto and Turlock subbasins for additional contaminants and providing drinking water subject to the terms of an agreement between VWC and the State Water Resources Control Board to administer a Safe and Affordable Funding for Equity and Resilience (SAFER) grant to assist private domestic well owners;

WHEREAS, starting on or about February 28, 2025, VWC expanded its efforts to also implement Early Action Plans in the Delta-Mendota, Eastern San Joaquin, Merced, Madera and Yolo groundwater basins/subbasins and expanded implementation of the SAFER grant to these additional basins/subbasins;

WHEREAS, the VWC's Early Action Plan efforts in the Delta-Mendota, Eastern San Joaquin, Merced, Madera and Yolo groundwater basins/subbasins offer free domestic well testing to measure nitrate and other contaminant levels in such wells and offers to provide replacement water to those whose wells that exceed the state's primary maximum contaminant levels for the constituents tested;

WHEREAS, under the VWC's administrative umbrella there exists a Delta-Mendota Subbasin Advisory Committee;

WHEREAS, in the Delta-Mendota Subbasin, there are 23 individual Groundwater Sustainability Agencies[1] formed under and pursuant to the provisions of the Sustainable Groundwater Management Act (SGMA) (Wat. Code, § 10720 et seq.) that are required to prepare and implement a Groundwater Sustainability Plan that meets the requirements of SGMA;

WHEREAS, the individual GSAs have worked cooperatively to prepare a single GSP that covers the entirety of the Delta-Mendota Subbasin;

WHEREAS, the single GSP finalized in 2024 addresses deficiencies identified by the California Department of Water Resources (DWR) in March of 2023 for the Delta-Mendota Subbasin;

WHEREAS, DWR's determination of inadequacy resulted in transferring primary jurisdiction for review of the single GSP to the State Water Board;

WHEREAS, the 23 GSAs have a shared interest to satisfy the requirements of SGMA and the State Water Board's potentially alleged deficiencies regarding GSP implementation;

WHEREAS, the parties acknowledge and understand that there are legacy groundwater quality issues in the Delta Mendota Subbasin, which already exist and occur independent of the actions of the VWC, the 23 GSAs and implementation of the single GSP or the Management Zone Implementation Plan;

WHEREAS, as part of GSP implementation, the 23 GSAs desire to mitigate the effects that may be felt by domestic water users whose wells are negatively impacted as a result of groundwater levels dropping due to groundwater management in the Delta Mendota Subbasin;

WHEREAS, the 23 GSAs have agreed to implement the Delta-Mendota Subbasin Domestic Well Mitigation Policy; and

WHEREAS, the VWC's Delta-Mendota Advisory Committee and the 23 GSAs desire to coordinate efforts related to testing groundwater quality in domestic wells and for providing replacement water as determined necessary and appropriate.

NOW, THEREFORE, the VWC and the 23 GSAs agree as follows:

AGREEMENT TERMS

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[1] The 23 GSAs include the following agencies: Aliso Water District GSA, Central Delta-Mendota GSA, City of Dos Palos GSA, City of Firebaugh GSA, City of Gustine GSA, City of Los Banos GSA, City of Mendota GSA, City of Newman GSA, City of Patterson GSA, County of Madera-3 GSA, DM-II GSA, Farmers Water District GSA, Fresno County Management Area A GSA, Fresno County Management Area B GSA, Grassland GSA, Merced County Delta-Mendota GSA, Northwestern Delta-Mendota GSA, Oro Loma Water District GSA, Patterson Irrigation District GSA, San Joaquin River Exchange Contractors GSA, Turner Island Water District-2 GSA, West Stanislaus Irrigation District GSA 1, and Widren Water District GSA.

1. VWC and the 23 GSAs agree to work collaboratively to avoid duplication of efforts in their respective administration of their programs, including but not limited to: 1) compilation and assessment of groundwater data; 2) groundwater monitoring; 3) testing domestic wells for drinking water constituents of concern; 4) mitigating dry wells; and, 5) providing replacement drinking water.

2. The VWC and the 23 GSAs agree that it is in their mutual interest to ensure that all residents in the Delta-Mendota Subbasin have access to an adequate supply of safe and affordable drinking water.

3. VWC agrees, consistent with its Early Action Plan for the Delta-Mendota Subbasin as approved by the Central Valley Regional Water Quality Control Board's (Central Valley Water Board) Executive Officer on February 25, 2025 , to conduct outreach to residents within the Delta-Mendota Subbasin to offer free domestic well testing for nitrate and other contaminants and will provide replacement water to residents if the domestic well exceeds the primary contaminate level for nitrate, and may provide replacement water to residents based on eligibility if the domestic well exceeds primary drinking water standards for other contaminants but not nitrate.

4. VWC agrees that as part of its Early Action Plan outreach efforts, VWC will provide residents throughout the Delta-Mendota Subbasin with information regarding the 23 GSAs Delta-Mendota Subbasin Domestic Well Mitigation Policy as long as such information is provided to the VWC for dissemination.

5. The 23 GSAs agree to identify a single point of contact for the VWC for cooperation and collaboration associated with its Domestic Well Mitigation Policy.

6. VWC agrees that if VWC, during the normal course of implementing its Early Action Plan in the Delta-Mendota Subbasin, encounters a dry well that may be eligible for mitigation under the 23 GSAs Delta-Mendota Subbasin Domestic Well Mitigation Policy, VWC will notify the contact person identified by the 23 GSAs of the dry well and will provide the resident with referral information from the 23 GSAs of the resident's options for seeking mitigation under the Delta-Mendota Subbasin Domestic Well Mitigation Policy.

7. The 23 GSAs agree that if a domestic well is eligible for mitigation pursuant to their Domestic Well Mitigation Policy, the 23 GSAs, in accordance with their Domestic Well Mitigation Policy, will take all reasonable efforts to install a replacement well that is perforated at a level where groundwater meets primary drinking water standards if installation of a replacement well is the chosen mitigation measure.

8. The 23 GSAs agree that if a replacement well is provided through the Domestic Well Mitigation Policy, the GSAs will test water from the well to determine if it exceeds drinking water standards. If the well exceeds the nitrate drinking water standard, the identified

single point of contact will work with the VWC to ensure that replacement water is provided to the residents that rely on the well in question.

9. The VWC and the 23 GSAs agree that it is their intent to develop a future agreement, or amendments to this agreement, whereby the 23 GSAs may contribute annually to the VWC to provide funding to the VWC to cover costs incurred specifically within the Delta-Mendota Subbasin for well testing and replacement water that may be associated with implementation of the single GSP for the Delta-Mendota Subbasin.

10. The 23 GSAs agree to provide the VWC with groundwater well data and information compiled by the GSAs to assist the VWC in its development of a Preliminary Management Zone Implementation Plan, and future plans as appropriate and applicable.

11. The VWC and the 23 GSAs agree to work collaboratively in the development of their monitoring well networks to ensure that there are not duplicative monitoring efforts and to share monitoring results of wells monitored so that each program enhances the other's well monitoring program rather than duplicating such programs.

IN WITNESS WHEREOF, the VWC and the 23 GSAs have executed this Memorandum of Understanding as of the Effective Date.

Dated: _____ **ALISO WATER DISTRICT GSA**

_____
Print Name: _____
Print Title: _____

Dated: _____ **CENTRAL DELTA-MENDOTA GSA**

_____
Print Name: _____
Print Title: _____

Dated: _____ **CITY OF DOS PALOS GSA**

_____
Print Name: _____
Print Title: _____

Dated: _____ **CITY OF FIREBAUGH GSA**

_____
Print Name: _____
Print Title: _____

Dated: _____ **CITY OF GUSTINE GSA**

_____

Print Name: _____

Print Title: _____

Dated: _____ **CITY OF LOS BANOS GSA**

_____

Print Name: _____

Print Title: _____

Dated: _____ **CITY OF MENDOTA GSA**

_____

Print Name: _____

Print Title: _____

Dated: _____ **CITY OF NEWMAN GSA**

_____

Print Name: _____

Print Title: _____

Dated: _____ **CITY OF PATTERSON GSA**

_____

Print Name: _____

Print Title: _____

Dated: _____ **COUNTY OF MADERA–3 GSA**

_____

Print Name: _____

Print Title: _____

Dated: _____ **COUNTY OF MERCED DELTA-MENDOTA GSA**

_____

Print Name: _____

Print Title: _____

Dated: _____

DM II GSA

_____

Print Name: _____

Print Title: _____

Dated: _____

FARMERS WATER DISTRICT GSA

_____

Print Name: _____

Print Title: _____

Dated: _____

FRESNO COUNTY MANAGEMENT AREA A GSA

_____

Print Name: _____

Print Title: _____

Dated: _____

FRESNO COUNTY MANAGEMENT AREA B GSA

Print Name: _____

Print Title: _____

_____

Dated: _____

GRASSLAND GSA

_____

Print Name: _____

Print Title: _____

Dated: _____

NORTHWESTERN DELTA-MENDOTA GSA

STANISLAUS COUNTY

_____

Print Name: _____

Print Title: _____

APPROVED AS TO FORM

By: _____

_____

MERCED COUNTY

_____

Print Name: _____

Print Title: _____

APPROVED AS TO FORM

By: _____

_____

Dated: _____

ORO LOMA WATER DISTRICT GSA

_____

Print Name: _____

Print Title: _____

Dated: _____

PATTERSON IRRIGATION DISTRICT GSA

_____

Print Name: _____

Print Title: _____

Dated: _____

SAN JOAQUIN RIVER EXCHANGE CONTRACTORS WATER AUTHORITY GSA

_____

Print Name: _____

Print Title: _____

Dated: _____

TURNER ISLAND WATER DISTRICT–2 GSA

_____

Print Name: _____

Print Title: _____

Dated: _____

WEST STANISLAUS IRRIGATION DISTRICT GSA 1

_____

Print Name: _____

Print Title: _____

Dated: _____

WIDREN WATER DISTRICT GSA

_____

Print Name: _____

Print Title: _____

Approved as to Legal Form:
COUNTY COUNSEL

By Rebecca Wilson

Digitally signed by: Rebecca Wilson
DN: CN = Rebecca Wilson email = rwilson@lozanosmith.com C = US O = LOZANO SMITH
Date: 2025.07.03 09:38:30 -07'00'

ACCOUNT NUMBERS:

CONTRACTING PARTIES:

VALLEY WATER COLLABORATIVE and

GROUNDWATER SUSTAINABILITY AGENCIES

IN THE DELTA MENDOTA SUBBASIN

TITLE OF CONTRACT:

MEMORANDUM OF UNDERSTANDING

4928-9650-7474, v.1

Committee Members
Leticia Gonzalez
Robert Macaulay

ITEM 6

Date: August 1, 2025

To: Madera County Groundwater Sustainability Agency (GSA) Committee
Leticia Gonzalez, Robert Macaulay

From: Stephanie Anagnoson, Director of Water and Natural Resources

Subject: Action Item: Consideration of entering into an Amendment to MCC No.11686F-24 with Davids Engineering, Inc. for an amount not to exceed $975,270.50 and amending the scope for professional engineering services associated with grant-funded recharge projects with a term date of June 30, 2027. All costs are reimbursed by a grant.

DISCUSSION:

The Madera County Groundwater Sustainability Agencies (GSAs) are currently implementing Groundwater Sustainability Plans (GSPs) for the Chowchilla, Madera, and Delta-Mendota Subbasins to achieve groundwater sustainability by 2040. The GSPs include a mix of projects and management actions that will lead to sustainable groundwater management. A key component of these GSPs is the development of projects that enable groundwater recharge through in-lieu practices, flood-managed aquifer recharge (Flood-MAR), and spreading basins. To aid in groundwater recharge project development, the County GSA is currently engaged in development of a strategic recharge plan and implementation program.

Davids Engineering, Inc. (DE) has been providing Madera County GSA with professional engineering services associated with these grant-funded recharge projects since inception (project formulation, grant application, preparation, and design activities to date). There are four proposals for professional engineering services with scopes that staff recommend amending.

- **Exhibit A: Proposal for 100% Design and Environmental Permitting for Madera Subbasin Recharge Project 1**

The project as identified in the strategic recharge plan included the planning, design, and environmental permitting associated with the following:

- Construction of three turnouts on Bureau of Reclamation facility, Lateral 6.2
- Rehabilitation of one existing turnout on Bureau of Reclamation facility, Lateral 32.2
- Construction of one 40-acre dedicated groundwater recharge basin
- Construction of infrastructure associated with conveyance of flood flows to approximately 2,500 acres of existing farmland for recharge through Flood-MAR

Collectively, all project components will be designed to have the capacity of recharging approximately 12,600 acre-feet (AF) per year when flood flows are available. Completion of the Project is being funded by a grant from the Department of Water Resources (DWR) and a local cost share. The work set-forth in this proposal covers professional engineering and environmental permitting services associated with advancing the project from its current level of design to 100% design. It includes costs to update the Cost Share Analysis, Basis of Design Report, Design Drawings, Engineer's Estimate, Technical Specifications and integrating environmental compliance measures into the design package. The cost is not to exceed $85,325.50 and is reimbursed to the County GSA with Prop 68 grant funds.

- **Exhibit B: Proposal for Bidding and Construction Management – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Project 1**

The project as identified in the strategic recharge plan includes the planning, design, environmental permitting, construction, construction management, monitoring, assessment, stakeholder outreach, and education associated with the following:

- Construction of three new turnouts (two capable of diverting 20 cfs and one capable of diverting 40 cfs) with appropriate conveyance to divert flood flows to approximately 1,700 acres of existing farmland for Flood-MAR
- Two landowner constructed dedicated groundwater recharge basins with approximately 64 acres in total area

The project will be designed to have a capacity to recharge 8,000 AF per year, when water is available. This proposal provides the scope and fee associated with providing bidding support, managing pre-construction activities, construction management and inspections, and post-construction reporting for Chowchilla Project 1. The cost is not to exceed $383,528 and is reimbursed to the County GSA with Prop 68 grant funds.

- **Exhibit C: Proposal for 100% Design and Environmental Compliance Permitting for Chowchilla Subbasin Recharge Project 2**

The project will construct a point of diversion on the Chowchilla Bypass to divert flood flows in years when water is available and apply the water onto participating lands for Flood-MAR and into a landowner constructed dedicated recharge basin for direct recharge. This point of diversion will have a maximum capacity of 20 cfs or approximately 40 AF per day. The project will be designed to have a capacity to recharge approximately 2,000-to-6,000 AF per year at full build out, when water is available. The work set-forth in this proposal covers professional engineering and environmental permitting services associated with advancing the project from its current level of design to 100% design. The proposal includes costs to update the Cost Share Analysis, Basis of Design Report, Design Drawings, Engineer's Estimate, Technical Specifications and integrate environmental compliance measures into the design package. The cost is not to exceed $180,000 and is reimbursed to the County GSA with Prop 68 grant funds.

- **Exhibit D: Proposal for 30% and 60% Designs for Chowchilla Recharge Project 2 – Talley Diversion System**

The project will be designed to have the capacity of recharging approximately 2,000 AF per year at full build out, when water is available. The following summary provides the anticipated design components:

- One point of diversion on the Chowchilla Bypass capable of diverting up to 20 cubic feet per second equipped with a fish screen and a 24-inch magnetic flow meter
- 2,500 lineal feet of PVC pipe to deliver water to a 5-acre private landowner constructed recharge basin for direct recharge and Flood-MAR

This proposal is intended to provide costs to start the Talley Diversion Project and bring it up to 60% Design. It includes costs for fieldwork, permitting/CEQA, 30/60% Design, and Basis of Design Report. The cost is not to exceed $326,417 and is reimbursed to the County GSA with Prop 68 grant funds.

The term date for this amendment is June 30,2027, and the cost is broken down as follows:

- 100% Design and Environmental Permitting for Madera Subbasin Recharge Project 1: $85,325.50
- Bidding and Construction Management – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Project 1: $383,528

- 100% Design and Environmental Compliance Permitting for Chowchilla Subbasin Recharge Project 2: $180,000
- 30% and 60% Designs for Chowchilla Recharge Project 2 – Talley Diversion System: $326,417

The total cost of all four proposals for this amendment is not to exceed $975,270.50 and is reimbursed to the County GSA with Prop 68 grant funds.

FISCAL IMPACT:

This is reimbursed by Prop 68 funding. There is no impact on the general fund.

ATTACHMENTS:

1. MCC NO. 11686-20
2. MCC NO. 11686A-21
3. MCC NO. 11686B-22
4. MCC NO. 11686C-22
5. MCC NO. 11686D-23
6. MCC NO. 11686E-23
7. MCC No. 11686F-24
8. DE 7th Recharge Contract Amendment 07.31.2025

MADERA COUNTY CONTRACT NO. 11686-20
(Davids Engineering Contract for Groundwater Recharge Study)

THIS AGREEMENT is made and entered into this 21st day of July, 2020, by and between the COUNTY OF MADERA, a political subdivision of the State of California and a Groundwater Sustainability Agency ("GSA") within the Madera, Chowchilla, and Delta-Mendota Groundwater Subbasins ("COUNTY"), and DAVIDS ENGINEERING, INC. ("CONSULTANT").

RECITALS

A. COUNTY is a GSA within the Madera, Chowchilla, and Delta-Mendota Subbasins under the Sustainable Groundwater Management Act ("SGMA"), and the COUNTY Board of Supervisors sits as the Board of Directors for the COUNTY GSAs.

B. COUNTY has determined that it is in the public interest to have performed those services described in CONSULTANT's May 15, 2020 proposal ("Proposal") entitled "Recharge Study Consulting Services RFP 2020-06." The Proposal is attached hereto as Exhibit "A," and incorporated in this Agreement.

C. COUNTY has determined the project involves the performance of professional engineering consultation services of a temporary nature.

D. COUNTY does not have available employees to perform the services required for the Project.

E. CONSULTANT, along with the sub-consultants identified in the Proposal, have the experience and expertise necessary for the performance of the professional engineering services required for the Project.

F. COUNTY has requested that CONSULTANT perform services for the Project and CONSULTANT has agreed to do so under the terms and conditions of this Agreement.

AGREEMENT

1. **TERM**. This agreement will commence on July 1, 2020, and will terminate upon completion of the services outlined in the Proposal, or June 30, 2023, whichever is sooner.

2. **SCOPE OF SERVICES**. CONSULTANT will perform its services over one and a half to three years (based on budget availability) in accordance with Phase 1 of the Proposal, a copy of which is attached as Exhibit "A," and incorporated into this Agreement.

3. **COMPENSATION AND INVOICING**. CONSULTANT shall be compensated in an amount not to exceed Six Hundred and Fifty Thousand dollars ($650,000.00). CONSULTANT's compensation under this Agreement, including the labor rates charged for work under this

Agreement, shall not be increased without the written modification of this Agreement by the COUNTY and CONSULTANT. Payments under this Agreement shall be made within thirty (30) days after CONSULTANT's regular monthly invoicing. Payment obligations under this Agreement are contingent upon the receipt, in a form and substance acceptable to COUNTY, of the deliverables required under the Proposal. Also, CONSULTANT shall be solely responsible for compensating any of its sub-consultants under this Agreement.

4. **NOTICES**. All notices required by this Agreement shall be in writing and shall be effective upon personal service or deposit in the mail, postage prepaid and addressed as follows:

COUNTY

County of Madera
Water and Natural Resources Dept.
200 West 4th Street
Madera, CA 93637

CONSULTANT

Bryan Thoreson
Davids Engineering, Inc.
1772 Picasso Avenue, Suite A
Davis, CA 95618

With Copy to

Rhonda Cargill, Clerk of the Board
Madera County Board of Supervisors
200 West 4th Street
Madera, CA 93637

5. **INSURANCE**. CONSULTANT shall maintain the following insurance: General liability, One Million Dollars ($1,000,000.00) per occurrence and Two Million Dollars ($2,000,000.00) aggregate, with additional-insured endorsement; Automobile liability, One Million Dollars ($1,000,000.00); Worker's Compensation as required by California law; Professional liability, One Million Dollars ($1,000,000.00) per occurrence and One Million Dollars ($1,000,000.00) aggregate.

6. **CONFLICT OF INTEREST AND REPORTING**. CONSULTANT shall at all times avoid any conflict of interest, or appearance of a conflict of interest, in performance of this Agreement. CONSULTANT represents that CONSULTANT and its officers and employees have no present financial or other conflict of interest that would disqualify any or all of them from entering into or performing services under this Agreement. CONSULTANT shall also refrain from engaging in business which opposes projects in which the COUNTY is processing while this contract is in place.

7. **CHANGE OF PERSONNEL**. COUNTY shall have the right to renegotiate this Agreement if project management staff as identified in the scope of work is changed.

8. **INDEPENDENT CONTRACTOR**. All services performed pursuant to this Agreement by CONSULTANT shall be performed as an independent contractor. Under no circumstances shall CONSULTANT, its officers, employees, or agents, look to COUNTY as its employer, or as a partner, agent, or principal. CONSULTANT shall not be entitled to any benefits accorded to COUNTY's employees. CONSULTANT shall be responsible for providing, at its own expense, and in its name, disability, worker's compensation, or other insurance as well as licenses or permits usual or necessary for conducting the services hereunder. CONSULTANT shall pay, when and as due, any and all taxes incurred as a result of CONSULTANT's compensation hereunder.

9. **PERFORMANCE OF SERVICES**. CONSULTANT represents that it has the qualifications and ability to perform the services required under this Agreement. CONSULTANT will perform such services with reasonable care and diligence, and in a professional manner according to accepted standards. CONSULTANT shall be solely responsible for the performance of the services hereunder, and shall receive no assistance, direction, or control from COUNTY. CONSULTANT shall have sole discretion and control of its services and the manner in which performed. COUNTY retains the right to administer this Agreement so as to verify that CONSULTANT is performing its obligations in accordance with the terms and conditions of the Agreement.

10. **COMPLIANCE WITH APPLICABLE LAW**. CONSULTANT shall use reasonable care and diligence to comply with the applicable federal, state, and local laws in performance of work under this Agreement.

11. **NON-DISCRIMINATION**. During the performance of this Agreement, CONSULTANT will not discriminate against any employee or applicant for employment on any basis prohibited by state or federal law including race, religion, creed, color, national origin, sex, age or disability.

12. **OWNERSHIP AND RETENTION OF DOCUMENTS**. All reports and other documents prepared by CONSULTANT pursuant to this Agreement shall become the property of COUNTY. COUNTY is entitled to full and unrestricted use of such reports and other documents for this Project. COUNTY may also retain the original of the reports and other documents upon request. CONSULTANT shall not apply for copyrights or patents on all or any part of the work performed under this Agreement.

13. **TERMINATION FOR CONVENIENCE**. COUNTY may terminate this Agreement without cause by giving at least thirty (30) days written notice to the other party, which notice shall

include the date of termination. If this Agreement is terminated prior to completion, CONSULTANT shall be paid for all work satisfactorily performed through the date of termination.

14. **REMEDIES UPON BREACH**. If CONSULTANT materially breaches the terms of this Agreement, COUNTY shall have all of the following remedies:

14.01: Immediately terminate the Agreement with CONSULTANT;

14.02: Retain the reports and other documents prepared by CONSULTANT;

14.03: Complete the unfinished work under this Agreement with a different consultant;

14.04: Charge CONSULTANT with the difference between the cost of completion of the unfinished work remaining under this Agreement by a different consultant and the amount that would otherwise be due CONSULTANT had CONSULTANT completed the work.15. **SUCCESSION AND ASSIGNMENT**. This Agreement is binding on CONSULTANT and its successors. Except as otherwise provided herein, CONSULTANT shall not assign, sublet or transfer its interest in this Agreement, or any part thereof or delegate its duties hereunder without the prior written consent of the COUNTY.

16. **ENTIRE AGREEMENT**. This Agreement, any exhibits attached hereto and incorporated by reference, shall constitute the entire agreement between CONSULTANT and COUNTY with respect to the subject matter hereof, and supersedes in its entirety all previous negotiations, proposals, commitments, writings, advertisements, publications, and understandings of any nature whatsoever unless expressly included in this Agreement. No other agreement, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or to bind either of the parties herein.

17. **GOVERNING LAW**. The laws of the State of California shall govern the rights, obligations, duties and liabilities of the parties to this Agreement and shall also govern the interpretation of this Agreement. Venue for any dispute arising under this Agreement shall be the Superior Court for the County of Madera, California.

18. **INDEMNITY**. To the fullest extent allowed by law, CONSULTANT shall defend, indemnify, and hold harmless COUNTY, its officers, employees, and agents from any loss, cost, expense (including attorney's fees), damage, claim, or liability resulting from, arising out of, or is in any way connected with the performance of this Agreement by CONSULTANT, it's officers, employees, or agents, except to the extent that such damage, claim, or liability is proven to be caused exclusively by COUNTY's sole negligence or willful misconduct in its performance of this

agreement. COUNTY will not be liable for any accident, loss, or damage to the work prior to its completion and acceptance.

19. **SURVIVAL OF OBLIGATIONS**. All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating responsibility or liability between the parties shall survive the completion of the services hereunder and/or the termination of this Agreement.

20. **SEVERABILITY**. In the event that one or more provisions of this Agreement may be deemed unenforceable, the remainder of the Agreement shall continue in full force and effect.

21. **SECTION HEADINGS**. The section headings, enumeration, and sequence of sections appearing herein are for convenience purposes only and shall not be deemed to govern, limit, modify, or in any manner affect the scope, meaning or intent of the provisions of this Agreement.

22. **TIME OF ESSENCE**. Time is of the essence to this Agreement.

23. **FORCE MAJEURE**. Neither the COUNTY nor CONSULTANT shall be liable to the other for damages or delay in performing under this Agreement, or for the direct or indirect costs resulting from such delay, arising out of labor strikes, riot, public disturbances, war, fire, accidents, extraordinary weather conditions, natural catastrophes, or any other cause beyond the control of either party.

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IN WITNESS WHEREOF the foregoing Agreement is executed on the date and year first above-written.

COUNTY OF MADERA GSA

Chairman, Board of Directors

ATTEST:

Clerk, Board of Directors

DAVIDS ENGINEERING, INC.

By: _____
(Signature)

_____
(Print Name)

Title: _____

Approved as to Legal Form:
COUNTY COUNSEL

By: _____
MICHAEL LIMBEN, DEPUTY

ACCOUNT NUMBER(S)

_____

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* * * * * * * * * * *

IN WITNESS WHEREOF the foregoing Agreement is executed on the date and year first above-written.

COUNTY OF MADERA

_____

Chairman, Board of Supervisors

ATTEST:

_____

Clerk, Board of Supervisors

DAVIDS ENGINEERING, INC.

By: Bryan Thoreson

(Signature)

Bryan Thoreson

(Print Name)

Title: Principal Engineer

Approved as to Legal Form:
COUNTY COUNSEL

By: Michael R. Linden

Digitally signed by: Michael R. Linden
DN: CN = Michael R. Linden email = mlinden@lozanosmith.com C = US
Date: 2020.06.30 12:45:06 -07'00'

ACCOUNT NUMBER(S)

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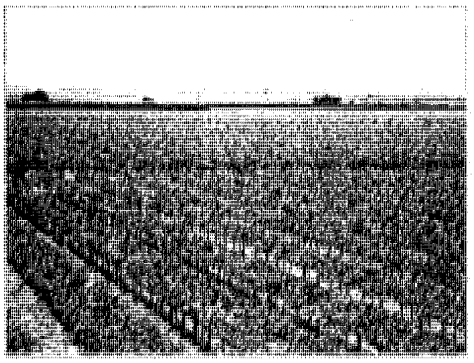
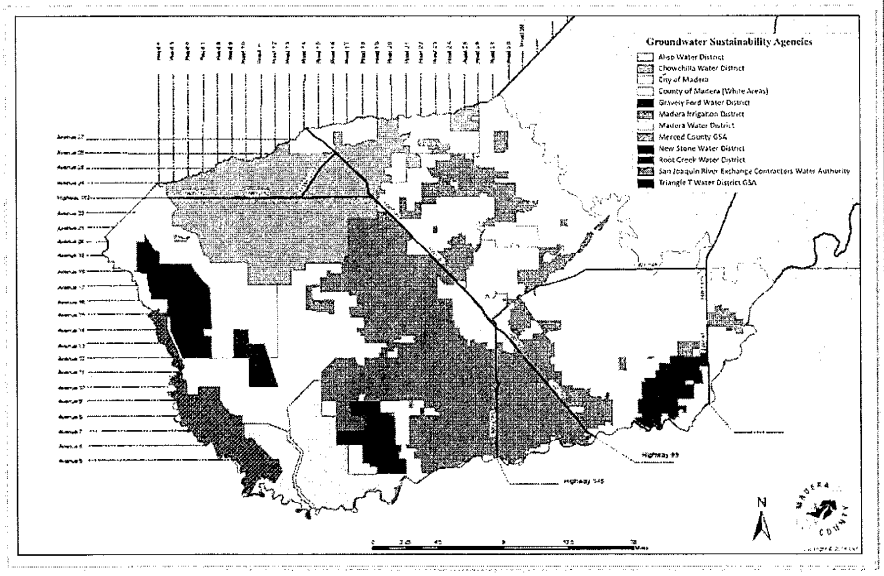
EXHIBIT A



Response to Request for Qualifications and Proposals

Recharge Study Consulting Services RFP 2020-06

May 15, 2020



Prepared by

DAVIDS ENGINEERING, INC

Luhdorff & Scalmanini Consulting Engineers

In association with

Kennedy Jenks

ERA Economics
Environment • Resources • Agriculture

Contact: Bryan Thoreson
Davids Engineering
1772 Picasso Avenue, Suite A
Davis, California 95618
530.757.6107 Ext.105
bryan@davidsengineering.com

Madera County

Response to Request for Qualifications and Proposals

Recharge Study Consulting Services

RFP 2020-06

May 15, 2020

Prepared For

Madera County Department of Water and Natural Resources

Prepared By

Davids Engineering and Luhdorff & Scalmanini Consulting Engineers
In association with
Environmental Science Associates
Kennedy-Jenks
ERA Economics and
Sacramento State Consensus and Collaboration Program

Cover Letter

May 15, 2020

Ms. Stephanie Anagnoson
Department of Water and Natural Resources
Madera County
200 W. 4th Street
Madera, California 93637

Subject: Response to Madera County-RFP-2020-06 Recharge Study Consulting Services

Dear Ms. Anagnoson:

Davids Engineering, Inc. (DE) and Luhdorff & Scalmanini Consulting Engineers (LSCE) are pleased to submit this proposal in response to your request to assist Madera County in Recharge Study Consulting Services. DE will be the primary consultant for contracting. Our team consists of handpicked individuals with applied experience to support the Madera County Groundwater Sustainability Agency (GSA) to implement artificial groundwater recharge efforts by providing technical expertise in the following areas: applying for temporary and permanent water rights, cost-benefit analyses focused on determining the optimum mix of permanent and temporary recharge Flood-Managed Aquifer Recharge (Flood-MAR) basins, identification and prioritizing of lands for recharge, design of infrastructure to deliver water to temporary and permanent basins, design and construction of temporary and permanent basins, and coordination and outreach. We will support the Madera County GSA from start to finish in development and implementation of a phased recharge plan, including design, permitting, and construction of recharge infrastructure.

The core of the DE-LSCE Team consists of four of the firms that worked on the Chowchilla and Madera Subbasin Groundwater Sustainability Plans (GSPs) plus Environmental Science Associates (ESA) and Kennedy-Jenks (KJ), to support specific tasks. ESA will provide environmental assessment and support, if desired, water rights acquisitions. KJ will provide recharge basin designs and provide support with infrastructure design and construction management. Key members of the team have worked together for many years and are also currently working together on other projects. For example, DE, LSCE, KJ and ERA are working together on preparation of the Solano Subbasin GSP. Additionally, DE, ERA and ESA are working together on the El Dorado (County) Water Reliability Project. LSCE is also currently working with ESA and KJ on various other projects. These teaming relationships have provided a strong foundation of understanding and communication amongst the team members, thereby ensuring seamless work flow for this recharge project.

This proposal includes a work plan and budget to develop and implement a recharge program for the Madera County GSA. We will continue and build on our past work with GSA stakeholders, including the local natural resource, conservation, and agricultural organizations and other interested stakeholders. We anticipate working closely with the Madera County GSA to develop a detailed, phased recharge program work plan and, if necessary, to scale the work plan and the budget as needed to align with available funding.

The DE-LSCE Team's experience and understanding of sustainable groundwater management in Madera County uniquely position us to successfully complete this project. Our experience emphasizes the following:

1. GSP development experience, data collection and analysis, and history working with stakeholders in the County, enabling us to complete the project planning phase in time for DWR's Sustainable Groundwater Management Grant Program GSP implementation grant applications scheduled for release in 2021.
2. Experience with drilling/installing nested monitoring wells in Chowchilla and Madera Subbasins, working closely with the County, other GSAs, and basin stakeholders (e.g. Leadership Council) to site wells at optimum locations for collection of lithologic, geophysical, water level, and water quality data.
3. Experience with and knowledge of existing project and management actions plans as described in the Chowchilla and Madera GSPs and annual reports.
4. Experience supporting the California Department of Water Resources (DWR) Flood-MAR Program with environmental and engineering and economic analyses.
5. Ability to handle all environmental needs during planning, design, permitting and construction of the project—including fisheries/fish screening and flood management expertise specific to the Chowchilla and Eastside bypasses.
6. Strategic thinking for identifying ecological benefits and avoiding impacts—during planning and design, not as mitigation.
7. Effective engagement of regulatory agencies and trusted relationships with United States Army Corps of Engineers (USACE), United States Fish and Wildlife Service (USFWS), National Marine Fishery Service (NMFS), and California Department of Fish and Wildlife (CDFW).

The DE-LSCE Team have worked together on a variety of projects involving surface water and groundwater resource management, including related work in Madera County, and have offices located near each other enabling close internal coordination throughout the duration of the project. The DE-LSCE Team is highly experienced and uniquely qualified to plan and implement the recharge program for the Madera County GSA. Our Team combines strong experience in planning and implementing the various aspects of a recharge program with our close familiarity of the groundwater and surface water conditions in the Chowchilla and Madera Subbasins gained through preparation of the Chowchilla GSP and the Joint GSP covering much of the Madera Subbasin. We look forward to the opportunity to continue working on behalf of the Madera County GSA.

We hereby certify that the information presented in this proposal is true and correct to the best of our knowledge. Please do not hesitate to contact either of us if you have any questions concerning this proposal.

Bryan Thoreson

Davids Engineering
Bryan Thoreson, Principal Engineer

Peter Leffler

Luhdorff & Scalmanini Consulting Engineers
Peter Leffler, Principal Hydrogeologist

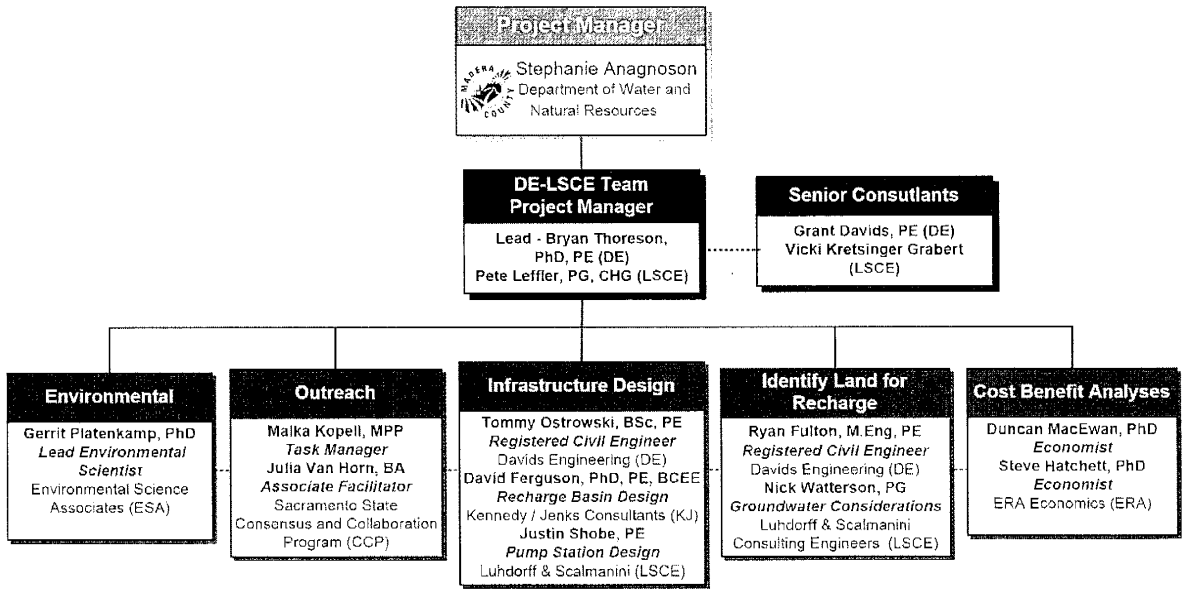
Table of Contents

1. Organization Chart

Davids Engineering (DE) and Luhdorff and Scalmanini, Consulting Engineers (LSCE) have complementary technical skills and qualifications covering a wide range of water resources services. Both firms are thoroughly familiar with the of the Sustainable Groundwater Management Act (SGMA) provisions, the Groundwater Sustainability Plans (GSPs) for Madera and Chowchilla Subbasins, and are also extensively involved in sustainable groundwater management and Flood Managed Aquifer Recharge (Flood-MAR or FMAR) in other groundwater basins in California.

TEAM ORGANIZATION

Working under the administrative direction of Madera County's project manager, our team will be led by Bryan Thoreson, principal engineer for DE (the contracting firm) and Pete Leffler, principal hydrogeologist for LSCE. Bryan will serve in the lead project manager role, as DE is the proposed lead firm. DE will provide overall project direction and management, coordination of sub consultants, expertise in water availability assessments, infrastructure design, and agricultural engineering. LSCE will provide hydrogeologic expertise including assessment and modeling to characterize, quantify, and prioritize recharge potential. LSCE will also contribute to design and implementation of performance monitoring plan(s), and support infrastructure design tasks, including pump station design. Company Presidents Grant Davids (DE) and Vicki Kretsinger Grabert (LSCE) will be available to provide advice to the team. Key team support personnel include technical task leaders Gerrit Platenkamp (ESA), Malka Kopell (CCP), Tommy Ostrowski (DE), Ryan Fulton (DE), Nick Watterson (LSCE), and Duncan MacEwan (ERA). A pool of staff and subject matter specialists from each of the firms on the DE-LSCE Team is available for additional technical support. The proposed key personnel and organization of the team for this project are presented on the organizational chart and staffing table below.



Key Project Support and Technical Specialists

Name	Firm	Support Area or Specialty
David Ceppos	CCP	FMAR Outreach / R&D
Brooks Ronspies, MS	ERA	Associate Economist
Brandon Ertis, PE	DE	GIS Mapping, Land Use
Bernadette Boyle	LSCE	Modeling
Brandon Hale, PE	KJ	Civil Designer
Jake Wicks, PE	KJ	Staff Engineer
Leslie Moulton-Post	ESA	Environmental Scientist
Meredith Parkin, JD	ESA	Water Rights Acquisition

2. Qualifications

Formed in 1993, DE provides a broad range of engineering services to support the planning, design, and construction of facilities for irrigation and drainage at scales ranging from individual fields to entire irrigation districts. Our focus is on developing the best facility to meet a given need in a manner that provides high quality operation in a practical and cost-effective manner. LSCE was formed in 1980 and provides a full complement of groundwater resources services, including conjunctive use planning, artificial recharge, analyses of surface water/groundwater interaction, land subsidence analyses, and water budget development.

Davids Engineering, Inc. (www.davidsengineering.com) provides professional engineering and scientific services to public agencies, private entities, and individual landowners responsible for managing water resources in the Western United States. Founded on a commitment to the highest standards of professional integrity and intellectual honesty, DE has successfully completed projects in Arizona, California, Nebraska, Nevada, New Mexico, Oregon and Washington and in a handful of developing nations. From its initial focus on agricultural surface water and groundwater management, the firm has gradually broadened its technical capabilities to encompass field services and comprehensive data management, facility design and construction, and remote sensing and GIS services. Most of the projects completed by DE involve the application of a blend of these capabilities to help clients better manage surface water and groundwater resources for increased agricultural productivity and environmental enhancement. Relevant to this recharge effort, DE staff were active participants and contributors to Flood Managed Aquifer Recharge (Flood-MAR) studies, with contributions regarding the grower willingness to flood crops and district ability to deliver water for wintertime flooding of crop land.

Luhdorff and Scalmanini Consulting Engineers (www.lsce.com) is a consulting company with a focus on the investigation, development, use, protection, and management of groundwater resources. LSCE staff include approximately 40 technical professionals, including licensed geologists, hydrogeologists, hydrologists, and engineers experienced in all aspects of groundwater ranging from hydrogeologic interpretation, hydrologic modeling, and artificial recharge including aquifer storage and recovery projects to well and pump station design and construction. In addition to a strong group of hydrogeologists and water resources staff, LSCE has field staff that specialize in monitoring, test, and production well drilling, installation, and testing; and an engineering group specializing in pump station and water system distribution design. Relevant to this recharge effort, LSCE staff were active participants and contributors to the California Department of Water Resources (DWR), (Flood-MAR) Research Advisory Committee (RAC) and the resulting Research and Data (R&D) Development Plan.

DE-LSCE TEAM PARTNERS

A group of four highly qualified firms has been assembled to complement the capabilities of DE and LSCE. DE and LSCE have handpicked individuals from these firms for specific roles in planning and implementing the Madera County GSA recharge program. ESA will provide expertise and experience in evaluating (during concept and design stages) potential environmental impacts of the project, mitigation requirements, permitting, and agency coordination. ESA will also provide support in water rights acquisition as needed. Kennedy-Jenks (KJ) will develop design criteria for and design recharge basins and provide construction services for recharge basin construction and support, as needed, and infrastructure design tasks, including pump station design. ERA Economics will provide cost-benefit analysis, assist with developing incentive structures and prioritization of project alternatives. CCP will assist with outreach and meeting facilitation. Short descriptions of each firm follow.

Environmental Science Associates (https://esassoc.com/) is a leading engineering and environmental consulting firm established in California in 1969. Founded on the principles of science, technical excellence, integrity, and credibility, ESA's 550+ staff provide integrated decision-making and develop innovative solutions based on robust science, thoughtful policy, and collaborative planning principles. ESA has decades of experience planning, designing, permitting and building water, flood and habitat projects. Similar to LSCE, ESA staff were also active participants and contributors to DWR's Flood-MAR RAC and R&D Development Plan. We understand environmental issues on Central Valley projects, and for Flood-MAR projects like this one, we know that if environmental opportunities and constraints are identified early, project concepts can be developed to maximize support from outside of the immediate water supply stakeholder community and more-easily complete environmental compliance and project permitting. The ESA Team has the breadth and depth of knowledge and experience to efficiently and effectively execute these services for Madera County.

Kennedy-Jenks (https://www.kennedyjenks.com/)

KJ is a full service, multidiscipline engineering consulting firm. With nearly 450 professionals in 27 offices throughout the United States, KJ can take on projects of all sizes and complexity while also providing personalized service. As an employee-owned firm, KJ's primary focus is developing long-term relationships with its clients. KJ offers our clients expertise in water, wastewater and stormwater, from resource management, to planning, design, and construction. KJ's in-house applied research group, composed of multi-discipline Ph.D., chemists, biologists, and engineers directly helps our clients solve technical challenges while reducing cost and risk.

KJ's planning and design efforts focus on delivering facilities that are functional, economical and sustainable, with minimal O&M requirements and streamlined public and regulatory acceptance. KJ has specific and extensive experience with engineering design and construction support for recharge basins in California that will facilitate development of recharge basins in Madera County.

ERA Economics, LLC (www.eraeconomics.com) Founded in 2013 and located in Davis, CA, ERA specializes in the economics of water resources and agriculture. ERA's services include feasibility studies, fiscal and economic impact analyses, and policy evaluation. Members of ERA's team have worked on California water and agriculture for over three decades, and understand how economics integrates with other engineering, technical, and legal analyses to support effective water planning decisions. ERA works with a range of agency and private clients on problems related to water resources and agriculture in California and the Western U.S.

Sacramento State Consensus and Collaboration Program (CCP) (www.csus.edu/ccp) is a fee-for-service, not for profit unit of California State University Sacramento. CCP specializes in assessing, designing, and managing collaborative projects. CCP is unparalleled in its experience engaging stakeholders in water resources having supported the DWR California Water Plan, the) Water Use and Efficiency Program, the Drought Contingency Program, the Proposition 1 Water Storage Investment Program, the State Drinking Water Program, the Irrigated Lands Regulatory Program, and SGMA. CCP is the consultant of record for DWR's Flood-MAR Outreach, RAC and R&D Program. CCP has played a prominent role providing facilitation, mediation, governance, and strategic advice services for 35 basins in California to support SGMA implementation including the Madera and Chowchilla Subbasins.

KEY DE-LSCE TEAM PERSONNEL

Bryan Thoreson, PhD, PE, Principal Engineer (DE)

Bryan has more than 25 years of professional experience in water resources and irrigation engineering. He is a registered civil engineer in California (#C56194). He specializes in water flow measurement,

uncertainty analyses and data management, including database development for water balances, water rights analysis, crop water use, land use analysis, and reservoir operations.

Projects with similar services.

Water Budget Development projects: Bryan has played a major role developing water budgets and quantifying water conserved by various conservation practices for irrigation and water districts in the Sacramento, San Joaquin and Imperial Valleys of California and elsewhere. Many of these water balances have supported agricultural land conservation programs.

Imperial Irrigation District (IID) Water Conservation Support: He managed the data component task for the IID Efficiency Conservation Definite Plan and Near-term Conservation Tasks, working closely with Steve Hatchett (now with ERA) to help IID develop its efficiency conservation incentive program.

Agricultural Land Development Feasibility Assessment: The El Dorado County Water Agency engaged ERA Economics and DE to assess historical trends, current agricultural footprint, and the land suitability and economic potential to develop additional lands in El Dorado County. Duncan MacEwan was the lead economist. Bryan provided senior review for the project and Ryan Fulton provided land and water use analysis support to the project.

Pete Leffler, PG, CHG, Principal Hydrogeologist (LSCE)

Pete has more than 30 years of professional experience in groundwater resources and hydrogeology. He is a Professional Geologist in California (#6475), and Certified Hydrogeologist (#462). He specializes in groundwater basin hydrogeologic characterization, water balances, groundwater modeling, and safe yield/sustainable yield analyses; groundwater sustainability plans; monitoring well, test well, and production well design, construction, aquifer testing, and groundwater quality sampling; groundwater impact studies related to treated wastewater disposal; evaluation of percolation pond capacity; groundwater quality studies; groundwater impact studies to support CEQA analyses; expert witness testimony; assessment of groundwater flow and well yields in fractured bedrock; and aquifer storage and recovery feasibility studies.

Projects with similar services

Groundwater Basin Characterization projects: Pete has played a major role in evaluating and characterizing the hydrogeology, groundwater recharge and discharge, and groundwater quality in several major groundwater basins in California. Many of these projects have been in groundwater basins dominated by agricultural land uses.

Recharge/Percolation Pond Capacity projects: Pete evaluated several existing and potential future sites for percolation pond capacity and recharge potential, and related impacts to groundwater levels and quality in the underlying aquifer. These studies have included field investigations (cone penetrometer testing (CPT), drilling boreholes and monitoring wells, aquifer testing, percolation capacity testing in test pits, data analysis, and groundwater modeling. These studies have been conducted for wastewater treatment plants, imported surface water supplies, and other purposes at several locations in California.

Madera and Chowchilla Subbasins: Pete conducted a detailed hydrogeologic assessment for GSPs that included evaluation of groundwater recharge and discharge areas, depth to groundwater and groundwater elevation contour mapping, evaluation of surface water – groundwater interaction, delineation of occurrence of several key groundwater quality constituents, and development of sustainable management criteria. Numerical groundwater modeling conducted for these projects included incorporation and assessment of on-farm recharge and recharge basins.

Gerrit Platenkamp, PhD, Environmental Science Associates (ESA)

Gerrit Platenkamp has 27 years of environmental consulting experience directing and serving as technical lead on flood, water and habitat restoration planning and design, NEPA/CEQA analysis, environmental permitting and compliance, and watershed assessment and planning projects. He has extensive experience assessing resources that can be affected by flood management facilities and/or water diversion and conveyance.

Projects with similar services

Programmatic and project-level biological impact assessments and mitigation design: Gerrit has completed biological impact assessment, CEQA/NEPA, permitting, and mitigation design on dozens for flood and water infrastructure programs and projects.

San Joaquin River Restoration Program's Long-term Recapture and Recirculation of Restoration Flows Project EIS/EIR and Eastside Bypass Improvements Project: Gerrit is using hydrologic and hydraulic modeling to assess impacts on fisheries resources and terrestrial riparian habitats; these impact/benefit assessments are similar and directly applicable to the analysis and assessments that would be conducted for Madera.

David Ferguson, PhD, PE, BCEE, Vice President, Kennedy Jenks (KJ)

David Ferguson, with Kennedy/Jenks, has four decades of experience in the planning, design, construction, and operation of water supply, infrastructure, and treatment projects. His background includes project and program management, as well as management of engineering and/or operations for three large water utilities in Southern California. He served as Project Manager for the IEUA's Recycled Water Facilities Plan and for their Regional Recycled Water Distribution System design. He also served as project manager for multiple conjunctive use projects including the $80 million Water Banking Program for Antelope Valley-East Kern Water Agency (AVEK), and the $50 million Palmdale Regional Groundwater Recharge and Recovery Project.

Projects with similar services

Water Banking Program for Antelope Valley-East Kern Water Agency (AVEK): David served as project manager for this $80 million multi-phase water banking program with recharge and recovery for water supply stabilization. The Westside Water Bank is on 1,475 acres of agricultural property and includes 500 acres of low-berm flooding recharge basins with a capacity to spread up to 50,000 ac-ft/year, and ultimately up to 30 extraction wells with a capacity to produce up to 45 mgd. The Eastside Water Bank is on a 240-acre site. The Eastside Water Bank includes 6 acres of recharge basins with expansion planned for an additional 66 acres with three to six recovery wells.

Palmdale Regional Groundwater Recharge and Recovery Project: David served as project manager for this $50 million large-scale surface spreading IPR groundwater bank in Antelope Valley, California. The project will ultimately provide up to 50,000 acre-feet per year (AFY) of recharge capacity and 30,000 AFY of extraction capacity, and is anticipated to serve approximately 50% of PWD's future water demand. The initial Phase 1a is sized to recharge 10,000 AFY and recover 7,500 AFY through the first 4 of 16 recovery wells. The project is anticipated to begin operation in late 2022.

Duncan MacEwan, PhD, Principal Economist (ERA)

Duncan is an economist specializing in water resources and agriculture. Prior to co-founding ERA Economics in 2013, Duncan held a position as a consultant economist with CH2M (now Jacobs) where he assessed agricultural water supply benefits for a range of planning studies, including a feasibility assessment for Sites Reservoir. Some of his current projects include agricultural impact analyses, water valuation and risk assessments, benefit-cost analyses, and water supply feasibility studies. He is the lead economist on several GSPs in high and medium priority groundwater subbasins across California. Duncan remains actively engaged in developing economic methods and working to integrate economics

with other technical studies to support water supply planning. Duncan has developed economic feasibility analyses and impacts analyses for CEQA/NEPA support for state, federal, and local projects.

Projects with similar services

Agricultural Land Development Feasibility Assessment. The El Dorado County Water Agency (EDCWA) engaged ERA Economics and DE to assess historical trends, current agricultural footprint, and the land suitability and economic potential to develop additional lands in El Dorado County. Duncan was the lead economist. Bryan Thoreson provided senior review for the project and Ryan Fulton provided land and water use analysis support to the project. EDCWA also engaged ESA to assist with this project

Economic and Financial Feasibility of District-wide Pressurized Irrigation. ERA and DE evaluated the techincal, financial, and economic feasibility of alternative pressurized irrigation sytems for South San Joaquin Irrigation District (SSJID). DE developed grower costs for alternative systems. Duncan developed an economic and financial framework that was used to assess grower willingess and ability to pay for alternative irrigation systems. A benefit-cost analysis was developed to assess whether alternative systems were economically feasibile, and a financial analysis was developed to evaluate District ability to pay. The resulting analysis was presented to District Staff and Board meetings and a series of workshops.

Malka Kopell, MPP, Senior Facilitator/Mediator (CCP)

Malka has more than 30 years' experience supporting State, city and county government agencies in collaborative process design, meeting facilitation, conflict resolution, strategic planning, and training, and has been part of the CCP family for 20+ years. She has developed and managed engagement and outreach processes around a wide variety of issues, including water quality and sustainability, air quality, land use planning, transportation, recycling, public budgeting, neighborhood revitalization, downtown redevelopment, youth development and public health.

Projects with similar services

SGMA Outreach and engagement: Malka has supported outreach and collaboration for SGMA efforts in Madera, Mendocino, Colusa, Glenn, San Luis Obispo, Santa Barbara and Butte Counties She provided consulting on outreach methods, designed and facilitated public meetings, and supported collaborative task forces focused on both GSA structure and GSP development.

Outreach and engagement to disadvantaged communities. Malka supported State and local agencies in tribal outreach and engagement with disadvantaged communities. Examples include supporting DWR and the County of Tulare on funding allocation related to Integrated Regional Water Management (IRWM) projects supporting disadvantaged communities and the Office of Environmental Health Hazard Assessment on tribal outreach related to climate change.

3. Project Understanding and Approach

The DE-LSCE Team understands the importance of this phased recharge plan for achieving sustainability objectives in the Madera County GSAs, and also its interrelatedness with other projects and management actions, (including the land conservation program and water marketing strategy) being implemented by the GSA to achieve sustainability. In this section, we discuss the DE-LSCE team project understanding, approach, and present a work plan for developing a phased recharge plan.

PROJECT UNDERSTANDING

The Madera County GSA is currently implementing GSPs for the Chowchilla, Madera, and Delta-Mendota Subbasins to achieve groundwater sustainability by 2040. The plans include a mix of projects and management actions that will lead to sustainable groundwater management. A key component of these GSPs is the development of projects that enable groundwater recharge through in-lieu practices, Flood-MAR, and spreading basins. A strategic recharge plan and implementation program is necessary to develop a package of recharge projects that can serve as the County's roadmap to achieving their sustainability goal.

Having developed the GSPs for the Chowchilla Subbasin and most of the Madera Subbasin, the DE-LSCE Team is intimately familiar with the projects. Our understanding is that the County desires a phased recharge program developed through a strategic work approach to cost-effectively meet the following objectives:

1. Develop projects that address "low hanging fruit" first.
2. Develop and implement projects that optimize on-farm recharge versus recharge basins.
3. Identify and pursue funding opportunities for implementation of projects.
4. Identify or establish partnerships with public agencies and non-profits to advance recharge.

APPROACH

The DE-LSCE Team proposes a comprehensive approach (Table 1) that includes six (6) phases of work that together form a strategic and technically robust recharge program led and supported by an experienced and capable team. Our approach also considers the interaction of recharge projects with other projects and management actions being implemented by the GSAs. The development and implementation of the plan over five years will be a dynamic process managed by incorporating milestones at key decision points. In this way, the County can adaptively manage the project by adjusting the scope and budget as needed at these points during the course of the project.

The DE-LSCE propose to begin with a planning effort that incorporates nine (9) work groups, each with a specific focus that together formulate the technical context to identify concept projects (including those in the GSP), assess feasibility and recharge potential, and quantify conceptual-level costs and benefits. A benefit-cost analysis (BCA) will be conducted to identify and prioritize programs (i.e. groups of projects) and evaluate interactions with other County GSA projects and management actions. The results of the feasibility assessment and BCA will support the County's pursuit of funding opportunities (including the upcoming Proposition 68 funding) and establish projects to advance into the design phases.

We anticipate that the planning phase would identify areas within the GSA to target for recharge as well as the methods of supplying and distributing the water to these areas. Pre-design (Phase 2) would identify specific sites for the improvements. Once sites are selected, phased design (Phase 3) and environmental compliance (Phase 4) will begin. Services During Construction (Phase 5) and Monitoring and Reporting (Phase 6) would follow and coincide with project construction.

The proposed approach incorporates a strong environmental science team throughout all phases to support planning, preliminary and final project design and; complete studies to support CEQA, NEPA and permitting, develop and obtain permits, and complete compliance documentation.

Table 1. Work approach summary with lead (L) and supporting (S) firms identified.

Tasks	Description/Objective	Deliverable	Objectives	PROPOSED PROJECT TEAM						
				DE	LSCE	KJ	ESA	ERA	CCP	*Subs
PHASE #1 – Planning										
1 - Objective statement and work plan	*Work plan and concise objective statement with project description to support consistency in planning tasks and facilitate early outreach and collaboration efforts.*	Work Plan & Project Concept Flier	1-4	L	S			S	S	
2 - Water rights and water availability assessment	*Technical assessment of available water from the targeted supplies to support the application for temporary and/or permanent water rights for recharge purposes.*	TM	1,2	S	S		S			
3 - Existing regional conveyance facilities	*Inventory and characterization of the primary conveyance facilities existing in and adjacent to the study area.*	TM	1, 2, 4	L		S				
4 - Landowner outreach and interest assessment	*Landowner and stakeholder outreach to assess and quantify interest in Flood-MAR and/or in-lieu recharge.*	TM	1-3	S				S	L	
5 - Hydrogeologic and recharge potential assessment	*Characterization and prioritization of recharge areas using available data/information, and modeling*	TM	1, 2	S	L			S		
6 - Screening level environmental assessments	*Initial identification of potential environmental issues, requirements, or constraints that may influence the project and provide recommended CEQA compliance strategy.*	TM	1	S	S	S	L	S	S	
7 - Feasibility assessment of project alternatives	*Based on TMs, develop project alternatives that can be evaluated, preferred alternatives selected and formulated into a phased recharge program.*	Phased Recharge Plan	1 - 3	L	S	S	S	S	S	
8 - Public outreach	*Coordination and collaboration with stakeholders to maintain effective communication, input, and review of deliverables (technical support included with those tasks)*	Meeting Minutes	1,2, 4	S	S	S	S	S	L	
9 - Funding opportunities	*Support the County in identifying potential funding opportunities.*	Opportunity summary	3	L	S	S	S	S	S	
MILESTONE #1 – Phased Recharge Plan including Revised Budget and Schedule for Upcoming Phases										
PHASE #2 - Pre-Design										
1 - Preliminary engineering data collection	*Topographic data collection, utility and constraint mapping, hydrogeologic/geotechnical investigation, and land title research*	Engineering Data report	1,2	L	S	S				S
2 - Preliminary environmental	*Biological and Botanical assessment(s) and studies*	Preliminary Report	1,2	S	S	S	L			
3 - Preliminary design & criteria development	*Develop design criteria for pump station, pipelines, and recharge basins*	Design Report	1,2	L	S	S				
MILESTONE #2 – Preliminary Design including Revised Budget and Schedule for Upcoming Phases										
PHASE #3 - Phased Design & PHASE #4 - Permitting and Environmental Compliance										
Various design milestones, bidding, drawings and specification	*Surveying, 30-100% Design Phases, Value-Engineering, Recharge Performance Monitoring Plan, Operations and Maintenance Manual, land-easement acquisition*	Phase Design Reports	1,2	L	S	S	S			S
CEQA/NEPA	*Environmental and Cultural Resources Documentation, Agency Approvals and Local Permits*	Environmental Reports	1,2	S	S	S	L		S	
MILESTONE #3 – Final Design and Permitting including Revised Budget and Schedule for Upcoming Phases										
PHASE #5 - Services During Construction & PHASE #6 - Monitoring & Reporting										
Construction management	*Bidding documents, advertising and award, contract administration, labor compliance, construction management, quality assurance, close-out, as-builts*	Inspection Reports	1,2	L	S	S	S		S	
Well construction	*Monitor groundwater level and water quality*	Well Reports	1	S	L	S	S		S	

*Specialty subcontractors will provide focused engineering data collection efforts as necessary (e.g. geotechnical borings and surveying).

PROPOSED WORK PLAN

The work plan covers a five-year period for engineering consulting services to develop and implement a phased recharge plan, including support for acquiring temporary and permanent water rights. The tasks comprising Phase 1 are described below, followed by overviews of the subsequent phases. Detailed work plans for subsequent phases will be developed at the conclusion of each milestone.

Phase 1 - Planning

Task 1 – Objective Statement and Work Plan

The DE-LSCE Team will conduct a work planning session with the project team members and County staff to collaborate regarding the County's objectives for the recharge program. From this, the DE-LSCE team will prepare a detailed work plan and a concise flier summarizing the program being developed to facilitate outreach, coordination, collaboration, and interest in the project by landowners, potential recharge partners, and the general public.

Task 2 – Water Rights and Water Availability Assessment

The DE-LSCE Team will work closely with the County staff and other contractors, as directed, to support the County's efforts to obtain temporary and permanent water rights for recharge projects.

Task 3 – Existing Regional Conveyance Facilities

The DE-LSCE Team will use existing available information and contacts with local water managers to inventory and characterize existing conveyance facilities in the region to support the strategic use of existing facilities to generate the most cost-effective solution(s). The characterization will focus on attributes of facilities that influence or impact their ability to convey flood waters or Reclamation Act Section 215 water to the project area for Flood-MAR, in-lieu recharge, or basin spreading. This task will also facilitate the coordination with regional water purveyors, potential partnership opportunities, and the identification of project(s) that can potentially be "fast-tracked."

Task 4 – Landowner Outreach and Interest Assessment

Aquifer recharge planning involves diverse interrelated topics. The recent work of DWR's Flood-MAR RAC and R&D Development Plan, illustrates myriad questions, potential conflicts, and hopeful opportunities for mutual benefits as directly affected landowners, (and other public stakeholders,) GSAs and technical specialists seek common ground on recharge solutions. Successful implementation of such solutions will require early (even before environmental compliance) understanding of representative stakeholder interests and when applicable, competing needs that must be reconciled. CCP will work with County project leadership and DE-LSCE Team colleagues to identify key project aspects to be tested/discussed with potentially affected stakeholders. As a neutral third party, CCP will be available to work directly with stakeholders in workshops/interviews to assess their interests or to act as process advisors to County staff.

Task 5 – Hydrogeologic and Recharge Potential Assessment

The DE-LSCE Team will conduct the preliminary evaluation of hydrogeologic conditions in Madera County GSA areas relative to potential on-farm recharge and permanent recharge basin sites. This hydrogeologic assessment will be based on existing data such as soils mapping, geologic cross-sections, local and regional stratigraphy relative to aquifers and aquitards (e.g., presence/absence of Corcoran Clay), locations of existing recharge basins, groundwater levels/quality, and previous groundwater model simulations. The optimal general distribution of new sites across each subbasin will be evaluated relative to where additional recharge is most needed, maximizing retention of recharged water within each Subbasin, and preliminary assessment of potential surficial percolation rates.

Task 6 – Screening Level Environmental Assessments

ESA will survey potential project sites using desktop- and preliminary field-assessments to identify sensitive biological resources. ESA's biologists will work closely with the team to consider which biological resources may have potential to be affected by the project(s).

Task 7 – Feasibility Assessment of Project Alternatives

Task 7 will incorporate the costs, benefits, and stakeholder feedback developed under Tasks 1 through 6 to develop a phased recharge plan and implementation program for the GSP projects, assesses feasibility and

recharge potential, and quantifies conceptual-level costs and benefits. Benefit-cost analysis will be conducted to assess and prioritize individual projects and alternatives. The analysis will also identify and evaluate interactions and consistency with other County GSA projects and management actions. Conceptual-level estimates of costs per acre-foot of recharge developed for the GSP will be refined and improved. Project benefits that accrue to individual stakeholders, the GSA, and the broader Subbasin will be quantified. The feasibility assessment would identify preferred project(s) from the recharge program for fast-track development for the 2021 Proposition 68 grant solicitation for GSP implementation projects. The land conservation program and water marketing strategy that the Madera County GSA is considering implementing may have important interactions with recharge project alternatives. The Team will identify and, where possible, quantify these interactions as part of its analysis.

Task 8 – Public Outreach

CCP and its DE-LSCE Team colleagues will work with the County to identify optimal milestones in each project phase to conduct broad public outreach. Starting in Phase 1, we will prepare summary materials of applicable tasks to present a comprehensive view of the project to-date with a focus on outcomes from the feasibility assessment (Task 7) and a summary of representative stakeholder interests from Task 4. Outreach will be conducted through in person and/or virtual meetings, informational materials provided on the GSA website, and a media strategy to enhance information sharing through the GSA's existing network of interested parties, affiliated groups and local media. While this outreach will be conducted prior to initiation of CEQA and NEPA activities, it will create an invaluable administrative record to enhance project scoping under a future environmental compliance context and will show that the County was rigorous in providing stakeholders an active voice in project development.

Task 9 – Funding Opportunities

DE-LSCE Team members will work with the County to track available grants and similar opportunities provided by the State and Federal governments and will be available in a support capacity. The County and GSA may use this support to prepare funding applications; coordinating technical content and working with stakeholders to identify and memorialize mutual support for such opportunities.

MILESTONE 1 – A phased recharge plan will be developed at this stage. Scope and budget will be reassessed and proceeding to Phase 2 will be at the sole discretion of the County.

Phase 2 – Preliminary Design

Preliminary Design will include preliminary geotechnical, surveying, technical analysis, and environmental evaluations to characterize the identified areas for recharge and identify specific sites (or series of sites) to screen for implementation. Hydrogeologic/geotechnical field investigations will be conducted to refine/validate the specific locations for their recharge suitability. Groundwater modeling simulations would evaluate benefits and potential consequences (e.g. discharge to surface water features) from conducting recharge at the prioritized locations. The results of these investigations would refine the feasibility evaluation, rank the preferred recharge areas, identify possible sites, and prepare preliminary designs and design criteria. The environmental analysis will consider the presence of sensitive biological resources and critical supporting ecosystem processes that may be affected by the project, impact avoidance and minimization strategies, and permitting strategies. The need for fish screening would also be evaluated.

MILESTONE 2 – Reassess scope and budget before proceeding to Phase 3 and 4.

Phase 3 – Phased Design and Engineering

Design of pump stations, pipeline and possibly other conveyance systems and recharge basins will be required. Pump stations would likely be utilized as part of the conveyance systems that deliver from the water source(s) to the recharge basins. The overall pump station design would include complete civil,

mechanical, and electrical designs. Pipelines would be designed to convey pumped water to recharge basins and fields for Flood-MAR. Recharge basins would be designed to receive water and spread it for recharge.

Phase 4 – Permitting and Environmental Compliance

The DE-LSCE Team will provide permitting and compliance support for the phased recharge program and the individual projects in the program. This will include assessment of the need for, and preparation of, various local, state, and federal permits as well as CEQA and NEPA compliance. ESA and CCP will support any mandated public engagement for permitting and environmental compliance such that the County and GSA capitalize on prior outreach and engagement to enhance the administrative record reflecting stakeholder opportunities for input and involvement.

MILESTONE 3 – Reassess scope and budget before proceeding to Phase 5 and 6.

Phase 5 – Services during Construction

The DE-LSCE Team will provide full technical support services prior to and during construction including advertising, bidding, contract administration, pre-construction, construction management, submittal review, field inspections, special inspections, quality assurance and material testing, biological monitoring (if required), change order processing, and cost control support.

Phase 6 – Monitoring and Reporting

Monitoring and reporting for on-farm recharge and recharge basins will be closely integrated with GSP Annual Reporting, which requires reporting of the amounts of recharge accomplished at each site for new projects. It is likely that many of the designated monitoring wells used to collect water levels and water quality around recharge sites will be part of the overall GSP monitoring network. This task will involve assessment of the recharge monitoring plan and how to best integrate it with overall GSP Annual Reporting.

PRELIMINARY SCHEDULE

The DE-LSCE Team has drafted a five-year schedule for the recharge program. The schedule for Phase One is more detailed and the DE-LSCE Team anticipates having a recharge program sufficiently developed to plug into the SGMA implementation grant PSPs anticipated to be released in the fall of 2021. The schedule will be re-evaluated and revised at the conclusion of each milestone as indicated in the table above.

	2020		2021			
PHASE 1 - PLANNING	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec
T1 - Objective statement & work plan						
T2 - Water rights and water availability assessment						
T3 - Existing regional conveyance facilities						
T4 - Landowner outreach and interest assessment						
T5 - Hydrogeologic and recharge potential assessment						
T6 - Screening-level environmental assessments						
T7 - Feasibility assessment of project alternatives						
T8 - Public outreach						
T9 - Funding Opportunities						

	2021			2022			2023			2024			2025	
Phases	Jan-April	May-Aug	Sept-Dec	Jan-April	May-Aug	Sept-Dec	Jan-April	May-Aug	Sept-Dec	Jan-April	May-Aug	Sept-Dec	Jan-April	May-July
P2 - Pre-Design														
P3 - Phased Design														
P4 - Permitting and Environmental Compliance														
P5 - Services During Construction														
P6 - Monitoring and Reporting														

4. Cost

The DE-LSCE Team has prepared a detailed budget for Phase 1 planning for the recharge program (Table 2) and is prepared to enter into a not-to-exceed contract to complete Phase 1 of the program. The total budget for Phase 1 is estimated to be $632,811. We anticipate working closely with the Madera County GSA to develop a detailed phased recharge program work plan and, if necessary, to scale the work plan and the budget as needed to align with available funding. Task-level budgets for Phases 2-6 are not provided due to the uncertainty in scope.

Table 2. Detailed Budget Detail for Phase 1

		Labor Hours by Staff Member/Firm and Project Task/Subtask									
Team Member	2020 Hourly Rate	Objective Statement & Work Plan	Water rights & water availability assessment	Existing regional conveyance facilities	Landowner outreach & interest assessment	Hydrogeologic & recharge potential assessment	Recon-level environmental assessments	Feasibility assessment of project alternatives	Public outreach	Funding Opportunities	Phase 1 Totals
DE SR. Principal Engineer	$206	2		4	2	4		26			38
DE Supervising Engineer/Scientist	$199	18	8	8	8	24	2	100	8	8	184
DE Senior Engineer/Scientist	$182	24	8	50	16	24	4	200	4	16	346
DE Associate Engineer/Scientist I	$162					120		90			210
DE Staff Engineer II	$154	12	40	100	36	80		260		16	544
DE Technical/ Project Assistant	$100	4	1	1	2	1	1	4	1	1	16
ESA Lead Environmental Scientist	$300	8	36				50	10			104
ESA Environmental Scientist	$240	12	32				100	30			174
ESA Environmental Scientist	$140						200	20			220
KJ Engineer/Scientist 9	$275	12				8	4	32			56
KJ Engineer/Scientist 5	$195	12				24	16	56			108
KJ Engineer/Scientist 3	$165					24	8	56			88
LSCE Principal	$220	18	8	8	8	110	8	50	8	8	226
LSCE Supervising Hydrogeologist	$210	24	4	4	4	150	4	80	4	4	278
LSCE Staff Hydrogeologist/GIS	$140	2				110		60			172
ERA Sr. Principal Economist	$225	12						40			52
ERA Principal Economist	$185	17						190			207
ERA Assoc. Economist	$135							230			230
CCP Managing Sr Mediator III	$206	12			5				2	2	21
CCP Senior Mediator II	$188	18			36				40	8	102
CCP Assistant Facilitator III	$126				6				50	8	64
CCP Admin. Support Asstnt.	$59				2				4		6
Total Labor Costs by Task =		$42,511	$30,388	$29,616	$21,932	$123,768	$76,366	$270,036	$19,488	$12,592	$626,697
		Direct Expenses by Firm									
DE		$ 140		$ 280	$ 560	$ 140		$ 280	$ 560		$1,960
ESA		$ 140					$ 2,500				$2,640
KJ		$ 140									$140
LSCE		$ 140				$ 140					$280
ERA		$ 140						$ 140			$280
CCP		$ 140			$ 337				$ 337		$814
Total Direct Expenses =		$840	$0	$280	$897	$280	$2,500	$420	$897	$0	$6,114
		Total Cost by Firm									
DE		$10,750	$9,308	$27,296	$11,220	$41,968	$1,226	$116,956	$2,980	$7,068	$228,772
ESA		$5,420	$18,480	$0	$0	$0	$69,500	$13,000	$0	$0	$106,400
KJ		$5,780	$0	$0	$0	$10,840	$5,540	$28,960	$0	$0	$51,120
LSCE		$9,420	$2,600	$2,600	$2,600	$71,240	$2,600	$36,200	$2,600	$2,600	$132,460
ERA		$5,985	$0	$0	$0	$0	$0	$75,340	$0	$0	$81,325
CCP		$5,996	$0	$0	$9,009	$0	$0	$0	$14,805	$2,924	$32,734
Total Phase 1 Costs		$43,351	$30,388	$29,896	$22,829	$124,048	$78,866	$270,456	$20,385	$12,592	$632,811

The detailed Phase 1 budget estimate was assembled based upon the Team's collective experience implementing similar projects and programs and the understanding and estimation of the level of effort required to achieve the County's objectives and outcomes as stated in the RFP. The estimate includes the following assumptions:

1. No travel restrictions (i.e. COVID 19-related) will be in affect and limit work activities, outreach or in-person meetings.
2. Development of the objective statement and detailed work plan will include an in-person meeting with the County staff and project team members at the County office.
3. The water rights and water availability assessment will be led by the County and the DE-LSCE team will provide support as limited by available budget.
4. GIS coverages of regional water conveyance infrastructure will be obtained from publicly available sources or can be made available from local water managers.
5. Landowner outreach will include up 2 days of consecutive, in person stakeholder interviews by CCP Senior Mediator Facilitator, associated support activities and summarization of interview outcomes.
6. Site visits for reconnaissance-level environmental assessments will be limited to 2 biologists for one day/site for up to 3 sites, plus travel time and related expenses. No wetland mapping or critical habitat identification will be completed.
7. No fish screen will be required for diversion and no special studies will be necessary during the planning phase of the project.
8. Funding opportunity support will be limited to research to identify potential funding opportunities and associated background information. Does not include consultant preparation of full grant (or similar) proposals.

Although not guaranteed, Table 3 provides planning-level estimates for Phases 2-6 based on the information available to the DE-LSCE Team at this time and the Team's collective experience. As indicated in the work plan section, the budget for work beyond Phase 1 will be reassessed and revised at each milestone based on the County's discretion and the best available information at that time.

Table 3. Planning-level budgets for Phases 2 - 6

Team Member	Estimated Cost by Phase by Firm for Phases 2 - 6					Totals
	Phase 2 - Pre-Design	Phase 3 - Phased Design	Phase 4 - Permitting & Environmental Regulatory Compliance	Services During Construction	Monitoring & Reporting	
Davids Engineering	$140,000	$292,500	$70,000	$644,000	$33,333	**$1,179,833**
Environmental Science Associates	$350,000	$42,500	$550,000	$277,500	$33,333	**$1,253,333**
Kennedy-Jenks	$115,000	$250,000	$70,000	$340,000	$33,333	**$808,333**
Luhdorff and Scalmanini	$360,000	$290,000	$70,000	$370,000	$100,000	**$1,190,000**
ERA Economics	$20,000	$15,000	$140,000	$0	$0	**$175,000**
Sac State Consensus and Collaboration Program	$14,000	$16,000	$29,000	$0	$0	**$59,000**
Sub	$100,000	$50,000	$0	$206,000	$0	**$356,000**
Totals	**$1,099,000**	**$956,000**	**$929,000**	**$1,837,500**	**$200,000**	**$5,021,500**

5. Project Experience Success and References

This section describes representative projects completed by DE, CCP, ERA, ESA, KJ and LSCE that highlight experience working on a combination of agricultural land programs, sustainable groundwater management, and underlying incentive structures that are similar to the recharge program technical requirements. Additionally, though not described below, the DE-led Team that includes CCP, ERA and LSCE are working together on other GSP development projects in the Sacramento Valley and other water and agricultural planning projects for state and local agencies.

PROJECT DESCRIPTIONS

DE, ERA, CCP and LSCE Project

Madera and Chowchilla Subbasins GSP Development and 2020 Annual Report Preparation.

Client: County of Madera. Years: 2018-2020.

ERA, CCP, LSCE and DE supported the Madera Subbasin Coordination Committee and the Chowchilla Subbasin GSP Advisory Committee in developing GSPs for the critically-overdrafted Madera and Chowchilla Subbasins. DE and LSCE also supported the development of the first Annual Reports submitted in April 2020.

In 2018, the GSAs comprising the Chowchilla and Madera Subbasins began developing comprehensive, coordinated GSPs to comply with the requirements of SGMA. GSP development was guided by an active stakeholder engagement process in both subbasins. The stakeholder engagement process and resulting GSP development leveraged longstanding water management planning activities in each subbasin, including an existing groundwater management plan; an active surface water and groundwater monitoring program; the Madera County Integrated Regional Water Management Plan (IRWMP); the Chowchilla Water District and Madera Irrigation District Water Management Plans (WMPs); urban water management plans; and other past studies.

Development of the GSP followed a phased, iterative process. Activities were strategically sequenced to meet an aggressive schedule, resulting in the completion of two GSPs by January 2020. Interrelated components were developed in parallel when appropriate and efficient, including the Plan Area, Basin Setting, Monitoring Network, Sustainable Management Criteria, and Projects and Management Actions. DE, LSCE, and ERA worked closely together and with the GSAs and other consultants throughout the development process. Key efforts include development of the MCSim Groundwater Model and coordination with other GSPs in the Madera Subbasin.

The team worked with the GSAs and stakeholders to establish sustainable management goals and criteria, characterize potential undesirable results, and establish Minimum Thresholds, Measurable Objectives, and Interim Milestones. Projects and Management Actions were developed and evaluated using the MCSim model, water budget information, economic analyses, and other tools in an integrated analysis of the feasibility, benefits, and costs of existing and potential projects and management actions.

The DE, LSCE, and ERA team successfully completed and submitted all sections of the GSPs by January 2020, and the first Annual Reports for each GSP (April 2020) in compliance with the SGMA requirements for critically overdrafted subbasins.

Similarities to Proposed Project

- Active, strategic engagement of beneficial users and other stakeholders.
- Iterative, coordinated development of GSP components to deliver a compliant and implementable plan that provides economic, societal, and environmental sustainability.

- Continuity and seamless integration of prior technical efforts and management activities, including hydrogeologic characterization, surface water and groundwater monitoring, and conjunctive water management projects.
- Cost-effective, on-time delivery of draft GSP and interim products.

Relevance to Recharge Program

This project is directly related to the recharge program development under the local GSPs and demonstrates the qualifications and experience of the DE-LSCE Team in efficiently completing supporting analysis and developing plans.

Client References:

Doug Welch
Chowchilla Water District, General Resources Manager
327 S. Chowchilla Blvd, Chowchilla, CA, 93610
(559) 665.3747, dwelch@cwdwater.com

ERA and DE Project
Evaluation of Restoration and Recharge Potential

Client: Butte County Department of Water and Resource Conservation. Years: 2018.

DE and ERA worked with Butte County to identify and create tools to help the County achieve groundwater sustainability. DE and ERA develped a feasibility assessment of in-lieu recharge options using dual source irrigation systems (i.e. systems capable of using both surface water and groundwater) for specific regions and parcels in the County. Duncan MacEwan was the lead economist and Byron Clark was the lead agricultural engineer. DE developed a geospatial analysis of lands suitable for recharge and a spreadsheet tool to calculate potential surface water delivery costs based on parcel charcteristics. ERA built an economic and financial spreadsheet model to assess economic benefits, quantify the value of additional water supply, and assess economic feasibility of potential alternatives for sets of parcels in Butte County.

Similarities to Proposed Project

- DE-ERA team experience assessing land use and economic factors affecting the feasibility of developing recharge benefits for groundwater sustainability, which is directly applicable to the Madera County GSA program.
- Demonstrates our ability to manage multiple spatial data sources (maps) and turn that information into actionable decision items for a county program to develop recharge basins.

Reference name and contact information:

Christina Buck, PhD
Butte County Department of Water and Resource Conservation, Assistant Director
308 Nelson Ave, Oroville, CA, 95965
(530) 552.3593, cbuck@buttecounty.net

LSCE Projects
North Recharge Facility, Mendota Pool Group EIS/EIR

As part of the technical analysis of the Mendota Pool Groups (MPG) NEPA and CEQA analysis of projects for an extension of the MPG's water exchange program, LSCE evaluated soil and geologic conditions within the MPG study area to identify preferred locations for a surface recharge facility. The analysis included evaluation of existing soil and geologic data, analysis of direct push subsurface geologic

data collected from on-site field borings, and modeling of the influence recharge projects would have on groundwater conditions.

The field testing covered an area that was approximately 1,000 acres along the west side of the Mendota Pool in Fresno County. The analysis of existing and field data resulted in a ranking of locations for siting the recharge facility. LSCE evaluated the frequency and amount of surface water available for recharge to help design the recharge basin operations. Following the development of the frequency and amount of expected recharge based on estimates of infiltration rates from the field investigation, LSCE analyzed the influence recharge operations would have on the groundwater system by utilizing a numerical groundwater flow model. This effort also helped identify where monitoring wells could be sited to assess the effectiveness and influence recharge operations have on the underlying aquifer system.

Reference name and contact information:

Jim Stillwell
President, Mendota Pool Group
(559) 659.3942 (office)
(559) 479.2109 (mobile), Jim@bakerfarming.com

Field Investigation of Recharge Potential on Ten Section, Kern County

In 2017, LSCE conducted a field investigation on Ten Section Oil Field in Kern County to evaluate this area for recharge potential. This work built on a preliminary investigation of hydrogeology of the study area also conducted by LSCE in 2000. The study area was comprised of 400 acres bordered by operational water banks. This investigation aimed to provide data on infiltration rates in different areas of the property which could then be utilized by the client to assess the feasibility of a water banking project on this land. Using soil data from NRCS (Natural Resources Conservation Service), LSCE examined the study area for variations in soil types. Based on this information, a total of 16 test locations were identified to account for soil variability and site variability.

The field testing conducted by LSCE involved the consideration of two different methodologies to determine percolation rates in soils; traditional percolation tests and double ring infiltration tests. Rates calculated using traditional percolation tests are attributed to both lateral and vertical flow and are commonly used for septic system testing, whereas rates calculated using double ring infiltration tests provide vertical percolation rates. Because the traditional percolation test results do not distinguish between vertical and lateral flow the results from this type of test would not be representative of a soil's vertical percolation properties which are important for recharge basins used for water banking projects. Therefore, LSCE used the double ring infiltration methodology for this investigation (in accordance with ASTM Standard D3385).

This investigation provided initial insight into the suitability of Ten Section Oil Field for water banking. Many test sites exhibited high infiltration rates suggesting these areas would be good candidates for recharge projects. Based on these findings, LSCE recommended further exploration of these candidate sites via shallow soil borings and pilot testing.

Reference name and contact information:

Greg Wegis, Partner
Wegis and Young Property Management, LLC
(661) 201.0068, greg@wegisandyoung.com

ESA Projects

Water Replenishment District of Southern California (WRD), West Coast Basin Groundwater Management Plan Program EIR (includes GW replenishment projects using storm water and recycled water)

ESA prepared a PEIR document for the proposed Central and West Coast Groundwater Basins Master Plan (GBMP). The GBMP will guide future development of groundwater resources in the Central and West Coast Basins. The Groundwater Reliability Improvement Project is one component of the GBMP. The GBMP identifies potential programs and management actions that will enhance the likelihood that local groundwater supplies will be sufficient to meet the water right allocations assigned to groundwater producers under the respective Judgments for the Basins for the near future. The GBMP also identifies potential programs and actions that can increase local groundwater supplies beyond adjudicated limits in a cost effective manner, improve water quality, and reduce dependence on imported water. These potential programs and actions were carried out by one or more of the stakeholders in the Basins, and/or by the WRD of Southern California itself. For this project, ESA coordinated with WRD, the Los Angeles Regional Water Quality Control Board, Central Basin MWD, West Basin MWD, and LA County Sanitation District.

Reference name and contact information:

Esther Rojas
Senior Water Resources Planner
(562) 921.5521

Woodland Davis Clean Water Agency, Davis-Woodland Water Supply Project/RD 2035 Joint Intake Project

On behalf of the Woodland Davis Clean Water Agency, RD 2035, and Reclamation, ESA led all environmental documentation, permitting, water rights support, and compliance monitoring for the Davis-Woodland Water Supply Project/RD 2035 Joint Intake Project. The project included construction of a new joint intake structure and fish screen on the Sacramento River, a new water treatment plant, and conveyance and distribution pipelines to serve the cities of Davis and Woodland and the University of California, Davis. The project required preparing an EIR and Environmental Assessment that addressed strong scrutiny of and opposition to the project, and included the need to support a new water right and obtain multiple permits for construction and operation. ESA oversaw a series of special studies evaluating: potential changes to the hydrology and water quality of the Sacramento River and Delta using CalSim II and DSM2; potential fisheries effects; potential surface water, land use, and agricultural effects on water transfer partners; and potential effects of installing facilities on wetlands, through sensitive habitats, and across potentially sensitive cultural resources. ESA led project permitting; provided assistance with the State Revolving Fund loan application; conducted cultural and biological resources field surveys, and construction monitoring and reporting; and completed supplemental CEQA and NEPA documentation.

Reference name and contact information:

Tim Busch
General Manager
(530) 661.5963

Rosedale-Rio Bravo Water Storage District (RRBWSD), Stockdale Integrated Banking Project EIR

ESA prepared the EIR for the Stockdale Integrated Banking Project, to be located outside of Bakersfield in western Kern County. Additionally, the ESA Team prepared biological and cultural resources technical

reports as well as CEQA documentation for the project. IRWD, together with RRBWSD, are in the process of developing over 500 acres of land with groundwater recharge and extraction facilities. The project will be integrated into RRBWSD's existing Conjunctive Use Program and provides RRBWSD with additional recharge and storage capability and operational flexibility. The project allows IRWD to store water for supply reliability and redundancy.

Reference name and contact information:

Dan W. Bartel
Assistant General Manager/District Engineer
(661) 589.6045

KJ Projects

Groundwater Banking Program, Antelope Valley-East Kern Water Agency (AVEK), Palmdale, CA

AVEK is pursuing an $80 million multi-phase water banking program with recharge and recovery for water supply stabilization. The Westside Water Bank is on 1,475 acres of agricultural property and includes 500 acres of low-berm flooding recharge basins with a capacity to spread up to 50,000 ac-ft/year, and ultimately up to 30 extraction wells with a capacity to produce up to 45 mgd. The Eastside Water Bank is on a 240-ac site. The Eastside Water Bank includes 6 acres of recharge basins with expansion planned for an additional 66 acres with three to six recovery wells.

Palmdale Regional Groundwater Recharge and Recovery Project for Recycled Water and Raw Water, Palmdale Water District, Antelope Valley, CA

Palmdale Water District is implementing the Palmdale Regional Groundwater Recharge and Recovery Project, a large-scale surface spreading IPR groundwater bank in Antelope Valley, California. The project will ultimately provide up to 50,000 acre-feet per year (AFY) of recharge capacity and 30,000 AFY of extraction capacity, and is anticipated to serve approximately 50% of PWD's future water demand. The initial Phase 1a is sized to recharge 10,000 AFY and recover 7,500 AFY through the first 4 of 16 recovery wells. The project is anticipated to begin operation in late 2022.

CPP Project

DWR Flood Managed Aquifer Recharge Outreach Program and Research and Data Development Plan

Clients: California Department of Water Resources Year: 2018-current. David Ceppos is the program manager of CCP's support to DWR for their implementation of Flood-MAR. CCP's services have included development of the Flood-MAR Communications and Engagement Plan, design and facilitation of public workshops and field tours in pilot study locations, and convening the Research Advisory Committee (RAC), the latter which resulted in the first California Flood-MAR R&D Plan. The R&D Plan is a compilation of recommendations from the RAC and its 13 subcommittees on topics such as Infrastructure Conveyance and Hydraulics; Crop Systems Suitability; Soils, Geology, and Aquifer Characterization; Land Use Planning and Management; Economic Analysis; and Local, State, and Federal Policies and Legal Considerations. CCP provided strategic consultation on the membership and formation of the RAC, the study areas for Subcommittees, and the structure, content and format of all materials and discussions during RAC meetings.

Reference name and contact information:

Denise England
Water Resources Program Director
(559) 636.5000, dengland@co.tulare.ca.us

MADERA COUNTY CONTRACT NO. 11686A-21
(Davids Engineering, Inc. Contract for Groundwater Recharge Study)

THIS AMENDMENT is made and entered into this 17TH day of AUGUST, 2021, by and between the COUNTY OF MADERA, a political subdivision of the State of California and a Groundwater Sustainability Agency ("GSA") within the Madera, Chowchilla, and Delta-Mendota Groundwater Subbasins ("COUNTY"), and DAVIDS ENGINEERING, INC. ("CONSULTANT").

RECITALS

A. The parties previously executed Madera Contract No. 11686-20 (the "Agreement") on July 21, 2020, for the purpose of having CONSULTANT performed those services described in CONSULTANT's May 15, 2020, proposal ("First Proposal") entitled "Recharge Study Consulting Services RFP 2020-06." The Agreement terminates upon completion of the services outlined in the First Proposal, or June 30, 2023, whichever is sooner.

B. The parties desire to amend the Agreement to add services outlined in CONSULTANT's proposal ("Second Proposal"), dated July 29, 2021, for the development of a Temporary Emergency Recharge Plan ("Plan"), a true and correct copy of which is attached hereto as **Exhibit A**.

NOW, THEREFORE, the parties agree as follows:

AMENDMENT

1. CONSULTANT's Second Proposal is hereby added to the Scope of Services outlined in Paragraph 2 of the Agreement.

2. For the services outlined in the Second Proposal, CONSULTANT shall be compensated in an amount not to exceed $186,962.00, as set forth in Attachment A of the Second Proposal.

3. Except as otherwise amended, all other provisions of the Agreement shall remain in full force and effect.

* * * * * * * * * * * *

IN WITNESS WHEREOF the foregoing Agreement is executed on the date and year first above-written.

COUNTY OF MADERA GSA

Chairman, Board of Directors

ATTEST:

Karen Scrivner
Clerk, Board of Directors

DAVIDS ENGINEERING, INC.

By: Bryan Thoreson
(Signature)

Bryan Thoreson
(Print Name)

Title: Principal Engineer

Approved as to Legal Form:
COUNTY COUNSEL

By: Michael R. Linden

Digitally signed by: Michael R. Linden
DN: CN = Michael R. Linden email = mlinden@lozanosmith.com C = US O = Lozano Smith
Date: 2021.07.30 09:35:49 -07'00'

ACCOUNT NUMBER(S)

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Exhibit “A”

DAVIDS ENGINEERING, INC

Proposal for Professional Engineering Services

To:	Ms. Stephanie Anagnoson Department of Water and Natural Resources Madera County
From:	Davids Engineering, Inc. www.davidsengineering.com
Date:	07/29/21
Subject:	Temporary Emergency Recharge Plan

Davids Engineering, Inc. (DE) is pleased to provide this proposal to Madera County (County) for development of a Temporary Emergency Recharge Plan (Plan).

1 Project Overview and Objective

The Madera County Groundwater Sustainability Agencies (GSAs) are currently implementing Groundwater Sustainability Plans (GSPs) for the Chowchilla, Madera, and Delta-Mendota Subbasins to achieve groundwater sustainability by 2040. The GSPs include a mix of projects and management actions that will lead to sustainable groundwater management. A key component of these GSPs is the development of projects that enable groundwater recharge through in-lieu practices, Flood-MAR, and spreading basins. To aid in groundwater recharge project development, Madera County (County) is currently engaged in development of a strategic recharge plan and implementation program. Recognizing that the strategic recharge plan, implementation program, and resulting construction related activities will not be completed by the 2021/2022 winter season, the ongoing dry conditions, and the immediate need for groundwater recharge within the Madera County GSAs, the County wishes to develop a Temporary Emergency Recharge Plan (Plan).

2 Project Approach

In the development of the Plan, DE proposes a comprehensive approach building off past and ongoing work being performed on behalf of the County. Doing so will allow DE to expedite Plan development and potential implementation, to the extent water is available for groundwater recharge as early as the 2021/2022 winter season.

3 Project Proposal

3.1 Scope of Services

This Scope of Services includes work activities in five (5) tasks as set-forth below.

Task 1. Develop Plan Objectives – The DE Team will facilitate one remote meeting with the project team members and applicable County staff to collaborate regarding the County's objectives for the Plan, planned tasks and approach to maximizing emergency recharge on a temporary basis.

Task 2. Assess Water Rights, Develop Temporary Water Right Petition and State Water Board Coordination – The DE Team will work closely with applicable County staff and other contractors, as directed, to support the County's efforts to obtain temporary water rights for the Plan. It is currently envisioned that coordination will be required with Triangle T Water District (TTWD) on submission of a temporary water rights permit application for diversions from the Eastside/Chowchilla Bypass (Bypass). The total number of potential points of diversion (PODs) associated with this Plan is estimated to be 40. Of the estimated 40 PODs, 5 PODs have an existing diversion structure or pump station and 35 will use temporary diversion infrastructure. The TTWD temporary water right permit has less than 40 PODs available for use by the County, so it is anticipated that the County will need to apply for a temporary water right permit. Utilizing the water availability analysis and water accounting information developed by MBK, and in coordination with County staff, the DE Team will develop and submit one (1) temporary water right petition for all PODs to the State Water Board. The DE Team will coordinate with the State Water Board during the petition review and approval process. It is assumed that the temporary water right permit will be exempt from CEQA per the 2017 Governor's Executive Order B-39-17.

Task 3. Develop Temporary Emergency Recharge Plan – The DE Team will utilize and build off past and ongoing work being performed to develop the Plan. The DE team recommends a streamlined Plan that includes making water available for diversion at each of the 40 PODs. It is envisioned that private landowners will be responsible for diversion from each of the 40 PODs and subsequent conveyance to their defined place of recharge (direct recharge). This approach will be vetted through ongoing discussions with the County and applicable stakeholders and may lead to the County playing a more active role. The DE Team will work closely with applicable County staff to coordinate landowner participation, identify final location of the PODs, develop a timeline for Plan implementation, develop an agreement for landowner participation in the Plan, and develop a spreadsheet-based method for tracking landowner participation in the Plan. Should the County's engagement in the Plan be more than currently envisioned, the DE Team will work cooperatively with the County to provide the highest level of service for the fee noted below. The DE Team will facilitate up to six remote meetings with applicable County staff to review progress and receive feedback on Plan development.

Task 4. Assess and Conduct Necessary Environmental Compliance and Permitting – The DE Team will assess environmental permitting necessary for the Plan as a whole and each of the 40 PODs. Environmental analysis will be based on the temporary and emergency nature of the Plan and will not include analysis necessary for installation of permanent conveyance infrastructure. Based on discussions with TTWD and the requirements for the TTWD temporary water right permit, it is assumed that no federal permits and only a Streambed Alteration Agreement with California Department of Fish and Wildlife (CDFW) will be required for the County's temporary water right permit. It is assumed the DE Team will be able to combine 10 PODs into one (1) Streambed Alteration Agreement (SAA) for a total of four (4) SAA Applications. To approve the SAAs, CDFW will need to show compliance with the California Environmental Quality Act (CEQA). It is assumed one (1) categorical exception (Cat-x) will be required for each SAA application package. Further, environmental analysis for each of the 40 PODs will include a

desktop analysis, using publicly available data. Biological and cultural reconnaissance field surveys will be conducted to rule out any impacts to biological or cultural resources.

Task 5. Conduct Public Outreach – The DE Team will facilitate one public meeting or attend an existing public meeting to introduce the Plan and get preliminary feedback. After that, as appropriate, members of the DE Team will work more closely with potential participants. As part of working more closely with potential participants and after the initial public meeting, the DE Team will prepare a project fact sheet concerning the Plan, inclusive of details outlining how to participate in the Plan. Prior to implementation, the DE Team will facilitate one additional public meeting or attend an existing public meeting to review the final Plan and answer any landowner questions.

3.2 Deliverables

- One Emergency Recharge Plan that can be adopted and implemented by the County when water is available for recharge.

3.3 Assumptions

- County will work cooperatively with DE and respond timely to DE's information requests.
- County will facilitate DE assess to lands as may be required during completion of the work outlined in tasks 1 - 5.
- County will be the lead agency for any and all environmental permitting deemed necessary.
- County agrees that implementation of the Plan is contingent on successful environmental permitting and DE cannot guarantee completion of the environmental permitting by a specified date.
- County agrees that implementation of the Plan is contingent on successful water rights permitting and DE cannot guarantee completion of water rights permitting by a specified date.
- County will provide legal review and/or assistance as may be required during completion of the work outlined in tasks 1 - 5.
- County will be the lead for stakeholder outreach beyond that set-forth in Task 5.
- No new data acquisition, including surveying or ground-based topographic data, will be performed as part of this scope of services.
- County will be the lead and facilitate landowner agreement execution as may be required.

3.4 Schedule

Work will be initiated in August of 2021 and will extend through December 31, 2021, or as mutually agreed between County and DE. A draft plan will be ready for County review by October 31, 2021

3.5 Cost Proposal

DE Team costs associated with performing tasks 1 – 5 as set-forth herein will be billed to the County on a time and materials basis not to exceed $186,962 as detailed below. While estimated costs are based on a detailed, task by task buildup, actual project costs will not be tracked on a task basis, nor will individual task budgets constrain charges for work performed up to the total estimated budget.

DAVIDS ENGINEERING, INC

Attachment A. Cost Summary for Temporary Emergency Recharge Plan

Project Task/Subtask	Labor Costs: DE Principal Engineer	DE Supervising Engineer/Scientist	DE Senior Engineer/Scientist	DE Associate Engineer/Scientist I	DE Staff Engineer II	DE Technical/ Project Assistant	ESA PM and Fisheries Lead	ESA Sr. Bio/Sr. Technical Review	ESA Sr.	ESA Sr. Biologists/Permitting	ESA Biologists/Permitting	ESA GIS	ESA WP	CCP Managing Sr Mediator III	CCP Senior Mediator II	CCP Assistant Facilitator III	Labor Costs Subtotal ($)	Direct Costs by Firm: DE	Direct Costs by Firm: ESA	Direct Costs** Subtotal ($)	Total Costs by Firm: DE	Total Costs by Firm: ESA	Total Costs by Firm: CCP	Total Cost ($)
	Hourly Rates: $220	$201	$184	$165	$155	$102	$240	$225	$190	$205	$160	$135	$120	$211	$203	$136								
Task 10. Temporary Emergency Recharge Plan																								
Task 10.1. Develop Plan Objectives	4	4			6	8											$3,430				$3,430			**$3,430**
Task 10.2. Assess Water Rights	24	24			32	4	40	8	40		20	4	16				$40,132				$15,472	$24,660		**$40,132**
Task 10.3. Develop Temporary Emergency Recharge Plan	24	32	50		140	8	24	16	96	32	160	16	24				$108,228	$1,000	$ 690	$1,690	$44,428	$65,490		**$109,918**
Task 10.4. Assess Necessary Environmental Permitting	4	8			32	4											$7,856				$7,856			**$7,856**
Task 10.5. Conduct Public Outreach	16	24			8	4								4	34	58	$25,626				$9,992		$15,634	**$25,626**
Task 10 TOTALS	72	92	50		218	28	64	24	136	32	180	20	40	4	34	58	185,272	$1,000	$690	$1,690	$81,178	$90,150	$15,634	**$186,962**

MADERA COUNTY CONTRACT NO. 11686B-22
(Davids Engineering, Inc. Contract for Groundwater Recharge Study)

THIS SECOND AMENDMENT is made and entered into this 1ST day of FEBRUARY, 2022, by and between the COUNTY OF MADERA, a political subdivision of the State of California and a Groundwater Sustainability Agency ("GSA") within the Madera, Chowchilla, and Delta-Mendota Groundwater Subbasins ("COUNTY"), and DAVIDS ENGINEERING, INC. ("CONSULTANT").

RECITALS

A. The parties previously executed Madera Contract No. 11686-20 (the "Agreement") on July 21, 2020, for the purpose of having CONSULTANT performed those services described in CONSULTANT's May 15, 2020, proposal ("First Proposal") entitled "Recharge Study Consulting Services RFP 2020-06." The Agreement terminates upon completion of the services outlined in the First Proposal, or June 30, 2023, whichever is sooner.

B. The parties also executed Madera Contract No. 11686A-21 (the "First Amendment") on August 17, 2021, amending the Agreement to add services outlined in CONSULTANT's proposal ("Second Proposal"), dated July 29, 2021, for the development of a Temporary Emergency Recharge Plan ("Plan").

C. The parties desire to amend the First Amendment to add services as outlined in CONSULTANT's Proposal for Professional Engineering Services – 30% Design for Projects 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1 ("Third Proposal"), dated December 10, 2021 and CONSULTANT's Proposal for Professional Engineering Services – Fairmead Groundwater Resilience Project ("Fourth Proposal"), dated January 7, 2022, true and correct copies of the Third and Fourth Proposal are attached hereto as Exhibit A.

NOW, THEREFORE, the parties agree as follows:

AMENDMENTS

1. Section 1 ("Term") is amended to read:

"This Agreement shall commence on July 1, 2020, and will terminate upon completion of the services as outlined in the Proposals ("Proposals" as defined in this section shall mean the Proposal, Second Proposal, Third Proposal, and Fourth Proposal) or June 30, 2023, whichever is sooner."

2. Section 2 ("Scope of Services") is amended to read:

"CONSULTANT shall perform its services over one and a half to three years (based on budget availability) in accordance with Phase 1 of the Proposal. CONSULTANT shall perform its services as outlined in CONSULTANT's Second, Third and Fourth Proposals."

3. Section 3 ("Compensation and Invoicing") is amended to read:

"CONSULTANT shall be compensated in an amount not to exceed:

- Six Hundred Fifty Thousand Dollars ($650,000.00) for the Proposal;
- One Hundred Eighty-Six Thousand Nine Hundred Sixty-Two Dollars ($186,962.00) for the Second Proposal;
- One Hundred Seventeen Thousand Four Hundred Forty-Six Dollars ($117,446.00) for the Third Proposal;
- Sixty-Six Thousand Seven Hundred Twenty Dollars ($66,720.00)."

(Referred to collectively herein as Proposals). CONSULTANT's compensation under this Agreement, including the labor rates charged for work under this Agreement, shall not be increased without the written modification of this Agreement by the COUNTY and CONSULTANT. Payments under this Agreement shall be made within thirty (30) days after

CONSULTANT's regular monthly invoicing. Payment obligations under this Agreement are contingent upon the receipt, in a form and substance acceptable to COUNTY, of the deliverables required under the Proposals. Also, CONSULTANT shall be solely responsible for compensating any of its sub-consultants under this Agreement.

4. Section 4 ("Notices") subsection labeled "With Copy to" is amended to read:

"With Copy to

Karen Scrivner, Clerk of the Board
Madera County Board of Supervisors
200 West 4th Street
Madera, CA 93637"

5. Except as otherwise amended herein, all other provisions of the Agreement shall remain in full force and effect.

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IN WITNESS WHEREOF the foregoing Amendment is executed on the date and year first above-written.

COUNTY OF MADERA

Chairman, Board of Supervisors

ATTEST:

Clerk, Board of Supervisors

DAVIDS ENGINEERING, INC.

By: _____
(Signature)

JOHN B. DAVIDS, P.E.
(Print Name)

Title: PRINCIPAL ENGINEER

Approved as to Legal Form:
COUNTY COUNSEL

By: Jessica A. Mejorado

Digitally signed by: Jessica A. Mejorado
DN: CN = Jessica A. Mejorado email = jmejorado@lozanosmith.com C = AD
Date: 2022.01.13 09:50:22 -08'00'

ACCOUNT NUMBER(S)

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EXHIBIT "A"

DAVIDS ENGINEERING, INC

Proposal for Professional Engineering Services

To:	Ms. Stephanie Anagnoson Department of Water and Natural Resources Madera County
From:	Davids Engineering, Inc. www.davidsengineering.com
Date:	12/10/21
Subject:	30% Design for Projects 1 - Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1

Davids Engineering, Inc. (DE) is pleased to provide this proposal to Madera County (County) for engineering services associated with 30% design for Projects 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1 (Project). While DE will complete the majority of work associated with 30% design of the Project, Environmental Science Associates (ESA) will perform an environmental fatal flaw analysis related to necessary diversion and conveyance infrastructure. DE and ESA are collectively referred to as the DE Team.

1 Project Overview and Objective

The Madera County Groundwater Sustainability Agencies (GSAs) are currently implementing Groundwater Sustainability Plans (GSPs) for the Chowchilla, Madera, and Delta-Mendota Subbasins to achieve groundwater sustainability by 2040. The GSPs include a mix of projects and management actions that will lead to sustainable groundwater management. A key component of these GSPs is the development of projects that enable groundwater recharge through in-lieu practices, Flood-MAR, and spreading basins. To aid in groundwater recharge project development, Madera County (County) is currently engaged in development of a strategic recharge plan and implementation program. For Chowchilla, the project as developed in the strategic recharge plan includes the planning, design, environmental permitting, construction, construction management, monitoring, assessment, stakeholder outreach, and education associated with the construction of four new turnouts with appropriate conveyance to divert flood flows to approximately 2,900 acres of existing farmland for recharge as flood-managed aquifer recharge (Flood-MAR) and/or two dedicated groundwater recharge basins with approximately 64 acres in total area. For Madera, the project as developed in the strategic recharge plan includes the planning, design, environmental permitting, construction, construction management, monitoring, assessment, stakeholder outreach, and education associated with the construction of three turnouts, rehabilitation of one existing turnout, construction of an approximately 40 acre dedicated groundwater recharge basin and all infrastructure associated with conveyance of flood flows to approximately 2,500 acres of existing farmland for recharge through land spreading, also described as Flood-MAR. Collectively, the Project will be designed to have the capacity of recharging approximately 19,000 acre-feet (AF) per year when flood flows are available. Funding for completion of the Project is being funded by a grant from the Department of Water Resources (DWR) and a local cost

share. The work set-forth in this proposal covers engineering services associated with 30% design of the Project.

2 Project Approach

In completion of the 30% design of the Project, the DE Team proposes a comprehensive approach building off past and ongoing work being performed on behalf of the County by the DE Team. Doing so will allow the DE Team to expedite completion of the 30% design in a streamlined and cohesive manner.

3 Project Proposal

3.1 Scope of Services

This Scope of Services includes work activities in four (4) tasks as set-forth below.

Task 1. Complete Basis of Design Reports – The DE Team will work closely with applicable County staff and interested stakeholders to prepare two DRAFT Basis of Design (BOD) Reports. The DRAFT BOD Reports are likely to include the following components:

- Introduction
- Review of Existing Conditions
- Design Criteria
- Alternative Analysis
- Preferred Alternative
- Project Implementation

Upon completion of the DRAFT BOD Reports, the DE Team will facilitate one in-person meeting to review the DRAFT BOD Report with interested stakeholders in Madera and Chowchilla. Following input received from interested stakeholders, the DE Team will make any necessary revisions and facilitate one remote meeting with applicable County staff to review the DRAFT BOD Reports and solicit any input. Following the meeting with the County, the DE Team will finalize the DRAFT BOD Reports.

Task 2. Perform Environmental Fatal Flaw Analysis – The DE Team will review Project diversion alternatives and necessary conveyance infrastructure alignments in an effort to lessen any environmental impacts and to the extent feasible, the necessary environmental permitting associated with the Project. This task doesn't include the initiation of Project permitting activities, only a fatal flaw analysis related to 30% design of the Project.

Task 3. Complete Preferred Alignment Survey and Geotechnical Investigation – The DE Team will facilitate the collection of survey information along the preferred Project alignment(s). Survey information collected will include that necessary to facilitate completion of 30% design of the Project. The scope of the geotechnical investigation will be limited to that necessary and will be dictated by the professional judgement of the DE Team.

Task 4. Complete 30% Design Drawings – The DE Team will facilitate the completion of 30% Design Drawings for the preferred alternative. 30% Design Drawings shall generally include the primary Project components, but are not final design drawings, and are not of sufficient detail to initiate construction and/or prepare a detailed engineers estimate of probable cost. Upon completion of the DRAFT 30% Design Drawings, the DE Team will facilitate one in-person meeting to review the DRAFT 30% Design Drawings with interested stakeholders in Madera and Chowchilla. Following input received from interested stakeholders, the DE Team will make any necessary revisions and facilitate one remote meeting with applicable County staff to review the DRAFT 30% Design Drawings and solicit any input. Following the meeting with the County, the DE Team will finalize the DRAFT 30% Design Drawings.

3.2 Deliverables

1. Electronic copy of DRAFT BOD Reports
2. Electronic copy of DRAFT 30% Design Drawings

3.3 Assumptions

- The DE Team will not be responsible for providing any legal advice, legal guidance and/or legal opinions.
- County shall provide the DE Team with all landowner contact information as may be required.
- County will work cooperatively with the DE Team and respond timely to the DE Teams information requests.
- County will facilitate DE Team access to lands as may be required during completion of the work outlined in tasks 1 - 4.
- County agrees that final implementation and subsequent use of the Project is contingent on successful environmental permitting, successful water rights permitting, and DWR approval as applicable in the grant agreement and the DE Team cannot guarantee completion of these items by a specified date.
- County will provide legal review and/or assistance as may be required during completion of the work outlined in tasks 1 - 4.
- County will be the lead for stakeholder outreach beyond that set-forth in tasks 1 and 4.
- County will be the lead and facilitate landowner and/or GSA agreement preparation, review, and execution as may be required.
- Project work required and/or requested by the County which is not covered in this proposal shall be paid for by the County on a time and materials basis at the applicable DE Team rate then in effect.
- County shall immediately notify the DE Team of any proposed and/or final changes to the grant agreement that materially impact the DE Teams ability to perform the work set-forth herein.
- County shall be responsible for grant agreement administration.
- County agrees that professional services set-forth in this proposal do not constitute final design and shall not be used for construction of the Project.
- The DE Team reserves the right to augment the DE Team with additional team members and remove team members as may be required to facilitate successful Project completion.
- County agrees that the DE Team will perform subsequent design and construction services associated with the Project through future task amendments.

3.4 Schedule

DE will initiate this scope of work as soon as practically possible after receiving notice to proceed from County. DE proposes to complete scope of work by March 31, 2022, or as mutually agreed between County and DE. Deviations from the agreed upon schedule that occur during the work will be made known to County as soon as practicable. Upon completion of this scope of work and amendment of the task by Madera County, the DE Team will begin work on subsequent design phases of the Project.

3.5 Cost Proposal

DE Team costs associated with performing tasks 1 – 4 as set-forth herein will be billed to the County on a time and materials basis not to exceed $117,446 as detailed in Appendix A To Attachment 4 of Grant Proposal for the Eastside Bypass Recharge for Subsidence and Flood Risk Reduction Project Phase 1 and East Madera Subbasin Recharge Phase 1 (Appendix A). Actual project costs will not be tracked on a task basis, nor will individual task budgets constrain charges for work performed up to the total estimated budget.

DAVIDS ENGINEERING, INC

Proposal for Professional Engineering Services

To:	Ms. Stephanie Anagnoson Department of Water and Natural Resources Madera County
From:	Davids Engineering, Inc. www.davidsengineering.com
Date:	1/7/22
Subject:	Fairmead Groundwater Resilience Project

Davids Engineering, Inc. (DE) is pleased to provide this proposal to Madera County (County) for engineering services associated with the Fairmead Groundwater Resilience Project (Project). As currently envisioned, the Project will design and develop a plan for implementing a groundwater resilience project involving groundwater recharge and/or land repurposing efforts within the severely disadvantaged community of Fairmead, in order to buffer this area from the water security impacts of climate-induced drought.

1 Project Overview and Objective

The Madera County Groundwater Sustainability Agencies (GSAs) are currently implementing Groundwater Sustainability Plans (GSPs) for the Chowchilla, Madera, and Delta-Mendota Subbasins to achieve groundwater sustainability by 2040. The GSPs include a mix of projects and management actions that will lead to sustainable groundwater management. A key component of these GSPs is the development of projects that enable groundwater recharge through in-lieu practices, Flood-MAR, and spreading basins. To aid in groundwater recharge project development, Madera County (County) is currently engaged in development of a strategic recharge plan and implementation program.

As briefly described above, the Project will design and develop a plan for implementing a groundwater resilience project involving groundwater recharge and/or land repurposing efforts within the severely disadvantaged community of Fairmead, in order to buffer this area from the water security impacts of climate-induced drought. The County intends for the Project to improve local and regional resilience to drought and climate change, including water quality and subsidence impacts that worsen with drought. In addition to improving groundwater resources, the Project will attempt to incorporate other climate resilience benefits, such as reducing local flood risk, enhancing valuable habitat, and improving outdoor spaces for public health. This unique and urgently needed Project combines private, public, community, environmental justice, and environmental interests to co-develop projects for climate resilience, drinking water protection, ecosystem benefits, and flood mitigation. This Project will demonstrate how unincorporated and disadvantaged communities can effectively address these threats at the local level. The project team will work with landowners to identify multiple benefit opportunities to repurpose land, including but not limited to restoring habitat and floodplains, creating pollinator habitat, converting to dryland farming or cover crops, switching from irrigated agriculture to rangeland, and creating parks or community recreation areas.

2 Project Approach

In assisting with completion of the Project, the DE Team proposes a comprehensive approach building off past and ongoing work being performed on behalf of the County by the DE Team. The DE Team will work collaboratively with the larger project team to facilitate completion of the Project. The DE Team will focus its effort on the four (4) tasks outlined below.

3 Project Proposal

3.1 Scope of Services

This Scope of Services includes work activities in four (4) tasks as set-forth below.

Task 1. Perform Hydrogeologic and Geospatial Analysis – The DE Team will work closely with applicable County staff to:

- Conduct desktop hydrogeologic site assessments to determine recharge and land use change potential to benefit existing community wells.
- Identify geographic areas where potential recharge and/or land use changes would benefit existing community wells using available desktop tools.
- Evaluate nutrient management concerns and potential mitigation options.

Task 2. Perform Land Ownership Identification – The DE Team will work closely with applicable County staff to:

- Identify highest priority land parcels based on the findings of Task 1.
- Coordinate with the project team to identify additional characteristics for priority consideration and develop prioritization protocols.
- Cross-reference parcel identification with landowner engagement and interest.
- Conduct parcel prioritization.
- Work with project team to engage landowners of prioritized parcels to further assess suitability.

Task 3. Perform Financial Analysis – The DE Team will work closely with applicable County staff to:

- Analyze the regional real estate market for Madera County and Fairmead community.
- Conduct informal parcel valuation for all priority parcels.
- Determine financial incentives and/or compensation option(s) for the landowners of the priority parcels.

Task 4. Perform Hydrologic and Environmental Engineering – The DE Team will work closely with applicable County staff to:

- Develop conceptual design(s) for multi-benefit groundwater resilience project(s), as determined for prioritized parcels.
- Develop conceptual monitoring plan elements for proposed project(s).
- Estimate final design and implementation costs for Phase 2 grant proposal.

3.2 Deliverables

1. Brief Technical Memorandum (TM) in electronic format summarizing the findings of Task 1.
2. Brief TM in electronic format summarizing the findings of Task 2 including a map or excel summary of priority parcels.
3. Brief TM in electronic format summarizing the findings of Task 3.
4. Brief TM in electronic format inclusive of conceptual layouts for at least one and up to five groundwater recharge projects, conceptual monitoring plan framework for identified projects, order of magnitude cost estimates for the identified projects, and an estimate of engineering fees associated with final design.

3.3 Assumptions

- The DE Team will not be responsible for providing any legal advice, legal guidance and/or legal opinions.
- The DE Team will not be responsible for obtaining formal appraisals for the priority parcels.
- County shall provide the DE Team with all landowner contact information as may be required.
- County will work cooperatively with the DE Team and respond timely to the DE Teams information requests.
- No field work will be required.
- All meetings will be held remotely.
- A one (1) hour remote meeting between the DE Team and the County will be held as part of completion of each task. The DE Team and the County will work collaboratively to schedule each meeting at a time most efficient given the work being performed.
- County will provide one set of track change comments on all draft deliverables and there will be only one round of revisions.
- County agrees that final implementation and subsequent use of the Project(s) is contingent on final design, landowner concurrence, successful environmental permitting, successful water rights permitting or water supply acquisition, other permitting or engineering as may be required, and construction and the DE Team cannot guarantee completion of these items by a specified date.
- County will provide legal review and/or assistance as may be required during completion of the work outlined in tasks 1 - 4.
- County will be the lead for stakeholder outreach.
- Project work required and/or requested by the County which is not covered in this proposal shall be paid for by the County on a time and materials basis at the applicable DE Team rate then in effect.

- County shall immediately notify the DE Team of any proposed and/or final changes to the grant that materially impact the DE Teams ability to perform the work set-forth herein.
- County shall be responsible for grant administration.
- County agrees that professional services set-forth in this proposal do not constitute final design and shall not be used for construction of the Project.
- The DE Team reserves the right to augment the DE Team with additional team members and remove team members as may be required to facilitate successful Project completion.
- County agrees that the DE Team will perform subsequent design and construction services associated with the Project through future task amendments.
- No survey work will be completed as part of this scope of work.
- All design work completed as part of this scope will be conceptual in nature.
- Any and all cost estimates prepared as part of this scope are order of magnitude cost estimates and subject to revision.

3.4 Schedule

DE will initiate this scope of work after receiving notice to proceed from the County, but no earlier than May 1, 2022. DE proposes to complete scope of work by October 31, 2023, or as mutually agreed between County and DE. Deviations from the agreed upon schedule that occur during the work will be made known to County as soon as practicable. Upon completion of this scope of work and amendment of the task by Madera County, the DE Team could begin work on subsequent design phases of the Project(s).

3.5 Cost Proposal

DE Team costs associated with performing tasks 1 – 4 as set-forth herein will be billed to the County on a time and materials basis not to exceed $66,720 as detailed in Appendix E of the California Resilience Challenge 2021 Grant Proposal Worksheet. Actual project costs will not be tracked on a task basis, nor will individual task budgets constrain charges for work performed up to the total estimated budget.

MADERA COUNTY CONTRACT NO. 11686C-22
(Davids Engineering, Inc. Contract for Groundwater Recharge Study)

THIS THIRD AMENDMENT is made and entered into this 12TH day of July, 2022, by and between the COUNTY OF MADERA, a political subdivision of the State of California and a Groundwater Sustainability Agency ("GSA") within the Madera, Chowchilla, and Delta-Mendota Groundwater Subbasins ("COUNTY"), and DAVIDS ENGINEERING, INC. ("CONSULTANT").

RECITALS

A. The parties previously executed Madera Contract No. 11686-20 (the "Agreement") on July 21, 2020, for the purpose of having CONSULTANT performed those services described in CONSULTANT's May 15, 2020, proposal ("First Proposal") entitled "Recharge Study Consulting Services RFP 2020-06." The Agreement terminates upon completion of the services outlined in the First Proposal, or June 30, 2023, whichever is sooner.

B. On August 17, 2021, the parties executed Madera Contract No. 11686A-21 (the "First Amendment"), amending the Agreement to add services outlined in CONSULTANT's proposal ("Second Proposal"), dated July 29, 2021, for the development of a Temporary Emergency Recharge Plan ("Plan").

C. On February 1, 2022, the parties executed Madera Contract No. 11686B-21 (the "Second Amendment"), amending the Agreement to add services outlined in CONSULTANT's Proposal for Professional Engineering Services – 30% Design for Projects 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1 ("Third Proposal"), dated December 10, 2021 and CONSULTANT's Proposal for Professional Engineering Services – Fairmead Groundwater Resilience Project ("Fourth Proposal"), dated January 7, 2022.

D. Now, the parties desire to amending the Agreement to add services outlined in CONSULTANT's "Proposal for Professional Engineering Services" (the "Fifth Proposal") dated April 29, 2022, for engineering services associated with 60% design for Projects 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1 (Project), attached hereto as Exhibit A.

NOW, THEREFORE, the parties agree as follows:

AMENDMENTS

1. Section 1 ("Term") is amended to read:

   "This Agreement shall commence on July 1, 2020, and will terminate upon completion of the services as outlined in the Proposals ("Proposals" as defined in this section shall mean the Proposal, Second Proposal, Third Proposal, Fourth Proposal, and Fifth Proposal) or June 30, 2023, whichever is sooner."

2. Section 2 ("Scope of Services") is amended to read:

   "CONSULTANT shall perform its services over one and a half to three years (based on budget availability) in accordance with Phase 1 of the Proposal. CONSULTANT shall perform its services as outlined in CONSULTANT's Second, Third, Fourth and Fifth Proposals."

3. Section 3 ("Compensation and Invoicing") is amended to read:

   "CONSULTANT shall be compensated in an amount not to exceed:

   - Six Hundred Fifty Thousand Dollars ($650,000.00) for the Proposal;
   - One Hundred Eighty-Six Thousand Nine Hundred Sixty-Two Dollars ($186,962.00) for the Second Proposal;
   - One Hundred Seventeen Thousand Four Hundred Forty-Six Dollars ($117,446.00) for the Third Proposal;

- Sixty-Six Thousand Seven Hundred Twenty Dollars ($66,720.00).
- Nine Hundred and Thirty-Nine Thousand, Five Hundred and Seventy-One Dollars ($939,571.00) for the Fifth Proposal."

(Referred to collectively herein as Proposals). CONSULTANT's compensation under this Agreement, including the labor rates charged for work under this Agreement, shall not be increased without the written modification of this Agreement by the COUNTY and CONSULTANT. Payments under this Agreement shall be made within thirty (30) days after CONSULTANT's regular monthly invoicing. Payment obligations under this Agreement are contingent upon the receipt, in a form and substance acceptable to COUNTY, of the deliverables required under the Proposals. Also, CONSULTANT shall be solely responsible for compensating any of its sub-consultants under this Agreement.

4. Except as otherwise amended herein, all other provisions of the Agreement shall remain in full force and effect.

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IN WITNESS WHEREOF the foregoing Amendment is executed on the date and year first above-written.

ATTEST:

Clerk, Board of Directors

Approved as to Legal Form:
COUNTY COUNSEL

By: Michael R. Linden

Digitally signed by: Michael R. Linden
DN: CN = Michael R. Linden email = mlinden@lozanosmith.com C = US O = LOZANO SMITH
Date: 2022.06.15 13:19:23 -07'00'

ACCOUNT NUMBER(S)

_____

_____

COUNTY OF MADERA

Chairman, Board of Directors

DAVIDS ENGINEERING, INC.

By: _____
(Signature)

JOHN B. DAVIDS
(Print Name)

Title: PRINCIPAL ENGINEER

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MADERA COUNTY CONTRACT NO. 11686D-23
(Davids Engineering, Inc. Contract for Groundwater Recharge Study)

THIS FOURTH AMENDMENT is made and entered into this 11TH day of APRIL, 2023, by and between the COUNTY OF MADERA, a political subdivision of the State of California and a Groundwater Sustainability Agency ("GSA") within the Madera, Chowchilla, and Delta-Mendota Groundwater Subbasins ("COUNTY"), and DAVIDS ENGINEERING, INC. ("CONSULTANT").

RECITALS

A. The parties previously executed Madera Contract No. 11686-20 (the "Agreement") on July 21, 2020, for the purpose of having CONSULTANT performed those services described in CONSULTANT's May 15, 2020, proposal ("First Proposal") entitled "Recharge Study Consulting Services RFP 2020-06." The Agreement terminates upon completion of the services outlined in the First Proposal, or June 30, 2023, whichever is sooner.

B. On August 17, 2021, the parties executed Madera Contract No. 11686A-21 (the "First Amendment"), amending the Agreement to add services outlined in CONSULTANT's proposal ("Second Proposal"), dated July 29, 2021, for the development of a Temporary Emergency Recharge Plan ("Plan").

C. On February 1, 2022, the parties executed Madera Contract No. 11686B-21 (the "Second Amendment"), amending the Agreement to add services outlined in CONSULTANT's Proposal for Professional Engineering Services – 30% Design for Projects 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1 ("Third Proposal"), dated December 10, 2021 and CONSULTANT's Proposal for Professional Engineering Services – Fairmead Groundwater Resilience Project ("Fourth Proposal"), dated January 7, 2022.

D. On July 12, 2022, the parties executed Madera Contract No. 11686C-22 (the "Third Amendment"), amending the Agreement to add services outlined in CONSULTANT's "Proposal for Professional Engineering Services" (the "Fifth Proposal") dated April 29, 2022, for engineering services associated with 60% design for Projects 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1 (Project).

E. Now, the parties desire to amend the Agreement to add services outlined in CONSULTANT's "Proposal for Professional Engineering Services" (the "Sixth Proposal") dated February 21, 2023, for engineering services associated with 30% and 60% Designs for Chowchilla Subbasin Project 2- Madera County Eastside Bypass Flood Flow Recharge Program, attached hereto as **Exhibit A**.

NOW, THEREFORE, the parties agree as follows:

AMENDMENTS

1. Section 1 ("Term") is amended to read:

   "This Agreement shall commence on July 1, 2020, and will terminate upon completion of the services as outlined in the Proposals ("Proposals" as defined in this section shall mean the Proposal, Second Proposal, Third Proposal, Fourth Proposal, Fifth Proposal, and Sixth Proposal) or October 13, 2023, whichever is sooner."

2. Section 2 ("Scope of Services") is amended to read:

   "CONSULTANT shall perform its services over one and a half to three years (based on budget availability) in accordance with Phase 1 of the Proposal. CONSULTANT shall perform its services as outlined in CONSULTANT's Second, Third, Fourth, Fifth, and Sixth Proposals."

3. Section 3 ("Compensation and Invoicing") is amended to read:

"CONSULTANT shall be compensated in an amount not to exceed:

- Six Hundred Fifty Thousand Dollars ($650,000.00) for the Proposal;
- One Hundred Eighty-Six Thousand Nine Hundred Sixty-Two Dollars ($186,962.00) for the Second Proposal;
- One Hundred Seventeen Thousand Four Hundred Forty-Six Dollars ($117,446.00) for the Third Proposal;
- Sixty-Six Thousand Seven Hundred Twenty Dollars ($66,720.00).
- Nine Hundred and Thirty-Nine Thousand, Five Hundred and Seventy-One Dollars ($939,571.00) for the Fifth Proposal.
- Four Hundred and Eleven, Four Hundred and Sixty-Five Dollars ($411,465.00) for the Sixth Proposal."

(Referred to collectively herein as Proposals). CONSULTANT's compensation under this Agreement, including the labor rates charged for work under this Agreement, shall not be increased without the written modification of this Agreement by the COUNTY and CONSULTANT. Payments under this Agreement shall be made within thirty (30) days after CONSULTANT's regular monthly invoicing. Payment obligations under this Agreement are contingent upon the receipt, in a form and substance acceptable to COUNTY, of the deliverables required under the Proposals. Also, CONSULTANT shall be solely responsible for compensating any of its sub-consultants under this Agreement.

4. Except as otherwise amended herein, all other provisions of the Agreement shall remain in full force and effect.

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IN WITNESS WHEREOF the foregoing Amendment is executed on the date and year first above-written.

COUNTY OF MADERA

ATTEST:

Chairman, Board of Directors

Clerk, Board of Directors

DAVIDS ENGINEERING, INC.

By: _____
(Signature)

JOHN R. DAVIDS
(Print Name)

Title: PRINCIPAL ENGINEER

Approved as to Legal Form:
COUNTY COUNSEL

By: Michael R. Linden

Digitally signed by: Michael R. Linden
DN: CN = Michael R. Linden email = mlinden@lozanosmith.com C = US O = LOZANO SMITH
Date: 2023.02.28 14:11:52 -08'00'

ACCOUNT NUMBER(S)

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EXHIBIT A

DAVIDS ENGINEERING, INC

Proposal for Professional Engineering Services

To:	Ms. Stephanie Anagnoson Department of Water and Natural Resources Madera County
From:	Davids Engineering, Inc. www.davidsengineering.com
Date:	2/21/23
Subject:	30% and 60% Designs for Chowchilla Subbasin Project 2 - Madera County Eastside Bypass Flood Flow Recharge Program

Davids Engineering, Inc. (DE) is pleased to provide this proposal to Madera County (County) for professional engineering services associated with 30% and 60% designs of Project 2 in the Chowchilla Subbasin (Project). While DE will complete the majority of work associated with design of the Project, Environmental Science Associates (ESA) will perform a environmental fatal flaw analysis and permitting related to necessary diversion and conveyance infrastructure. DE and ESA are collectively referred to as the DE Team.

1 Project Overview and Objective

The Madera County Groundwater Sustainability Agencies (GSAs) are currently implementing Groundwater Sustainability Plans (GSPs) for the Chowchilla, Madera, and Delta-Mendota Subbasins to achieve groundwater sustainability by 2040. The GSPs include a mix of projects and management actions that will lead to sustainable groundwater management. A key component of these GSPs is the development of projects that enable groundwater recharge through in-lieu practices, Flood-MAR, and spreading basins. To aid in groundwater recharge project development, Madera County is currently engaged in development of a strategic recharge plan and implementation program.

Project 2 in the Chowchilla Subbasin - Madera County Eastside Bypass Flood Flow Recharge Program (Chowchilla Project 2) - is funded in part by a Sustainable Groundwater Management Act (SGMA) Implementation Round 1 Grant administered by Triangle T Water District as component 5. Chowchilla Project 2 includes the planning, design, environmental permitting, construction, construction management, monitoring, assessment, stakeholder outreach, and education associated with development of the following:

- Approximately 2 points of diversion on the Chowchilla Bypass equipped with a 20 cfs pump and fish screen and a 24 inch magnetic flow meter
- Conveyance facilities to deliver water to approximately 700 acres of existing agricultural land for Flood-MAR including approximately 5,850 linear feet of 27 inch PVC pipeline
- Approximately 6 grower turnouts
- Development and installation of approximately one deep dual completion monitoring well

2 Project Approach

In completion of the 30% and 60% designs of the Project, the DE Team proposes a comprehensive approach building off past and ongoing work being performed on behalf of the County by the DE Team. Doing so will allow the DE Team to expedite completion of the 30% and 60% designs in a streamlined and cohesive manner.

3 Project Proposal

This Scope of Services includes work activities for both 30% and 60% designs as set-forth below.

3.1 Scope of Services - 30% Design

Task 1. Complete Basis of Design Report – The DE Team will work closely with applicable County staff and interested stakeholders to prepare a DRAFT Basis of Design (BOD) Report. The DRAFT BOD Report is likely to include the following components:

- Introduction
- Review of Existing Conditions
- Design Criteria
- Environmental considerations
- Alternative Analysis
- Preferred Alternative
- Project Implementation

Upon completion of the DRAFT BOD Report, the DE Team will facilitate one in-person meeting to review the DRAFT BOD Report with interested stakeholders. Following input received from interested stakeholders, the DE Team will make any necessary revisions and facilitate one remote meeting with applicable County staff to review the DRAFT BOD Report and solicit input. Following the meeting with the County, the DE Team will finalize the DRAFT BOD Report.

Task **2. Perform Environmental Fatal Flaw Analysis** – The DE Team will review Project diversion alternatives and necessary conveyance infrastructure alignments in an effort to lessen environmental impacts and to the extent feasible, the necessary environmental permitting associated with the Project. This task doesn't include the initiation of Project permitting activities, only a fatal flaw analysis related to 30% design of the Project.

Task 3. Complete Preferred Alignment Survey and Geotechnical Investigation – The DE Team will facilitate the collection of survey information along the preferred Project alignment(s). Survey information collected will include that necessary to facilitate completion of Project designs. At the 30% Design stage the scope of the geotechnical investigation will be limited to a desktop exercise using information available from previous studies conducted during phase 1 projects as well as online. Geotechnical efforts expended during this phase of design will be dictated by the professional judgement of the DE Team.

Task 4. Complete 30% Design Drawings – The DE Team will facilitate the completion of 30% Design Drawings for the preferred alternative resulting from Task 1. 30% Design Drawings shall generally include the primary Project components, but are not final design drawings, and are not of sufficient detail to initiate construction and/or prepare a detailed engineer's estimate of probable cost. Upon completion of the DRAFT 30% Design Drawings, the DE Team will facilitate one in-person meeting to review the DRAFT 30% Design Drawings with interested stakeholders. Following input received from interested stakeholders, the DE Team will make any necessary revisions and facilitate one remote meeting with County staff to review the DRAFT 30% Design Drawings and solicit input. Following the meeting with the County, the DE Team will finalize the DRAFT 30% Design Drawings.

3.2 Scope of Services - 60% Design

Task 5. Update Basis of Design Reports – The DE Team will work closely with applicable County staff and interested stakeholders to update the DRAFT Basis of Design (BOD) Report prepared as part of the 30% design.

Upon completion of the BOD Report, the DE Team will facilitate one, 1-hour meeting to review with interested stakeholders in Chowchilla Subbasin. Following input received from interested stakeholders, the DE Team will make any necessary revisions and facilitate one, 1-hour remote meeting with applicable County staff to review the updated BOD Report and solicit input. Following the meeting with County staff, the DE Team will finalize the BOD Report. The DE Team doesn't foresee any changes to the BOD Report following completion of the 60% design. The County shall be responsible for conveying copies of the BOD Report to the DWR Grant Manager as may be required.

Task 6. Perform Environmental Compliance and Permitting – Using the design information available, the DE Team will initiate environmental compliance and permitting for the Project. Environmental compliance and permitting may include, but is not limited to field surveys, CEQA compliance, and permitting activities with various entities as may be required (USACE, NHPA, USFWS, NMFS, SWRCB, CVFPB, CDWF, and various local agencies). The DE Team will share electronic copies of draft environmental compliance and permitting documentation with applicable County staff to solicit input. Up to 10, 1-hour remote meetings will be held with the DE Team and applicable County staff to discuss environmental compliance and permitting activities as may be required. Remote meetings will include, at most, 4 DE Team members (2 from DE and 2 from ESA). The County shall be responsible for conveying copies of all required permits, initial study, notice of intent, notice of completion, notice of determination and any additional required CEQA documentation to the DWR Grant Manager. Any and all filing and permit application fees will be the responsibility of the County. The DE Team can't guarantee timely action by the permitting agencies and therefore any delay on behalf of the permitting agencies will impact the schedule set-forth in Section 3.5 of this proposal.

Task 7. Prepare DRAFT Project Specifications and Bid Documents – The DE Team will prepare a complete working draft of the technical specifications and bid documents for the Project. To the extent available, County staff shall supply DE with standard specifications and bid documents as may be customarily used by the County. It is anticipated that specifications and bid documents will be substantially the same as that developed for Chowchilla Subbasin Project 1. Bid Documents provided by

the DE Team will include Scope of Work, General Specifications, Technical Specifications, Engineers Estimate, Bid Quantities Sheet, and Design Drawings. The County will be responsible for providing Construction Contract Agreement(s) and General Conditions. Following completion of the draft specifications and bid documents, the DE Team will facilitate one, 2-hour meeting with applicable County staff to review the draft specifications and bid documents. Following the meeting with the County, the DE Team will revise the draft specifications and bid documents as may be required. County staff will be responsible for sharing the draft specifications and bid documents with the DWR Grant Manager and subsequently sharing any and all comments from the DWR Grant Manager with the DE Team as applicable.

Task 8. Complete 60% Design Drawings – The DE Team will facilitate the completion of 60% Design Drawings for the Project. 60% Design Drawings will include all primary Project components and relevant details. The 60% design drawings aren't final design drawings and shall not be used to initiate construction and/or prepare a final engineer's estimate of probable cost. Upon completion of the 60% Design Drawings, the DE Team will facilitate one, 2-hour in-person meeting to review the 60% Design Drawings with interested stakeholders in Chowchilla Subbasin. Following input received from interested stakeholders, the DE Team will make any necessary revisions and facilitate one, 2-hour remote meeting with applicable County staff to review the 60% Design Drawings and solicit input. Following the meeting with the County, the DE Team will finalize the 60% Design Drawings. County staff will be responsible for sharing the 60% Design Drawings with the DWR Grant Manager and subsequently sharing any and all comments from the DWR Grant Manager with the DE Team as applicable.

Task 9. Prepare Planning Level Engineer's Estimate of Probable Cost (Engineer's Estimate) – Using the 60% Design Drawings (Task 8), the DE Team will prepare an Engineer's Estimate. The Engineer's Estimate will reflect the scope of the Project as set-forth in the 60% Design Drawings, the requirements and standards set-forth in the draft specifications, and current construction costs. At this point, the Engineer's Estimate will not include costs associated with Environmental Permitting and Compliance. Costs estimated at this stage are suitable for planning and value engineering but shall not be used for making binding budget decisions. Final estimated Project costs are predicated on the final design drawings, specifications, and construction prices at the time of bid. Following completion of the Engineer's Estimate, the DE Team will facilitate one, 2-hour remote meeting with applicable County staff to review the Engineer's Estimate and solicit any input. Any Project scope changes stemming from the review shall be conveyed to the DE Team in writing.

3.3 Deliverables

30% Design Deliverables

1. Electronic copy of DRAFT BOD Report
2. Electronic copy of DRAFT 30% Design Drawings

60% Design Deliverables

1. Electronic copy of Updated BOD Reports
2. Electronic copy of DRAFT 60% Design Drawings
3. Electronic copy of DRAFT Engineer's Estimate
4. Electronic copy of DRAFT Project Specifications and Bid Documents
5. Electronic copy of CEQA documentation

3.4 Assumptions

- The DE Team will not be responsible for providing any legal advice, legal guidance and/or legal opinions.
- County shall provide the DE Team with all landowner contact information as may be required.
- County will work cooperatively with the DE Team and respond timely to the DE Teams information requests.
- County will facilitate DE Team access to lands as may be required during completion of the work outlined in tasks 1 - 9.
- County agrees that final implementation and subsequent use of the Project is contingent on successful environmental permitting, successful water rights permitting, and DWR approval as applicable in the grant agreement and the DE Team cannot guarantee completion of these items by a specified date.
- County will provide legal review and/or assistance as may be required during completion of the work outlined in tasks 1 – 9.
- County will be the lead for stakeholder outreach beyond that set-forth above.
- County will be the lead and facilitate landowner and/or GSA agreement preparation, review, and execution as may be required.
- Project work required and/or requested by the County which is not covered in this proposal shall be paid for by the County on a time and materials basis at the applicable DE Team rate then in effect.
- County shall immediately notify the DE Team of any proposed and/or final changes to the grant agreement that materially impact the DE Teams ability to perform the work set-forth herein.
- County shall be responsible for grant agreement administration.
- County agrees that professional services set-forth in this proposal do not constitute final design and shall not be used for construction of the Project.
- The DE Team reserves the right to augment the DE Team with additional team members and remove team members as may be required to facilitate successful Project completion.
- County agrees that the DE Team will perform subsequent design and construction services associated with the Project through future task amendments.

3.5 Schedule

DE will initiate this scope of work as soon as practically possible after receiving notice to proceed from County. DE proposes to complete scope of work, excluding completion of task 6 Environmental Compliance and Permitting, by October 13, 2023, or as mutually agreed between County and DE. Deviations from the agreed upon schedule that occur during the work will be made known to County as soon as practicable. Upon completion of this scope of work and amendment of the task by Madera County, the DE Team will begin work on subsequent design phases of the Project.

3.6 Cost Proposal

DE Team costs associated with performing tasks 1 – 9 as set-forth herein will be billed to the County on a time and materials basis not to exceed $411,465. Actual project costs will not be tracked on a task

basis, nor will individual task budgets constrain charges for work performed up to the total estimated budget.

MADERA COUNTY CONTRACT NO. 11686E-23
(Davids Engineering, Inc. Contract for Groundwater Recharge Study)

THIS FIFTH AMENDMENT is made and entered into this 12TH day of SEPTEMBER 2023, by and between the COUNTY OF MADERA, a political subdivision of the State of California and a Groundwater Sustainability Agency ("GSA") within the Madera, Chowchilla, and Delta-Mendota Groundwater Subbasins ("COUNTY"), and DAVIDS ENGINEERING, INC. ("CONSULTANT").

RECITALS

A. The parties previously executed Madera County Contract No. 11686-20 (the "Agreement") on July 21, 2020, for the purpose of having CONSULTANT performed those services described in CONSULTANT's May 15, 2020, proposal ("First Proposal") entitled "Recharge Study Consulting Services RFP 2020-06." The Agreement terminates upon completion of the services outlined in the First Proposal, or June 30, 2023, whichever is sooner.

B. On August 17, 2021, the parties executed Madera County Contract No. 11686A-21 (the "First Amendment"), amending the Agreement to add services outlined in CONSULTANT's proposal ("Second Proposal"), dated July 29, 2021, for the development of a Temporary Emergency Recharge Plan ("Plan").

C. On February 1, 2022, the parties executed Madera County Contract No. 11686B-21 (the "Second Amendment"), amending the Agreement to add services outlined in CONSULTANT's Proposal for Professional Engineering Services – 30% Design for Projects 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1 ("Third Proposal"), dated December 10, 2021 and CONSULTANT's Proposal for Professional Engineering Services – Fairmead Groundwater Resilience Project ("Fourth Proposal"), dated January 7, 2022.

D. On July 12, 2022, the parties executed Madera County Contract No. 11686C-22 (the "Third Amendment"), amending the Agreement to add services outlined in CONSULTANT's "Proposal for Professional Engineering Services" (the "Fifth Proposal") dated April 29, 2022, for engineering services associated with 60% design for Projects 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1 (Project).

E. On April 11, 2023, the parties executed Madera County Contract No. 11686D-23 (the "Fourth Amendment") to add services outlined in CONSULTANT's "Proposal for Professional Engineering Services" (the "Sixth Proposal") dated February 21, 2023, for engineering services associated with 30% and 60% Designs for Chowchilla Subbasin Project 2- Madera County Eastside Bypass Flood Flow Recharge Program.

F. Now, the parties desire to amend the Agreement to extend the term of the Agreement to June 30, 2027.

NOW, THEREFORE, the parties agree as follows:

AMENDMENTS

1. Section 1 ("Term") is amended to read:

"This Agreement shall commence on July 1, 2020, and will terminate upon completion of the services as outlined in the Proposals ("Proposals" as defined in this section shall mean the Proposal, Second Proposal, Third Proposal, Fourth Proposal, Fifth Proposal, and Sixth Proposal) or June 30, 2027, whichever is sooner."

2. Except as otherwise amended herein, all other provisions of the Agreement shall remain in full force and effect.

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IN WITNESS WHEREOF the foregoing Amendment is executed on the date and year first above-written.

ATTEST:

Clerk, Board of Directors

COUNTY OF MADERA

Chairman, Board of Directors

DAVIDS ENGINEERING, INC.

By: _____
(Signature)

JOHN B. DAVIDS
(Print Name)

Title: PRINCIPAL ENGINEER

Approved as to Legal Form:
COUNTY COUNSEL

By: Michael R. Linden

Digitally signed by: Michael R. Linden
DN: CN = Michael R. Linden email = mlinden@lozanosmith.com C = US O = LOZANO SMITH
Date: 2023.08.03 16:19:10 -07'00'

ACCOUNT NUMBER(S)

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MADERA COUNTY CONTRACT NO. 11686F-24
(Contract Amendment; Davids Engineering, Inc.
Contract for Groundwater Recharge Study)

THIS SIXTH AMENDMENT is made and entered into this 6TH day of AUGUST, 2024, by and between the COUNTY OF MADERA, a political subdivision of the State of California and a Groundwater Sustainability Agency ("GSA") within the Madera, Chowchilla, and Delta-Mendota Groundwater Subbasins ("COUNTY"), and DAVIDS ENGINEERING, INC. ("CONSULTANT").

RECITALS

A. The parties previously executed Madera County Contract No. 11686-20 (the "Agreement") on July 21, 2020, for the purpose of having CONSULTANT performed those services described in CONSULTANT's May 15, 2020, Proposal ("First Proposal") entitled "Recharge Study Consulting Services RFP 2020-06." The Agreement terminates upon completion of the services outlined in the First Proposal, or June 30, 2023, whichever is sooner.

B. On August 17, 2021, the parties executed Madera County Contract No. 11686A-21 (the "First Amendment"), amending the Agreement to add services outlined in CONSULTANT's Proposal ("Second Proposal"), dated July 29, 2021, for the development of a Temporary Emergency Recharge Plan ("Plan").

C. On February 1, 2022, the parties executed Madera County Contract No. 11686B-21 (the "Second Amendment"), amending the Agreement to add services outlined in CONSULTANT's Proposal for Professional Engineering Services – 30% Design for Projects 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1 ("Third Proposal"), dated December 10, 2021 and CONSULTANT's Proposal for Professional Engineering Services – Fairmead Groundwater Resilience Project ("Fourth Proposal"), dated January 7, 2022.

D. On July 12, 2022, the parties executed Madera County Contract No. 11686C-22 (the "Third Amendment"), amending the Agreement to add services outlined in CONSULTANT's "Proposal for Professional Engineering Services" (the "Fifth Proposal") dated April 29, 2022, for engineering services associated with 60% design for Projects 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1 (Project).

E. On April 11, 2023, the parties executed Madera County Contract No. 11686D-23 (the "Fourth Amendment") to add services outlined in CONSULTANT's "Proposal for Professional Engineering Services" (the "Sixth Proposal") dated February 21, 2023, for engineering services associated with 30% and 60% Designs for Chowchilla Subbasin Project 2- Madera County Eastside Bypass Flood Flow Recharge Program.

F. On September 12, 2023, the parties executed Madera County Contract No. 11686E-23 ("Fifth Amendment") to extend the term of the Agreement to June 30, 2027.

G. Now, the parties desire to amend the Agreement to revise and expand the scope of services provided by CONSULTANT.

NOW, THEREFORE, the parties agree as follows:

AMENDMENTS

1. Section 2 ("Scope of Services") is amended to add and revise additional services to be provided by CONSULTANT as follows:

> "CONSULTANT shall perform (a) those additional services described in its Proposal dated May 28, 2024, attached herewith as Exhibit A (30% and 60% Designs for Madera Subbasin Project 2 - Chowchilla Bypass Flood Water Recharge) and (b) those additional services described in its Proposal dated May 28, 2024, attached herewith as Exhibit B (100% Design and

Environmental Compliance Permitting for Project 1 - Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1)."

2. Section 3 ("Compensation and Invoicing") is amended to read as follows:

"CONSULTANT shall be compensated in an amount not to exceed:

- Six Hundred Fifty Thousand Dollars ($650,000.00) for the Proposal.
- One Hundred Eighty-Six Thousand Nine Hundred Sixty-Two Dollars ($186,962.00) for the Second Proposal.
- One Hundred Seventeen Thousand Four Hundred Forty-Six Dollars ($117,446.00) for the Third Proposal.
- Sixty-Six Thousand Seven Hundred Twenty Dollars ($66,720.00) for the Fourth Proposal.
- Nine Hundred Thirty-Nine Thousand Five Hundred Seventy-One Dollars ($939,571.00) for the Fifth Proposal.
- Four Hundred Eleven Thousand Four Hundred Sixty-Five Dollars ($411,465.00) for the Sixth Proposal.
- Four Hundred Forty-Seven Thousand Five Hundred Eighty Dollars ($447,580.00) for the Seventh Proposal, attached herewith as Exhibit A.
- Sixty Thousand Three Hundred Thirty-One Dollars ($60,331.00) for the Eighth Proposal, attached herewith as Exhibit B.

(Referred to collectively herein as Proposals). CONSULTANT's compensation under this Agreement, including the labor rates charged for work under this Agreement, shall not be increased without the written modification of this Agreement by the COUNTY and CONSULTANT. Payments under this Agreement shall be made within thirty (30) days after

CONSULTANT's regular monthly invoicing. Payment obligations under this Agreement are contingent upon the receipt, in a form and substance acceptable to COUNTY, of the deliverables required under the Proposals. Also, CONSULTANT shall be solely responsible for compensating any of its sub-consultants under this Agreement."

3. Except as otherwise amended herein, all other provisions of the Agreement shall remain in full force and effect.

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IN WITNESS WHEREOF the foregoing Amendment is executed on the date and year first above-written.

COUNTY OF MADERA

Chairman, Board of Directors

ATTEST:

Clerk, Board of Directors

DAVIDS ENGINEERING, INC.

By: _____
(Signature)

JOHN B. DAVIDS
(Print Name)

Title: PRINCIPAL ENGINEER

Approved as to Legal Form:
COUNTY COUNSEL

By: Dale E. Bacigalupi

Digitally signed by: Dale E. Bacigalupi
DN: CN = Dale E. Bacigalupi email = dbacigalupi@lozanosmith.com C = US O = Lozano Smith
Date: 2024.07.09 09:48:23 -07'00'

ACCOUNT NUMBER(S)

_____

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EXHIBIT "A"

DAVIDS ENGINEERING, INC

Proposal for Professional Engineering Services

To:	Ms. Stephanie Anagnoson Department of Water and Natural Resources Madera County
From:	Davids Engineering, Inc. www.davidsengineering.com
Date:	5/28/24
Subject:	30% and 60% Designs for Madera Subbasin Project 2 – Chowchilla Bypass Flood Water Recharge

Davids Engineering, Inc. (DE) is pleased to provide this proposal to Madera County (County) for professional engineering services associated with 30% and 60% designs of Project 2 in the Madera Subbasin (Project). While DE will complete the majority of work associated with design of the Project, Ardurra, Inc. (Ardurra) will perform land surveying, BSK Associates (BSK) will provide geotechnical engineering services, Environmental Science Associates (ESA) will perform environmental permitting related to necessary diversion and conveyance infrastructure and diversion system design will be performed by Provost and Pritchard Consulting Group (P&P). DE, Ardurra, BSK, ESA & P&P are collectively referred to as the DE Team.

1 Project Overview and Objective

The Madera County Groundwater Sustainability Agencies (GSAs) are currently implementing Groundwater Sustainability Plans (GSPs) for the Chowchilla, Madera, and Delta-Mendota Subbasins to achieve groundwater sustainability by 2040. The GSPs include a mix of projects and management actions that will lead to sustainable groundwater management. A key component of these GSPs is the development of projects that enable groundwater recharge through in-lieu practices, Flood-MAR, and spreading basins. To aid in groundwater recharge project development, Madera County is currently engaged in development of a strategic recharge plan and implementation program.

Madera Project 2 includes activities associated with the planning, design, permitting, and public outreach for future construction of one turnout off of the Chowchilla Bypass with appropriate conveyance to divert flood flows to approximately 2,600 acres of existing farmland for groundwater recharge through both flood-managed aquifer recharge (Flood-MAR) and dedicated recharge basins. The Project will be designed to have the capacity of recharging approximately 2,000 acre-feet per year, when water is available. The following summary provides the anticipated design components:

- One point of diversion on the Chowchilla Bypass equipped with a 20 cfs pump and fish screen and a 24 inch magnetic flow meter
- 16,000 lineal feet of PVC pipe to deliver water to approximately 2,600 acres of existing agricultural land for Flood-MAR
- One groundwater recharge basin
- Approximately 3 grower turnouts

- Development and installation of approximately one deep dual completion monitoring well

2 Project Approach

In completion of the 30% and 60% designs of the Project, the DE Team proposes a comprehensive approach building off past and ongoing work being performed on behalf of the County by the DE Team. Doing so will allow the DE Team to expedite completion of the 30% and 60% designs in a streamlined and cohesive manner.

3 Project Proposal

This Scope of Services includes work activities for both 30% and 60% designs as set-forth below.

3.1 Scope of Services - 30% Design

Task 1. Complete Basis of Design Report – The DE Team will work closely with applicable County staff and interested stakeholders to prepare a DRAFT Basis of Design (BOD) Report. The DRAFT BOD Report is likely to include the following components:

- Introduction
- Review of Existing Conditions
- Design Criteria
- Environmental considerations
- Alternative Analysis
- Preferred Alternative
- Project Implementation

Upon completion of the DRAFT BOD Report, the DE Team will facilitate one remote meeting to review the DRAFT BOD Report with County staff. Following the meeting with County staff, the DE Team will finalize the DRAFT BOD Report. The County shall be responsible for conveying copies of the BOD Reports to the DWR Grant Manager as may be required.

Task 2. Perform Environmental Fatal Flaw Analysis – The DE Team will review Project diversion alternatives and necessary conveyance infrastructure alignments in an effort to lessen environmental impacts and to the extent feasible, the necessary environmental permitting associated with the Project. This task doesn't include the initiation of Project permitting activities, only a fatal flaw analysis related to 30% design of the Project.

Task 3. Complete Preferred Alignment Survey and Geotechnical Investigation – The DE Team will facilitate the collection of survey information along the preferred Project alignment(s). Survey information collected will include that necessary to facilitate completion of Project designs. At the 30% Design stage the scope of the geotechnical investigation will be limited to a desktop exercise using information available from previous studies conducted during phase 1 projects as well as online. Geotechnical efforts expended during this phase of design will be dictated by the professional judgement of the DE Team.

Task 4. Complete 30% Design Drawings – The DE Team will facilitate the completion of 30% Design Drawings for the preferred alternative resulting from Task 1. 30% Design Drawings shall generally include the primary Project components, but are not final design drawings, and are not of sufficient detail to initiate construction and/or prepare a detailed engineer's estimate of probable cost. Upon completion of the DRAFT 30% Design Drawings, the DE Team will facilitate one remote meeting to review the DRAFT 30% Design Drawings with interested stakeholders. Following input received from interested stakeholders, the DE Team will make any necessary revisions and facilitate one remote meeting with County staff to review the DRAFT 30% Design Drawings and solicit input. Following the meeting with the County, the DE Team will finalize the DRAFT 30% Design Drawings.

3.2 Scope of Services - 60% Design

Task 5. Update Basis of Design Reports – The DE Team will work closely with applicable County staff and interested stakeholders to update the DRAFT Basis of Design (BOD) Report prepared as part of the 30% design. Upon completion of the 60% BOD Report, the DE Team will facilitate one, 1-hour in-person meeting with applicable County staff to review the updated BOD Report and solicit input. Following the meeting with County staff, the DE Team will finalize the BOD Report.

The DE Team doesn't foresee any changes to the BOD Report following completion of the 60% design. The County shall be responsible for conveying copies of the BOD Report to the DWR Grant Manager as may be required.

Task 6. Perform Environmental Compliance and Permitting – Using the design information available, the DE Team will initiate environmental compliance and permitting for the Project. Environmental compliance and permitting may include, but is not limited to field surveys, CEQA compliance, and permitting activities with various entities as may be required (USACE, NHPA, USFWS, NMFS, SWRCB, CVFPB, CDWF, and various local agencies). The DE Team will share electronic copies of draft environmental compliance and permitting documentation with applicable County staff to solicit input.

Up to 10, 1-hour remote meetings will be held with the DE Team and applicable County staff to discuss environmental compliance and permitting activities as may be required. Remote meetings will include, at most, 4 DE Team members (2 from DE and 2 from ESA). The County shall be responsible for conveying copies of all required permits, initial study, notice of intent, notice of completion, notice of determination and any additional required CEQA documentation to the DWR Grant Manager. Any and all filing and permit application fees will be the responsibility of the County. The DE Team can't guarantee timely action by the permitting agencies and therefore any delay on behalf of the permitting agencies will impact the schedule set-forth in Section 3.5 of this proposal.

Task 7. Prepare DRAFT Project Specifications and Bid Documents – The DE Team will prepare a complete working draft of the technical specifications and bid documents for the Project. To the extent available, County staff shall supply DE with standard specifications and bid documents as may be customarily used by the County. It is anticipated that specifications and bid documents will be substantially the same as that developed for Madera Subbasin Project 1. Bid Documents provided by the DE Team will include Scope of Work, General Specifications, Technical Specifications, Engineer's

Estimate, Bid Quantities Sheet, and Design Drawings. The County will be responsible for providing Construction Contract Agreement(s) and General Conditions. Following completion of the draft specifications and bid documents, the DE Team will facilitate one, 2-hour meeting with applicable County staff to review the draft specifications and bid documents. Following the meeting with the County, the DE Team will revise the draft specifications and bid documents as may be required. County staff will be responsible for sharing the draft specifications and bid documents with the DWR Grant Manager and subsequently sharing any and all comments from the DWR Grant Manager with the DE Team as applicable.

Task 8. Complete 60% Design Drawings – The DE Team will facilitate the completion of 60% Design Drawings for the Project. 60% Design Drawings will include all primary Project components and relevant details. The 60% design drawings aren't final design drawings and shall not be used to initiate construction and/or prepare a final engineer's estimate of probable cost. Upon completion of the 60% Design Drawings, the DE Team will facilitate one, 2-hour remote meeting to review the 60% Design Drawings with interested stakeholders in Madera Subbasin. Following input received from interested stakeholders, the DE Team will make any necessary revisions and facilitate one, 2-hour remote meeting with applicable County staff to review the 60% Design Drawings and solicit input. Following the meeting with the County, the DE Team will finalize the 60% Design Drawings. County staff will be responsible for sharing the 60% Design Drawings with the DWR Grant Manager and subsequently sharing any and all comments from the DWR Grant Manager with the DE Team as applicable.

Task 9. Prepare Planning Level Engineer's Estimate of Probable Cost (Engineer's Estimate) – Using the 60% Design Drawings (Task 8), the DE Team will prepare an Engineer's Estimate. The Engineer's Estimate will reflect the scope of the Project as set-forth in the 60% Design Drawings, the requirements and standards set-forth in the draft specifications, and current construction costs. At this point, the Engineer's Estimate will not include costs associated with Environmental Permitting and Compliance. Costs estimated at this stage are suitable for planning and value engineering but shall not be used for making binding budget decisions. Final estimated Project costs are predicated on the final design drawings, specifications, and construction prices at the time of bid. Following completion of the Engineer's Estimate, the DE Team will facilitate one, 1-hour remote meeting with applicable County staff to review the Engineer's Estimate and solicit any input. Any Project scope changes stemming from the review shall be conveyed to the DE Team in writing.

3.3 Deliverables

30% Design Deliverables

1. Electronic copy of DRAFT BOD Report
2. Electronic copy of DRAFT 30% Design Drawings

60% Design Deliverables

1. Electronic copy of Updated BOD Reports
2. Electronic copy of DRAFT 60% Design Drawings
3. Electronic copy of DRAFT Engineer's Estimate
4. Electronic copy of DRAFT Project Specifications and Bid Documents
5. Electronic copy of CEQA documentation

3.4 Assumptions

- The DE Team will not be responsible for providing any legal advice, legal guidance and/or legal opinions.
- County shall provide the DE Team with all landowner contact information as may be required.
- County will work cooperatively with the DE Team and respond timely to the DE Teams information requests.
- County will facilitate DE Team access to lands as may be required during completion of the work outlined in tasks 1 - 9.
- County agrees that final implementation and subsequent use of the Project is contingent on successful environmental permitting, successful water rights permitting, and DWR approval as applicable in the grant agreement and the DE Team cannot guarantee completion of these items by a specified date.
- County will provide legal review and/or assistance as may be required during completion of the work outlined in tasks 1 - 9.
- County will be the lead for stakeholder outreach beyond that set-forth above.
- County will be the lead and facilitate landowner and/or GSA agreement preparation, review, and execution as may be required.
- Project work required and/or requested by the County which is not covered in this proposal shall be paid for by the County on a time and materials basis at the applicable DE Team rate then in effect.
- County shall immediately notify the DE Team of any proposed and/or final changes to the grant agreement that materially impact the DE Teams ability to perform the work set-forth herein.
- County shall be responsible for grant agreement administration.
- County agrees that professional services set-forth in this proposal do not constitute final design and shall not be used for construction of the Project.
- The DE Team reserves the right to augment the DE Team with additional team members and remove team members as may be required to facilitate successful Project completion.
- County agrees that the DE Team will perform subsequent design and construction services associated with the Project through future task amendments.

3.5 Schedule

DE will initiate this scope of work as soon as practically possible after receiving notice to proceed from the County. DE proposes to complete scope of work, excluding completion of task 6 Environmental Compliance and Permitting, by January 31, 2025, or as mutually agreed between County and DE. Deviations from the agreed upon schedule that occur during the work will be made known to County as soon as practicable. Upon completion of this scope of work and amendment of the task by Madera County, the DE Team will begin work on subsequent design phases of the Project.

3.6 Cost Proposal

DE Team costs associated with performing tasks 1 - 9 as set-forth herein will be billed to the County on a time and materials basis not to exceed $447,580. Actual project costs will not be tracked on a task basis, nor will individual task budgets constrain charges for work performed up to the total estimated budget.

EXHIBIT "B"

Proposal for Professional Engineering Services

To:	Ms. Stephanie Anagnoson Department of Water and Natural Resources Madera County
From:	Davids Engineering, Inc. www.davidsengineering.com
Date:	5/28/24
Subject:	100% Design and Environmental Compliance Permitting for Project 1 - Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1

Davids Engineering, Inc. (DE) is pleased to provide this proposal to Madera County (County) for engineering services associated with 100% design for Project 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 (Project). Completion of 100% design of the Project will include diversion system design to be performed by Provost and Pritchard Consulting Group (P&P). P&P is a subconsultant to DE. DE and P&P are collectively referred to as the DE Team.

1 Project Overview and Objective

The Madera County Groundwater Sustainability Agencies (GSAs) are currently implementing Groundwater Sustainability Plans (GSPs) for the Chowchilla, Madera, and Delta-Mendota Subbasins to achieve groundwater sustainability by 2040. The GSPs include a mix of projects and management actions that will lead to sustainable groundwater management. A key component of these GSPs is the development of projects that enable groundwater recharge through in-lieu practices, Flood-MAR, and spreading basins. To aid in groundwater recharge project development, Madera County (County) is currently engaged in development of a strategic recharge plan and implementation program.

The Project identified in the strategic recharge plan includes the planning, design, environmental permitting, construction, construction management, monitoring, assessment, stakeholder outreach, and education associated with the construction of four new turnouts with appropriate conveyance to divert flood flows to approximately 2,900 acres of existing farmland for flood-managed aquifer recharge (Flood-MAR) and/or two dedicated groundwater recharge basins with approximately 64 acres in total area.

2 Project Approach

In completion of the 100% design of the Project, the DE Team proposes a comprehensive approach building off past and ongoing work being performed on behalf of the County by the DE Team.

3 Project Proposal

3.1 Scope of Services

This Scope of Services includes work activities in five (5) tasks as set-forth below.

Task 1. Update Basis of Design Report – The DE Team will work closely with Madera County GSA staff and interested stakeholders to update the DRAFT Basis of Design (BOD) Report prepared as part of the 60% design. Upon completion of the BOD Report, the DE Team will facilitate one, 1-hour in-person meeting with applicable County staff to review the updated BOD Report and solicit input. Following the meeting with County staff, the DE Team will finalize the BOD Report. The County shall be responsible for conveying copies of the BOD Reports to the DWR Grant Manager as may be required.

Task 2. Environmental Compliance and Permits
DE will assist county staff in review and incorporation of all environmental and encroachment permits into the bid documents. The County shall be responsible for conveying copies of all required permits and any required CEQA documentation to the DWR Grant Manager. Any and all filing and permit application fees will be the responsibility of the County.

Task 3. Prepare 100% Project Specifications and Bid Documents – The DE Team will prepare a complete working draft of the technical specifications for the Project. Technical specifications will be provided to county staff for preparation of bid documents to be used in the public bidding process. The technical specifications and bid documents will incorporate environmental constraints or mitigation deemed necessary by permits applicable to the project. Bid Documents provided by the DE Team will include Scope of Work, General Specifications, Technical Specifications, Engineers Estimate, Bid Quantities Sheet, and Design Drawings. The County will be responsible for providing Construction Contract Agreement(s) and General Conditions.

County staff will be responsible for sharing the draft specifications and bid documents with the DWR Grant Manager and subsequently sharing any and all comments from the DWR Grant Manager with the DE Team as applicable.

Task 4. Complete 100% Design Drawings – The DE Team will facilitate the completion of 100% Design Drawings for the Project. 100% Design Drawings will include full design of all Project components and relevant details. The 100% design drawings will incorporate environmental constraints or mitigation deemed necessary as part of completion of Task 2.

Upon completion of the 100% Design Drawings, the DE Team will facilitate one, 1-hour remote meeting with applicable County staff to review the 100% Design Drawings and solicit input. Following the meeting with the County, the DE Team will finalize the 100% Design Drawings. County staff will be responsible for sharing the 100% Design Drawings with the DWR Grant Manager and subsequently sharing any and all comments from the DWR Grant Manager with the DE Team as applicable.

Task 5. Prepare Engineer's Estimate of Probable Construction Cost (Engineer's Estimate) – Using the 100% Design Drawings, the DE Team will prepare an Engineer's Estimate. The Engineer's Estimate will

reflect the scope of the Project as set-forth in the 100% Design Drawings, the requirements and standards set-forth in the Project specifications, measures required by permits and current construction costs.

The 100% Engineer's Estimate will be reviewed during the meeting facilitated as part of Task 4. Any Project scope changes stemming from the review shall be conveyed to the DE Team in writing.

3.2 Deliverables

1. Electronic copy of Final BOD Report
2. Electronic copy of 100% Design Drawings
3. Electronic copy of 100% Engineer's Estimate
4. Electronic copy of 100% Project Specifications

3.3 Assumptions

- The DE Team will not be responsible for providing any legal advice, legal guidance and/or legal opinions.
- County will be responsible for coordination with DWR Grant Manager as required.
- Any Project changes stemming from review meetings shall be conveyed to the DE Team in writing.
- Any and all filing and permit application fees will be the responsibility of the County.
- Any and all mitigation (environmental or other) required will be the responsibility of the County.
- County will work cooperatively with the DE Team and respond timely to the DE Teams information requests.
- County agrees that the DE Team can't guarantee timely action by the permitting agencies and therefore, any delay on behalf of the permitting agencies will impact the schedule set-forth in section 3.4 of this proposal.
- County will facilitate DE Team access to lands as may be required during completion of the work outlined in tasks 1 - 5.
- County agrees that final implementation and subsequent use of the Project is contingent on successful environmental permitting, successful water rights permitting, and DWR approval as applicable in the grant agreement and the DE Team cannot guarantee completion of these items by a specified date.
- County will provide legal review and/or assistance as may be required during completion of the work outlined in tasks 1 - 5.
- County will provide any templates or boiler plate documents necessary for completion of Task 3.
- Bid Documents provided by the DE Team will include Scope of Work, General Specifications, Technical Specifications, Engineers Estimate, Bid Quantities Sheet, and Design Drawings. The County will be responsible for providing Construction Contract Agreement(s) and General Conditions.
- County will be the lead for stakeholder outreach beyond that set-forth in this proposal.
- County will be the lead and facilitate landowner and/or GSA agreement preparation, review, and execution as may be required.

- Project work required and/or requested by the County which is not covered in this proposal shall be paid for by the County on a time and materials basis at the applicable DE Team rate then in effect.
- County shall immediately notify the DE Team of any proposed and/or final changes to the grant agreement that materially impact the DE Teams ability to perform the work set-forth herein.
- County shall be responsible for grant agreement administration.
- The DE Team reserves the right to augment the DE Team with additional team members and remove team members as may be required to facilitate successful Project completion.
- County agrees that the DE Team will perform subsequent design and construction services associated with the Project through future task amendments.

3.4 Schedule

The DE Team will initiate the scope of work set-forth in this proposal as soon as practically possible after receiving a signed agreement from the County.

3.5 Cost Proposal

DE Team costs associated with performing Tasks 1 – 5 as set-forth herein will be billed to the County on a time and materials basis not to exceed $60,331 as detailed in Appendix A to Attachment 4 of the Grant Proposal for the Eastside Bypass Recharge for Subsidence and Flood Risk Reduction Project Phase 1. Actual project costs will not be tracked on a task basis, nor will individual task budgets constrain charges for work performed up to the total estimated budget.

MADERA COUNTY CONTRACT NO. _____
(Contract Amendment; Davids Engineering, Inc.
Contract for Groundwater Recharge Study)

THIS SEVENTH AMENDMENT is made and entered into this _____ day of _____, 2025, by and between the COUNTY OF MADERA, a political subdivision of the State of California and a Groundwater Sustainability Agency ("GSA") within the Madera, Chowchilla, and Delta-Mendota Groundwater Subbasins ("COUNTY"), and DAVIDS ENGINEERING, INC. ("CONSULTANT").

RECITALS

A. The parties previously executed Madera County Contract No. 11686-20 (the "Agreement") on July 21, 2020, for the purpose of having CONSULTANT performed those services described in CONSULTANT's May 15, 2020, Proposal ("First Proposal") entitled "Recharge Study Consulting Services RFP 2020-06." The Agreement terminates upon completion of the services outlined in the First Proposal, or June 30, 2023, whichever is sooner.

B. On August 17, 2021, the parties executed Madera County Contract No. 11686A-21 (the "First Amendment"), amending the Agreement to add services outlined in CONSULTANT's Proposal ("Second Proposal"), dated July 29, 2021, for the development of a Temporary Emergency Recharge Plan ("Plan").

C. On February 1, 2022, the parties executed Madera County Contract No. 11686B-21 (the "Second Amendment"), amending the Agreement to add services outlined in CONSULTANT's Proposal for Professional Engineering Services – 30% Design for Projects 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1 ("Third Proposal"), dated December 10, 2021 and CONSULTANT's Proposal for Professional Engineering Services – Fairmead Groundwater Resilience Project ("Fourth Proposal"), dated January 7, 2022.

D. On July 12, 2022, the parties executed Madera County Contract No. 11686C-22 (the "Third Amendment"), amending the Agreement to add services outlined in CONSULTANT's "Proposal for Professional Engineering Services" (the "Fifth Proposal") dated April 29, 2022, for engineering services associated with 60% design for Projects 1 – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1 and East Madera Subbasin Recharge Phase 1.

E. On April 11, 2023, the parties executed Madera County Contract No. 11686D-23 (the "Fourth Amendment") to add services outlined in CONSULTANT's "Proposal for Professional Engineering Services" (the "Sixth Proposal") dated February 21, 2023, for engineering services associated with 30% and 60% Designs for Chowchilla Subbasin Project 2- Madera County Eastside Bypass Flood Flow Recharge Program.

F. On September 12, 2023, the parties executed Madera County Contract No. 11686E-23 (the "Fifth Amendment") to extend the term of the Agreement to June 30, 2027.

G. On August 6, 2024, the parties executed Madera County Contract No. 11686F-24 (the "Sixth Amendment") to add services outlined in CONSULTANT's "Proposal for Professional Engineering Services" (the "Seventh Proposal") dated May 28, 2024, for engineering services associated with 30% and 60% Designs for Madera Subbasin Project 2 - Chowchilla Bypass Flood Water Recharge and "Proposal for Professional Engineering Services" (the "Eighth Proposal") dated May 28, 2024, for engineering services associated with 100% Design and Environmental Compliance Permitting for Project 1 - Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Phase 1.

H. Now, the parties desire to amend the Agreement to revise and expand the scope of services provided by CONSULTANT.

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NOW, THEREFORE, the parties agree as follows:

AMENDMENTS

1. Section 1 ("Term") is amended to read:

"This Agreement shall commence on July 1, 2020, and will terminate upon completion of the services as outlined in the Proposals ("Proposals" as defined in this section shall mean the Proposal incorporated into the original Agreement and all subsequent Proposals added through amendment of this Agreement) or June 30, 2027, whichever is sooner."

2. Section 2 ("Scope of Services") is amended to add and revise additional services to be provided by CONSULTANT as follows:

"CONSULTANT shall perform (a) those additional services described in its Proposal dated July 1, 2025 (the "Ninth Proposal"), attached herewith as Exhibit A (Proposal for 100% Design and Environmental Permitting for Madera Subbasin Recharge Project 1), (b) those additional services described in its Proposal dated July 1, 2025 (the "Tenth Proposal"), attached herewith as Exhibit B (Proposal for Bidding and Construction Management – Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Project 1), (c) those additional services described in its Proposal dated May 2, 2025 (the "Eleventh Proposal"), attached herewith as Exhibit C (Proposal for 100% Design and Environmental Compliance Permitting for Chowchilla Subbasin Recharge Project 2), and (d) those additional services described in its Proposal dated June 3, 2025 (the "Twelfth Proposal"), attached herewith as Exhibit D (Proposal for 30% and 60% Designs for Chowchilla Recharge Project 2 – Talley Diversion System)."

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3. Section 3 ("Compensation and Invoicing") is amended to read as follows:

"CONSULTANT shall be compensated in an amount not to exceed:

- Six Hundred Fifty Thousand Dollars ($650,000.00) for the First Proposal.
- One Hundred Eighty-Six Thousand Nine Hundred Sixty-Two Dollars ($186,962.00) for the Second Proposal.
- One Hundred Seventeen Thousand Four Hundred Forty-Six Dollars ($117,446.00) for the Third Proposal.
- Sixty-Six Thousand Seven Hundred Twenty Dollars ($66,720.00) for the Fourth Proposal.
- Nine Hundred Thirty-Nine Thousand Five Hundred Seventy-One Dollars ($939,571.00) for the Fifth Proposal.
- Four Hundred Eleven Thousand Four Hundred Sixty-Five Dollars ($411,465.00) for the Sixth Proposal.
- Four Hundred Forty-Seven Thousand Five Hundred Eighty Dollars ($447,580.00) for the Seventh Proposal.
- Sixty Thousand Three Hundred Thirty-One Dollars ($60,331.00) for the Eighth Proposal.
- Eighty-Five Thousand Three Hundred Twenty-Five Dollars and Fifty Cents ($85,325.50) for the Ninth Proposal, attached herewith as Exhibit A.
- Three Hundred Eighty-Three Thousand Five Hundred Twenty-Eight Dollars ($383,528.00) for the Tenth Proposal, attached herewith as Exhibit B.

- One Hundred Eighty Thousand Dollars ($180,000.00) for the Eleventh Proposal, attached herewith as Exhibit C.
- Three Hundred Twenty-Six Thousand Four Hundred Seventeen Dollars ($326,417.00) for the Twelfth Proposal, attached herewith as Exhibit D.

(Referred to collectively herein as Proposals). CONSULTANT's total combined compensation for the Nineth, Tenth, Eleventh, and Twelfth Proposals shall not exceed Nine Hundred Seventy-Five Thousand Two Hundred Seventy Dollars and Fifty Cents ($975,270.50). CONSULTANT's compensation under this Agreement, including the labor rates charged for work under this Agreement, shall not be increased without the written modification of this Agreement by the COUNTY and CONSULTANT. Payments under this Agreement shall be made within thirty (30) days after CONSULTANT's regular monthly invoicing. Payment obligations under this Agreement are contingent upon the receipt, in a form and substance acceptable to COUNTY, of the deliverables required under the Proposals. Also, CONSULTANT shall be solely responsible for compensating any of its sub-consultants under this Agreement."

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4. Section 4 ("Notices") is amended to read as follows:

"All notices required by this Agreement shall be in writing and shall be effective upon personal service or deposit in the mail, postage prepaid and addressed as follows:

COUNTY

County of Madera
Water and Natural Resources Dept.
200 West 4th Street
Madera, CA 93637

CONSULTANT

John Davids
Davids Engineering, Inc.
1772 Picasso Avenue, Suite A
Davis, CA 95618

With Copy to

Clerk of the Board
Board of Supervisors
200 West 4th Street
Madera, CA 93637"

5. Except as otherwise amended herein, all other provisions of the Agreement shall remain in full force and effect.

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IN WITNESS WHEREOF the foregoing Amendment is executed on the date and year first above-written.

COUNTY OF MADERA

_____
Chair, Board of Directors

ATTEST:

_____
Clerk, Board of Directors

DAVIDS ENGINEERING, INC.

By: _____
(Signature)

John B Davids
(Print Name)

Title: PRINCIPAL ENGINEER

Approved as to Legal Form:
COUNTY COUNSEL

By: Rebecca Wilson

Digitally signed by: Rebecca Wilson
DN: CN = Rebecca Wilson email = rwilson@lozanosmith.com C = US O = LOZANO SMITH
Date: 2025.07.24 16:02:07 -07'00'

ACCOUNT NUMBER(S)

_____

_____

4907-6450-7992, v.2

EXHIBIT A

DAVIDS ENGINEERING, INC

Proposal for Professional Engineering Services

To:	Ms. Stephanie Anagnoson Department of Water and Natural Resources Madera County GSA
From:	Davids Engineering, Inc. www.davidsengineering.com
Date:	July 1, 2025
Subject:	100% Design and Environmental Permitting for Madera Subbasin Recharge Project 1

Davids Engineering, Inc. (DE) is pleased to provide this proposal to the Madera County GSA (County GSA) for professional engineering services associated with 100% design for Madera Subbasin Recharge Project 1 (Project). Completion of 100% design of the Project will include environmental compliance and permitting services to be performed by Environmental Science Associates (ESA) as a subconsultant to DE. DE and ESA are collectively referred to as the DE Team.

1 Project Overview and Objective

The Madera County Groundwater Sustainability Agencies (GSAs) are currently implementing Groundwater Sustainability Plans (GSPs) for the Chowchilla, Madera, and Delta-Mendota Subbasins to achieve groundwater sustainability by 2040. The GSPs include a mix of projects and management actions that will lead to sustainable groundwater management. A key component of these GSPs is the development of projects that enable groundwater recharge through in-lieu practices, Flood-MAR, and spreading basins. To aid in groundwater recharge project development, the County GSA is currently engaged in development of a strategic recharge plan and implementation program.

The Project as identified in the strategic recharge plan included the planning, design, and environmental permitting associated with the following:

- Construction of three turnouts on MID Lateral 6.2
- Rehabilitation of one existing turnout on MID Lateral 32.2
- Construction of one 40 acre dedicated groundwater recharge basin
- Construction of infrastructure associated with conveyance of flood flows to approximately 2,500 acres of existing farmland for recharge through Flood-MAR.

Collectively, all Project components will be designed to have the capacity of recharging approximately 12,600 acre-feet (AF) per year when flood flows are available. Completion of the Project is being funded by a grant from the Department of Water Resources (DWR) and a local cost share. The work set-forth in this proposal covers professional engineering and environmental permitting services associated with 100% design of the Project.

2 Project Approach

In completion of the 100% design of the Project, the DE Team proposes a comprehensive approach building off past and ongoing work being performed on behalf of the County GSA by the DE Team.

3 Project Proposal

3.1 Scope of Services

This scope of professional services includes work activities in five (5) tasks as set-forth below.

Task 1. Update Basis of Design Report – The DE Team will work closely with Madera County GSA staff and interested stakeholders to update the DRAFT Basis of Design (BOD) Report prepared as part of the 60% design. Upon completion of the BOD Report, the DE Team will facilitate one, 1-hour remote meeting (up to 2 DE staff) with applicable County GSA staff to review the updated BOD Report and solicit input. Following the meeting with County GSA staff, the DE Team will finalize the BOD Report. The County GSA shall be responsible for conveying copies of the BOD Reports to the DWR Grant Manager as may be required.

Task 2. Integration of Environmental Documentation and Encroachment Permits Into Bid Documents DE will assist County GSA staff in review and incorporation of all environmental and encroachment permits into the bid documents. The County GSA shall be responsible for conveying copies of all required permits and any required CEQA documentation to the DWR Grant Manager. Any and all filing and permit application fees will be the responsibility of the County GSA.

Task 3. Prepare 100% Project Specifications and Bid Documents – The DE Team will prepare a complete working draft of the technical specifications for the Project. Technical specifications will be integrated into the bid documents to be used in the public bidding process. The technical specifications and bid documents will incorporate environmental constraints and/or mitigation measures deemed necessary by permits applicable to the Project. Bid Documents provided by the DE Team will include Scope of Work, General Specifications, Technical Specifications, Engineers Estimate, Bid Quantities Sheet, and Design Drawings. The DE Team will assist the County GSA in developing the Construction Contract Agreement(s) and General Conditions.

County GSA staff will be responsible for sharing the draft specifications and bid documents with the DWR Grant Manager and subsequently sharing any and all comments from the DWR Grant Manager with the DE Team as applicable.

Task 4. Complete 100% Design Drawings – The DE Team will facilitate the completion of 100% Design Drawings for the Project. 100% Design Drawings will include full design of all Project components and relevant details. The 100% design drawings will incorporate environmental constraints and/or mitigation measures deemed necessary as part of completion of Task 2.

Upon completion of the 100% Design Drawings, the DE Team will facilitate one, 1-hour in-person meeting (up to 2 DE staff) with applicable County GSA staff to review the 100% Design Drawings and

solicit input. Following the meeting with the County GSA, the DE Team will finalize the 100% Design Drawings. County GSA staff will be responsible for sharing the 100% Design Drawings with the DWR Grant Manager and subsequently sharing any and all comments from the DWR Grant Manager with the DE Team as applicable.

Task 5. Prepare Engineer's Estimate of Probable Construction Cost (Engineer's Estimate) – Using the 100% Design Drawings, the DE Team will prepare an Engineer's Estimate. The Engineer's Estimate will reflect the scope of the Project as set-forth in the 100% Design Drawings, the requirements and standards set-forth in the Project specifications, measures required by permits and current construction costs.

The 100% Engineer's Estimate will be reviewed during the meeting facilitated as part of Task 4. Any Project scope changes stemming from the review shall be conveyed to the DE Team in writing.

3.2 Deliverables

1. Electronic copy of Final BOD Report
2. Electronic copy of 100% Design Drawings
3. Electronic copy of 100% Engineer's Estimate
4. Electronic copy of 100% Project Specifications

3.3 Assumptions

- The DE Team will not be responsible for providing any legal advice, legal guidance and/or legal opinions.
- County GSA will be responsible for coordination with DWR Grant Manager as required.
- Any Project changes stemming from review meetings shall be conveyed to the DE Team in writing.
- Any and all filing and permit application fees will be the responsibility of the County GSA.
- Any and all mitigation (environmental or other) required will be the responsibility of the County GSA.
- County GSA will work cooperatively with the DE Team and respond timely to the DE Teams information requests.
- County GSA agrees that the DE Team can't guarantee timely action by the permitting agencies and therefore, any delay on behalf of the permitting agencies will impact the schedule set-forth in section 3.4 of this proposal.
- County GSA will facilitate DE Team access to lands as may be required during completion of the work outlined in tasks 1 - 5.
- County GSA agrees that final implementation and subsequent use of the Project is contingent on successful environmental permitting, successful water rights permitting, and DWR approval as applicable in the grant agreement and the DE Team cannot guarantee completion of these items by a specified date.
- County GSA will provide legal review and/or assistance as may be required during completion of the work outlined in tasks 1 - 5.

- County GSA will provide any templates or boiler plate documents necessary for completion of Task 3.
- Bid Documents provided by the DE Team will include Scope of Work, General Specifications, Technical Specifications, Engineers Estimate, Bid Quantities Sheet, and Design Drawings. The County GSA will be responsible for providing Construction Contract Agreement(s) and General Conditions.
- County GSA will be the lead for stakeholder outreach beyond that set-forth in this proposal.
- County GSA will be the lead and facilitate landowner and/or GSA agreement preparation, review, and execution as may be required.
- Project work required and/or requested by the County GSA which is not covered in this proposal shall be paid for by the County on a time and materials basis at the applicable DE Team rate then in effect.
- County GSA shall immediately notify the DE Team of any proposed and/or final changes to the grant agreement that materially impact the DE Teams ability to perform the work set-forth herein.
- County GSA shall be responsible for grant agreement administration.
- The DE Team reserves the right to augment the DE Team with additional team members and remove team members as may be required to facilitate successful Project completion.
- County GSA agrees that the DE Team will perform subsequent design and construction services associated with the Project through future task amendments.

3.4 Schedule

The DE Team will initiate the scope of work set-forth in this proposal as soon as practically possible after receiving a signed agreement from the County GSA.

3.5 Cost Proposal

DE Team costs associated with performing Tasks 1 – 5 as set-forth herein will be billed to the County GSA on a time and materials basis not to exceed $85,325.50. Actual Project costs will not be tracked on a task basis, nor will individual task budgets constrain charges for work performed up to the total estimated budget. Table 1 below provides a Budget Summary of the costs associated with the work contemplated herein.

TABLE 1. BUDGET SUMMARY

Budget Summary	
Original Project Budget for Planning/Design/Environmental (Grant Category b)	$574,337.00
Total Budget Allocated to Date (30% & 60% Designs)	$489,011.50
Remaining Budget to Complete 100% Design	$85,325.50

EXHIBIT B

Proposal for Professional Engineering Services

To:	Ms. Stephanie Anagnoson Department of Water and Natural Resources Madera County
From:	Davids Engineering, Inc. www.davidsengineering.com
Date:	7/1/2025
Subject:	Bidding & Construction Management - Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Project 1

Davids Engineering, Inc. (DE) is pleased to provide this proposal to Madera County GSA (County) for professional engineering services associated with providing bidding support and construction management services for Chowchilla Bypass Recharge for Subsidence and Flood Risk Reduction Project 1 (Project). While DE will complete the majority of work associated with construction management of the Project, a team of subconsultants will provide assistance within their specific areas of expertise as indicated below. DE, Environmental Science Associates (ESA), BSK, Provost and Pritchard, and Ardurra, Inc. are collectively referred to as the DE Team.

- ESA will perform environmental surveys as required by Project permits
- BSK will perform soils and materials testing
- Ardurra, Inc. will provide construction staking and as-built surveys
- Provost and Pritchard will provide on-site inspection

1 Project Overview and Objective

The Madera County Groundwater Sustainability Agencies (GSAs) are currently implementing Groundwater Sustainability Plans (GSPs) for the Chowchilla, Madera, and Delta-Mendota Subbasins to achieve groundwater sustainability by 2040. The GSPs include a mix of projects and management actions that will lead to sustainable groundwater management. A key component of these GSPs is the development of projects that enable groundwater recharge through in-lieu practices, Flood-MAR, and spreading basins. To aid in groundwater recharge project development, Madera County is currently engaged in development of a strategic recharge plan and implementation program.

The Project as identified in the strategic recharge plan includes the planning, design, environmental permitting, construction, construction management, monitoring, assessment, stakeholder outreach, and education associated with the construction of three new turnouts with appropriate conveyance to divert flood flows to approximately 1,700 acres of existing farmland for flood-managed aquifer recharge (Flood-MAR) and two dedicated groundwater recharge basins with approximately 64 acres in total area.

2 Project Approach

In completion of providing construction management services for the Project, the DE Team proposes a comprehensive approach building off past and ongoing work being performed on behalf of the County by the DE Team.

3 Project Proposal

3.1 Scope of Services

The scope of professional services includes work activities in four (4) tasks as set-forth below.

Task 1. Advertise Project for Bid and Support Award
The DE Team, in collaboration with Madera County GSA staff, will prepare bidding documents including the invitation to bid, instructions to bidders, bid forms, and descriptions of bid items. Upon completion of bid documents, the DE Team will assist Madera County GSA staff with coordinating an on-site pre-bid meeting and publicly advertising the Project in accordance with the public bidding practices adopted by Madera County. Upon acceptance of public bids, the DE Team will provide support in reviewing received bids and making a recommendation of award.

Deliverables:

- Bidding Documents
- Recommendation of Award

Task 2. Complete Pre-Construction Activities
The DE Team will advance the construction/implementation phase from bid award to the beginning of construction by coordinating with landowners, sending pre-construction notification to permitting agencies, and coordinating the pre-construction meeting. The DE team will also coordinate pre-construction surveys & reporting for permit compliance.

Deliverables:

- Pre-construction notifications to permitting agencies and landowners
- Pre-construction surveys and reports for permit compliance and documentation of pre-construction conditions
- Pre-construction meeting minutes

Task 3. Facilitate Construction Management
In performing construction management duties, the DE Team will provide the following:

- Engineering and management services during construction to ensure that the Project is built per the approved plans and specifications, meets the designer's intent, and methods, products, materials, and equipment used are pre-approved and documented.
- Day-to-day management of construction activities with the objective of 1) ensuring that contractual and design-related requirements are being met by the contractor, 2) construction-related costs and schedule are monitored and controlled, 3) construction activities are tracked, documented, and relayed to the Madera County GSA staff and other project partners, and 4) the

transitional stages (i.e., close-out and hand-over) of the Project are completed efficiently and effectively.

- Preparation of progress payments.
- Onsite oversite and inspection of construction activities as dictated by construction progress and focusing on critical stages of work, underground work prior to covering, and items requiring special inspection.
- Facilitate biological and permit compliance monitoring.
- Participate in one pre-, during, and post-construction site visit with the DWR Grant Manager and/or other representative of DWR as required.
- Construction staking that provides general layout allowing contractor to set line and grade for all Project features and components.
- Materials and soils testing to ensure work performed meets the project plans and specifications.

Deliverables:

- Construction documentation – daily reports, submittals, schedules, requests for information, progress payments, etc.
- Construction staking records
- Materials and soils testing records
- Photo documentation
- Site visit write ups
- Environmental compliance reports

Task 4. Perform Construction Contract Close-Out

The DE Team will prepare a summary and reconciliation of all payments, certification of completion by the design engineer and a notice of final completion to close-out the construction contract. The Project Manager will review and confirm accuracy of the record/as-built drawings to indicate all changes made during the construction process. The Project Manager will complete the final close-out walk-through and inspection (with Madera County GSA staff), including any permit inspections showing all commitments and compliance.

Deliverables:

- Record/As-built drawings
- Certification of completion
- Grant Completion Report
- Notice of completion

3.2 Assumptions

- The DE Team will not be responsible for providing any legal advice, legal guidance and/or legal opinions.
- County shall provide the DE Team with all landowner contact information as may be required.
- County will work cooperatively with the DE Team and respond timely to the DE Team's information requests.

- County will facilitate DE Team access to lands as may be required during completion of the work outlined in tasks 1 - 4.
- County agrees that final implementation and subsequent use of the Project is contingent on successful environmental permitting, successful water rights permitting, and DWR approval as applicable in the grant agreement and the DE Team cannot guarantee completion of these items by a specified date.
- County will provide legal review and/or assistance as may be required during completion of the work outlined in tasks 1 - 4.
- County will be the lead for stakeholder outreach beyond that set-forth in tasks 1 - 4.
- County will be the lead and facilitate landowner and/or GSA agreement preparation, review, and execution as may be required.
- Any and all fees associated with environmental permitting and CEQA will be the responsibility of CLIENT.
- Any and all fees associated with Project advertising will be the responsibility of CLIENT.
- Project work required and/or requested by the County which is not covered in this proposal shall be paid for by the County on a time and materials basis at the applicable DE Team rate then in effect.
- County shall immediately notify the DE Team of any proposed and/or final changes to the grant agreement that materially impact the DE Teams ability to perform the work set-forth herein.
- County shall be responsible for grant agreement administration.
- The DE Team reserves the right to augment the DE Team with additional team members and remove team members as may be required to facilitate successful Project completion.
- One set of construction stakes will be provided for each project feature (pump sump, control structure, pipelines, etc.). Any re-staking or staking outside of this scope of shall be paid for by the County on a time and materials basis at the applicable DE Team rate then in effect.

3.3 Schedule

DE will initiate this scope of work as soon as practically possible after receiving notice to proceed from County. DE proposes to complete scope of work by January 28, 2026 (1 month prior to grant end date), or as mutually agreed between County and DE. Deviations from the agreed upon schedule that occur during the work will be made known to County as soon as practicable.

3.4 Cost Proposal

DE Team costs associated with performing tasks 1 – 4 as set-forth herein will be billed to the County on a time and materials basis not to exceed $383,528. Actual project costs will not be tracked on a task basis, nor will individual task budgets constrain charges for work performed up to the total estimated budget. Table 1 below provides a Fee Summary by Task of the costs associated with the work contemplated herein.

TABLE 1. FEE SUMMARY

Task Number	Task Name	DE Labor Cost	Sub - Contractor Cost	Direct Cost	Estimated Total Cost
1	Advertise Project for Bid and Support Award	$41,668	$10,000	$98	$51,766
2	Complete Preconstruction Activities	$10,960	$0	$336	$11,296
3	Facilitate Construction Management	$45,178	$259,620	$3,136	$307,934
4	Perform Construction Contract Close-Out	$12,196	$0	$336	$12,532
Totals		**$110,002**	**$269,620**	**$3,906**	**$383,528**

EXHIBIT C

Proposal for Professional Engineering Services

To:	Ms. Stephanie Anagnoson Department of Water and Natural Resources Madera County GSA
From:	Davids Engineering, Inc. www.davidsengineering.com
Date:	May 2, 2025
Subject:	100% Design and Environmental Compliance Permitting for Chowchilla Subbasin Recharge Project 2

Davids Engineering, Inc. (DE) is pleased to provide this proposal to the Madera County GSA (County GSA) for professional engineering services associated with 100% design for Chowchilla Subbasin Recharge Project 2 (Project). Completion of 100% design of the Project will include diversion system design to be performed by Provost and Pritchard Consulting Group (P&P). DE and P&P are collectively referred to as the DE Team.

1 Project Overview and Objective

The Madera County Groundwater Sustainability Agencies (GSAs) are currently implementing Groundwater Sustainability Plans (GSPs) for the Chowchilla, Madera, and Delta-Mendota Subbasins to achieve groundwater sustainability by 2040. The GSPs include a mix of projects and management actions that will lead to sustainable groundwater management. A key component of these GSPs is the development of projects that enable groundwater recharge through in-lieu practices, Flood-MAR, and spreading basins. To aid in groundwater recharge project development, the County GSA is currently engaged in development of a strategic recharge plan and implementation program.

The Project is located in the western portion of the Chowchilla Subbasin and lies solely within the management area shared with Triangle T Water District. Recharge activities will occur on lands adjacent to or within short proximity of the Chowchilla Bypass. As defined in the Chowchilla Subbasin GSP, the Project will divert flood flows from the Chowchilla Bypass in years when water is available and apply the water onto participating lands for Flood Managed Aquifer Recharge (Flood-MAR) and into a dedicated recharge basin for direct recharge. The Project will construct a single Point of Diversion (POD) on the Chowchilla Bypass and build a conveyance pipeline to deliver the water to the participating agricultural lands. The combination of a recharge basin and Flood-MAR in a single project allows for a larger total recharge capacity while maintaining much of that capacity in productive farmland when water is not being applied for recharge. In addition, the combination of recharge methods into one project results in a more cost-effective overall project.

2 Project Approach

In completion of the 100% design of the Project, the DE Team proposes a comprehensive approach building off past and ongoing work being performed on behalf of the County GSA by the DE Team.

3 Project Proposal

3.1 Scope of Services

This scope of professional services includes work activities in five (5) tasks as set-forth below.

Task 1. Update Basis of Design Report – The DE Team will work closely with Madera County GSA staff and interested stakeholders to update the DRAFT Basis of Design (BOD) Report prepared as part of the 60% design. Upon completion of the BOD Report, the DE Team will facilitate one, 1-hour in-person meeting with applicable County GSA staff to review the updated BOD Report and solicit input. Following the meeting with County GSA staff, the DE Team will finalize the BOD Report. The County GSA shall be responsible for conveying copies of the BOD Reports to the DWR Grant Manager as may be required.

Task 2. Integrate Environmental Compliance and Permits
DE will assist County GSA staff in review and incorporation of all environmental and encroachment permits into the bid documents. The County GSA shall be responsible for conveying copies of all required permits and any required CEQA documentation to the DWR Grant Manager. Any and all filing and permit application fees will be the responsibility of the County GSA.

Task 3. Prepare 100% Project Specifications and Bid Documents – The DE Team will prepare a complete working draft of the technical specifications for the Project. Technical specifications will be integrated into the bid documents to be used in the public bidding process. The technical specifications and bid documents will incorporate environmental constraints or mitigation deemed necessary by permits applicable to the Project. Bid Documents provided by the DE Team will include Scope of Work, General Specifications, Technical Specifications, Engineers Estimate, Bid Quantities Sheet, and Design Drawings. The DE Team will assist the County GSA in developing the Construction Contract Agreement(s) and General Conditions.

County GSA staff will be responsible for sharing the draft specifications and bid documents with the DWR Grant Manager and subsequently sharing any and all comments from the DWR Grant Manager with the DE Team as applicable.

Task 4. Complete 100% Design Drawings – The DE Team will facilitate the completion of 100% Design Drawings for the Project. 100% Design Drawings will include full design of all Project components and relevant details. The 100% design drawings will incorporate environmental constraints or mitigation measures deemed necessary as part of completion of Task 2.

Upon completion of the 100% Design Drawings, the DE Team will facilitate one, 1-hour remote meeting with applicable County GSA staff to review the 100% Design Drawings and solicit input. Following the meeting with the County GSA, the DE Team will finalize the 100% Design Drawings. County GSA staff will

be responsible for sharing the 100% Design Drawings with the DWR Grant Manager and subsequently sharing any and all comments from the DWR Grant Manager with the DE Team as applicable.

Task 5. Prepare Engineer's Estimate of Probable Construction Cost (Engineer's Estimate) – Using the 100% Design Drawings, the DE Team will prepare an Engineer's Estimate. The Engineer's Estimate will reflect the scope of the Project as set-forth in the 100% Design Drawings, the requirements and standards set-forth in the Project specifications, measures required by permits and current construction costs.

The 100% Engineer's Estimate will be reviewed during the meeting facilitated as part of Task 4. Any Project scope changes stemming from the review shall be conveyed to the DE Team in writing.

3.2 Deliverables

1. Electronic copy of Final BOD Report
2. Electronic copy of 100% Design Drawings
3. Electronic copy of 100% Engineer's Estimate
4. Electronic copy of 100% Project Specifications

3.3 Assumptions

- The DE Team will not be responsible for providing any legal advice, legal guidance and/or legal opinions.
- County GSA will be responsible for coordination with DWR Grant Manager as required.
- Any Project changes stemming from review meetings shall be conveyed to the DE Team in writing.
- Any and all filing and permit application fees will be the responsibility of the County GSA.
- Any and all mitigation (environmental or other) required will be the responsibility of the County GSA.
- County GSA will work cooperatively with the DE Team and respond timely to the DE Teams information requests.
- County GSA agrees that the DE Team can't guarantee timely action by the permitting agencies and therefore, any delay on behalf of the permitting agencies will impact the schedule set-forth in section 3.4 of this proposal.
- County GSA will facilitate DE Team access to lands as may be required during completion of the work outlined in tasks 1 - 5.
- County GSA agrees that final implementation and subsequent use of the Project is contingent on successful environmental permitting, successful water rights permitting, and DWR approval as applicable in the grant agreement and the DE Team cannot guarantee completion of these items by a specified date.
- County GSA will provide legal review and/or assistance as may be required during completion of the work outlined in tasks 1 - 5.
- County GSA will provide any templates or boiler plate documents necessary for completion of Task 3.

- Bid Documents provided by the DE Team will include Scope of Work, General Specifications, Technical Specifications, Engineers Estimate, Bid Quantities Sheet, and Design Drawings. The County GSA will be responsible for providing Construction Contract Agreement(s) and General Conditions.
- County GSA will be the lead for stakeholder outreach beyond that set-forth in this proposal.
- County GSA will be the lead and facilitate landowner and/or GSA agreement preparation, review, and execution as may be required.
- Project work required and/or requested by the County GSA which is not covered in this proposal shall be paid for by the County on a time and materials basis at the applicable DE Team rate then in effect.
- County GSA shall immediately notify the DE Team of any proposed and/or final changes to the grant agreement that materially impact the DE Teams ability to perform the work set-forth herein.
- County GSA shall be responsible for grant agreement administration.
- The DE Team reserves the right to augment the DE Team with additional team members and remove team members as may be required to facilitate successful Project completion.
- County GSA agrees that the DE Team will perform subsequent design and construction services associated with the Project through future task amendments.

3.4 Schedule

The DE Team will initiate the scope of work set-forth in this proposal as soon as practically possible after receiving a signed agreement from the County GSA.

3.5 Cost Proposal

DE Team costs associated with performing Tasks 1 – 5 as set-forth herein will be billed to the County GSA on a time and materials basis not to exceed $180,000. Actual Project costs will not be tracked on a task basis, nor will individual task budgets constrain charges for work performed up to the total estimated budget.

EXHIBIT D

DAVIDS ENGINEERING, INC

Proposal for Professional Engineering Services

To:	Ms. Stephanie Anagnoson Department of Water and Natural Resources Madera County
From:	Davids Engineering, Inc. www.davidsengineering.com
Date:	6/3/25
Subject:	30% and 60% Designs for Chowchilla Recharge Project 2 – Talley Diversion System

Davids Engineering, Inc. (DE) is pleased to provide this proposal to the Madera County Groundwater Sustainability Agency (County GSA) for professional engineering services associated with 30% and 60% Designs of the Talley Diversion which was added to Chowchilla Recharge Project 2 by execution of grant Amendment 4 (Project). While DE will complete the majority of work associated with design of the Project, Ardurra, Inc. (Ardurra) will perform land surveying, BSK Associates (BSK) will provide geotechnical engineering services, Environmental Science Associates (ESA) will perform environmental permitting related to necessary diversion and conveyance infrastructure and diversion system design will be performed by Provost and Pritchard Consulting Group (P&P). DE, Ardurra, BSK, ESA & P&P are collectively referred to as the DE Team.

1 Project Overview and Objective

The Madera County Groundwater Sustainability Agencies (GSAs) are currently implementing Groundwater Sustainability Plans (GSPs) for the Chowchilla, Madera, and Delta-Mendota Subbasins to achieve groundwater sustainability by 2040. The GSPs include a mix of projects and management actions that will lead to sustainable groundwater management. A key component of these GSPs is the development of projects that enable groundwater recharge through in-lieu practices, Flood-MAR, and spreading basins. To aid in groundwater recharge project development, the Madera County GSA is currently engaged in the development of a strategic recharge plan and implementation program.

Chowchilla Project 2 includes activities associated with the planning, design, permitting, and public outreach for future construction of turnouts on the Chowchilla Bypass with appropriate conveyance to divert flood flows to existing farmland for groundwater recharge through both flood-managed aquifer recharge (Flood-MAR) and dedicated recharge basins. The Project will be designed to have the capacity of recharging approximately 2,000 acre-feet per year at full build out, when water is available. The following summary provides the anticipated design components:

- One point of diversion on the Chowchilla Bypass capable of diverting up to 20 cubic feet per second equipped with a fish screen and a 24-inch magnetic flow meter.
- 2,500 lineal feet of PVC pipe to deliver water to a 5-acre private recharge basin for direct recharge and Flood-MAR.

2 Project Approach

In completion of the 30% and 60% Designs for the Project, the DE Team proposes a comprehensive approach building off past and ongoing work being performed on behalf of the County GSA by the DE Team. Doing so will allow the DE Team to expedite completion of the 30% and 60% Designs in a streamlined and cohesive manner.

3 Project Proposal

This Scope of Services includes work activities for both 30% and 60% Designs as set-forth below.

3.1 Scope of Services - 30% Design

Task 1. Complete Basis of Design Report – The DE Team will work closely with applicable County GSA staff and interested stakeholders to prepare a DRAFT Basis of Design (BOD) Report. The DRAFT BOD Report is likely to include the following components:

- Introduction
- Review of Existing Conditions
- Design Criteria
- Environmental considerations
- Alternative Analysis
- Preferred Alternative
- Project Implementation

Upon completion of the DRAFT BOD Report, the DE Team will facilitate one remote meeting (up to 2 DE staff) to review the DRAFT BOD Report with County GSA staff. Following the meeting with County GSA staff, the DE Team will finalize the DRAFT BOD Report. The County GSA shall be responsible for conveying copies of the BOD Reports to the DWR Grant Manager as may be required.

Task 2. Complete Survey and Geotechnical Investigation – The DE Team will facilitate the collection of survey information along the Project alignment(s). Survey information collected will include that necessary to facilitate completion of Project designs.

The DE Team will complete a geotechnical investigation including field exploration and laboratory testing. Based on the results of the field exploration and laboratory testing program, engineering analyses will be performed to evaluate site conditions and develop recommendations for site preparation procedures. This work will be summarized in a geotechnical report used to inform the Project design.

Task 3. Complete 30% Design Drawings – The DE Team will facilitate the completion of 30% Design Drawings for the Project resulting from Tasks 1-2. 30% Design Drawings shall generally include the primary Project components, but are not final design drawings, and are not of sufficient detail to initiate construction and/or prepare a detailed engineer's estimate of probable cost. Upon completion of the

DRAFT 30% Design Drawings, the DE Team will facilitate one remote meeting (up to 2 DE staff) to review the DRAFT 30% Design Drawings with interested stakeholders. Following input received from interested stakeholders, the DE Team will make any necessary revisions and facilitate one remote meeting (up to 2 DE staff) with County GSA staff to review the DRAFT 30% Design Drawings and solicit input. Following the meeting with the County GSA, the DE Team will finalize the DRAFT 30% Design Drawings.

3.2 Scope of Services - 60% Design

Task 4. Update Basis of Design Report – The DE Team will work closely with applicable County GSA staff and interested stakeholders to update the DRAFT Basis of Design (BOD) Report prepared as part of the 30% Design. Upon completion of the 60% BOD Report, the DE Team will facilitate one, 1-hour in-person meeting (up to 2 DE staff) with applicable County GSA staff to review the updated BOD Report and solicit input. Following the meeting with County GSA staff, the DE Team will finalize the BOD Report.

The DE Team doesn't foresee any changes to the BOD Report following completion of the 60% Design. The County GSA shall be responsible for conveying copies of the BOD Report to the DWR Grant Manager as may be required.

Task 5. Perform Environmental Compliance and Permitting – Using the design information available, the DE Team will initiate environmental compliance and permitting for the Project. Environmental compliance and permitting may include, but is not limited to field surveys, CEQA compliance, and permitting activities with various entities as may be required (USACE, NHPA, USFWS, NMFS, SWRCB, CVFPB, CDWF, and various local agencies). The DE Team will share electronic copies of draft environmental compliance and permitting documentation with applicable County GSA staff to solicit input.

Up to 10, 1-hour remote meetings will be held with the DE Team and applicable County GSA staff to discuss environmental compliance and permitting activities as may be required. Remote meetings will include, at most, 4 DE Team members (2 from DE and 2 from ESA). The County GSA shall be responsible for conveying copies of all required permits, initial study, notice of intent, notice of completion, notice of determination and any additional required CEQA documentation to the DWR Grant Manager. Any and all filing and permit application fees will be the responsibility of the County GSA. The DE Team can't guarantee timely action by the permitting agencies and therefore any delay on behalf of the permitting agencies will impact the schedule set-forth in Section 3.5 of this proposal.

Task 6. Prepare DRAFT Project Specifications and Bid Documents – The DE Team will prepare a complete working draft of the technical specifications and bid documents for the Project. To the extent available, County GSA staff shall supply DE with standard specifications and bid documents as may be customarily used by the County GSA. It is anticipated that specifications and bid documents will be substantially the same as that developed for Chowchilla Recharge Project 1. Bid Documents provided by the DE Team will include Scope of Work, General Specifications, Technical Specifications, Engineer's Estimate, Bid Quantities Sheet, and Design Drawings. The County GSA will be responsible for providing Construction Contract Agreement(s) and General Conditions. Following completion of the draft specifications and bid documents, the DE Team will facilitate one, 2-hour meeting (up to 2 DE staff) with applicable County GSA staff to review the draft specifications and bid documents. Following the meeting

with the County GSA, the DE Team will revise the draft specifications and bid documents as may be required. County GSA staff will be responsible for sharing the draft specifications and bid documents with the DWR Grant Manager and subsequently sharing any and all comments from the DWR Grant Manager with the DE Team as applicable.

Task 7. Complete 60% Design Drawings – The DE Team will facilitate the completion of 60% Design Drawings for the Project. 60% Design Drawings will include all primary Project components and relevant details. The 60% Design Drawings aren't final design drawings and shall not be used to initiate construction and/or prepare a final engineer's estimate of probable cost. Upon completion of the 60% Design Drawings, the DE Team will facilitate one, 2-hour remote meeting (up to 2 DE staff) to review the 60% Design Drawings with interested stakeholders in Madera Subbasin. Following input received from interested stakeholders, the DE Team will make any necessary revisions and facilitate one, 2-hour remote meeting (up to 2 DE staff) with applicable County GSA staff to review the 60% Design Drawings and solicit input. Following the meeting with the County GSA, the DE Team will finalize the 60% Design Drawings. County GSA staff will be responsible for sharing the 60% Design Drawings with the DWR Grant Manager and subsequently sharing any and all comments from the DWR Grant Manager with the DE Team as applicable.

Task 8. Prepare Planning Level Engineer's Estimate of Probable Cost (Engineer's Estimate) – Using the 60% Design Drawings (Task 7), the DE Team will prepare an Engineer's Estimate. The Engineer's Estimate will reflect the scope of the Project as set-forth in the 60% Design Drawings, the requirements and standards set-forth in the draft specifications, and current construction costs. At this point, the Engineer's Estimate will not include costs associated with Environmental Permitting and Compliance. Costs estimated at this stage are suitable for planning and value engineering but shall not be used for making binding budget decisions. Final estimated Project costs are predicated on the final design drawings, specifications, and construction prices at the time of bid. Following completion of the Engineer's Estimate, the DE Team will facilitate one, 1-hour remote meeting (up to 2 DE staff) with applicable County GSA staff to review the Engineer's Estimate and solicit any input. Any Project scope changes stemming from the review shall be conveyed to the DE Team in writing.

3.3 Deliverables

30% Design Deliverables

1. Electronic copy of DRAFT BOD Report
2. Electronic copy of DRAFT 30% Design Drawings
3. Electronic copy of Geotechnical Report

60% Design Deliverables

1. Electronic copy of Updated BOD Report
2. Electronic copy of DRAFT 60% Design Drawings
3. Electronic copy of DRAFT Engineer's Estimate
4. Electronic copy of DRAFT Project Specifications and Bid Documents
5. Electronic copy of CEQA documentation

3.4 Assumptions

- The DE Team will not be responsible for providing any legal advice, legal guidance and/or legal opinions.
- County GSA shall provide the DE Team with all landowner contact information as may be required.
- County GSA will work cooperatively with the DE Team and respond timely to the DE Teams information requests.
- County GSA will facilitate DE Team access to lands as may be required during completion of the work outlined in tasks 1 - 8.
- County GSA agrees that final implementation and subsequent use of the Project is contingent on successful environmental permitting, successful water rights permitting, and DWR approval as applicable in the grant agreement and the DE Team cannot guarantee completion of these items by a specified date.
- County GSA will provide legal review and/or assistance as may be required during completion of the work outlined in tasks 1 - 8.
- County GSA will be the lead for stakeholder outreach beyond that set-forth above.
- County GSA will be the lead and facilitate landowner and/or GSA agreement preparation, review, and execution as may be required.
- Project work required and/or requested by the County GSA which is not covered in this proposal shall be paid for by the County GSA on a time and materials basis at the applicable DE Team rate then in effect.
- County GSA shall immediately notify the DE Team of any proposed and/or final changes to the grant agreement that materially impact the DE Teams ability to perform the work set-forth herein.
- County GSA shall be responsible for grant agreement administration.
- County GSA agrees that professional services set-forth in this proposal do not constitute final design and shall not be used for construction of the Project.
- The DE Team reserves the right to augment the DE Team with additional team members and remove team members as may be required to facilitate successful Project completion.
- County GSA agrees that the DE Team will perform subsequent design and construction services associated with the Project through future task order amendments.

3.5 Schedule

DE will initiate this scope of work as soon as practically possible after receiving notice to proceed from the County GSA. DE proposes to complete scope of work, excluding completion of task 5 Environmental Compliance and Permitting, by January 31, 2026, or as mutually agreed between County GSA and DE. Deviations from the agreed upon schedule that occur during the work will be made known to County GSA as soon as practicable. Upon completion of this scope of work and amendment of the task by Madera County GSA, the DE Team will begin work on subsequent design phases of the Project.

3.6 Cost Proposal

DE Team costs associated with performing tasks 1 - 8 as set-forth herein will be billed to the County GSA on a time and materials basis not to exceed $326,417. Actual project costs will not be tracked on a task basis, nor will individual task budgets constrain charges for work performed up to the total estimated budget. Table 1 below provides a Fee Summary by Task of the costs associated with the work contemplated herein.

TABLE 1. FEE SUMMARY

Task Number	Task Name	DE Labor Cost	Sub - Contractor Cost	Direct Cost	Estimated Total Cost
1	Complete Basis of Design Report	$10,110	$0	$105	$10,215
2	Complete Survey and Geotechnical Investigation	$3,268	$23,500	$210	$26,978
3	Complete 30% Design Drawings	$17,186	$35,000	$0	$52,186
4	Update Basis of Design Report	$5,160	$14,200	$0	$19,360
5	Perform Environmental Compliance and Permitting	$11,376	$162,500	$0	$173,876
6	Prepare DRAFT Project Specifications and Bid Documents	$24,120	$0	$0	$24,120
7	Complete 60% Design Drawings	$10,982	$0	$0	$10,982
8	Prepare Planning Level Engineer's Estimate of Probable Cost	$8,700	$0	$0	$8,700
Totals		**$90,902**	**$235,200**	**$315**	**$326,417**