KERN GROUNDWATER AUTHORITY

Regular Meeting of Board of Directors
September 22, 2021 8:00 a.m.

NOTICE: Pursuant to the Governor's Executive Order N-29-20 this meeting will be conducted by teleconference. All parties/public may attend the meeting via teleconferencing and offer public comments by phone, using the call-in information below:

Zoom: https://zoom.us/j/97434288750?pwd=MEJ5WUM4V2Fvd3dNa0dGVnBwT0t0Zz09
Meeting ID: 974 3428 8750
Passcode: 868983
Telephone Dial-in: (669)900-6833

Kern Groundwater Authority Board of Directors Agenda

This meeting is held in accordance with the Governor's Executive Order N-29-20 and portions of the Brown Act pursuant to Section 54956 of the California Government Code and the Kern Groundwater Authority Joint Powers Agreement.

1. Roll Call - Quorum Determination
In the absence of a quorum of the Board the meeting will be adjourned.

2. Flag Salute

3. Public Input
This portion of the meeting is set aside to provide the public an opportunity to bring to the attention of the Board matters of which the Board may not be aware and which are not on the current agenda. No action can be taken on any matter raised during this portion of the meeting; however, a Board member may request that the matter be placed on any future agenda for further review and possible action. Members of the public may directly address the Board of Directors on any item of interest within the Board's subject matter jurisdiction, before or during the Board's consideration of the item. The President may limit the time allowed for comment.

4. Approval of Minutes
a. July Regular Board Meeting Minutes*

5. Treasurer's Report
a. Presentation & Adoption of the 2020 Audit* - Barbich, Hooper, King
b. Financial Report & Accounts Payable (Ratify) – August*
c. Financial Report & Accounts Payable (Approve) – September*

6. Attorneys Report
a. Report on the Curtailments

- Denotes Action Item

7. Executive Director Report

- **a.** Discussion & approval for 2021 Cash Call – Second Installment*
- **b.** Discussion and direction on Native Yield Study Proposal for adoption in October*
- **c.** Update on the Data Management System
- **d.** Accomplishments
- **e**. Forward Work Plan

8. New Business

This Portion of the Meeting is set aside to provide each Board member an opportunity to bring to the attention of other Board members and the public matters which have come to their attention and/or which may be appropriate for future consideration. No action can be taken on any matter raised during this portion of the meeting; however, a Board member may request that the matter be placed on any future agenda for further review and possible action.

9. Correspondence

a. Kern County Planning Department – Notice of Proposed General Plan Amendment Zone Change for APN 177-220-24 in Arvin-Edison Water Storage District jurisdiction

b Wheeler Ridge-Maricopa Water Storage District – Notice of adopted 2020 Agricultural Water Management Plan

c. Arvin-Edison Water Storage District, Wheeler Ridge-Maricopa Water Storage District & Tejon-Castac Water District letter regarding Groundwater Sustainability Agency status

10. Closed Session

a. Conference with Legal Counsel – Potential Litigation: Closed Session pursuant to Government Code Section 54956.9(d)(2), (e)(2)(two matters)

11. Adjournment

A person with a qualifying disability under the Americans with Disabilities Act of 1990 may request the Authority provide disability-related modification or accommodation in order to participate in any public meeting of the Authority. Such assistance includes appropriate alternative formats for the agendas and agenda packets. Requests should be made in person, by telephone, facsimile and/or written correspondence to the Authority office, at least 48 hours before a public Authority meeting. Written materials related to an item on this agenda to be considered in open session that are public documents and that are distributed to board members after the posting of the agenda, will be made available for public inspection when they are so distribution at the office of the Authority located at 1800 30th Street, Ste #280, Bakersfield, California during normal business hours. Documents that are public documents provided by others during a meeting will be available at the same location during business hours after the meeting.

- Denotes Action Item

JPA Board Meeting Minutes
Kern Groundwater Authority

Wednesday, July 28, 2021, at 8:00 a.m.
Participation by Teleconference/ZOOM

JPA DISTRICT REPRESENTATIVES AND ALTERNATES PRESENT

Rafael Gallardo, Arvin Community Services District
Derek Yurosek, Arvin-Edison WSD
John Gaugel, Cawelo WD
Chad Hathway, Eastside Water Management Area (non-voting member)
Laura Cattani, Kern County Water Agency
Andrew Pandol, Kern-Tulare WD
Kim Brown, Kern Water Bank Authority
Gary Unruh, Rosedale-Rio Bravo WSD
Dan Waterhouse, Semitropic WSD
Brandon Morris, Southern San Joaquin MUD
Randy Bloemhof, Shafter-Wasco ID
Mark Valpredo, Tejon-Castac WD
Gary Morris, West Kern WD
Rob Goff, Westside District Water Authority
Michael Blaine, Wheeler Ridge-Maricopa WSD

JPA DISTRICT REPRESENTATIVES ABSENT

Chad Givens, City of Shafter
Kevin Andrew, North Kern Water Storage District

OTHERS PRESENT/PARTICIPATING

Valerie Kincaid, O'Laughlin Paris, LLC
Patty Poire, Kern Groundwater Authority

1. **Roll Call – Quorum Determination** – Chairman Waterhouse called meeting to order at 8:01 a.m. after it was confirmed there was a quorum. The Board met the threshold for a quorum under the JPA and operated under it.

2. **Public Comments**
    a. Jeff Anthony – Commented with compliments for Zoom meeting option.
    b. Don Wright, Water Wrights – Commented with Thanks for conference call meeting option.

3. **Approval of Minutes**
    a. June Regular Board Meeting Minutes

A motion was made by Director Blaine and seconded by Director Valpredo to approve the June 23, 2021, Regular Board Meeting Minutes. The motion was unanimously carried.

4. **Treasurer's Report**
    a. **Financial Report & Accounts Payable – April** – Mrs. Duarosan asked the board to approve the Treasurer's Report as presented and authorize disbursement of $41,773.65 for the month of June as detailed on Exhibit D. It was reported in Exhibit A from June 1, 2021, thru June 30, 2021, that the beginning cash balance was $178,837.83 with no deposits received for June and ending cash balance was $140,701.93. Exhibit B reflected accounts receivable payment received totaling $434 thru June 30, 2021. Mrs. Duarosan reported final Audit summary and results will be reported at the September Board Meeting. A motion was made by Director Brown and seconded by Director Gaugel to approve the treasurer's report and proceed with payments for June 2021. The motion was unanimously carried.

5. **Attorney's Report**
    a. **Discussion & Direction on State Water Board Resolution on Racism** – Agenda item removed at start of meeting.
    b. **Update on State curtailment (including proposed curtailment of groundwater extractions in Scott and Shasta Rivers** - Ms. Kincaid summarized proposed regulations for curtailment of groundwater and extractions in Scott and Shasta Rivers. Ms. Kincaid also presented concerns for impacts on local reservoir's due to proposed regulations. Ms. Kincaid reported that the proposed regulations will either be adopted or amended on August 3rd.

6. **Executive Director Report**
    a. **Discussion & Approval of Exceedance Policy** – Mrs. Poire presents 5th revision of Exceedance Policy for discussion and approval to submit to DWR as part of the KGA GSP for review. A motion was made by Director Pandol and seconded by Director Gary Morris. to approve Draft Exceedance Policy. The motion was all in favor with a nay from Director Unruh from Rosedale-Rio Bravo Water Storage District.
    b. **Discussion & Approval of reimbursement of unused** – Ms. Poire presented and requested reimbursement of unused funds for the 2021 Annual Report for participants. A motion was made by Director Unruh and seconded by Director Goff to approve reimbursement of unused funds. The motion unanimously carried.
    c. **Update on Native Yield Study** – Ms. Poire reported all managers and GSA's have received the proposed Native Yield Study draft proposal for review and comment. Mrs. Poire stated no comments have been received to date.

d. **Update on the Data Management System** – Ms. Poire reported the system was released on July 1st to the GSAs available for the uploading of required SGMA seasonal data. Ms. Poire went on to explain that this will be the first time that the GSAs will be uploading the seasonal via the DMS and from this should be able to continue that process for the life of SGMA. She went on to explain that the DMS will have other features which should be rolled out in September to the board and the public.
e. **Accomplishments** –Ms. Poire referred the Board to the memo regarding Accomplishments and Forward Work Plan in the board package. August meeting is canceled.
f. **Forward Work Plan** – Ms. Poire referred the Board to the memo regarding Forward Work Plan in the board package.

7. **New Business** – None

8. **Correspondence** – Accepted and filed

9. **Closed Session** – Entered into closed session at 8:45 a.m. Board took action to proceed with comment letter submittal.

10. **Adjournment** – 9:54 a.m.

Kern Groundwater Authority

Financial Statements

December 31, 2020

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Independent Auditors' Report

Board of Directors
Kern Groundwater Authority
Bakersfield, California

We have audited the accompanying financial statements of the Kern Groundwater Authority as of and for the year ended December 31, 2020 and the related notes to the financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Kern Groundwater Authority as of December 31, 2020 and the changes in its financial position and cash flows for the year ended December 31, 2020 in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 2 through 5 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

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BARBICH HOOPER KING
DILL HOFFMAN
Accountancy Corporation

Bakersfield, California
September 22, 2021

As management of the Kern Groundwater Authority ("Authority" or "KGA"), we offer readers of the Authority's financial statements this narrative overview and analysis of the Authority's financial performance during the year ended December 31, 2020. Please read it in conjunction with the Authority's financial statements, which follow this section.

Financial and Operating Highlights

Commencing in 2015, the Authority began gathering data for compliance with the Sutainable Groundwater Management Act ("SGMA") as noted in Note 1 by engaging legal and engineering consultants, the primary tasks of which were:

- Evaluating different models for ground water sustainability agencies and plans
- Formulating a strategy for required coordination issues
- Preparation for determining data to be collected for the above processes

Since its formation, KGA has accomplished these preliminary goals culminating in the completion of a Groundwater Sustainability Plan (GSP) that met the requirements of SGMA and was submitted to the California Department of Water Resources (DWR) on January 31, 2020. This submittal was the driving force to all the agreements and activities of the previous years as well as the formation of the Authority. During and throughout this process, KGA completed the development of a groundwater basin modeling system (CV2Sim) and validation of the model through peer review, coordinated with Members and other Groundwater Sustainability Agencies (GSAs) "Participants" on various SGMA compliance parameters, and developed a Groundwater Sustainability Plan (GSP) and related coordination agreements with multiple GSAs within the Kern County sub-basin. The Authority also participated and coordinated with the other GSAs in the Kern subbasin toward the development and submittal of the first required Annual Report which was successfully submitted to DWR on April 1, 2020. With the submittal of the GSP and the Annual Report, the continued requirement of submittal of seasonal data was also an activity in 2020 and will continue going forward. At year-end, KGA began the process of developing a data management tool/system designed to capture and gather the necessary information to satisfy SGMA data management and reporting requirements at the sub-basin, GSA (KGA) and Member/Participant levels.

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Overview of the Financial Statements

This annual financial report includes the management's discussion and analysis, the independent auditors' report, and the basic financial statements of the Authority. The financial statements also include notes that explain in more detail some of the information in the financial statements.

Required Financial Statements

The financial statements of the Authority report information using accounting methods similar to those used by private sector companies. These statements offer short and long-term financial information about its activities. The Statement of Net Position includes all of the Authority's assets and liabilities and provides information about the nature and amounts of investments in resources (assets) and the obligations to the Authority's creditors (liabilities). It also provides the basis for evaluating the capital structure of the Authority and assessing its liquidity and financial flexibility.

All of the revenues and expenses for the year ended December 31, 2020 are accounted for in the Statement of Revenues, Expenses, and Changes in Net Position.

This statement can be used to determine whether the Authority has successfully recovered all its costs through its user fees and other charges, and to determine its profitability and its credit worthiness.

The final required financial statement is the Statement of Cash Flows. This statement reports cash receipts, cash payments, and net changes in cash resulting from operations, financing, and investing activities, and provides answers to such questions as where did cash come from, what was cash used for, and what was the change in the cash balance during the reporting period.

Financial Analysis of the Authority

The Statement of Net Position, and the Statement of Revenues, Expenses and Change in Net Position report information about the Authority's activities during the year. These two statements report the net position of the Authority and the changes in it.

Table A presents a summary of the Authority's statement of net position.

Table A
Condensed Statement of Net Position
December 31, 2020 and 2019

	2020	*2019*	*Dollar Change*	*Percentage Change*
Current assets	$ 297,616	$ 1,362,647	$ (1,065,031)	(78.2%)
Current liabilities	$ 90,408	$ 226,455	$ (136,047)	(60.1%)
Net position	207,208	1,136,192	(928,984)	(81.8%)
	$ 297,616	$ 1,362,647	$ (1,065,031)	(78.2%)

The decrease in current assets of $1,065,032 or 78.2% at December 31, 2020 are largely due to $771,226 of grant reimbursements received during the year from 2019 submittals to DWR for the Proposition 1 Sustainable Groundwater Planning (SGMA) grant (see Note 1) and $229,225 of accounts receivable collections from Members for the prior year's cash calls.

The decrease in current liabilities of $136,047 or 60.1% at December 31, 2020 is due to timing of payments for accounts payable invoices.

The decrease in unrestricted net position at December 31, 2020 of $928,984 or 81.8% is primarily due to refund distributions to Members and Participants (other GSA's) for the SGMA grant reimbursements as noted above.

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While the Statement of Net Position shows the change in financial position of the Authority, the Statement of Revenues, Expenses, and Changes in Net Position provides answers as to nature and source of these changes.

Table B presents a summary of the Authority's statement of revenues, expenses and changes in net position.

Table B
Condensed Statement of Revenues, Expenses and Changes in Net Position
For the Years ended December 31, 2020 and 2019

	2020	*2019*	*Dollar Change*	*Percentage Change*
Operating revenues	$ 671,547	$ 1,492,509	$ (820,962)	(55.0%)
Operating expenses	1,600,531	1,255,894	344,637	27.4%
Operating income (loss)	(928,984)	236,615	(1,165,599)	(492.6%)
Change in net position	(928,984)	236,615	(1,165,599)	(492.6%)
Net position, at beginning of year	1,136,192	899,577	236,615	26.3%
Net position, at end of year	$ 207,208	$ 1,136,192	$ (928,984)	(81.8%)

The decrease in operating revenues of $820,962 or 55.0% at December 31, 2020 is attributable to $230,183 decrease in grant income from the Proposition 1 Sustainable Groundwater Planning (SGMA) Grant Program (See Note 1) in addition to a decrease of $590,777 in Assessments to Members and Participants (other GSA's) as the groundwater modeling and groundwater sustainability plans were completed during 2020.

The increase of $344,637 or 27.04% in operating expenses at December 31, 2020 is the result of a $603,844 decrease in general and administrative expenses arising from reduced Engineering and Legal costs offset by a $948,481 increase in Member and Participants (other GSA's) refunds primarily for the Proposition 1 Sustainable Groundwater Planning (SGMA) Grant Program (See Note1).

Budgetary Comparison

The Authority prepares and adopts a budget annually, however, it is primarily used as a guideline for the regulation of expenses and generally serves as the basis from which cash calls to Authority Members and Participants are determined and approved. The budget is prepared on a modified cash basis of accounting.

Capital Assets

During the year ended December 31, 2020, the Authority did not purchase or receive capital assets.

Debt Service Requirements

No debt was issued or outstanding during the year ended December 31, 2020.

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Contacting the Authority's Management

This financial report is designed to provide our customers and creditors with a general overview of the Authority's finances and to demonstrate the Authority's accountability for the money it receives. If you have questions about this report or need additional information, contact David Hampton, General Manager of North Kern Water Storage District, P.O. Box 81435, Bakersfield, CA 93308.

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Kern Groundwater Authority

Statement of Net Position
December 31, 2020

ASSETS		
Current Assets		
Cash and cash equivalents	$	97,041
Accounts receivable, related party		1,177
Grant receivable		199,398
	$	297,616
LIABILITIES AND NET POSITION		
Current Liabilities		
Accounts payable and accrued liabilities	$	90,408
Net Position		
Unrestricted		207,208
	$	297,616

See Notes to Financial Statements.

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Kern Groundwater Authority

Statement of Revenues, Expenses, and Changes in Net Position
For the Year Ended December 31, 2020

Revenues:		
Assessments to Members and Participants	$	604,092
Grant income		67,455
		671,547
Operating expenses:		
General and administrative		652,050
Member refunds		948,481
		1,600,531
Operating loss		(928,984)
Change in net position		(928,984)
Net position, at December 31, 2019		1,136,192
Net position, at December 31, 2020	$	207,208

See Notes to Financial Statements.

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Kern Groundwater Authority

Statement of Cash Flows
For the Year Ended December 31, 2020

Cash flows from operating activities:		
Cash receipts from assessments and grants	$	1,671,998
Cash payments to Project Participants		(948,481)
Cash payments to suppliers for goods and services		(788,097)
Net cash used in operating activities		(64,580)
Net decrease in cash and cash equivalents		(64,580)
Cash and cash equivalents at December 31, 2019		161,621
Cash and cash equivalents at December 31, 2020	$	97,041
Reconciliation of operating loss to net cash used in operating activities:		
Operating loss	$	(928,984)
Changes in operating assets and liabilities:		
Accounts receivable		1,000,451
Accounts payable		(136,047)
Net cash used in operating activities	$	(64,580)

See Notes to Financial Statements.

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Note 1. Nature of Activities and Summary of Significant Accounting Policies

The reporting entity:

As a result of extended drought in California and diminishing surface water supplies, the State of California began proposing and developing comprehensive groundwater legislation to better manage groundwater. The California State Legislature passed and the Governor signed the "Sustainable Groundwater Management Act ("SGMA")" on September 16, 2014, which became effective January 1, 2015.

In anticipation and prior to SGMA being passed into law, a number of Kern County water districts formed a committee in January 2014 to begin the process of forming a joint powers authority to represent member water districts in the administration of duties related to SGMA. On May 27, 2014, the Kern Groundwater Authority (the "Authority") was formalized through the adoption of a Joint Powers Authority (JPA) to carry out the purposes of part 2-75 of Division 6 (commencing at section 10750 of the California Water Code) and develop, adopt, and implement a ground water management plan that would be available to those lands within the boundaries of the Authority's members.

The Authority amended and restated the original JPA and the Board adopted it on April 5, 2016. The amended and restated JPA addressed the intent that each Member has the sole right and responsibility to implement SGMA within its respective boundaries, acknowledges the formation of the Groundwater Sustainability Agency (GSA) under SGMA (Water Code 10723) and the development of the Groundwater Sustainability Plan (GSP) (Water Code 10727). In May 2017, the Authority received approval from the Department of Water Resources (DWR) of its status as a GSA for the Members.

During 2016, County of Kern was awarded a grant from DWR under the Proposition 1 Water Quality, Supply and Infrastructure Improvement Act of 2014 for counties with stressed basins. The grant was divided into two Kern County Sub-Basins: Indian Wells Sub-Basin and Kern County Sub-Basin. The Authority is located within the Kern County Sub-Basin and is a participant in the grant. As of December 31, 2020, the Authority did not record any grant income and the County of Kern closed this grant with the DWR.

In November 2017, the Authority executed a grant directly with DWR under the Proposition 1 Water Quality, Supply, and Infrastructure Improvement Act of 2014, Agricultural Water Use Efficiency Program. This grant was used to fund costs related to the Irrigation Training & Research Center (ITRC) study. The grant was amended during 2020 to increase funds for remote sensors. As of December 31, 2020, the Authority recorded grant income in the amount of $547.

During 2018, all the GSAs in the Kern County Sub Basin (the Authority and Other GSAs such as Buena Vista Water Storage District, Henry Miller Water District, Kern River Groundwater Sustainability Agency, and Olcese Water District) participated and submitted an application for the Proposition 1 Sustainable Groundwater Planning (SGMA) Grant Program to assist in activities to develop sustainable groundwater plans for the Kern County Sub-Basin.

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The grant agreement between DWR and the Kern River GSA (lead GSA on the grant) was executed on February 4, 2019. The grant is divided into six different work components of which the Authority is participating in four of these components. This grant allows costs for reimbursement dating back to 2015. During 2020, the DWR combined Prop 1 SGMA and Prop 68 grant funds to provide additional funds to Sub-Basins for additional planning monies to assist in GSPs. The Kern Sub-Basin GSA's applied and was approved under this new combined program for the development of a data management system (DMS) which is a requirement under SGMA. The original grant agreement was amended to reflect seven components instead of six with the new component as the Development of the Data Management System. There is no match requirement for this new component. During 2020, there were no submittals to the DWR requesting grant funds for Component seven. As of December 31, 2020, the Authority recorded grant income in the amount of $66,910 for Components one through six.

As part of the SGMA implementation process, the Authority developed several separate and distinct agreements to manage and account for the varied activities related to SGMA. Below is a summary of these agreements, funding methods, specific activities within each agreement and related grant, if any:

Agreement	Formation	Funding	Purpose	Grant ^
SAA#1 *	16-Apr	1	Contract with Irrigation Training & Research Center (ITRC) to develop estimates of historical water use in the Kern County Basin	Prop 1 ITRC
SAA#3 *	17-Apr	2	Establish a Groundwater Sustainability Agency and to coordinate with Members and Department of Water Resources	Not Applicable
SAA#4 *	18-Jul	2	Development of Groundwater Sustainability Plan	Prop 1 SGMA
Groundwater Modeling #1	18-May	2	Contract with Todd Groundwater to develop groundwater modeling for the Kern County Basin-Phase 1	Prop 1 SGMA
Groundwater Modeling #2	18-Oct	3	Contract with Todd Groundwater to develop groundwater modeling for the Kern County Basin-Phase 2	Prop 1 SGMA
GW Peer Review #1	18-May	1	Contract with Woodard & Curran to develop groundwater peer modeling for the Kern County Basin-Phase 1	Prop 1 SGMA
GW Peer Review #2	19-May	4	Contract with Woodard & Curran to develop Groundwater peer modeling for the Kern County Basin-Phase 2	Prop 1 SGMA

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* = Special Activity Agreement
1 = Authority members and Other GSAs based on acreage allocation
2 = Authority members based on per acre basis
3 = Authority members based on equal basis
4 = Authority members based on equal basis; Participants based on acreage allocation
^ = Costs incurred partially reimbursed through grants

Authority Members:

As of December 31, 2020, the Authority's Members are as follows:

Arvin Community Services District
Arvin-Edison Water Storage District
Cawelo Water District
City of Shafter
Eastside Water Management Area
Kern County Water Agency-Pioneer Project
Kern-Tulare Water District
Kern Water Bank Authority
North Kern Water Storage District
Rosedale-Rio Bravo Water Storage District
Semitropic Water Storage District
Shafter-Wasco Irrigation District
Shafter-Wasco 7th Standard Annex
Southern San Joaquin Municipal Utility District
Tejon-Castaic Water District
West Kern Water District
Westside Water Authority
Wheeler Ridge-Maricopa Water Storage District

Management and Board of Directors:

The Authority shall be governed by a Board of Directors, which shall elect a Chairman and Vice-Chairman, whose terms shall be established by the Board of Directors from time to time as necessary. The Board of Directors composition shall be altered from time to time to reflect the termination and/or admission of any new Member. The JPA directs that voting is based on each Member having one vote on matters in which such Members are entitled to vote.

Basis of accounting and financial reporting:

The accompanying financial statements have been prepared on the accrual basis of accounting, in conformity with the uniform system of accounts prescribed for water districts by the Controller of the State of California. Revenues are recognized when earned and expenses are recognized when incurred regardless of the timing of cash payments or receipts.

Proprietary funds distinguish operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. Revenues and expenses not meeting this definition are reported as nonoperating.

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When the Authority has both unrestricted and restricted resources available for Authority purposes, it is the Authority's practice to first expend restricted resources, subsequently utilizing unrestricted resources as needed.

The Authority utilizes a net position presentation in accordance with GASB Statement 34, *Basic Financial Statements - and Management's Discussion and Analysis - for State and Local Governments*, as amended by GASB statement 63, *Financial Reporting of Deferred Outflows of Resources, Deferred Inflows of Resources, and Net Position*.

Net position is categorized as invested in capital assets, net of related debt, restricted components of net position and unrestricted components of net position. These categories are defined as follows:

Net investment in capital - This component of net position consists of capital assets, including restricted capital assets, net of accumulated depreciation and the deferred outflow of advanced refunding of bonds, reduced by the outstanding balances of any bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. If there are significant unspent related debt proceeds at year end, the portion of the debt attributable to the unspent proceeds are not included in the calculation of invested in capital assets, net of related debt. Rather, that portion of the debt is included in the same net position component as the unspent proceeds.

Restricted components of net position - This component of net position consists of restricted assets reduced by liabilities and deferred inflows of resources related to those assets. Generally, a liability relates to restricted assets if the asset results from a resource flow that also results in the recognition of a liability or if the liability will be liquidated with the restricted assets reported.

Unrestricted components of net position - This component of net position is the net amount of assets, deferred outflows of resources, liabilities, and deferred inflows of resources that are not included in the determination of net investment in capital assets or the restricted component of net position

Fund accounting:

The Authority is accounted for as an enterprise fund. Enterprise funds are set up to account for the acquisition and operation of government facilities and services that are intended to be primarily (over 50%) self supported by user charges. Enterprise funds are required when any one of the three criteria are met: the activity of the fund is financed by debt secured by a pledge of fee revenue, laws require collection fees adequate to recover costs, or pricing policies are established to produce fees that recover costs.

Use of estimates:

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

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Cash and cash equivalents:

For purpose of reporting cash flows, the Authority considers cash equivalents to be all highly liquid debt instruments purchased with an original maturity of three months or less. At December 31, 2020, cash and cash equivalents include amounts deposited with banks.

Cash flows:

GASB Statement 9, *Reporting of Cash Flows for Proprietary and Nonexpendable Trust Funds and Governmental Entities that Use Proprietary Fund Accounting,* states for purposes of preparing the statement of cash flows, all transactions not classified as capital and related financing activities or investing activities are classified as operating activities.

Custodial credit risk

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, the Authority will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty (e.g. broker-dealer) to a transaction, a government will not be able to recover the value of its investment or collateral securities that are in the possession of another party. The California Government Code and the Authority's investment policy do not contain legal or policy requirements that would limit the exposure to custodial credit risk for deposits, other than the following provisions for deposits: The California Government Code requires that a financial institution secure deposits made by state or local governmental units by pledging securities in an undivided collateral pool held by a depository regulated under state law (unless so waived by the governmental unit). The market value of the pledged securities in the collateral pool must equal at least 110% of the total deposited by the public agencies. California law also allows financial institutions to secure governmental deposits by pledging first trust deed mortgage notes having a value of 150% of the secured public deposits. At December 31, 2020, the Authority had no risk associated with custodial assets.

Note 2. Related Party Transactions

Assessment fees for the year ended December 31, 2020 of $604,092 resulted from a cost sharing agreement between the Members, Other GSAs and the Authority. Additionally, member refunds for the year ended December 31, 2020 of $948,481 were paid following the receipt of grant income.

DRAFT

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NORTH KERN WATER STORAGE DISTRICT

August 25, 2021

TO: Kern Groundwater Authority Members

FROM: A. David Hampton, General Manager

RECOMMENDED MOTION

Approve the Treasurer's Report as presented and authorize disbursement of accounts payable in the amount of $36,747.90 for the month of July 2021 as detailed on **Exhibit E**.

DISCUSSION

Exhibit A is the Treasurer's Report for the Authority's financial activities from July 1, 2021 through July 31, 2021. There were no cash deposits for the month. After disbursement of expenses totaling $69,737.57, the cash balance on July 31, 2021 was $70,964.36. There was a subsequent cash receipt and deposit of $434.00 in the month of August 2021 as reflected on **Exhibit B**.

The Accounts Receivable balance from Members at July 31, 2021 was $434.00 as detailed on **Exhibit C** but this amount was received in August as reflected on **Exhibit B**. Receivable from Grants on July 31, 2021 was $120,377.00 as detailed in **Exhibit D**. The combined total of Receivables on July 31, 2021 was $120,811.00.

Exhibit E is the detail of Accounts Payable for the month of July 31, 2021 reflecting outstanding payables of $43,606.87. However, invoices totalling $36,747.90 are being requested for payment approval and disbursement at this time. Invoices in the amount of $6,858.97 remains on hold pending further review by the Planning Manager.

Exhibit F is the Authority's unaudited financial statements on July 31, 2021. They include a Statement of Net Position as of July 31, 2021 and a Statement of Revenues and Expenses for the seven months ended July 31, 2021. Both statements present the financial position and results of the Authority's activities for the general JPA membership and each specific Special Activity Agreements. At this time, please direct questions regarding the above to the Fiscal Agent, North Kern Water Storage District's General Manager, David Hampton (dhampton@northkernwsd.com) who can also be reached at the District's Office at 661-393-2696.

Exhibit A
Kern Groundwater Authority
Treasurer's Report - through July 31, 2021

CURRENT ACTIVITY

Cash Balance, Prior Report (June 30, 2021)				140,701.93
Deposits	**Date**	**Purpose**	**Amount**	
Total Deposits				-
Disbursements	**Date**	**Ck #**	**Amount**	
Barbich Hooper King Dill, et al	7/30/21	1855	6,500.00	
Great America Networks Conferencing	7/30/21	1856	8.07	
North Kern WSD	7/30/21	1857	1,000.00	
O'Laughlin & Paris, LLP	7/30/21	1858	10,430.00	
Provost & Pritchard	7/30/21	1859	20,778.10	
Todd Groundwater	7/30/21	1860	3,057.48	
Members and Participants	7/30/21	1860-1880	27,963.92	
Total Disbursements				69,737.57
Cash Balance, Current Report (July 31, 2021)				70,964.36
Accounts Receivable				
Receivables from Members (Exhibit C)			434.00	
Other Receivables:				
Prop 1 Distress Grant - 5% retention Req #2 (Gen Acct)		8,415.39		
Prop 1 Distress Grant - 10% retention Req #3 (Gen Acct)		6,669.22		
ITRC Grant - 10% retention Req #1		3,120.64		
ITRC Grant - 10% retention Req #2		127.75		
ITRC Grant - 10% retention Req #3		26.04		
ITRC Grant - 10% retention Req #4		18.59		
ITRC Grant - 10% retention Req #5		32.27		
ITRC Grant - 10% retention Req #6		22.97		
ITRC Grant (Amended) - 10% retention Req #1		36.76		
ITRC Grant (Amended) - 10% retention Req #2		17.91		
Prop 1 SGMA Grant - 10% retention Req #1		69,769.74		
Prop 1 SGMA Grant - 10% retention Req #2		4,179.19		
Prop 1 SGMA Grant - 10% retention Req #3		19,178.29		
Prop 1 SGMA Grant - 10% retention Req #4		8,762.24		
Grant Receivable - see Exhibit D			120,377.00	
Total Receivables				120,811.00
Accounts Payable				
See Attached A/P Detail (Exhibit E)				43,606.87
Accrued Payables (audit fee)				3,500.00
Total Accounts Payable and Accrued Payables				47,106.87
Net Assets, July 31, 2021				**144,668.49**

Exhibit B

Kern Groundwater Authority

Treasurer's Report - Deposits through August 12, 2021

All Deposits - Aug 1 - Aug 12, 2021	Dep Date	Amount	
Tejon-Castac	8/5/2021	434.00	
Deposits - Reimbursement			**434.00**
Total Deposits (thru 8/12/2021)			**$ 434.00**

Exhibit C

Kern Groundwater Authority

Treasurer's Report - Accounts Receivable detail as of July 31, 2021

Customer	Description	Invoice #	Invoice Date	Invoice Amount
Tejon-Castac WD	P&P-GSA boundary reimb	KG202168	5/20/2021	434.00
	TOTAL RECEIVABLES from MEMBERS @ 7/31/21			**$ 434.00**

Exhibit D

Kern Groundwater Authority

Treasurer's Report - Grant Detail as of July 31, 2021

Agency	Description	Date of Submittal	Invoice Amount	Amount Received	Date Received	Rem. Balance Due	Retention %
DWR	Prop1-Distress Draw#1	12/21/2017	168,307.80	159,892.41	6/11/2018	8,415.39	5%
DWR	Prop1-Distress Draw#3	3/23/2018	66,692.20	60,022.98	8/22/2018	6,669.22	10%
DWR	ITRC - Draw #1:	8/1/2018					
	General Account		120.00	108.00	1/16/2019	12.00	10%
	SAA #1		12,500.00	11,250.00	1/16/2019	1,250.00	10%
	SAA #4		18,586.38	16,727.74	1/16/2019	1,858.64	10%
			31,206.38	28,085.74		3,120.64	
DWR	ITRC - Draw #2:	10/31/2018					
	General Account		738.84	664.96	1/16/2019	73.88	10%
	SAA #1		538.66	484.79	1/16/2019	53.87	10%
			1,277.50	1,149.75		127.75	
DWR	ITRC - Draw #3:	1/29/2019					
	SAA #1		260.44	234.40	4/9/2019	26.04	10%
DWR	ITRC - Draw #4:						
	SAA #1	4/30/2019	185.94	167.35	7/19/2019	18.59	10%
DWR	ITRC - Draw #5:						
	SAA #1	7/26/2019	322.67	290.40	10/23/2019	32.27	10%
DWR	ITRC - Draw #6:						
	SAA #1	10/29/2019	229.66	206.69	4/15/2020	22.97	10%
DWR	ITRC (amended) - Draw #1:						
	General Accout	7/28/2020	367.60	330.84	9/23/2020	36.76	10%
DWR	ITRC (amended) - Draw #2:						
	General Accout	10/19/2020	179.05	161.14	1/11/2021	17.91	10%
DWR	Prop1-SGMA Draw#1:	5/31/2019					
#132	Component #2-Todd GW	as adjusted	244,878.23	220,390.41	1/27/2020	24,487.82	10%
#131,133,Gen	Component #3-W.C.+Admin		91,977.25	82,779.53	1/27/2020	9,197.72	10%
#140,Gen	Component #4		197,279.63	177,551.67	1/27/2020	19,727.96	10%
#140,Gen	Component #5		163,562.40	147,206.16	1/27/2020	16,356.24	10%
			697,697.51	627,927.77		69,769.74	
DWR	Prop1-SGMA Draw#2:	7/31/2019					
#132	Component #2-Todd GW		-				
#131,133,Gen	Component #3-W.C.+Admin		2,414.00	2,172.60	4/9/2020	241.40	10%
#140	Component #4		-			-	-
#100,140	Component #5		39,377.92	35,440.13	4/9/2020	3,937.79	10%
			41,791.92	37,612.73		4,179.19	
DWR	Prop1-SGMA Draw#3:	10/31/2019					
#132	Component #2-Todd GW	as adjusted	62,280.50	56,052.45	9/23/2020	6,228.05	10%
#133,Gen	Component #3-W.C.+Admin		51,178.75	46060.88	9/23/2020	5,117.87	10%
#140,Gen	Component #4-GSP+Outrch	as adjusted	-	-	9/23/2020	-	-
Gen	Component #5-TO #18		78,323.68	70,491.31	9/23/2020	7,832.37	10%
			191,782.93	172,604.64		19,178.29	
DWR	Prop1-SGMA Draw#4:	5/18/2020					
	Component #2-None		-	-	4/15/2021	-	-
Gen	Component #3-Admin		3,638.00	3,274.20	4/15/2021	363.80	10%
#132	Component #4-Todd GW		83,984.37	75,585.93	4/15/2021	8,398.44	10%
	Component #5-TO #18		-	-	4/15/2021	-	-
			87,622.37	78,860.13		8,762.24	
		Total Billed:	1,287,377.32				
		TOTAL GRANTS OUTSTANDING as of 7/31/21				**120,377.00**	

Exhibit E

Kern Groundwater Authority

Treasurer's Report - Accounts Payable detail as of July 31, 2021

Vendor	Description	Invoice #	Invoice Date	Invoice Amount	
O'Laughlin & Paris, LLP	General Legal Services-Jul-21	1518	8/1/2021	9,275.00	
Provost & Pritchard	Management Services - Jul-21	86632	8/10/2021	25,969.30	
	Prop 1 Grant Admin - May/Jun-21	86092	7/12/2021	69.60	
	Misc Services-GSA boundary	84694	4/22/2021	46.50	
	Misc Services-GSA boundary	85133	5/19/2021	387.50	
North Kern WSD	Accounting Services-Jul-21	NK202169	8/4/2021	1,000.00	
	TOTAL PAYABLES REQUEST at this Meeting			**$ 36,747.90**	

INVOICE ON HOLD:

GEI Consultants	TO 7 Amend#4- Proj Mgmt	3083050	1/11/2011	6,858.97	Pending further review
	INVOICES ON HOLD			**6,858.97**	
	TOTAL PAYABLES Outstanding at 7/31/21			**$ 43,606.87**	

Exhibit F

Kern Groundwater Authority
Statement of Net Position
As of July 31, 2021

Assets

Current Assets		
Cash		70,964
Accounts Receivable-Members		434
Accounts Receivable-Grants		120,377
Total Current Assets		191,775
Total Assets		**191,775**

Liabilities and Net Position

Current Liabilities		
Accounts Payable		43,607
Accrued Payables		3,500
Total Current Liabilities		47,107
Net Position		
KGA JPA - #100		
Current Earnings	13,046	
Net Position - Prior Year	23,202	
Accrue 2020 Audit fee	(10,000)	26,249
Evapotranspiration Study - SAA 1 - #110		
Current Earnings	-	
Net Position - Prior Year	(13,929)	
	-	(13,929)
Kern River GSA Groundwater Model - #130-133 (combined)		
Current Earnings	(75,586)	
Net Position - Prior Year	122,772	
	-	47,186
KGA GSA - SAA 3 - #120		
Current Earnings	-	
Net Position - Prior Year	-	-
KGA GSP - SAA 4 - #140		
Current Earnings	-	
Net Position - Prior Year	85,162	
	-	85,162
Total Net Position		144,668
Total Liabilities and Net Position		**191,775**

Exhibit F

Kern Groundwater Authority
Statement of Revenues and Expenses
7 Months Ended July 31, 2021

	Current Month								Year to Date - 2021							
	KGA JPA Dept. 100	ET Study SAA #1 Dept. 110	Phase 1 - RMC Peer Review - Dept. 131	Phase 2 - RMC Peer Review - Dept. 133	TODD GW MODELING Dept. 132	KGA GSA SAA #3 Dept. 120	KGA GSP SAA #4 Dept. 140	Combined	KGA JPA Dept. 100	ET Study SAA #1 Dept. 110	Phase 1 - RMC Peer Review - Dept. 131	Phase 2 - RMC Peer Review - Dept. 133	TODD GW MODELING Dept. 132	KGA GSA SAA #3 Dept. 120	KGA GSP SAA #4 Dept. 140	Combined
Member Contributions(Refunds)	(27,964)	-	-	-	-	-	-	(27,964)	369,649	-	-	-	-	-	-	369,649
Grant Revenue (Member Refunds)	-	-	-	-	-	-	-	-	(3,274)	-	-	-	(75,586)	-	-	(78,860)
Total Revenue	(27,964)	-	-	-	-	-	-	(27,964)	366,375	-	-	-	(75,586)	-	-	290,789
Accounting	1,000	-	-	-	-	-	-	1,000	7,000	-	-	-	-	-	-	7,000
Engineering	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Legal	9,275	-	-	-	-	-	-	9,275	86,695	-	-	-	-	-	-	86,695
Office Supplies / Bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Outside Services	26,039	-	-	-	-	-	-	26,039	259,633	-	-	-	-	-	-	259,633
Total Expenses	36,314	-	-	-	-	-	-	36,314	353,328	-	-	-	-	-	-	353,328
Change in Net Position - Current Earnings	(64,278)	-	-	-	-	-	-	(64,278)	13,046	-	-	-	(75,586)	-	-	(62,540)

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NORTH KERN WATER STORAGE DISTRICT

September 17, 2021

TO: Kern Groundwater Authority Members

FROM: A. David Hampton, General Manager

RECOMMENDED MOTION

Approve the Treasurer's Report as presented and authorize disbursement of accounts payable in the amount of $32,964.13 for the month of August 2021 as detailed on **Exhibit C**.

DISCUSSION

Exhibit A is the Treasurer's Report for the Authority's financial activities from August 1, 2021 through August 31, 2021. There was a total of $434.00 cash deposit for the month. After disbursement of expenses totaling $36,747.90, the cash balance on August 31, 2021 was $34,650.46. There were no subsequent cash receipts and deposits.

The Accounts Receivable balance from Members at August 31, 2021 was $0.00. Receivable from Grants on August 31, 2021 was $120,377.00 as detailed in **Exhibit B**. The combined total of Receivables on August 31, 2021 was $120,377.00.

Exhibit C is the detail of Accounts Payable for the month of August 31, 2021 reflecting outstanding payables of $39,823.10. However, invoices totalling $32,964.13 are being requested for payment approval and disbursement at this time. An invoice in the amount of $6,858.97 continues to remain on hold pending further review by the Executive Director.

Exhibit D is the Authority's unaudited financial statements on August 31, 2021. They include a Statement of Net Position as of August 31, 2021 and a Statement of Revenues and Expenses for the eight months ended August 31, 2021. Both statements present the financial position and results of the Authority's activities for the general JPA membership and each specific Special Activity Agreements. At this time, please direct questions regarding the above to the Fiscal Agent, North Kern Water Storage District's General Manager, David Hampton (dhampton@northkernwsd.com) who can also be reached at the District's Office at 661-393-2696.

Exhibit A
Kern Groundwater Authority
Treasurer's Report - through August 31, 2021

CURRENT ACTIVITY

Cash Balance, Prior Report (July 31, 2021)				70,964.36
Deposits	**Date**	**Purpose**	**Amount**	
Tejon-Castac	8/5/2021	GSA boundary reimb	434.00	
Total Deposits				434.00
Disbursements	**Date**	**Ck #**	**Amount**	
North Kern WSD	8/20/21	1881	1,000.00	
O'Laughlin & Paris, LLP	8/20/21	1882	9,275.00	
Provost & Pritchard	8/20/21	1883	26,472.90	
Total Disbursements				36,747.90
Cash Balance, Current Report (August 31, 2021)				34,650.46
Accounts Receivable				
Receivables from Members			-	
Other Receivables:				
Prop 1 Distress Grant - 5% retention Req #2 (Gen Acct)		8,415.39		
Prop 1 Distress Grant - 10% retention Req #3 (Gen Acct)		6,669.22		
ITRC Grant - 10% retention Req #1		3,120.64		
ITRC Grant - 10% retention Req #2		127.75		
ITRC Grant - 10% retention Req #3		26.04		
ITRC Grant - 10% retention Req #4		18.59		
ITRC Grant - 10% retention Req #5		32.27		
ITRC Grant - 10% retention Req #6		22.97		
ITRC Grant (Amended) - 10% retention Req #1		36.76		
ITRC Grant (Amended) - 10% retention Req #2		17.91		
Prop 1 SGMA Grant - 10% retention Req #1		69,769.74		
Prop 1 SGMA Grant - 10% retention Req #2		4,179.19		
Prop 1 SGMA Grant - 10% retention Req #3		19,178.29		
Prop 1 SGMA Grant - 10% retention Req #4		8,762.24		
Grant Receivable - see Exhibit B			120,377.00	
Total Receivables				120,377.00
Accounts Payable				
See Attached A/P Detail (Exhibit C)				39,823.10
Accrued Payables (audit fee)				3,500.00
Total Accounts Payable and Accrued Payables				43,323.10
Net Assets, August 31, 2021				**111,704.36**

Exhibit B

Kern Groundwater Authority

Treasurer's Report - Grant Detail as of August 31, 2021

Agency	Description	Date of Submittal	Invoice Amount	Amount Received	Date Received	Rem. Balance Due	Retention %
DWR	Prop1-Distress Draw#1	12/21/2017	168,307.80	159,892.41	6/11/2018	8,415.39	5%
DWR	Prop1-Distress Draw#3	3/23/2018	66,692.20	60,022.98	8/22/2018	6,669.22	10%
DWR	ITRC - Draw #1:	8/1/2018					
	General Account		120.00	108.00	1/16/2019	12.00	10%
	SAA #1		12,500.00	11,250.00	1/16/2019	1,250.00	10%
	SAA #4		18,586.38	16,727.74	1/16/2019	1,858.64	10%
			31,206.38	28,085.74		3,120.64	
DWR	ITRC - Draw #2:	10/31/2018					
	General Account		738.84	664.96	1/16/2019	73.88	10%
	SAA #1		538.66	484.79	1/16/2019	53.87	10%
			1,277.50	1,149.75		127.75	
DWR	ITRC - Draw #3:	1/29/2019					
	SAA #1		260.44	234.40	4/9/2019	26.04	10%
DWR	ITRC - Draw #4:						
	SAA #1	4/30/2019	185.94	167.35	7/19/2019	18.59	10%
DWR	ITRC - Draw #5:						
	SAA #1	7/26/2019	322.67	290.40	10/23/2019	32.27	10%
DWR	ITRC - Draw #6:						
	SAA #1	10/29/2019	229.66	206.69	4/15/2020	22.97	10%
DWR	ITRC (amended) - Draw #1:						
	General Accout	7/28/2020	367.60	330.84	9/23/2020	36.76	10%
DWR	ITRC (amended) - Draw #2:						
	General Accout	10/19/2020	179.05	161.14	1/11/2021	17.91	10%
DWR	Prop1-SGMA Draw#1:	5/31/2019					
#132	Component #2-Todd GW	as adjusted	244,878.23	220,390.41	1/27/2020	24,487.82	10%
#131,133,Gen	Component #3-W.C.+Admin		91,977.25	82,779.53	1/27/2020	9,197.72	10%
#140,Gen	Component #4		197,279.63	177,551.67	1/27/2020	19,727.96	10%
#140,Gen	Component #5		163,562.40	147,206.16	1/27/2020	16,356.24	10%
			697,697.51	627,927.77		69,769.74	
DWR	Prop1-SGMA Draw#2:	7/31/2019					
#132	Component #2-Todd GW		-				
#131,133,Gen	Component #3-W.C.+Admin		2,414.00	2,172.60	4/9/2020	241.40	10%
#140	Component #4		-			-	-
#100,140	Component #5		39,377.92	35,440.13	4/9/2020	3,937.79	10%
			41,791.92	37,612.73		4,179.19	
DWR	Prop1-SGMA Draw#3:	10/31/2019					
#132	Component #2-Todd GW	as adjusted	62,280.50	56,052.45	9/23/2020	6,228.05	10%
#133,Gen	Component #3-W.C.+Admin		51,178.75	46060.88	9/23/2020	5,117.87	10%
#140,Gen	Component #4-GSP+Outrch	as adjusted	-	-	9/23/2020	-	-
Gen	Component #5-TO #18		78,323.68	70,491.31	9/23/2020	7,832.37	10%
			191,782.93	172,604.64		19,178.29	
DWR	Prop1-SGMA Draw#4:	5/18/2020					
	Component #2-None		-	-	4/15/2021	-	-
Gen	Component #3-Admin		3,638.00	3,274.20	4/15/2021	363.80	10%
#132	Component #4-Todd GW		83,984.37	75,585.93	4/15/2021	8,398.44	10%
	Component #5-TO #18		-	-	4/15/2021	-	-
			87,622.37	78,860.13		8,762.24	
		Total Billed:	1,287,377.32				
			TOTAL GRANTS OUTSTANDING as of 8/31/21			**120,377.00**	

Exhibit C

Kern Groundwater Authority

Treasurer's Report - Accounts Payable detail as of August 31, 2021

Vendor	Description	Invoice #	Invoice Date	Invoice Amount	
O'Laughlin & Paris, LLP	General Legal Services-Aug-21	1546	9/1/2021	4,095.00	
Provost & Pritchard	Management Services - Aug-21	87371	9/15/2021	21,214.50	
	Prop 1 Grant Admin - Jul-21	86760	8/13/2021	87.00	
North Kern WSD	Accounting Services-Aug-21	NK202174	9/7/2021	1,000.00	
Todd Groundwater	Subbasin GSP Annual Report	62310 520	5/8/2020	6,567.63	
	TOTAL PAYABLES REQUEST at this Meeting			**$ 32,964.13**	
INVOICE ON HOLD:					
GEI Consultants	TO 7 Amend#4- Proj Mgmt	3083050	1/11/2011	6,858.97	Pending further review
	INVOICES ON HOLD			**6,858.97**	
	TOTAL PAYABLES Outstanding at 8/31/21			**$ 39,823.10**	

Exhibit D

Kern Groundwater Authority
Statement of Net Position
As of August 31, 2021

Assets

Current Assets		
Cash		34,650
Accounts Receivable-Members		-
Accounts Receivable-Grants		120,377
Total Current Assets		155,027
Total Assets		**155,027**

Liabilities and Net Position

Current Liabilities		
Accounts Payable		39,823
Accrued Payables		3,500
Total Current Liabilities		43,323
Net Position		
KGA JPA - #100		
Current Earnings	(19,918)	
Net Position - Prior Year	23,202	
Accrue 2020 Audit fee	(10,000)	(6,716)
Evapotranspiration Study - SAA 1 - #110		
Current Earnings	-	
Net Position - Prior Year	(13,929)	
	-	(13,929)
Kern River GSA Groundwater Model - #130-133 (combined)		
Current Earnings	(75,586)	
Net Position - Prior Year	122,772	
	-	47,186
KGA GSA - SAA 3 - #120		
Current Earnings	-	
Net Position - Prior Year	-	-
KGA GSP - SAA 4 - #140		
Current Earnings	-	
Net Position - Prior Year	85,162	
	-	85,162
Total Net Position		111,704
Total Liabilities and Net Position		**155,027**

Exhibit D

Kern Groundwater Authority
Statement of Revenues and Expenses
8 Months Ended August 31, 2021

	Current Month								Year to Date - 2021							
	KGA JPA Dept. 100	ET Study SAA #1 Dept. 110	Phase 1 - RMC Peer Review - Dept. 131	Phase 2 - RMC Peer Review - Dept. 133	TODD GW MODELING Dept. 132	KGA GSA SAA #3 Dept. 120	KGA GSP SAA #4 Dept. 140	Combined	KGA JPA Dept. 100	ET Study SAA #1 Dept. 110	Phase 1 - RMC Peer Review - Dept. 131	Phase 2 - RMC Peer Review - Dept. 133	TODD GW MODELING Dept. 132	KGA GSA SAA #3 Dept. 120	KGA GSP SAA #4 Dept. 140	Combined
Member Contributions(Refunds)	-	-	-	-	-	-	-	-	369,649	-	-	-	-	-	-	369,649
Grant Revenue (Member Refunds)	-	-	-	-	-	-	-	-	(3,274)	-	-	-	(75,586)	-	-	(78,860)
Total Revenue	-	-	-	-	-	-	-	-	366,375	-	-	-	(75,586)	-	-	290,789
Accounting	1,000	-	-	-	-	-	-	1,000	8,000	-	-	-	-	-	-	8,000
Engineering	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Legal	4,095	-	-	-	-	-	-	4,095	90,790	-	-	-	-	-	-	90,790
Office Supplies / Bank	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Outside Services	27,869	-	-	-	-	-	-	27,869	287,502	-	-	-	-	-	-	287,502
Total Expenses	32,964	-	-	-	-	-	-	32,964	386,292	-	-	-	-	-	-	386,292
Change in Net Position - Current Earnings	(32,964)	-	-	-	-	-	-	(32,964)	(19,918)	-	-	-	(75,586)	-	-	(95,504)

KERN GROUNDWATER AUTHORITY

Whitepaper on Sacramento-San Joaquin Delta Watershed Curtailment

Governor's Drought Proclamation

https://www.gov.ca.gov/wp-content/uploads/2021/05/5.10.2021-Drought-Proclamation.pdf

On May 10, 2021, the Governor issued an emergency proclamation regarding drought conditions and directed the State Water Resources Control Board (State Water Board) to, among other actions, "consider emergency regulations to curtail water diversions when water is not available at water right holders' priority of right." The purpose of such curtailment considerations was to "ensure protection of water needed for health, safety, and the environment."

Curtailment Regulation

https://www.waterboards.ca.gov/drought/delta/docs/deltareg_oal_approval.pdf

(a) Delegation to Deputy Director to Issue Curtailment Orders

The Curtailment Regulation delegates the authority to issue Curtailment Orders to the Deputy Director of Water Rights. (Cal. Code of Regs., tit. 23, § 876.1)

(b) Methodology

https://www.waterboards.ca.gov/drought/drought_tools_methods/docs/wua_report_072321.pdf

The Curtailment Regulation delegates the authority of the Deputy Director to issue Curtailment Orders based on the Water Unavailability Methodology (Methodology) developed by State Water Board staff. The Methodology is the approach developed by the State Water Board staff to evaluate supply and demand and determine when water is no longer available for diversion for a specific water right holder.

(1) Supply

The Methodology uses several different tools to estimate supply or full natural flow (FNF). The primary tool is the B-120 forecasting tool developed by the Department of Water Resources (DWR). This tool provides a projection of FNF that is theoretical and not actually measured. Although the B-120 locations are referred to as "gages", the FNF are not directly measured, but estimated based on calculations of snowpack measurements, estimates of water content, expected weather, rates of evaporation, ground absorption, and other factors. The B-120 model provides a single monthly projection of FNF supply from February to May. From October through January, when the B-120 model is not available, the Methodology uses data from the California Nevada River Forecast Center (CNRFC) to estimate similar monthly supply forecasts.

(2) Demand

The Methodology demand is based on reported water use from 2018. The demand assumes all unverified claims to divert water are valid. Water right claims are made by submitting form called a Statement of Diversion and Use to the State Water Board. The majority of Statements of Diversion and

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Use are submitted by diverters in the legal Delta, claiming senior water rights (riparian or pre-1914). Many Statements of Diversion and Use are submitted claiming both pre-1914 and riparian rights. In this case, the Methodology assumes the claim represents a valid riparian (the more senior) right. The Methodology includes several assumptions regarding connectivity, apportioning Delta demand to the Sacramento and San Joaquin watersheds not by connectivity, but by the percent each of these watersheds supplies water into the Delta in a given month. Finally, the Methodology assumes no contribution from specific upper watershed areas, including the Fresno, Chowchilla, and other upper watershed areas.

(3) Stored Water

The Methodology takes the position that it does not include the release of stored water in evaluating supply. However, the Methodology assumes that stored water released to meet instream flow requirements is abandoned once the water passes the compliance point. These are all legal determinations that usually require a stream adjudication or other adjudicatory hearing prior to making these determinations.

(c) Exceptions

The Curtailment Regulation includes several exceptions, which allow diversions to continue even if a Curtailment Order has been issued.

(1) Public health and safety

The Curtailment Regulation and subsequent Curtailment Orders do not require a water right holder to stop diverting water if such diversion is "necessary for minimum human health and safety needs." (Cal. Code of Regs., tit. 23, § 878.1.) Diversions of 55 gallons of water per person per day are exempted automatically. (Cal. Code of Regs., tit. 23, § 878.1(b)(1).) Public health and safety needs above the 55-gallon limit must be approved by the Deputy Director. (Cal. Code of Regs., tit. 23, § 878.1(b)(2).) Diversions at the higher level may continue while seeking approval from the Deputy Director. ((Cal. Code of Regs., tit. 23, § 878.1(e).) The regulatory package issued by the State Water Board in support of the Curtailment Regulation includes an economic impact statement. This statement discloses that the public health and safety exemption will result in allowing domestic and municipal uses to continue that otherwise would have been curtailed under the rules of priority at the expense of the increased curtailments to the agriculture sector. The statement only estimates loss of revenue from water sales but predicts the public health and safety will cost the agriculture industry tens of millions of dollars.

https://www.waterboards.ca.gov/drought/delta/docs/080621_digest.pdf

(2) Non-consumptive uses

The Curtailment Regulation and subsequent Curtailment Orders do not apply to non-consumptive uses, defined as uses that do not decrease downstream flows, including hydropower diversions or the instream dedication to fish and wildlife uses. (Cal. Code of Regs., tit. 23, § 878.)

(3) Delta Diversions Below Sea Level

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The Curtailment Regulation and subsequent Curtailment Orders do not apply to direct diversions in the Legal Delta used to irrigate lands entirely below sea level, when there is substantial evidence that such irrigation does not increase depletions. (Cal. Code of Regs., tit. 23, § 878(e).)

(d) Enforcement

Violation of the Curtailment regulation (or Curtailment Order issued pursuant thereto) constitutes a trespass pursuant to Water Code section 1052 and an unreasonable use of water. (Cal. Code of Regs., tit. 23, § 879.2.) Violations are subject to fines of up to $1,000 per day and $2,500 per acre foot.

(e) Suspension or End Date

The Curtailment Regulation does not include an end date or other metric to determine the point at which the delegation of authority to the Deputy Director to issue Curtailment Orders will be lifted or end. Resolution 2021-0028 (the resolution with which the State Water Board adopted the Curtailment Regulations) states the Curtailment Regulations will last one year. (Resolution, at Res. 4.)

https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2021/rs2021_0028_regs.pdf

Curtailment Orders

https://www.waterboards.ca.gov/drought/delta/docs/082021_order_lg.pdf

On August 20, 2021, the State Water Board issued 4,500 Curtailment Orders to water right holders in the Delta watershed. The Curtailment Order consists of a five-page cover letter and the operating order.

(a) Cover Letter

The cover letter sent with the Curtailment Orders included some explanation regarding timing and changes to the determination that water is not available. Specifically, the cover letter suggested that the curtailment of in-Delta diversions may be lifted as early as September, due to drainage from rice fields on the floor of the Sacramento Valley. The cover letter also indicates that the curtailment is in place until it is lifted, which could be as long as a year and may be readopted if necessary for more than a year.

(b) Operating Curtailment Order

The Curtailment Order requires the recipient to: (1) immediately stop diverting water; (2) certify under penalty of perjury that diversions have ceased; (3) subscribe to the State Water Board distribution list to receive further notices. Recipients that divert more than 5,000-acre feet are also required to comply with increased reporting requirements by September 10, 2021.

(c) Request for Reconsideration

Any recipient of the Curtailment Order may request the State Water Board reconsider the Curtailment Order pursuant to California Code of Regulations, title 23, sections 768 through 771 no later than September 20, 2021. Pursuant to the CCR, the State Water Board has 90 days to review the Petition for Reconsideration.

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Kern Groundwater Authority

Proposed Budget Calendar Year 2021 - Member Cost Breakdown

	KGA General & Admin Expenses			Annual Reporting		Remote Sensing Project		Data Management System (1)		Data Management System (2)		Subsidence Study	
	Cost Allocation	Member Costs	Final Cash Call	Cost Allocation	Member Costs	Cost Allocation	Member Costs	Cost Allocation	Member Costs	Cost Allocation	Member Costs	Cost Allocation	Member Costs
KGA General Members													
Arvin Community Services District	5.556%	$ 29,916.67	$ 14,958.33	0.000%	$ -	0.000%		0.000%		0.000%		0.000%	
Arvin-Edison Water Storage District	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
Cawelo Water District	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
City of Shafter	5.556%	$ 29,916.67	$ 14,958.33	0.000%	$ -	0.000%		0.000%		0.000%		0.000%	
Eastside Water Management Area	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
Kern County Water Agency	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
Kern-Tulare Water District	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
Kern Water Bank Authority	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
North Kern Water Storage Distirct	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
Rosedale-Rio Bravo Water Storage District	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
Semitropic Water Storage District	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
Shafter-Wasco Irrigation District	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
Shafter-Wasco 7th Standard Annex	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
South San Joaquin Municipal Utilities District	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
Tejon-Castaic Water District	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
West Kern Water District	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
Westside District Water Authority	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
Wheeler Ridge-Maricopa Water Storage District	5.556%	$ 29,916.67	$ 14,958.33	6.250%	$ 3,814.14	6.250%		6.250%		6.250%		6.250%	$ -
Subtotal	*100.000%*	*$ 538,500.00*	*$ 269,250.00*	*100.000%*	*$ 61,026.24*	*100.000%*	*$ 133,597.00*	*100.000%*		*100.000%*		*100.000%*	
KGA Special Activity Agreement Members													
Buena Vista Water Storage District	0.000%			0.000%		0.000%		0.000%		0.000%		6.250%	
Henry Miller Water District	0.000%			0.000%		0.000%		0.000%		0.000%		6.250%	
Kern River Groundwater Sustainability Agency	0.000%			0.000%		0.000%		0.000%		0.000%		6.250%	
Olcese Water District	0.000%			0.000%		0.000%		0.000%		0.000%		6.250%	
Subtotal	*0.000%*							*0.000%*	*$ -*	*0.000%*		*100.000%*	
Total	***100%***	***$ 538,500.00***	***$ 269,250.00***	***100%***		***100%***	***$ 133,597.00***	***100%***	***$ -***	***100%***	***$ -***	***100%***	***$ -***

NOTES

1 KGA JPA Expenses with Grant funds of $220,000 Distressed Grant Funds received

2 The remote sensing project will be allocated to those members who participate

3

4

- ~~Subtask 1.3~~TASK 1.0 - **Identify Natural Recharge Components**: As a preliminary task, (along with Subtask 1.1 and 1.2) and prior to moving forward with other phases of the Study, Todd will conduct workshops with local water managers, stakeholders and policy makers with assistance from a facilitator provided by DWR to evaluate and determine the various components and assumptions that will form the foundation of the Study. In addition to precipitation and watershed hydrology, other unallocated natural recharge components such as bedrock inflows, return flows, stormwater, waste water and stream flow may also be considered. For this subtask, a preliminary assessment of these other potential components will be developed and vetted with local water managers and policy makers under Task 5. From these discussions, local policy makers will determine the base assumptions for the Study. A change to the allocation status of the natural recharge components referenced above, or to any water source that contributes to the natural recharge in the basin, may warrant a change to the base assumptions in the future. Whatever the determination, all supplies – whether part of the "foundation of the study" or not- need to be quantified, regardless of what supplies ultimately become part of the native yield there should be an understanding of the results of those determinations.

Commented [PP1]: Changes requested by Southern San Joaquin MUD

Commented [PP2]: Changes requested by West Kern

Commented [PP3]: Changes requested by Wheeler Ridge

TODD GROUNDWATER

June 17, 2021

DRAFT PROPOSAL

To: Kern County Subbasin Groundwater Sustainability Agencies (GSAs)
Patty Poire, Kern County Subbasin GSP Plan Manager

From: Mike Maley, PG, CHG, Principal Hydrogeologist / Groundwater Modeler
Phyllis Stanin, PG, CHG, Vice President / Principal Geologist

Re: **DRAFT Proposal – Revision 2**- Kern County Subbasin Native Yield Study and C2VSimFG-Kern Model Recalibration

The Kern County Subbasin (Subbasin or Basin) Groundwater Sustainability Agencies (GSAs) are cooperating on the implementation of their recently completed Groundwater Sustainability Plans (GSPs). One of the management actions listed in the Kern Groundwater Authority (KGA) Umbrella GSP was the development and implementation of a Native Yield Study to refine the understanding of the available natural, or native, groundwater recharge within the Subbasin. The results will provide technical support for future policy decisions regarding allocation groundwater pumping. A second management action is to address data gaps and recalibrate the C2VSimFG-Kern groundwater model for the Kern County Subbasin to improve the understanding of groundwater response to the implementation of projects and management actions, relationship to minimum thresholds and measurable objectives, determination of the native yield of the Subbasin, and subsurface flow within and out of the Subbasin. Since these two management actions are interrelated, the GSAs has recommended that that the work for these management actions should be conducted concurrently.

Todd Groundwater has been asked to develop both an approach to meet the objectives of both of these management actions and a proposal to conduct the work. The scope of work for the Native Yield Study and the C2VSimFG-Kern model recalibration are presented as separate scopes of work.

NATIVE YIELD STUDY

Our approach assumes that this proposal is a technical study to quantify of the natural groundwater recharge in Kern County Subbasin through a systematic analysis of the available data. We understand that the definition of the native yield will be developed by the Kern County Subbasin GSAs and local stakeholders. Incorporated in this study are multiple meetings to provide opportunity to review the technical work during the course of the study so that a consensus of the components of the natural groundwater recharge is reached by the end of the study. The goal of the study outlined in this proposal is to provide technical support for future deliberations to determine the allocation of groundwater resources.

Background

The native yield support the Kern County GSAs on future groundwater allocation issues within the basin. In general, the sustainable yield of a basin is the amount of groundwater that can be withdrawn annually without causing undesirable results. The native yield is essentially a subset of the sustainable yield where only the natural groundwater recharge is considered.

For the 2020 GSPs, the native yield was calculated using both the C2VSimFG-Kern model and a basinwide spreadsheet water balance approach. However, questions persisted about the underlying data used for these calculations. The KGA GSP acknowledges these data gaps in the parameters used to define the native yield. The KGA GSP notes that as those data gaps are addressed and management actions are implemented, the estimate of native yield is subject to change. Because of this, the GSAs of the Kern County Subbasin have agreed to the continued analysis and refinement of the native yield, on both a technical and policy basis.

Objectives

During the process of working through the water budget allocations for the entire Kern County Subbasin with the GSAs, the native yield was one of the most critical supply sources to be coordinated. Because of this, we recognize that the development of the native yield is an important yet sensitive topic. Therefore, the overall objective of the Native Yield Study is to provide the necessary technical data to the local water managers, policy makers and stakeholders that they need to make decisions regarding the allocation of basinwide groundwater resources. To achieve this overall objective, we consider the following points as key to conducting a successful Native Yield Study.

The primary focus of the Study is to develop a *technically credible analysis*. Our approach to this Study starts with a comprehensive compilation and review of available data. We will develop the key data sets of all natural groundwater recharge sources from the available basinwide data. These basinwide data will be validated by comparison to detailed local data for multiple areas in different parts of the Subbasin, as available. The purpose of this process is to obtain agreement on the basic data sets that compose the natural groundwater recharge and to determine the basinwide volumes and distribution for each component. The basinwide natural recharge will provide the technical basis to support decisionmakers as they address the policy, legal and water rights issues in determining the allocation of the Kern County Subbasin native yield..

In addition, we recognize the need for *transparency* and *effective communication* of the data, methodologies, and results of the Study throughout the process. Therefore, our approach includes technical support to the GSAs through *coordination with numerous agencies and stakeholders* in the Subbasin across a variety of venues. The stakeholder process needs to consider a wide range of stakeholders that include, but are not limited to, private well owners, disadvantaged communities, wastewater agencies, among others. Accordingly, multiple meetings and workshops with the Subbasin GSP managers and policy decision-makers are incorporated into the scope and budget. The scope and budget envision broad support of the stakeholder outreach process by the GSAs.

Ultimately, the Study will need to *align the technical analyses with policy decisions* to protect water rights while supporting beneficial uses. To support this need, our approach is to vet the methodologies and results with local water managers, policy makers and stakeholders during the Study. Our approach includes interim documentation of each of the major technical tasks with sufficient time allowed in the schedule for review and comment periods by interested parties. Each task includes time to address these

comments as the Study progresses. In this manner, we can address issues and concerns during the process with the goal to achieve general agreement on the approach as the Study progresses.

The Kern County Subbasin Coordination Agreement refers to the local groundwater-surface water model (C2VSimFG-Kern) as the agreed upon method for generating coordinated water budgets for the Kern County Subbasin. To support future water budget analyses, the Study data and methodologies will be *aligned with planned revisions to the C2VSimFG-Kern model*. In this manner, the Native Yield Study data will be embedded into the model so that future water budget analyses are consistent with the Study results. Therefore, the Native Yield Study provides a dual function by also making key revisions to the C2VSimFG-Kern model; thereby providing a *cost benefit by addressing part of the planned model revisions as part of the Native Yield Study*.

These and other concepts are embedded in our approach for the Native Yield Study. Additional details of our proposed approach – along with a scope of services, schedule, and budget – are provided in this proposal.

Approach for the Native Yield Study

Our approach for the Native Yield Study is to develop a systematic, basinwide technical analysis of the natural groundwater recharge in the Kern County Subbasin based on a comprehensive compilation and analysis of the relevant data to provide local water managers, policy makers and stakeholders with the data and information needed for allocating basinwide groundwater resources.

Conceptually, natural groundwater recharge that provides native yield is derived primarily from precipitation, streamflow and watershed runoff. Therefore, this study will focus on assessing the climate and hydrological data for determining the native yield. We will compile available climatic and hydrologic data from local agencies and regional studies by state and federal agencies. Based on these data, we will develop rainfall distribution maps to assess the volume of precipitation in different areas of the Subbasin. Consideration of other native yield components such as bedrock inflow and return flows will also be addressed during the Study.

The infiltration of precipitation, runoff and return flows into the subsurface is primarily controlled by the land use and soil properties. We will map local soil properties from local soil surveys to assess the runoff/infiltration partitioning of the precipitation. We will review existing local land use and crop type maps and update them, as necessary. We will assess the magnitude and transport of surface runoff during high rainfall events. Consideration of recharge and evaporative losses of natural runoff at ephemeral lakes and ponded areas will be included.

Large streams, such as the Kern River and Poso Creek, have existing water rights; however, the flow in these streams is also part of the natural groundwater recharge. Although much of the flow and diversion data have been tabulated, this has mainly been done from a contractual viewpoint. The actual diversion and distribution of this water is quite complicated. Water from these streams is used for agricultural irrigation, municipal water supply, groundwater banking, lake level management and many other uses. In addition, these uses are often associated with exchanges, transfers, and written agreements involving multiple water sources. Our task is to compile and organize this data for the purpose of computing the natural groundwater recharge. The analysis will include secondary recharge of this water from return flows, wastewater disposal, conveyance seepage, runoff, and other mechanisms.

The natural recharge will be determined using a water balance approach similar to that used for the GSPs and the C2VSimFG-Kern model. The climate and hydrologic data will be evaluated over the historical

period as that provides average hydrologic conditions as the basis for assessing the sustainable yield for the GSPs. A soil moisture budget approach will be used to assess the deep percolation of natural recharge below the root zone. The projected-future baseline scenario in the GSPs repeated the historical natural hydrology, so this approach is appropriate for supporting the Native Yield Assessment.

The distribution of the natural groundwater recharge is also affected by the geology of the unsaturated zone and principal aquifers. The unsaturated zone may contain clay layers that form local perching horizons. Several of these features have been identified in the GSPs. We will compile a map of these areas to factor perching horizons into the analysis. Four principal aquifers have been defined, so the natural recharge to each of these will be evaluated. Several aquifer exemption areas for oilfield activities have also been defined, so we will assess the effect of these areas on natural recharge. Several areas along the Subbasin margin are more complex. We have included Aquilogic, who brings experience in working for water districts and oil companies in western Kern County Subbasin, as a subconsultant to provide their experience in considerations of natural recharge in these areas. We will also work with local GSAs to address similar issues along the eastern and southern Subbasin margins. These and other revisions emphasize the need for coordination across multiple agencies during this Study.

The Study will include incorporating the Native Yield Study data into the C2VSimFG-Kern model. The revised model to be used as a validation step in assessing natural recharge for the Subbasin for the Study. We will rerun the historical and projected future scenarios using the revised model. We can then compare the change in the natural recharge and native yield estimates of the revised model relative to the model results provided in the 2020 GSPs.

During this Study, each step will be vetted with local water managers, policy makers and stakeholders to provide an opportunity for these groups to review and comment on the technical study data, methodology and results. The goal of our approach is to help the local water managers, policy makers, and stakeholders reach a consensus on the volume of natural groundwater recharge available for allocation. To achieve this, communication and transparency of development and results of the Native Yield Study is a focus of this scope. Therefore, a significant amount of time and budget is allotted to meetings to inform these parties of the ongoing progress and receive feedback on policy and Subbasin coordination issues related to the Native Yield Study.

For each of the primary technical tasks, a technical memo and data package will be developed to provide local water managers, policy makers and stakeholders with preliminary results for review and comment. Final technical memoranda will address comments and be included as attachments to the final technical report to provide detailed documentation of data, methodology and results. The Final Technical Report will include a discussion of the Native Yield Study results in more general terms for an intended audience that includes local policymakers, stakeholders, and other interested parties. The technical documentation will be included in the technical memoranda attachments. By structuring the final report to address both a general audience and a technical audience, our goal is to provide clear, defensible documentation for the wide range of parties interested in the Native Yield study.

PROPOSED SCOPE OF SERVICES

The following scope of work provides additional details and a stepwise process for accomplishing the Native Yield Study.

Task 1: Natural Hydrology Data Compilation and Mapping

Task 1 involves gathering data necessary to determining natural recharge, incorporating the data into a GIS format, and performing an initial assessment of the data. This will center around the basic climatic and hydrologic data for the Subbasin. The assessment of precipitation is the primary step, which provides the foundation of natural groundwater recharge. Second, data sets will be compiled on the physical properties of the basin and surrounding watersheds that control the runoff-infiltration portioning of the rainfall. Finally, this task includes a comprehensive bibliography of relevant previous studies that can serve as a source of data and/or assessment of hydrologic processes in Kern County Subbasin. Several subtasks for Task 1 are outlined below:

- **Subtask 1.1 - Historical Precipitation Data:** Todd Groundwater will compile regional precipitation data from the PRISM Climate Group at Oregon State University. The PRISM data includes both daily and monthly rainfall data for Kern County. The PRISM data will be verified by comparison with available local measured precipitation data. The precipitation data will be mapped using GIS to evaluate regional precipitation patterns. Monthly and annual precipitation totals will be calculated. Periods of high-intensity rainfall will be evaluated on a daily scale to assist in evaluating runoff during high rainfall events.
- **Subtask 1.2 - Basin and Surrounding Watershed Hydrology Data**: The physical properties of the basin and surrounding watersheds will be compiled and mapped using GIS. These include land use, vegetation types, geology, soil properties, ET, slope, and other relevant hydrology information. Todd Groundwater already has much of this data in the C2VSimFG-Kern model. We will review and update data, as necessary. We will compile relevant previous studies from state and federal agencies on the regional hydrology of Kern County Subbasin. We will also request available hydrologic studies from local agencies. A bibliography of relevant studies will be developed.
- **Subtask 1.3 - Identify Natural Recharge Components**: In addition to precipitation and watershed hydrology, other natural recharge components such as bedrock inflows, return flows, stormwater, waste water and stream flow may also be considered. For this subtask, a preliminary assessment of these other potential components will be developed and vetted with local water managers, policy makers and stakeholders under Task 5. From these discussions, local policy makers will decide how these components should be addressed in the Study.
- **Subtask 1.4 - Task 1 Technical Memorandum (TM) / Data Package**: The data sources, methodology and analysis will be documented in a technical memorandum (TM), along with a data package of climate and hydrological data in GIS format. A draft TM will be issued for review and comment by local stakeholders. The final TM will be addressed in Task 4 for the final report.

The results of this compilation will be summarized using tables and GIS maps that put the data into a consistent format to illustrate a range of conditions and identify potential data gaps. An assessment of these data will be performed to determine the overall strengths and weaknesses of the different data sets. The schedule includes time for presentation and review of this information by local water managers, policy makers and stakeholders under Task 6.

Task 2: Natural Hydrological Evaluation

For Task 2, the approach is to conduct these evaluations for limited areas with higher quality data to work out the details of applying the methodology and distributing parameters over areas of differing hydrologic characteristics.

A key part of the hydrological evaluation is to determine the runoff-infiltration portioning of the rainfall for different areas of the Kern County Subbasin and surrounding watersheds. This will focus first on the surface conditions during rainfall, including a drainage assessment to evaluate transport of surface runoff. A soil moisture budget approach will be used, similar to that used for the C2VSimFG-Kern model, to assess the volume of the natural recharge taken up by evapotranspiration and the remaining volume available for deep percolation below the root zone. The root zone properties from the model will be reviewed and updated as necessary to better reflect local conditions.

Task 2 includes compilation of data for large stream to develop the process for calculating seepage recharge, conveyance seepage and return flows from diverted streamflow. In addition, initial work on the influence of geology will be developed with emphasis on the complex geology along the Subbasin margins, oil field aquifer exemptions and distribution of key confining layers such as the E-clay.

The approach is to conduct these evaluations for limited areas with higher quality data to work out the details of applying the methodology and distributing parameters over areas of differing hydrologic characteristics. We have added time to each subtask for coordination with local agencies and stakeholders to vet our methodology to improve our ability to estimate the natural hydrology recharge based on local data and water management practices. We have included budget for subconsultants, such as Aquilogic, to provide their experience to help address specific issues such as watershed hydrology and hydrogeological conceptual model issues along the Subbasin margins. In addition, we have added time for collaboration with DWR, USGS California Water Science Center and local universities on our technical approach to each subtask.

Once the methodology and parameters are defined, then the evaluation will be scaled-up to a basinwide evaluation. By focusing on these local areas first, we can improve the efficiency in completing the hydrological evaluations. Several subtasks are outlined below that address the following subtasks:

- **Subtask 2.1 - Watershed Hydrological Assessment**: The hydrology of the surrounding watersheds is distinctly different from those in the Subbasin. The goal of this subtask is to characterize the watershed areas to determine the volume of runoff, baseflow and bedrock inflow emanating from these areas into the Subbasin. The hydrology assessment will also examine the route of surface water runoff as it flows through the Subbasin, including the ultimate destination of high flows. We will also consider the potential for bedrock inflows from these watersheds based on available information.
- **Subtask 2.2 - Basin Hydrological Assessment**: The hydrology of the basin will primarily follow the soil moisture budget approach used in the C2VSimFG-Kern model to insure consistency of methods. Because of this, we have many of the required parameters in the model already. However, the mapping of the climate, hydrologic, physical, and other properties throughout the Subbasin will be reviewed and updated, as necessary. It is anticipated that the assessment will employ the IDC tool, which is a standalone module of the C2VSimFG-Kern model. The IDC tool tracks return flows through the soil zone from precipitation and applied water separately to allow for a determination of natural recharge return flows.

- **Subtask 2.3 - Large Stream and Canal Seepage Hydrological Assessment:** Streamflow and diversion data for large streams will be compiled and organized for the purpose of computing the natural groundwater recharge from local hydrographic reports, water district data and other sources. The purpose is to develop a process to track the distribution of natural streamflow within the Subbasin separately from water imported from outside of the basin. A process will be developed to track the use of diverted natural stream water for agricultural irrigation, municipal water supply, groundwater banking, lake level management and many other uses. In addition, this process will also address how to include secondary recharge from the natural stream water from return flows, wastewater disposal, conveyance seepage, runoff and other mechanisms separately from imported water.
- **Subtask 2.4 - Assessment of Other Natural Recharge Components:** The other hydrologic components that are selected by local policymakers from Subtask 1.3 will be addressed under this task. The methodology for return flows and unallocated stream recharge may overlap with Subtasks 2.1 and 2.2. Bedrock inflow and potentially other identified native yield components will be addressed in this subtask following the approach developed in Subtask 1.3.
- **Subtask 2.5 - Assessment of Basin Geology on Natural Recharge:** Identify the key geological features that may affect natural groundwater recharge. These include the geology of the unsaturated zone and principal aquifers. Compile maps of the four principal aquifers, local clay layers that form local perching horizons, aquifer exemption areas for oilfield activities.
- **Subtask 2.6 - Task 2 Technical Memorandum (TM) / Data Package:** The methodology and analysis will be documented in a technical memorandum (TM), along with a data package, which will summarize the Subbasin and watershed hydrological assessments. A draft TM will be issued for review and comment by local stakeholders. Comments will be addressed in the final TM and incorporated into the final report as described in Task 5.

The results of this compilation will be summarized using tables and GIS maps that put the hydrological and water budget components into a consistent format to illustrate the potential range of conditions and identify potential data gaps. An assessment of these data will be performed to determine the overall strengths and weaknesses of the different data sources. The schedule includes time for presentation and review of this information by local water managers, policy makers and stakeholders under Task 6.

Task 3: Natural Groundwater Recharge Evaluation

Task 3 consists of an assessment of the volume and distribution of natural groundwater recharge within the Kern County Subbasin as the basis for determining a native yield. This task first involves updating the Task 2 analysis based on newly available data or comments by local stakeholders. Then the basinwide natural groundwater recharge will be calculated based on the Task 1 and 2 data and methodologies. For the native yield assessment, the distribution of the natural groundwater recharge will be evaluated with respect to the four principal aquifers. Potential losses of natural recharge to perched groundwater systems or exempt aquifers will also be considered. Based on this assessment, a native yield will be developed. Several subtasks for Task 2 are outlined below:

- **Subtask 3.1 - Update Data and Hydrological Assessment:** It is anticipated that after review of the information presented in the Task 1 and 2 TMs, there will be additions or modifications to the data, mapping or methodologies used. We will address these comments and update the Task 1 and 2 evaluations as appropriate. The goal of the study is to reach a consensus, so this subtask provides to revise Task 1 and 2 results in preparation for Task 3 based comments on the Task 1 and 2 TMs and presentations.

- **Subtask 3.2 - Groundwater Basin Natural Recharge**: We will apply the data and methodology to develop a basinwide distribution of natural groundwater recharge for the Kern County Subbasin. This will integrate the recharge from precipitation, runoff and other identified natural recharge components both within the basin and from the surrounding watersheds. The groundwater recharge will be calculated monthly and compiled annually to determine the volume and distribution of recharge. We will also look at losses of natural water in the root zone and evaporation from lakes and ponded areas.
- **Subtask 3.3 - Develop Basinwide Stream and Canal Seepage Natural Recharge:** Based on diversion data for large streams, develop a basinwide dataset for the purpose of computing the natural groundwater recharge from local hydrographic reports, water district data and other sources. The purpose is to track natural streamflow from water inflows from outside of the basin. Tabulate water uses of diverted surface water for agricultural irrigation, municipal water supply, groundwater banking, lake level management and many other uses. The analysis will include secondary recharge of this water from return flows, wastewater disposal, conveyance seepage, runoff and other mechanisms.
- **Subtask 3.4 - Natural Groundwater Recharge Evaluation**: Using the results from Subtask 3.2, we will further assess the location of the natural groundwater recharge with respect to the underlying aquifers. We will assess the recharge that goes to each of the four principal aquifers. Recharge to perched groundwater systems or oil-field aquifer exemptions will be assessed whether any of that recharge ultimately goes to a principal aquifer. Based on this assessment, a preliminary estimate or range of estimates of the potential Kern County Subbasin native yield will be developed. The recalibrated model results will be assessed with respect to the natural recharge for the Subbasin as a validation step to identify potential issues.
- **Subtask 3.5 - Task 3 Technical Memorandum (TM) / Data Package**: The methodology and analysis will be documented in a technical memo, along with a data package of summarizing the natural groundwater recharge evaluation. A draft TM will be issued for review and comment by local stakeholders. The final TM will be addressed in Task 5 for the final report.

Task 3 is the primary technical analysis for assessing the native yield. Therefore, the schedule includes pauses in the study to allow for review by local water managers, policy makers and stakeholders. There will be multiple presentations of this information under Task 6.

The results of this compilation will be summarized using tables and GIS maps that put the distribution of the natural groundwater recharge and native yield assessment into a consistent format to illustrate the potential range of conditions and identify potential data gaps. An assessment of these data will be performed to determine the overall strengths and weaknesses of the different data sets.

Task 4: Technical Report

A technical report will be developed that documents the work performed for this scope of work. The technical report will provide the technical basis for the data compilation, hydrologic evaluations, and natural recharge assessments for the Kern County Subbasin and the surrounding watersheds. The Native Yield Study Technical Report will provide a concise discussion of the Native Yield Study results in a more general manner for an intended audience that includes local policymakers, stakeholders, and other interested parties. The more detailed technical documentation will be provided by the Tasks 1, 2 and 3 TMs that will be included in the Technical Report as attachments. Several subtasks for Task 4 are outlined below:

- **Subtask 4.1 - Finalize TMs as Report Attachments:** The Task 1, 2 and 3 technical memos will be finalized by addressing comments. The finalized TMs will be included as attachments to the final technical report to provide detailed documentation of data, methodology and results for the Native Yield Study.
- **Subtask 4.2 - Draft Report**: The draft Technical Report will focus on a discussion of the Native Yield Study results in a more user-friendly format for local decisionmakers. A summary of the data and analysis used for the study will be provided in the report with reference to the attached TMs.
- **Subtask 4.3 - Final Report**: The draft technical report will be finalized by making revisions that address comments.

For costing purposes, we assume that the draft technical report will require two draft versions. An Administrative Draft Technical Report will be prepared. Comments will be incorporated into a Draft Technical Report for stakeholder review and comments. The Final Technical Report will address final comments. Electronic submittal is assumed for each version.

Task 5: Project Coordination and Meetings

This task covers project coordination and meetings with the client and local stakeholders throughout the project. A high level of interaction with local water managers, policy makers and stakeholders are included in this task to allow for transparency in performing the analysis, to receive feedback on the methods, and to engage in discussion of the issues involved with developing a native yield. As demonstrated by the level of effort in this task, communication during the development of the Native Yield Study is a high priority. Several subtasks for Task 5 are outlined below:

- **Subtask 5.1 - GSA Coordination and Water Manager Meetings:** The Kern County Subbasin water managers have regular meetings to discuss water issues. We anticipate providing a series of update presentations on the progress of the Native Yield Study. Because the water managers experience, these meetings will also serve the role of a technical advisory committee to provide feedback to help improve the evaluations as they are underway.
- **Subtask 5.2 - Policy Team Updates:** Regular presentations to provide regular updates to the Kern County Subbasin Policy Team are included. We provide time and budget for technical support for multiple presentations to local policymakers to answer questions and obtain feedback from the policymakers regarding the Native Yield Study.
- **Subtask 5.3 - Stakeholder Workshops**: A series of presentations to the local stakeholders are included. As key element of the project, we provide time and budget for technical support for multiple presentations to local stakeholders and policymakers as part of the stakeholder outreach process by the GSAs. It is assumed that these presentations will be provided in different locations in Kern County at different stages of the project. It is further anticipated that these events will be coordinated to minimize travel expenses.
- **Subtask 5.4 - Project Coordination:** Coordination with the client will include project planning, on-going communications, and project status updates. We assume that communication during the project will be conducted via emails, telephone and/or web meetings, if needed.

In addition to attendance and travel to each of the meetings, the Task 5 budget includes preparation time for development of PowerPoint presentations and other meeting materials for each of meeting. Preparation also allows time for review of technical work and preparation for anticipated questions.

Included in the subtasks is an initial set of meetings are anticipated to outline the general approach of the Native Study with local water managers, policy makers and stakeholders. The objective is to introduce the study and get initial feedback on data, methodology and objectives. Subsequent meetings will be scheduled and facilitated through the Kern County GSP Planning Coordinator.

Task 6: Supplemental Technical Support

Due to the importance and potential sensitivity of the Native Yield Study to the Kern County Subbasin GSAs and local stakeholders, it is anticipated that questions or concerns will arise during the course of the Study that will require us to revisit or expand upon work performed in Tasks 1 through 5. Task 6 provides a process to address and track these supplemental tasks that are currently undefined by defining a task that addresses these unresolved or emerging issues as they arise. Supplemental tasks are anticipated to include additional analysis, documentation or presentations that respond to specific questions or concerns from local water managers, policy makers and stakeholders. Subtasks for Task 6 are outlined below:

- **Subtask 6.1 - Supplemental Technical Analysis:** As-needed supplemental technical support is intended to cover requests by local water managers, policy makers and stakeholders for supplemental technical analysis to address questions about the data and analysis to address new or unresolved questions or concerns about the technical analysis in Tasks 1, 2, and 3.
- **Subtask 6.2 – Supplemental Documentation and Communication:** This subtask provides for additional time for increased documentation and communication in Tasks 4 and 5 to address issues that may emerge during the course of the Native Yield Study.

For budgeting purposes, the level of effort is defined as ten percent of the associated task budgets. Use of the Task 6 budget will require approval by email from the Kern County Subbasin GSP Plan Manager.

COST ESTIMATE

The approach for the Native Yield Study is a comprehensive and detailed data analysis for the entire Kern County Subbasin. Our assumption is that we are building up the analysis from a comprehensive data compilation and analysis. This is to address questions and concerns about the native yield estimates from the 2020 GSPs. Our budget includes time for a comprehensive technical analysis under Tasks 1, 2, 3 and 4. In addition, we have included a significant budget towards meetings and presentations with local water managers, policy makers and stakeholders under Task 5. Our assumption is that we will be requested to provide multiple presentations of the Native Yield Study over the course of the project. There may be opportunities for cost-savings by limiting the number of meetings, and/or shifting some of these meetings to videoconferences. In addition, the detailed analysis also serves a dual purpose, as the results of this study will also address planned revisions to the C2VSimFG-Kern model that are also listed as a management action by the KGA and other GSAs.

A cost estimate summary is provided at the end of this text in **Table 1** with a more detailed cost estimate in **Table 2** (located following the text). As summarized on **Tables 1** and **2**, the subbasin water budget analysis is estimated to total **$1,488,650**. Costs include labor, fees, subconsultants and expenses for each project task.

Todd Groundwater will track schedule and budget monthly. Invoices will clearly show team members, hours, costs, and progress on project tasks. A monthly progress report will be prepared for each invoice

showing progress made during the month, next steps for the following billing cycle, and status of both schedule and budget.

TABLE 1 – Kern County Subbasin Native Yield Study Budget Summary

TASKS	Estimated Hours	ESTIMATED COST
Task 1 Natural Hydrology Data Compilation and Mapping	436	$82,020
Task 2 Natural Hydrological Evaluation	1,926	$363,616
Task 3 Natural Groundwater Recharge Evaluation	2,072	$389,074
Task 4 Technical Report	834	$166,810
Task 5 Project Coordination and Meetings	1,710	$413,570
Task 6 As-Needed Supplemental Technical Support	348	$73,560
TOTAL	**7,326**	**$1,488,650**

SCHEDULE

The Todd Groundwater Team can initiate the project within 30 days of the receipt of a notice-to-proceed. The total length of the project is anticipated to occur over 24 to 36 months.

We anticipate the technical analysis (Tasks 1, 2, and 3) will be completed over a 16 to 24-month period from the notice-to-proceed. The schedule allows for considerable time for review and comment by local water managers, policy makers and stakeholders through multiple presentations and TMs so that feedback can be incorporated into the Study. However, the proposed schedule may provide opportunities to expedite the project.

After the completion of the technical analysis (Tasks 1, 2, and 3), we plan to allow for 9 to 12 months to develop the draft and final Native Yield Study Technical Report (Task 4). This length of time allows for sufficient review by local water managers, policy makers and stakeholders of this important and sensitive report before it is finalized. We assume close coordination and cooperation with the Subbasin GSAs to meet this schedule.

A key element of this Native Yield Study is the proposed series of meetings and workshops with workshop meetings with local water managers, policy makers and stakeholders (Task 5). These meetings and workshops will occur regularly over the entire duration of the project; however, the frequency of these meetings and workshops is anticipated to increase in the latter half of the projected schedule. It is during the latter half of the projected schedule that the Supplemental Tasks (Task 6) are anticipated to be more highly utilized to address issues and concerns that arise from these meetings. It is anticipated that the scheduling of these meeting and potential issues that may be raised will be a key factor in determining the timeline for the project schedule. Therefore, schedule flexibility is represented by the range of times for completion of tasks.

C2VSimFG-Kern Model Recalibration

The Kern County Subbasin Coordination Agreement refers to the local groundwater-surface water model (C2VSimFG-Kern) as the agreed upon method for generating coordinated water budgets for the Kern County Subbasin. Appendices 2 and 4 of the Kern County Subbasin Coordination Agreement include a technical report on the development and application of C2VSimFG-Kern for these purposes. To support the Kern County Subbasin Groundwater Sustainability Plans (GSPs) that were submitted in January 2020, DWR's C2VSimFG-Beta model with locally-derived historical data for the Kern County subbasin to better represent local water conditions. Historical surface water diversion, water bank recharge and water bank withdrawal information were collected from local GSAs, management areas, water agencies and purveyors.

Because the model update was done concurrently with the development of the Kern County GSPs, DWR's existing hydrogeologic conceptual model and data management structure were maintained in C2VSimFG-Kern. This was done to focus the modeling effort for the 2020 GSPs on updating the water budgets and in anticipation that improvements in the hydrogeologic conceptual model and other relevant data would be advanced during the GSP process. Therefore, the next step in the water budget analysis is to begin to address the data gaps and other model improvements identified during the GSP process that were recommended for future C2VSimFG-Kern updates.

Background

During the time that the Subbasin was evaluating various modeling alternatives, DWR was in the process of updating the regional C2VSim model through water year (WY) 2015. In addition, the GSP regulations stated that DWR would provide the C2VSim model "for use by Agencies in developing the water budget." DWR's 2018 release of C2VSimFG-Beta includes historical input data for WY1922 to WY2015. C2VSimFG-Beta includes historical precipitation, stream inflow, land use and crop acreage for the entire Central Valley. These data include monthly precipitation and annual land use for each model element and estimated monthly evapotranspiration for each modeled land use type and agricultural crop. Historical surface water data include monthly surface water inflow for each river entering the model boundary and monthly surface water diversions and deliveries.

Todd Groundwater was contracted to modify DWR's C2VSimFG-Beta model with locally-derived historical data for the Kern County subbasin to better represent local water conditions. Historical surface water diversion, water bank recharge and water bank withdrawal information were collected from local GSAs, management areas, water agencies and purveyors. Urban land use was restricted to developed areas, and urban populations and per-capita water demands were updated. Model structure (elements, streams, stratigraphy, etc.) was not modified. Model parameters were not calibrated, although some model parameters were adjusted to improve model performance in specific geographic areas.

The C2VSimFG-Kern performs well in the Kern County Subbasin, producing simulated water budget components that generally match historical values compiled by local agencies. C2VSimFG-Kern simulated groundwater levels provide a reasonable approximation of observed groundwater levels in the central part of the Kern County Subbasin. The model is well suited for estimating the impacts of management actions on the Subbasin groundwater storage and is also well suited as a planning tool in meeting compliance of SGMA. During the model update, several outstanding issues were identified that

should be addressed in future updates to C2VSimFG-Kern. The following actions and model improvements are recommended:

- Improve streamflow simulations of the Kern River and Poso Creek
- Improve the geologic and hydrogeologic conceptual model of the Kern County portion of the Central Valley
- Simulation of deep percolation and small watersheds
- Root Zone Parameters
- Investigate development of a stand-alone Kern County Subbasin model
- Adjust the finite element grid to honor water management boundaries
- Quantify boundary flows around the Kern County Subbasin Boundary
- Utilize more complex water management features of IWFM.
- Calibrate the improved model for the Kern County Subbasin.

The following scope of work outlines the tasks and level of effort necessary to update the C2VSimFG-Kern model used for the 2020 GSPs and Annual Report based on the recommendations listed in the Model Report included as Appendices 2 and 4 of the Kern County Subbasin Coordination Agreement. The list of recommendations from the Model Report is provided as an attachment.

Model Recalibration Approach

C2VSimFG-Kern is a regional planning model designed to support SGMA compliance through a consistent basin-wide approach for evaluating groundwater and surface water conditions for the Kern County Subbasin. C2VSimFG-Kern is not intended to supersede any local model but rather to represent local model data in assessing the basin-wide conditions. However, through this process C2VSimFG-Kern may provide modeling support for areas that do not otherwise have a local model available.

Our approach focuses on sequencing of work in a stepwise, systematic manner. As part of this approach, the IWFM model would be functional after the completion of each task. We have included—as a quality assurance process—to run the model simulation during each subtask and verify the model results at the calibration targets to verify that model input parameters are performing as expected. This process will help to identify any model setup issues during each subtask so that they can be appropriately addressed. Therefore, at the end of this process, we can proceed directly to the final calibration task to avoid potential schedule delays.

The model upgrade includes incorporating data from available local models as a method to maintain consistency of modeling approaches in the Subbasin. Local models will, however, contain local scale data pertinent to local conditions and the overall purpose of that model. As a regional planning model, data from local models would be "scaled-up" to provide input to C2VSimFG-Kern at the regional-scale.

During the model update, two versions of the model will be maintained. One version of the model (Production Model) will stay consistent with the 2020 GSP version of the model to provide consistent water budget and change in storage results for Annual Reports. The second version of the model (Developmental Model) will include the in-progress model upgrades where water budgets and change in storage may be variable as new features and data are incorporated. It is preferable for the Kern County Subbasin GSAs to continue to present a consistent set of water budget results in the Annual Report while the model upgrades are being implemented. This will avoid having to explain ongoing water budget changes in the Annual Reports. Once the Developmental Model is fully calibrated and agreed to

by the Kern County Subbasin GSAS, revised water budgets, change in storage and sustainable yields can be simulated in the future.

The C2VSimFG-Kern model will be updated for White Wolf Subbasin concurrently with the Kern County Subbasin. This will require coordination with the White Wolf GSA; however, it is anticipated that the Kern County Subbasin GSAs and the White Wolf GSA will continue to maintain independent versions of the model.

PROPOSED SCOPE OF SERVICES

The following discussion provides additional details on our approach including some initial recommendations on addressing model update objectives and issues. As initial recommendations, we understand that we will work with the TAC on defining the final model upgrade tasks for implementation.

Task 1 –Northern Kern County Subbasin Boundary Modification

For Task 1, the focus is on how to represent the areas outside of Kern County in future simulations with the focus on the northern Kern County Subbasin boundary and whether to include the areas beyond this boundary in the model. The key objectives Task 1 include the following:

- Coordinate with adjacent Groundwater Basins to better quantify boundary flow simulations based on shared data with GSAs in adjacent basins.
- Develop a stand-alone Kern County Subbasin model to provide a more-efficient platform focused on Kern County conditions and data.

Our proposed scope of work to complete the Task 1 is described below.

- **Subtask 1.1** – Develop Kern County Subbasin Focused Model - To develop the Kern County Subbasin focused version of the model, all of the elements north of the boundary condition would be removed from the model input files.
- **Subtask 1.2** – Coordinate with Adjacent SGMA Basins - A key part of this scope of work is to coordinate with GSAs in neighboring groundwater subbasins to the north– the Tulare Lake and Tule subbasins – to obtain groundwater level data and simulation results to help in defining the northern boundary condition. Since both of the northern adjacent subbasins have groundwater models to forecast their projected-future groundwater conditions, the exchange of data will include results from the various models. It is anticipated that the GSAs in neighboring groundwater basins will request similar data sets from the Kern County Subbasin. The modeling team will work with the Kern County Subbasin GSA representatives on this coordination process.
- **Subtask 1.3** – Implement and Validate Northern Boundary - For Task 3, an initial assessment of the measured and simulated groundwater levels will be made to define a northern boundary condition to simulate the transition of groundwater conditions in the Kern County Subbasin with the neighboring subbasins to the north. These will be further assessed by comparing them with the simulated groundwater levels from C2VSimFG-Kern for both the historical and projected future simulations. These preliminary boundary conditions will be further developed during future model updates. This new northern boundary will be implemented into the Developmental Model. The developmental model will be run with the northern boundary condition using historical and projected future scenarios. Task 3 also includes post-processing of

the scenario results to provide the necessary tables, graphs and maps to sufficiently validate the model modifications.

Task 2 – Refine Model Grid

The C2VSimFG-Kern finite element grid developed by DWR is not well optimized for evaluating conditions in Kern County and may be a limiting factor in implementing the planned model upgrades. The approach for modifying the C2VSimFG-Kern finite element grid is to prioritize the key hydrologic features and water management boundaries that should be considered. Topics to be included in the prioritization are anticipated to include the following:

- Align grid with surface water features such as rivers, major creek, and major canals.
- Align grid with water management boundaries, urban areas and major riparian or groundwater dependent ecosystem locations.
- Prioritize element density to be highest in high stress locations such as wellfield and banking operations.
- Define a maximum element size for irrigated agricultural areas.
- Apply larger elements over undeveloped areas.
- Consider grid alignment for simulation of the four principal aquifers.
- Identify and address problematic areas such as oilfield exempt aquifers, etc.

Modification of the finite element grid is a time-consuming process; therefore, it is assumed that the finite element grid will be finalized during Task 2 and no further modifications of the grid will be conducted in later tasks of the model upgrade.

- **Subtask 2.1 Generate Revised Mode Grid** - Once the prioritization of the finite element grid modification with the TAC is decided, a modified grid will be developed. Finite grid generation software will be used to map the elements and nodes to the appropriate geographic locations based on the prioritization. The finite element grid will be mapped using ArcMap GIS for review and comment by the TAC. A draft grid will be presented at a Manager's Committee meeting.
- **Subtask 2.2 Remap Model Parameters to New Grid** - model input data will be remapped to the revised finite element grid. This process will include update the data management which provides the added benefit of supporting the Task 3 and 4 as well. The model input file data will be verified to the Task 1 model. The Task 2 Developmental Model will be run to validate that the results are comparable with the with the 2020 GSP for the Annual Report results to further ensure consistency in water budget results due to finite element grid modification.

Task 3 – Update Surface Water Management

During the C2VSimFG-Kern modeling for the 2020 GSPs, several agencies noted some inconsistencies in the application or results of the managed water supply and demand. These were noted as limitations in the 2020 C2VSimFG-Kern Model Report that would be addressed in future model updates. The key objectives of Task 3 Model Upgrades include the following:

- Improve simulation of rivers to better represent streamflow of the Kern River and Poso Creek.
- More fully utilize the water management simulation features of IWFM to provide increased accuracy of water supply, distribution and demands.
- Remap the areal distribution land use including agricultural, urban, riparian and native.

- Update root zone and agricultural parameters to better simulate deep percolation and small watershed inflows.

The Modeling Team will prioritize the IWFM features for streams and the IWFM Demand Calculator (IDC) functions that should be adjusted. It is anticipated that the focus will be on those that have the most significant impact on the water budget. These will be coordinated with similar activities being performed as part of the Native Yield Study.

- **Subtask 3.1 - Redefine Simulated Rivers** - Flows in the Kern River channel, including local stream-groundwater interactions, are not well replicated and surface water diversions are not dynamically simulated. Some rejected recharge occurs in the Kern Fan area in very wet years, with significant outflow of groundwater to the Kern River especially in the Kern Fan banking area (i.e., rejected recharge). One key issue is the selection of the stream simulation options that DWR applied that did not accommodate streambed conductance varied as a function of stage but did not considered the width, or wetted perimeter, of the stream. This approach works for northern California streams, but is not sufficient for simulating the highly variable flows that occur on the Kern River and Poso Creek. This one of the key reasons to develop a Kern-only model since the streambed approach applies to the entire model. To address this, the stream simulation options will be changed to a more appropriate streamflow simulation option that is available in IWFM.
- **Subtask 3.2 - Update Urban Water Management Parameters:** Update urban water supply and demand components of the model with emphasis on disadvantaged communities, small water systems, Industrial and domestic water data.
- **Subtask 3.3 - Update C2VSimFG-Kern with Native Yield Study Data:** The data used for the Native Yield Study will be incorporated into the C2VSimFG-Kern model for the small watershed and root zone modules. This will focus on the IWFM Demand Calculator (IDC) function in the model, and include update for the soil, root zone and agricultural parameters to better simulate deep percolation and small watershed inflows.

The Task 3 Developmental Model will be run to validate that the results are comparable with the with the 2020 GSP for the Annual Report results to evaluate the resulting changes in water budget results due to the Task 3 modifications.

Task 4 – Update Hydrogeological Conceptual Model

Task 4 includes updates to the Hydrogeologic Conceptual Model (HCM) to better represent local geologic and hydrogeologic conditions. Due to the number of modifications that were required to the HCM and aquifer parameters during the C2VSimFG-Kern development, it is recommended that a more rigorous and systematic model update be conducted that will make the HCM and aquifer parameters more consistent with the Kern County Subbasin GSPs. In addition, further calibration of C2VSimFG-Kern is recommended to revise aquifer parameters in the Kern County Subbasin. HCM work will be done by GSAs and MAs with Todd Groundwater providing compilation services to link these together. Issues to be reconciled will be passed back to the appropriate GSAs and MAs. In order to improve the representation of the HCM in the C2VSimFG-Kern model, the following tasks are proposed:

- **Subtask 4.1 - Compile and review model aquifer parameters:** Aquifer property information will be compiled from the 2020 GSPs and available groundwater models. These will be reviewed and tabulated to define the spatial distribution and variation of model aquifer parameters.
- **Subtask 4.2 - Update Principal Aquifer Layer Definitions:** Modify the model layer elevations to better align with the geometry from detailed geologic and HCMs in the Kern County Subbasin GSPs, other technical studies and local groundwater models. Differentiate the four Principal Aquifers that have been identified in the Kern County Subbasin based on definitions from local management area GSPs and supporting data.
- **Subtask 4.3 - Incorporate key natural features that affect groundwater flow:** Identify the locations and characteristics of natural features that affect groundwater recharge and movement (faults, ridges, clays). This includes representation of exempt aquifers that may affect the definition of the accepted horizontal and vertical bounds of the Kern County Subbasin as presented in the 2020 GSPs.

It is assumed that the development of the key local conditions will be done by GSAs and MAs. The Modeling Team will compile the HCM data and work to link these together. If information and maps are inconsistent across the Subbasin, specific issues will be identified for reconciliation by the appropriate GSAs and MAs.

Task 5 – C2VSimFG-Kern Recalibration

During the calibration process, the aquifer properties and boundary conditions will be varied within an acceptable range until the closest fit of the simulated versus measured groundwater elevation data is achieved. Because there are multiple combinations of aquifer properties and boundary conditions that can be used to match a single set of groundwater elevation data, it is important to calibrate the model over a long historical period that contains varying hydrologic conditions and thereby to demonstrate that the model has the capability of simulating historical changes in groundwater elevations and surface water flows in the Basin. Localized areas can be further calibrated by evaluating short term conditions related to multi-day aquifer pumping tests.

The C2VSimFG-Kern model calibration will be performed using data from the Native Yield Study. The Native Yield Study provides a dual function of revising the C2VSimFG-Kern model that will be performed in Subtask 4.3. Following the update, the historical and projected future baseline scenarios will be rerun. This tasks primarily serves as a validation step to check that the results can be reproduced using the revised model. This will be conducted concurrently with the Native Yield Study, so any issues found in the model calibration can be addressed.

- **Subtask 5.1 - Recalibration of C2VSimFG-Kern Model:** Model calibration will consist of history-matching of simulated versus measured groundwater elevation data. Calibration will be performed by comparing simulated versus measured groundwater elevation data. Long-term historical calibration conducted over the 1994 to 2024 simulation period that includes wet, dry, and normal years with varying degrees of pumping. Calibrating the model over a long period of variable hydrologic conditions constrains the calibration to reduce uncertainty. Assessment of calibration will be performed by using a series of metrics to evaluate the calibration results including a statistical analysis of simulated to measured groundwater levels, hydrograph trends, and groundwater gradients.
- **Task 5.2 - Generate revised historical water budgets:** We will use the IWFM Z-Budget feature to develop the subbasin water budgets from the revised C2VSim. The water budgets will

quantify the required elements required for SGMA including simulation results for subsurface inflows and outflows, managed aquifer recharge and irrigation pumping and return flows.

- **Task 5.3 – Sensitivity Analysis:** The model provides a platform to vary parameters used to assess the relative sensitivity of variations in the data on the model results. The model sensitivity analysis will be done to screen for the most sensitive parameters. This will also support the Native Yield Study.
- **Task 5.4 – Update SGMA Projected-Future Scenarios:** The projected future baseline scenarios will be rerun using the updated C2VSimFG-Kern model. Projected future water budgets for the Kern County Subbasin will be developed to evaluate the performance of proposed management actions with respect to achieving groundwater sustainability. Based on these results, participating agencies will be asked to provide updated lists of projected future management actions to be implemented by WY2040. The updated model results will be compared to the 2020 GSP model results as a validation step in assessing calibration.

The results of Task 5 will produce an updated historical water budget and change in groundwater in storage estimates for the Kern County Subbasin in preparation of the 2025 GSP updates. These results can be applied for developing updated sustainable and native yield estimates as well. The emphasis is to better represent local groundwater conditions including representation of water levels in the four principal aquifers and higher accuracy in simulating changes in groundwater levels over time.

Final updates for the projected-future scenarios are not part of this scope of work, and will be performed as part of the scope of work to support the 2025 GSP development. That is because the final projected future model updates will depend upon input from the Kern County Subbasin GSAs that will include their updated lists of projected future management actions to be implemented by WY2040 based on their 2025 GSP updates. For the 2025 GSP Updates, the projected future water budgets for the Kern County Subbasin will be developed using the recalibrated model to evaluate the performance of proposed management actions with respect to achieving groundwater sustainability.

Task 6 – Technical Report

A technical report will be developed that documents the work performed for the model recalibration. The technical report will provide the technical basis for setting up the baseline, documenting the model results, and developing the projected water budgets. The modeling results and water budgets produced for the Technical Report will be consistent with DWR's SGMA guidelines and BMPs. It is anticipated that this report will provide sufficient compliance for all GSAs in the subbasin for the GSP requirements of current and historical water budgets. The following subtasks are included in Task 6.

- **Subtask 6.1 – Draft Technical Report:** For costing purposes, we assume that the draft technical report will require two draft versions. An Administrative Draft Technical Report will be prepared for stakeholder review and comments. Comments will be incorporated into a Draft Technical Report. Electronic submittal is assumed for both versions.
- **Subtask 6.2 – Final Technical Report:** The Final Technical Report will address final comments and will be submitted to the GSAs for GSP supporting documentation. For costing purposes, we assume an electronic delivery for the Final Technical Report.

Task 5 supports the modeling and basin-wide water budget requirements for the 2025 GSP updates by developing the projected future baseline and climate changes water budgets as required by the GSP regulations and consistent with DWR guidance. Projected future water budgets will be run for Baseline

conditions and Climate Conditions over the 50-year planning and implementation horizon. These scenario models provide a basis of comparison for evaluating proposed sustainability management actions and projects over the SGMA planning and implementation horizon.

Task 7: Project Coordination and Communication

This task covers project coordination with the client throughout the project. Coordination will include project planning, on-going communications and project status updates. We assume that communication during the project will be conducted via emails, telephone and web meetings.

- **Subtask 7.1 – GSA Coordination and Water Manager Meetings:** Several project updates (via conference call) and three workshops are included in the scope of work over the duration of the project to keep KRGSA and other Kern County Subbasin GSAs up-to-date on the modeling process. We believe that this effort will support the overall transparency of the modeling efforts and help to achieve acceptance of the results to keep the GSPs on schedule to meet GSP deadlines.
- **Subtask 7.2 – Project Coordination:** This task covers project coordination with the client throughout the project. Coordination will include project planning, on-going communications and project status updates. We assume that communication during the project will be conducted via emails, telephone and/or web meetings, if needed. Todd Groundwater will track schedule and budget monthly. Invoices will clearly show team members, hours, costs, and progress on project tasks. A monthly progress report will be prepared for each invoice showing progress made during the month, next steps for the following billing cycle, and status of both schedule and budget.

Model Recalibration Cost Estimate and Schedule

A cost estimate summary to complete the proposed C2VSimFG-Kern model recalibration is provided at the end of this text in **Table 3** with a more detailed cost estimate in **Table 4** (located following the text). As summarized on **Tables 3** and **4**, the subbasin water budget analysis is estimated to total **$799,610**. Costs include labor, fees, subconsultants and expenses for each project task.

Todd Groundwater will track schedule and budget monthly. Invoices will clearly show team members, hours, costs, and progress on project tasks. A monthly progress report will be prepared for each invoice showing progress made during the month, next steps for the following billing cycle, and status of both schedule and budget.

TABLE 3 – Kern County Subbasin Model Recalibration Budget Summary

TASKS	Estimated Hours	ESTIMATED COST
Task 1 Modify Northern Kern County Subbasin Boundary	256	$50,760
Task 2 Refine Model Grid	384	$66,680
Task 3 Update Surface Water Management	660	$125,660
Task 4 Update Hydrogeological Conceptual Model	898	$170,710
Task 5 C2VSimFG-Kern Recalibration	980	$190,820
Task 6 Technical Report	576	$113,020
Task 7 Project Coordination and Meetings	356	$81,960
TOTAL	**4,110**	**$799,610**

The proposed schedule outlines the time needed to conduct the work and to allow sufficient time for water managers and stakeholders to review and comment on model upgrades. The schedule assumes that Task 1 would begin in late 2021 and that the phased approach would follow in a consistent manner over the period. This is designed to allow sufficient time to improve C2VSimFG-Kern in time for use in development of the 2025 GSP Updates. The schedule will also be coordinated with the accompanying Native Yield Study where key model input parameters will be developed.

The schedule also allows time for key management actions to address data gaps to evolve during the period so that additional data are available for the model upgrade. It is assumed that the work of the Modeling Team is primarily focused on incorporating data for the Model Upgrade. It is assumed that the Modeling Team will rely on data provided by the local GSAs and MAs so that the Model Upgrade is consistent with the data and interpretations presented in the GSPs for their areas.

DRAFT

Kern Subbasin DMS
User Permissions Matrix

Users	View Data			Data Management								Notifications	
	Map Viewer [1]			Search/Download [2]			Add Data		Add Sites, Edit & Delete		Manage Users	Data Entered	MT Exceedance
	Public	Owned	RMW *	Public	Owned	RMW	Owned	RMW	Owned	RMW [3]	Agency		
Agency Administrator	X	X	X	X	X	X	X	X	X		X	X	X [4]
Agency QA/QC Reviewer	X	X	X	X	X	X	X	X	X			X	
Agency User	X	X	X	X	X	X	X	X					
Basin Coordinator	X		X	X		X				X			X
Stakeholder [5]	X	X	X	X	X								
Public	X		X										

[1] Access to the Map Viewer and it's functionality has limited search and print capabilities.

[2] Access to the Data Management tab, which has more robust search and download capabilities with export tools.

[3] Monitoring Network data linked to the SGMA portal: site code, RP and GS Elevations, SMCs and water level reads, consistent with the coordination agreement.

[4] MT Exceedance notifications are triggered after data is approved, and will automatically be emailed to ALL Agency Administrators and the Basin Coordinator.

[5] Stakeholder permission is limited to wells they are associated with by the Agency granting their user permission.

* SGMA Representative Monitoring Well. Data is entered into the DMS and uploaded to the SGMA Portal, consistent with the coordination agreement.

KERN GROUNDWATER AUTHORITY

Memorandum

To: Kern Groundwater Authority Board of Directors
From: Patty Poire, Executive Director
Date: September 22, 2021
Subject: Accomplishments and Forward Work Plan

Accomplishments

- Prepared with GEI & held meeting with the managers/GSAs on the DMS to discuss next steps and Permission schedule – completed the permission schedule
- Prepared and held a meeting with GEI & EDF on accounting platform programs
- Working with GEI to finalize the work plan on the DMS
- Participated with Olcese & KRGSA with CalGEM on an aquifer exemption request for Round Mountain area
- Meeting with Congressman Valadao on CA water infrastructure with Chair in Five Points
- Meeting with Assemblymember Fong on water infrastructure and legislation pertaining to water – AB 252
- Participated with sponsors and other GSAs on AB 252 -repurposing lands due to SGMA
- Participated in ACWA Groundwater Trading Working Group established for the Water Commissions Groundwater white paper
- Meeting with GEI and EDF on coordination of systems to allow an accounting platform
- Prepared and held a KGA Executive Committee meetings
- Participated in a DWR workshop to develop Principles and Strategies Related to Groundwater Management and Drinking Water Wells. Governor's Executive Order item #11
- Participated in CDFA Board meeting on SGMA & local drought impacts & Drinking Water
- Participated in the CA Partnership for the San Joaquin Valley quarterly meeting
- Participated in the CA Partnership for the San Joaquin Valley on the drought & drinking water– Director
- Prepared and presented at the Kern County Farm Bureau meeting on SGMA update
- Prepared and presented for Bakersfield College on water and energy
- Prepared and presented for the Downtown Rotary Club on SGMA with Arvin-Edison and Wheeler Ridge managers participating as well
- Prepared and held a KGA manager meeting on planning documents and water well permits.
- Attended the KRGSA meeting – requesting that KRGSA beta test the permissions of the DMS
- Participated in the State Water Board meeting

- Participated in ACWA SGMA Implementation Committee - member
- Participated in the San Joaquin Valley Blueprint Process & Progress
- Continue working with Kern County on new water wells permits and distributed to managers/GSAs

Forward Work Plan

- Begin the discussion on the coordination of the implementation of the management actions and projects
- Continue the discussion on the development of the Data Management System for the Kern subbasin
- Continue the work on the boundary adjustment including Arvin-Edison, Wheeler Ridge and Tejon Castac formation of GSAs
- Hold regular monthly Stakeholder meetings to encourage engagement with the implementation of the GSP – when COVID restrictions allow

Lorelei H. Oviatt, AICP, Director
2700 "M" Street, Suite 100
Bakersfield, CA 93301-2323
Phone: (661) 862-8600
Fax: (661) 862-8601 TTY Relay 1-800-735-2929
Email: planning@kerncounty.com
Web Address: http://kernplanning.com/

PLANNING AND NATURAL RESOURCES DEPARTMENT

Planning
Community Development
Administrative Operations

July 16, 2021

FILE: General Correspondence, Map 125
PLN21-00582

Rick Jhaj
Jhaj and Jhaj, LLC
1631 S. Comanche Dr.
Bakersfield, CA 93307

RE: Preliminary Review – Proposed General Plan Amendment and Zone Change for APN #177-220-24, located on the east side of Comanche Dr., north of Highway 58, and south of Edison Highway.

Dear Mr. Jhaj,

Staff is in receipt of the application materials submitted for the project as noted above. The purpose of this letter is to inform you that based on the information provided, the submitted application has been found to be incomplete. Please review the following information.

A. PROJECT OVERVIEW

- **Applications Received** – Based on the materials received to date, the proposed project requests a general plan amendment and a change in zone classification to facilitate future expansion of the existing Shell gas station and truck stop services on 8.26 acres:

    1. General Plan Amendment from R-IA (8.1 Intensive Agriculture) to LI (7.1 Light Industrial)

    2. Change in Zone Classification from A-1 (Limited Agriculture) to M-1 PD (Light Industrial- Precise Development Combining).

- **Existing and Proposed Site Characteristics** – The proposed project site is 8.26 gross acres that is currently agriculturally developed. The project site has a Map Code designation of R-IA (Intensive Agriculture) by the Metropolitan Bakersfield General Plan and has a zone classification of A-1 (Limited Agriculture). Staff notes that the project site's map code designation and zoning are inconsistent. Access to the site would be provide by Comanche Drive. Surrounding properties include the following:

Location	General Plan	Zone Classification	Land Use
Project Site	R-IA	A-1	Developed land with Active Agriculture
North	LI	M-1 PD	Gas Station with Convenience Market

East	R-IA	A-1	Undeveloped land that appears to have been disked
South			State Route 58
West	R-IA	A-1	Developed land with Active Agriculture
Proposed Utilities: Water: Private water well Sewer: Septic system			

- Based on a review of our records, no violation currently exist on the project site.

- **Notable General/Specific Plan & Zoning Policies** – The proposed project is located within the administrative boundaries of the Metropolitan Bakersfield General Plan. As such, according to the Public Services and Facilities Element, all new urban development is required to be serviced by centralized wastewater collection, treatment and disposal facilities, unless an exception to the requirement to connect to public sewer is approved by the Kern County Board of Supervisors. (Please review Chapter X, Public Services and Facilities Element of the Metropolitan Bakersfield General Plan).

- Domestic water is proposed through the construction of a private water well. Please be advised, the project site is located within the Kern County Subbasin, in an area designated as high priority, and critically over drafted-groundwater subbasin by the Department of Water Resources. The project is subject to the provisions of the adopted Kern Groundwater Authority Groundwater Sustainability Plan administered by the Kern Groundwater Authority Groundwater Sustainability Agency (KGAGSA).

  Enclosed is a map detailing that your proposed project is within KGAGSA boundaries.

  The KGAGSA is a separate and independent agency from the County of Kern. You will be required to provide sufficient evidence through consultation with the agency that there is sufficient water allocations to the site for the proposed development, or a written correspondence from a water agency authorized to provide domestic water to the site.

  Please refer to the following link for the Kern Groundwater Authority Groundwater Sustainability Plan. http://www.kerngwa.com/assets/kga-umbrella-gsp_final.pdf

- The proposed project is located within a Type "A" improvement area. Implementation of the project will at a minimum require construction of Type "A" improvements along project frontage roads. Such improvements include, curb, gutter and paving to Type A standards.

B. CEQA ANALYSIS: Mitigated Negative Declaration

- Based on a preliminary review of the proposed request, including the information identified above, Staff has determined that the project will require the preparation of a Mitigated Negative Declaration per the California State CEQA Guidelines with conditions that reduce all impacts to less than significant. The project site is located within the San Joaquin Valley Air Pollution Control District (SJVAPCD) administrative boundaries. Currently, the San Joaquin Valley is in Federal nonattainment status for Ozone (8) hour and PM 2.5 and in State nonattainment status for Ozone (1) and (8) hour, PM 10, and PM 2.5. In addition to other district requirements, please be advised that this department will require the Mitigated Negative Declaration to provide analysis and mitigation to

require as a condition of building permit for the project applicant to enter into a Voluntary Emissions Reduction Agreement (VERA) with the district to reduce all air impacts to the equivalent of net zero. This is in addition to the mandatory Indirect Source Rule (ISR) requirements.

- Please be aware that a Mitigated Negative Declaration requires that the applicant sign the document agreeing to all mitigation measures before circulation of the document for public comment. If the applicant does not agree with the proposed Mitigation Measures that reduce all impacts to less than significant, then an Environmental Impact Report is required to be prepared.

- The standard for determining than an Environmental Impact Report instead of a Mitigated Negative Declaration must be prepared is the "fair argument" that the project level and cumulative impacts of the project cannot be reduced to a level of less than significant for even one of the resource areas.

Staff reserves the right to re-evaluate the CEQA determination based on comments received during the formal processing of this request.

C. ITEMS NEEDED TO MOVE FORWARD WITH PROJECT

In order to initiate the processing of this request, several items are needed in order for Staff to deem your application complete. In order to move forward with this request, please submit the following items:

1) **Precise Development Plan Application** (Form 103) – The project proposes a change in zone classification to LI PD (Light Industrial Precise Development Combining District). Staff requires the concurrent processing of a Precise Development Plan. Please complete and submit a Precise Development Plan Application (Form 103) which is enclosed and is available online at https://kernplanning.com/forms-applications/ . Please prepare and submit a Precise Development Plan which includes, but is not limited to the following:

    a. Width, location, and name of all surrounding streets. (Including any other types of right-of-ways, easements, pipelines, conduits, canals, drainage ditches, etc.);
    b. Location, dimensions, ground floor area, and use of all existing and proposed buildings and structures on subject property;
    c. Parking area, type of paving, size and number of parking spaces, bumper blocks, etc.);
    d. Points of ingress and egress for pedestrians, location and width of walkways, etc.);
    e. Location of proposed or existing signs (includes size and height);
    f. Indicate the location and dimensions of all trash enclosures;
    g. Proposed dedications and improvements;
    h. Location, height and proposed construction materials for walls and fences;
    i. Under the "Statistical Information," include height, ground floor area and total floor area of existing and proposed buildings.

    For your convenience and reference, instructions and map examples (Form 103 A) for a precise development Plan are enclosed.

2) **Cost Recovery Form** (Form 106) – Please complete and submit an Agreement for Cost Recovery. The application for the above-mentioned project may generate processing costs in excess of the amount of the filing fee deposit. It is necessary to implement the provision of the County fee ordinance that enables this Department to recover the full cost of processing an application. This form is to be completed with an original signature by the party responsible for the cost of this permit. A monthly invoice will be sent outlining the costs, and any costs not covered by the deposit are due within 30 days. The form is also available online at http://pcd.kerndsa.com/planning/forms-and-applications/

3) **Articles of Incorporation** – Please provide a copy of the Articles of Incorporation for Jhaj and Jhaj, LLC specifying who holds signature authority.

4) **Proof of Water** – As discussed above, the project is subject to the provisions of the adopted Kern Groundwater Authority Groundwater Sustainability Plan administered by the Kern Groundwater Authority Groundwater Sustainability Agency (KGAGSA). Please provide ***a written response from the KGAGSA*** related to the availability of water for the proposed project.

5) **Operational Statement** – Please prepare and submit an Operational Statement which details a narrative project description of the proposed project which identifies, but is not limited to the following:
   a. Describe the overall concept for the proposed project site;
   b. Days and hours of operation;
   c. Number of employees;
   d. Any other information you feel best describes the proposal

6) **Required Studies** – The following studies are required in order for Staff to initiate the processing of the required Mitigated Negative Declaration:

   a. Property Title Reports
   b. Air Quality Study, including Greenhouse Gas Emissions Analysis;
   c. Biological Report;
   d. Cultural Report
   e. Groundwater Mounding and Nitrate Loading Study
   f. Traffic Analysis
   g. Ag Conversion Study

D. **NEXT STEPS:**

Please submit all items under Section C.

After review of the submitted materials which will be completed within 30 days, the application will either be found to be incomplete and additional information will be requested (or) the following fees will be requested to complete your application.

Fees (Initial Application Processing). The following fee amount is being provided to you as a courtesy only, therefore, ***do not send any fees until requested by Staff.*** Please be advised this project will be processed on a time and materials basis. Additional funds will be required and billed on a monthly basis.

Fee Description	Amount
General Plan Amendment (SPP-001)*	$1,355.00
Clerk of the Board (CLK-001)	$120.00
Environmental Health Services (EHS-090)	$495.00
Public Works (LDR-TBD)	$100.00
Fire Department (FD-333)	$210.00
County Counsel (CCL-001)	$185.00
Zone Change (PIM-001)*	$2,000.00
Clerk of the Board (CLK-001)	$120.00
Environmental Health Services (EHS-090)	$495.00
Public Works (LDR - REQ'D)	$100.00

Fire Department (FD-333)	$210.00
County Counsel	$185.00
Precise Development Plan Preliminary Review (PIM-P05)	$600.00
Precise Development Plan* (PIM-005)	$2,300.00
Environmental Health Services (EHS-090)	$495.00
Public Works (LDR-TBD)	$100.00
Initial Study/Mitigated Negative Declaration (ENP-002)	$5,000.00
Environmental Health Services (EHS-090)	$495.00
Fire Department (FD 331)	$215.00
Neg. Dec. Fish & Game Filing Fee (CCF-G02)	$2,480.25
Electronic Permitting Maintenance (POG-003) $100 x 3	$300.00
CEQA Posting Fee (CCF-002T)	$50.00
Total	**$17,610.25**

Fees identified with an asterisk (*) denote Staff time and material fees.

Note: Please be advised that formal acceptance of your application and payment of fees does not mean the Planning and Natural Resources Department will recommend approval for this project. Recommendations will be based on the information obtained throughout the public processing process and upon further review and detailed analysis of the proposed project.

If you have any questions regarding this correspondence, the required submittal items or of the processing of your request, please do not hesitate to contact me directly at hooverc@kerncounty.com or by telephone at (661) 862-8629

Sincerely,

Cindi Hoover
Supervising Planner - Advance Planning
Planning and Natural Resources Department

Cc: *Patricia Newquist – Cornerstone Engineering Inc.*

Enclosures: Groundwater Sustainability Agency Map
Form 103 – Precise Development Plan Application
Form 103 A – Precise Development Plan Instructions
Form 106 – Cost Recovery Agreement
Receipt 449667
Receipt 449668

Patricia Poire

From: Eric McDaris <emcdaris@wrmwsd.com>
Sent: Tuesday, August 10, 2021 8:50 AM
Subject: FW: Wheeler Ridge Agricultural Water Management Plan
Attachments: WRMWSD 2020 AWMP-2021 Final.pdf

In accordance with California Water Code Section 10843, attached is the 2020 Agricultural Water Management Plan as adopted by Wheeler Ridge- Maricopa Water Storage District. The plan is also available on our website at https://wrmwsd.com/resources/district-documents/.

//Eric McDaris
Water Resources Manager
Wheeler Ridge- Maricopa Water Storage District
D: 661-527-6069 | C: 661-205-8797 | emcdaris@wrmwsd.com

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From: Eric McDaris
Sent: Friday, July 2, 2021 7:41 AM
Subject: Wheeler Ridge Agricultural Water Management Plan

In accordance with the California Water Code Section 10841, you are being notified that Wheeler Ridge- Maricopa Water Storage District is preparing a draft 2020 Agricultural Water Management Plan. The WRMWSD Board of Directors will hold a public hearing in the morning of July 14, 2021, to consider public comments and determine whether the District shall adopt an agricultural water management plan.

The public hearing will be conducted virtually, and the meeting information is provided below:

Wednesday, July 14, 2021 @ 9:30 A.M.
GoToMeeting
Conference Line: +1 (872) 240-3212
Access Code: 211-452-397
https://www.gotomeet.me/WRMWSD

As a reminder and in effort to reduce background noise and disruption, we ask that you please ensure your microphone and/or camera is muted or off.

A copy of the 2020 AWMP may be reviewed at the WRMWSD office (12109 Highway 166, Bakersfield, CA 93313) or on the District website here or by visiting 'Upcoming Events' at www.wrmwsd.com. You are encouraged to provide written comments before the public hearing and can also provide comments at the public hearing. Comments may be emailed to emcdaris@wrmwsd.com or publicrelations@wrmwsd.com. Written comments, submitted before the hearing should be directed to:

Eric McDaris
Wheeler Ridge-Maricopa Water Storage District
12109 Highway 166, Bakersfield, CA 93313
Comments may also be provided at the hearing.

Please reach me with any questions.

//Eric McDaris
Water Resources Manager
Wheeler Ridge- Maricopa Water Storage District
D: 661-527-6069 | C: 661-205-8797 | emcdaris@wrmwsd.com

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September 15, 2021

Kern Groundwater Authority (KGA)
c/o Patricia Poire
1800 30th Street, Suite 280
Bakersfield, CA 93301

RE: Groundwater Sustainability Agency (GSA) status

KGA Directors,

Arvin-Edison Water Storage District (AEWSD), Wheeler Ridge Maricopa Water Storage District (WRMSD) and Tejon-Castac Water District (TCWD), collectively referred to as GSA DISTRICTS, individually approved at each of their respective Board's to become exclusive GSA's in October of 2019.

The KGA approved GSA DISTRICTS request for such GSA status was also approved in October 2019.

GSA DISTRICTS have completed boundary/border discrepancies amongst each other. In addition, AEWSD has also completed similar boundary discrepancies with Kern River GSA member districts, namely Kern Delta Water District, Improvement District #4, and East Niles Community Service District.

GSA DISTRICTS have been patiently awaiting over the last 23 months through reasons of "COVID-19", "Department of Water Resource (DWR) and State Water Resource Control Board staffing turnover", and now "DWR Groundwater Sustainability Plan reviews".

In order for the GSA DISTRICTS to timely achieve its goals to become sustainable and consequently obtain the necessary GSA authorities and powers, we respectfully request that KGA staff work with GSA DISTRICTS staff to process the long overdue requested GSA status by September 30, 2021 and therefore finalize becoming official GSA's or have DWR provide in writing reasons for further delays.

Sincerely,

Edwin Camp
AEWSD Board President

Dennis Atkinson
WRMWSD Board President

Dennis Atkinson
TCWD Board President

Derek Yurosek
AEWSD KGA Rep

Michael Blaine
WRMWSD KGA Rep

Mark Valpredo
TCWD KGA Rep

Cc: GSA DISTRICT Board of Director's