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Appendix 1

1A Letter of Intent to Form GSAs

1B Mid-Kaweah Joint Powers Agreement

First Amendment to Mid-Kaweah Joint Powers Agreement

1C Land Use Maps from Current County and City General Plans

1D Mid-Kaweah Groundwater Sustainability Agency Communication and Engagement Plan

1E Kaweah Subbasin Memorandum of Understanding

1F DWR Stakeholder Communication and Engagement Guidance Document

1G Public Comment Summary and Attachments

Appendix 1A Letter of Intent to Form GSAs

LETTER OF INTENT

KAWEAH SUBBASIN COORDINATED GROUNDWATER SUSTAINABILITY AGENCY ACTIVITIES

This Letter of Intent ("LOI") by and between the Mid-Kaweah Groundwater Sustainability Agency ("MKGSA"), the Greater Kaweah Groundwater Sustainability Agency ("GKGSA"), and the East Kaweah Groundwater Sustainability Agency ("EKGSA") (individually referred to also as "Party" and collectively referred to as "Parties"), is entered into by the Parties based upon the following commonly understood facts:

1. The California Legislature enacted the Sustainable Groundwater Management Act of 2014 ("SGMA"), which, as amended, establishes a statewide framework for the sustainable management of groundwater resources. SGMA authorizes the formation of a Groundwater Sustainability Agencies ("GSAs"), one or more of which are authorized to be responsible for implementing provisions of SGMA.

2. SGMA allows local agencies or a combination of local agencies overlying a groundwater basin to serve as GSAs to develop and implement one or more Groundwater Sustainability Plans ("GSPs") over an entire basin, subbasin, or a portion of a basin.

3. Pursuant to Water Code Section 10727, SGMA allows for the preparation of a GSP by three methods: (1) A single GSP covering the entire basin/subbasin developed and implemented by one GSA; (2) A single GSP covering the entire basin/subbasin developed and implemented by multiple GSAs; (3) Multiple GSPs implemented by multiple GSAs that are subject to a single Coordination Agreement that covers the entire basin/subbasin.

4. SGMA requires that if multiple GSPs will be implemented within a basin or subbasin then a Coordination Agreement must be prepared to ensure that the GSPs within a basin or subbasin utilize certain common data and methodologies as specified in Water Code Section 10727.6.

5. The Parties acknowledge that multiple GSAs have been formed within the Kaweah Subbasin and that each Party intends to develop and implement its own GSP. The Parties further acknowledge that careful coordination amongst GSAs within a subbasin is necessary and critical to achieve and maintain SGMA compliance.

The purpose of this LOI is to memorialize the mutual understandings and agreements of the Parties regarding the coordinated activities the Parties intend to undertake to comply with the aforementioned SGMA mandates, with principal emphasis focusing on the Parties' collective pursuit of Category 2, Tier 1 grant funds from the Sustainable Groundwater Planning ("SGWP") Grant Program being implemented by the

California Department of Water Resources ("DWR") and authorized by the Water Quality, Supply and Infrastructure Improvement Act of Act of 2014 ("Prop 1"). The current Category 2, Tier 1 funding opportunity shall be referred to hereinafter as the "Prop 1 Funding for GSPs and other Projects."

The Parties hereby agree to the following principles and parameters regarding their pursuit of Prop 1 Funding for GSPs and other Projects:

1. Each Party shall be responsible for third-party consultant costs associated with application preparation costs for the Prop 1 Funding for GSPs and other Projects pursuant to the following proportions:

MKGSA	33.3%
GKGSA	33.3%
EKGSA	33.3%

   Each Party shall be responsible for its own costs associated all efforts or activities undertaken by said Party's personnel, the personnel of said Party's members, and each Party's legal counsel for the Prop 1 Funding for GSPs and other Projects.

2. The Parties agree to utilize the services of third-party consultant GEI Consultants, Inc. for the purpose of preparing all necessary application materials for the Prop 1 Funding for GSPs and other Projects.

3. The Parties agree that the MKGSA will serve as the administrative point of contact and fiscal agent for the Parties for the purposes of entering into the third-party consultant contract with GEI Consultants, Inc. specifically pertaining to the preparation of application materials for the Prop 1 Funding for GSPs and other Projects, and if such funding is awarded, for purposes of serving as the administrative point of contact and contracting party with DWR.

4. The Parties agree to communicate and coordinate with each other in the preparation of the application for the Prop 1 Funding for GSPs and other Projects, and continue to communicate and coordinate should such funds be awarded, including but not limited to attending regularly scheduled meetings. To the extent that the MKGSA is serving as the administrative point of contact and fiscal agent for the preparation of the application for the Prop 1 Funding for GSPs and other Projects, the MKGSA ensures that the representatives for the EKGSA and GKGSA are adequately consulted with and integrated into said process and activities. In no event shall an application for the Prop 1 Funding for GSPs and other Projects be submitted to DWR without the prior approval of the Parties.

5. Any application materials for the Prop 1 Funding for GSPs and other Projects shall propose a grant award such that, if awarded, each Party would be entitled to the grant award to the following proportions:

MKGSA	33.3%
GKGSA	33.3%
EKGSA	33.3%

6. In the event the Parties are awarded Prop 1 Funding for GSPs and other Projects, each Party shall be entitled to said funding pursuant to the following proportions:

MKGSA	33.3%
GKGSA	33.3%
EKGSA	33.3%

7. Notwithstanding the agreement of the Parties to share equally in the Prop 1 Funding for GSPs and other Projects if awarded, the Parties intend to dedicate their proportionate share of the funding first towards third-party consultant costs associated with the development of certain common data and methodologies as specified in Water Code Section 10727.6 ("Coordination Agreement Preparatory Work"). The Parties acknowledge that they are currently negotiating the terms and conditions of a "Memorandum of Understanding" that they will utilize for purposes of determining the scope and nature of the Coordination Agreement Preparatory Work, as well as the selection of third party consultants necessary for same. Any remaining Prop 1 Funding for GSPs and other Projects will be distributed equally to each Party for that party to utilize in the preparation of its GSP.

8. It is anticipated that work plans and budgets for the following projects will be included in the grant application: (1) Coordination Agreement Preparatory Work, (2) GSP for MKGSA, (3) GSP for GKGSA, and (4) GSP for EKGSA ("Projects"). The Parties shall ensure that the application Prop 1 Funding for GSPs and other Projects shall contain a sufficient number of eligible Projects and sufficient detail such that the total proposal costs are at least equal to the maximum potential grant award ($1.5 million, as of the execution of this LOI).

9. At this time, the draft proposal solicitation package for the Prop 1 Funding for GSPs and other Projects indicates that a minimum cost share of 50% of the total proposal costs will be required. In this instance, the total of proposal costs for the Projects must be at least $3 million to secure the maximum grant award. However, the possibility exists that DWR costs sharing for funded project proposals may be waived or reduced in certain circumstances. In the event that a cost share is required, each Party be responsible for identifying its cost share match pursuant to the following proportions:

MKGSA	33.3%
GKGSA	33.3%
EKGSA	33.3%

Pursuant to the draft proposal solicitation package, each Party may cover this cost share match with either GSP-related expenditures incurred after May 18, 2016, or by identifying additional projects that said Party desires to undertake as may be necessary.

For purposes of communications pursuant to this LOI, the point of contact for each Party shall be as follows:

Mid-Kaweah Groundwater Sustainability Agency

J. Paul Hendrix
Mid-Kaweah Groundwater Sustainability Agency
411 E. Kern Ave.
Tulare, CA 93274
jph@tulareid.org

Mark Larsen
Greater Kaweah Groundwater Sustainability Agency
2975 N. Farmersville Blvd.
Farmersville, CA 93223
mlarsen@kdwcd.com

Michael D. Hagman
East Kaweah Groundwater Sustainability Agency
315 E. Lindmore St.
Lindsay, CA 93247
mhagman@lindmoreid.com

The Parties have entered into this LOI as of the last date executed below.

MKGSA:

By: Steve Nelsen — 10/2/17
Chairman Steve Nelsen — Date

By: J. Paul Hendrix — 9/29/17
J. Paul Hendrix — Date

GKGSA:

By: Don Mills 10-17-17
Chairman Don Mills Date

By: 10/17/17
Secretary Mark Larsen Date

EKGSA:

By: Ed Milanesio 10/24/17
Chairman Edward Milanesio Date

By: 10/27/17
Secretary Michael D. Hagman Date

Appendix 1B Mid-Kaweah Joint Powers Authority and First Amendment to MKGSA JPA

JOINT POWERS AGREEMENT

FORMATION OF THE
MID-KAWEAH GROUNDWATER SUBBASIN JOINT POWERS AUTHORITY

THIS AGREEMENT is entered into as of September 14, 2015, and between the CITY OF VISALIA, the CITY OF TULARE (including its Board of Public Utilities Commissioners), both of which are Charter Law municipal corporations organized and existing under the laws of the State of California, and the TULARE IRRIGATION DISTRICT, a California Irrigation District organized pursuant to California Water Code §§ 20500 et seq., hereinafter collectively referred to as Members, with reference to the following:

A. In September 2014, the Governor signed three bills (SB 1168, SB 1319, and AB 1739) into law creating the Groundwater Management Act of 2014 (the Act).

B. The Act requires the formation of a Groundwater Sustainability Agency ("GSA") that will be responsible for implementing provisions of the Act as to each groundwater basin and groundwater subbasin falling within the provisions of the Act.

C. The Members overlie the Kaweah Subbasin of the San Joaquin Valley Groundwater Basin (the "Subbasin"), an unadjudicated groundwater basin, portions of which underlie the jurisdictional boundaries of each Member.

D. The Members can exercise powers related to groundwater management within their jurisdictional boundaries and qualify individually to serve as a GSA under the provisions of the Act.

E. Under the Act, a combination of local agencies may elect to form a joint GSA through a joint powers agreement.

F. The Members intend by this Agreement to create a joint powers authority, and are authorized to enter into this Agreement pursuant to Government Code §§ 6500 et seq. for the purpose of acting as an independent public agency to serve

as a single GSA under the Act for areas of the Subbasin underlying the jurisdictional boundaries of the Members.

G. Under the Act, each GSA will be responsible for assuming its regulatory role by July 1, 2017, and for submitting a Groundwater Sustainability Plan ("GSP") to the California State Water Resources Control Board ("SWRCB") by either January 31, 2020 or January 31, 2022, depending on criteria specified in the Act.

H. The Members intend to negotiate and enter into Cooperation Agreements with other water agencies, cities, and the County of Tulare electing to serves as GSAs in the Subbasin, for the purpose of coordinating each GSA's GSP to collectively manage the Subbasin in a sustainable manner as required by the Act.

I. The Members each caused notice of their consideration to serve as a joint GSA for the Subbasin to be published in the *Visalia Times-Delta* and the *Tulare Advance-Register* as required by the Act.

J. Courtesy copies of the notice were mailed to the Kaweah Delta Water Conservation District, the Kaweah and St. John's Rivers Association, the Cities of Farmersville, Woodlake and Exeter, and the County of Tulare and any other party specifically requesting notification to the affected Member.

K. On July 20, 2015, the City of Visalia held a public hearing to consider whether it should elect to become a joint GSA with each of the other Members for those portions of the Subbasin subject to their jurisdiction, and to do so by entering into this Agreement.

L. On July 21, 2015, the City of Tulare held a public hearing to consider whether it should elect to become a joint GSA with each of the other Members for those portions of the Subbasin subject to their jurisdiction, and to do so by entering into this Agreement.

M. On August 11, 2015, the Tulare Irrigation District held a public hearing to consider whether it should elect to become a joint GSA with each of the other Members for those portions of the Subbasin subject to their jurisdiction, and to do so by entering into this Agreement.

N. The Members desire to begin collecting and organizing data, engaging and retaining experts and consultants, and soliciting feedback from stakeholders within the portion of the Subbasin subject to their jurisdiction, for the purpose preparing a GSP for the portions of the Subbasin subject to their jurisdiction, and for the purpose of negotiating Coordination Agreements with the other GSAs in the Subbasin to ensure that there is a coordinated plan for managing the Subbasin in compliance with the requirements of the Act.

O. The Members further intend by this Agreement to provide for the management and funding commitments reasonably anticipated to be necessary for the above purposes.

P. The City of Tulare by charter has a Board of Public Utilities Commissioners to which responsibility has been delegated for water utility management, and which must thereby also be a signatory to this Agreement.

ACCORDINGLY, IT IS AGREED:

1. **RECITALS:** The foregoing recitals are incorporated herein by reference.

2. **DEFINITIONS**: Unless otherwise required by the context, the following terms shall have the following meanings:

a. "Act" shall mean the California Groundwater Management Act of 2014 and all regulations adopted under the legislation (SB 1168, SB 1319 and AB 1739) which collectively comprise the Act, as that legislation and those regulations may be amended from time to time.

b. "Authority" shall mean the Mid-Kaweah Groundwater Subbasin Joint Powers

Authority, which is the public and separate legal entity created by this Agreement.

c. "Board" or "Board of Directors" shall mean the Board of Directors of the Authority as provided in this Agreement to govern and administer the Authority.

d. "Member" shall mean any of the signatories of this Agreement and "Members" shall mean all of the signatories to this Agreement.

e. "Subbasin" shall mean the Kaweah Subbasin of the San Joaquin Valley Groundwater Basin, as identified in Bulletin 118 prepared by the California Department of Water Resources.

f. "Groundwater Sustainability Agency" or "GSA" shall mean an agency enabled by the Act to regulate portions of the Subbasin cooperatively with all other Groundwater Sustainability Agencies in the Subbasin, in compliance with the terms and provisions of the Act.

g. "DWR" shall mean the California Department of Water Resources.

g. "SWRCB" shall mean the California State Water Resources Control Board.

h. "County" shall mean the County of Tulare.

i. "Other Kaweah Agencies" shall mean all other governmental agencies whose jurisdictions include the land overlying the Subbasin or whose jurisdictions include some governmental authority over the Subbasin.

3. **CERTIFICATION:** Each Member, as a signatory to this Agreement, certifies and declares that it is a public agency, as defined by Government Code § 6500, that is authorized to enter into a joint powers agreement to contract with each other for the joint exercise of any common power under Article 1, Chapter 5, Division 7, Title 1 of the Government Code.

4. **CREATION OF SEPARATE AGENCY:** There is hereby created an agency separate from the parties to the Agreement, and which is responsible for the administration of the Agreement, to be known as the "**MID-KAWEAH GROUNDWATER SUBBASIN JOINT POWERS**

AUTHORITY" (the "Authority"). Within thirty (30) days of the effective date of this Agreement, the Members shall cause a notice of this Agreement to be prepared and filed with the office of the California Secretary of State as required by Government Code § 6503.5.

5. PURPOSES and MEMBER RESPONSIBILITIES: The Authority is formed with the purpose and intent of jointly forming a separate entity to fulfill the role of a GSA consisting of the Members, so that the Members may collectively develop, adopt, and implement a Groundwater Sustainability Plan ("GSP") for the sustainable management of groundwater for that portion of the Subbasin underlying the jurisdictional boundaries of the Members, as those boundaries may be amended from time to time. Notwithstanding their intent to collectively develop, adopt, and implement a GSP, the Members intend to maintain complete control and autonomy over the surface water and groundwater assets to which they are currently legally entitled, and make no commitments by entering into this Agreement to share or otherwise contribute their water supply assets as part of the preparation of a GSP. The geographic boundaries of the GSA contemplated by the Members are set forth in the map attached hereto as Exhibit "A", which is incorporated herein by this reference. The Authority will also represent the Members in discussions with Other Kaweah Agencies, and shall enter into Coordination Agreements with those that form GSAs as required by the Act, to achieve an integrated, comprehensive basin-wide plan that satisfies the Act as to sustainable groundwater management required by the Act for the entire Subbasin.

The Members may exercise independent power within their own jurisdiction, including but not limited to, the establishment or approval of fees and the exercise and administration of all powers held by each Member with regards to groundwater management and regulation as they existed prior to the approval of this Agreement and/or consistent with the Act, except as otherwise provided in this Agreement and/or as required by the Act. Should a Member choose to withdraw from the Authority in accordance with the terms of this Agreement, that Member expressly retains the right to serve as the GSA for the groundwater basin underlying its

jurisdictional boundaries. Members shall be responsible within each of their own jurisdictions for the implementation of any GSP developed by the Authority, unless otherwise provided for in this Agreement or as required by the Act. The Members enter this Agreement with the intent to operate the Authority in compliance with the requirements of the Act with a minimum level of staff, addressing those operations and programs that can be most cost-effectively handled at the regional level by maximizing local resources, private sector participation and contract services. Each Member will be responsible for adhering to the terms of this Agreement, for constructively participating in the efforts to achieve compliance with the Act, and for timely payment of contributions that are approved by the Board in compliance with this Agreement.

6. **POWERS:** The Members intend that the Authority provide for the joint exercise of certain powers common to the Members in studying, planning and cooperatively and sustainably managing groundwater in the Subbasin, and for the exercise of such additional powers as are conferred by law in order to meet the requirements of the Act. The Members are each empowered by the laws of the State of California to exercise the powers specified in this Agreement, and to comply with the provisions of the Act and other laws. These common powers shall be exercised for the benefit of any one or more of the Members or otherwise in the manner set forth in this Agreement. Subject to the limitations set forth in this Agreement, the Authority shall have the powers to perform all acts necessary to accomplish its purpose as stated in this Agreement, including but not limited to the following:

a. To make and/or assume contracts and to employ agents, employees, consultants and such other persons or firms as the Board may deem necessary, to the full exercise of the Authority's power, including, but not limited to, engineering, hydrogeological, and other consultants, and with attorneys and accountants and financial advisors, for the purpose of providing any service required by the Authority to accomplish its purposes and Member responsibilities identified in Section 5;

b. To conduct all necessary research and investigations, and to compile appropriate reports and collect data from all available sources to assist in preparation of a GSP, and for development of Coordination Agreements with other GSAs in the Subbasin, so as to allow the Members to participate in the sustainable management of the Subbasin in compliance with the Act;

c. To cooperate, act in conjunction with, and contract with the United States, the State of California, or any agency thereof, the County of Tulare, and the Other Kaweah Agencies, or any of them, in the full exercise of the Authority's powers as a GSA;

d. To apply for, accept and receive licenses, permits, water rights, approvals, agreements, grants, loans, gifts, contributions, donations or other aid from any agency of the United States, the State of California or other public or private person or entity necessary for fulfilling the purposes of a GSA;

e. By unanimous vote of its Board, acquire by grant, purchase, lease, gift, devise, contract, construction, eminent domain or otherwise, and hold, use, enjoy, sell, let, and dispose of, real and personal property of every kind, including lands, water rights, structures, buildings, rights-of-way, easements, and privileges, and construct, maintain, alter, and operate any and all works or improvements, within or outside the agency, necessary or proper to carry out any of the purposes of the Authority (Water Code § 10726.2);

f. To utilize the GSA enforcement powers identified in the Act (Water Code § 10732), including the imposition and collection of civil penalties that shall be utilized in accordance with the requirements of the Act;

g. To sue and be sued in its own name;

h. To provide for the prosecution of, defense of, or other participation in actions or proceedings at law or in public meetings in which the Members, pursuant to this

Agreement, may have an interest, and to employ counsel or other expert assistance for that purpose;

i. By the unanimous vote of its Board, to adopt an initial operating budget and initial member contributions within ninety (90) days of the execution of this Agreement, and an annual budget and Member contributions to same, by June 30 of each year;

j. To incur debts, liabilities or obligations, subject to the limitations provided in this Agreement;

k. By unanimous vote of its Board, to impose fees authorized by the Act (Water Code §§ 10730-10731), without any limitation on a Member's ability to impose fees within its jurisdiction, to fund the cost of furthering the purposes of this Agreement, complying with the Act, and sustainably managing groundwater within the Subbasin;

l. To adopt rules, regulations, policies and procedures for governing the operation of the GSA and adoption and implementation of the GSP consistent with the powers and purposes of the Authority and as authorized by Chapter 5 of the Act;

m. To investigate legislation and proposed legislation affecting the Act and the Subbasin and make appearances regarding such matters;

n. To take such actions as are deemed necessary to achieve its specific and limited purposes as stated above.

7. **OBLIGATIONS OF AUTHORITY:** No debt, liability or obligation of the Authority shall constitute a debt, liability or obligation of any of the Members, except as otherwise provided in this Agreement.

8. **DESIGNATION OF ADMINISTERING AGENCY:** The powers of the Authority provided in this Agreement shall be exercised in the manner provided by law for the exercise of such powers by the Members.

9. ORGANIZATION:

a. GOVERNING BOARD: The Authority shall be governed by a Board of Directors which shall be composed of two (2) City of Visalia City Councilmembers, a total of two (2) members from either or both of the following: City of Tulare City Council or the City of Tulare Board of Public Utilities, and two (2) members of the Tulare Irrigation District Board of Directors, who will be considered the principal Directors. In addition, each of the Members may designate one (1) Alternate Director who may participate on the Authority Board only when a principal Director is absent. An Alternate Director may, but need not be a member of the legislative body of the Member agency that he or she represents. Directors and Alternate Directors shall serve without compensation, except that they may be reimbursed for reasonable expenses associated with their service on the Board as authorized by the Board.

b. TERM: The Authority Board Members shall serve without terms and at the pleasure of the legislative body which appointed them.

c. MEETINGS: Regular meetings of the Board may be held quarterly, or as the Board determines as necessary, on such dates and times and at such locations as the Board shall fix by resolution. Special meetings of the Board shall be called in accordance with Government Code § 54956. All meetings shall comply with the provisions of the Ralph M. Brown Act (Government Code §§ 54950 at seq.).

d. QUORUM: Fifty percent (50%) of the Board of Directors plus one (1) shall constitute a quorum in order to conduct business.

e. VOTING: A simple majority of the quorum shall be required for the adoption of a resolution, ordinance, contract authorization or other action of the Board, except that:

(a) A majority vote of less than a quorum may vote to adjourn;

(b) Any of the following actions shall require a unanimous vote of the entire Board (which may include alternates):

(1) Adoption of an initial budget;

(2) Adoption or modification of the annual budget;

(3) Contracts over $25,000 and for terms in excess of two (2) years;

(4) Admission of additional members;

(5) Appointment, employment, or dismissal of an employee, including any independent contractor who functions as an employee;

(6) Setting the amounts of any contributions or fees to be made or paid to the Authority from any Member;

(7) Compromise or payment of any claim against the Authority;

(8) Acquisition by grant, purchase, lease, gift, devise, contract, construction, or otherwise, and hold, use, enjoy, sell, let, and dispose of, real and personal property of every kind, including lands, water rights, structures, buildings, rights-of-way, easements, and privileges, and construct, maintain, alter, and operate any and all works or improvements, within or outside the agency, necessary or proper to carry out any of the purposes of the Authority.

(9) Adoption and imposition of any fees pursuant to Water Code §§ 10730-10731;

(10) Replacement of the annual special audit required by Government Code § 6505 with an audit covering a two year period;

(11) Approval of a GSP for the portions of the Subbbasin identified by the GSA boundaries.

f. MINUTES: The Board shall cause minutes of all meetings to be prepared, and shall cause a copy of the minutes to be delivered to each member of the Board,

and filed with the governing body of each party, as soon as practicable after each meeting.

g. RULES: The Board shall adopt such other rules and regulations for the conduct of its business as a GSA and in the implementation of any GSP as it shall deem necessary or desirable consistent with the provisions of this Agreement and the Act.

h. OFFICERS: The officers of the Authority shall be a Chairperson, and Vice-Chairperson, and such other officers as the Board shall designate. The election of officers will take place at the first meeting of a new fiscal year. The Treasurer shall be formally designated by a resolution adopted by the Board of Directors stating the effective date of the appointment and the term of the appointment.

i. ADVISORY COMMITTEE: The Board shall create an Advisory Committee for the purpose of soliciting information from the Other Kaweah Agencies and potentially affected stakeholders utilizing groundwater within the jurisdictional boundaries of the Members and potentially subject to the GSP to be developed by the Authority. Membership on the Advisory Committee and the time/date for meetings shall be at the discretion of the Board.

j. MANAGEMENT COMMITTEE: The Board shall create a Management Committee for the purpose of overseeing all activities undertaken in pursuit of the goals and objectives of the Authority identified in this Agreement, and for reporting upon same to the Board. The Management Committee shall be comprised of one staff person from each of the Members. The Management Committee shall, among other things, be responsible for the approval of all expenditures authorized by the Board through their approval of budget appropriations as required herein. The Management Committee may also

establish a Technical Advisory Subcommittee for the purpose of assisting the Management Committee and the Board with the technical aspects of GSP development and implementation of the Act.

k. ADDITIONAL MEMBERS: The Board shall allow additional members to join the Authority only by unanimous vote. Additional members must be capable of being designated as a GSA under the Act, and must be a stakeholder located within the Subbasin. The Board may set whatever conditions it deems necessary in order to allow the inclusion of additional members, including but not limited to the reimbursement of such additional members' proportionate share of the costs already incurred by the Members.

10. FISCAL AGENT, DEPOSITORY AND ACCOUNTING: The Treasurer appointed by the Board is designated as the fiscal agent and depository for the Authority. The Treasurer may, but need not be, the Finance Director, or designee thereof, of any of the Authority's Members. The Treasurer shall be the depositary and have custody of all money of the Authority, from whatever source, subject to the applicable provisions of any indenture or resolution providing for a trustee or other fiscal agent. All funds of the Authority shall be held in the joint operating fund established by Section 13, or such other separate accounts as may be necessary, in the name of the Authority and not commingled with the funds of any Member or any other person or entity. Full books and accounts shall be maintained for the Authority in accordance with practices established by, or consistent with, those utilized by the Controller of the State of California for public entities. The books and records of the Authority shall be open to inspection by the Members at all reasonable times, and by bondholders and tenders as and to the extent provided by resolution or indenture.

11. ACCOUNTABILITY, REPORTS AND AUDITS: There shall be strict accountability of all funds, and an auditor designated by the Board shall report any and all receipts and disbursements to the Board with such frequency as shall reasonably be required by the Board.

The Authority will utilize the services of an outside independent certified public accountant to make an annual audit of the accounts and records of the Authority as required by Government Code § 6505, unless the Members, by unanimous vote, elect to conduct the audit for a two (2) year period. In each case, the minimum requirements of the audit shall be those prescribed by the State Controller for special districts pursuant to Government Code § 26909, and shall conform to generally accepted accounting principles. The outside independent certified public accountant selected by the Authority shall be formally designated by a resolution adopted by the Board of Directors stating the effective date of the appointment and the term of the appointment.

12. OPERATING BUDGET AND EXPENDITURES: The Board shall, by unanimous vote, approve an in initial operating budget within ninety (90) days following the execution of this Agreement. Thereafter, the fiscal year for the Authority shall extend from July 1 to June 30 of each year, and the Board shall, by unanimous vote, adopt an annual operating budget for the coming fiscal year by June 30 of each year, as required to conduct its business in a manner consistent with the purposes of the Authority. All expenditures within the designations and limitations of the applicable approved budget appropriations shall be made upon approval of the Management Committee. The Treasurer shall draw checks or warrants or make payments by other means for claims or disbursements not within an applicable budget only upon the approval of the Board and in accordance with Board directions and authorizations concerning authorized account signatories. The Authority may invest any money in the treasury that is not required for its immediate necessities in the same manner, and upon the same conditions, as any local agency may do pursuant to Government Code § 53635.

13. CONTRIBUTIONS AND ALTERNATIVE FUNDING SOURCES: The Authority shall have the power to establish a joint operating fund. The fund shall be used to pay all administrative, operating and other expenses incurred by the Authority, and shall be funded by from Member contributions as set forth in the initial and annual operating budget required by Section 12. The Authority may also seek funding from other alternative sources, including but not

limited to state and federal grants or loans, and unless specifically allocated by the unanimous vote of the Board, all funding contributions obtained from alternative sources shall be equally allocated to each Member.

The Board may arrange payment of the expenses of the Authority through an alternative funding source. In accordance with Government Code § 6512.1, the Board may direct repayment or return to the Members all or part of the contributions made by the Members, upon such terms as may be consistent with any indebtedness incurred by the Authority. Unless otherwise prohibited by the alternative funding source, said alternative source's funds will be disbursed before local funds for covered Authority obligations.

14. ASSESSMENTS FOR EXTRAORDINARY COSTS: In the event the Authority should experience an unanticipated need to pay for extraordinary costs, or to pay for any and all costs of litigation or indemnification as provided in this Agreement, and to the extent that such costs cannot otherwise be reasonably funded through use of reserves on hand or through the other revenue sources authorized by this Agreement, the Board may allocate the additional costs, whether actually incurred or estimated to be necessary. Unless specifically allocated by the unanimous vote of the Board all allocations shall be equally allocated to each Member. The Members agree that they will then contribute their proportionate share of the additional costs within a reasonable period of time as determined by the Board.

15. INITIAL STAFFING CONTRIBUTIONS: The Authority initially intends to pursue the goals and objectives identified in this Agreement by utilizing the staff of each of the Members to pursue those operations, investigations and programs that can be most cost-effectively handled by maximizing Member staff and resources. The Management Committee shall meet to determine the respective initial staffing contributions of the Members that will be utilized during the time period covered by the initial operating budget. Thereafter, all Member staff contributions to conducting the activities of the Authority shall be recommended by the Management Committee for approval by the Board at the time for adopting the annual budget for the Authority.

In the event that the staffing contributions of the Members recommended by the Management Committee are not allocated equally amongst the Members, the Board may adjust the monetary contributions of the Members as specified in Section 13 herein.

16. DISPUTE RESOLUTION: Should any controversy arise between the Members concerning this Agreement or the rights and duties of any Member under this Agreement, the Members shall submit the matter to a person appointed by the Management Committee to mediate the dispute. The appointed mediator shall be a person who is not an employee or agent of any Member and who has knowledge of and experience in the management of groundwater resources. The appointed mediator shall render a final decision on the matter in dispute and will be compensated by the Authority.

17. WITHDRAWAL:

a. NOTICE TO MEMBERS: Any Member may withdraw from the Authority by delivery of written notice to withdraw to each of the Members at least one hundred twenty (120) days prior to the date of withdrawal ("Withdrawal Notice Period").

b. EFFECT OF WITHDRAWAL: The withdrawal of the Member shall have no effect on the continuance of this Agreement among the remaining Members. After providing written notice of withdrawal, the withdrawing Member shall neither be entitled nor obligated to participate in a vote on any matter before the Board, including but not limited to adoption of the annual operating budget required by Section 12 and the assessment for extraordinary costs allowed by Section 14.

c. CONTINUING FISCAL OBLIGATIONS: Any Member that withdraws as provided herein shall remain proportionately liable during the Withdrawal Notice Period for its proportionate share of the annual operating budget required by Section 12. If the remaining Members elect to incur extraordinary costs in accordance with Section 14, the withdrawing Member shall be proportionately liable during the Withdrawal Notice Period for the obligations or debts approved and incurred by the

Authority for those extraordinary costs. Any Member that withdraws shall remain proportionately liable for any unfunded capital expenditures incurred or approved prior to the date of written notice of withdrawal of such Member.

d. CONTINUING CLAIMS OBLIGATIONS: Members will remain obligated to contribute their proportionate share (based upon the membership roll as of the date of the claim), including without limitation legal defense costs, for any occurrences incurred during the Member's membership, but not presented as a claim against the Authority until after the Member's withdrawal.

e. DIVISIONS OF PROPERTY ASSETS: The real or personal property assets contributed by the withdrawing member or the value of the real or personal property assets at the date of withdrawal will be returned to the withdrawing member.

18. TERM AND TERMINATION: This Agreement shall become effective, and the Authority shall come into existence, on the date that the last of the named parties executes the Agreement. The Agreement, and the Authority, shall thereafter continue in full force and effect until the governing bodies of the parties unanimously elect to terminate the Agreement.

Upon effective election to terminate this Agreement, the Board shall continue to act as a board to wind up and settle the affairs of the Authority. The Board shall adequately provide for the known debts, liabilities and obligations of the Authority, and shall then distribute the assets of the Authority among the Members, as follows:

a. The assets contributed by each Member, or the value thereof as of the date of termination shall be distributed to that entity.

b. The remaining assets shall then be distributed to each Member in equal proportions.

The distribution of assets shall be made in-kind to the extent possible by returning to each Member those assets contributed by such parties to the Authority; however, no party shall

be required to accept transfer of an asset in kind.

Notwithstanding any other provision by the Board for payment of all known to debts, liabilities and obligations of the Authority, each of the Members shall remain liable for any and all such debts, liabilities, and obligations in equal proportions, or in the proportion specified by unanimous action of the Board if alternative proportions are so specified for particular actions or activities that give rise to such debts, liabilities, and obligations.

19. INDEMNIFICATION/CONTRIBUTION: The Authority shall hold harmless, defend and indemnify the Members, and their agents, officers and employees from and against any liability, claims, actions, costs, damages or losses of any kind, including death or injury to any person and/or damage to property (including property owned by any Member), arising out of the activities of the Authority, or its agents, officers and employees under this Agreement. The foregoing indemnification obligations shall continue beyond the term of this Agreement as to any acts or omissions occurring before or under this Agreement or any extension of this Agreement.

To the extent that the Authority is unable or unwilling to hold harmless, defend and indemnify any party to this Agreement as provided in this Section, such party shall be entitled to contribution from each of the other parties in equal proportion to the extent one Member pays more than its equal share of such obligation.

20. INSURANCE: The Authority shall obtain insurance for the Board members and general liability insurance containing liability in such amounts as the Board shall determine will be necessary to adequately insure against the risks of liability that may be incurred by the Authority. The Members, their officers, directors and employees, shall be named as additional insureds.

21. CLAIMS: All claims against the Authority, including, but not limited to, claims by public officers and employees for fees, salaries, wages, mileage, or any other expenses, shall be filed within the time and in the manner specified in Chapter 2 (commencing with Section 910) of Part 3, Division 3.6 of Title I of the Government Code, which describes the appropriate content of a claim.

22. ENTIRE AGREEMENT REPRESENTED: This Agreement represents the entire agreement among the parties as to its subject matter and no prior oral or written understanding shall be of any force or effect. No part of this Agreement may be modified without the written consent of all of the parties.

23. HEADINGS: Section headings are provided for organizational purposes only and do not in any manner affect the scope, meaning or intent of the provisions under the headings.

24. NOTICES: Except as may be otherwise required by law, any notice to be given shall be written and shall be either personally delivered sent by facsimile transmission, emailed or sent by first class mail, postage prepaid and addressed as follows:

The Authority

To all of its Members, who are identified as follows:

MEMBERS:

City of Tulare
City Manager
411 E. Kern Ave.
Tulare, CA 93274
Fax No.: (559) 685-2398 / Confirming No.: (559) 684-4200

Tulare Irrigation District
General Manager
6826 Avenue 240
Tulare, CA 93274
(559) 686-3425

City of Visalia
City Manager
425 East Oak Avenue, Suite 301
Visalia, CA 93291
(559) 713-4314

Notice delivered personally, sent by facsimile transmission, emailed is deemed to be received upon receipt. Notice sent by first class mail shall be deemed received on the fourth day after the date of mailing. Any party may change the above address by giving written notice pursuant to this Section.

25. CONSTRUCTION: This Agreement reflects the contributions of all parties and

accordingly the provisions of Civil Code Section 1654 shall not apply to address and interpret any uncertainty.

26. NO THIRD PARTY BENEFICIARIES INTENDED: Unless specifically set forth, the parties to this Agreement do not intend to provide any other party with any benefit or enforceable legal or equitable right or remedy.

27. WAIVERS: The failure of any party to insist on strict compliance with any provision of this Agreement shall not be considered a waiver of any right to do so, whether for that breach or any subsequent breach.

28. CONFLICT WITH LAWS OR REGULATIONS/SEVERABILITY: This Agreement is subject to all applicable laws and regulations. If any provision of this Agreement is found by any court or other legal authority, or is agreed by the parties, to be in conflict with any code or regulation governing its subject, the conflicting provision shall be considered null and void. If the effect of nullifying any conflicting provision is such that a material benefit of the Agreement to any party is lost, the Agreement may be terminated at the option of the affected party. In all other cases the remainder of the Agreement shall continue in full force and effect.

29. FURTHER ASSURANCES: Each party agrees to execute any additional documents and to perform any further acts which may be reasonably required to affect the purposes of this Agreement.

30. COUNTERPARTS: This Agreement may be signed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

31. AMENDMENT: This document may only be amended with a unanimous vote by its Members.

THE PARTIES, having read and considered the above provisions, indicate their agreement by their authorized signatures.

CITY OF TULARE Signature page

THE PARTIES, having read and considered the above provisions, indicate their agreement by their authorized signatures below.

CITY OF TULARE

Bob Hunt — Date 9-14-15
City Manager /acting

Date 9-14-15
ATTEST
City Clerk

CITY OF TULARE BOARD OF PUBLIC UTILITIES

Date 9-11-15
President, Board of Public Utilities Commissioners

Shanna Oneal — Date 9-14-15
ATTEST
Secretary, Board of Public Utilities Commissioners

Approved to Form
City of Tulare City Attorney

Date

CITY OF TULARE Signature page

THE PARTIES, having read and considered the above provisions, indicate their agreement by their authorized signatures below.

CITY OF TULARE

_____ Date _____
City Manager

_____ Date _____
ATTEST
City Clerk

CITY OF TULARE BOARD OF PUBLIC UTILITIES

_____ Date _____
President, Board of Public Utilities Commissioners

_____ Date _____
ATTEST
Secretary, Board of Public Utilities Commissioners

Approved to Form
City of Tulare City Attorney

_____ Date 8/7/18

TULARE IRRIGATION DISTRICT **Signature page**

THE PARTIES, having read and considered the above provisions, indicate their agreement by their authorized signatures below.

TULARE IRRIGATION DISTRICT

David G Benlow 9-14-15

President of the Board

J. Paul Hendrix Date 9/14/15

ATTEST
Secretary of the Board

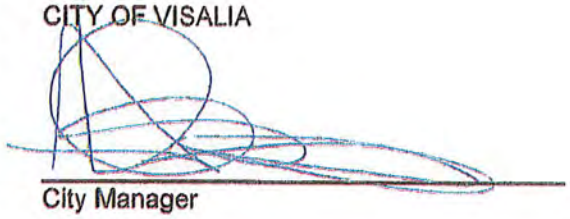
Approved to Form
District Counsel

Kevin D Bell Date 9-14-15

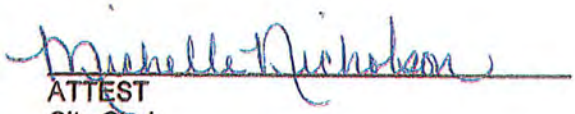
CITY OF VISALIA Signature page

THE PARTIES, having read and considered the above provisions, indicate their agreement by their authorized signatures below.

CITY OF VISALIA



City Manager Date 9/14/15



ATTEST Date 9/15/15
City Clerk

Approved to Form
City of Visalia City Attorney

Date 9-14-15

FIRST AMENDMENT TO JOINT POWERS AGREEMENT

FORMATION OF THE
MID-KAWEAH GROUNDWATER SUBBASIN JOINT POWERS AUTHORITY

THIS FIRST AMENDMENT is entered into as of June __, 2018 and between the CITY OF VISALIA, the CITY OF TULARE (including its Board of Public Utilities Commissioners), both of which are Charter Law municipal corporations organized and existing under the laws of the State of California, and the TULARE IRRIGATION DISTRICT, a California Irrigation District organized pursuant to California Water Code §§ 20500 et seq., hereinafter collectively referred to as Members, with reference to the following:

A. On September 14, 2015, the Members entered into that certain "Joint Powers Agreement – Formation of the Mid-Kaweah Groundwater Subbasin Joint Powers Authority" ("Agreement").

B. The Members now desire to amend certain terms and conditions of the Agreement.

ACCORDINGLY, IT IS AGREED:

1. **Section 6(e) is amended to read as follows:** "To acquire by grant, purchase, lease, gift, devise, contract, construction, eminent domain or otherwise, and hold, use, enjoy, sell, let, and dispose of, real and personal property of every kind, including lands, water rights, structures, buildings, rights-of-way, easements, and privileges, and construct, maintain, alter, and operate any and all works or improvements, within or outside the agency, necessary or proper to carry out any of the purposes of the Authority (Water Code § 10726.2)."

2. **Section 6(i) is amended to read as follows**: "To adopt an initial operating budget and initial member contributions within ninety (90) days of the execution of this Agreement, and thereafter, to adopt an annual budget and Member contributions to annual budget by June 30 of each year."

3. **Section 6(k) is amended to read as follows:** "To impose fees authorized by the

Act (Water Code §§ 10730-10731), without any limitation on a Member's ability to impose fees within its jurisdiction, to fund the cost of furthering the purposes of this Agreement, complying with the Act, and sustainably managing groundwater within the Subbasin."

4. **Section 9(a) is amended to read as follows:** "GOVERNING BOARD: The Authority shall be governed by a Board of Directors totaling six (6) seats, which shall be designated by each of the Members and shall be composed of two (2) City of Visalia City Councilmembers, two (2) individuals selected from either the City of Tulare City Council or the City of Tulare Board of Public Utilities, and two (2) members of the Tulare Irrigation District Board of Directors. In addition, each of the Members may designate up to two (2) Alternate Directors who may participate on the Authority Board only when either of that Member's designated Directors is absent. An Alternate Director may, but need not be a member of the legislative body of the Member agency that he or she represents. Directors and Alternate Directors shall serve without compensation, except that they may be reimbursed for reasonable expenses associated with their service on the Board as authorized by the Board."

5. **Section 9(b) is amended to read as follows:** "TERM: Directors and Alternate Directors shall serve without terms and at the pleasure of the legislative body which appointed them."

6. **Section 9(e) is amended to read as follows:** "VOTING: A simple majority of the quorum shall be required for the adoption of a resolution, ordinance, contract authorization or other action of the Board, except that:

(a) A majority vote of less than a quorum may vote to adjourn;

(b) Any of the following actions shall require a modified majority vote of four Directors or Alternate Directors, provided that an affirmative vote is made by at least one Director or Alternate Director from each Member:

(1) Adoption or modification of the annual budget or Member contributions to fund the annual budget;

(2) Contracts over $25,000 and for terms in excess of two (2) years;

(3) Appointment, employment, or dismissal of an employee, including any independent contractor who functions as an employee;

(4) Setting the amounts of any contributions or fees to be made or paid to the Authority from any Member;

(5) Compromise or payment of any claim against the Authority;

(6) Acquisition by grant, purchase, lease, gift, devise, contract, construction, or otherwise, and hold, use, enjoy, sell, let, and dispose of, real and personal property of every kind, including lands, water rights, structures, buildings, rights-of-way, easements, and privileges, and construct, maintain, alter, and operate any and all works or improvements, within or outside the agency, necessary or proper to carry out any of the purposes of the Authority.

(7) Adoption and imposition of any fees pursuant to Water Code §§ 10730-10731;

(8) Approval of a GSP for the portions of the Subbasin identified by the GSA boundaries, as well as any Coordination Agreement required for the GSP.

(9) Allocation of alternative funding sources described in Section 13 in any manner other than equally between the Members.

(c) Any of the following actions shall require a unanimous vote of the entire Board:

(1) Replacement of the annual special audit required by Government Code § 6505 with an audit covering a two year period.

7. **Section 9(j) is amended to read as follows:** "MANAGEMENT COMMITTEE: The Board shall create a Management Committee for the purpose of overseeing all activities

undertaken in pursuit of the goals and objectives of the Authority identified in this Agreement. The Authority's Manager shall be responsible for overseeing and coordinating the activities of the Management Committee, and for reporting on the Management Committee's activities, recommendations and determinations to the Board. The Management Committee shall be comprised of one staff person designated by each of the Members. The Management Committee shall, among other things, be responsible for the approval of all expenditures authorized by the Board through their approval of budget appropriations as required herein. The Management Committee may also establish a Technical Advisory Subcommittee for the purpose of assisting the Management Committee and the Board with the technical aspects of GSP development and implementation of the Act."

8. **Section 9(k) is amended to read as follows:** "ADDITIONAL MEMBERS: Additional members may only be added by amendment to this Agreement, which requires the approval of each governing body of each Member. Additional members must be capable of being designated as a GSA under the Act, and must be a stakeholder located within the Subbasin. The Board may recommend to the Members whatever conditions it deems necessary in order to allow the inclusion of additional members, including but not limited to the reimbursement of such additional members' proportionate share of the costs already incurred by the Members.

9. **Section 12 is amended to read as follows:** "The Board shall, by unanimous vote, approve an in initial operating budget within ninety (90) days following the execution of this Agreement. Thereafter, the fiscal year for the Authority shall extend from July 1 to June 30 of each year, and the Board shall, by modified majority vote as set forth in Section 9(e), adopt an annual operating budget for the coming fiscal year by June 30 of each year, as required to conduct its business in a manner consistent with the purposes of the Authority. All expenditures within the designations and limitations of the applicable approved budget appropriations shall be made upon approval of the Management Committee. The Treasurer shall draw checks or

warrants or make payments by other means for claims or disbursements not within an applicable budget only upon the approval of the Board and in accordance with Board directions and authorizations concerning authorized account signatories. The Authority may invest any money in the treasury that is not required for its immediate necessities in the same manner, and upon the same conditions, as any local agency may do pursuant to Government Code § 53635."

10. The first paragraph of Section 13 shall be amended to read as follows: "The Authority shall have the power to establish a joint operating fund. The fund shall be used to pay all administrative, operating and other expenses incurred by the Authority, and shall be funded by from Member contributions as set forth in the initial and annual operating budget required by Section 12. The Authority may also seek funding from other alternative sources, including but not limited to state and federal grants or loans, and all funding contributions obtained from alternative sources shall be equally allocated to each Member unless specifically allocated differently by a supermajority vote of the Board."

11. Section 14 shall be amended to read as follows: "In the event the Authority should experience an unanticipated need to pay for extraordinary costs, or to pay for any and all costs of litigation or indemnification as provided in this Agreement, and to the extent that such costs cannot otherwise be reasonably funded through use of reserves on hand or through the other revenue sources authorized by this Agreement, the Board may allocate the additional costs, whether actually incurred or estimated to be necessary. All allocations of additional costs shall be equally allocated to each Member unless specifically allocated differently by a supermajority vote of the Board. The Members agree that they will then contribute their proportionate share of the additional costs within a reasonable period of time as determined by the Board.

12. Section 31 shall be amended to read as follows: "This Agreement may only be amended with the approval of the legislative body of the Members."

THE MEMBERS, having read and considered the above provisions, indicate their agreement by their authorized signatures.

CITY OF TULARE Signature page

THE PARTIES, having read and considered the above provisions, indicate their agreement by their authorized signatures below.

CITY OF TULARE

_____ Date 6-5-18
City Manager

_____ Date 6-5-18
ATTEST
Chief Deputy City Clerk

CITY OF TULARE BOARD OF PUBLIC UTILITIES

_____ Date 6-21-18
President, Board of Public Utilities Commissioners

_____ Date 10-25-18
ATTEST
Secretary, Board of Public Utilities Commissioners

Approved to Form
City of Tulare City Attorney

_____ Date_____

CITY OF TULARE Signature page

THE PARTIES, having read and considered the above provisions, indicate their agreement by their authorized signatures below.

CITY OF TULARE

_____ Date 6-5-18
City Manager

_____ Date 6-5-18
ATTEST
City Clerk

CITY OF TULARE BOARD OF PUBLIC UTILITIES

_____ Date 6-21-18
President, Board of Public Utilities Commissioners

_____ Date 6-25-18
ATTEST
Secretary, Board of Public Utilities Commissioners

Approved to Form
City of Tulare City Attorney

_____ Date 7/3/18
Mario W. Zamora

TULARE IRRIGATION DISTRICT **Signature page**

THE PARTIES, having read and considered the above provisions, indicate their agreement by their authorized signatures below.

TULARE IRRIGATION DISTRICT

President of the Board

ATTEST
Secretary of the Board

Date 10/11/2018

Approved to Form
District Counsel

Date 10/25 2018

CITY OF VISALIA Signature page

THE PARTIES, having read and considered the above provisions, indicate their agreement by their authorized signatures below.

CITY OF VISALIA

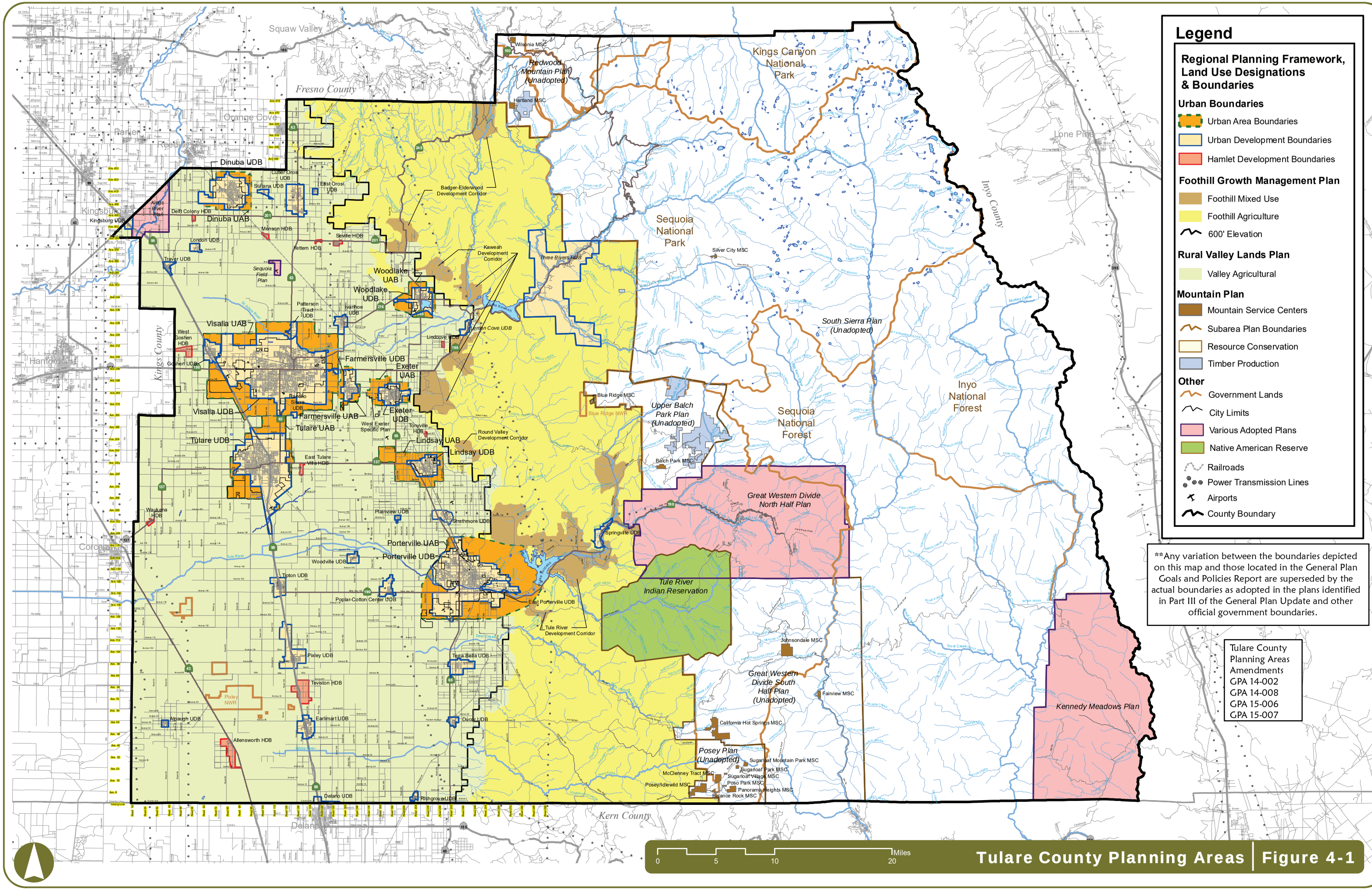
_____ Date 11-19-2018
City Manager

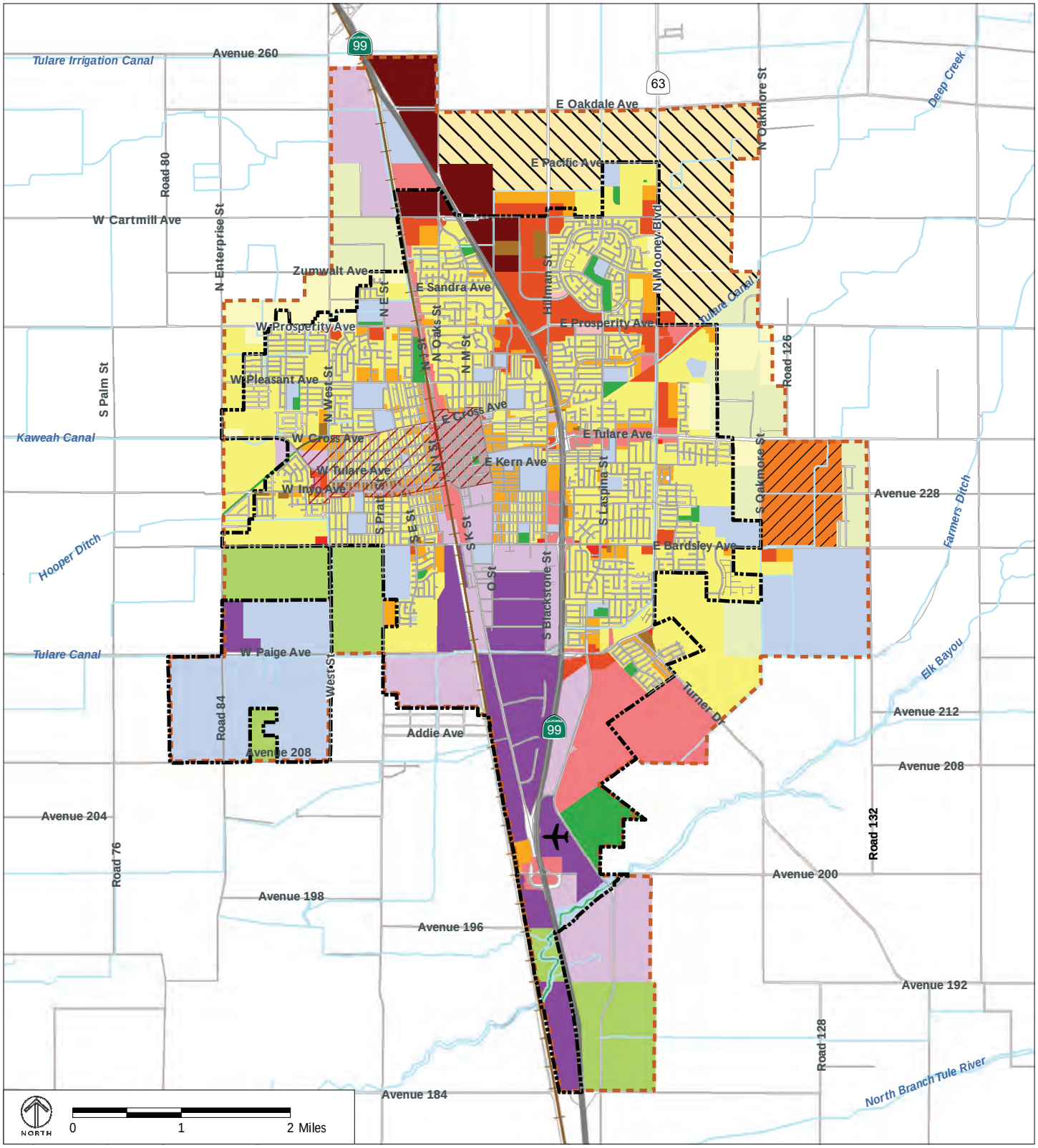
_____ Date 11/20/18
ATTEST
Chief Deputy City Clerk

Approved to Form
City of Visalia City Attorney

_____ Date 11-15-18

Appendix 1C Land Use Maps from Current County and City General Plans


Legend
Regional Planning Framework, Land Use Designations & Boundaries
Urban Boundaries
Urban Area Boundaries
Urban Development Boundaries
Hamlet Development Boundaries
Foothill Growth Management Plan
Foothill Mixed Use
Foothill Agriculture
600' Elevation
Rural Valley Lands Plan
Valley Agricultural
Mountain Plan
Mountain Service Centers
Subarea Plan Boundaries
Resource Conservation
Timber Production
Other
Government Lands
City Limits
Various Adopted Plans
Native American Reserve
Railroads
Power Transmission Lines
Airports
County Boundary
**Any variation between the boundaries depicted on this map and those located in the General Plan Goals and Policies Report are superseded by the actual boundaries as adopted in the plans identified in Part III of the General Plan Update and other official government boundaries.
Tulare County Planning Areas Amendments
GPA 14-002
GPA 14-008
GPA 15-006
GPA 15-007
Tulare County Planning Areas | Figure 4-1
0 5 10 20 Miles
Fresno County
Kern County
Kings County
Inyo County
Kings Canyon National Park
Sequoia National Park
Sequoia National Forest
Inyo National Forest
Redwood Mountain Plan (Unadopted)
South Sierra Plan (Unadopted)
Upper Balch Park Plan (Unadopted)
Great Western Divide North Half Plan
Great Western Divide South Half Plan (Unadopted)
Posey Plan (Unadopted)
Kennedy Meadows Plan
Tule River Indian Reservation
Pixley NWR
Blue Ridge NWR
Dinuba UDB
Dinuba UAB
Visalia UAB
Visalia UDB
Farmersville UDB
Farmersville UAB
Exeter UAB
Exeter UDB
Tulare UAB
Tulare UDB
Lindsay UAB
Lindsay UDB
Woodlake UAB
Woodlake UDB
Porterville UAB
Porterville UDB
Three Rivers UDB
Badger-Elderwood Development Corridor
Kaweah Development Corridor
Round Valley Development Corridor
Tule River Development Corridor
Wisonia MSC
Hartland MSC
Silver City MSC
Blue Ridge MSC
Balch Park MSC
Johnsondale MSC
Fairview MSC
California Hot Springs MSC
Sugarloaf Mountain Park MSC
Sugarloaf Park MSC
Sugarloaf Village MSC
Poso Park MSC
Panorama Heights MSC
Balance Rock MSC
McClenney Tract MSC
Posey/Idlewild MSC



Source: City of Tulare, Tulare County, and The Planning Center | DC&E.

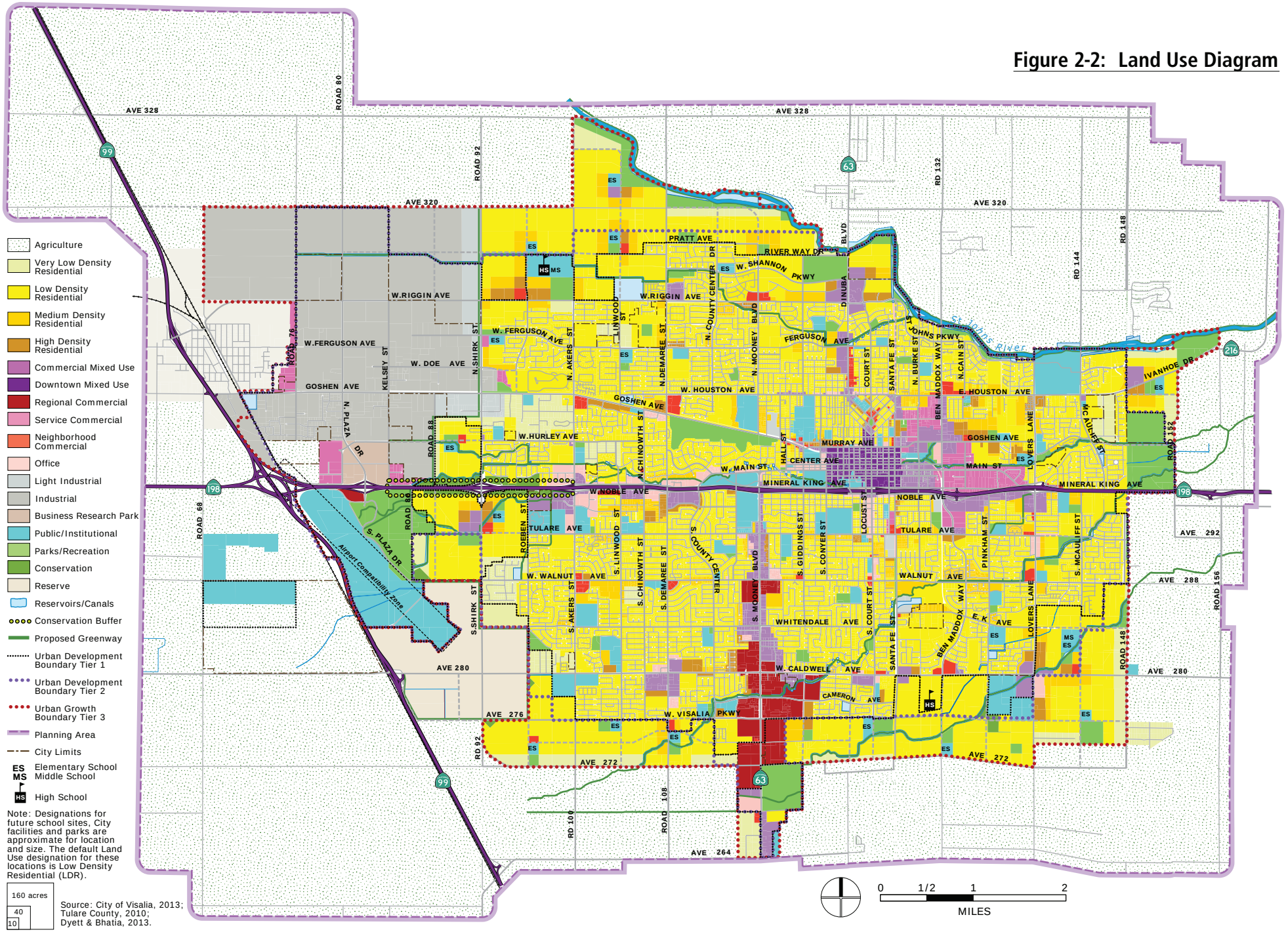
- City Limit
- 2035 Urban Development Boundary
- Rural Residential 0-2
- Residential Estate 2.1-3
- Low Density Residential 3.1-7
- Medium Density Residential 7.1-14
- High Density Residential 14.1-29
- Neighborhood Commercial
- Community Commercial
- Regional Commercial
- Service Commercial
- Central Business District
- Office Commercial
- Light Industrial
- Heavy Industrial
- Public/Quasi-Public
- Parks & Recreation
- Open Space/Agriculture
- Village*
- COS North TOD
- TOD Overlay

*Village areas require a Specific Plan and a General Plan Amendment prior to development.

FIGURE 2-2

2035 GENERAL PLAN LAND USE MAP

Figure 2-2: Land Use Diagram



Appendix 1D Mid-Kaweah Groundwater Sustainability Agency Communication and Engagement Plan

Stantec

Mid-Kaweah Groundwater Sustainability Agency Communication and Engagement Plan

Draft: Version 4

August 7, 2018

Prepared for:

Mid-Kaweah Groundwater Sustainability Agency

Revision	Description	Author		Quality Check		Independent Review	
1	Draft Document	Craig Moyle					
2	Review	Paul Hendrix		Craig Moyle			
3	Revise and Update	Craig Moyle		Chris Petersen			
4	Committee Edits and New Information	Craig Moyle					

Table of Contents

LIST OF APPENDICES

Executive Summary

The Mid-Kaweah Groundwater Sustainability Agency (Mid-Kaweah GSA) Communication and Engagement Plan provides a high-level overview of near- and long-term outreach strategies, tactics and tools that support public and stakeholder communication actions, as required by the Sustainable Groundwater Management Act (SGMA) of 2014. While primarily focused on achieving the communication needs of the Mid-Kaweah GSA, this Plan also describes certain intra-basin activities that serve to accomplish the needs of the agency and its fellow Kaweah Subbasin GSAs: East Kaweah GSA and Greater Kaweah GSA. The Plan is comprised of four main sections as follows:

Section 1: Introduction and Overview

Passed by the legislature during the third year of California's worst drought in decades, SGMA requires local public agencies to establish a governance structure and lead development and implementation of a Groundwater Management Plan to address and respond to chronic groundwater overdraft in subbasins identified to have high and medium risk of overdraft. The Mid-Kaweah GSA is one of three GSAs in the Kaweah Subbasin (DWR Bulleting 118, 5-022.11) identified as a high priority region at risk of critical overdraft by the state's California Statewide Groundwater Evaluation Monitoring (CASGEM) Program. Other GSAs in the Kaweah Subbasin are East Kaweah GSA and the Greater Kaweah GSA, subbasins identified to have high and medium risk of overdraft. The Mid-Kaweah GSA is one of three GSAs in the Kaweah Subbasin (DWR Bulleting 118, 5-022.11) identified as a high priority region at risk of critical overdraft by the state's California Statewide Groundwater Evaluation Monitoring (CASGEM) Program. Other GSAs in the Kaweah Subbasin are East Kaweah GSA and the Greater Kaweah GSA.

Section 2: About the Mid-Kaweah Groundwater Sustainability Agency

Formed in September 2015, the Mid-Kaweah GSA is among the first to be formed in response to SGMA. Founding member agencies are the cities of Tulare (inclusive of the Tulare Board of Public Utilities) and Visalia, and Tulare Irrigation District. The GSA was formed as Joint Powers Authority (JPA) under the state's Joint Exercise of Powers Act and is includes a six-member Board of Directors. Voting thresholds are defined in the JPA, with decision making support to the Board of Director led by an Executive Director in consultation with a Management Committee, Advisory Committee, Technical Advisory Committee, and Kaweah Subbasin Management Team (see Figure 1, Page 2.4). The Management Committee, Advisory Committee, and the Kaweah Subbasin Management Team are standing committees established through a Board of Director vote and are subject to the Ralph M. Brown Act (California Government Code §54950 et seq.).. Management Team are standing committees established through a Board of Director vote and are subject to the Ralph M. Brown Act (California Government Code §54950 et seq.)..

Section 3: Mid-Kaweah GSA Communication and Engagement

Outreach activities described in the Plan are managed by the Advisory Committee in close coordination with the Management Committee and the Executive Director. The described outreach activities draw, in part, from the Mid-Kaweah GSA Advisory Committee Assessment, a document aimed to inform the organizational structure of the committee and collect outreach requirements and recommendations from committee members. Planned outreach activities are supported by a range of outreach tools, which include:

- **Interested Party Database:** Pursuant to Water Code §10723.4, the three GSAs in the Kaweah Subbasin intend to establish and jointly manage a coordinated Interested Party Database (IPD) for distribution of notices related to GSP preparation, meeting announcements, availability of draft plans, maps and other related information. Slated for release in early summer 2018, the website provides stakeholder contact management, event management, mass email notification, and administrative record functions that accomplish certain requirements of SGMA. For contact management, the platform supports self-enrollment to an email database of the GSA or GSAs of the stakeholder's choice. If uncertain of which GSA applies to their property or area of interest, the website will provide a link to assist in identification of the appropriate agency.
- **Communication and Engagement Database:** The database identifies potential stakeholder and outreach audiences. Stakeholders have been divided into three stakeholder "groups." Pursuant to the requirements of SGMA, any outreach conducted to these stakeholders will be recorded in the Database and listed in the GSP. These tiers are described as follows:
  - **Group 1:** *Collaborated (Inform + Consult + Collaborate*) – This group is closely connected during the planning process through direct engagements aimed to exchange information through active two-way communication. As a pro-active and re-active activity, these engagements gather information, and develop solutions to existing and emerging issues.
  - **Group 2:** *Consulted (Inform + Consult*) – This group is connected during planning through written informational materials and scheduled presentations. This engagement is a pro-active activity seeks to gather stakeholder opinions to information presented by Mid-Kaweah GSA.
  - **Group 3:** *Connected (Inform*) – This group is connected during planning through distribution of written informational materials and prepared informational presentations. Presentations would be held in response to stakeholder requests.
- **Project Website:** The Mid-Kaweah GSA partner agencies have developed a stand-alone website for the GSA: www.midkaweah.org. The website provides information about SGMA, the member agencies, Board of Directors and Advisory Committee meeting notices, public outreach information and other informational resources.
- **Key Messages:** Initial key messages associated with SGMA, Mid-Kaweah GSA, and sustainable groundwater management have been developed and included in Appendix A. These key messages will be periodically updated.
- **Outreach Materials:** A suite of informational materials are planned for development utilizing a common visual identify to assist the reader readily identify the Mid-Kaweah GSA from the array of GSAs in California. These materials maybe be translated into multiple languages. These documents include an electronic newsletter, fliers, brochures, fact sheets, utility bill inserts, PowerPoint presentations, and surveys.

A variety of outreach activities are planned in support of GSP development through adoption of the agency's GSP by Jan. 31, 2020. Activities aimed to engage the public and stakeholders throughout this phase include:

- **Standing Meetings:** In addition to regular meetings of the Board of Directors, three standing meetings subject to the Brown Act are held or co-hosted by the Mid-Kaweah GSA. These include the Management Committee, the Advisory Committee, and the Kaweah Subbasin Management Team meeting. Subbasin Management Team meeting.
- **Member Agency Meetings:** Staff of the Mid-Kaweah GSA plan to conduct periodic presentations before the boards and councils of the founding agency members.
- **Public and Stakeholder Meetings:** The Mid-Kaweah GSA intends to host a series of meetings to present technical topics to the public and stakeholders to assist in development of the GSP. These meetings are planned for the fall of 2018.
- **Community Presentations:** To maintain and expand awareness of the agency, staff intend to provide high-level presentations at meetings hosted by civic organizations and non-government organizations with interests in sustainable groundwater management.
- **Non-Profit Partnerships:** The Mid-Kaweah GSA is collaborating with various non-profit groups formed to assist disadvantaged communities engage sustainable groundwater management planning. This collaboration is

intended to identify opportunities for the GSA to partner with these groups in development of projects to include to the agency's Groundwater Sustainability Plan.

- **GSP Review and Adoption:** Staff anticipates adoption of the 2020 Mid-Kaweah GSA GSP to be up to seven months. This will include a mid-2019 release of a Public Draft GSP for a public review period of up to 90-days. Public comments collected during this phase will be compiled into the Mid-Kaweah GSA Public Comment Report, which informs completion of the Draft Final GSP, slated for release in the fall of 2019. A public hearing to adopt the Draft Final GSP is proposed for December 2019.
- **Post Adoption Activities:** Following adoption and submittal of the Mid-Kaweah GSP by the statutory deadline of January 31, 2020, the California Department of Water Resources (DWR) will perform a 60-day public review period for all GSPs and relay such comments to their respective GSA. These comments will inform DWR's evaluation of submitted GSPs. These evaluations are due by legislative statute in 2022. Mid-Kaweah GSA staff plan to assemble public comments submitted to DWR, as well as public comments shared during the agency's public hearing to adopt, as an errata to the Mid-Kaweah GSA Public Comment Report.

Section 4: Intra-Basin Outreach Activities

In addition to the joint management of the Interested Parties Database, the Kaweah Subbasin GSAs plan to consider implementation of two intra-basin coordination outreach activities. These activities include co-hosting annual "state of the subbasin" forums intended to share subbasin-wide information to the public and stakeholders during plan development and throughout GSP implementation. The agency's additionally plan to consider issuing one consolidated annual report to DWR in response to GSP Emergency Regulations §356.2 GSAs plan to consider implementation of two intra-basin coordination outreach activities. These activities include co-hosting annual "state of the subbasin" forums intended to share subbasin-wide information to the public and stakeholders during plan development and throughout GSP implementation. The agency's additionally plan to consider issuing one consolidated annual report to DWR in response to GSP Emergency Regulations §356.2

Abbreviations

Board of Directors	Mid-Kaweah GSA Board of Directors
CASGEM	California Statewide Groundwater Elevation Monitoring Program
CWC	Community Water Center
DWR	California Department of Water Resources
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
JPA	Joint Powers Authority
LCJA	Leadership Counsel for Justice and Accountability
SGMA	Sustainable Groundwater Management Act
SHE	Self-Help Enterprises
TAC	Technical Advisory Committee
Water Board	State Water Resources Control Board

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Christian Petersen, GEI Consultants

1.0 INTRODUCTION AND OVERVIEW

As part of its development and passage of the Sustainable Groundwater Management Act (SGMA) of 2014, the State legislature intended that local public agency actions pursuant to the new law be conducted in an open public process. This document identifies and presents the public and stakeholder communication and engagement activities to be implemented by the Mid-Kaweah Groundwater Sustainability Agency (GSA) in support of development and eventual implementation of a Groundwater Sustainability Plan (GSP) within the agency's jurisdictional boundaries. This Plan is intended to function as a guide versus a prescriptive approach to outreach activities, thereby supporting a flexible and adaptive process for the Mid-Kaweah GSA Advisory Committee to implement in response to stakeholder needs during GSP development. Development of this plan was informed, in part, through information and advice collected through the Mid-Kaweah GSA Advisory Committee Assessment[1]. This Plan describes the Mid-Kaweah GSA's approach to achieve communication and engagement activities identified in California Code of Regulations Section 354.10:

§ 354.10. Notice and Communication

Each Plan shall include a summary of information relating to notification and communication by the Agency with other agencies and interested parties including the following:

(a) A description of the beneficial uses and users of groundwater in the basin, including the land uses and property interests potentially affected by the use of groundwater in the basin, the types of parties representing those interests, and the nature of consultation with those parties.

(b) A list of public meetings at which the Plan was discussed or considered by the Agency.

(c) Comments regarding the Plan received by the Agency and a summary of any responses by the Agency.

(d) A communication section of the Plan that includes the following:

(1) An explanation of the Agency's decision-making process.

(2) Identification of opportunities for public engagement and a discussion of how public input and response will be used.

(3) A description of how the Agency encourages the active involvement of diverse social, cultural and economic elements of the population within the basin.

Key Sustainable Groundwater Management Act Dates:

- June 30, 2017: Establish Groundwater Sustainability Agencies (or equivalent) for all high and medium priority basins – Water Code § 10724(b)
- July 1, 2017: County must affirm or disaffirm responsibility as Groundwater Sustainability Agency if no Groundwater Sustainability Agency has been established – Water Code § 10724(b)
- Jan. 31, 2020: All critically over drafted high and medium priority basins must be managed under a Groundwater Sustainability Plan. Water Code § 10720.7(a)(1)
- On April 1 following Groundwater Sustainability Plan adoption and annually thereafter, Groundwater Sustainability Agencies provide report on progress towards sustainability to the California Department of Water Resources. Water Code § 10728

[1] http://bit.ly/Kaweah_AdvComAsmnt

(4) The method the Agency shall follow to inform the public about progress implementing the Plan, including the status of projects and actions.

1.1 ABOUT THE SUSTAINABLE GROUNDWATER MANAGEMENT ACT

SGMA was passed by the legislature during the third year of California's chronic drought. While the drought was declared over due to near record rainfall in the 2016/17 season, groundwater basins throughout the state have not recovered to pre-drought conditions and, in some cases, experienced permanent groundwater storage capacity losses through land subsidence. The legislation requires local public agencies and newly-formed Groundwater Sustainability Agencies in high and medium priority subbasins to sustainably manage California groundwater resources with oversight by the California Department of Water Resources (DWR) and potential intervention by the State Water Resources Control Board (Water Board) if management activities are determined to be inadequate. Passage of SGMA ended an era where sustainable groundwater management was a voluntary action or a court mandated requirement through adjudication.

Following passage of SGMA, DWR embarked on a series of public and agency meetings to develop GSP Emergency Regulations. These regulations were released in July 2016 and are chaptered under the California Code of Regulations Title 23. Waters (§350-§358.4). In conjunction with release of these regulations, DWR published the Groundwater Sustainability Plan Emergency Regulations Guide. The guide summarizes and defines the processes and requirements found in Title 23 for GSA formation, the development and implementation of GSPs, the responsibilities of the DWR and interbasin coordination (§357.2).

1.2 ABOUT THE KAWEAH SUBBASIN

The Kaweah Subbasin of the San Joaquin Valley Basin (DWR Bulletin 118, 5-022.11, Figure 1) is one of 515 groundwater subbasins in California, and is one of 127 subbasins that have been identified as high or medium priority by DWR's California Statewide Groundwater Elevation Monitoring (CASGEM) Program. The CASGEM Program has identified the Kaweah Subbasin as a high priority critical overdraft basin, a determination that requires implementation of sustainable groundwater management actions by January 31, 2020. The subbasin is primarily located within the Tulare County, with a portion included in Kings County. At the time of this plan, three GSAs have been established within the subbasin pursuant to SGMA, including:

- East Kaweah GSA
- Greater Kaweah GSA
- Mid-Kaweah GSA

2.0 ABOUT THE MID-KAWEAH GROUNDWATER SUSTAINABILITY AGENCY

The Mid-Kaweah GSA was established on Sept. 14, 2015, through execution of the Mid-Kaweah Groundwater Subbasin Joint Powers Authority[2] (JPA) between the City of Visalia, the City of Tulare (including its Board of Public

[2] http://bit.ly/MKGSA_JPA

Utilities Commissioners), and Tulare Irrigation District. Each agency is eligible to serve as a GSA as a "local agency" pursuant to California Water Code §10721(m)[3].

Formed pursuant to Government Code §6500 et seq., the JPA serves as an independent public agency on behalf of its member agencies to comply with SGMA. The jurisdictional boundaries of the GSA represents approximately one-quarter of the Kaweah Subbasin, or approximately 170 square miles of the 696 square-mile subbasin. The founding agencies have engaged for many years in projects and programs to further conjunctive use and other groundwater management programs of mutual benefit. They collectively encompass the major population centers (approximately 190,000 people) and provide irrigation supplies to approximately 65,000 acres. Groundwater is relied upon heavily for municipal, industrial and agricultural purposes.

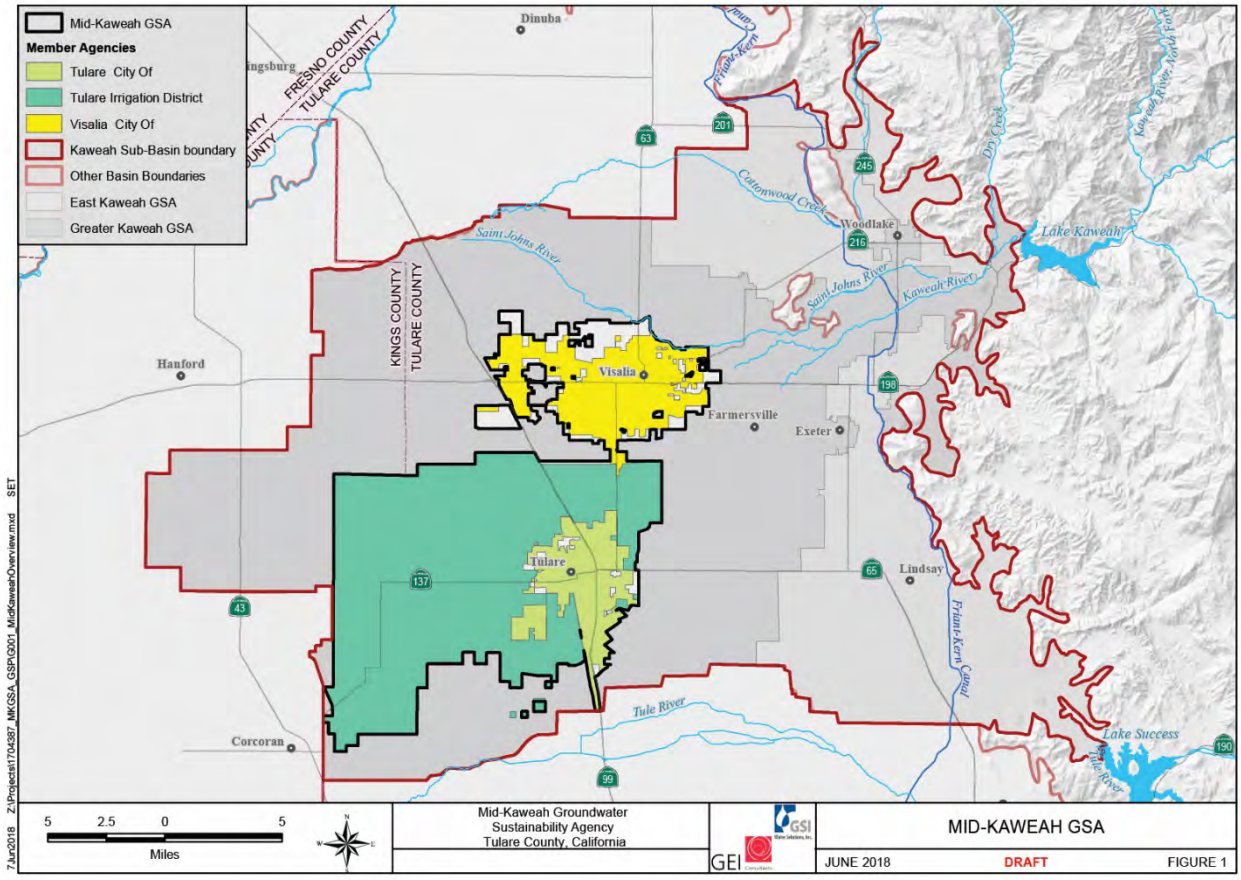


Figure 1 Groundwater Sustainability Agencies of the Kaweah Subbasin

2.1 BOARD STRUCTURE

The Mid-Kaweah GSA is led by a six-member Board of Directors comprised of two City of Visalia City Councilmembers, a total of two members from either or both of the City of Tulare City Council or the City of Tulare

[3] California Water Code §10721(m) – "Local agency" means a local public agency that has water supply, water management or land use responsibilities within a groundwater basin.

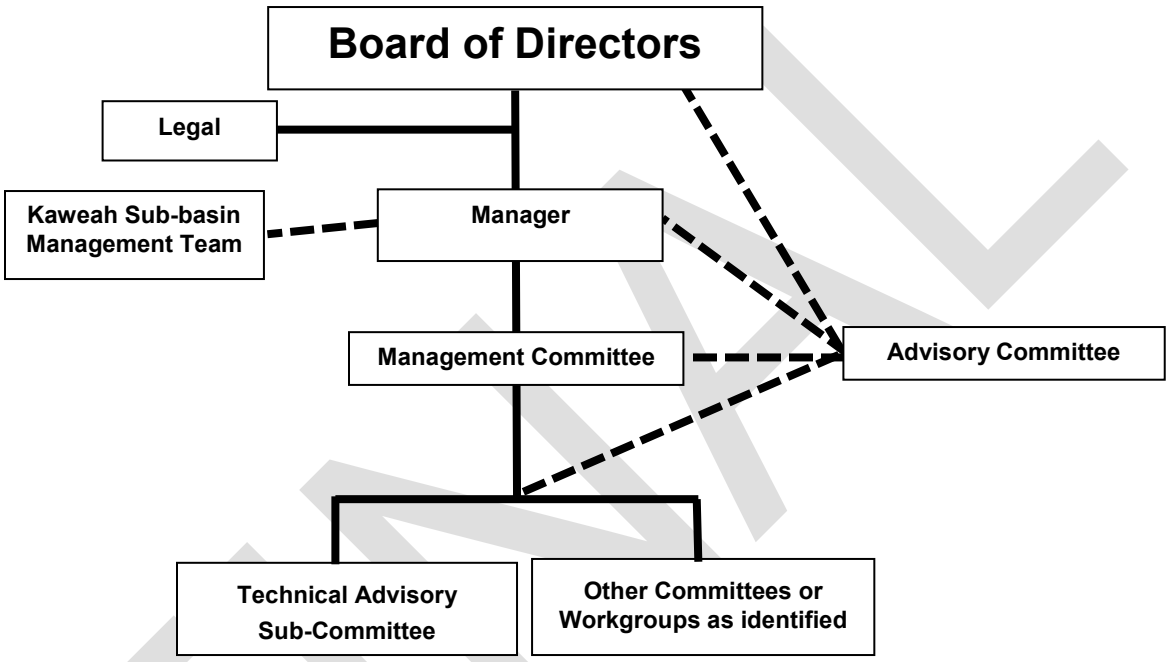
Board of Public Utilities, and two members of the TID Board of Directors. Additional members may be added to the Authority by a unanimous vote. These additional members must be eligible to serve as a GSA under the Act, and be a stakeholder located within the subbasin. Each member can designate one alternate director to serve in the event of a director's absence. Board members of the Authority serve without terms and at the pleasure of the legislative body that appointed them. Decision making of issues before the Board of Directors is via a simple majority of the quorum required for adoption of a resolution, ordinance, contract authorization or other action of the Board, except that:

1. A majority voice of less than a quorum may vote to adjourn
2. A unanimous vote of the entire Board (which may include alternatives) for the following:
3. Adoption of an initial budget;
4. Adoption or modification of the annual budget;
5. Contracts over $25,000 and for terms in excess of two years;
6. Admission of additional members
7. Appointment, employment, or dismissal of an employee, including any independent contractor who functions as an employee;
8. Setting the amounts of any contributions or fees to be made or paid to the Authority from any member
9. Compromise or payment of any claim against the Authority;
10. Acquisition by grant, purchase, lease, gift, devise, contract, construction, or otherwise, and hold, use, enjoy, sell, let, and dispose of, real and personal property of every king, including lands, water rights, structures, buildings, right-of-way, easements, and privileges, and construct, maintain, alter, and operate any and all works or improvements, within or outside the agency, necessary or property to carry out any of the purposes of the Authority
11. Adoption and imposition of fees pursuant to Water Code §10730-10731;
12. Replacement of the annual special audit required by Government Code §6505 with audit covering a two year period;
13. Approval of a GSP for the portions of the Subbasin identified by the GSA boundaries.

2.2 DECISION MAKING SUPPORT

Decision making support to the MKSGA Board of Directors is provided by a GSA manager, legal counsel, two standing committees, and an intra-basin coordination team. The decision making structure is illustrated Figure 1 and described further in the sections below.

Figure 2 Decision Making Structure of Mid-Kaweah GSA



2.2.1 Manager

The GSA Manager is appointed by the Board of Directors and serves at its pleasure. This position provides administrative and fiscal management for the GSA, and serves as overall coordinator for development and implementation of the GSP. Other ancillary administrative services are performed in-kind by staff members of the three GSA Members, to and including the GSA Secretary and Treasurer as appointed by the Board. Administrative functions include servicing the needs of the GSA and Board including, but not limited to meeting calendars, notices, agendas, minutes, resolutions and other reports or services required to conduct the business of the GSA. As fiscal agent the duties include payables, receivables, audit data, audits and any other fiscal requirements or fiscal controls needed to conduct the business of the GSA.

2.2.2 Legal Counsel

Legal counsel serves at the pleasure of the Board and is retained to advise members and the executive director on topics associated with the development and implementation of the GSA, and applicable functions of the Board.

2.2.3 Management Committee

The Mid-Kaweah GSA Management Committee is one of two standing committees formed through execution of the JPA and is subject to requirements of the Brown Act. The committee is comprised of one staff member from each of the Member agencies. These staff members are responsible for approval of all expenditures included in the Board-approved budget, and assists the board with all aspects of GSP development and implementation of the Act. The Management Committee may also, pursuant to its formation under 9(j) of the Mid-Kaweah GSA JPA[4], establish a Technical Advisory Committee (TAC) for the purpose of assisting the Management Committee and the Board. The role of the TAC is to perform technical studies for development of the agency GSP and to perform intra-basin coordination with other GSAs within the Kaweah Subbasin to address and resolve shared technical processes. Staffing of the TAC is anticipated to change throughout the plan development process depending on technical requirements.

2.2.4 Advisory Committee

The Mid-Kaweah GSA Advisory Committee is a standing committee appointed by the Board of Directors and is subject to the Brown Act. Formed pursuant to section 9(i) of the JPA[5], the 11-member committee is selected from a pool of applicants and serve three-year terms renewable through a board vote. Applicants must be residents within the jurisdictional boundaries of the Mid-Kaweah GSA. Membership on the board seeks to staff a committee whose membership represents the various social, economic and environmental stakeholder communities affected by SGMA. To achieve this balance, the following topical and geographic objectives are sought when selecting committee members:

- Up to three members representing governmental organizations operating within the GSA;
- Up to three members representing environmental interests and/or disadvantaged communities;
- Up to three members representing the agricultural community; and
- All remaining positions are appointed at-large and based, in part, on geographic location.

The Advisory Committee's purpose is to support decision making structure of the Board of Directors and provide counsel on behalf of the communities they serve to the various administrative, social, and technical topics being

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[4] *9(j): MANAGEMENT COMMITTEE: The Board shall create a Management Committee for the purpose of overseeing all activities undertaken in pursuit of the goals and objectives of the Authority identified in this Agreement, and for reporting upon same to the Board. The Management Committee shall be comprised of one staff person from each of the Members. The Management Committee shall, among other things, be responsible for the approval of all expenditures authorized by the Board through their approval of budget appropriations as required herein. The Management Committee may also establish a Technical Advisory Committee for the purpose of assisting the Management Committee and the Board with the technical aspects of GSP development and implementation of the Act.*

[5] *9(i): ADVISORY COMMITTEE: The Board shall create an Advisory Committee for the purpose of soliciting Information from the Other Kaweah Agencies and potentially affected stakeholders utilizing groundwater within the jurisdictional boundaries of the Members and potentially subject to the GSP to be developed by the Authority. Membership on the Advisory Committee and the time/date for meetings shall be at the discretion of the Board.*

addressed for development of the GSP. To accomplish this purpose, the Advisory Committee guides and implements outreach activities that encourage active and consistent involvement of the public, civic organizations, agencies, landowners, and other stakeholder communities during plan development. These outreach activities seek to engage stakeholders in one of three "groups" tailored to deliver, share and exchange information as applicable to the stakeholder's desired level of engagement in sustainable groundwater management. It is anticipated that stakeholder status within each group will change during the planning process consistent with each stakeholder's informational and engagement needs. These groups are described in section 3.1.2 Communication and Engagement Database.

2.2.5 Kaweah Subbasin Management Team

Established in November 2017, the Kaweah Subbasin Management Team is an intra-basin coordination activity involving the three GSAs within the Kaweah Subbasin. The team was formed under a Memorandum of Understanding (MOU) for Cooperation and Coordination of the Kaweah Subbasin[6]. Team meetings are held monthly and publicly noticed consistent with the Brown Act. As described in the MOU, the Team's purpose is to conduct necessary studies and seek mutual agreement in the preparation of a Coordination Agreement require by SGMA. The team is comprised of three members of each GSA, with one vote per GSA. These participants are appointed by their respective Board of Directors and serve at their direction. At the time of this Plan, the Mid-Kaweah GSA manager serves the custodian of records on behalf of the Team. Coordination of meeting locations and meeting moderation is rotated among each subbasin GSA.

3.0 MID-KAWEAH GSA COMMUNICATION AND ENGAGEMENT

Consistent with SGMA, the Mid-Kaweah GSA intends to develop and implement its GSP in close coordination, consultation and cooperation with the public and stakeholders through various outreach activities tailored to accomplish the regulatory goals of SGMA. The Mid-Kaweah GSA announced its public and stakeholder engagement objectives as part of its September 2015 formation notification (Water Code §10723.8)(a)(4)). This notification serves as the foundation for consistent and progressive engagement activities to the diverse social, cultural, and economic stakeholder communities within the jurisdictional boundaries of the Mid-Kaweah GSA.

Communication and engagement activities described in this section include tools, tasks, and tactics tailored to the unique needs of the Mid-Kaweah GSA. These activities draw from results of the Mid-Kaweah GSA Advisory Committee Assessment and are framed to establish and maintain broad community awareness in SGMA and the agency. These activities additionally seek to encourage active and consistent participation in groundwater management planning by Mid-Kaweah GSA stakeholders towards completion of a durable and implementable GSP.

Initial information needs identified in the Advisory Committee Assessment include:

- Raise awareness of SGMA and regulations that have been promulgated since its passage, particularly in urban areas.
- Maintain and increase awareness that the GSP for the region is locally led and focused to meet local needs.

[6] http://bit.ly/Kaweah_MOU

- Raise public understanding of groundwater issues, particularly in relation to fluctuations in groundwater levels associated with conjunctive use.
- Foster water conservation practices that help maintain viable municipal landscapes (e.g. urban forests).
- Communicate the role of surface water storage in meeting consumption demand by municipal, industrial and agricultural water users.
- Distribute a groundwater overdraft report prior to release of the GSP to familiarize groundwater users of the scope of the challenge.
- Distribute a timeline that conveys the schedule of major milestones to encourage public participation at appropriate intervals.

3.1 OUTREACH TOOLS

Outreach tools are activities for stakeholder identification, tracking engagements with stakeholders, and vehicles to publish and disseminate information to the public and stakeholders. This section describes the suite of tools developed or planned for use by the Mid-Kaweah GSA and managed by the Advisory Committee. The agency, on an as-needed basis, may provide materials in Spanish and Portuguese. A common visual identity format will be implemented for all printed and electronic informational materials distributed to the public and stakeholders.

3.1.1 Interested Party Database

To manage and document participation during the plan development process with individual stakeholders, GSAs are required to establish, maintain and utilize an Interested Party Database (IPD) as a means to distribute notices related to GSP preparation, meeting announcements, availability of draft plans, maps and other related information. Agencies are required to add any person who provides a written request to be placed on the IPD (Water Code §10723.4).

As part of existing intra-basin coordination, the three Kaweah Subbasin GSAs intend to establish a jointly manage IPD and meeting calendar website integrated to each agency's website. Slated for release in early summer 2018, the website is intended to provide stakeholder contact management, event management, mass email notification, and administrative record functions. For contact management, the platform supports self-enrollment to an email database of the GSA or GSAs of the stakeholder's choice. If uncertain of which GSA applies to their property or area of interest, the website will provide a link to assist in identification of the appropriate agency. Information requested during the subscription process includes the following fields:

- Name
- Email
- Company/Organization
- Address
- Stakeholder Category (Water Code §10723.2[7]):
    - Citizens Groups
    - General Public
    - Disadvantaged Communities[8]
    - Agricultural Well Owners
    - Domestic Well Owners
    - Commercial and Industrial Self-Supplied

[7] As available and consistent with Water Code Section 10723.2
[8] Includes those served by private domestic wells or small community water systems (Water Code §10723.2(i)

- Private and Public Water Purveyors
- Surface Water Users[9]
- Governmental and Land Use Agencies
- Tribal Governments and Communities
- Environmental and Ecosystem Interests
- Remediation and Groundwater Cleanup

The subscription enrollment form is anticipated to include a range of notification topics applicable to each GSA. For the Mid-Kaweah GSA, this menu is as follows:

- All GSA Notices and Announcements
- Board Meetings
- Advisory Committee
- Media Notices
- Document Release
- Kaweah Subbasin Management Team

The site's calendar provides a dashboard view of scheduled meetings and links to receive additional information, download documents, register to attend, and review the list of those that has registered to attend. A link will be provided for visitors to add the event to their personal calendar (e.g. Microsoft Outlook, Google Calendar, etc.). Links to adopted outreach plans and other related documents are planned for inclusion on the website.

Administratively, the site assists GSAs in the preparation and conduct of public meetings, monitor the effectiveness of communication activities, and serve as a platform to submit information required by SGMA. Public meeting functions include coordinated scheduling of GSA events, distribution of announcements by mass email, and logistical planning of public meetings based on attendee registration. Readership trends from mass email campaigns will be measured to identify the frequency emails are opened and forwarded on to others. Geographic information provided by subscribers can be displayed on a map to reveal potential geographic gaps in public participation. Finally, the platform will be integrated to the state's GSP submittal website (https://sgma.water.ca.gov/portal/) for receipt of the agency's public outreach plan and record of public participation.

3.1.2 Communication and Engagement Database

The Communication and Engagement Database is a Microsoft Excel spreadsheet used to plan, implement, and evaluate engagements with stakeholder groups and the media. The database is managed by Advisory Committee and Mid-Kaweah GSA support staff. The spreadsheet includes four sections as follows:

Tab: Stakeholder Database – This section includes stakeholder organizations identified as subject to, or potentially interested in, SGMA and the Mid-Kaweah GSA activities. These organizations are categorized in the database consistent with §10723.2 and assigned to one of three "groups." These groups serve to define a level of engagement with a stakeholder community based on self-identified or pre-assessed need. These groupings are as follows:

- **Group 1:** *Collaborated (Inform + Consult + Collaborate*) – This group is closely connected during the planning process through direct engagements aimed to exchange information through active two-way communication. As a pro-active and re-active activity, these engagements gather information, and develop solutions to existing and emerging issues.

[9] If there is a hydrologic connection between surface and groundwater bodies (Water Code §10723.2(g))

- **Group 2:** *Consulted (Inform + Consult*) – This group is connected during planning through written informational materials and scheduled presentations. This engagement is a pro-active activity seeks to gather stakeholder opinions to information presented by Mid-Kaweah GSA.
- **Group 3:** *Connected (Inform*) – This group is connected during planning through distribution of written informational materials and prepared informational presentations. Presentations would be held in response to stakeholder requests.

The grouping assignment for each stakeholder community is subject to change based on stakeholder interest and GSP content needs. It is anticipated that the assignment will be dynamic throughout the planning process as issues are identified and addressed. Such changes will be documented consistent with Water Code § 354.10 (b) and 354.10 (d).

Tab: Upcoming Outreach – This section identifies pending outreach activities to be implemented by the Mid-Kaweah GSA. This section defines the date of the activity, the host, the organization type, the identified presenter or task lead and associated action items.

Tab: Outreach Record – This section documents outreach activities to stakeholder groups and represents the administrative record for inclusion in the agency's GSP. This includes planned outreach actions and those that were in response to a stakeholder group's request. Meeting attendance, duration and key topics covered during the presentation will be recorded in the database.

Tab: Media Database – This section identifies media outlets applicable to the Mid-Kaweah GSA and document media relations activities. The section will be periodically updated with contact information of reporting and editorial staff, as well as requirements for placement of advertisements. All media relations activities (i.e. news releases, interviews, etc.) and their results will be recorded here and included as part of the administrative record during submittal of the adopted GSP.

3.1.3 GSA Website

Pursuant to GSP Emergency Regulations Section 353.6, the Mid-Kaweah GSA members developed a stand-alone website for the GSA. Located at www.midkaweah.org, this website provides information about SGMA, the member agencies, Board of Directors, Board meeting notices and summaries, public outreach and timeline information, frequently asked questions, news, links and a contact list. Visitors can enroll in the agency's Interested Parties Database and ask questions of member agencies. The site is cross-linked to Greater Kaweah GSA and East Kaweah GSA websites, the Kaweah Subbasin website and its Data Management System (DMS), the DWR SGMA information portal, and other related sites.

The Mid-Kaweah GSA website is formatted to be compatible with smartphone platforms to assist in engagement with stakeholders who prefer or are reliant on this format. This effort recognizes, in part, that high-speed internet use is not universal throughout the Mid-Kaweah GSA jurisdictional area either through lack of availability, personal choice, or economic reasons.

The Mid-Kaweah GSA intends to post various documents in Spanish – and other languages, as appropriate – on the project website to assist in stakeholder communication and engagement activities. Establishment of a multi-language website for the agency is under evaluation by staff and the Advisory Committee. Factors under consideration include identification of a demonstrable need of the pertinent stakeholder group and availability of resources.

3.1.4 Key Messages

An initial list of key messages has been developed for use in all Mid-Kaweah GSA communications. These messages provide a menu of message options to utilize when responding to stakeholders, the public, media and other groups. These message are also available for use by member agencies for response to GSA or SGMA-specific activities specific to their jurisdictional area. These key messages are organized to deliver information related to SGMA, GSA formation and GSP development. The messages should be adapted to the target audience (i.e. urban community, rural community, disadvantaged community, grower or industry representative). These key messages are subject to change during the plan development process as information is developed as conditions change. The initial key messages developed with this Outreach Plan are included in Appendix A.

3.1.5 Outreach Tools and Resources

Outreach tools and resources for the Mid-Kaweah GSA support outreach activities implemented to build and maintain awareness, and support plan development. Informational materials distributed to stakeholders will have a common visual identity to assist GSA stakeholders distinguish its work product from other GSAs in the region. The range of document planned for use include agency letterhead, meeting summaries, comment cards, fliers, PowerPoint presentations, sign-in sheets, brochures, factsheets, news releases, media advisories, utility bill inserts, surveys, and others as-needed. The general purpose/approach for these materials are as follows:

Letterhead: Utilized for formal communication to the public, stakeholders and other parties. This letterhead identifies agency members, the agency Board of Directors, and key staff. This document may serve as a stand-alone communication vehicle or as a companion to other outreach materials.

Meeting Summaries: Utilized to memorialize discussions, decisions and other important milestones associated with a meeting hosted by the Mid-Kaweah GSA.

Comment Cards: Provided in a postcard format, this document serves to collect public and stakeholder feedback and receive requests to be added to the Interested Parties Database. Depending on setting, document may be pre-addressed for convenient delivery to the agency by U.S. Mail.

PowerPoint Presentation: Provided in electronic format, this document will provide visual and text content that support verbal presentations by Mid-Kaweah GSA members and staff.

Sign-in Sheet: This document will assist in maintaining the record of engagement for agency meetings and assist stakeholders in signing up to the Interested Parties Database.

Newsletter: A periodic online newsletter intended to keep stakeholders and the public up to date on the GSP development process, notify stakeholders of upcoming public meetings and workshops and address other topics applicable to sustainable groundwater management pertinent to the region. It is anticipated that the newsletters would be sent to the stakeholders up to three times per year during the GSP development process. The newsletter may include the following content: status of the GSP development process and milestones, key groundwater issues or topics of concern for the subbasin, regional coordination activities, state-wide updates on SGMA and a schedule of planned public meetings, workshops or other events.in the subbasin, regional coordination activities, statewide updates on SGMA and a schedule of planned public meetings, workshops or other events.

Brochures and Fact Sheets: These are typically one to two pages in length and developed to assist engagement with the public and stakeholders on specific topics. The editorial focus of these documents will be managed by the Advisory Committee in coordination with the Management Committee.

Utility Bill Inserts: These documents utilize space, as available, in utility bills delivered to customers by U.S. Mail. The agency may utilize these formats, as available, during the following plan development intervals:

- Spring/Summer 2018 – This first insert seeks to raise awareness of Mid-Kaweah GSA and encourage enrollment in the IPD.
- Winter 2018-19 – This second insert continues to raise awareness and encourage visitation to the agency website to stay informed of sustainable groundwater management activities to date.
- Fall 2019 – This third insert will be timed to coincide with public notification for adoption of the Mid-Kaweah GSA GSP.

Fliers: These one-page documents are focused on stakeholder communities and intended to raise awareness of certain topics or events of the Mid-Kaweah GSA.

News Releases: These documents are typically one to two pages in length and serve to draw media attention to a significant event or milestone of the agency.

Calendar Advisories: One-page documents that provide a brief description of a Mid-Kaweah GSA event or milestone (e.g. deadline for receipt of public comment).

Social Media: Social media is a rapid and convenient method to reach stakeholders and other interested parties. The Mid-Kaweah GSA established a presence on Facebook in mid-2016, with most postings focused on meeting announcements. Postings to the site would be completed in coordination with updates to the project website and additional activities identified in coordination with the Advisory Committee and Management Committee.

Surveys: The Mid-Kaweah GSA intends to periodically conduct surveys of the public, stakeholder groups and other interested parties. Circulated online, by email or direct mail, these surveys are important tools that can assist in data collection, raise or increase awareness of key topics, respond to key issues, or collect feedback following a public meeting or event. The Advisory Committee will be responsible for the management, implementation and oversight of all agency surveys. Survey may be developed by the Advisory Committee, the Management Committee, and/or the Technical Advisory Committee. Where necessary, draft surveys will be presented to the Board of Directors for their approval. The content of each survey will address the following criteria:

- Duration
- Purpose and objective
- Target audience and circulation
- Application to Sustainable Groundwater Management Planning
- Contribution to objectives of Mid-Kaweah GSA

Anticipated survey topics are as follows and subject to change during the planning process. The schedule for implementation of these activities will be determined by the Advisory Committee.

- Post-Event Surveys: These surveys would be printed on a 5.5 x 8.5 inch sheet of paper and circulated during a public meeting or workshop. These surveys may serve to evaluate the information shared during a meeting, or function as a data collection vehicle associated with a key topic discussed at the meeting.

- Awareness Surveys: These surveys are anticipated to be circulated electronically either through email, the project website, or social media (e.g. Facebook, SurveyMonkey, etc.) These surveys would include high-level questions associated with sustainable groundwater management. Awareness surveys are typically circulated at various intervals to measure changes in stakeholder responses.
- Subject-Matter Surveys: These surveys are exploratory in nature and seek to collect information from a specific stakeholder community or geography. Such surveys can help inform the planning process by testing alternatives to potential actions (e.g. alternatives to an identified undesirable result) or recruiting information (e.g. location of properties with multiple wells at different depths).

3.2 OUTREACH ACTIVITIES

The Mid-Kaweah GSA Advisory Committee intends to conduct and monitor a variety of public outreach activities each aimed to inform, engage and respond to stakeholders and other interested parties during GSP development, adoption and, later, implementation. These activities serve to engage and interact with the public and stakeholders during GSP development, and to assist Mid-Kaweah GSA staff and leadership collect information important to groundwater sustainability planning. This engagement and interaction occur in five general areas: Standing Meetings; member agency meetings; public and stakeholder meetings; and existing community meetings. The date and schedule of these engagements is illustrated in Appendix C: Mid-Kaweah GSA Outreach and Coordination Schedule. Commonly used tools applicable to each form of engagement are included in the descriptions below:

3.2.1 Standing Meetings

Commonly Used Tools: Sign-in Sheet, Comment Card, Meeting Summary, Survey

Schedule:

- Monthly: Board of Directors
- Bi-Monthly: Advisory Committee
- Monthly: Management Committee
- As-Needed: Technical Advisory Committee
- Monthly: Kaweah Subbasin Management Team

The Mid-Kaweah GSA hosts or participates in three standing meetings that are subject to the Brown Act. These include the agency's Board of Directors, the agency's Advisory Committee, and the Kaweah Subbasin Management Team meeting. Notification for these meetings are performed pursuant to the Brown Act. They represent points of access for the public and stakeholders to observe and participate in a forum where key decisions are presented, discussed and decided. They also serve to engage with the public and stakeholders in the decision making process for development of a GSP that addresses local requirements consistent with SGMA. Topics presented for Board review and decision are brought by the agency's Manager in consultation with the Management Committee, Advisory Committee and the Technical Advisory Sub-Committee. Details of each meeting are be reported on the agency website consistent with Water Code §10725.2.

3.2.2 Member Agency Meetings

Commonly Used Tool: Comment Card

Schedule:

- Spring 2019: Public Draft GSP Briefing

- Fall 2019: Final Draft GSP Briefing

As part of GSP development, Mid-Kaweah GSA staff intend to provide briefings to member agency (cities of Tulare and Visalia; Tulare ID) councils and boards. These briefings will be conducted during a member agency's publicly noticed meeting and may include opportunities for public and stakeholder engagement at the discretion of the member agency. It is anticipated that these briefings would be requested by the member agency or scheduled proactively by Mid-Kaweah GSA staff. The primary purpose of these briefings is to provide updates on plan progress and next steps, and to respond to questions. These presentations provide opportunities to share and describe how elements of the GSP apply to the service area of the member agency. Results of these presentations will be posted on the website of the Mid-Kaweah GSA and the requesting member agency.

3.2.3 Public and Stakeholder Meetings

Commonly Used Tools: Sign-in Sheet, Comment Card, Meeting Summary, Survey

Schedule:

- Fall 2018: Sustainable Management Criteria Technical Presentations
- Spring 2019: Administrative Draft Technical Presentations
- Summer 2019: Public Draft GSP Hearing
- Winter 2019: Final Draft GSP Public Hearing

In support of plan development, the Mid-Kaweah GSA anticipates periodically hosting or participating in meetings to present technical findings and exchange information with stakeholders. These meetings will be planned and managed by the Advisory Committee in close coordination with the Management Committee. The meetings, as identified in the Communication and Engagement Database, would focus on specific stakeholder groups, such as school districts, water purveyors, industry groups, agricultural associations, disadvantaged or economically stressed communities and non-governmental agencies. The primary functions of these meetings are: 1) to build and maintain awareness of SGMA, the Mid-Kaweah GSA and the plan development process; 2) to receive public and stakeholder input and advice during plan development; 3) to encourage the public and stakeholders to attend and participate at agency Board and Advisory Committee meetings; and 4) to encourage public and stakeholder enrollment in the Interested Parties Database. Notification of these meetings will be conducted through the agency website, the Interested Parties Database and other communication vehicles available through member agencies or other partners. These may include newsletters, post cards, fliers, utility bill inserts and social media. Results of these meetings will be posted on the agency website and tracked in the Communication and Engagement Database.

3.2.4 Community Presentations

Commonly Used Tool: Comment Card, Survey

Schedule:

- Spring and Summer 2018
- Winter and Spring 2019

The Mid-Kaweah GSA plans to conduct presentations to rural schools, neighborhood associations, mobile home parks, civic, non-profit and other community organizations to build and maintain awareness about SGMA and the

agency, to encourage participation at Board and Advisory Committee meetings and to encourage enrollment in the Interested Parties Database. These sessions will occur during the second and third quarter of 2018. Subsequent presentations may be provided upon request by a stakeholder group or as a follow-on action of the Advisory Committee. The initial round of presentations will focus on expanding self-enrollment in the Interested Parties Database, increasing awareness of SGMA and increasing awareness and participation in Mid-Kaweah GSA GSP development. Subsequent rounds of community presentations would serve to continue dialog with stakeholder communities and alert groups to pending key milestones (e.g. public hearings). The Communication and Engagement Database identifies the timing, sequence and action items for these presentations. The presentations may be led by Mid-Kaweah GSA staff, member agency staff, Advisory Committee members, or consultant support staff using the prepared key messages.

3.3 NON-PROFIT PARTNERSHIPS

In 2017, the California Department of Water Resources issued $85.8 million in grant funds through the Sustainable Groundwater Planning (SGWP) Program to support GSP development activities by GSAs and other groups. This award includes a $1 million grant to Self-Help Enterprises (SHE), a $758,000 grant to the Leadership Counsel for Justice and Accountability (LCJA), and a $614,353 grant to the Community Water Center (CWC) – three non-profit groups organized to assist disadvantaged communities address a range of social, civic and environmental issues. Funds allocated to these groups are available, among other things, to provide technical support for development of projects, provide translation support to GSAs, and staff participation in GSA activities.

The Mid-Kaweah GSA and its member agencies are long-standing partners of Self-Help Enterprises. A staff member of the organization is a standing member of the agency's Advisory Committee. On June 12, 2018, the Mid-Kaweah GSA provided the California Natural Resources Agency a letter of its support of the LCJA's scope of work for SGMA. Activities with the CWC has included participation in an April 2018 multi-meeting to discuss the organization's development of a Drinking Water Vulnerability Assessment Web Tool. The agency anticipate continued collaboration with CWC on the web tool and will respond to other requests as they arise. At the time of this plan, SHE and LCJA were determining their grant investment strategies within Mid-Kaweah GSA and other regions. This plan will be updated once those investment strategies are finalized.

Regardless of the extent of partnership opportunities available with these and other organizations, the Mid-Kaweah GSA intends to engage with each of the disadvantaged communities within its jurisdictional area or potentially dependent on infrastructure of its member agencies. The preliminary list of these communities[10] are identified in the Communication and Engagement Database and identified below.

- Matheny Tract – Severely Disadvantaged Community
- Soults Tract – Disadvantaged Community
- Lone Oak Tract – Disadvantaged Community
- Waukena Hamlet – Severely Disadvantaged Community
- Okieville Higland Acres Mutual Water Company – Disadvantaged Community
- East Tulare Hamlet – Disadvantaged Community[11]

[10] List is based on the 2015 Mid-Kaweah GSA Formation Notification; the DWR Disadvantaged Communities Mapping Tool for "Community Places"; the Tulare County 2030 General Plan Update; Tulare Lake Basin Water Alliance website

[11] This community is located in the Greater Kaweah GSA service area; however, activities are underway to connect this area to the City of Tulare for emergency water supplies.

- Mooney Grove Park – Disadvantaged Community
- Mooney Grove Manor Mobile Home Park – Disadvantaged Community
- Royal Oaks Mobile Home Park – Disadvantaged Community
- Westlake Village Mobile Home Park – Disadvantaged Community
- Willow Glen Mobile home Park – Disadvantaged Community
- Mountain View Mobile Home Park – Disadvantaged Community

3.4 GSP REVIEW AND ADOPTION

Adoption of a GSA is governed by Water Code §10728.4 and provides the following requirements:

> *A groundwater sustainability agency may adopt or amend a groundwater sustainability plan after a public hearing, held at least 90 days after providing notice to a city or county within the area of the proposed plan or amendment. The groundwater sustainability agency shall review and consider comments from any city or county that receives notice pursuant to this section and shall consult with a city or county that requests consultation within 30 days of receipt of the notice. Nothing in this section is intended to preclude an agency and a city or county from otherwise consulting or commenting regarding the adoption or amendment of a plan.*

While the above Water Code provision intimates a three month adoption process, the Mid-Kaweah GSA anticipates a two-phased approach for the public review and adoption of the agency's GSP that may last up to seven months. These phases are described as follows:

3.4.1 Public Review Phase

The Public Review Phase is anticipated to take up to three months and begin in mid-2019. The major milestone of this phase is release of the agency's Public Draft GSP and conduct of a public review period. This phase seeks to provide opportunities for public input to the GSP prior to formal adoption proceedings pursuant to §10728.4. This step is separate from a public comment processes to be conducted by DWR (Water Code §10733.4(3)(c)[12]). The agency's Public Review Phase includes the following components:

Public Draft GSP: The Public Draft GSP is intended for release in mid-2019 for up to a 90-day public review.

Public Meeting: During the day public review period for the Public Draft GSP, the Mid-Kaweah GSA intends to host at least one public meeting intended to provide a high level presentation of the document and receive comments from the public and stakeholders. A stenographer may staff this public meeting to record verbal comments.

Notifications: Consistent with Government Code §6066, the Mid-Kaweah GSA intends to place two newspaper advertisements at least five days apart, 14 days prior to the public meeting. Additional notification activities include distribution of a news release to local and regional print, broadcast and on-line media sources, distribution of event fliers to organizations identified in the Communication and Engagement Database, and mass email distribution via the agency's Interested Party Database.

[12] Upon receipt of a groundwater sustainability plan, the department shall post the plan on the department's Internet Web site and provide 60 days for persons to submit comments to the department about the plan.

Public Comment Report: A Public Comment Report will be developed to document all written comments submitted during the public comment period and staff responses to these comments. This document will include all verbal comments collected by a stenographer during the public meeting, as available. Information contained in this document will contribute to completion of the Draft Final GSP.

3.4.2 GSP Adoption Phase

The GSP Adoption Phase is expected to last 90 to 120 days and slated to begin in late summer/early fall. This phase includes the following components:

Notice of Intent: Pursuant to Water Code §10728.4, the agency will prepare and release a Notice of Intent to Adopt its GSP during a regularly scheduled meeting of the Board of Directors. This notice will be provided to the County of Tulare and cities within the jurisdictional area of the Mid-Kaweah GSA. Consultation meetings will be performed in the event written request is received pursuant to §10728.4. As for-profit water purveyors operate within the jurisdictional boundary of Mid-Kaweah GSA, the agency intends to provide a courtesy copy of this Notice of Intent to the California Public Utilities Commission. This action continues notification first initiated pursuant to Water Code 10727.8(a).[13]

Member Agency Briefing: Prior to release of the Draft Final GSP, Mid-Kaweah GSA staff plan to provide a briefing of the document's key elements and results from the public comment period before the Visalia City Council, the Tulare City Council and Tulare Board of Public Utilities, and also before the Tulare ID Board of Directors. This presentation will provide a high-level overview and communicate the adoption schedule by the Mid-Kaweah GSA Board of Directors.

Release Draft Final GSP: The Draft Final GSP is intended for public release in late fall/early winter 2019.

Notifications: Pursuant to Government Code §6066, the Mid-Kaweah GSA will place two newspaper advertisements at least five days apart, 14 days prior to the conduct of a public hearing required by Water Code §10728.4. Additional notification activities include distribution of a news release to local and regional print, broadcast and on-line media sources, distribution of event fliers to organizations identified in the Communication and Engagement Database, and mass email and text notification using the agency's Interested Party Database.

Public Hearing: Pursuant to the Water Code, the Board of Directors will host a formal public hearing to receive verbal comments from the public and stakeholders. This hearing is in advance of a Board of Directors action to adopt the 2020 Mid-Kaweah GSA GSP and authorize the Coordination Agreement (SGMA §10727(b)(3) and GSP Emergency Regulations §357.4). Written comments provided by the public and other interested parties will be accepted during the hearing. A stenographer may be in attendance to record public comments. Written and verbal comments will

[13] 10727.8. (a) Prior to initiating the development of a groundwater sustainability plan, the groundwater sustainability agency shall make available to the public and the department a written statement describing the manner in which interested parties may participate in the development and implementation of the groundwater sustainability plan. The groundwater sustainability agency shall provide the written statement to the legislative body of any city, county, or city and county located within the geographic area to be covered by the plan. The groundwater sustainability agency may appoint and consult with an advisory committee consisting of interested parties for the purposes of developing and implementing a groundwater sustainability plan. The groundwater sustainability agency shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the groundwater basin prior to and during the development and implementation of the groundwater sustainability plan. If the geographic area to be covered by the plan includes a public water system regulated by the Public Utilities Commission, the groundwater sustainability agency shall provide the written statement to the commission.

retained for post adoption use (see Section 3.4 Post Adoption Activities). This hearing is slated to occur in early December 2019.

3.5 POST ADOPTION ACTIVITIES

Adoption of the Mid-Kaweah GSA GSP authorizes agency staff to begin implementation the identified actions. The adoption additionally initiates review and evaluation of submitted GSPs by DWR to be tracked by the Mid-Kaweah GSA as part of GSP implementation. These activities include the following components:

Public Review: Water Code Section 10733.4 directs DWR to conduct a public comment period for submitted GSPs for a period of 60 days. This review is conducted on a subbasin level and begins after DWR receives all GSPs from GSAs in a groundwater subbasin. Comments are submitted via an on-line form managed by DWR. These comments are delivered to DWR staff and automatically relayed to a subbasins point of contact as identified in the GSP or Coordination Agreement, as applicable. It is anticipated that DWR will refer to these comments as part of its completion of GSP Evaluations by 2022 (GSP Emergency Regulations §355.2). Comments are submitted via an on-line form managed by DWR. These comments are delivered to DWR staff and automatically relayed to a subbasins point of contact as identified in the GSP or Coordination Agreement, as applicable. It is anticipated that DWR will refer to these comments as part of its completion of GSP Evaluations by 2022 (GSP Emergency Regulations §355.2).

Public Comment Report Errata: Following the close of DWR's 60-day public review period, the Mid-Kaweah GSA anticipates publishing an erratum to the Public Comment Report. Anticipated for delivery to the agency Board of Directors in last spring/early summer 2020, this document will compile and respond, as appropriate, to comments submitted to DWR and relayed to the agency, and comments provided to the agency during formal adoption proceedings.

3.6 OUTREACH IN SUPPORT OF GSP IMPLEMENTATION

The Mid-Kaweah GSA expects to continue use of the outreach tools and tactics described in this plan as part of outreach to the public and stakeholder community following adoption of the GSP. The format and approach of this outreach will be described in an update to this plan based, in part, on results of engagement with stakeholders during the plan development, recommendations by the Advisory Committee, Management Committee, and direction of the agency Board of Directors.

4.0 INTRA-BASIN OUTREACH ACTIVITIES

Appendix C Schedule identifies two intra-basin outreach activities to be conducted by the three Kaweah Subbasin GSAs. These activities are preliminary and subject to agreement of the GSAs. These activities are described as follows:

4.1 SUBBASIN FORUMS

Subbasin forums are conference-style events co-hosted by management and technical staff for each of the Kaweah Subbasin GSAs. The purpose of these forums is to provide the public and stakeholders with a broad, subbasin-wide perspective of groundwater conditions in the region and allow each GSA describe important features for their specific area. These meetings would be held annually and promoted through various notification activities including advertising, news release, event fliers, and mass email to the Interested Party Databases of the GSAs. The purpose of these forums is to provide the public and stakeholders with a broad, subbasin-wide perspective of groundwater conditions in the region and allow each GSA describe important features for their specific area. These meetings would be held annually and promoted through various notification activities including advertising, news release, event fliers, and mass email to the Interested Party Databases of the GSAs.

4.2 ANNUAL REPORTS

Following submittal of adopted GSPs, subbasins are required to develop and submit to DWR annual reports that identify progress and status of sustainable groundwater management activities (GSP Emergency Regulations §356.2). These annual reports will additionally be distributed to subbasin stakeholders through the Interested Party Database and various community meetings. The Kaweah Subbasin GSAs anticipate joint release of these annual reports and implementation of coordinated outreach activities.

APPENDICIES

5.0 APPENDICIES

Appendix A KEY MESSAGES

Version: June 7, 2018; Content is subject to change.

A.1 SUSTAINABLE GROUNDWATER MANAGEMENT ACT

What is the Sustainable Groundwater Management Act?

The Sustainable Groundwater Management Act (commonly referred to as "SGMA"), signed into law in 2014, provides a framework for long-term sustainable groundwater management across California. It requires that local and regional authorities in the medium and high priority groundwater basins form a locally-controlled and governed Groundwater Sustainability Agency, which will prepare and implement a Groundwater Sustainability Plan.

Is the Sustainable Groundwater Management Act related to the drought?

Not directly. Sustainable groundwater management, much like management of surface water resources, is the result of a long-term vision and commitment by one or more water users or communities. That said, now that California has faced several consecutive years of drought, the need to manage groundwater is more relevant than ever. Some of our groundwater basins have reached an all-time historic low. Creating a framework for State oversight ensures a standard, consistent process to maintain and actively monitor and manage basins at the local level, and reduce impacts seen from overuse of these basins.

Why was the Sustainable Groundwater Management Act established?

Over the years, California water managers, individual well owners and communities that rely on groundwater resources have observed a rapid decline of water levels in some aquifers.[14] Impacts and issues related to the decline are apparent. In some areas, groundwater pumping has exacerbated land subsidence, which also threatens infrastructure such as roads, canals and bridges. Drought and low water levels have also impacted water quality and quantity of private well users.

In January 2014, the Governor's Office identified groundwater management as one of ten key action steps in its California Water Action Plan. The Sustainable Groundwater Management Act, signed into law months later, follows up on that action, giving local agencies the ability to manage their respective basins following statewide guidelines.

What does "Sustainable Groundwater Management" mean?

"Sustainable groundwater management" is defined as the management and use of groundwater in a manner that can be maintained long-term without causing undesirable results in six areas:

[14] An **aquifer** is an underground layer of water-bearing permeable rock, rock fractures or unconsolidated materials (gravel, sand or silt) from which groundwater can be extracted using a water well.

- Chronic lowering of groundwater levels (not including overdraft if a basin is otherwise managed)
- Significant and unreasonable reduction in groundwater storage
- Significant and unreasonable sea water intrusion
- Significant and unreasonable degraded water quality, including migration of contaminant plumes that impair water supplies
- Significant and unreasonable land subsidence that substantially interferes with surface land uses
- Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of surface water

Who is required to comply with the Sustainable Groundwater Management Act?

The Act requires the formation of Groundwater Sustainability Agencies to comply with the Act within basins identified by the State as medium or high priority. Certain parts of the state, notably those for which groundwater use is under the jurisdiction of a court adjudication, are currently exempted from most of SGMA's mandates. Entities eligible to serve as a Groundwater Sustainability Agency are defined by the Act as a local public agency that has water supply, water management or land use management responsibilities within a groundwater basin (California Water Code Section 10721(n)). If no local agency steps forward, the county is the default agency. The statutory deadline to form a Groundwater Sustainability Agency was June 30, 2017.

What is a Groundwater Sustainability Agency?

A groundwater sustainability agency is one or more local governmental agencies that implement the provisions of the Sustainable Groundwater Management Act. A local agency is defined as one that has water supply, water management or land management authority. Groundwater Sustainability Agencies assess the conditions of their local groundwater basins, adopt locally-based sustainable management plans to create drought resiliency and improve coordination between land use and groundwater planning.

Will the Sustainable Groundwater Management Act affect existing water and property rights?

The Sustainable Groundwater Management Act does not change existing groundwater or property rights. Groundwater rights will continue to be subject to regulation under article 10, section 2, of the California Constitution.

What authority will Groundwater Sustainability Agencies have?

Local Groundwater Sustainability Agencies can choose to implement as many of the legal powers as they deem necessary for management of their basin. The Sustainable Groundwater Management Act as currently enacted empowers all Groundwater Sustainability Agencies to:

- Adopt rules, regulations, ordinances and resolutions to implement the Act
- Monitor compliance and enforcement
- Require registration of groundwater wells
- Require appropriate measurement devices and reporting of extractions
- Investigate, appropriate and acquire surface water rights, groundwater and groundwater rights into the Groundwater Sustainability Agency.
- Identify projects and management actions to achieve sustainability in the basin by 2040.
- Acquire or augment local water supplies to enhance the sustainability of the groundwater basin
- Propose and collect fees
- Adopt and fund a Groundwater Sustainability Plan according to existing laws

Groundwater Sustainability Agencies may use a number of management tools to achieve sustainability goals. The specific tools and methods a Groundwater Sustainability Agency will use to achieve sustainability will be determined in discussion with stakeholders and identified in the Groundwater Sustainability Plan.

It is also important to note that the Sustainable Groundwater Management Act requires local agencies to acknowledge Groundwater Sustainability Plans when a legislative body is adopting or substantially amending its General Plan. General Plans must accurately reflect the information in the Groundwater Sustainability Plan with regards to available water supplies.

Is the State trying to take over control of groundwater?

The State legislature, in passage of SGMA, communicated its intent that sustainable groundwater management is best left with local government agencies with expertise and responsibilities over water supplies. To help foster local control, the Act provided local agencies with tools and authorities they previously lacked to manage groundwater resources sustainably. However, the legislation also included a series of triggers that would result in intervention by the State Water Resources Control Board in the event a subbasin failed to meet requirements of the Act. This State intervention occurs only if local efforts, including county efforts, to form a Groundwater Sustainability Agency or prepare a viable Groundwater Sustainability Plan are not successful. Where intervention occurs, the State can impose fees and groundwater pumping restrictions that can remain in place until local efforts are able to sustainably manage groundwater resources. The Mid-Kaweah Groundwater Sustainability Agency partners are committed to maintaining local control and managing groundwater resources on behalf of agricultural water users, rural and urban communities and the environment. Mid-Kaweah Groundwater Sustainability Agency partners are committed to maintaining local control and managing groundwater resources on behalf of agricultural water users, rural and urban communities and the environment.

Would the Kaweah Subbasin be sustainable had the legislature and the courts not re-allocated surface water supplies used for farms, cities and businesses to the environment?

The re-assignment of surface water supplies to environmental purposes by the courts and legislature is one of several factors contributing to chronic groundwater overdraft in the Kaweah Subbasin. Without a doubt, this re-allocation away from direct or in-lieu groundwater recharge has exacerbated the overdraft problems and challenged the ability of local agencies to sustainably manage groundwater resources. However, growth in the regional economy and population, coupled with changes agricultural practices, are also substantial contributors to groundwater overdraft and cannot be ignored. Sustainability requires striking a balance among all water users – agriculture, municipal, industrial and environmental – that is reasonable, supportable and valid.

If Groundwater Sustainability Agencies are locally controlled, what is the State's role in this effort?

The California Department of Water Resources is the agency responsible for oversight of the formation of Groundwater Sustainability Agencies and Groundwater Sustainability Plans, but the State Water Resources Control Board (Water Board) and California Water Commission also have roles in the implementation of the Sustainable Groundwater Management Act. The Department of Water Resources has a list of regulations, objectives and actions formulated to assist local agencies and Groundwater Sustainability Agencies with the preparation and implementation of Groundwater Sustainability Plans. Under law, all regulations adopted by the Department of Water Resources become effective only upon approval by the California Water Commission. Under a limited set of circumstances, the

Water Board may intervene if local efforts to form a Groundwater Sustainability Agency or prepare a viable Groundwater Sustainability Plan are not successful.

How will adjacent Groundwater Sustainability Agencies be handled?

The regulations require that all Groundwater Sustainability Agencies coordinate with adjacent Groundwater Sustainability Agencies in a given basin. This coordination will occur through additional discussions with neighboring agencies as Groundwater Sustainability Agencies are formally developed, and the Groundwater Sustainability Plans will describe how the adjacent Groundwater Sustainability Agencies will work together to achieve groundwater sustainability for the entire basin. The State requires that multiple Agencies within a basin or subbasin each sign on to a coordination agreement which binds their respective management activities together in a cohesive fashion.

A.2 KAWEAH SUBBASIN

When was the Mid-Kaweah Groundwater Sustainability Agency formed?

The Mid-Kaweah Groundwater Sustainability Agency is a joint powers authority (JPA) of local public agencies and was established on September 14, 2015. The founding members of the JPA – the cities of Tulare and Visalia, and Tulare Irrigation District – notified DWR of the GSAs formation on September 16, 2015, becoming one of the first GSAs established in California under SGMA.

How many GSAs are in the Kaweah Subbasin?

DWR recognizes three GSA in the Kaweah Subbasin. They include: East Kaweah GSA, Greater Kaweah GSA and Mid-Kaweah GSA.

What is the health of the Kaweah Subbasin?

The Kaweah Subbasin (DWR Bulletin 118) has been identified by the California Department of Water Resources as being in critical over-draft and a high priority as part of the CASGEM Groundwater Basin Prioritization. The region has extensive history of groundwater overdraft dating back to the early 1900s. Construction of federal Central Valley Project in the 1940s and 1950s served to stabilize groundwater conditions in the region through delivery of surface water from the San Joaquin River watershed. Likewise, importation of State Water Project supplies to interconnected areas westerly of the Kaweah Subbasin have aided in sustaining groundwater levels. However, a variety of factors have led to chronic long-term overdraft in the region, including competition for available surface water supplies, population growth, and expansion of farming in areas fully or partially dependent on groundwater.

What is the health of the Mid-Kaweah GSA portion of Subbasin?

Groundwater supplies within the Mid-Kaweah GSA are comparatively better than adjoining areas within and adjacent to its boundaries. This health primarily stems from the surface water rights and contracts held by Tulare Irrigation District, and its groundwater recharge capabilities that have assisted the cities of Tulare and Visalia to leverage their existing resources for improved groundwater management. California Water Service Company, a for-profit water purveyor to residential and commercial customers in Visalia, has also contributed to improved groundwater conditions through purchase of surface water supplies from willing sellers. The Mid-Kaweah GSA portion of the subbasin,

however, continues to experience groundwater overdraft conditions that lead to many of the undesirable results that SGMA was intended to resolve.

What is California Water Service Company's involvement in Mid-Kaweah GSA?

California Water Company is a for-profit water utility regulated by the California Public Utilities Commission (CPUC). Water utilities subject to CPUC regulations are ineligible to independently function as a GSA as they are not a local public agency as defined in California Water Code §10721(n). These utilities can serve in a limited capacity on a GSA Board of Directors; however, this must be accomplished through a memorandum of understanding or similar agreement. While the California Water Company has not been afforded a voting membership on the agency's Board of Directors, its staff are active participants on agency committees including the Advisory Committee and the Technical Advisory Committee.

How are groundwater users involved?

During passage of the Sustainable Groundwater Management Act, the legislature placed a high value on active involvement by groundwater users in planning for and preserving our shared natural resource. Among the requirements in the Sustainable Groundwater Management Act is development of a list of interested parties (Water Code §10723.2) and an explanation of how their interests will be considered in development and operation of the Groundwater Sustainability Agency and the development and implementation of the agency's sustainability plan. The Mid-Kaweah Groundwater Sustainability Agency team desires to understand and utilize ideas from groundwater user stakeholders throughout development and implementation of a Groundwater Sustainability Plan for the region. Interested Parties are encouraged to sign up for notifications from the Mid-Kaweah GSA website, and attend and participate in Board and Advisory Committee meetings.

Will stakeholders or the public have the opportunity to weigh in on the Groundwater Sustainability Plan development?

Stakeholders are encouraged to sign up for notifications by the Mid-Kaweah GSA on its website (www.midkaweah.org). The primary venues for stakeholders to get involved in the GSP development process are regularly scheduled Mid-Kaweah GSA Board and Advisory Committee meetings. The agency also anticipates conducting briefings to member agency boards and commissions, presentations to civic and non-profit organizations, and various public meetings. The schedule for Board and Advisory Committees meetings is available on the website.

What is the governance structure for the Mid-Kaweah GSA? How will the agencies work together to run it?

The Mid-Kaweah GSA is governed by a six-member Board of Directors, with two members from each of the founding members. Directors are elected officials who have been appointed to serve by their respective boards or councils. The equal representation on the Board is intended to foster active collaboration and cooperation towards meeting the mutual issues associated with SGMA. The JPA that formed the agency stipulates voting thresholds by issue.

A.3 GROUNDWATER SUSTAINABILITY PLAN

What is a Groundwater Sustainability Plan?

A Groundwater Sustainability Plan is the plan developed by a Groundwater Sustainability Agency that provides for sustainably managed groundwater that meets the requirements of the State's new groundwater laws. Groundwater Sustainability Agencies in high- and medium-priority groundwater basins are required to submit a Groundwater Sustainability Plan to the California Department of Water Resources. The plan must outline how the Groundwater Sustainability Agency will implement, manage and measure specific actions for the health and viability of the basins. The California Department of Water Resources will evaluate the Groundwater Sustainability Plan and provide the Groundwater Sustainability Agency with an assessment of the plan and any necessary recommendations within two years following its establishment.

When does a Groundwater Sustainability Plan have to be established?

Subbasins deemed to be in critical overdraft (which includes the Kaweah Subbasin) are required to complete and begin implementation of their Groundwater Sustainability Plan by January 31, 2020. Subbasin) are required to complete and begin implementation of their Groundwater Sustainability Plan by January 31, 2020.

What will the process and timing be for development of the GSP?

The Mid-Kaweah GSA is currently working on developing its GSP. The agency projects release of a Public Draft GSP in June 2019, for a public review period of up to 90-days and include a public meeting to receive comments. The GSP will be revised to address public and stakeholder comments. The Final GSP will be adopted at a public hearing, tentatively scheduled for December 2019. All GSPs in the Kaweah Subbasin are due no later than January 31, 2020.

What happens after the GSP is completed?

Following submittal and acceptance by DWR, the GSAs in the Kaweah Subbasin GSAs will begin implementation. Each year, the agencies are required to submit a combined Groundwater Sustainability Plan Annual Report to the State (Water Code §10728). Pursuant to § 356.4 the agencies are required to evaluate their GSP least every five years and whenever the Plan is amended, and provide a written assessment to the Department. § 356.4 the agencies are required to evaluate their GSP least every five years and whenever the Plan is amended, and provide a written assessment to the Department.

Are GSPs required for new or amended County or City General Plan?

Prior to adopting a new or amended General Plan, Government Code §65350.5 requires each planning agency to review any applicable groundwater sustainability plan, groundwater management plan, adjudicated water right or interim plan by the State Water Resources Control Board (commencing with §10735). In addition to this, the GSA (per §653352.5) is required to provide the planning agency the current GSP (or alternative); judgment, decree, agreement or interim plan, if relevant; and a report addressing the anticipated effect on implementation of the GSP by the proposed General Plan update or amendment.

Appendix B CASGEM GROUNDWATER PRIORITIZATION

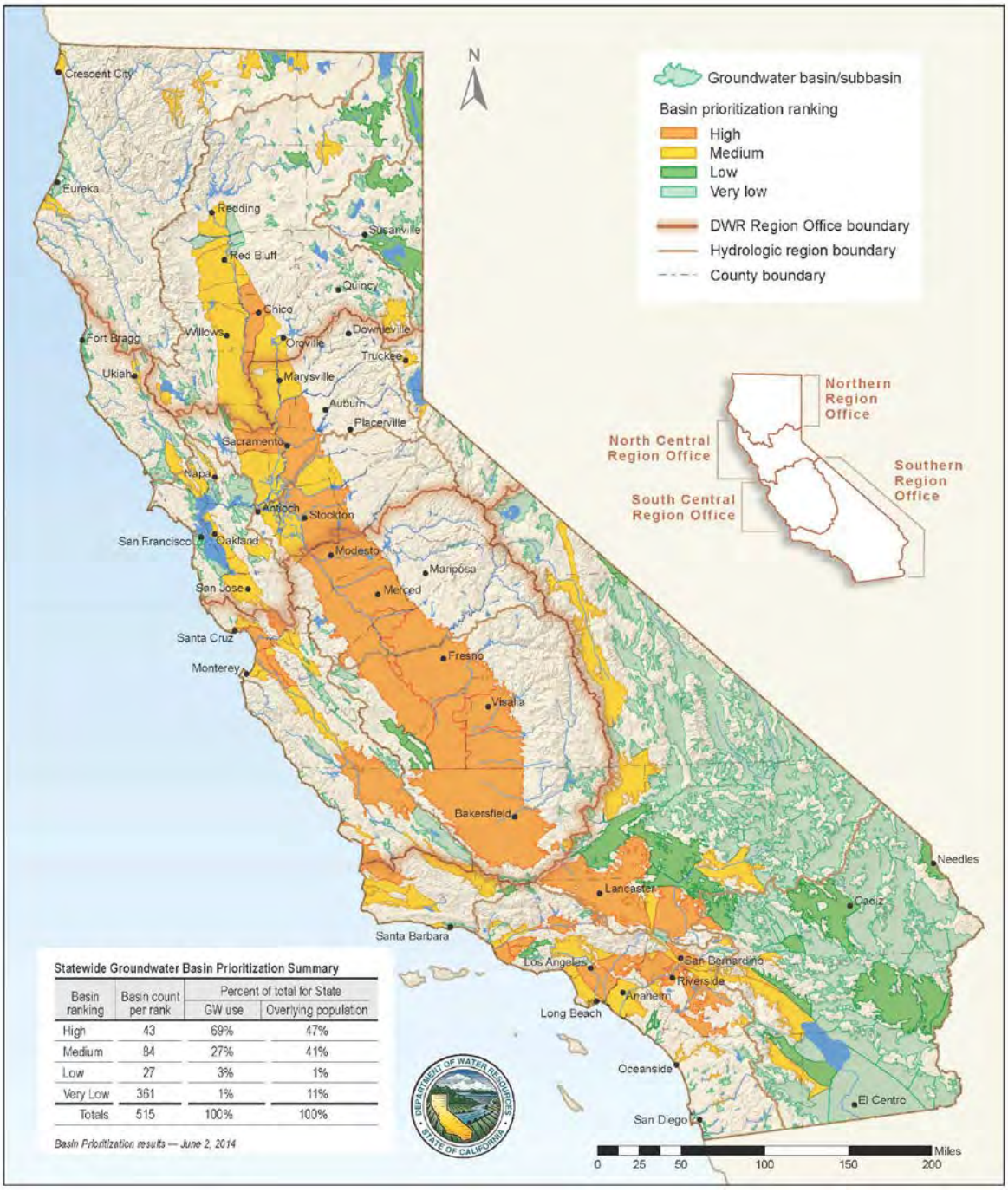
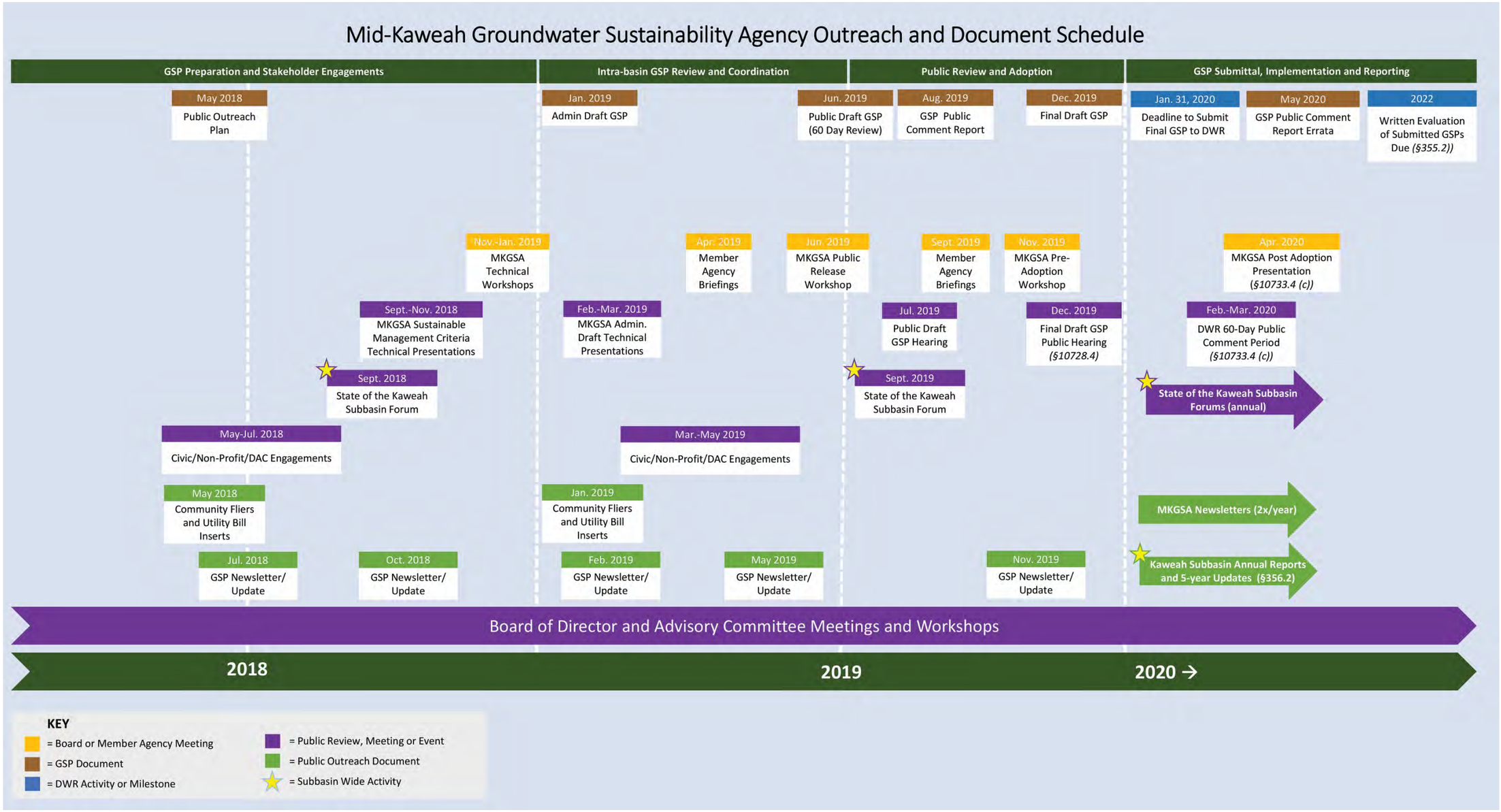


Figure 3 CASGEM Groundwater Basin Prioritization

Appendix C MID-KAWEAH GSA OUTREACH AND COORDINATION SCHEDULE


Mid-Kaweah Groundwater Sustainability Agency Outreach and Document Schedule
GSP Preparation and Stakeholder Engagements
Intra-basin GSP Review and Coordination
Public Review and Adoption
GSP Submittal, Implementation and Reporting
May 2018
Public Outreach Plan
Jan. 2019
Admin Draft GSP
Jun. 2019
Public Draft GSP (60 Day Review)
Aug. 2019
GSP Public Comment Report
Dec. 2019
Final Draft GSP
Jan. 31, 2020
Deadline to Submit Final GSP to DWR
May 2020
GSP Public Comment Report Errata
2022
Written Evaluation of Submitted GSPs Due (§355.2))
Nov.-Jan. 2019
MKGSA Technical Workshops
Apr. 2019
Member Agency Briefings
Jun. 2019
MKGSA Public Release Workshop
Sept. 2019
Member Agency Briefings
Nov. 2019
MKGSA Pre-Adoption Workshop
Apr. 2020
MKGSA Post Adoption Presentation (§10733.4 (c))
Sept.-Nov. 2018
MKGSA Sustainable Management Criteria Technical Presentations
Feb.-Mar. 2019
MKGSA Admin. Draft Technical Presentations
Jul. 2019
Public Draft GSP Hearing
Dec. 2019
Final Draft GSP Public Hearing (§10728.4)
Feb.-Mar. 2020
DWR 60-Day Public Comment Period (§10733.4 (c))
Sept. 2018
State of the Kaweah Subbasin Forum
Sept. 2019
State of the Kaweah Subbasin Forum
State of the Kaweah Subbasin Forums (annual)
May-Jul. 2018
Civic/Non-Profit/DAC Engagements
Mar.-May 2019
Civic/Non-Profit/DAC Engagements
May 2018
Community Fliers and Utility Bill Inserts
Jan. 2019
Community Fliers and Utility Bill Inserts
MKGSA Newsletters (2x/year)
Jul. 2018
GSP Newsletter/ Update
Oct. 2018
GSP Newsletter/ Update
Feb. 2019
GSP Newsletter/ Update
May 2019
GSP Newsletter/ Update
Nov. 2019
GSP Newsletter/ Update
Kaweah Subbasin Annual Reports and 5-year Updates (§356.2)
Board of Director and Advisory Committee Meetings and Workshops
2018
2019
2020 →
KEY
= Board or Member Agency Meeting
= GSP Document
= DWR Activity or Milestone
= Public Review, Meeting or Event
= Public Outreach Document
= Subbasin Wide Activity

Appendix C Mid-Kaweah GSA Outreach and Coordination Schedule

Appendix D COMMUNICATION AND ENGAGEMENT ACTIVITIES DATABASE

Organization Name	Location	Type	WC 10723.1 Category	Frequency	Contact Information	Notes
Agricultural Well Owners	TID	Agriculture	Agricultural Well Owners	N/A		
Tulare County Farm Bureau	Tulare	Agriculture	Citizens Groups	N/A	E: tcfb@tulcofb.org Web: http://www.tulcofb.org/	
Downtown Visalia Kiwanis Club	Visalia	Civic Organization	Citizens Groups	Weekly	E: kiwanisvisalia@gmail.com Web: https://www.facebook.com/visaliakiwanis/	
Rotary Club of Visalia Breakfast	Visalia	Civic Organization	Citizens Groups	Weekly	Web: http://www.vbrotary.org/ T: 559-802-6755	
Sequoia-Visalis Kiwanis Club	Visalia	Civic Organization	Citizens Groups	Weekly - Wednesday mornings	Debra Hill, President E: info@sequoia-visaliakiwanis.org Web: http://www.sequoia-visaliakiwanis.com/about.html	
Tulare International Kiwanis Club	Tulare	Civic Organization	Citizens Groups	Weekly	Web: http://www.tularenoonkiwanis.org/	
Tulare Morning Kiwanis	Tulare	Civic Organization	Citizens Groups	Weekly - Tuesdays at 6:30 am	E: morningkiwanis@gmail.com	
Visalia Club Rotary Club	Visalia	Civic Organization	Citizens Groups	Weekly - Thursdays	Web: http://www.visaliarotaryclub.com/ T: 559-967-1357	
Visalia County Center Rotary Club	Visalia	Civic Organization	Citizens Groups	Weekly - Tuesdays at noon	Deborah Volosin, President Web: https://www.vccrotary.org/ E: membership@vccrotary.org	
Visalia Latino Rotary	Visalia	Civic Organization	Citizens Groups	Weekly - Wednesdays	Lina Contreras, President E: lina.contreras@sbcglobal.net Web: https://www.visalialatinorotary.org/	
Visalia Sunset Rotary	Visalia	Civic Organization	Citizens Groups	Weekly	Barbara Hood, President Web: http://www.visaliasunsetrotary.org/ E: [Use contact form on website]	

West Visalia Kiwanis Club	Visalia	Civic Organization	Citizens Groups	Weekly - Thursdays at noon	Buz Southard, 2017 Club President E: buzdonna@sbcglobal.net Web: http://www.westvisaliakiwanis.org/	
Community Water Center	Tulare County	DAC Advocate	Citizens Groups	N/A	Adriana Renteria, Regional Water Management Coordinator E: adriana.renteria@communitywatercenter.org T: (559) 733-0219 Web: https://www.communitywatercenter.org/	Primarily focuses on northern Tulare County.
Leadership Counsel for Justice & Accountability	Tulare County	DAC Advocate	Citizens Groups	NA	www.leadershipcounsel.org	Non-Profit Outreach Partner
Self-Help Enterprises	Tulare County	DAC Advocate	Citizens Groups	N/A	Web: https://www.selfhelpenterprises.org/	Non-Profit Outreach Partner
Building Industry Association	Visalia	Other - Building Industry	Citizens Groups	N/A	Web: https://www.biatkc.org/ E: build@biatkc.com T: 1-559-625-5447	Represents builders, developers, subcontractors and associated businesses in Tulare and Kings Counties
Saputo Dairy Foods USA	Tulare	Industrial	Commercial and Industrial Self-Supplied	N/A	T: (559) 686-2876 [General phone number]	
Land O Lakes	Tulare	Industrial	Commercial and Industrial Self-Supplied			
Kraft Foods	Tulare	Industrial	Commercial and Industrial Self-Supplied			
County Manor Mobile Home Community	Visalia	Disadvantaged Community	Disadvantaged Community	N/A	T: 559-732-8144 E: countrymanor@towermgmt.com Web: http://countrymanormhc.com/community.htm 820 S. Chinowth Street , Visalia, California 93277	-
East Tulare Hamlet	GKGSA	Disadvantaged Community	Disadvantaged Community			Served by CalWater's Tulco System. System has one well. CalWater and the City of Tulare are in the process of linking to the system to provide emergency water supply if the last well breaks down.
Lone Oak Tract	Tulare	Disadvantaged Community	Disadvantaged Community	N/A	Denise England, County of Tulare, Water Resources Program Director E: DEngland@co.tulare.ca.us T: 559-636-5005	From Tulare County General Plan "The Lone Oak Tract, located west of the city limit, is a disadvantaged community that includes approximately 27 housing units and 139 residents (as of the 2010 Census). " Relies on City of Tulare's water distribution system for water service.

Matheny Tract	Tulare	Disadvantaged Community	Disadvantaged Community	N/A	Reinelda Palma, Community Activist Denise England, County of Tulare, Water Resources Program Director E: DEngland@co.tulare.ca.us T: 559-636-5005	From Tulare County General Plan: "The Matheny Tract, located south of the city limit between Pratt and I Streets, is considered a disadvantaged community, with approximately 349 housing units and a population of 1,225 people (as of the 2010 Census). " Previously served by Pratt Mutual Water Company, now consolidated with City of Tulare. Served by City of Tulare since 2016. City worked with SHE.
Mooney Grove Manor Mobile Home Park	Visalia	Disadvantaged Community	Disadvantaged Community	N/A	E: mgoffice559@gmail.com T: (559) 688-2681	Different well than Mooney Grove Regional Park?
Mooney Grove Park	Visalia	Disadvantaged Community	Disadvantaged Community	N/A	Neil Pilegard, County of Tulare, Parks and Recreation Manager	Tulare County Park https://tularelakebasin.com/alliance/index.cfm/disadvantaged-communities-dacs/water-system-search/water-system-details/?GISWSID=5400951
Mountain View Mobile Home Park	Tulare	Disadvantaged Community	Disadvantaged Community	N/A		
Okieville Highland Acres Mutual Water Company	Tulare	Disadvantaged Community	Disadvantaged Community			
Royal Oaks Mobile Home Park	Visalia	Disadvantaged Community	Disadvantaged Community	N/A	T: (855) 585-3268	
Soults Track	Tulare	Disadvantaged Community	Disadvantaged Community	N/A	Denise England, County of Tulare, Water Resources Program DirectorE: DEngland@co.tulare.ca.usT: 559-636-5005	From Tulare County General Plan: "The Soults Tract, located west of the city limit, is a disadvantaged community that includes approximately 20 housing units and 125 residents (as of the 2010 Census)."Previously served by Soults Mutual Water Company. Connected to the City of Tulare's water system in 2008. However, the system suffered water loss due to leakage or backflow. Soults Mutal Water Company partnered with SHE to secure State funding to resolve the connection issues. Also previously experienced Nitrate issues.
The Lakes Mobile Home Park	?	Disadvantaged Community	Disadvantaged Community	N/A		
Waukena Hamlet	TID	Disadvantaged Community	Disadvantaged Community			Defined as a SDAC in the Waukena Hamlet Plan 2017, Strategic Growth Council. Domestic wells and sewer.
Westlake Village Mobile Home Park	Visalia	Disadvantaged Community	Disadvantaged Community	N/A	E: popkinfamilytrust@gmail.com T: (559) 734-2811 (Visalia location) E: (213) 383-3222 (Main Office Location) Web: http://westlakemobilepark.com/	
Willow Glen Mobile Estates	Visalia	Disadvantaged Community	Disadvantaged Community	N/A	[DOUBLE-CHECK CONTACT INFO] T: (559) 732-1541 225 N Akers St, Visalia, CA 93291	

Buena Vista School	Tulare	Rural School	Domestic Well Owner	N/A	Carole Mederos, Superintendent/Principal E: cmederos@buenavistaeagles.org T: 559-686-2015 Web: https://buenavistaeagles.org/	
Liberty School	Visalia	Rural School	Domestic Well Owner	N/A	Keri Montoya, Superintendent/Principal Address: 11535 Avenue 264, Visalia, CA 93277 Phone: (559) 686-1675 Web: https://les-libertyesd-ca.schoolloop.com/	School District: Liberty School District
Oak Valley School	Tulare	Rural School	Domestic Well Owner	N/A	Fernie Marroquin, Superintendent E: f.marroquin@oakvalleyschool.org T: (559) 688-2908 24500 Rd 68, Tulare, CA 93274	School District: Oak Valley Union Elementary School District
Palo Verde School	Visalia	Rural School	Domestic Well Owner	N/A	Phil Anderson, Superintendent T: (559) 688-0648 Web: https://pvuesd-ca.schoolloop.com/ 9637 Ave 196, Tulare, CA 93274	School District: Palo Verde Elementary School District
Sundale School District	Tulare	Rural School	Domestic Well Owner	N/A	Terri Rufert, Superintendent E: terri.rufert@sundale.org T: (559) 688-7451 Web: https://suesd-ca.schoolloop.com/	
Sycamore Valley Academy	Visalia	Rural School	Domestic Well Owner	N/A	6832 Ave. 280 • Visalia, CA 93277 http://www.sycamorevalleyacademy.org/	Formerly Packwood Elementary School
Waukena Joint Union School District	Tulare	Rural School	Domestic Well Owner	N/A	Terri Lancaster, Superintendent/Principal E: terril@waukena.k12.ca.us T: (559) 686-3328 Gloria Solis, Secretary T: (559) 686-3328 Web: http://www.tcoe.org/districts/waukena.shtm	
Homestead Well Owners	Tulare County	De Minimus User	Domestic Well Owners	N/A		
City of Tulare, Planning Department	Tulare County	Land Use Planning Agency	Governmental and Land Use Agencies	N/A	Josh McDonnell, AICP Community & Economic Development Director T: 559-684-4210 E: jmcdonnell@tulare.ca.gov	

City of Visalia, Planning Department	Tulare County	Land Use Planning Agency	Governmental and Land Use Agencies	N/A	Paul Vernal, City of Visalia, City Planner T: 559-713-4025 E: Paul.Bernal@visalia.city	
County of Tulare, Planning Department	Tulare County	Land Use Planning Agency	Governmental and Land Use Agencies	N/A	Reed Schneke, County of Tulare, Resource Management Agency, Director E: RSchenke@co.tulare.ca.us Denise England, County of Tulare, Water Resources Program Director E: DEngland@co.tulare.ca.us T: 559-636-5005	
Tulare County Local Agency Formation Commission	Tulare County	Land Use Planning Agency	Governmental and Land Use Agencies	N/A	Ben Guiliani, Executive Officer E: bGiuliani@tularecog.org T: (559) 623-0450	
Kaweah Delta Water Conservation District	Farmersville	Water District, Adjacent Subbasin	Groundwater Monitoring /Reporting Agency	Monthly - First Tuesday of each month	Web: http://www.kdwcd.com/index.html	
Bedel Mutual Water Co.	Visalia	Municipal and Industrial	Private Water Purveyor	N/A	Danny Thron; 2133 E WESTCOTT AVE VISALIA, CA 93292 Gary and Jeanne Orr; 932 S Pinkham St, Visalia, CA 93292-1582	Serves 155
California Water Service Co.	Visalia	Municipal and Industrial	Private Water Purveyor	N/A	Tammy Kelly, Visalia District Manager T: (559) 624-1620	Tamara Kelly also serves on the Tulare County Water Commission
Tulare Irrigation District	Tulare County	Agriculture	Public Water Purveyor	N/A		
City of Tulare, Water Department	Tulare	Municipal and Industrial	Public Water Purveyor	N/A	Tim Doyle, Water and Wastewater Collections Utility Manager T: (559) 684-4324 E: tdoyle@tulare.ca.gov 3981 S. K Street, Tulare, CA 93274	
Corcoran Irrigation District	Corcoran	Water District, Adjacent Subbasin	Public Water Purveyor	N/A	Gene Kilgore, General ManagerE: gkilgore@corcoranid.comT: (559) 992-5165	2015 AWMP prepared by Summers Engineering Inc.

Kings County Water District	Kings County	Water District, Adjacent Subbasin	Public Water Purveyor	N/A	Dennis Mills, General Manager E: kcwdh2o@sbcglobal.net T: T: 559-584-6412 200 North Campus Drive, Hanford, CA 93230
Lakeside Water District		Water District, Adjacent Subbasin	Public Water Purveyor	N/A	
Santa Rosa Rancheria Tachi-Yokut Tribe	Leemore	Tribe	Tribal Government and Communities	N/A	Noah Ignacio, Tachi Yokut Environmental Director E: Nignacio@tachi-yokut-nsn.gov T: 559-924-1278 Jason Sisco, Tachi Yokut Environmental Technician E: JSisco@tachi-yokut-nsn.gov T: 559-924-1278 Web: https://www.tachi-yokut-nsn.gov/ T: (559) 924-1278
Waksache Tribe		Tribe	Tribal Government and Communities	N/A	[Can't find any information. Check spelling?]

Appendix D Communication and Engagement Activities Database

Appendix 1E Kaweah Subbasin Memorandum of Understanding

MEMORANDUM OF UNDERSTANDING
FOR COOPERATION AND COORDINATION
OF THE KAWEAH SUBBASIN

THIS MEMORANDUM OF UNDERSTANDING ("Coordination MOU") is entered into this 1st day of November, 2017, by and between the Mid-Kaweah Groundwater Sustainability Agency ("MKGSA"), Greater Kaweah Groundwater Sustainability Agency ("GKGSA"), and East Kaweah Groundwater Sustainability Agency ("EKGSA") (individually also referred to as "Party" or "GSA" and collectively referred to as "Parties").

RECITALS

WHEREAS, the Parties are all located within the Tulare Lake Hydrologic Region, San Joaquin Valley Groundwater Basin, Kaweah Subbasin, a groundwater Subbasin recognized by the California Department of Water Resources ("DWR") Bulletin 118 (2003) as Groundwater Basin Number 5-22.11;

WHEREAS, the Sustainable Groundwater Management Act ("SGMA") requires Groundwater Sustainability Agencies to develop and implement Groundwater Sustainability Plans ("GSP") to achieve certain sustainability goals;

WHEREAS, SGMA allows local agencies or a combination of local agencies overlying a groundwater basin to serve as a GSA to develop and implement one or more GSPs;

WHEREAS, pursuant to Water Code §10727 a GSP may be any of the following: (1) A single GSP covering the entire basin developed and implemented by one GSA; (2) A single GSP covering the entire basin developed and implemented by multiple GSAs; or (3) Multiple GSPs implemented by multiple GSAs that are subject to a single Coordination Agreement that covers the entire basin.

WHEREAS, pursuant to Water Code §10727.6 and Code of Regulations §357.4, a Coordination Agreement must be prepared if multiple GSPs will be implemented within a basin which requires the Parties to ensure that the GSPs utilize the same data and methodologies within the basin for the following items: (a) groundwater elevation data; (b) groundwater extraction data; (c) surface water supply; (d) total water use; (e) change in groundwater storage; (f) water budget; and (g) sustainable yield;

WHEREAS, the Parties acknowledge that multiple GSAs were formed within the Kaweah Subbasin and the Parties presently intend to develop and implement multiple GSPs;

WHEREAS, the Parties acknowledge that the data analysis and other technical information required for a Coordination Agreement in the Kaweah Subbasin have not been completely collected and the Parties agree that under this Coordination MOU they will cooperate with the data collection and related efforts necessary for preparation of a Coordination Agreement;

WHEREAS, the purpose of this Coordination MOU is to provide for a cooperative means of gathering this information and establishing processes required for the preparation of a Coordination Agreement that will serve to coordinate development and implementation of multiple GSPs by the GSAs, and to provide a framework among the Parties to collectively manage the Kaweah Subbasin in accordance with the requirements of SGMA.

NOW, THEREFORE, it is mutually understood and agreed as follows:

SECTION 1: DEFINITIONS

1.1. "Kaweah Subbasin" or "Kaweah Basin" refers to that Subbasin identified and described in California Department of Water Resources California's Groundwater Bulletin 118 as part of the Tulare Lake Hydrologic Region, San Joaquin Valley Groundwater Basin, Kaweah Subbasin, also identified as Groundwater Basin Number 5-22.11 as delineated in **Exhibit A**.

1.2. "Groundwater Sustainability Plan" or "GSP" means a plan of a GSA proposed or adopted under SGMA as defined in Water Code § 10721(k).

1.3. "Coordination Agreement" shall be the agreement to ensure coordination of the data and methodologies used in all GSPs within the Kaweah Basin for the following assumptions: (a) groundwater elevation data; (b) groundwater extraction data; (c) surface water supply; (d) total water use; (e) change in groundwater storage; (f) water budget; (g) sustainable yield, all as mandated by SGMA and as defined by Water Code § 10727.6 and California Code of Regulations §357.4.

1.4. "SGMA" refers to the Sustainable Groundwater Management Act, codified at Part 2.74 of the California Water Code, and any related statutes and regulations.

SECTION 2: PURPOSE AND GOALS

2.1. The purpose of this Coordination MOU is to:

2.1.1. Set forth the Parties mutual agreement to prepare and enter into a Coordination Agreement.

2.1.2. Provide for the acquisition of the data and analyses required for the Coordination Agreement.

2.1.3. Set forth a structure for communication and recommendation procedures between the Parties for preparation and finalization of a Coordination Agreement.

SECTION 3: CONSULTANT

3.1. *Consultant.* The Parties agree that it will be necessary for certain consultants to be engaged to prepare various data and technical analysis required for the Coordination

Agreement and possibly other Kaweah Subbasin SGMA compliance needs that the Parties deem valuable to handle collectively.

3.2. *Contracting.* The Parties agree that each GSA shall be a party to any agreement with a consultant for required work to be conducted in furtherance of the Coordination Agreement. The Parties agree further that the MKGSA shall be the fiscal administrator for purposes of billing, payment and related contract administration for any agreement the Parties enter into with a consultant for required work to be conducted in furtherance of the Coordination Agreement. The foregoing requirements shall in no way preclude any Party from retaining their own consultants to assist their GSA for purposes of complying with SGMA.

SECTION 4: COST SHARING

4.1. *Cost Sharing of Consultant.* The Parties agree to share equally in costs of any consultants retained for purposes of fulfilling any recommendations under this Agreement. The Parties understand that each individual GSA may retain the same consultants for GSA-specific work, and costs for consultant work only applicable to an individual GSA shall not be shared by the Parties collectively.

4.2. *Grant Funds.* The Parties entered into a Letter of Intent ("LOI"), which is incorporated by reference to this Coordination MOU and attached hereto as **Exhibit B.** The LOI outlines the cost sharing provisions agreed to for purposes of applying for Prop 1 Funding GSPs and other Projects, as well as the division of any potential awards, of which funds will go towards this Coordination Agreement and the Parties individual GSP preparation.

4.3. *Other Costs.* The Parties acknowledge that other costs may arise in the future to fulfill the terms of the Coordination Agreement and this Coordination MOU. All additional costs must be approved by each GSA, in a proportion to be decided at such time.

SECTION 5: COMMITTEES

5.1. *Formation of Joint-Committees.* The Parties agree that communication between the GSAs is necessary to accomplish the goals of this Coordination MOU. To that end, the Parties shall form the following joint-committees: the Management Team Committee and the Subbasin Technical Advisory Committee. All committee meetings shall be subject to the Ralph M. Brown Act, and the committees shall be responsible for determining an appropriate process to ensure compliance.

5.2. *Management Team Committee.*

5.2.1. *Purpose and Responsibilities.* The Management Team shall make recommendations regarding the Coordination Agreement and other Kaweah Subbasin related SGMA related compliance issues to each GSA. The Management Team shall meet as necessary.

5.2.2. *Membership.* Each GSA shall appoint three (3) representatives to the Management Team Committee. Each GSA's respective representatives shall serve at the pleasure of his or her appointing GSA.

5.2.3. Each GSA will be entitled to one (1) vote on the Management Team Committee. The process for declaring such vote must be determined by each respective GSA. Recommendations to the GSAs shall be made by the Management Team Committee only upon the unanimous vote of the Management Team Committee. Should unanimity not be reached, the votes shall be reported to each GSA's Board of Directors for further direction.

5.3. *Subbasin Technical Advisory Committee.*

5.3.1. *Purpose and Responsibilities.* The Subbasin TAC shall make technical recommendations regarding the Coordination Agreement and other Kaweah Subbasin related SGMA compliance issues to the Management Team. The Subbasin TAC shall meet as necessary.

5.3.2. *Membership.* Each GSA shall appoint two (2) representatives to the Subbasin TAC. Each GSA's respective representatives shall serve at the pleasure of his or her appointing GSA.

5.4. *Adoption of Committee Recommendations.* Recommendations approved by unanimous consent of the Management Team Committee shall be reported to each GSA Board, with the process and manner for GSA approval left to the discretion of each GSA. If a GSA fails to approve a recommendation of the Management Team Committee, the Management Team Committee shall reconvene and endeavor to develop an alternative recommendation that may resolve any issues which resulted in the failure to approve. If the Management Team Committee is unable to develop an alternative recommendation, or if a GSA fails to approve the Management Team Committee's alternative recommendation, the Parties shall evaluate whether to enter into the dispute resolution process outlined in Section 5.6.

5.5. *Failure of Management Team Committee to Reach Consensus.* The Parties acknowledge that at times consensus may not be reached amongst the Management Team Committee. All matters in which consensus of the Management Team Committee cannot be reached shall be reported to the GSA Boards of Directors. The Management Team Committee shall reconvene after the unresolved issue has been reported to the GSA Boards of Directors. If the Management Team Committee is still unable to reach consensus, the Parties shall evaluate whether to enter into the dispute resolution process outlined in Section 5.6.

5.6. *Dispute Resolution.* Any GSA may choose to initiate a dispute resolution process by serving written notice to the remaining GSAs of the following: (1) identification of the conflict; (2) description of how the conflict may negatively impact the sustainability of the Kaweah Subbasin; and (3) a proposal for one or more resolutions. The Parties agree to designate representatives to meet and confer with each other within thirty (30) days of

the date such notice is given and said representatives shall then meet within a reasonable time to address all issues identified in the notice. Should the representatives be unable to reach a resolution within ninety (90) days of the written notice, the Parties shall enter into informal mediation in front of a mutually agreeable mediator.

SECTION 6: GENERAL PROVISIONS

6.1. *Term.* This Coordination MOU shall become effective on the date first written above and shall remain so until the Coordination Agreement becomes effective.

6.2. *Third Party Beneficiaries.* This MOU shall not create any right of interest in any non-Party or in any member of the public as a third party beneficiary.

6.3. *Construction and Interpretation.* This MOU was finalized through negotiations of the Parties. Each Party has had a full and fair opportunity to review and revise the terms herein. As a result, the normal rules of construction that any ambiguities are to be interpreted against the draft Party shall not apply in the construction or interpretation of this MOU.

6.4. *Good Faith.* Each Party shall use its best efforts and work in good faith for the expeditious completion of the purposes and goals of this Coordination MOU and the satisfactory performance of its terms.

6.5. *Execution.* This Coordination MOU may be executed in counterparts and the signed counterparts shall constitute a single instrument. The signatories to this Coordination MOU represent that they have the authority to sign this Coordination MOU and to bind the Party for whom they are signing.

6.6. *Amendment.* This MOU may be amended or modified in writing and executed by each of the Parties.

6.7. *Notices.* All notices, requests, demands or other communications required or permitted under this MOU shall be in writing unless provided otherwise in this MOU, and shall be deemed to have been duly given and received on: (i) the date of service if personally served or served by electronic mail or facsimile transmission on the Party to whom notice is to be given at the address(es) below; (ii) on the first day after mailing, if mailed by Federal Express, U.S. Express Mail, or other similar overnight courier service; or (iii) on the third day after mailing if mailed to the Party to whom notice is to be given by first class mail, registered certified as follows:

TO:
Paul Hendrix
Mid-Kaweah Groundwater Sustainability Agency
6826 Avenue 240
Tulare, CA 93274
jph@tulareid.org

TO:
Mark Larsen, Secretary
Greater Kaweah Groundwater Sustainability Agency
2975 N. Farmersville Blvd.
Farmersville, CA 93223
mlarsen@kdwcd.com

TO:
Mike Hagman, Executive Director
East Kaweah Groundwater Sustainability Agency
315 E. Lindmore St.
Lindsay, CA 93247
mhagman@lindmoreid.com

IN WITNESS WHEREOF, the Parties have entered into this MOU as of the date executed below.

MKGSA:

By: _____ 11/9/17
Chairman Steve Nelsen Date

By: _____ 11/13/17
J. Paul Hendrix Date

GKGSA:

By: _____ 12-5-17
Chairman Don Mills Date

By: _____ 12/5/17
Secretary Mark Larsen Date

EKGSA:

By: _____ 12/5/17
Chairman Edward Milanesio Date

By _____ 12/5/17
Secretary Michael D. Hagman Date

Appendix 1F DWR Stakeholder Communication and Engagement Guidance Document

California Department of Water Resources
Sustainable Groundwater Management Program

January 2018

Guidance Document for
Groundwater Sustainability Plan

Stakeholder Communication and Engagement

Guidance Document for Groundwater Sustainability Plan

Stakeholder Communication and Engagement

January 2018

The objective of this guidance document is to provide Groundwater Sustainability Agencies (GSAs) information to aid with stakeholder communication and engagement for Groundwater Sustainability Plan (GSP) preparation. It provides examples and existing resources related to public engagement and effective communication for Sustainable Groundwater Management Act (SGMA) implementation.

Limitation and use of this guidance information

This guidance document is not intended to prescribe specific outreach and communications methods for GSAs or local agencies to follow, but to provide resources and various examples for consideration. This guidance document also summarizes the public notification requirements that GSAs must adhere to in order to comply with SGMA and the GSP regulations. Other than what is required by statute or regulation, GSAs have discretion on how they communicate and engage with the beneficial uses and users of groundwater within a basin.

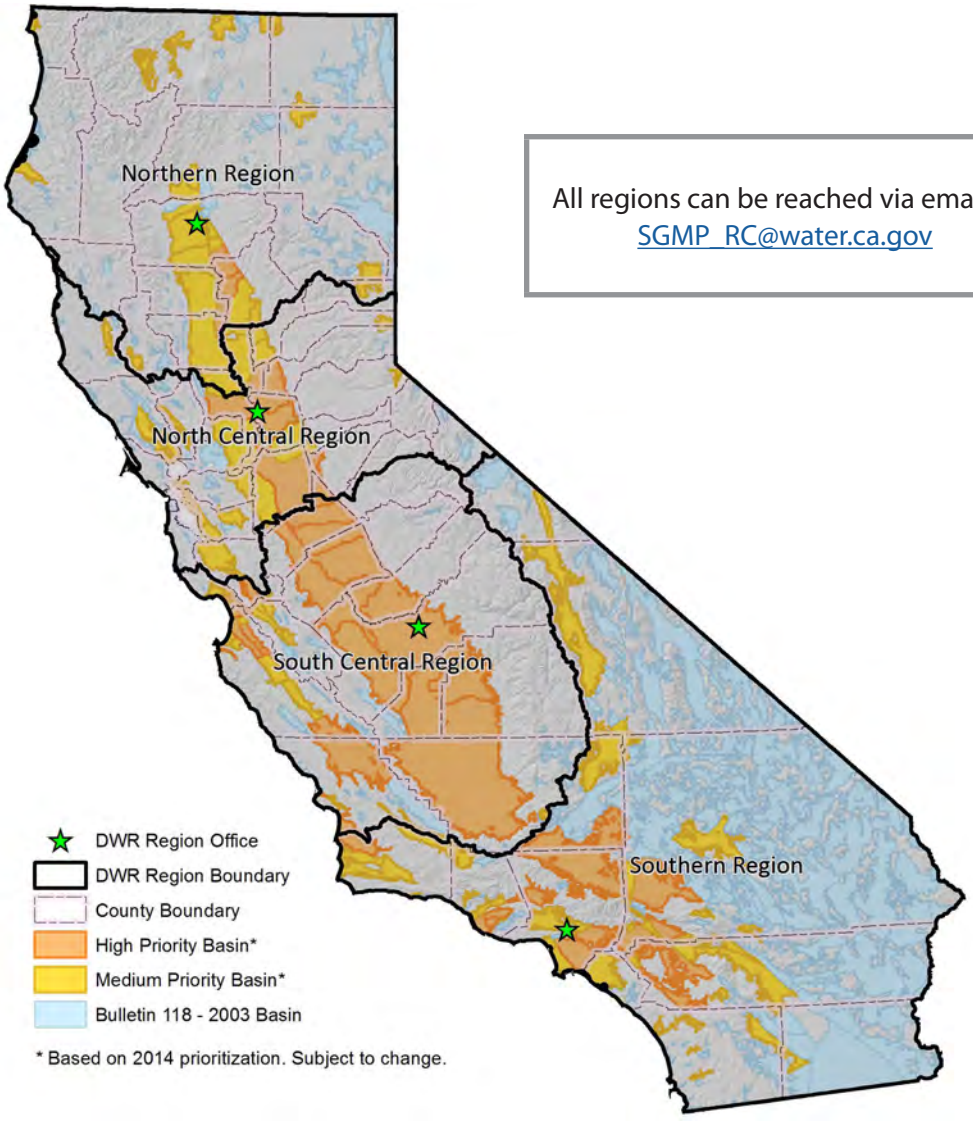
California Department of Water Resources
Sustainable Groundwater Management Program
1416 Ninth Street
P.O. Box 942836
Sacramento, CA 94236-0001
www.water.ca.gov/groundwater

Contents

DWR Region Offices

The California Department of Water Resources (DWR) provides a variety of SGMA-related resources to assist water management groups and the public. Four DWR Region Offices are strategically located across the state.

All high and medium priority basins are assigned a Point of Contact from DWR Region Offices. POCs assist GSAs and stakeholders in the basin to connect with the Sustainable Groundwater Management Program and locate resources for assistance. POC contacts can be found on DWR website https://www.water.ca.gov/Programs/Groundwater-Management/Assistance-and-Engagement.



All regions can be reached via email at SGMP_RC@water.ca.gov

Section 1

Overview

The legislative intent of the historic 2014 Sustainable Groundwater Management Act (SGMA) is for groundwater to be managed sustainably in California's groundwater basins by local public agencies and newly-formed Groundwater Sustainability Agencies (GSAs).

In the basins designated by the Department of Water Resources (DWR) as medium and high priority, local public agencies and GSAs are required to develop and implement groundwater sustainability plans (GSPs) or alternatives to GSPs (Alternatives).

Under the requirements of SGMA, GSAs must consider interests of all beneficial uses and users of groundwater. As a result, the GSP development needs to consider effects to other stakeholder groups in or around the groundwater basin with overlapping interests. These interests include, but are not limited to, holders of overlying groundwater rights (including agriculture users and domestic well owners), public water systems, local land use planning agencies, environmental users, surface water users, federal government, California Native American tribes, and disadvantaged communities (Water Code 10723.2).

Furthermore, the GSP Regulations require that GSAs document in a communication section of the GSP the opportunities for public engagement and active involvement of diverse social, cultural, and economic elements of the population within the basin. Expertise of stakeholders may increase the chance that the GSAs are using best available information and best available science for GSP development.

As GSAs begin to meet to develop a GSP, common questions, such as the ones below, are considered regarding stakeholder communication and engagement.

How can a GSA effectively communicate and engage with multiple and varied stakeholders?

This document helps GSAs determine who the interested parties are (individuals, organizations, local agencies) that they need to engage with and provides guidance to better understand their issues and interests of beneficial uses and users of groundwater.

What are methods and tools for communications and engagement?

This document provides links to methods and tools that can be modified and used to reach and communicate with stakeholders. Not all of the tools will be applicable to all GSAs, but they are presented as examples of effective ways to engage.

How can a GSA conduct meaningful engagement to develop a GSP?

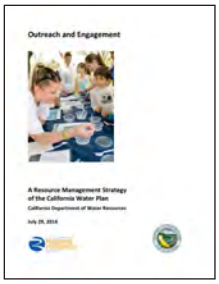
This document gives GSAs a step-by-step example of how to communicate and engage with stakeholder groups. In addition to following the procedure requirements for public notice, meaningful engagement is to integrate stakeholders throughout the development of a GSP and allow active participation in the decision-making process. The benefits of meaningful engagement are improved outcomes, optimized resources, broad support, and reduced conflict.

Published Resources

There are several published documents that either directly or indirectly address best practices or statutory requirements for stakeholder engagement. In addition to the information in this guidance document, these documents may be useful for GSAs while developing a Communication and Engagement (C&E) Plan or other outreach programs.

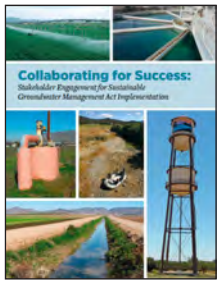
Groundwater Sustainability Plan (GSP) Emergency Regulations Guide, California Department of Water Resources

This guide (published July 2016) includes information to aid with the understanding of the GSP Regulations. It explains the fundamental concepts of the regulations and contains information directly relevant to the regulations through four general phases of development and implementation. https://goo.gl/QYwqT9



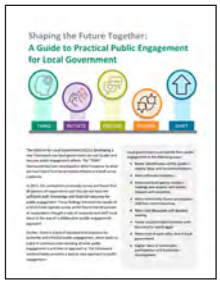
Outreach and Engagement: A Resource Management Strategy for the California Water Plan, California Department of Water Resources

The California Water Plan provides a broad set of resource management strategies (RMSs) that can help local agencies and government (and GSAs) manage their water and related resources. While not specific to SGMA, the Outreach and Engagement RMS directly addresses water management in California and discusses tools and practices by water agencies to facilitate contributions by public individuals and groups toward good water management outcomes. https://goo.gl/YfQQcu



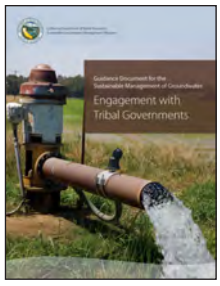
Collaborating for Success: Stakeholder Engagement for Sustainable Groundwater Management Act Implementation, Community Water Center

Prepared by the Community Water Center in July 2015, the intent of this report is to convey the value of stakeholder engagement to sustainable groundwater management. The report outlines the statutory requirements for stakeholder engagement in SGMA, gives examples of best practices and examples of collaborative management from around the state, and provides a recommended roadmap for effective stakeholder engagement drawn specifically for SGMA implementation.
http://www.cleanwateraction.org/files/publications/ca/SGMA_Stakeholder_Engagement_White_Paper.pdf



Inclusive Public Engagement, Institute for Local Government (ILG)

This report offers tip sheets and resources to effectively and successfully plan and implement successful engagement strategies. Whether it's supporting and connecting with local leadership programs as a pipeline to engage specific populations, or partnering with local community-based organizations to reach beyond the small slice of the public that most frequently attends meetings, ILG's inclusive public engagement resources will offer perspective to any planning process.
http://www.ca-ilg.org/inclusive-public-engagement



Engagement with Tribal Governments Guidance Document (Draft), California Department of Water Resources

This document is meant to help local agencies engage with a Tribal government in the planning, financing, and management of a GSA, or with development or implementation of a GSP.

Section 2

About Public Engagement

What is Public Engagement?

As defined by the Center for Advances in Public Engagement:

> ***Public engagement is a process that brings people together to address issues of common importance, to solve shared problems, and to bring about positive social change.***

Effective public engagement invites citizens to get involved in deliberation, dialogue, and action on public issues that they care about. It helps leaders and decision makers better understand the perspectives, opinions, and concerns of citizens and stakeholders.

When done well, public engagement goes far beyond the usual participants to include those members of the community whose voices have traditionally been left out of political and policy debates.

Public Engagement Benefits

- **Helps** people weigh a variety of perspectives and listen to each other's views.
- **Builds** common understanding, manages differences, and establishes direction for moving ahead on tough issues.
- **Builds** trust and improves communication between the public and leaders.
- **Creates** new opportunities for citizens to become involved in public problem solving and decision making.

Build Public Engagement for Regional Sustainability

Many areas have public engagement efforts already in place for other water management efforts such as Integrated Regional Water Management Plans and Groundwater Management Plans. Use these existing stakeholder connections as you begin your SGMA-related communication and engagement efforts. Collectively, all water management plans work with a shared interest toward the ultimate goal of regional sustainability.

Levels of Engagement

It is important that stakeholders understand the role they are invited to play in a public engagement program. This will help provide clarity to the process and help avoid misunderstandings. Stakeholder roles may naturally evolve over the period that they are engaged in a public process, and as transition occurs, it is wise to redefine these roles. When an advisory committee or partnership between public agencies is established, it is helpful to develop a charter or other memo of understanding that describes the roles and responsibilities of all involved.

Figure 1 is a summary of the levels of public engagement that comes from the International Association of Public Participation.

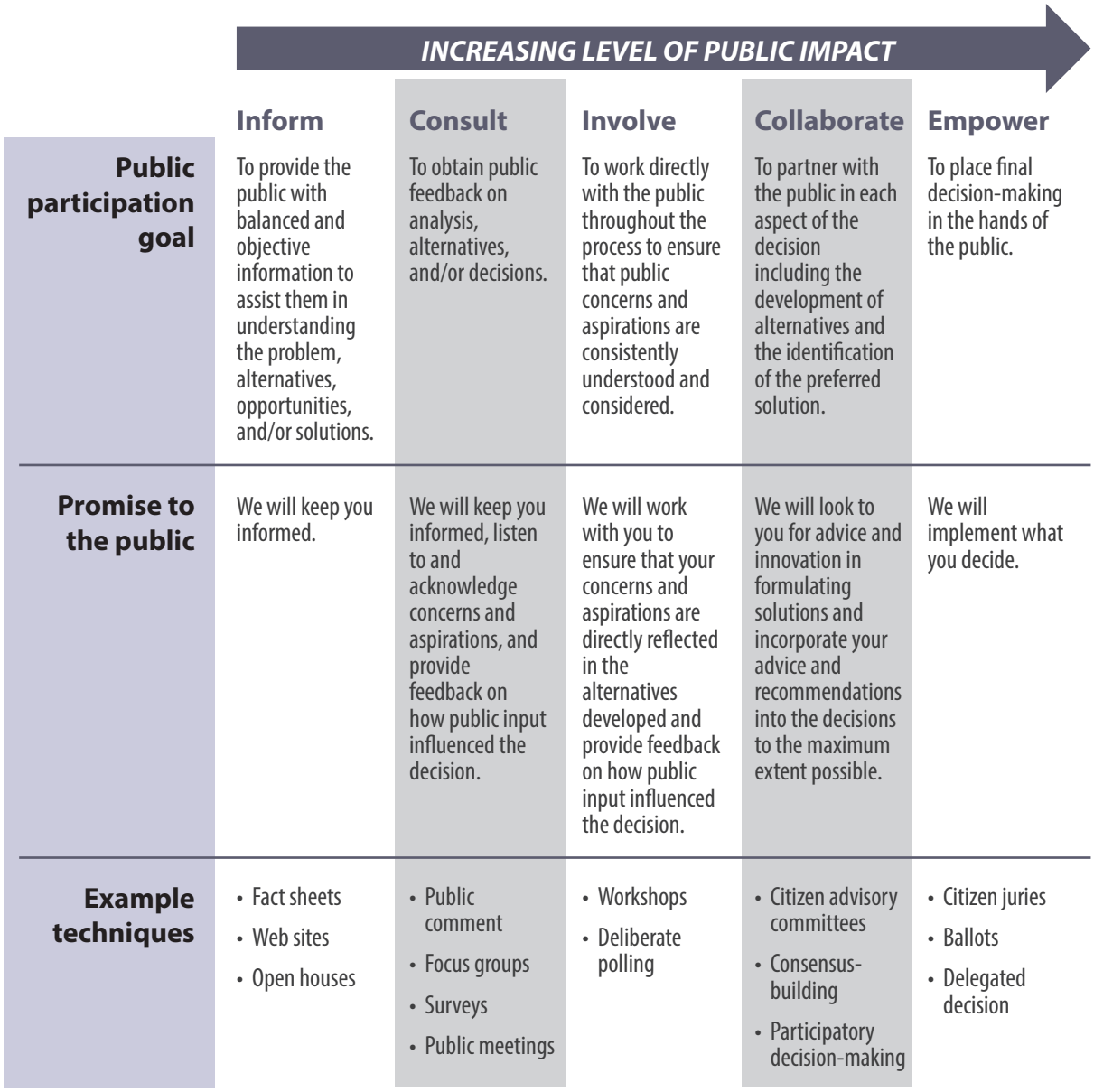


Figure 1. International Association of Public Participation (IAP2) Spectrum of Public Participation

Section 3

Planning Communication & Engagement

Stakeholder engagement can allow agencies to leverage networks and resources to their advantage and can provide a means whereby agencies can capitalize on local knowledge, including the expertise, resources, and capacity of individual stakeholders.

— Collaborating for Success: Stakeholder Engagement for Sustainable Groundwater Management Act Implementation, Community Water Center

There are four phases of SGMA implementation as illustrated in the diagram on pages 12 and 13. The statutory requirements for engagement are summarized for each phase. The other relevant sections of the Water Code and GSP Regulations are also provided for reference.

Phase 1 (GSA formation and coordination) was completed June 30, 2017 per SGMA. GSA formation and coordination has helped start relationship building and shared understanding with stakeholders. As GSAs move forward with Phase 2 (GSP preparation and submission), successful communication and engagement (C&E) with stakeholders will require up-front resource commitments and planning.

GSP Regulations (Section 354.10) require a communication section to include the following:

1. An explanation of the Agency's (GSAs) decision-making process.
2. Identification of opportunities for public engagement and a discussion of how public input and response will be used.
3. A description of how the Agency (GSA) encourages the active involvement of diverse social, cultural, and economic elements of the population within the basin.
4. The method the Agency (GSA) shall follow to inform the public about progress implementing the Plan, including the status of projects and actions.

DWR will assess, as part of GSP Regulations Section 355.4, whether the interests of the beneficial uses and users of groundwater in the basin, as well as the land uses and property interests potentially affected by the use of groundwater in the basin, have been considered. DWR will take into account comments made in accordance with GSP Regulations Section 353.8 when determining whether interests within the basin have been considered in the development and operation of the GSA and the development and implementation of the GSP.

The following guidance for planning communication and engagement is adaptable for basin-wide application. In instances where there are multiple GSAs covering a basin, GSAs should coordinate with each other to ensure that all stakeholders are identified for outreach and are informed through the process of other SGMA implementation efforts within the basin that may affect them. This means a GSA may need to outreach to stakeholders outside of their boundaries to ensure all beneficial uses and users are included in the GSP development process.

Communication & Engagement Steps

Communication and Engagement (C&E) consists of seven general steps. These steps are illustrated in Figure 2 and explained in further detail below.

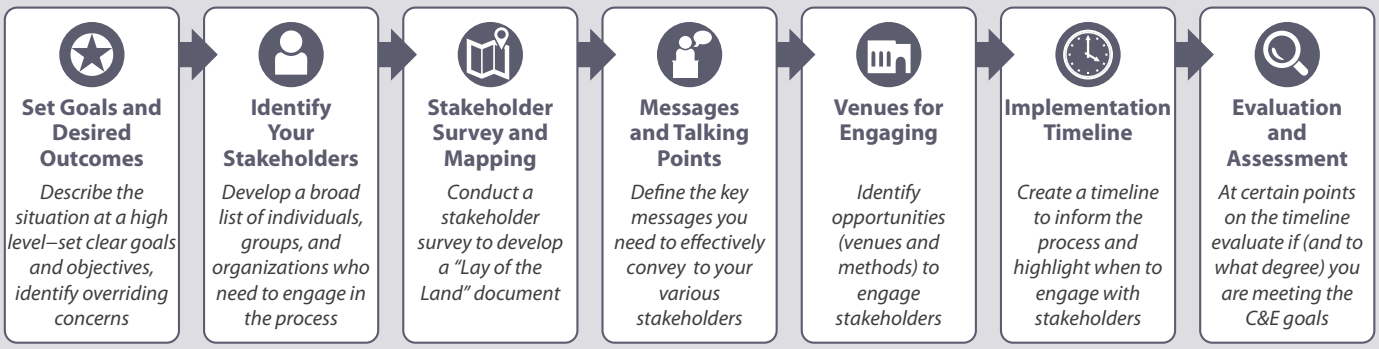


Figure 2. Communication and Engagement Steps

Set Goals and Desired Outcomes

Start by providing a description and background of your GSA and explain the intent of C&E is to support the development of your GSP. Then define in simple terms the challenge, regulatory requirement, or opportunity, and the desired outcome.

Answer these questions:

- What are we trying to accomplish?
- How will we know if we are successful?
- What are the challenges or barriers?
- What are the opportunities?
- What is the timeframe?
- When will public input be relevant?
- How will public input be used?

Identify Your Stakeholders

Identify the many interested individuals and groups you expect to engage with or inform at any stage of the GSP process.

Answer these questions when making your list:

- Who has a financial, political, business, or personal stake in this issue? *(i.e. organizational mission, regulatory role, land ownership, etc.)*
- What organization, agency, or individual must be involved in the GSP process for it to proceed? *(Due to organizational mission, regulatory role, landownership, etc.)*
- What organizations, agencies, or individuals are likely to have an interest in this effort, or be impacted by the development of your GSP? *(Due to organizational mission, or established interest in subject matter.)*

Use the following chart to stimulate brainstorming about who should be invited to engage in your GSP development. The category of interest intends to reflect "diverse social, cultural and economic elements of the population". The list is not exclusive. GSAs are encouraged to add other interested persons or groups as needs are identified.

Stakeholder Engagement Chart for GSP Development

Category of Interest	Examples of Stakeholder Groups
General Public	• Citizens groups • Community leader
Land Use	• Municipalities (City leaders, County planning departments) • Regional land use agencies
Private users	• Private pumpers • Domestic users • Schools and colleges • Hospitals
Urban/ Agriculture users	• Water agencies • Irrigation districts • Municipal water companies • Resource conservation districts • Farmers/Farm Bureaus
Industrial users	• Commercial and industrial self-suppliers; groups • Local trade association or group
Environmental and Ecosystem	• Federal and State agencies (Fish and Wildlife) • Wetland managers • Environmental groups
Economic Development	• Chambers of commerce • Business groups/associations • Elected officials (Board of Supervisors, City Council members) • State Assembly members • State Senators
Human right to water	• Disadvantaged Communities • Small community systems • Environmental Justice Groups
Tribes	• Tribal Government
Federal and State lands	• Military bases/Department of Defense • Forest Service • National Park Services • Bureau of Land Management • California Department of Fish and Wildlife
Integrated Water Management	• Regional water management groups (IRWM regions) • Flood agencies • Recycled water coalition

SGMA (Section 10723.2) calls for consideration of all interests of **all beneficial uses and users** of groundwater:

The groundwater sustainability agency shall consider the interests of all beneficial uses and users of groundwater, as well as those responsible for implementing groundwater sustainability plans. These interests include, but are not limited to, all of the following:

(a) Holders of overlying groundwater rights, including:

(1) Agricultural users.

(2) Domestic well owners.

(b) Municipal well operators.

(c) Public water systems.

(d) Local land use planning agencies.

(e) Environmental users of groundwater.

(f) Surface water users, if there is a hydrologic connection between surface and groundwater bodies.

(g) The federal government, including, but not limited to, the military and managers of federal lands.

(h) California Native American tribes.

(i) Disadvantaged communities, including, but not limited to, those served by private domestic wells or small community water systems.

(j) Entities listed in Section 10927 that are monitoring and reporting groundwater elevations in all or a part of a groundwater basin managed by the groundwater sustainability agency.

Resources to help identify and contact stakeholders are provided in the Stakeholder Communication and Engagement Digital Toolkit and Appendix B of Community Water Center's Collaborating for Success: Stakeholder Engagement for Sustainable Groundwater Management Act Implementation includes suggested resources.

Stakeholder Survey and Mapping

Contact each stakeholder organization to learn more about them, describe the project, and invite them to engage in the process. Prepare for your first meeting with project background, necessary maps, and a stakeholder survey. Also be prepared to convene a follow up meeting within a week or two, to answer questions that come up during this meeting.

Develop a set of questions to use in a one-on-one meeting with a stakeholder group. This meeting will give you answers to help you understand stakeholder interests, issues, and challenges.

An example of a **stakeholder survey** can be downloaded from the online digital toolkit. Consider surveying communities using their most often used languages (i.e. Spanish).

Examples of questions in a survey include:

- Are you familiar with SGMA regulations?
- Are you currently engaged in activities or discussions regarding groundwater management in this region?
- Do you own, manage, or operate land in this basin?
- Do you manage water resources? If yes, what is your role?
- Are bilingual information and meeting materials needed?

Using the information gathered during your meetings with stakeholder organizations, create a stakeholder mapping grid by doing a "Lay of the Land" exercise. The exercise will chart all of the stakeholder groups you decide are important to the public engagement program and list known issues, interests, challenges, preferred methods of communication, and strategies and roles for engagement.

A **"Lay of the Land" exercise** example can be downloaded from the online digital toolkit.

Examples of information included in the "Lay of the Land" exercise include:

- Types of stakeholders
- Stakeholder key interests related to groundwater
- Key documented issues

Messages

Define the key messages you need to effectively convey to your various stakeholders. Key messages should be three overriding messages that explain the goals and outcomes for development of the GSP.

- **Key message 1**: Concise explanation of the goal of the C&E strategy to support the development of a successful GSP
- **Key message 2**: The GSA is committed to working with identified stakeholders using an open and transparent communication and engagement process
- **Key message 3**: The overall GSP will be more successful with an engaged group of stakeholders providing useful information

It would also be helpful to develop a set of talking points that can be used by members of your GSA when communicating with specific stakeholder groups. These talking points can also be customized to a specific group.

Another useful tool is a Q&A document that contains likely questions or responses you anticipate from stakeholder groups based on the issues, challenges, and interests you discovered in the mapping exercise.

Venues for Engaging

You must decide on the scale of the public engagement necessary to achieve the goals and objectives of your C&E strategy. This will help you determine the best venue for your information and messages to be heard. It is important to regularly provide feedback and updates to the interested persons and stakeholder groups who provide input to the GSP through public convenings. Invite the public to meetings at key milestones to learn and contribute input. You should also consider how public comments will be received, reviewed, and responded to.

Water Code Section 10723.4 requires GSAs to establish and maintain an interested persons list; regular notifications to persons on this list should be one of the venues used for public engagement.

Convenings

- Community issue-specific or location-specific advisory committees
- Small group briefings or workshops at key milestones to learn and contribute input

Presentations

- Presentations by lead public agencies to small or large groups at scheduled events
- Presentations by lead public agencies to elected officials at publicly noticed meetings

Advisory Committees

GSAs may appoint and consult with an advisory committee. A properly developed and engaged advisory body can be of great assistance in engaging the broad range of interest groups in a basin and creating a shared understanding of local sustainability.

Digital

- Public-facing website or webpage, regularly updated and easily accessible
- Online resources, posted for interactive or non-interactive uses
- Regular updates shared via social media, email, or newsletters

Community, regional, and social media

- Submit/post regular updates to media that promote opportunities for public engagement
- Submit/post regular updates to media that provide information about how public input is being used, project status, and next opportunities for engagement

Groundwater Sustainability Agency Stakeholder Meeting, April 2017

Inform Your Stakeholders

- Invest in signs and banners to announce meetings
- Hand out fliers at key public locations to reach the general public
- Personally call stakeholder groups
- Mail and email meeting announcements
- Post on social media pages

Professional Facilitators

Many public agencies find it helpful to engage the services of a professional facilitator to guide discussions and decision-making between partnering agencies and other interested parties.

Professional facilitators, with deep expertise in mediation, negotiation, and consensus building, help broker agreements in tough natural resources disputes. Professional facilitators actively manage a process to support stakeholders' desired outcomes. They work closely with all stakeholders to design an effective process, manage meetings, seek input between meetings, and strategize throughout to deliver widely supported decisions.

Implementation Timeline

Now that you've identified your stakeholders, your key messages, and where and when to engage with them, you'll need to create a timeline for your C&E strategy. Don't confuse this with an implementation timeline for your GSP. The C&E timeline tracks communication and engagement activities and tactics.

Here is a list of common C&E tactics to include in a timeline:

- Website launch
- When to send email or other digital communication
- Media outreach activities
- Public meetings

Evaluation and Assessment

At various points along the implementation timeline, stop and assess how well you are performing against your goals and objectives. You can redirect resources, update strategies, or introduce new tactics.

The following questions as listed in the Collaborating for Success report are useful metrics for evaluation. Surveys and interviews are good tools to obtain feedback.

- Are stakeholders educated about the GSP development process and their own role?
- Is the timeline for implementation of the GSP clear?
- Has the GSA received positive press coverage?
- Do diverse stakeholders feel included?
- Have there been behavior changes related to the program goals? Or improved trust/relationships among participants?

Sample C&E Plan Outline

This example outline is a tool for GSAs to create common understanding and transparency throughout the GSP preparation and submission process. This process should be tailored to the basins and stakeholder needs. Documentation of the engagement and outreach by GSAs is important for Phase 3 (GSP review and evaluation). GSAs could evaluate the successes and learn from the stakeholder feedback to make necessary adjustments in order to achieve their goals.

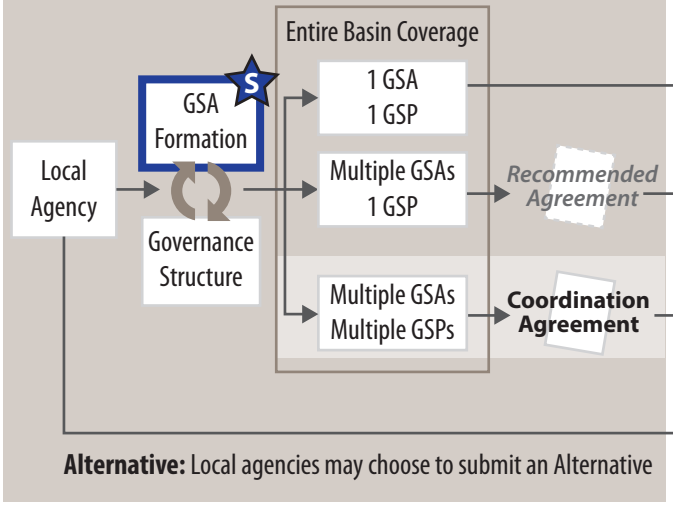
Sample C&E Plan Outline

1. **Set Goals and Desired Outcomes**
   a. Description and background of the GSA and subsequent GSP
      i. Explanation of your GSA's decision-making process
   b. Goal/desired outcomes of GSP development
   c. Communication objectives to support the GSP
   d. Overriding concerns, major concerns or challenges
2. **Identify Your Stakeholders**
   See stakeholder engagement chart example provided in digital toolkit.
   a. List the stakeholder groups, community organizations or others who are concerned about the GSA/GSP and how each group will engage with the development of the GSP
3. **Stakeholder survey and mapping**
   See example provided in digital toolkit.
   a. Meet one on one with stakeholders and ask them a set of questions to help find out their issues, interests and challenges
   b. Compile a "Lay of the Land" document of your stakeholders to identify how to engage with them
4. **Messages and Talking Points**
   Define the key messages you need to effectively convey to your various stakeholders
   a. Key messages: Three overriding messages that explain the goals and outcomes for development of the GSP
   b. Talking points/Q&A: Anticipating likely questions or issues will support effective engagement with stakeholders
   c. Likely questions or issues and responses
5. **Venues for Engaging**
   Identify the opportunities – venues or methods – to engage stakeholders.
   a. Depending on the level of engagement, you'll want to determine the venue and how to share your key messages
   b. Determine how you will invite, inform, and follow up with stakeholders
6. **Implementation Timeline**
   List the milestones and stakeholder engagement opportunities throughout the GSP development process.
   a. C&E Plan and GSP milestones
      i. Refer to the Stakeholder Engagement by Phase graphic for required engagement milestones
   b. Supporting tactics: Include tactics or tools you will use to communicate your messages and resources available to support
      i. Website launch
      ii. When to send email or other digital communication
      iii. Media outreach activities
      iv. Community meetings
7. **Evaluation and Assessment**
   Assess at various points during Implementation to evaluate how your plan is performing against your goals and objectives.
   a. What worked well?
   b. What didn't work as planned?
   c. Meeting recaps with next steps
   d. Lessons learned
   e. Budget analysis

Stakeholder Engagement Requirements by Phase

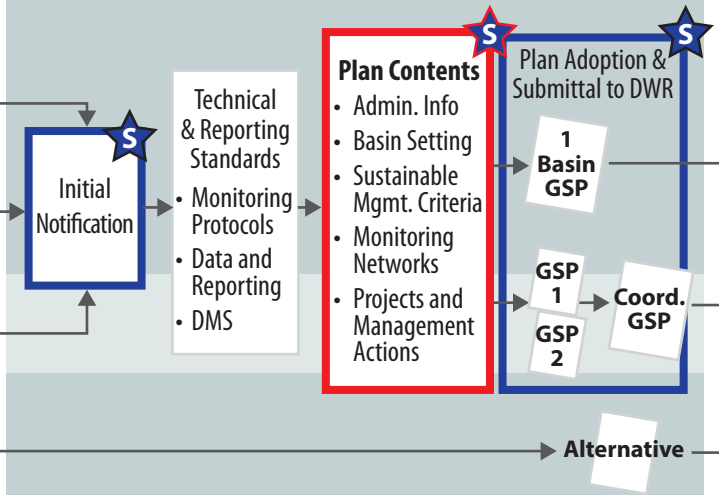
Phase 1: 2015–2017

GSA Formation and Coordination



Phase 2: 2017–2022

GSP Preparation and Submission



Phase 1 Engagement Requirements

- **Establish and Maintain List of Interested Parties** §10723.4
- **GSA Formation Public Notice** §10723(b)
- **GSA Formation Public Hearing** §10723(b)
- **GSA Formation (due 6/30/17)** §10723(b)
  Notify DWR:
  - › Include list of interested parties
  - › Explain how parties' interests will be considered
- **Pre-GSP Development** §10727.8
  Provide a written statement describing how interested parties may participate to:
  - › DWR
  - › Cities within the GSA boundary
  - › Counties within the GSA boundary

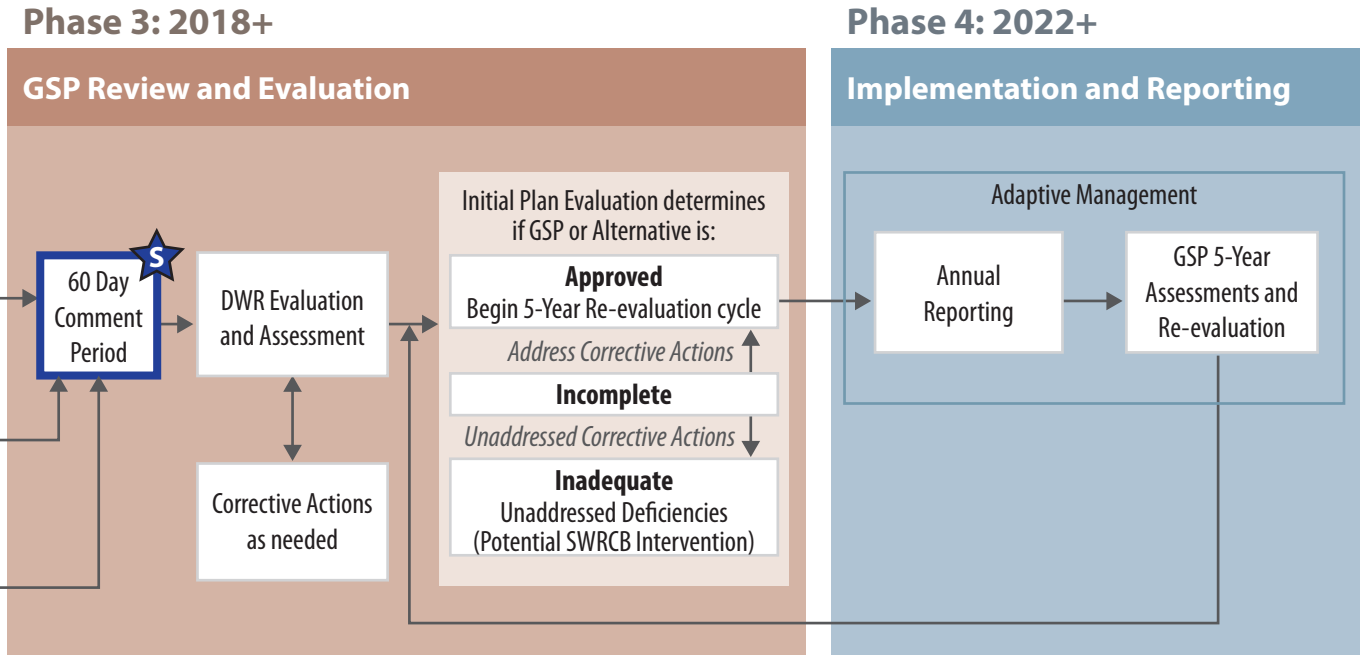
Phase 2 Engagement Requirements

- **GSP Initial Notification** §353.6*
  - › GSAs are required to submit GSP Initial Notifications through the SGMA Portal - GSP Initial Notification System at http://sgma.water.ca.gov/portal/#gsp
  - › Public can comment on the submitted GSP notification
- **GSP Preparation** §10727.8 and §10723.2
  - › Encourage active involvement
  - › Consider beneficial uses and users of groundwater when describing *Undesirable Results, Minimum Thresholds, and Projects & Actions*
- **GSP Communications Section** §354.10*
  - › GSA decision-making process
  - › Opportunities for engagement and how public input is used
  - › How GSA encourages active involvement
  - › Method of informing the public
- **Public Notice of Proposed Adoption** §10728.4
- **GSP Adoption Public Hearing** §10728.4
- **GSP Submittal** §354.10*
  - › Include a summary of communications: description of beneficial uses/users, list of public meetings, comments received/responses

Stakeholder Input

Stakeholders should be informed throughout the development of Plan Content

Code References: §(#) = SGMA, §(#)* = GSP Regulations



Phase 3 Engagement Requirements

- **60 Day Comment Period** §353.8*
  - Any person may provide comments to DWR regarding a proposed or adopted GSP via the SGMA Portal at http://sgma.water.ca.gov/portal/
  - Comments will be posted to DWR's website

Phase 4 Engagement Requirements

- **Public Notices and Meetings** §10730
  - Before amending a GSP
  - Prior to imposing or increasing a fee
- **Encourage Active Involvement** §10727.8

Engagement Requirements Applicable to ALL PHASES

- **Beneficial Uses and Users** §10723.2
  Consider interests of all beneficial uses and users of groundwater
- **Advisory Committee** §10727.8
  GSA may appoint and consult with an advisory committee
- **Public Notices and Meetings** §10730
  - Before electing to be a GSA
  - Before adopting or amending a GSP
  - Prior to imposing or increasing a fee
- **Encourage Active Involvement** §10727.8
  Encourage the active involvement of diverse social, cultural, and economic elements of the population within the groundwater basin
- **Native American Tribes** §10720.3
  - May voluntarily agree to participate
  - See Engagement with Tribal Government Guidance Document
- **Federal Government** §10720.3
  - May voluntarily agree to participate

Section 4

Engagement Methods & Tools

Stakeholder Communication and Engagement Digital Toolkit

A set of tools and examples are available for the purposes of SGMA outreach at DWR's Sustainable Groundwater Management website. The examples from local SGMA work groups include agenda, basin fact sheet, newsletter, mailing list sign up, etc. The templates may be downloaded, modified, and tailored to specific needs and audiences. While not all tools and templates are applicable to all GSAs, they are available as examples of effective ways to engage.

Find the Digital Toolkit at:
https://www.water.ca.gov/Programs/Groundwater-Management/Assistance-and-Engagement

DWR will add additional resources and case studies as they are developed to the Digital Toolkit.

Section 5

Additional Resources

DWR Region Office Contacts

DWR has knowledgeable staff available at the four region offices located across the State and in Sacramento. DWR's regional coordinators along with the Point of Contacts (POCs) are available to answer questions and provide available assistance and resources. The Regional Coordinators can answer SGMA related questions, provide educational presentations, discuss facilitation support services, and put you in contact with SGMA program contacts and other State and federal agencies. DWR Regional Coordinators can be reached via email at SGMP_RC@water.ca.gov.

Integrated Regional Water Management

Integrated Regional Water Management (IRWM) is a collaborative effort to identify and implement water management solutions on a regional scale that increase regional self-reliance, reduce conflict, and manage water to concurrently achieve social, environmental, and economic objectives. DWR, through the IRWM grant program, worked with 49 IRWM regions to coordinate regional water management activities and implemented multi-benefit projects with local agencies. Stakeholder communication and engagement plays a key role in the successes of the IRWM. Information about these activities is available at: https://www.water.ca.gov/Programs/Integrated-Regional-Water-Management

Other Agency Information

State Water Resources Control Board

In areas where groundwater users and local agencies are unable or unwilling to sustainably manage their groundwater, SGMA authorizes State Water Resources Control Board (State Board) intervention. http://www.waterboards.ca.gov/water_issues/programs/gmp/about.shtml#info

Contact Email: groundwater_management@waterboards.ca.gov T: (916) 650-0474

California Department of Fish and Wildlife Groundwater Program

CDFW developed a Groundwater Program to ensure fish and wildlife resources reliant upon groundwater are addressed in GSPs and that CDFW remains in compliance with regulatory requirements. https://www.wildlife.ca.gov/Conservation/Watersheds/Groundwater

Federal Agencies

GSAs can locate federal lands under various federal government jurisdiction (i.e. Bureau of Indian Affairs, Bureau of Land Management, National Parks Service, Department of Defense, Fish and Wildlife Services) from the Water Management Planning Tool under the Federal Lands layer. https://gis.water.ca.gov/app/boundaries/

The federal government may voluntarily agree to participate in the preparation or administration of a GSP through a joint powers authority or other agreement with local agencies in the basin. The GSAs should work to include federal interests in all aspects of the public process. Successful examples include ex-officio liaison on the GSA Board and membership on technical and public advisory committees.

California Department of Water Resources
1416 Ninth Street
P.O. Box 942836
Sacramento, CA 94236-0001

http://www.water.ca.gov

Appendix 1G Public Comment Summary and Attachments

Mid-Kaweah Groundwater Sustainability Agency Groundwater Sustainability Plan

Appendix 1G:
Public Comment Summary

December 13, 2019

Prepared for:

Mid-Kaweah Groundwater Sustainability Agency

Prepared by:

Stantec Consulting Services, Inc.

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Table of Contents

LIST OF TABLES

ABBREVIATIONS

DWR	California Department of Water Resources
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
Matrix	Comment and Comment Response Matrix
MCR	Multiple Comment Response
MKGSA	Mid-Kaweah Groundwater Sustainability Agency
SGMA	Sustainable Groundwater Management Act of 2014

ATTACHMENTS

Attachment A – Notice to Cities and Counties in the Plan Area

Attachment B – Comment Letters Received on Draft Groundwater Sustainability Plan

Attachment C – Mid-Kaweah GSA Board Meeting Presentation (Nov. 12, 2019)

Attachment D – Mid-Kaweah Groundwater Sustainability Plan Comment and Comment Response Matrix

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MID-KAWEAH GROUNDWATER SUSTAINABILITY AGENCY GROUNDWATER SUSTAINABILITY PLAN PUBLIC COMMENT SUMMARY

December 13, 2019

1.0 INTRODUCTION

This Public Comment Summary (Summary) describes the process and tools used by the Mid-Kaweah Groundwater Sustainability Agency (MKGSA) to solicit, review, and respond to public and stakeholder comments on its Draft Groundwater Sustainability Plan (GSP); and notify cities and counties within the plan area of MKGSA's intent to adopt the GSP. This Summary is Appendix 1G, and is to be view in conjunction with the MKGSA GSP. These public review and notification processes were developed pursuant to the Sustainable Groundwater Management Act of 2014 (SGMA) and the California Department of Water Resources' (DWR) Groundwater Sustainability Plan Emergency Regulations, developed in May 2016.

California Code of Regulations §355.4 provides the basis for DWR's determination of a GSP's compliance with SGMA and whether a GSP is likely to achieve the sustainability goal for the basin. As part of this criteria, DWR will consider:

> *(10) Whether the Agency has adequately responded to comments that raise credible technical or policy issues with the Plan. (§ 355.4(b)(10))*

This document reviews MKGSA actions to notify the public and other interested parties of the availability of the Draft GSP; the period and approach to receive comments to the Draft GSP; and the approach to review, consider and respond to technical and policy comments submitted by the public and other interested parties.

1.1 DOCUMENT FORMAT

This Summary is comprised of the following four sections:

- Section 1 – Introduction: Section 1 provides an overview of the purpose and structure of the document, as well as describes the GSP evaluation criteria for addressing comments on the GSP.
- Section 2 – Commenting Process: Section 2 describes the public comment process for the Draft GSP and method by which the MKGSA notified cities and counties within the plan area of the proposed plan.
- Section 3 – Submitted Comments: Section 3 provides an overview of comment letters received on the Draft GSP during the public comment period. The comment letters in their entirety are included as **Attachment B** to this Summary.
- Section 4 – Comment Management and Review: Section 4 describes how the MKGSA reviewed and responded to comment letters received during the public comment period, including the processes for identifying and categorizing individual comments and responding to comments that raised credible technical and policy issues. This section also describes the tool used to manage the comments and comment responses. A copy of the final Matrix is provided at **Attachment C** to this document.

2.0 COMMENTING PROCESS

The MKGSA Board of Directors authorized release of the Draft GSP on July 31, 2019, for a 45-day public comment period that ended September 16, 2019. The Draft GSP was posted on the MKGSA website, as well made available for review at multiple public locations. Written comments on the Draft GSP were accepted by U.S. Mail, hand-delivery or submittal to the Agency's email address at midkaweah@gmail.com. This section further describes the Draft GSP notification and public comment process. In addition, it describes the method by which MKGSA notified cities and counties of availability of the Draft GSP, pursuant to California Water Code § 10728.4.

2.1 DRAFT GSP RELEASE AND PUBLIC COMMENT PERIOD

The MKGSA solicited public comments from individuals, agencies, and organizations representing beneficial uses and users of groundwater described in Water Code § 10723.2; as well as any other interested members of the public. The Draft GSP was released for public review and comment on Wednesday, July 31, 2019. This marked the beginning of a 45-day public comment period, which ended at 5 p.m. on Monday, September 16, 2019. The MKGSA notified interested parties and members of the public of the release of the Draft GSP and public comment period through posting on the MKGSA website and an email sent out through the Kaweah Groundwater Communications Portal (www.kaweahgcp.com).

The Draft GSP was available for review on the MKGSA website throughout the public comment period. In addition, hard copies of the documents were made available for review at the following public locations:

- Tulare County Library, located at 200 W. Oak Ave., Visalia
- City of Tulare Library, located at 475 N. M St., Tulare
- Tulare irrigation District, located at 6826 Avenue 240, Tulare

Members of the public were provided multiple methods to provide comment on the Draft GSP. Hard copies of comments could be sent, or hand delivered to the MKGSA mailing address:

- MKGSA, c/o Paul Hendrix; 144 S. L Street, Suite N; Tulare, CA 93274.

Electronic copies of comment could be submitted to the MKGSA email address at midkaweah@gmail.com.

2.2 NOTICE TO CITIES AND COUNTIES

SGMA (as chaptered in California Water Code § 10728.4) requires that:

> *A groundwater sustainability agency may adopt or amend a groundwater sustainability plan after a public hearing, held at least 90 days after providing notice to a city or county within the area of the proposed plan or amendment. The groundwater sustainability agency shall review and consider comments from any city or county that receives notice pursuant to this section and shall consult with a city or county that requests consultation within 30 days of receipt of the notice. Nothing in this section is intended to preclude an agency and a city or county from otherwise consulting or commenting regarding the adoption or amendment of a plan.*

Pursuant these regulations, the MKGSA notified cities and counties within the GSP area of the its intention to adopt the GSP at least 90 days before adoption of the Final GSP. This notification included a letter sent to the cities of Tulare and Visalia and the county of Tulare on August 13, 2019, provided as **Attachment A** to this Summary. As a courtesy, the MKGSA also provided notice to the California Water Service Co., which serves as the municipal and industrial water purveyor in the City of Visalia. In addition to the letter, cities and counties were notified about release of the Draft GSP via postings on the MKGSA website and the Kaweah Groundwater Communications Portal. The MKGSA did not receive any formal requests for consultation pursuant to § 10728.4.

2.3 INTERNAL PEER REVIEW PROCESSES

External to the public comment process managed by MKGSA, some Members of the MKGSA Joint Powers Authority conducted internal peer review of the Public Draft GSP as a component the member's review of the document. These peer review processes included retention of consultant services to provide an administrative level review of the Draft GSP via either participation in the GSA's Technical Advisory Sub-Committee during GSP drafting or examination of the draft GSP. Members that conducted these reviews included the City of Visalia and the Tulare Irrigation District. The Tulare Irrigation District additionally held 12 "Landowner Roundtable" meetings. The District's purpose for these meetings was to present the Draft GSP to its customers in groups of no more than 12 and receive their comments and observations of the GSP and factors that may affect the District. This input served to inform the District during its administrative review of the Draft GSP.

Eleven of the 12 Landowner Roundtable meetings were designated for District grower/members. One meeting was conducted on request of Self-Help Enterprises with a goal to engage private well operators in Okieville/Highland Acres, an unincorporated community that is developing a small community water system in partnership with Tulare Irrigation District. These meetings were held from August 14 to August 27, 2019, at the District's office in Tulare. Participants of these meetings were advised that comments shared during these meetings were external to the public comment process managed by MKGSA. Participants were encouraged to submit written comments to the MKGSA as they feel appropriate. A total of 66 grower/members participated in the meetings. No private well operators in the Okieville/Highland Acres community accepted the meeting invitation.

Information collected during these meetings was summarized by District staff and provided to MKGSA management and support staff for informational purposes. This information as considered by staff during preparation of the Final Draft GSP, but not formally responded by the MKGSA Advisory Committee. Below is the District's summary of the comments and observations it collected during the Landowner Roundtable meetings.

- How are we accounting for dairy flows? Several dairy landowners explained the complicated nature of moving flows from the confined animal facility to crops for nutrient management and irrigation purposes. They wanted to know if the allocation of groundwater applied to the confined animal space and under SGMA can we limit their pumping to a confined animal facility, which may cause harm to their cows.

- There was a great deal of concern with "white area" pumping surrounding the MKGSA and if we had identified the parcels. Further discussion revolved around how to address over pumping in "white areas" and what will be the timing for the reduction in pumping in these areas.

- We will need to look at each monitoring well carefully to ensure that we allow for an appropriate Minimum Threshold and Measurable Objective that allows for significant declines in dry years. I used KSB-038 as an example and several growers noted that historic readings were below the Minimum Threshold.
- We need to determine/define what are the actions during a drought period.
- Are we measuring our levels dropping below a Minimum Threshold on a rolling average or just an annual reading? If 1/3 of our wells go below the MT, does SWRCB immediately step in or do we get one year to bring the levels up?
- Some growers are concerned that we are painting too rosy of a picture and that DWR and the SWRCB will not see our work in the same way. I think we need to STRONGLY encourage DWR to collaborate (interactive feedback) during the review process to ensure we are properly explaining our approach and current status.
- Growers fear that DWR and the SWRCB will simply move the bar in regards to acceptance of our plan and sustainability.
- Some growers brought up the City of Corcoran well field. We need to locate this well field and identify if they are pumping from within the MKGSA or GKGSA out to an adjacent GSA.
- The growers are concerned that we are indicating that we have a surplus, but our groundwater levels are declining. Although we have ideas of what is causing it, we may need to devote some thought in the document to walking DWR through a thought process that shows that we are not the problem. The question then becomes, do we throw in who we think it is?
- There was a great deal of discussion and concern that if our groundwater levels continue to decline due to outside forces, the subbasin will be put in probation. Will MKGSA be exposed to the SWRCB fees and enforcement?
- Growers are supportive of moving towards a metering program. They are fearful of using the data for reporting to the State, however, they do recognize the benefits of having a meter on their well.
- Growers are also supportive of an allocation and marketing program to provide the flexibility needed under SGMA.
- One grower had an idea to run the metering, allocation and marketing program under a third-party non-profit model. This would keep the data private and allow it to operate in support of our SGMA goals.
- There were a few questions of how we intend to pay for our projects and annual costs.

3.0 SUBMITTED COMMENTS

The MKGSA received 13 comment letters on the Draft GSP during the public comment period. Four letters were submitted by individual contributors. Nine letters were submitted from organizations representing beneficial uses and users of groundwater in the region, including state agencies, local and regional governments, private and public water purveyors, and organizations representing disadvantaged communities. **Table 1,** shown below, provides the list of

comments that were received on the Draft GSP, organized stakeholder name alphabetically by commenter name. Copies of each comment are provided as **Attachment B** to this Summary.

Table 1. Submitted Comments

Commenter or Agency Name	Commenter Type	Date Comment was Received
Bill Huott	Individual Contributor	8/10/19
California Department of Fish and Wildlife	State Agency	9/12/19
California Water Service	Water Purveyor	9/16/19
Edward Henry	Individual Contributor	9/3/19
Kevin Layne	Individual Contributor	8/13/19
Kings County Water District	Water Purveyor	9/16/19
Leadership Counsel for Justice and Accountability	Non-Governmental Organization	9/16/19
Richard Garcia	Individual Contributor	9/16/19
Self-Help Enterprises	Non-Governmental Organization	9/16/19
The Nature Conservancy	Non-Governmental Organization	9/9/19
Tulare County Resource Management Agency	Local/Regional Government	9/16/19
Various Non-Profit Organizations	Non-Governmental Organization	9/16/19
Westchester Group	Non-Governmental Organization	9/13/19

4.0 COMMENT REVIEW AND RESPONSE

This section describes the process and tools the MGKSA used to review and respond to comments on the Draft GSP. Following the close of the public comment period, the MKGSA reviewed each comment letter to identify individual comments on the Draft GSP. Of the 13 letters received, MKGSA staff identified 197 issue-specific comments applicable to the GSP. To organize and manage the review of issue-specific comments, staff created a database, or matrix, that allowed for the categorization, grouping, and response to comments. . This comment management approach is described below.

4.1 COMMENT MANAGEMENT

This subsection describes the process MKGSA used to categorize each of the comment letters received on the Draft GSP and identify issue-specific comments for review and response. Of those 13 letters received, a total of 197 issue-specific comments applicable to the Draft GSP were identified. Each comment was assigned an individual comment identification number and entered into the database referred to as the Mid-Kaweah GSP Comment and Comment Response Matrix (Matrix), further described below. MKGSA staff then used the Matrix to group technical or policy issues raised on the GSP, identify potential changes to the GSP to address comments, and develop comment responses.

4.1.1 Comment and Comment Response Matrix

The Matrix is an Excel-based database developed and used by MKGSA staff and consultants to categorize and respond to comments submitted on the Draft GSP. **Table 2**, shown below, describes the types of information included in the Matrix. A copy of the completed Matrix is provided as **Attachment D** to this Summary.

Table 2. Mid-Kaweah Groundwater Sustainability Plan Comment and Comment Response Matrix Columns

Matrix Column	Column Description
Author	Name of agency or organization that signed or submitted the comment letter.
Sub-Category	Topic within the Draft GSP that the comment identifies with, describes, or otherwise raises questions about.
Comment Identification Number (CIN)	Unique identifier assigned to each comment received. A single comment letter may contain multiple individual comments, each with its own comment identification number.
Multiple Comment Response (MCR) number	Comments that were similar in scope were grouped together based on the GSP sections or content they discussed. Each group of comments were assigned an MCR number, identified here.
Priority	Comment grouping to facilitate structured review by Advisory Committee and MKGSA staff.
Description	Short description of the main topic or issues raised in the comment.
Code/Regulation	The code or regulation cited in the comment, if applicable.
Comment	Copies of the comment text directly from the comment letter.
Staff Summary of Comment	Short description of MKGSA and consultant staff's understanding of the comment as it pertains to the GSP.
Response/Recommended Action	Response or recommended action to address the comment.
Response Location in GSP	Location in Draft GSP text changes were made in response to comment, if applicable.

Key:
GSA = Groundwater Sustainability Agency
GSP = Groundwater Sustainability Plan

4.1.2 Sub-Categories

To aid the comment management process, MKGSA staff and consultants assigned all comments a sub-category based on primary topic or issue the topic raised. The sub-categories were used to sort comments by topic and assign the appropriate subject-matter expert to develop the comment response. **Table 3** provides a list of the comment sub-categories.

Table 3. Groundwater Sustainability Plan Comment Sub-Categories

Acronym	Sub-Category
AL	Pumping Allocations/Metering/De Minimus Extractors/Water Marketing/Extraction – Water Accounting Framework
DC	Disadvantaged Communities/Rural Domestic Users
GA	GSA Organization
GE	General
GL	Groundwater Levels
GS	Groundwater Storage
GP	County General Plan
HM	Hydrogeologic Modeling
IS	Interconnected Surface Waters/ Groundwater Ecosystems/Environmental Beneficial Users – Dependent
LS	Land Subsidence
MA	Management Areas
MU	Municipal Land/Water Use
OR	Groundwater Sustainability Plan Organization
PM	Projects and Management Actions
PO	Public Outreach
SB	Subbasin Characteristics

WB	Water Budget/Water Accounting Framework
WI	Well Inventory
WR	Water Resources/Water Rights
WQ	Water Quality

4.1.3 Multiple Comment Response

Comments of a similar nature were additionally assigned a "Multiple Comment Response" or MCR. A MCR is a single response that applies to multiple comments of a similar nature. **Table 4**, shown below, provides a brief description of each MCR number.

Table 4. Defined Multiple Comment Response Numbers

MCR Number	Definition
MCR-1	Phreatophyte extraction definition incorrect
MCR-2	GL Minimum Threshold Definition inconsistent
MCR-3	Non-applicability of ISWs/GDEs, surface water elevation/flow rate depletion data to substantiate
MCR-4	GL lowering Impacts on ISWs/GDEs
MCR-5	Kaweah Subbasin area calculation inconsistent
MCR-6	Prioritization of Water Quality Degradation in Projects/Management Actions
MCR-7	Sustainability goal/Inclusion of environmental beneficial users
MCR-8	Identification/Mapping of ISWs/GDEs
MCR-9	Inventory of GDE vegetation types
MCR-10	GL Minimum thresholds and GDEs
MCR-11	Multiple benefit Projects and Management Actions
MCR-12	Management Areas – GDEs and DACs
MCR-13	GL Minimum thresholds impact on DACs
MCR-14	Rural domestic drinking assistance program
MCR-15	GS/GL relation
MCR-16	Impacts of ISW depletion on deliveries
MCR-17	Identification/mapping of DACs w/ Recharge/Wells/Contaminant Plumes/Monitoring
MCR-18	WQ Monitoring for DACs/rural domestic
MCR-19	Water Accounting Surplus vs Water Budget Deficit, Apparent Contradiction
MCR-20	Water Budget/Water Accounting Framework Definition Inconsistent
MCR-21	Sustainability Goal/Sustainable Management Criteria: Inclusion of DACs/Rural Domestic Beneficial Users
MCR-22	Public Outreach: DACs
MCR-23	Public Outreach: Future, General

Key:
DAC = Disadvantaged Communities
GDE = Groundwater Dependent Ecosystem
GL = Groundwater Levels
GS = Groundwater Storage
ISW = Interconnected Surface Waters
MCR = Multiple Comment Response
WQ = Water Quality

4.1.4 Comment Priority

Following completion of Sub-category and MCR assignments to comments, MKGSA staff and consultants conducted a detailed evaluation of the scope, relevance and importance of each individual comment. As part of this evaluation, staff and consultants amended the database to include a draft response to each comment and the applicable GSP

section. Though this activity, staff and consultants conducted an initial grouping, or prioritization, of these comments based, in part, on their applicability § 355.4(b)(10). These groupings are further described below.

- **"Priority 1":** Comments were categorized as Priority 1 if they primarily raised editorial issues or could be addressed without requiring further technical evaluations or significant changes to the GSP text. For example, if a comment indicated that a certain passage or section of the GSP could be improved through a closer editorial review, it was given a Priority 1 status. Of the 197 comments, 103 were categorized as Priority 1 comments and addressed directly by MKGSA and consultant staff.

- **"Priority 2":** Comments were categorized Priority 2 if they required additional evaluation or significant changes to the GSP and considered valid technical or policy issues for focused review. This included comments that referred to content and themes included throughout the GSP and would require more consideration revisions to address. Of the 197 comments received, 75 comments were categorized as Priority 2.

- **Priority 3:** Comments were categorized Priority 3 if they raised substantial technical or policy issues most likely to be subject to § 355.4(b)(10). Of the 197 comments received, 19 were categorized as Priority 3.

4.2 REVIEW AND RESPONSE

This subsection describes the approach and process MKGSA and consultant staff used to review, respond, and address comments received on the Draft GSP and approval of amendments to the Draft GSP. This review and response process include a series of public meetings of the MKGSA Advisory Committee and a presentation to the MKGSA Board of Directors. These meetings, and their focus, are as follows:

4.2.1 Comment Overview and Response Process Workshop

On Oct. 4, 2019, the MKGSA Advisory Committee held a publicly noticed meeting to take stock of all public comments and to discuss the process by which the comments would be grouped and prioritized. The Committee was prepared to hold several more meetings to reach a consensus vote on a recommendation to the GSA board at its November meeting on how the comments would be recognized and responded to in the draft GSP.

4.2.3 Priority 3 Comment Workshop

On Oct. 15, 2019, the MKGSA Advisory Committee held a publicly noticed meeting to review and respond to comments MKGSA staff and consultants had identified as Priority 3 comments. Committee members were additionally invited to amend the priority designations of Priority 1 and 2 comments. No Priority 1 or 2 comments were nominated for Priority 3 status. The 19 comments identified as Priority 3 fell into one of the four sub-categories identified in **Table 5**:

Table 5. Priority 3 Comments

Acronym	Sub-Category	No. Comments
DC	Disadvantaged Communities/Rural Domestic Users	6
GL	Groundwater Levels	2
IS	Interconnected Surface Waters/ Groundwater Ecosystems/Environmental Beneficial Users – Dependent	9
WQ	Water Quality	2

Through a facilitated session, the MKGSA staff, consultants and the Advisory Committee reviewed and provided staff direction, as appropriate, to amend each of the 19 staff-developed responses. These Committee-endorsed amendments were provided to MKGSA staff and consultants for completion and follow-on presentation.

4.2.4 Priority 2 Comment Workshop

On Oct. 22, 2019, the MKGSA Advisory Committee held a publicly noticed meeting to review and respond to comments MKGSA staff and consultants had identified as Priority 2 comments. Committee members were additionally invited to amend the priority designations of Priority 1 comments or revisit responses to Priority 3 comments from the prior workshop. No Priority 1 comments were nominated, and Priority 3 responses were retained as-is. The 75 comments identified as Priority 2 fell into 13 categories as listed in **Table 6**.

Table 6. Priority 2 Comments

Acronym	Sub-Category	No. Comments
AL	Pumping Allocations/Metering/De Minimus Extractors/Water Marketing/Extraction – Water Accounting Framework	3
DC	Disadvantaged Communities/Rural Domestic Users	5
GL	Groundwater Levels	10
GS	Groundwater Storage	3
HM	Hydrogeologic Modeling	2
IS	Interconnected Surface Waters/ Groundwater Ecosystems/Environmental Beneficial Users – Dependent	20
LS	Land Subsidence	2
MA	Management Areas	4
PM	Projects and Management Actions	3
SB	Subbasin Characteristics	1
WB	Water Budget/Water Accounting Framework	9
WR	Water Resources/Water Rights	12
WQ	Water Quality	1

To facilitate review of these comments, the Advisory Committee accepted staff recommendation to apply the Oct. 4 decisions of Priority 3 comments to Priority 2 comments of the same four categories. This led to a facilitated discussion on review of staff responses to 28 comments in the remaining 9 sub-categories. These Committee-endorsed amendments were provided to MKGSA staff and consultants for completion and follow-on presentation.

4.2.5 Comment and Response Recommendations Workshop

On. Nov. 5, 2019, the MKGSA Advisory Committee held a publicly noticed meeting to review, modify and approve revisions to comments per Committee direction provided during Oct. 4, Oct. 15 and Oct. 22 workshops. To facilitate this discussion, the consultant team summarized the 94 comments and responses identified as Priority 2 and 3 into four comment “themes” for their review, modification and approval. These themes are as follows:

- Stream Flow Depletion/Groundwater Dependent Ecosystem
- Water Budget/Water Accounting/Misc.
- Small Well Groundwater Level Impacts
- Groundwater Quality Impacts

These themes, available in detail in **Attachment C**, sought to summarize the major findings and decisions identified in the prior workshops. Committee members were asked to review, debate and modify each theme, before voting to accept the content as the body's recommendation to the MKGSA Board of Directors as guidance to modify the GSP. The Committee completed this activity for the five comment themes and approved each by a unanimous vote.

4.2.6 Board of Director Recommendation

On Nov. 12, 2019, the MKGSA Board of Directors held a publicly noticed meeting to receive the recommendation of its Advisory Committee to amendments of the Draft GSP. The Board presentation was led by Advisory Committee Chairman Blake Wilbur, with support of MKGSA staff and consultants. The presentation (**Attachment C**) included a detailed review of each of the five comment theme areas, and a review of the deliberative process and decision of the Advisory Committee. The Board thanked the Chairman and the committee for its efforts and accepted the recommendation on a unanimous vote.

ATTACHMENT A
NOTICE TO CITIES AND COUNTIES IN THE PLAN AREA

MID-KAWEAH GSA

Mid-Kaweah Groundwater Sustainability Agency

August 13, 2019

Denise England – Water Resources Program Director
County of Tulare
2800 W. Burrel Avenue
Visalia, California 93291

Subject: Notice of Intent to Adopt GSP

Dear Ms. England:

The Mid-Kaweah Groundwater Sustainability Agency (GSA) hereby provides notice to the County of Tulare of its intent to adopt the 2020 Mid-Kaweah GSA Groundwater Sustainability Plan (GSP or Plan) no earlier than 90 days upon your receipt of this notice. Considerations to adopt this document shall occur as part of a public hearing to be held on or before December 10, 2019. Once adopted, the Plan will govern sustainable groundwater management activities within the jurisdictional boundaries of the GSA for that portion of the Kaweah Subbasin (DWR Groundwater Basin No. 5-22.11). California Water Code §10728.4, pursuant to passage of the Sustainable Groundwater Management Act of 2014, obligates distribution of this notice to any city or county whose jurisdictional area lies within the area of the proposed Plan (see attached map of Mid-Kaweah GSA).

Entities that receive this notice may request to consult on the 2020 Mid-Kaweah GSA Groundwater Sustainability Plan. These requests must be received within 30 calendar days upon receipt of this notice. Written requests for consultation shall be delivered to the person and GSA office address identified below. Requests may also be E-mailed to jph@midkaweah.org.

To view the schedule for the public hearing and other outreach activities to receive comments on the Plan, to download a copy of the Public Draft GSP, or receive other information, visit the website www.midkaweah.org.

Sincerely,

J. Paul Hendrix

J. Paul Hendrix
Manager

Attachment

144 South L Street Suite N • Tulare California 93274 • Telephone (559) 686-2166

MID-KAWEAH GSA

Mid-Kaweah Groundwater Sustainability Agency

August 13, 2019

Tammy Kelly – District Manager
California Water Service Company
216 N. Valley Oaks Drive
Visalia, California 93292

Subject: Notice of Intent to Adopt GSP

Dear Ms. Kelly:

The Mid-Kaweah Groundwater Sustainability Agency (GSA) hereby provides notice to the Calif. Water Service Company of its intent to adopt the 2020 Mid-Kaweah GSA Groundwater Sustainability Plan (GSP or Plan) no earlier than 90 days upon your receipt of this notice. Considerations to adopt this document shall occur as part of a public hearing to be held on or before December 10, 2019. Once adopted, the Plan will govern sustainable groundwater management activities within the jurisdictional boundaries of the GSA for that portion of the Kaweah Subbasin (DWR Groundwater Basin No. 5-22.11). California Water Code §10728.4, pursuant to passage of the Sustainable Groundwater Management Act of 2014, obligates distribution of this notice to any city or county whose jurisdictional area lies within the area of the proposed Plan (see attached map of Mid-Kaweah GSA). Mid-Kaweah has also chosen to provide said notice to Calif. Water Services Company, given its role as the water purveyor for the City of Visalia, a member of this GSA.

Entities that receive this notice may request to consult on the 2020 Mid-Kaweah GSA Groundwater Sustainability Plan. These requests must be received within 30 calendar days upon receipt of this notice. Written requests for consultation shall be delivered to the person and GSA office address identified below. Requests may also be E-mailed to jph@midkaweah.org.

To view the schedule for the public hearing and other outreach activities to receive comments on the Plan, to download a copy of the Public Draft GSP, or receive other information, visit the website www.midkaweah.org.

Sincerely,

J. Paul Hendrix

J. Paul Hendrix
Manager

Attachment

MID-KAWEAH GSA

Mid-Kaweah Groundwater Sustainability Agency

August 13, 2019

Randy Groom – City Manager
City of Visalia
220 N. Santa Fe Street
Visalia, California 93291

Subject: Notice of Intent to Adopt GSP

Dear Mr. Groom:

The Mid-Kaweah Groundwater Sustainability Agency (GSA) hereby provides notice to the City of Visalia of its intent to adopt the 2020 Mid-Kaweah GSA Groundwater Sustainability Plan (GSP or Plan) no earlier than 90 days upon your receipt of this notice. Considerations to adopt this document shall occur as part of a public hearing to be held on or before December 10, 2019. Once adopted, the Plan will govern sustainable groundwater management activities within the jurisdictional boundaries of the GSA for that portion of the Kaweah Subbasin (DWR Groundwater Basin No. 5-22.11). California Water Code §10728.4, pursuant to passage of the Sustainable Groundwater Management Act of 2014, obligates distribution of this notice to any city or county whose jurisdictional area lies within the area of the proposed Plan (see attached map of Mid-Kaweah GSA).

Entities that receive this notice may request to consult on the 2020 Mid-Kaweah GSA Groundwater Sustainability Plan. These requests must be received within 30 calendar days upon receipt of this notice. Written requests for consultation shall be delivered to the person and GSA office address identified below. Requests may also be E-mailed to jph@midkaweah.org.

To view the schedule for the public hearing and other outreach activities to receive comments on the Plan, to download a copy of the Public Draft GSP, or receive other information, visit the website www.midkaweah.org.

Sincerely,

J. Paul Hendrix

J. Paul Hendrix
Manager

Attachment

144 South L Street Suite N • Tulare California 93274 • Telephone (559) 686-2166

Mid-Kaweah Groundwater Sustainability Agency

August 13, 2019

Rob A. Hunt – City Manager
City of Tulare
411 E. Kern Avenue
Tulare, California 93274

Subject: Notice of Intent to Adopt GSP

Dear Mr. Hunt:

The Mid-Kaweah Groundwater Sustainability Agency (GSA) hereby provides notice to the City of Tulare of its intent to adopt the 2020 Mid-Kaweah GSA Groundwater Sustainability Plan (GSP or Plan) no earlier than 90 days upon your receipt of this notice. Considerations to adopt this document shall occur as part of a public hearing to be held on or before December 10, 2019. Once adopted, the Plan will govern sustainable groundwater management activities within the jurisdictional boundaries of the GSA for that portion of the Kaweah Subbasin (DWR Groundwater Basin No. 5-22.11). California Water Code §10728.4, pursuant to passage of the Sustainable Groundwater Management Act of 2014, obligates distribution of this notice to any city or county whose jurisdictional area lies within the area of the proposed Plan (see attached map of Mid-Kaweah GSA).

Entities that receive this notice may request to consult on the 2020 Mid-Kaweah GSA Groundwater Sustainability Plan. These requests must be received within 30 calendar days upon receipt of this notice. Written requests for consultation shall be delivered to the person and GSA office address identified below. Requests may also be E-mailed to jph@midkaweah.org.

To view the schedule for the public hearing and other outreach activities to receive comments on the Plan, to download a copy of the Public Draft GSP, or receive other information, visit the website www.midkaweah.org.

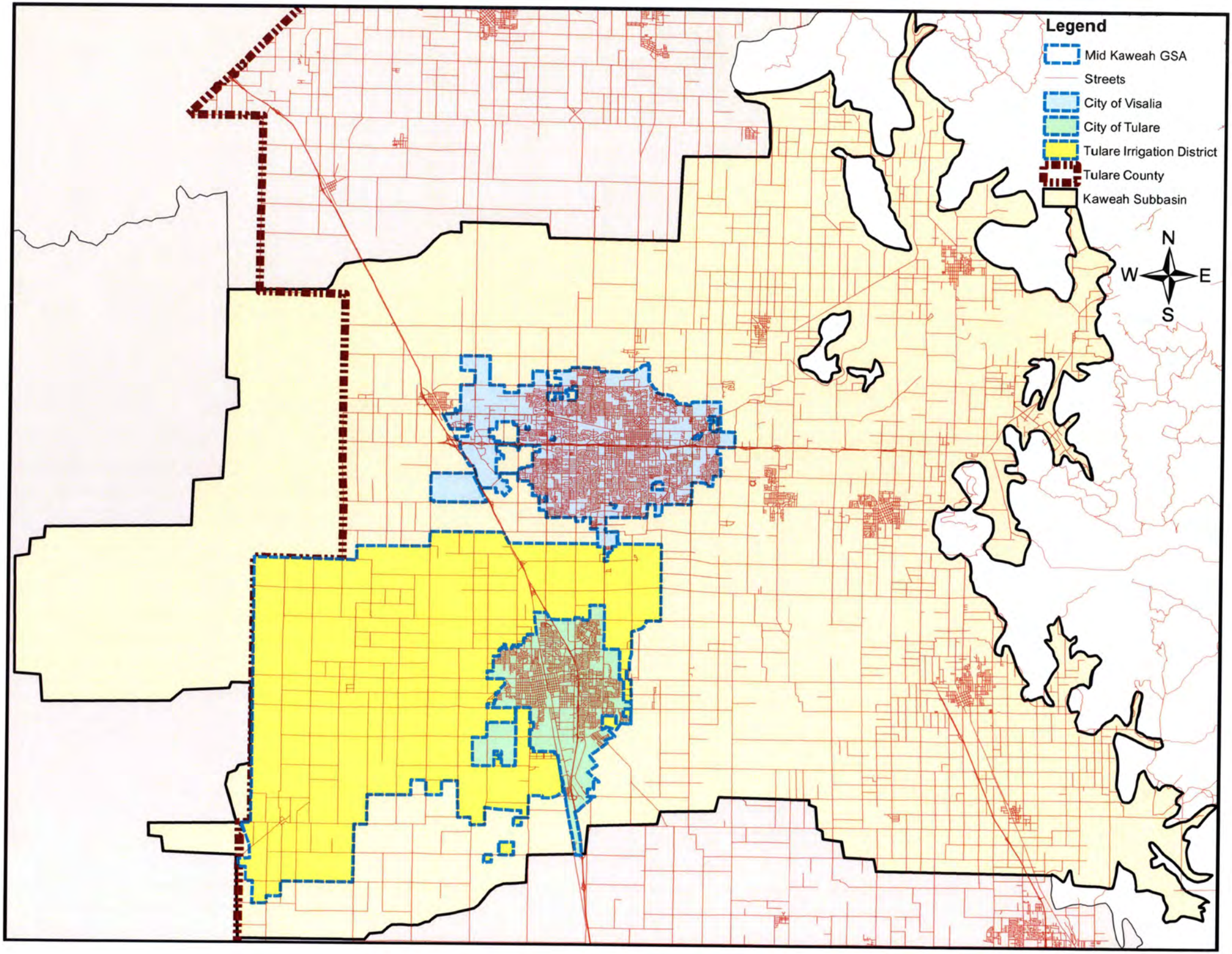
Sincerely,

J. Paul Hendrix

J. Paul Hendrix
Manager

Attachment

144 South L Street Suite N • Tulare California 93274 • Telephone (559) 686-2166


Legend
Mid Kaweah GSA
Streets
City of Visalia
City of Tulare
Tulare Irrigation District
Tulare County
Kaweah Subbasin
N
W
E
S

ATTACHMENT B
COMMENT LETTERS RECEIVED ON DRAFT GROUNDWATER SUSTAINABILITY PLAN

Gmail

Paul Hendrix <midkaweah@gmail.com>

Public comment water sustainability

1 message

"B. "Clean is Less Mean" H." <whuott2013@gmail.com> Sat, Aug 10, 2019 at 11:20 AM
To: midkaweah@gmail.com

We need to create a reservoir that was the natural way thus valley was constructed and discovered.
A Tulare lake size reservoir, all this water should never flush to the ocean!
Never did, it filled Tulare Lake!
Come on.
We has a good year but now we could have seven years drought!
No cushion, no backup, no reservoir!

Bill Huott
Visalia.

Sent from my iPad

BH-001

Gmail **Paul Hendrix <midkaweah@gmail.com>**

GSP

1 message

Layne, Kevin <kevin.layne@farmcreditwest.com> Tue, Aug 13, 2019 at 5:18 PM
To: "midkaweah@gmail.com" <midkaweah@gmail.com>

I just reviewed your recently released GPS. Has anyone put together an abridged version with the highlights that I could easily share with my customers and coworkers? I'd love to see something that explained how many acres of recharge basins were going to be added and how many acre feet they would drink, how much pumping is going to have to decrease and how fast, and how many acres are expected to come out of production and the timeline for that.

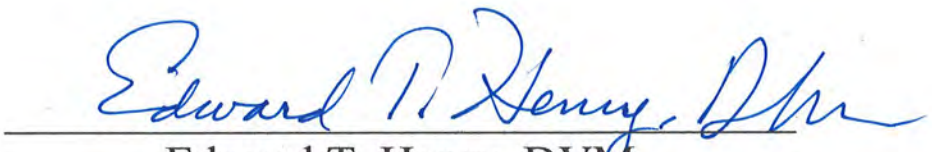
KL-001

Thanks,

Kevin

Comments to the Public Review Draft of the MKGSA Groundwater Sustainability Plan (GSP)

Submitted on September 3, 2019



Edward T. Henry, DVM

Page 1-1
1.1.2 Executive Summary

1.1.2—*"occupying some 700 sq miles"*. Simple calculation: 700 sq miles x 640 acre/sq mile = 448,000 acres within the KSB. Current accepted KSB acreage is 441,000 acres. So which figure is the most accurate? If the 441,000 acres is correct, then the *"occupying some 700 sq miles"* needs to be changed to "689 sq miles" to be more accurate (441,000 acres divided by 640 acre per sq mile = 689 sq miles). EH-001

Page 1-2

Top of the page—should add in *"possible degraded individual septic systems as the result of age, poor maintenance, and/or lack of routine service."* See attachment from Washington State Department of Health, *How Nitrogen from Septic Systems Can Harm Water Quality.* https://www.doh.wa.gov/Portals/1/Documents/4450/337-142-Nitrogen-Removal-from-OSS-FactSheet.pdf (See Attachment A) EH-002

Would add in "minimum" threshold (MT) and "measurable" objective (MO).

Page 1-4

1.4.1—Kaweah Subbasin (696 sq miles). By calculation: 696 sq miles x 640 acres/sq mile = 445,000 which is different than section 1.1.2 at *"700 sq miles"* which calculates/equates to 448,000 acres in the KSB. There needs to be agreement and accuracy on the total acreage within the KSB. EH-003

Page 1-9

Figures 1-6 (Domestic) and 1-7 (Production). Both of these figures show these two types of wells within the jurisdictional boundaries of Tulare and Visalia. With specific regard to **Figure 1-7 (Production)**, it is surprising that there are agriculture production wells within the jurisdictional boundaries of both of these cities. Is this data accurate? EH-004

Page 1-15
1.4.3.3 City of Tulare General Plan

The Conservation and Open Space Element of the Tulare General Plan also addresses the issue of water resources for the City. One of the element's objectives is to "ensure a reliable, adequate water supply to sustain a high quality of life, ***while protecting and enhancing the environment****."* EH-005

In this section of the MKGSA GSP in the Tulare General Plan it states: *to "ensure a reliable, adequate water supply to sustain a high quality of life, while protecting and enhancing the environment.". "**protecting and enhancing the [Tulare's] environment**"* to include the city's "urban forest" is critical to "*a high quality of life*". What is an "urban forest"? First, there are two major components—the public "urban forest" (parks and other city-owned trees, major shrubs and plants for which the city is charged with caring for and maintaining), and the private "urban forest" (residential, commercial, industrial, institutional trees and major shrubs and plants). One should not have priority of the other as both are very important to a city's overall general health and well-being. An "urban forest" can be defined and should include all major trees, shrubs and plants within a city's jurisdictional boundaries. It's that flora environment within a city which would be very difficult and costly to replace in the short-term no matter who owns them.

Unfortunately many (probably greater than 75%) of a city's "urban forest" trees (public and private) are "lawn trees". Lawn trees are those trees that at being watered secondarily to lawns—they only receive water because the lawn is being watered—they are direct beneficiaries of the lawn watering. If there are major mandatory reductions in outdoor landscape and lawn watering, then those trees won't receive adequate water and will become stressed and subject to a variety of stress-related diseases and infestations and possibly die. Lawns are easily rejuvenated by just reapplying water and possibly over-seeding but once major trees and shrubs are lost, they are expensive to remove and replace plus it'll be years before they (replacements) reach maturity and provide maximum "urban forest" benefits. Dead mature tree removal is expensive costing anywhere from $800 to $1,200 per tree. This will be an added financial burden to residential homeowners especially since Tulare is designated as a "disadvantage community" (see **Page 1-25, 1.5.2.11 Disadvantaged Communities** "*The City of Tulare has been identified as a Disadvantaged Community,...*"). The use of a city's municipal groundwater supply is a "reasonable and beneficial" of water in order to have a viable "urban forest".

"Environmental Stewardship" is term originally coined by UC Davis. With regard to a city's "urban forest", this term has application in that there are two important components. One is "Conservation" and the other is "Preservation". Conservation of a city's groundwater supply must be balanced with the Preservation of a city's "urban forest". With SGMA the focus is sustainability of groundwater but little consideration has been given to preservation of a city's "urban forest" (as well as agriculture's "rural forest"). Draconian mandatory reductions in outdoor landscape water usage will have devastating affects on a city's (Tulare and Visalia) "urban forest". A resultant massive die-off in the range of 20-40% or more of trees (and major shrubs and plants) is unacceptable for any city—there has to be a balance, an "Environmental Stewardship" approach (Conservation + Preservation).

There needs to be a "Double E" approach for Tulare (and Visalia) in order to maintain and have its "urban forests" thrive. The first "E" is for Education. Educate the residents of Tulare just how important the city's "urban forest" is. Educate them on water conservation and efficiency measures such as "Cycle-Soak" watering regimes that can be

applied to outdoor landscape water usage (https://crconserve.com/188/Cycle-Soak Note: this website is listed only as an example of the educational and informational resources available on the internet regarding "Cycle-Soak" methods. Search by "Cycle-Soak" or "Cycle & Soak".), and the "Tree Ring Irrigation Contraption—TRIC", (https://ccuh.ucdavis.edu/tric). (Note: there are soaker hose setups of various lengths that will do the same thing as TRIC that can be purchased for substantially less than the TRIC product at Lowe's, The Home Depot, Tractor Supply, etc.) Posts of this sort of information and/or web links to this information should be on the city's website. Use informational flyers in the city's utility bill several times annually. Use social media. Engage with the UC Cooperation Extension's Tulare-Kings County Master Garden Program as an additional educational resource. (https://ucanr.edu/sites/UC_Master_Gardeners/ and https://ucanr.edu/sites/UC_Master_Gardeners/Drought_Information/)

The second "E" is for Enforcement. Unfortunately, Education will not reach all residents, businesses, etc. For those that are just not informed (or don't want to be) or are just plain defiant regarding water usage, this approach usually is a good incentive—it hits their wallet. There's lots of unnecessary water wastage and abuse daily—water running in the gutter—not just some over-spray onto a driveway or sidewalk which is often unavoidable but 10s to 100s of gallons unnecessarily flowing into the gutter, and watering off-schedule and at the wrong time of day particularly when evaporation rates are the highest. This wastage/abuse is not limited to the private sector, it's also seen on the city's side—they're guilty too. They need to get their own house in order before being too heavy handed on the private sector. Hopefully after the first citation there will be an incentive to come onboard with the Educational portion of the "Double E" approach.

A number of cities in California have a department or division of Urban Forestry. Visalia has a Parks & Urban Forestry Division but not Tulare—Parks only but not Urban Forestry. One recommendation is that Tulare rapidly moves forward in establishing an Urban Forestry Division.

Here is a small list of benefits attributed to maintaining a city's "urban forest":

--Trees (all plants) produce oxygen, clean the air, cool the air and reduce global warming by removing CO_2 (remember that CO_2 is plant food—without it there wouldn't be trees and other plants including the vegetables we eat).

--Trees and sidewalk gardens reduce flooding and water pollution

--Trees and sidewalk gardens increase revenues in shopping districts

--Trees make the wait for a bus feel shorter. The more mature trees are present, the shorter the wait time is perceived.

--Street trees and sidewalk gardens create a physical and mental barrier between the street and the sidewalk, keeping pedestrians, children and pets out of harm's way.

--Street trees and sidewalk gardens provide a natural habitat for birds and insects.

--Street trees absorb traffic noise and increase privacy.

--Street trees and sidewalk gardens build neighborhood and civic pride.

For a more extensive list of resources on this topic, do a Google search on "the value of an urban forest".

Tulare's groundwater usage compared to the Sustainable Yield for the KSB is only 2.7% (Tulare annually pumps slightly less than 18,000 AF—data from the City of Tulare. The Sustainable Yield for the KSB is approximately 660,000 AF—date from MKGSA GSP—Public Review Draft, Page 6-3 Table 6-2: GSA Apportionment. Calculations: 18,000 AF divided by 660,000 AF = 2.7% of Sustainable Yield.) Looking at Tulare's groundwater pumping relative to the Total Net Extraction for the KSB is 2.25% (18,000 AF divided by 798,400 AF from Table 32, Page 109, Basin Setting Components Draft March 2019 Revision) and for the MKGSA, Tulare's percentage is 9.36% as a percent of the Total Net Extraction (18,000 AF divided by 192,200 AF from Table 2-1, Page 2-3, MKGSA GSP—Public Review DRAFT).

Lastly, the average annual groundwater pumped from 2010-2017 on an AF/acre of land [within their respective jurisdictional boundaries] for Tulare and Visalia was 1.30 AF/acre and 1.32 AF/acre, respectively. Whereas during that same time period the total applied water for crop irrigation purposes within the Tulare Irrigation District (TID) was approximately 3.20 AF/acre with 2.14 AF/acre coming from groundwater pumping. The two cities, individually, are pumping about 39% less groundwater than the growers in the TID. If the Sustainable Yield (SY) on an AF/acre basis within the KSB is around 1.50 AF/acre (660,000 total AF SY for KSB divided by 441,000 total acres within the KSB = 1.496 rounded up to 1.50 AF/acre) then both cities pumped less than the SY on an AF/acre basis: Tulare at 1.30 AF/acre and Visalia at 1.32 AF/acre versus 1.50 AF/acre for the KSB. (NOTE: Data on groundwater pumping was obtained directly for the City of Tulare, the City of Visalia, and the TID for that time period 2010-2017.)

To impose heavy-handed restrictions of outdoor landscape usage is grossly unnecessary and would have very negative impacts on maintaining the viability of Tulare's "urban forest". It is hoped that the City of Tulare recognizes the "reasonable and beneficial use" of landscape watering, and now the State needs to be convinced of its importance also. California cities are easy targets as they are required to report groundwater pumping (metered pumping), and to impose cutbacks in the area of 30% is only a fraction of all groundwater pumping. The Public Policy Institute of California (PPIC) has stated that urban water usage is only about 10%-12% of the total water usage in California.
The above comments could also be included in **1.5.2 -- *Beneficial Uses and Users*** on **Page 1-23.**

Page 1-16

At the bottom of the page, *"...Communication & Engagement (C&E) Plan, developed by Stantec for MKGSA and adopted on **August 14, 2018** and included as **Appendix 1C**."* The posted document in **Appendix 1C** has a date of August 7, 2018, Draft: Version 4, rather than the **August 14th** date cited in the above quoted text. There should or must be a later version to reflect the noted date of August 14, 2018, as the database of the August 7, 2018 document is definitely not up-to-date. The last entry in that database of August 7, 2018, is the Waksache Tribe. In **Appendix D: Communications and Engagement Activities Database** version that I have there are a number of **Organization Names** following the Waksache Tribe entry. Those missing organizations in the August 7, 2018 version are in my version are the: Tulare County Agricultural Commissioner; University of California Cooperative Extension (Tulare and Kings County Master Gardener Program); University of California Davis Veterinary Medicine Teaching and Research Center; Western United Dairymen; Milk Producers Council; and the California Milk Advisory Board.

EH-006

Also it's probably too late for this version of the MKGSA GSP draft, but in the future it would be very helpful when a **Figure**, **Table**, **Appendix**, etc. is referenced that one could move the cursor to that item and click on it and it would take you directly to that item. Right now, one has to get out of a document and search in the Table of Contents in order to go to the referenced item(s)—very inconvenient and time consuming. I had to do a lot of searching (and time consuming) to find **Appendix 1C** noted above. Clicking directly on **Appendix 1C** would have been much more efficient.

Also see **Page 1-26**, the last sentence of the last paragraph. *"All outreach efforts and engagement activities were tracked in a Community Engagement and Activities Database (CE & AD) that was **continuously monitored and updated**, consistent with DWR Emergency Regulations §354.10 (b) and §354.10 (d)."* As noted above, the Communications and Engagement Activities Database is not up-to-date.

Page 1-24

1.5.2.6 Municipal and Industrial Well Operators

"The City of Tulare and the City of Visalia account for about 20 and 30 percent of the land area within the MKGSA, respectively." More accurately, Tulare's land area within the MKGSA is **12.7%** (13,631acres divided by 107,000 acres in MKGSA) and Visalia's land area is **21.7%** (23,197 acres divided by 107,000 acres in MKGSA) for a total urban acreage of approximately 37,000 acres or **35%** (~37,000 acres divided by 107,000 acres) of the MKGSA acreage.

EH-007

Page 2-2
2.3 GSA Water Budget

In the first sentence of the second paragraph starting with *"...Section 6 of this GSP..."* – after "Section 6" should insert reference to **Table 6.2** so as to read "…Section 6 **in Table 6.2** of this GSP…". By adding in **Table 6.2** makes for better clarity.

EH-008

Also see on **Page 6-3 (Section 6 Water Supply Accounting)** in the last sentence, *"...Yet, as acknowledged in Section 2 of this Plan,..."*, reference to **Table 2-1** should be inserted after "Section 2" so as to read *"...Yet, as acknowledged in Section 2* ***in Table 2-1*** *of this Plan,..."*. By adding in **Table 2-1** makes for better clarity.

Page 2-4
2.4 Management Areas

With regards to the 4th bullet point, *"Financial contributions by each Member towards projects may depend on an evaluation of existing water management agreements among them and on the water accounting framework (Section 6) which will define the water budget components of each Member. These contributions may not be equal and would therefore vary depending on the management area."*. It states that "*the water accounting framework (Section 6) which will define the water budget components of each Member.*". Can further explanation be given as to how the "water [supply] accounting framework" (WSAF), **Table 6-2** in **Section 6**, will define the "water budget", **Table 2-1** in **Section 2**? How are they related? I thought each one was independent of the other—the WSAF being based on a legal construct concept/definition whereas the water budget is the physical movement of water? It is curious that by combing those two figures for the MKGSA there is essentially a 50,000 AF range (swing) from a +38,000 AF surplus in the WSAF (**Table 6-2**) to a -13,000 AF deficit in water budget (**Table 2-1**). So is/are WSAF data/inputs considered the independent variable (driver), and then the water budget would then be considered the dependent variable of the WSAF? With the approximate -13,000 AF deficit in the water budget is this the more realistic figure/calculation that should be used by the three management areas (Tulare, Visalia, & TID) when establishing Minimum Thresholds and Measurable Objectives?

EH-009

Page 3-3
3.2.1 Causes leading to Undesirable Results

At the end of the first sentence should add after "*…interconnected surface waters...*" the 6th Undesirable Result which is "*seawater intrusion*". All 6 Undesirable Results (UR) should be listed in this opening sentence as seawater intrusion is the last listed UR in section **3.2.1.6 Seawater Intrusion** at the bottom of the page.

EH-010

3.2.1.1 Groundwater Levels

From the Sustainable Management Criteria – BMP document, November 2017, page 4, under the heading ***Sustainability Indicators,*** the first indicator, "Chronic lowering of groundwater levels…" I would like to add a direct quote from there to the end of the sentence at the top of **Page 3.4** from this section of the BMP which states, *"Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and groundwater recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods."* A lot of people on these GSA boards, committees, etc. are not aware of the above "wiggle room" statement allowed by the State--this is a very important point. To me, the State recognizes that agriculture may have to overdraft during a declared drought period in order to be economically sustainable but then it must make-up for that overdraft in normal and wet years. After all, the primary purpose of SGMA is to stop the chronic lowering of our groundwater, and we have until 2040 to bring our groundwater into sustainability.

EH-011

In **Section 3.2.1.1 Groundwater Levels** should now read, *"Undesirable results associated with groundwater level declines are caused by over-pumping or nominal groundwater recharge operations during drought periods such that groundwater levels fall and remain below minimum thresholds. Over-pumping and lack of recharge is area specific, and some GSA Management Areas experience greater adverse impacts than others.* **[However],** ***Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and groundwater recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods."*** . (Note: The bold, italic insert above is from the Sustainable Management Criteria – BMP document, November 2017, page 4)
Also note that on **Page 5-2, Section 5.3.1.2 Undesirable Results** has the complete text for the definition of undesirable results for groundwater elevations (including the *"...* ***Overdraft during a period of drought****..."* caveat sentence for additional clarification): *"Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon.* ***Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and groundwater recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods."***

Page 3-4
3.2.1.3 Land Subsidence

EH-012

It states, *"...Over-pumping during drought periods, which may result in new lows in terms of groundwater elevations, is of particular concern based on current scientific understanding of subsidence trends in this region.* ***Regional correlations of water levels***

v. subsidence trends remain difficult to ascertain... " and yet on **Page 4-6, Section 4.2.3 Representative Monitoring,** in the second sentence of the second paragraph it states, "*...The USGS and DWR have utilized changes in groundwater elevations to estimate changes in storage and* ***have demonstrated a correlation*** *between groundwater elevation and subsidence...".* This appears to infer a stronger correlation of groundwater elevations and subsidence than what was stated in **Section 3.2.1.3** where is states, *"...Regional correlations of water levels v. subsidence trends remain difficult to ascertain...".* So for the Kaweah Subbasin, in general, and the MKGSA, in particular, how strong is the correlation? Because of differential subsidence and regional affects on critical infrastructure, groundwater elevations may or may not have a good or strong correlation with land subsidence—it that correct? It's my understanding that within the KSB there are some regions of strong correlations for groundwater elevations and land subsidence, and for other regions the correlations are quite weak? Is the language in those two sections in conflict with each other?

EH-012 (contd.)

Also see **Page 4-15, Section 4.10.1.3 Land Subsidence Data Gaps** where is states, *"...Additionally, there was not sufficient data to find a good correlation between pumping and land surface subsidence...".* With this text there is some conflicting information to the casual reader on the relationship between groundwater elevations [due to pumping] and land subsidence. (NOTE: Perhaps I'm "beating a dead horse" here with semantics and parsing words in those three above referenced sections on the correlation between groundwater elevations and land subsidence. What will DWR accept here? As noted there are data gaps and perhaps by 2025 with better monitoring sites and technology there will be a better understanding of that relationship between groundwater elevations and subsidence whether for better or worse—meaning a more positive correlation or a less positive one, or good in one region and not good in another.)

Page 5-2
5.3 Minimum Thresholds
5.3.1 ***Minimum Thresholds – Lowered Groundwater Levels***
5.3.1.1 Overview

EH-013

In the third sentence of the first paragraph should be inserted **"minimum threshold (MT)"** before *"...groundwater.."* so as to read, *"...If any of the representative monitoring wells fall below the* ***minimum threshold (MT)*** *groundwater elevation in its respective zone, undesirable results could occur...".*

Page 5-5
Table 5-3: Summary of Groundwater Level Sustainability Management Criteria for MKGS

EH-014

In the first row under the heading of Well ID, **KSB-0922**, and under the **Measurable Objective** heading, the **fmsl** figure/number is listed as a minus 19 (-19) which is incorrect as it should be positive 19 fmsl. In **Appendix 5B** ***Groundwater Level***

Sustainable Management Criteria Hydrographs the first hydrograph is for well **KSB-0922** which definitely shows a Measurable Objective of +19 **fmsl** and not a negative figure. Of the 42 listed Well IDs in **Table 5-3,** well **KSB-0922** is the only well I compared or cross-checked the numbers to the hydrographs shown in **Appendix 5-B**. (Due to the tediousness of going completely through each well in that table and comparing/cross-checking them to the hydrographs, and the time constraints of thoroughly going though this GSP, I did not examine the data for each of the other 41 wells listed. Hopefully well **KSB-0922** is the only well in **Table 5-3** in incorrect data.)

EH-014 (contd.)

Section 5 Appendices:

Although the following comments may be out of contextual order but while in **Section 5 Appendices** (from above), I also looked at **Appendix 5D: Water Storage Additions – An Alternative Approach.** In **Figure 1: Hypothetical Representation of Measurable and Optimal Objectives** (on the last page), the four **Interim Milestone** numbers in parenthesis are shown as positive numbers. Shouldn't they be listed as negative numbers as all are below zero (0) with regards to storage depletion on the y-axis? They should be -21, -33, -40, & -42 TAF. Also the **Storage Depletion** label/units in parenthesis should be **(TAF)** rather than the **(AF)** as currently shown.

EH-015

Page 5-7

In the paragraph beginning with the sentence, *"...The results of this well impact analysis..."*, there is reference to *"...**Figure 5-2** is an example plot showing 144 domestic wells in Hydrogeologic Zone 2..."*. None of the plots and statistical well summaries categorized by zone (1-10) have listings by **Figures** which makes it difficult to locate what is listed as **Figure 5-2**. Can this be corrected to add a **Figure x.x**, accordingly, to each of the plot and statistical well summaries? Also not seeing the well impact evaluation summaries referred to in the following sentence, *"...The **well impact evaluation summaries** for all zones (**Appendix 5C**) indicate that 18 percent of agricultural wells, 9 percent of public wells, and 21 percent of rural residential wells including domestic wells..."*. There is no summary for all zones—only plots by each zone without **Figure x.x** assignments.

EH-016

Page 5-13

5.3.3 *Minimum Threshold– Degraded Water Quality*

5.3.3.3 Minimum Thresholds

In the next to the last sentence of the last paragraph of this section on degraded water quality (**Page 5-13**) it states, *"...The relationship between groundwater levels and degradation trends, if any, is site-specific."*. At the June 14, 2019, meeting of the GKGSA's Combine Meeting of the Rural Communities Committee and Stakeholder Committee, Agenda Item 4 (handout), there were a total of 13 data graphs presented from various HZs in the KSB: 3 for Arsenic and 10 for Nitrates. All 13 graphs showed either a very poor correlation and/or no correlation between groundwater levels and water quality

EH-017

for those 2 constituents/substances. It is paramount that all GSAs in the KSB are not in some way or another held "hostage" to [degraded] water quality issues. This lack of correlation may perhaps be unique to the KSB (but doubtful), and water quality issues should not be the driver of projects and management actions that would have a positive outcome on preventing the undesirable results of other sustainability indicators, particularly groundwater levels, groundwater storage, and land subsidence.

EH-017 (contd.)

Page 5-20
5.4.1 *Groundwater Level Measurable Objectives*

In the third to the last sentence in the last paragraph on Page 5-20, it states, *"...MKGSA anticipates that coordination will focus on the Management Areas where water budgets remain in deficit, depending on degree..."*. Obviously there is a water budget for the MKGSA but are there also individual waters budgets for the 3 Management Areas—City of Tulare, City of Visalia, and TID? If there are separate water budgets for each Management Area, when will they be published? This is the first I've heard of additional water budgets [within the MKGSA], and I may be totally mis-reading that sentence.

EH-018

Page 5-21
5.4.2 *Groundwater Storage Measurable Objectives*

In the second sentence of the paragraph following the bullet points it states, ***"...Figure 5-3 shows the results of this analysis indicating that the measurable objective has 641,000 AF in storage at 2040, and the optimal objective has 1,356,000 AF in storage at 2040..."***. When going back to **Figure 5-3** on **Page 5-10**, that figure shows the Optimal Objective at 1,340,000 AF rather than the number of 1,356,000 AF cited above—that's a difference of 16,000 AF (which is almost the amount of groundwater pumped annually by the City of Tulare at roughly 18,000 AF). Which number is correct?

EH-019

Page 5-21
5.4.3 *Water Quality Measurable Objectives*

In the second sentence of first paragraph under the heading, **5.4.3 *Water Quality Measurable Objectives*** it states, *"...All future projects and management actions implemented by the MKGSA are designed to avoid causing further groundwater quality degradation..."*. It's my firm understanding that the primary charge of SGMA is to stop the chronic lowering of groundwater which will be accomplished through projects and management actions. Projects and management actions most likely will always benefit groundwater quality but there's also a small risk that somehow it (water quality) may be negatively impacted such as unintentional plume migration. I'm very concerned that stating *"...all future projects and management action...are designed to avoid causing further groundwater water degradation..."* could be a potential segue into litigation through misinterpretation, and that sentence should be stricken from this GSP in the final

EH-020

document version for submission to DWR. Again, the design of future projects and management actions should be heavily geared towards the sustainability indicators of chronic lowering of groundwater levels, loss of groundwater storage, and land subsidence through preventing or eliminating those undesirable results—hopefully groundwater quality will be a [secondary] beneficiary of those projects and management actions, and not the primary focus as currently stated above. Again, it should be noted that there is a very poor correlation between groundwater levels and water quality (for Arsenic and Nitrates) as shown in the graphical data presented at the meeting of the GKGSA's Combine Meeting of the Rural Communities Committee and Stakeholder Committee on June 14, 2019 (see reference to **Page 5-13** above.)

EH-020 (contd.)

Page 5-23 Table 5-3

In **Table 5-3** in the **Measurable Objective** column there are no units, i.e. "inches", nor is that a timeframe. Can those additions be made to the **Measurable Objective** column? Also it's not clear as to how the **Measurable Objective** numbers were determined.

EH-021

Page 6-4
6. Water Supply Accounting
6.3 Water Accounting Framework Allocation

In the third sentence of the first paragraph it states, *"...Whereas the average water accounting framework water balance is positive, the comparable hydrogeologic water budget is negative by about 13,000 AF..."*. After the word *"positive"* should insert ***"at around 38,000 AF"***, in order to be consistent with the negative *"13,000 AF"*. With the insert ***"at around 38,000 AF"*** that sentence would now read, *"...Whereas the average water accounting framework water balance is positive* ***at around 38,000 AF****, the comparable hydrogeologic water budget is negative by about 13,000 AF..."*. This would help the reader to see both the positive and negative number for better clarity.

EH-022

With regard to **Figure 6.1**, several additions would make this figure more understandable. First the label on the y-axis needs to be **Groundwater Storage**, and the *"Change in Acre-Feet"* needs to be in parenthesis, *"(Change in Acre-Feet)"*. Lastly, to the right of the two horizontal lines, in the upper line, **Shared/Owner Ave**, put in the *38,000 AF* figure to reflect what is in the text above, and for the lower line, **Hydrogeologic Ave**, put in the negative/minus *-13,000 AF*, again to be consistent with the text description above on **Page 6.4** and give the reader better clarity of that figure.

Page 7-1
7. Projects and Management Actions
7.1 Summary

EH-023

In the first sentence (4th line) of the second paragraph on **Page 7.1** it states, *"...future urban and agricultural conservation,..."* and yet on **Page 7.2**, in the **Table/Chart** under the column heading, **Management Actions:**, for the bullet point, **Agricultural Water Conservation and Management Program**, none of the four boxes are checked for the 4 Sustainability Indicators and states, **Not Applicable**, whereas the bullet point, **Urban Water Conservation Program**, 2 of the Sustainability Indicators, **GW Levels** and **Reduction in Storage**, are checked. Why does the **Agricultural Water Conservation and Management Program** get a pass on conservation? I would have thought that all 4 Sustainability Indicator boxes for the **Agricultural Water Conservation and Management Program** would have been checked—after all agriculture is by far and away the largest extractor of groundwater. This is not to pit ag versus urban but putting an unrealistic burden on urban areas (cities) is counter productive. I'll refer you back to my comments on Pages 2 through 4 regarding the "urban forest" and the actual urban water usage.

EH-023 (contd.)

Also under the heading of **Extraction Measurement Program** it states **Not Applicable**. Although SGMA doesn't require "metering", the regulatory agencies will never fully have an accounting of groundwater extraction until there is metering. All the "players" who have "straws in the punch bowl" need to be metered at some point—realistically by 2025. Meters will be part of the costs of doing business. Those "players" who are designated or self-designated as *"de minimis"* (less than 2 AF annually) need to prove they are truly *de minimis*, and the only accurate and reliable way to demonstrate that is by being metered. Yes, one could argue that the *de minimis* user's groundwater extraction is probably less than 5% of the total groundwater pumped but again if the regulatory agencies want to know ALL extractors and to have equality, then metering is the only answer. Right now the small 3-5 acre "ranchettes" will get a pass on SGMA whereas a city resident (and I'm a definite *de minimis* user) may have draconian reductions impose on outdoor landscape usage for my "urban forest".

Page 7-33
7. Projects and Management Actions
7.4.2 *Groundwater Extraction Allocation Implementation*
7.4.2.2 Status of Implementation

In the first sentence of the first paragraph it states, *"...As identified in GSP Section 6.1, the MKGSA's water budget shortfall is estimated to be **fairly negligible**.."*. After *"**fairly negligible**"* consider inserting *"**by about -13,000 AF**..."* so as to read, *"...As identified in GSP Section 6.1, the MKGSA's water budget shortfall is estimated to be **fairly negligible** by about -13,000 AF...."*. Then in the second sentence of the same paragraph after the word *"...surplus..."* consider inserting *"**at around 38,000 AF**"* so as to read, *"...a surplus **at around 38,000 AF** is in fact inferred based on preliminary water accounting framework..."* By inserting those figures/numbers in those two sentences would give the reader more clarity regarding the actual numbers, and would spare [the reader] the need and time to refer back to Section 6.1 in order to verify those numbers—just makes for an easier read.

EH-024

In the third sentence of that same paragraph there is a major typo reference/category—**water budget** versus **water accounting framework**. It states in part, "…*hydrogeologic evaluations will continue to determine the reason for the differences between the* ***water budget surplus*** *and the conditions of decline..".* That's incorrect as it's not the ***"…water budget surplus…"*** which in fact has a deficit by about -13,000 AF but rather it's the ***"…water accounting framework…"*** that has a 38,000 AF surplus. With the correction that portion of the sentence should now read, *hydrogeologic evaluations will continue to determine the reason for the differences between the* ***water accounting framework surplus*** *and the conditions of decline..".*

EH-024 (contd.)

Page 7-34
7.4.2.3 Permitting and Regulatory Compliance

In the second sentence of the first paragraph it states, *"...this initial phase of an allocation program shall exclude those well owners who extract less than two AF per year (i.e., de minimis extractors)...".* Again, I will challenge how a *de minimis extractor* will be identified? So if one lives in the county (not within the jurisdictional boundaries of a city—i.e. Tulare or Visalia) on a 2-3 acre parcel with a half-dozen head of beef cattle, a couple of horses, irrigated pasture(s), some fruit and nut trees, a vegetable garden, a ½ acre green lawn, etc. that will be declared a *de minimis extractor*—there's no way that parcel/residence is a *de minimis extractor*? I live in Tulare on just under 1/3 of an acre, and I am definitely a *de minimis* user of groundwater. But because I'm within the jurisdictional boundary of Tulare, I won't have the same rights [to use that groundwater] as a *de minimis extractor*. Granted I don't have the risks of a well going dry or potentially degraded water quality or other well associated operation and maintenance concerns as one who has a domestic well in the county but something is wrong with this picture. Make *de minimis extractors* prove they are truly *de minimis*—keep the playing field level and equitable. Meter the *de minimis extractor*.

EH-025

Page 7-41
7.4.6 *Urban Water Conservation*
7.4.6.3 Permitting and Regulatory Compliance

In the third line of that paragraph it states, "…*mandates of a* ***20 percent reduction*** *in urban per capita water usage by 2020...".* What is the base year for the reduction? During the drought years 2012-2016, cities were mandated by the governor to cut the water usage by 28-32% from the base year of 2013. Will 2013 be used again as the base year?

EH-026

Page 7-43

The last bullet point at the bottom of the page states, "*…A determination by the GSA to **not regulate any de minimis extractor**, i.e., any well owner pumping two acre-feet or less annually…*". Again, I'll voice my concern that in fact a "*…**de minimis extractor**…*" should have to prove the ***de minimis extractor*** designation or classification—metering will be the only way to validate such a claim. EH-027

Page 7-46
7.5 Implementation
7.5.1 *Implementation Schedule*

In the first sentence of the first paragraph on **Page 7-46** (below **Figure 7-5**) it states, "*…coupled with this GSA's assigned share of the Subbasin **water budget** as articulated in Section 6 of this Plan…*". Isn't it the **water accounting framework** which present in **Section 6**? Instead of referring to the "***water budget***" shouldn't replacing the term ***water budget*** with the term ***water accounting framework*** be more correct/accurate as it is articulated on **Page 6-3** in **Section 6** of this Plan, in **Table 6-2** and **Table 6-3**. EH-028

Page 7-48

In the first paragraph below **Table 7-1**, the third sentence states, "*…This range of recharge accomplishments is depicted in the "Cumulative Added Storage" bandwidth on **Figure 7-5**…*" It should read ***Figure 7.6***, not ***Figure 7-5.*** EH-029

Page 7-50
7.6 Benefits Analyses
7.6.1 Surplus Water Recharge Analysis

At the bottom 1/3 of **Table 7.2** under the heading, **Combined**, it has "**SVP Surplus**"—shouldn't read "**CVP Surplus**"? EH-030

Page 7-51

In the paragraph below **Table 7-3** in the second sentence of that paragraph it states, "*…Technical Memorandum (TM) "Estimate of Future Friant Division Supplies For Use in Groundwater Sustainability Plans," Friant Water Authority, December 2018, included as an appendix to the Basin Setting report…*". To facilitate easier location of this Technical Memorandum (TM), it should be noted or referenced that this document is in **Appendix D. Friant Water Authority Future Water Supply Study**, of **Section 2 Appendices – 2A Kaweah Subbasin Basin Setting Componets**. At the MKGSA EH-031

website the **Basin Setting Components** document, due to its MB size, is split—**Pages 1-200 (23.2MB)** and **Pages 200-373 (20.4MB)**. The Friant document, referenced, above is in the second half, **Pages 200-373**, and is the very last document listed.

EH-031 (contd.)

Page 8-1
8. DWR Reporting
8.1 Annual Reporting Summary

EH-032

In the first paragraph note that September only has 30 days.
*"...which will be WY 2019 (October 1, 2018 to **September 31**, 2019)..."*

ATTACHMENT H

How Nitrogen from Septic Systems Can Harm Water Quality

Washington State Department of Health

Why do we care?

Septic systems, also known as on-site sewage systems (OSS), are designed to reduce pollution by treating the solids, pathogens, organics, and ammonium (a form of nitrogen) in human waste before it is discharged to the soil. By design, bacteria consume ammonium and convert it to nitrate either in the drainfield or through aeration.

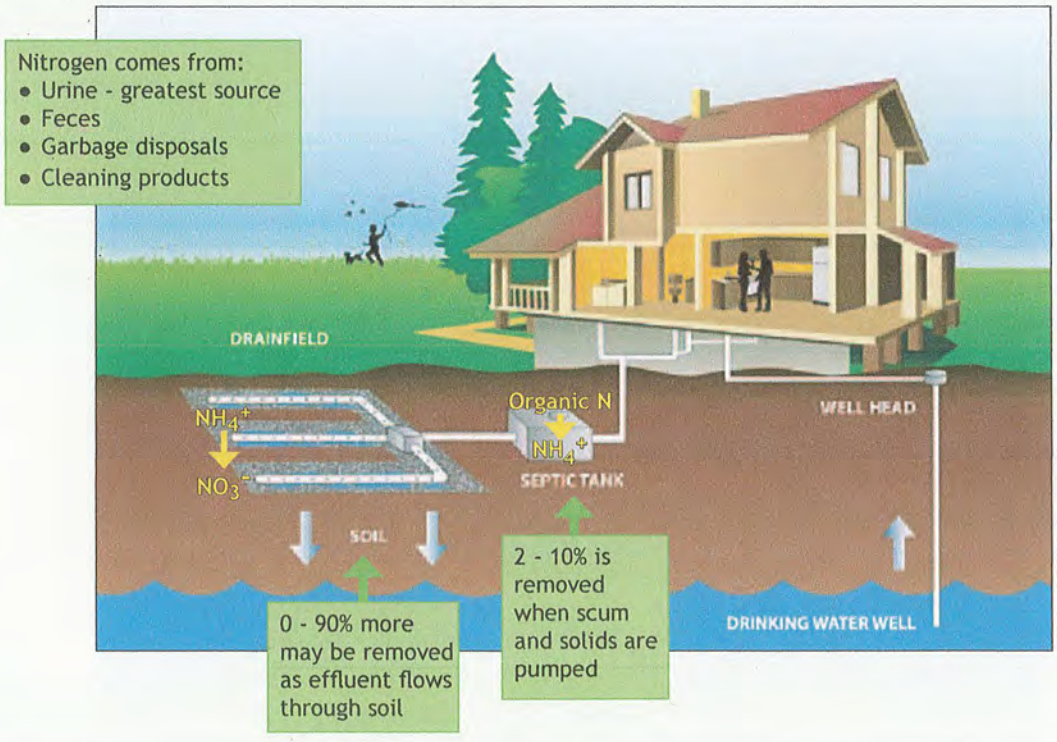
Wastewater treated by a properly functioning OSS generally contains significant amounts of nitrate. After leaving a properly functioning drainfield, nitrified effluent flows through soil. What happens to nitrates in soil is highly variable. It may be used by plants, flow to ground or surface water, or be consumed by bacteria. The amount of nitrate removed after leaving the drainfield varies between 0 and 90% depending on site conditions.

An improperly functioning OSS can result in excessive ammonium/ ammonia or nitrates discharged to the soil, where it can flow to groundwater or surface water and cause problems.

Moderate levels of nitrate in drinking water can cause blue baby syndrome and other adverse health effects. Excess nitrate can also harm the environment by increasing algal growth and decreasing oxygen levels in Puget Sound and lakes.

How do on-site systems treat nitrogen from human waste?

Nitrogen removal in wastewater varies depending on the type and concentration of the waste and the type of OSS used to treat it. Nitrogen concentrations are generally between 50 and 60 milligrams per liter (mg/L) in domestic wastewater but can be higher if a home uses low-flow fixtures or if the waste is coming from a school, campground, or office building. The drawing below shows nitrogen transformations as effluent flows through an OSS.



How Nitrogen from Septic Systems Can Harm Water Quality

Some nitrogen that enters the septic tank is removed when the scum and solids are pumped from the tank. In most OSS, oxygen loving bacteria convert ammonium to nitrate in the drainfield. This process is called "nitrification" and the effluent becomes "nitrified."

Advanced systems that aerate and recirculate wastewater can remove even more nitrogen (up to 60 percent). In the Puget Sound region only about 20 percent of OSS are advanced systems. Systems that include oxygen-free conditions in part of the treatment process can remove over 90 percent of nitrogen through a process called denitrification. Denitrification converts nitrate to nitrogen gas which is released to the air. Denitrification requires a type of bacteria that grow in oxygen-free conditions. Very few nitrogen reducing systems are used in the Puget Sound region. Some advanced systems are registered to remove nitrogen.

A properly designed drainfield can also increase nitrogen removal. Characteristics such as the size of the drainfield, the rate wastewater is released to soil, the depth of soil, how the wastewater is applied and distributed (such as drip irrigation or trenches, gravity or pressure), and vegetation management over the drainfield can all influence what happens to the nitrogen once it enters and eventually leaves the drainfield.

What is the role of soil?

Nitrogen removal in the soil is highly variable. Denitrification and plant uptake of nitrates are the two ways soil can remove nitrogen from wastewater. A deeper, moist, finer textured soil will generally remove more nitrogen than a shallow coarse soil. Nitrates move slower through fine soils and have more opportunity to be used as food by plants. Fine moist soils also allow the growth of bacteria required for denitrification. This is especially true in the wet climates of western Washington and Puget Sound.

Denitrification treatment system study

Recognizing the need for more treatment options to affordably reduce nitrogen in wastewater, we collaborated with the University of Washington to study the performance of three public domain treatment systems.

The 2013 study evaluated the effectiveness of the three systems listed in the table below and the recirculating gravel filter (RGF) as a stand-alone system with the goal of reducing total nitrogen concentrations in wastewater below 20 mg/L. For more details on the study go to our Denitrification Verification Project web page.

The three treatment processes reduced effluent nitrogen concentrations well below the goal of an annual average of 20 mg/L and the RGF achieved a 51 percent reduction to levels just above the target concentration.

Treatment Process	Average Total Influent Nitrogen Concentration	Average Effluent Nitrogen Concentrations				Total Nitrogren Removal
		NH3-N (mg/L)	NOx-N (mg/L)	Organic N (mg/L)	Total N (mg/L)	
Recirculating Gravel Filter (RGF)	48.6 mg/L	0.7	20.9	2.2	23.9	51%
Vegetated RGF		4.1	9.5	1.6	15.1	69%
Enhanced RGF		6.8	0.6	1.3	8.6	82%
Vegetated Woodchip RGF		0.5	2.4	1.1	4.0	92%

The Pacific Northwest Salmon Center installed an RGF woodchip bed systems to further document their long-term performance. To learn more about PNSC's project go to their OSS nitrogen reduction web page.

Addendum on September 5, 2019

Page 7-33
7.4.2.2 Status of Implementation

In the third sentence of the first paragraph there is an additional correction which was missed in my original comments' submission on September 3, 2019, and it states, "…*Despite the **water budget** surplus, as evidenced in Section 2 (Basin Setting **Appendix 2A**), groundwater levels and storage have been in decline within the Mid-Kaweah area*…". In fact, there is not a **water budget** surplus as stated above (go to the MKGSA website and see **Section 2 Appendices 2A**, **Page 109**, **Table 32,** which shows a **-77.6 TAF** deficit for the entire Kaweah Subbasin**)**, but rather it's the **water accounting framework** which shows a surplus within the MKGSA of around **38 TAF** in **Section 6 – Water Supply Accounting** (on **Page 6-3**, **Table 6-3** of this **GSP**). Later in that same sentence it states, "…*and hydrogeologic evaluations will continue to determine the reason for the differences between the between the **water budget** surplus and the conditions of decline*…". Again, it's the **water accounting framework** which shows a surplus (**~38 TAF**) and not the **water budget** (**~ -13 TAF**—see **Page 2-3**, **Table 2-1** of this **GSP**). With those corrections that sentence should now read as follows, "…*Despite the ~~**water budget**~~ **water accounting framework** surplus, as evidenced in ~~Section 2 (Basin Setting **Appendix 2A**)~~ **Section 6 – Water Supply Accounting** (on **Page 6-3**, **Table 6-3**) of this **GSP**, groundwater levels and storage have been in decline within the Mid-Kaweah area and hydrogeologic evaluations will continue to determine the reason for the differences between the ~~**water budget**~~ **water accounting framework** surplus and the conditions of decline*…".

I'm concerned that there is incorrect interchangeable usage of the terms **water budget** and **water accounting framework** and will confuse the causal reader. On **Page 2-2, 2.3 GSA Water Budget**, there's a good definition and the current estimate of the MKGSA **water budget**: "…*This localized **water budget** represents the estimated physical movement of water in and out of the MKGSA area on an annual basis and provides an average for the 21-year period. During that period, **average groundwater storage depletions were 12.6 thousand acre-feet (TAF) per year** due to a combination of water management activities within the GSA as well as influences from neighboring GSAs both in the Kaweah Subbasin and in neighboring subbasins…*". Also on **Page 2-2** there is a good definition of the **water accounting framework** [which is specifically addressed on **Page 6-3, Table 6-2 and Table 6-3** of this **GSP**] and shows an **Imputed Balance** (**Table 6-3**) surplus within the Mid-Kaweah area of approximately **37.8 thousand acre-feet (TAF)** per year: "…*To apportion responsibilities for the development of projects and management actions (extraction reductions), Section 6 of this GSP segregates groundwater inflows based on a **legal construct of native, foreign, and salvaged components**. These components are proportionately assigned to each of the three Subbasin GSAs. This construct and apportionment were considered and accepted by each GSA and represent a preliminary **water accounting framework** to be further discussed and refined during the first five-year assessment of this GSP…"*. These two components/entities are calculated quite differently, and should not be loosely interchanged particularly when one is negative and the other is positive.

Addendum #2 on September 7, 2019

Page 5-11
5.3.3 *Minimum Threshold– Degraded Water Quality*
5.3.3.1 Overview

While in the process of doing an extensive word search on "projects' and "management actions", a second identical sentence to the one on **Page 5-21, section 5.4.3 *Water Quality Measurable Objectives*** was found (obviously an oversight on my part when I first read this GSP) which states, *"…All future projects and management actions implemented by the MKGSA will be designed to avoid causing further groundwater quality degradation…"*. As stated then in my initial GSP comments (submitted on September 3, 2016), this sentence should be stricken from this GSP in the final document version for submission to DWR. I'll refer the reader of these GSP comments back
to my original comments on **Page 5-21** which will apply here also.

Please insert this page between Pages 9 & 10 of my originally submitted comments of September 3, 2019.

Addendum #3 on September 10, 2019

A general comment on the term **"sustainable yield"** as it is used in the MKGSA GSP. The term **"sustainable yield"** is used a total of 10 times in this GSP but it does not indicate or state an actual numerical value for the **"sustainable yield"** in any of the text.

At many of the KSB's GSA meetings over the past 6 months it's been stated by the 3 GSA managers and others, and shown in tabular form that the **"sustainable yield"** is 659,999 AF (660,000 AF rounded up) for the KSB. This is depicted on **Page 6-3, Table 6-2: GSA Apportionment**, of this GSP. (NOTE: This table is also known as the **Water [Supply] Accounting Framework**, and also referred to as the **"Three Buckets"** accounting method) In that table in the lower right-hand corner is the figure of 659,999 which is oftened referred to as the **"sustainable yield"** but not specifically labeled as such. I would suggest putting a double asterisks (**) after the 659,999 number. Then below the table add this additional footnote (to the ones already there) with a double asterisks (**). The footnote would then read, *"…****Sustainable Yield for KSB**…"*.

Although **"sustainable yield"** is used 10 times, there is no concise definition of the term **"sustainable yield"** found anywhere in this GSP. At the MKGSA website under **Documents** in **Section 3 Appendices, 3B Sustainable Management Criteria Best Management Practices, 5. KEY DEFINITIONS, Page 34,** it gives the definition of **"sustainable yield"** as follows:

*(w) **"Sustainable yield"** means the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result.*

Perhaps this definition should be inserted in parenthesis the first time the term **"sustainable yield"** (last bullet point) is used in the **1. Introduction, General Information, 1.1.1 *Purpose of GSP*** on **Page 1-1**. That last bullet point would now read in part, "…*the sustainability goal and*

ensure that the Subbasin is ultimately operated within the ***sustainable yield.*** *(**"Sustainable yield"** means the maximum quantity of water, calculated over a base period representative of long-term conditions in the basin and including any temporary surplus, that can be withdrawn annually from a groundwater supply without causing an undesirable result.)…".*

Please add this Addendum #3 to the last page of my GSP comments which were originally submitted on September 3, 2019.

Edward T. Henry, DVM

Addendum #4 on September 14, 2019 **Page 1 of 2**

The term "**hydrogeologic zone(s)**" (AKA **HZs**) is used 14 times in the MKGSA GSP, and yet there is not an actual map/figure of the KSB showing those nine (9) **HZs** of which there are four (4) **HZs** in the MKGSA—1, 2, 4, and 7. An excellent map/figure is found (at the MKGSA website) under **Documents**, **Section 5 Appendices**, **Appendix 5A** ***Overview of Application of Hydrogeologic Zones for Development of Groundwater Level Minimum Thresholds***, **Figure 5.1** on **Page A5-1**. For easy reference by the reader of this GSP, I would suggest imbedding **Figure 5.1** into **Section 2. Basin Setting** at the bottom of **Page 2-5** and above the **Section 2 – Basin Setting** explanation box. In the first sentence of the third paragraph from the bottom on **Page 2-5**, it reads in part, "…*Each MA's minimum thresholds have been determined using the hydrogeologic zone mapping…*", and yet there is no **HZs** map in this GSP. Since the word "*…mapping…*" is used here, this would be an excellent place to include/insert this map/figure. After the word "*…mapping…*", should be added ***(Figure 5.1)***, so as to read, "…*Each MA's minimum thresholds have been determined using the hydrogeologic zone mapping* ***(Figure 5.1)****…*".
In **Appendix 5B** ***Groundwater Level Sustainable Management Criteria Hydrographs*** there are approximately 34 hydrographs. In the heading at the top of each hydrograph there is a well designation (plus other information), i.e. **Well KSB-0922**, but it does not identify the **HZ** where that particular well is located. After some prolonged looking, **Well KSB-0922** can be found in **HZ1**. It would be more convenient if the **HZ** for each hydrograph were to be labeled with the **HZ** in the heading as shown in the example below: **Well KSB-0922 – HZ1 Mid Kaweah GSA Well ID: CID_038 Aquifer System: Unknown – Model Layer 3** Also, none of the 34 hydrographs listed in **Appendix 5B** have a **Figure** designation, i.e. **Figure x.xx**, in their lower left-hand corner as do other **Figures** and **Tables** in this GSP and the accompanying **Appendices** at the MKGSA website. Having all **Tables** and **Figures** labeled as such would be more convenient for referencing and cross-checking when needed.

Addendum #5 on September 15, 2019 **Page 1 of 3**

In the last sentence of the second complete paragraph down from the top of **Page 5-19** of this GSP it states, "…*This approach is summarized in the* ***bullet list*** *that follows and is illustrated on* ***Figure 5.1*** *of* ***Appendix 5A****:…*". There is a definite inaccuracy here related to "…***Figure 5.1*** *of* ***Appendix 5A****:…*" as ***Figure 5.1*** is a map/figure (not a hydrograph) of the **Hydrogeologic Zones** in the KSB (see map/figure below). Could you be referring instead to **Figure 5.2** through **Figure**

5.5 in **Appendix 5A**, OR RATHER is it in **Appendix 5B** where the first hydrograph (unlabeled—no **Figure** designation) is shown as **Well KSB-0922**? In looking further at the "…***bullet list***…" and in the discussions that follow about the minimum thresholds, measurable objectives, and interim milestones, it seems logical that **Well KSB-0922** is the well being referred to here as the example illustration. But since **Well KSB-0922** does not have a **Figure** designation attached to it, it was confusing initially. (See hydrograph of **Well KSB-0922** on **Page 2 of 2** below.)

In the second sentence of the next to the last paragraph on **Page 5-19** it states, "…***Figure 5-1*** *shows these criteria at a* ***single well*** *in the southwest area of MKGSA and* ***Appendix 5B*** *includes these criteria for each well*…". That "…***single well***…" is **Well KSB-0922** which is in **HZ1** (the southwest area of the MKGSA) but it does not have a ***Figure 5-1*** designation (confusing). All 34 hydrographs in ***Appendix 5B*** need to be updated with a **Figure** designation, i.e. **Figure x.xx**, in the lower left-hand corner (below the hydrograph) of the each hydrograph for a more concise and easier referencing process.

As mentioned earlier on **Page 2 of 2**, **Addendum #4** (of these GSP comments) where the example for **Well KSB-0922 – HZ1** is shown (to include the **HZ** number), it is first of all suggested here that the "well title headings" include the **HZ** for all 34 hydrographs. Secondly, it also would be very convenient to have all hydrographs grouped by **Hydrogeologic Zones** for easier referencing in this GSP. Although on **Page 5-2** it states,

"…*one-third of the Subbasin's representative monitoring sites exceeding minimum thresholds for water levels would constitute an undesirable result*…", it would be very helpful to know if those exceedances are random within the KSB or even the MKGSA or if one **HZ** is statistically more heavily impacted than another **HZ**. If those exceedences were isolated to a particular **HZ**, then possibly Projects and Management Actions could be specifically tailored to that **HZ** or a region of that **HZ**, and/or the Management Area occupying that **HZ.** There is the possibility the exceedances could occur in only one Management Area of a particular **HZ** (which potentially traverses one or more Management Areas—i.e. **HZ4** which traverses all three Management Areas of the MKGSA) and not throughout an entire **HZ**. As an example, what if the "…*one-third*…" exceedances occurred only in the northeast section of the City of Tulare which is in part of **HZ4**? The whole KSB and the MKGSA should not be penalized in that scenario. In summary, there are several main points here: First, is to identify the **HZ** in which each well resides and add to each well's "well title headings" which **HZ** it's located in, and secondly, would be to group the 34 wells by **HZ.**

In the MKGSA GSP in **Table 4-5: Groundwater Level monitoring network Well Summary** on **Page 4-8** there are 43 **Well IDs** listed, and yet in ***Appendix 5B*** there are hydrographs for only 34 wells. That's a difference of nine monitoring wells without hydrographs. All nine wells are in the Tulare Irrigation District and have the following **Well ID**: KSB-1320s; KSB-1320d; KSB-1408s; KSB-1408d; KSB-1536s; KSB-1536d; KSB-1545s; KSB-1545d; & KSB-1879. With the

exception of KSB-1879 the other eight wells appear to have good and complete **Well Construction Information** as listed in those three columns of **Table 4-5**. Why are those nine wells which are listed in **Table 4-5** not showing hydrographs in ***Appendix 5B***?

Edward T. Henry, DVM

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September 9, 2019

MKGSA Groundwater Sustainability Plan Public Comments
c/o Tulare Irrigation District
P.O. Box 1920
Tulare, CA 93275

Submitted via email at midkaweah@gmail.com

Re: Mid-Kaweah Groundwater Subbasin Groundwater Sustainability Plan

Dear Basin Representatives,

The Nature Conservancy (TNC) appreciates the opportunity to comment on the Mid-Kaweah Subbasin Groundwater Sustainability Plan being prepared under the Sustainable Groundwater Management Act (SGMA).

TNC as a Stakeholder Representative for the Environment

TNC is a global, nonprofit organization dedicated to conserving the lands and waters on which all life depends. We seek to achieve our mission through science-based planning and implementation of conservation strategies. For decades, we have dedicated resources to establishing diverse partnerships and developing foundational science products for achieving positive outcomes for people and nature in California. TNC was part of a stakeholder group formed by the Water Foundation in early 2014 to develop recommendations for groundwater reform and actively worked to shape and pass SGMA.

Our reason for engaging is simple: California's freshwater biodiversity is highly imperiled. We have lost more than 90 percent of our native wetland and river habitats, leading to precipitous declines in native plants and the populations of animals that call these places home. These natural resources are intricately connected to California's economy providing direct benefits through industries such as fisheries, timber and hunting, as well as indirect benefits such as clean water supplies. SGMA must be successful for us to achieve a sustainable future, in which people and nature can thrive within Mid-Kaweah Subbasin region and California.

We believe that the success of SGMA depends on bringing the best available science to the table, engaging all stakeholders in robust dialog, providing strong incentives for beneficial outcomes and rigorous enforcement by the State of California.

Given our mission, we are particularly concerned about the inclusion of nature, as required, in GSPs. The Nature Conservancy has developed a suite of tools based on best available science to help GSAs, consultants, and stakeholders efficiently incorporate nature into GSPs. These tools and resources are available online at GroundwaterResourceHub.org. The Nature Conservancy's tools and resources are intended to reduce costs, shorten timelines, and increase benefits for both people and nature.

Addressing Nature's Water Needs *in GSPs*

SGMA requires that all beneficial uses and users, including environmental users of groundwater, be considered in the development and implementation of GSPs (Water Code § 10723.2).

The GSP Regulations include specific requirements to identify and consider groundwater dependent ecosystems [23 CCR §354.16(g)] when determining whether groundwater conditions are having potential effects on beneficial uses and users. GSAs must also assess whether sustainable management criteria may cause adverse impacts to beneficial uses, which include environmental uses, such as plants and animals. The Nature Conservancy has identified each part of the GSP where consideration of beneficial uses and users are required. That list is available here: https://groundwaterresourcehub.org/importance-of-gdes/provisions-related-to-groundwater-dependent-ecosystems-in-the-groundwater-s. Please ensure that environmental beneficial users are addressed accordingly throughout the GSP. Adaptive management is embedded within SGMA and provides a process to work toward sustainability over time by beginning with the best available information to make initial decisions, monitoring the results of those decision, and using data collected through monitoring to revise decisions in the future. Over time, GSPs should improve as data gaps are reduced and uncertainties addressed.

To help ensure that GSPs adequately address nature as required under SGMA, The Nature Conservancy has prepared a checklist (**Attachment A**) for GSAs and their consultants to use. The Nature Conservancy believes the following elements are foundational for 2020 GSP submittals. For detailed guidance on how to address the checklist items, please also see our publication, *GDEs under SGMA: Guidance for Preparing GSPs*[1].

1. Environmental Representation

SGMA requires that groundwater sustainability agencies (GSAs) consider the interests of all beneficial uses and users of groundwater. To meet this requirement, we recommend actively engaging environmental stakeholders by including environmental representation on the GSA board, technical advisory group, and/or working groups. This could include local staff from state and federal resource agencies, nonprofit organizations and other environmental interests. By engaging these stakeholders, GSAs will benefit from access to additional data and resources, as well as a more robust and inclusive GSP.

2. Basin GDE and ISW Maps

SGMA requires that groundwater dependent ecosystems (GDEs) and interconnected surface waters (ISWs) be identified in the GSP. We recommend using the Natural Communities Commonly Associated with Groundwater Dataset (NC Dataset) provided online[2] by the Department of Water Resources (DWR) as a starting point for the GDE map. The NC Dataset was developed through a collaboration between DWR, the Department of Fish and Wildlife and TNC.

3. Potential Effects on Environmental Beneficial Users

[1] GDEs under SGMA: Guidance for Preparing GSPs is available at: https://groundwaterresourcehub.org/public/uploads/pdfs/GWR_Hub_GDE_Guidance_Doc_2-1-18.pdf

[2] The Department of Water Resources' Natural Communities Commonly Associated with Groundwater dataset is available at: *https://gis.water.ca.gov/app/NCDatasetViewer/*

SGMA requires that potential effects on GDEs and environmental surface water users be described when defining undesirable results. In addition to identifying GDEs in the basin, The Nature Conservancy recommends identifying beneficial users of surface water, which include environmental users. This is a critical step, as it is impossible to define "significant and unreasonable adverse impacts" without knowing *what* is being impacted. For your convenience, we've provided a list of freshwater species within the boundary of the Kaweah Subbasin in **Attachment C**. Our hope is that this information will help your GSA better evaluate the impacts of groundwater management on environmental beneficial users of surface water. We recommend that after identifying which freshwater species exist in your basin, especially federal and state listed species, that you contact staff at the Department of Fish and Wildlife (DFW), United States Fish and Wildlife Service (USFWS) and/or National Marine Fisheries Services (NMFS) to obtain their input on the groundwater and surface water needs of the organisms on the GSA's freshwater species list. We also refer you to The Critical Species LookBook[3] prepared by The Nature Conservancy and partner organizations for additional background information on the water needs and groundwater reliance of critical species. Because effects to plants and animals are difficult and sometimes impossible to reverse, we recommend erring on the side of caution to preserve sufficient groundwater conditions to sustain GDEs and ISWs.

4. Biological and Hydrological Monitoring

If sufficient hydrological and biological data in and around GDEs is not available in time for the 2020/2022 plan, data gaps should be identified along with actions to reconcile the gaps in the monitoring network.

The Nature Conservancy has thoroughly reviewed the Mid-Kaweah Subbasin Draft GSP. We appreciate the work that has gone into the preparation of various elements of this plan. However, we consider it to be **inadequate** under SGMA since key environmental beneficial uses and users are not adequately identified and considered. In particular, GDEs are not adequately evaluated through existing data or modeling, and no plans are presented for future monitoring to address current data gaps. We recognize that acreage of potential GDEs (220 acres) in the mid-Kaweah subbasin is small compared to acreage of potential GDEs in the entire Kaweah Basin (3488 acres). However, since the Basin Setting section (Appendix 2A) covers the *entire* Kaweah Basin, presenting a complete analysis of the identification of GDEs in the full Kaweah Basin is a necessary first step. Only then can the GDEs in the Mid-Kaweah subbasin be identified and evaluated for ecological importance, noting any data gaps that can be addressed in the future, and considered in the basin's sustainable management criteria. **Please present a thorough analysis of the identification and evaluation of GDEs in subsequent drafts of the GSP**. **Once GDEs are identified, they must be considered when defining undesirable results and for further monitoring**.

Our specific comments related to the Mid-Kaweah Subbasin Draft GSP are provided in detail in **Attachment B** and are in reference to the numbered items in **Attachment A. Attachment C** provides a list of the freshwater species located in the Kaweah Subbasin. **Attachment D** describes six best practices that GSAs and their consultants can apply when using local groundwater data to confirm a connection to groundwater for DWR's Natural Communities Commonly Associated with Groundwater Dataset[2]. **Attachment E** provides an overview of a new, free online tool that allows GSAs to assess changes in groundwater dependent ecosystem (GDE) health using satellite, rainfall, and groundwater data.

Thank you for fully considering our comments as you develop your GSP.

[3] The Critical Species LookBook is available at: https://groundwaterresourcehub.org/sgma-tools/the-critical-species-lookbook/

Best Regards,

Sandi Matsumoto
Associate Director, California Water Program
The Nature Conservancy

Attachment A

Environmental User Checklist

The Nature Conservancy is neither dispensing legal advice nor warranting any outcome that could result from the use of this checklist. Following this checklist does not guarantee approval of a GSP or compliance with SGMA, both of which will be determined by DWR and the State Water Resources Control Board.

GSP Plan Element*		GDE Inclusion in GSPs: Identification and Consideration Elements	Check Box
Admin Info	**2.1.5 Notice & Communication** *23 CCR §354.10*	**Description of the types of environmental beneficial uses of groundwater that exist within GDEs and a description of how environmental stakeholders were engaged throughout the development of the GSP.**	1
Planning Framework	**2.1.2 to 2.1.4 Description of Plan Area** *23 CCR §354.8*	**Description of jurisdictional boundaries, existing land use designations, water use management and monitoring programs; general plans and other land use plans relevant to GDEs and their relationship to the GSP.**	2
		Description of instream flow requirements, threatened and endangered species habitat, critical habitat, and protected areas.	3
		Summary of process for permitting new or replacement wells for the basin, and how the process incorporates any protection of GDEs	4
Basin Setting	**2.2.1 Hydrogeologic Conceptual Model** *23 CCR §354.14*	**Basin Bottom Boundary:** Is the bottom of the basin defined as at least as deep as the deepest groundwater extractions?	5
		Principal aquifers and aquitards: Are shallow aquifers adequately described, so that interconnections with surface water and vertical groundwater gradients with other aquifers can be characterized?	6
		Basin cross sections: Do cross-sections illustrate the relationships between GDEs, surface waters and principal aquifers?	7
	2.2.2 Current & Historical Groundwater Conditions *23 CCR §354.16*	**Interconnected surface waters:**	8
		Interconnected surface water maps for the basin with gaining and losing reaches defined (included as a figure in GSP & submitted as a shapefile on SGMA portal).	9
		Estimates of current and historical surface water depletions for interconnected surface waters quantified and described by reach, season, and water year type.	10
		Basin GDE map included (as figure in text & submitted as a shapefile on SGMA Portal).	11

		If NC Dataset *was* used:	Basin GDE map denotes which polygons were kept, removed, and added from NC Dataset (Worksheet 1, can be attached in GSP section 6.0).	12
			The basin's GDE shapefile, which is submitted via the SGMA Portal, includes two new fields in its attribute table denoting: 1) which polygons were kept/removed/added, and 2) the change reason (e.g., why polygons were removed).	13
			GDEs polygons are consolidated into larger units and named for easier identification throughout GSP.	14
		If NC Dataset *was not* used:	Description of why NC dataset was not used, and how an alternative dataset and/or mapping approach used is best available information.	15
		Description of GDEs included:		16
		Historical and current groundwater conditions and variability are described in each GDE unit.		17
		Historical and current ecological conditions and variability are described in each GDE unit.		18
		Each GDE unit has been characterized as having high, moderate, or low ecological value.		19
		Inventory of species, habitats, and protected lands for each GDE unit with ecological importance (Worksheet 2, can be attached in GSP section 6.0).		20
	2.2.3 Water Budget *23 CCR §354.18*	Groundwater inputs and outputs (e.g., evapotranspiration) of native vegetation and managed wetlands are included in the basin's historical and current water budget.		21
		Potential impacts to groundwater conditions due to land use changes, climate change, and population growth to GDEs and aquatic ecosystems are considered in the projected water budget.		22
Sustainable Management Criteria	**3.1 Sustainability Goal** *23 CCR §354.24*	**Environmental stakeholders/representatives were consulted.**		23
		Sustainability goal mentions GDEs or species and habitats that are of particular concern or interest.		24
		Sustainability goal mentions whether the intention is to address pre-SGMA impacts, maintain or improve conditions within GDEs or species and habitats that are of particular concern or interest.		25
	3.2 Measurable Objectives *23 CCR §354.30*	**Description of how GDEs were considered and whether the measurable objectives and interim milestones will help achieve the sustainability goal as it pertains to the environment.**		26
	3.3 Minimum Thresholds *23 CCR §354.28*	**Description of how GDEs and environmental uses of surface water were considered when setting minimum thresholds for relevant sustainability indicators:**		27
		Will adverse impacts to GDEs and/or aquatic ecosystems dependent on interconnected surface waters (beneficial user of surface water) be avoided with the selected minimum thresholds?		28
		Are there any differences between the selected minimum threshold and state, federal, or local standards relevant to the species or habitats residing in GDEs or aquatic ecosystems dependent on interconnected surface waters?		29
	3.4 Undesirable Results *23 CCR §354.26*	**For GDEs, hydrological data are compiled and synthesized for each GDE unit:**		30
		If hydrological data *are available* within/nearby the GDE	Hydrological datasets are plotted and provided for each GDE unit (Worksheet 3, can be attached in GSP Section 6.0).	31
			Baseline period in the hydrologic data is defined.	32

			GDE unit is classified as having high, moderate, or low susceptibility to changes in groundwater.	33
			Cause-and-effect relationships between groundwater changes and GDEs are explored.	34
		If hydrological data *are not available* within/nearby the GDE	Data gaps/insufficiencies are described.	35
			Plans to reconcile data gaps in the monitoring network are stated.	36
		For GDEs, biological data are compiled and synthesized for each GDE unit:		37
		Biological datasets are plotted and provided for each GDE unit, and when possible provide baseline conditions for assessment of trends and variability.		38
		Data gaps/insufficiencies are described.		39
		Plans to reconcile data gaps in the monitoring network are stated.		40
		Description of potential effects on GDEs, land uses and property interests:		41
		Cause-and-effect relationships between GDE and groundwater conditions are described.		42
		Impacts to GDEs that are considered to be "significant and unreasonable" are described.		43
		Known hydrological thresholds or triggers (e.g., instream flow criteria, groundwater depths, water quality parameters) for significant impacts to relevant species or ecological communities are reported.		44
		Land uses include and consider recreational uses (e.g., fishing/hunting, hiking, boating).		45
		Property interests include and consider privately and publicly protected conservation lands and opens spaces, including wildlife refuges, parks, and natural preserves.		46
Sustainable Management Criteria	**3.5 Monitoring Network** *23 CCR §354.34*	Description of whether hydrological data are spatially and temporally sufficient to monitor groundwater conditions for each GDE unit.		47
		Description of how hydrological data gaps and insufficiencies will be reconciled in the monitoring network.		48
		Description of how impacts to GDEs and environmental surface water users, as detected by biological responses, will be monitored and which GDE monitoring methods will be used in conjunction with hydrologic data to evaluate cause-and-effect relationships with groundwater conditions.		49
Projects & Mgmt Actions	**4.0. Projects & Mgmt Actions to Achieve Sustainability Goal** *23 CCR §354.44*	Description of how GDEs will benefit from relevant project or management actions.		50
		Description of how projects and management actions will be evaluated to assess whether adverse impacts to the GDE will be mitigated or prevented.		51

* In reference to DWR's GSP annotated outline guidance document, available at: https://water.ca.gov/LegacyFiles/groundwater/sgm/pdfs/GD_GSP_Outline_Final_2016-12-23.pdf

Attachment B

TNC Evaluation of the
Mid-Kaweah Groundwater Sustainability Plan, Public Review Draft

A complete draft of the Mid-Kaweah Groundwater Sustainability Plan (GSP) was provided for public review on July 31, 2019. This attachment summarizes our comments on the complete public draft GSP, which includes the main GSP file and several separate appendix files. Comments are provided in the order of the checklist items included as Attachment A.

Checklist Item 1 - Notice & Communication (23 CCR §354.10)

- [Section 1.5.2 Beneficial Uses and Users (p. 1-23 to 1-25)]
    - Surface water users and the following groups were listed as Beneficial Users: "Environmental and ecosystem interests in MKGSA include representatives of the Tulare Basin Wildlife Partners, Sierra Club Mineral King Group, and Sequoia Riverlands Trust (p. 1-25)." **Please identify whether or not the following beneficial uses and users of groundwater in the subbasin are present: Protected Lands, including preserves, refuges, conservation areas, recreational areas; and other protected lands; and Public Trust Uses, including wildlife, aquatic habitat, fisheries, and recreation.** NC-001
    - The types and locations of environmental uses, species and habitats supported, and the designated beneficial environmental uses of surface waters that may be affected by groundwater extraction in the Subbasin should be specified. **To identify environmental users, please refer to the following:**
        - Natural Communities Commonly Associated with Groundwater dataset (NC Dataset) - https://gis.water.ca.gov/app/NCDatasetViewer/
        - The list of freshwater species located in the Kaweah Subbasin in Attachment C of this letter. Please take particular note of the species with protected status.

Checklist Items 2 to 4 - Description of general plans and other land use plans relevant to GDEs and their relationship to the GSP (23 CCR §354.8).

- [Section 1.4.3 General Plans in Plan Area (p. 1-12 to 1-16)]
    - This section should include a discussion of General Plan goals and policies related to the protection and management of GDEs and aquatic resources that could be affected by groundwater withdrawals, rather than being limited to goals and policies directly related to groundwater resources as the Tulare General Plan does. **Please include a discussion of how implementation of the GSP may affect and be coordinated with General Plan policies** NC-002

and procedures regarding the protection of wetlands, aquatic resources and other GDEs and ISWs.

- This section should identify Habitat Conservation Plans (HCPs) or Natural Community Conservation Plans (NCCPs) within the Subbasin and if they are associated with critical, GDE or ISW habitats. **Please identify all relevant HCPs and NCCPs within the Subbasin, and address how GSP implementation will coordinate with the goals of these HCPs or NCCPs.**
- The Open Space and Conservation Element of the City of Visalia's General Plan includes (p. 1-14 to 1-15):

  "1. Protect, restore and enhance a continuous corridor of native riparian vegetation along Planning Area waterways, including the St. Johns River; Mill, Packwood, and Cameron Creeks; and segments of other creeks and ditches where feasible, in conformance with the Parks and Open Space diagram of this General Plan.

  2. Establish design and development standards for new projects in waterway corridors to preserve and enhance irrigation capabilities, if provided, and the natural riparian environment along these corridors. In certain locations or where conditions require it, alternative designs may be appropriate (e.g., terraced seating or a planted wall system)

  3. Place special emphasis on the protection and enhancement of the St. Johns River Corridor by establishing extensive open space land along both sides

  4. Where no urban development exists, maintain a minimum riparian habitat development setback from the discernible top of the bank: 50 feet for both sides of the Mill, Packwood, and Cameron Creek corridors and 25 feet for both sides of Modoc, Persian, and Mill Creek ditches. Where riparian trees are located within 100 feet of the discernible top of the banks of the creek corridors and 50 feet from the banks for the ditches, the setback shall be wide enough to include five feet outside the drip line of such trees. Restore and enhance the area within the setback with native vegetation as follows:

  a. Where existing development or land committed to development prohibits the 50-foot setback on Mill, Packwood, and Cameron Creek corridors, provide the maximum amount of land available for a development setback

  b. Where existing development or land committed to development prohibits the 25-foot setback along Modoc, Persian, and Mill Creek ditches, provide the maximum amount of land available for a development setback."

  Please specify if any of these areas are potential GDEs and describe how they are managed.

NC-002 (contd.)

- Please refer to The Critical Species LookBook[4] to review and discuss the potential groundwater reliance of critical species in the basin. **Please include a discussion regarding the management of critical habitat for these aquatic species and its relationship to the GSP.**

[4] The Critical Species LookBook is available at: https://groundwaterresourcehub.org/sgma-tools/the-critical-species-lookbook/

- [Appendix 2A Section 2.3.1 Existing Groundwater Level Monitoring (p. 37-38)] The monitoring programs are described, but there is no mention of how GDEs are monitored and protected. **Once GDEs are identified, please describe how existing groundwater monitoring programs are protective of GDEs, or propose additional monitoring that specifically targets GDEs.** NC-003
- [Appendix 2A Section 2.3.4 Existing Stream Flow Monitoring (p. 50)] This section describes the programs of USACOE, Kaweah and St. Johns Rivers Association (KSJRA), and the ditch companies. Surface water sources are listed along with the group monitoring them. Small surface streams which pass through TID's service area are noted as used, but the names are not listed. There is no mention of ISWs or GDEs and how they are monitored. **Please explain how existing stream flow monitoring is protective of ISWs and GDEs.** NC-004
- [Section 1.4.4 Well Permitting Process (p. 1-17)] **This section should include a discussion of the following:**
    - Future well permitting must be coordinated with the GSP to assure achievement of the Plan's sustainability goals. The County of Tulare is currently revising their well permitting program. The City of Visalia also has a well permitting program for wells within their jurisdiction.
    - The State Third Appellate District recently found that Counties have a responsibility to consider the potential impacts of groundwater withdrawals on public trust resources when permitting new wells near streams with public trust uses (ELF v. SWRCB and Siskiyou County, No. C083239). The need for well permitting programs to comply with this requirement should be stated in the text.

NC-005

Checklist Items 5, 6, and 7 – Hydrogeologic Conceptual Model (23 CCR §354.14); The Hydrogeologic Conceptual Model should illustrate the relationship between GDEs, surface waters, and principal aquifers.

- [Appendix 2A Section 2.2.4 Bottom of the Subbasin (p. 22)] The base of the Subbasin corresponds with the base of freshwater. "This is generally defined as the elevation below which total dissolved solids are greater than 2,000 milligrams per liter (mg/l) (Bertoldi et al, 1991)" (p. 22 of Appendix 2A). As noted on page 9 of DWR's Hydrogeologic Conceptual Model BMP (https://water.ca.gov/LegacyFiles/groundwater/sgm/pdfs/BMP_HCM_Final_2016-12-23.pdf) "the definable bottom of the basin should be at least as deep as the deepest groundwater extractions". **Thus, groundwater extraction well depth data should also be included in the determination of the basin bottom.** Properly defining the bottom of the basin will prevent the possibility of extractors with wells deeper than the basin boundary from claiming exemption from SGMA due to their well residing outside the vertical extent of the basin boundary. NC-006
- [Appendix 2A Section 2.2.1.3 Kaweah Subbasin Geology (p. 17-21)] Basin-wide cross sections provided in Figures 4 through 13 are regional, and do not include a graphical representation of the manner in which shallow groundwater may interact with ISWs or GDEs that would allow the reader to understand this topic. **Please consider including an example near-surface cross section that depicts the** NC-007

conceptual understanding of shallow groundwater and stream interactions at different locations, including the Upper Aquifer, as well as any potential GDEs.

NC-007 (contd.)

Checklist Items 8, 9, and 10 – Interconnected Surface Waters (ISW) (23 CCR §354.16); Identification of ISWs is a required element of Current and Historical Groundwater Conditions (23 CCR §354.16).

- [Appendix 2A Section 2.9 Interconnected Surface Water (p. 145)] The discussion of interconnected surface waters should first be introduced in Appendix 2A Section 2.4 (Groundwater Elevation and Flow Conditions §354.16), since the identification of interconnected surface water systems is a required element of Current and Historical Groundwater Conditions (23 CCR §354.16). In Appendix 2A Section 2.4 (Groundwater Elevation and Flow Conditions §354.16), please expand this discussion, in particular:
    - The regulations [23 CCR §351(o)] define interconnected surface waters (ISW) as "surface water that is hydraulically connected at any point by a continuous saturated zone to the underlying aquifer and the overlying surface water is not completely depleted". "At any point" has both a spatial and temporal component. Even short durations of interconnections of groundwater and surface water can be crucial for surface water flow and supporting environmental users of groundwater and surface water. **Please identify interconnected surface waters in the Basin by relying on groundwater elevation and stream gauge data, specifying any data gaps that exist so that they can be resolved in the monitoring network.**
    - ISWs are best estimated by first determining which reaches are completely disconnected from groundwater. This approach would involve comparing groundwater elevations with a land surface Digital Elevation Model that could identify which surface waters have groundwater consistently below surface water features, such that an unsaturated zone would separate surface water from groundwater. Groundwater elevations that are always deeper than 50 feet below the land surface can be used to identify the aboveground reaches as disconnected surface waters. **Please reconcile data gaps (shallow monitoring wells, stream gauges, and nested/clustered wells) along surface water features in the Monitoring Network section of the GSP to improve ISW mapping.**

NC-008

- [Section 3.2.1.5 Interconnected Surface Water Systems (p. 3-4)] "Depletions of interconnected surface waters are minimal and, to the extent they occur, impact only vegetation along the banks of unlined channels within the forebay regions of the aquifer system where natural channels exhibit gaining reaches from time to time. Undesirable results may occur should any such groundwater-dependent vegetation disappear from locations of known historic existence." This discussion is inadequate and is not supported by data. **Please expand the discussion of ISWs to include the above referenced recommendations on identifying and mapping ISWs and provide discussion of the depletions on specific rivers or creeks.**

NC-009

Checklist Items 11 to 15, Identifying and Mapping GDEs (23 CCR §354.16); Identification of GDEs is a required element of Current and Historical Groundwater Conditions (23 CCR §354.16).

- [Section 5.3.5 Minimum Thresholds – Interconnected Surface Waters (p. 5-17)], [Appendix 2A Section 2.2.7.3 Delineation of recharge areas, potential recharge areas, and discharge areas, including springs, seeps, and wetlands (p. 33)], and [Appendix 2A Section 2.10 Groundwater Dependent Ecosystems (p. 146)] All three of the above referenced sections refer to or include discussion of the identification of groundwater dependent ecosystems (GDEs). **Please consolidate and expand these sections of the document in GSP Appendix 2A Section 2.4 (Groundwater Elevation and Flow Conditions §354.16), since the identification of groundwater dependent ecosystems (GDEs) is a required element of Current and Historical Groundwater Conditions (23 CCR §354.16)**. This is a more appropriate place for the identification of GDEs, since groundwater conditions (e.g., depth to groundwater, interconnected surface water maps, groundwater quality) are necessary local information and data from the GSP in assessing whether polygons in the NC dataset are connected to groundwater in a principal aquifer. For detailed guidance on how to address GDEs, please see our publication, *GDEs under SGMA: Guidance for Preparing GSPs*[5]. In particular, note the following: NC-010
    - **Please provide a comprehensive discussion and figure(s) for the identification of GDEs**. Figure 19 of Appendix 2A is titled "Potential Groundwater Dependent Ecosystems", however the figure does not actually present this. The NC dataset is a starting point for GSAs to identify GDEs in their basin. The NC dataset comprises 3,488 acres of potential GDEs for the entire Kaweah basin, representing a significant amount of GDEs to be considered. **Please map the original NC dataset on Figure 19 or another figure, and document which polygons were added (and what local sources were used to identify them), removed (and the removal reason), and kept (from the original NC dataset)**. The basin's GDE shapefile, which is submitted via the SGMA Portal, should also include two new fields in its attribute table denoting: 1) which polygons were kept/removed/added, and 2) the change reason (e.g., why polygons were added or removed).
    - **Please refer to Attachment D of this letter for best practices for using local groundwater data to verify whether polygons in the NC dataset are supported by groundwater in an aquifer. If insufficient data are available to describe groundwater conditions within or near polygons from the NC dataset, include those polygons in the GSP until data gaps are reconciled in the monitoring network**. Specifically, please note:

[5]GDEs under SGMA: Guidance for Preparing GSPs is available at: https://groundwaterresourcehub.org/public/uploads/pdfs/GWR_Hub_GDE_Guidance_Doc_2-1-18.pdf

- **Please provide depth to groundwater contour maps. See Attachment D for best practices for completing this step. Specifically, ensure that the first step is contouring groundwater elevations, and the subtracting this layer from land surface elevations from a Digital Elevation Model (DEM) to estimate depth to groundwater contours across the landscape**. This will provide much more accurate contours of depth-to-groundwater along streams and other land surface depressions where GDEs are commonly found. Depth to groundwater contours developed from depth to groundwater measurements at wells assumes that the land surface is constant, which is a poor assumption to make.
- Figure 19 presents areas marked as 'Spring 2015 Groundwater Surface within 50 feet of Ground Surface'. Spring 2015 is after the SGMA benchmark date of January 1, 2015. **Please rely on groundwater condition data prior to the SGMA benchmark date**.
- It is highly advised that seasonal and interannual groundwater fluctuations in the groundwater regime are taken into consideration. Utilizing groundwater data from one point in time (e.g., Spring 2015) can misrepresent groundwater levels required by GDEs, and inadvertently result in adverse impacts to the GDEs. **We highly recommend using depth to groundwater data from multiple seasons and water year types (e.g., wet, dry, average, drought) to determine the range of depth to groundwater around NC dataset polygons. Please refer to Attachment D of this letter for best practices for using local groundwater data to verify whether polygons in the NC Dataset are supported by groundwater in an aquifer. If insufficient data are available to describe groundwater conditions within or near polygons from the NC dataset, include those polygons in the GSP <u>until</u> data gaps are reconciled in the monitoring network**.
- **Please specify which data were used to determine the elevation of the stream or river bottom and the Valley Oak root zone in the basin**. Page 5-18 states "The water table lies some 60 to 150 feet below the invert of all three of these channel reaches, which is generally 40 to 130 feet below the root zone of the Valley Oak", however no information is provided on the data used to determine the elevation of the stream or river bottom and these calculations. These depths suggest a root zone of approximately 20 feet, but this is not stated explicitly. There is a citation to data (Lewis and Burgy, 1964[6]) which indicates root zones deeper than 70 feet for this species in a fractured rock aquifer. Rooting depths for the Valley Oak in this region have not been reported, and are a data gap. Furthermore, care must be taken when considering rooting depths of vegetation. Rooting depths are likely to spatially vary based on the local hydrologic

NC-010 (contd.)

[6] *Lewis, D.C. and Burgy, R.H., 1964. The relationship between oak tree roots and groundwater in fractured rock as determined by tritium tracing. Journal of Geophysical Research, 69(12), pp.2579-2588.*

conditions available to the plant. Maximum rooting depths do not take capillary action into consideration, which will vary with soil type and is an important consideration since woody phreatophytes generally do not like to have their roots submerged in groundwater for extended periods of time, and hence can access groundwater at deeper depths. In addition, while it is likely to be true that shallow water availability is necessary to support the recruitment of saplings, hydraulic lift of groundwater to shallow depths has been observed in Quercus spp.

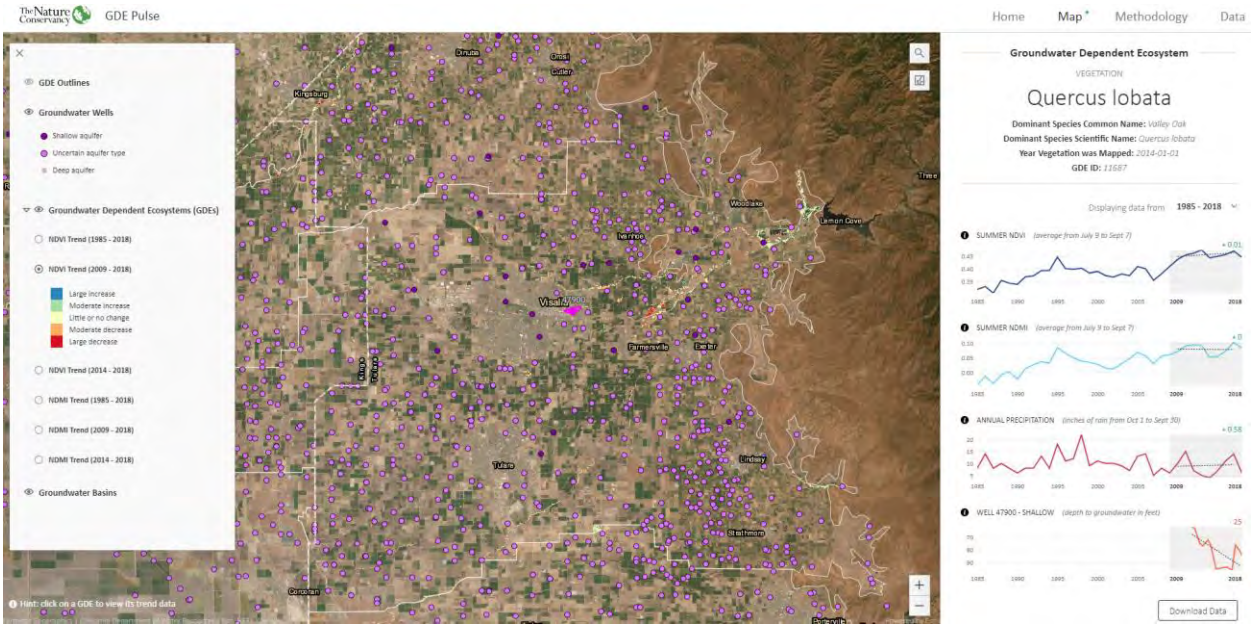
- Page 33 of Appendix 2A states "The locations of these potential GDEs and hydrographs for the Subbasin indicate that the vegetation of these areas are dependent surface water flows, rather than shallow groundwater." We disagree with this statement dismissing all potential GDEs from further consideration. There are 3,488 acres of potential GDEs within the Kaweah subbasin as per the NC dataset, and the location is, as to be expected, at the interconnection between groundwater and surface water. Adverse impacts can occur to GDEs due to pumping that further separates groundwater from surface water. **Please provide the rationale for this statement, including the discussion of the type of river reach (i.e., gaining or losing)**. Riparian vegetation may still be accessing groundwater, and hence be identified as a GDE. We highly recommend that depth to groundwater levels under the NC polygons be used as the evaluation criteria, since access to groundwater could be occuring in/near losing reaches. **Please refer to Attachment D of this letter for best practices for using local groundwater data to verify whether polygons in the NC Dataset are supported by groundwater in an aquifer. Specifically, it is highly advised that fluctuations in the groundwater regime be characterized in space and time to understand the seasonal and interannual groundwater variability in GDEs.**

NC-010 (contd.)

Checklist Items 16 to 20, Describing GDEs (23 CCR §354.16)

- **Once potential GDEs are identified, please provide information on the historical or current groundwater conditions in the GDEs or the ecological conditions present**. Refer to GDE Pulse (https://gde.codefornature.org; See Attachment E of this letter for more details) or any other locally available data to describe depth to groundwater trends in and around GDE areas, as well as trends in plant growth (e.g., NDVI) and plant moisture (e.g., NDMI). Below is a screenshot example of data available in GDE Pulse for NC dataset polygons found in the Mid-Kaweah Subbasin:

NC-011



- Once potential GDEs are identified, provide an inventory of the vegetation types or habitat types and rank the vegetation species as having a high, moderate or low value. **Please identify whether any endangered or threatened freshwater species of animals and plants or areas with critical habitat were found in any of the GDEs**. The list of freshwater species located in the Kaweah Subbasin can be found in Attachment C of this letter.

NC-011 (contd.)

Checklist Items 21 and 22 – Water Budget (23 CCR §354.18)

- [Appendix 2A Section 2.5.1.3 Summary of Water Budget Components (p. 102)]
    - Please clarify what the term "phreatophyte extraction' means. The text states 'Phreatophyte extraction consists of removing vegetation in riparian areas to prevent consumptive water use." If phreatophytes were indeed removed from within the Subbasin, please provide further details. If phreatophyte extraction refers to the uptake of groundwater by phreatophytes, then correct this text. It should be clearly stated if the phreatophytes are referring to GDE vegetation (riparian vegetation). Also the reference is from 2007 and the acreage and ET estimation methodology may be outdated.
    - **Please clarify what assumptions and data were used to calculate the outflow term from groundwater by phreatophytes.**

NC-012

Checklist Items 23 to 25 – Sustainability Goal (23 CCR §354.24)

- [Section 3.1 Sustainability Goal (p. 3-2)] "The broadly stated sustainability goal for the Kaweah Subbasin as agreed to by the three GSAs therein is, for each GSA to manage groundwater resources to preserve the quality of life through maintaining the viability of existing enterprises of the region, both agricultural and urban." There

NC-013

is no mention of protection of ISWs or GDEs, and no indication that environmental stakeholders were consulted. **Please expand the goal to include protection of GDEs, ISWs, and critical habitats.** NC-013 (contd.)

- [Section 3.2.1.5 Interconnected Surface Waters (p. 3-4)] The statement "Depletion of interconnected surface waters are minimal and, to the extent they occur, impact only vegetation along the banks of unlined channels within the forebay regions of the aquifer system…." is not backed up by evidence presented in the GSP. **Once ISWs are analyzed per our comments on Checklist Items 8, 9, and 10 above, please revise this section, noting any data gaps to be filled.** NC-014

Checklist Item 26 – Measurable Objectives (23 CCR §354.30)

- [Section 5.4.1 Groundwater Level Measurable Objectives (p. 5-18 to 5-20)] The measurable objective was set equal to the water level at 2030 using the 2006-2016 water level trend for each of the wells selected as representative monitoring sites. The specific measurable objectives for all of the selected wells are listed in Table 5-3. **Please explain how the measurable objectives will help achieve the sustainability goal as it pertains to the environment. After GDEs and ISWs are identified, please discuss if any impacts to GDEs or ISWs are expected. Data gaps should be noted and addressed in the Monitoring section.** NC-015

Checklist Items 27 to 29 – Minimum Thresholds (23 CCR §354.28)

- [Section 5.3.1 Minimum Thresholds – Chronic Lowering of Groundwater Levels (p. 5-1 to 5-9)] The trend of the 2006-2016 water levels over time was used to set the minimum threshold at 2040 for each of the wells, used as representative monitoring sites, in each of four hydrogeologic zones within the Subbasin (shown on Figure 5.1, p. A5-1). The minimum thresholds and other sustainable criteria for each well are listed in Table 5-3 (p. 5-5). The minimum threshold derived in this manner means that it is based on a pre-SGMA level. **After GDEs are identified, please add discussion of the possible impacts to the environment. Data gaps should be noted and addressed in the Monitoring section.** NC-016

Checklist Items 30 to 46 – Undesirable Results (23 CCR §354.26)

- [Section 3.2.2.5 Interconnected Surface Waters (p. 3-7)] **Please specifically cite "periodic comparisons of surface water elevations and flowrate depletion in applicable stream channels and adjacent groundwater" as a data gap and further address in the monitoring section.** NC-017
- [Section 3.2.3.5 Interconnected Surface Waters (p. 3-9)] As noted above, an inventory of the vegetation types or habitat types and ranking of the vegetation species as having a high, moderate or low value will provide rational for the statement that "the intermittent nature of this vegetative habitat is such that its temporary loss does not rise to the level of an undesirable result." NC-018

- [Section 5.3.1.2 Undesirable Results (p. 5-2)] After the identification and evaluation of potential GDEs is completed, this section should discuss impacts to those GDEs. Specifically,
    - For chronic lowering of water level, the GSP Committee considered that one-third of the representative monitoring sites (wells) exceeding minimum thresholds for water levels would constitute an undesirable result. There appears to be no additional guidance to protect potential GDEs or ISWs. **Please discuss how this undesirable result can be used to avoid impacts to GDEs or ISWs.** NC-019
    - There appears to be no consideration of undesirable results on land uses that include and consider recreational uses (e.g. fishing/hunting, hiking, boating) and property interests that include and consider privately and publicly protected conservation lands and open spaces, including wildlife refuges, parks and natural preserves. **Please describe how impacts to these types of properties will be avoided.**
    - **Please provide more specifics on what biological responses (e.g., extent of habitat, growth, recruitment rates) would best characterize a significant and unreasonable impact to GDEs.** The definition of 'significant and unreasonable' is a qualitative statement that is used to describe when undesirable results would occur in the basin, such that a minimum threshold can be quantified. Potential effects on all beneficial users of groundwater in the basin need to be taken into consideration. According to the California Constitution Article X, §2, water resources in California must be "put to beneficial use to the fullest extent of which they are capable". **Please identify appropriate biological indicators that can be used to monitor potential impacts to environmental beneficial users due to groundwater conditions. Refer to Appendix E of this letter for an overview of a free, new online tool for monitoring the health of GDEs over time.**

Checklist Items 47, 48 and 49 – Monitoring Network (23 CCR §354.34)

- [Section 4.4 Groundwater Level Monitoring Network (p.4-6 to 4-11)]
    - The GSP proposes to use groundwater level monitoring for chronic groundwater level. Some of the monitoring wells are missing well construction information (only 22 of 37 wells are complete). Only 14 of the 37 wells are screened in the Upper Aquifer. The missing well information is a known data gap and was acknowledged on p. 4-15. Two multi-level wells are proposed to help fill this data gap, shown on Figure 4-7 (p. 4-22). **The missing information should be obtained or a different well selected for monitoring.** NC-020
    - "As stated previously, the interconnection of surface water and groundwater was disrupted many decades ago in the MKGSA. Therefore, a monitoring network and monitoring is not required for this GSA (p. 4-14)." Data has not been presented to substantiate this statement. **Please provide additional analysis to back-up this conclusion.**

- Per the GSP Regulations (23 CCR §354.34 (a) and (b)), monitoring must address trends in groundwater *and related surface conditions* (emphasis added). Groundwater level monitoring alone may be insufficient to establish a linkage between groundwater extraction and potentially resulting impacts to environmental resources associated with GDEs and ISWs. The cause-effect relationship between groundwater levels and the biological responses that could result in significant and unreasonable impacts to ISWs and GDEs depends on a number of complicated factors, and this relationship is not characterized or discussed. As such, it is not possible to determine whether the proposed monitoring, minimum thresholds and measurable objectives are sufficiently protective to ensure significant and unreasonable impacts to GDEs and ISWs will be prevented. **Please add monitoring of potential GDEs and at any locations where ISWs have been or were previously present.**

NC-020 (contd.)

- [Section 8.1 Annual Reporting Summary to DWR (p. 8-1 to 8-2)] "Groundwater contour maps submitted during the first five years may reflect a composite of the principal aquifers within the subbasin due to data gaps as discussed in Section 2 of this Plan. As additional dedicated monitoring wells are installed, and as more knowledge is gained regarding subbasin hydrogeology, groundwater conditions within each separate aquifer will be better understood (p. 8-1)." **A groundwater elevation map should be prepared for the Upper Aquifer above the Corcoran Clay**, as that is the only way one can determine the appropriate depth relationships between the surface water and the groundwater, which are needed to designate a GDE. Mixing shallow and deep wells, particularly when confined conditions may be present, can be misleading.

NC-021

Checklist Items 50 and 51 – Projects and Management Actions to Achieve Sustainability Goal (23 CCR §354.44)

- [Section 7 Projects and Management Actions (p. 7-1)] A summary of projects and management actions are listed on p. 7-1 and described in the following pages (p. 7-2 through 7-30).
  - Most of the proposed projects involve recharge to groundwater. "Visalia Eastside Regional Park & Groundwater Recharge project to be built by the City of Visalia consists of a 250-acre park featuring diverse recreational opportunities, native plants, wildlife habitat, and integrated groundwater replacement and storm water retention facilities (p. 7-26)." This is an example of a project with environmental benefits and multiple other benefits. Consistent with existing grant and funding guidelines for SGMA-related work, priority should be given to multi-benefit projects that can address water quantity as well as providing environmental benefits or benefits to disadvantaged communities. **Please state how ISWs and GDEs will benefit or be protected, or what other environmental benefits will accrue.**

- Recharge ponds, reservoirs and facilities for managed stormwater recharge can be designed to include elements that act functionally as wetlands and provide a benefit for wildlife and aquatic species. In some cases, such facilities have been incorporated into local HCPs, more fully recognizing the value of the habitat that they provide and the species they support. For projects that will be constructing recharge ponds, **please identify if there will be habitat value incorporated into the design and how the recharge ponds will be managed to benefit environmental users.**

Attachment C

Freshwater Species Located in the Kaweah Subbasin

To assist in identifying the beneficial users of surface water necessary to assess the undesirable result "depletion of interconnected surface waters", Attachment C provides a list of freshwater species located in the Kaweah Subbasin. To produce the freshwater species list, we used ArcGIS to select features within the California Freshwater Species Database version 2.0.9 within the GSA's boundary. This database contains information on ~4,000 vertebrates, macroinvertebrates and vascular plants that depend on fresh water for at least one stage of their life cycle. The methods used to compile the California Freshwater Species Database can be found in Howard et al. 2015[7]. The spatial database contains locality observations and/or distribution information from ~400 data sources. The database is housed in the California Department of Fish and Wildlife's BIOS[8] as well as on The Nature Conservancy's science website[9].

Scientific Name	Common Name	Legally Protected Species		
		Federal	State	Other
Birds				
Actitis macularius	Spotted Sandpiper			
Aechmophorus clarkii	Clark's Grebe			
Aechmophorus occidentalis	Western Grebe			
Agelaius tricolor	Tricolored Blackbird	Bird of Conservation Concern	Special Concern	BSSC - First priority
Aix sponsa	Wood Duck			
Anas acuta	Northern Pintail			
Anas americana	American Wigeon			
Anas clypeata	Northern Shoveler			
Anas crecca	Green-winged Teal			
Anas cyanoptera	Cinnamon Teal			
Anas discors	Blue-winged Teal			
Anas platyrhynchos	Mallard			
Anas strepera	Gadwall			
Anser albifrons	Greater White-fronted Goose			
Ardea alba	Great Egret			
Ardea herodias	Great Blue Heron			
Aythya affinis	Lesser Scaup			
Aythya americana	Redhead		Special Concern	BSSC - Third priority
Aythya collaris	Ring-necked Duck			
Aythya marila	Greater Scaup			

[7] Howard, J.K. et al. 2015. Patterns of Freshwater Species Richness, Endemism, and Vulnerability in California. PLoSONE, 11(7). Available at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0130710
[8] California Department of Fish and Wildlife BIOS: https://www.wildlife.ca.gov/data/BIOS
[9] Science for Conservation: https://www.scienceforconservation.org/products/california-freshwater-species-database

Aythya valisineria	Canvasback		Special	
Botaurus lentiginosus	American Bittern			
Bucephala albeola	Bufflehead			
Bucephala clangula	Common Goldeneye			
Butorides virescens	Green Heron			
Calidris alpina	Dunlin			
Calidris mauri	Western Sandpiper			
Calidris minutilla	Least Sandpiper			
Chen caerulescens	Snow Goose			
Chen rossii	Ross's Goose			
Chlidonias niger	Black Tern		Special Concern	BSSC - Second priority
Chroicocephalus philadelphia	Bonaparte's Gull			
Cistothorus palustris palustris	Marsh Wren			
Cygnus columbianus	Tundra Swan			
Cypseloides niger	Black Swift	Bird of Conservation Concern	Special Concern	BSSC - Third priority
Egretta thula	Snowy Egret			
Empidonax traillii	Willow Flycatcher	Bird of Conservation Concern	Endangered	
Fulica americana	American Coot			
Gallinago delicata	Wilson's Snipe			
Grus canadensis	Sandhill Crane			
Haliaeetus leucocephalus	Bald Eagle	Bird of Conservation Concern	Endangered	
Himantopus mexicanus	Black-necked Stilt			
Icteria virens	Yellow-breasted Chat		Special Concern	BSSC - Third priority
Ixobrychus exilis hesperis	Western Least Bittern		Special Concern	BSSC - Second priority
Limnodromus scolopaceus	Long-billed Dowitcher			
Lophodytes cucullatus	Hooded Merganser			
Megaceryle alcyon	Belted Kingfisher			
Mergus merganser	Common Merganser			
Mergus serrator	Red-breasted Merganser			
Numenius americanus	Long-billed Curlew			
Numenius phaeopus	Whimbrel			
Nycticorax nycticorax	Black-crowned Night-Heron			
Oxyura jamaicensis	Ruddy Duck			

Pelecanus erythrorhynchos	American White Pelican		Special Concern	BSSC - First priority
Phalacrocorax auritus	Double-crested Cormorant			
Phalaropus tricolor	Wilson's Phalarope			
Plegadis chihi	White-faced Ibis		Watch list	
Pluvialis squatarola	Black-bellied Plover			
Podiceps nigricollis	Eared Grebe			
Podilymbus podiceps	Pied-billed Grebe			
Porzana carolina	Sora			
Rallus limicola	Virginia Rail			
Recurvirostra americana	American Avocet			
Riparia riparia	Bank Swallow		Threatened	
Setophaga petechia	Yellow Warbler			BSSC - Second priority
Tachycineta bicolor	Tree Swallow			
Tringa melanoleuca	Greater Yellowlegs			
Tringa semipalmata	Willet			
Tringa solitaria	Solitary Sandpiper			
Xanthocephalus xanthocephalus	Yellow-headed Blackbird		Special Concern	BSSC - Third priority
Crustaceans				
Branchinecta lynchi	Vernal Pool Fairy Shrimp	Threatened	Special	IUCN - Vulnerable
Lepidurus packardi	Vernal Pool Tadpole Shrimp	Endangered	Special	IUCN - Endangered
Fishes				
Catostomus occidentalis occidentalis	Sacramento sucker			Least Concern - Moyle 2013
Cottus gulosus	Riffle sculpin		Special	Near-Threatened - Moyle 2013
Lampetra hubbsi	Kern brook lamprey		Special Concern	Vulnerable - Moyle 2013
Lavinia exilicauda exilicauda	Sacramento hitch		Special	Near-Threatened - Moyle 2013
Lavinia symmetricus symmetricus	Central California roach		Special Concern	Near-Threatened - Moyle 2013
Mylopharodon conocephalus	Hardhead		Special Concern	Near-Threatened - Moyle 2013
Oncorhynchus mykiss irideus	Coastal rainbow trout			Least Concern - Moyle 2013
Orthodon microlepidotus	Sacramento blackfish			Least Concern - Moyle 2013

Ptychocheilus grandis	Sacramento pikeminnow			Least Concern - Moyle 2013
Herps				
Actinemys marmorata marmorata	Western Pond Turtle		Special Concern	ARSSC
Ambystoma californiense californiense	California Tiger Salamander	Threatened	Threatened	ARSSC
Anaxyrus boreas boreas	Boreal Toad			
Rana boylii	Foothill Yellow-legged Frog	Under Review in the Candidate or Petition Process	Special Concern	ARSSC
Spea hammondii	Western Spadefoot	Under Review in the Candidate or Petition Process	Special Concern	ARSSC
Taricha torosa	Coast Range Newt		Special Concern	ARSSC
Thamnophis couchii	Sierra Gartersnake			
Thamnophis sirtalis sirtalis	Common Gartersnake			
Insects and Other Invertebrates				
Eulimnichus analis				Not on any status lists
Ischnura barberi	Desert Forktail			
Mammals				
Castor canadensis	American Beaver			Not on any status lists
Lontra canadensis canadensis	North American River Otter			Not on any status lists
Ondatra zibethicus	Common Muskrat			Not on any status lists
Mollusks				
Physella virgata	Protean Physa			CS
Plants				
Alnus rhombifolia	White Alder			
Ammannia coccinea	Scarlet Ammannia			
Anemopsis californica	Yerba Mansa			
Azolla filiculoides	NA			
Baccharis glutinosa	NA			Not on any status lists
Bidens laevis	Smooth Bur-marigold			
Carex densa	Dense Sedge			
Cephalanthus occidentalis	Common Buttonbush			
Cyperus acuminatus	Short-point Flatsedge			

Cyperus erythrorhizos	Red-root Flatsedge			
Downingia bella	Hoover's Downingia			
Echinodorus berteroi	Upright Burhead			
Eleocharis macrostachya	Creeping Spikerush			
Epilobium cleistogamum	Cleistogamous Spike-primrose			
Eryngium pinnatisectum	Tuolumne Coyote-thistle		Special	CRPR - 1B.2
Eryngium spinosepalum	Spiny Sepaled Coyote-thistle		Special	CRPR - 1B.2
Eryngium vaseyi vaseyi	Vasey's Coyote-thistle			Not on any status lists
Euthamia occidentalis	Western Fragrant Goldenrod			
Lasthenia ferrisiae	Ferris' Goldfields		Special	CRPR - 4.2
Lasthenia fremontii	Fremont's Goldfields			
Leersia oryzoides	Rice Cutgrass			
Lemna minor	Lesser Duckweed			
Ludwigia peploides peploides	NA			Not on any status lists
Marsilea vestita vestita	NA			Not on any status lists
Mimulus cardinalis	Scarlet Monkeyflower			
Mimulus guttatus	Common Large Monkeyflower			
Mimulus tricolor	Tricolor Monkeyflower			
Myosurus minimus	NA			
Myriophyllum hippuroides	Western Water-milfoil			
Orcuttia inaequalis	San Joaquin Valley Orcutt Grass	Threatened	Endangered	CRPR - 1B.1
Paspalum distichum	Joint Paspalum			
Phyla nodiflora	Common Frog-fruit			
Plagiobothrys acanthocarpus	Adobe Popcorn-flower			
Platanus racemosa	California Sycamore			
Puccinellia simplex	Little Alkali Grass			
Rumex occidentalis				Not on any status lists
Sagina saginoides	Arctic Pearlwort			
Salix exigua exigua	Narrowleaf Willow			
Salix gooddingii	Goodding's Willow			
Salix laevigata	Polished Willow			
Salix lasiolepis lasiolepis	Arroyo Willow			

Stachys albens	White-stem Hedge-nettle			
Typha domingensis	Southern Cattail			
Typha latifolia	Broadleaf Cattail			

Attachment D

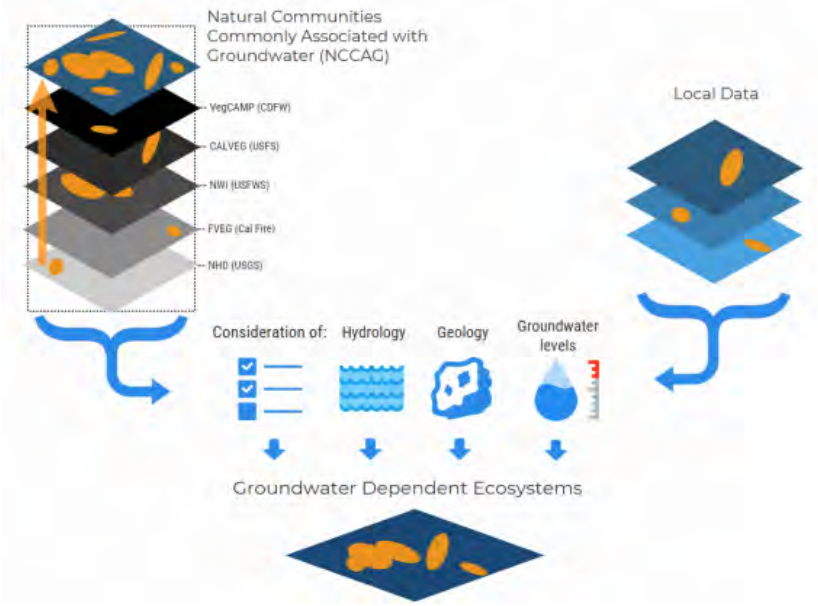
The Nature Conservancy

July 2019

IDENTIFYING GDEs UNDER SGMA

Best Practices for using the NC Dataset

The Sustainable Groundwater Management Act (SGMA) requires that groundwater dependent ecosystems (GDEs) be identified in Groundwater Sustainability Plans (GSPs). As a starting point, the Department of Water Resources (DWR) is providing the Natural Communities Commonly Associated with Groundwater Dataset (NC Dataset) online[10] to help Groundwater Sustainability Agencies (GSAs), consultants, and stakeholders identify GDEs within individual groundwater basins. To apply information from the NC Dataset to local areas, GSAs should combine it with the best available science on local hydrology, geology, and groundwater levels to verify whether polygons in the NC dataset are likely supported by groundwater in an aquifer (Figure 1)[11]. This document highlights six best practices for using local groundwater data to confirm whether mapped features in the NC dataset are supported by groundwater.



[10] *NC Dataset Online Viewer:* https://gis.water.ca.gov/app/NCDatasetViewer/

[11] California Department of Water Resources (DWR). 2018. Summary of the "Natural Communities Commonly Associated with Groundwater" Dataset and Online Web Viewer. Available at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Data-and-Tools/Files/Statewide-Reports/Natural-Communities-Dataset-Summary-Document.pdf

The NC Dataset identifies vegetation and wetland features that are good indicators of a GDE. The dataset is comprised of 48 publicly available state and federal datasets that map vegetation, wetlands, springs, and seeps commonly associated with groundwater in California[12]. It was developed through a collaboration between DWR, the Department of Fish and Wildlife, and The Nature Conservancy (TNC). TNC has also provided detailed guidance on identifying GDEs from the NC dataset[13] on the Groundwater Resource Hub[14], a website dedicated to GDEs.

BEST PRACTICE #1. Establishing a Connection to Groundwater

Groundwater basins can be comprised of one continuous aquifer (Figure 2a) or multiple aquifers stacked on top of each other (Figure 2b). In unconfined aquifers (Figure 2a), using the depth-to-groundwater and the rooting depth of the vegetation is a reasonable method to infer groundwater dependence for GDEs. If groundwater is well below the rooting (and capillary) zone of the plants and any wetland features, the ecosystem is considered disconnected and groundwater management is not likely to affect the ecosystem (Figure 2d). However, it is important to consider local conditions (e.g., soil type, groundwater flow gradients, and aquifer parameters) and to review groundwater depth data from multiple seasons and water year types (wet and dry) because intermittent periods of high groundwater levels can replenish perched clay lenses that serve as the water source for GDEs (Figure 2c). Maintaining these natural groundwater fluctuations are important to sustaining GDE health.

Basins with a stacked series of aquifers (Figure 2b) may have varying levels of pumping across aquifers in the basin, depending on the production capacity or water quality associated with each aquifer. If pumping is concentrated in deeper aquifers, SGMA still requires GSAs to sustainably manage groundwater resources in shallow aquifers, such as perched aquifers, that support springs, surface water, domestic wells, and GDEs (Figure 2). This is because vertical groundwater gradients across aquifers may result in pumping from deeper aquifers to cause adverse impacts onto beneficial users reliant on shallow aquifers or interconnected surface water. The goal of SGMA is to sustainably manage groundwater resources for current and future social, economic, and environmental benefits. While groundwater pumping may not be currently occurring in a shallower aquifer, use of this water may become more appealing and economically viable in future years as pumping restrictions are placed on the deeper production aquifers in the basin to meet the sustainable yield and criteria. Thus, identifying GDEs in the basin should done irrespective to the amount of current pumping occurring in a particular aquifer, so that future impacts on GDEs due to new production can be avoided. A good rule of thumb to follow is: *if groundwater can be pumped from a well - it's an aquifer*.

---

[12] *For more details on the mapping methods, refer to: Klausmeyer, K., J. Howard, T. Keeler-Wolf, K. Davis-Fadtke, R. Hull, A. Lyons. 2018. Mapping Indicators of Groundwater Dependent Ecosystems in California: Methods Report. San Francisco, California. Available at: https://groundwaterresourcehub.org/public/uploads/pdfs/iGDE_data_paper_20180423.pdf*

[13] "Groundwater Dependent Ecosystems under the Sustainable Groundwater Management Act: Guidance for Preparing Groundwater Sustainability Plans" is available at: https://groundwaterresourcehub.org/gde-tools/gsp-guidance-document/

[14] *The Groundwater Resource Hub: www.GroundwaterResourceHub.org*

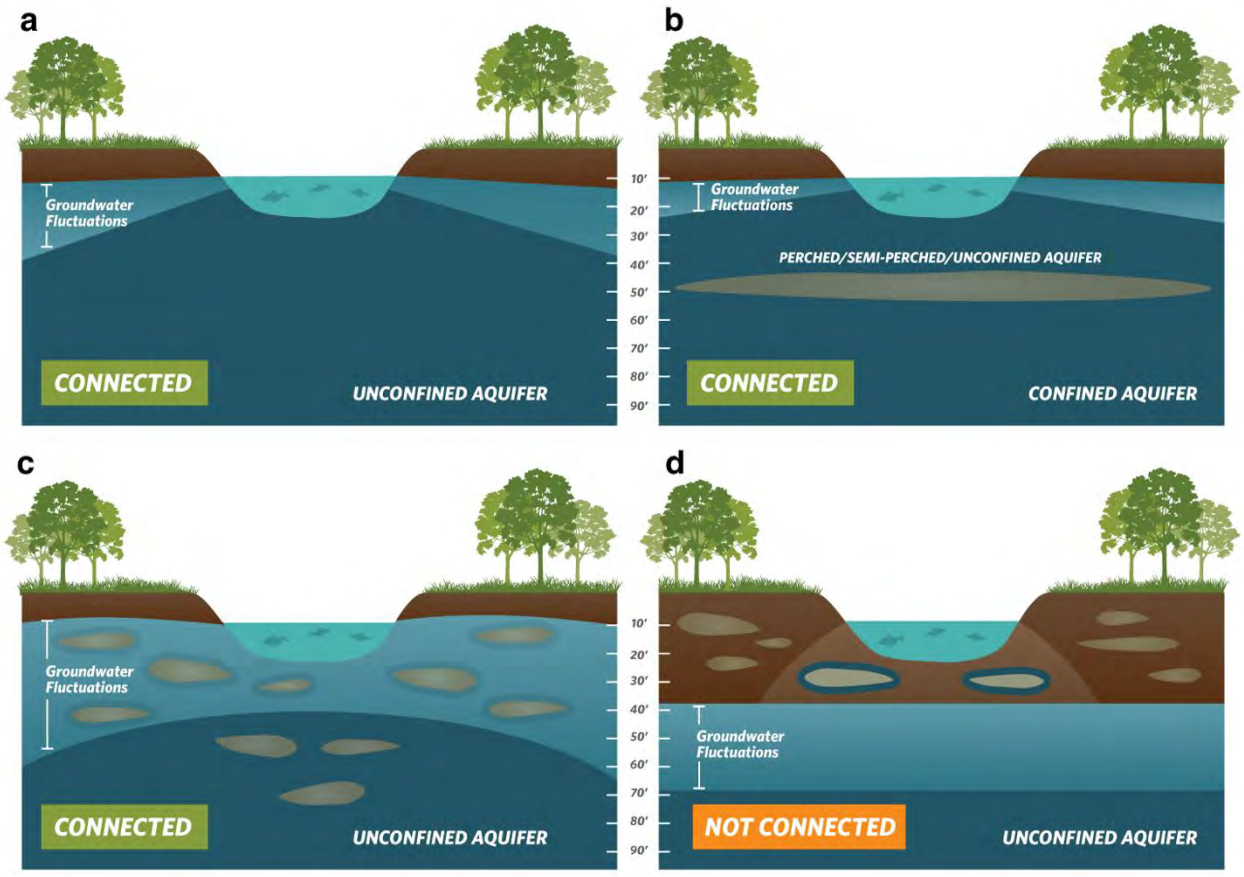


Figure 2. Confirming whether an ecosystem is connected to groundwater. Top: (a) Under the ecosystem is an unconfined aquifer with depth-to-groundwater fluctuating seasonally and interannually within 30 feet from land surface. **(b)** Depth-to-groundwater in the shallow aquifer is connected to overlying ecosystem. Pumping predominately occurs in the confined aquifer, but pumping is possible in the shallow aquifer. **Bottom: (c)** Depth-to-groundwater fluctuations are seasonally and interannually large, however, clay layers in the near surface prolong the ecosystem's connection to groundwater. **(d)** Groundwater is disconnected from surface water, and any water in the vadose (unsaturated) zone is due to direct recharge from precipitation and indirect recharge under the surface water feature. These areas are not connected to groundwater and typically support species that do not require access to groundwater to survive.

BEST PRACTICE #2. Characterize Seasonal and Interannual Groundwater Conditions

SGMA requires GSAs to describe current and historical groundwater conditions when identifying GDEs [23 CCR §354.16(g)]. Relying solely on the SGMA benchmark date (January 1, 2015) or any other single point in time to characterize groundwater conditions (e.g., depth-to-groundwater) is inadequate because managing groundwater conditions with data from one time point fails to capture the seasonal and interannual variability typical of California's climate. DWR's Best Management Practices document on water budgets[15] recommends using 10 years of water supply and water budget information to describe how historical conditions have impacted the operation of the basin within sustainable yield, implying that a baseline[16] could be determined based on data between 2005 and 2015. Using this or a similar time period, depending on data availability, is recommended for determining the depth-to-groundwater.

GDEs depend on groundwater levels being close enough to the land surface to interconnect with surface water systems or plant rooting networks. The most practical approach[17] for a GSA to assess whether polygons in the NC dataset are connected to groundwater is to rely on groundwater elevation data. As detailed in TNC's GDE guidance document[4], one of the key factors to consider when mapping GDEs is to contour depth-to-groundwater in the aquifer that is supporting the ecosystem (see Best Practice #5).

Groundwater levels fluctuate over time and space due to California's Mediterranean climate (dry summers and wet winters), climate change (flood and drought years), and subsurface heterogeneity in the subsurface (Figure 3). Many of California's GDEs have adapted to dealing with intermittent periods of water stress, however if these groundwater conditions are prolonged, adverse impacts to GDEs can result. While depth-to-groundwater levels within 30 feet[4] of the land surface are generally accepted as being a proxy for confirming that polygons in the NC dataset are supported by groundwater, it is highly advised that fluctuations in the groundwater regime be characterized to understand the seasonal and interannual groundwater variability in GDEs. Utilizing groundwater data from one point in time can misrepresent groundwater levels required by GDEs, and inadvertently result in adverse impacts to the GDEs. Time series data on groundwater elevations and depths are available on the SGMA Data Viewer[18]. However, if insufficient data are available to describe groundwater conditions within or near polygons from the NC dataset, include those polygons in the GSP until data gaps are reconciled in the monitoring network (see Best Practice #6).

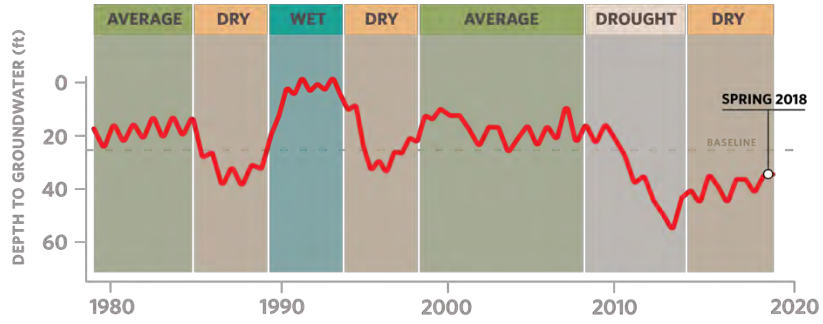


Figure 3. Example seasonality and interannual variability in depth-to-groundwater over time. Selecting one point in time, such as Spring 2018, to characterize groundwater conditions in GDEs fails to capture what groundwater conditions are necessary to maintain the ecosystem status into the future so adverse impacts are avoided.

[15] DWR. 2016. Water Budget Best Management Practice. Available at: https://water.ca.gov/LegacyFiles/groundwater/sgm/pdfs/BMP_Water_Budget_Final_2016-12-23.pdf

[16] *Baseline is defined under the GSP regulations as "historic information used to project future conditions for hydrology, water demand, and availability of surface water and to evaluate potential sustainable management practices of a basin." [23 CCR §351(e)]*

[17] Groundwater reliance can also be confirmed via stable isotope analysis and geophysical surveys. For more information see The GDE Assessment Toolbox (Appendix IV, GDE Guidance Document for GSPs[4]).

[18] *SGMA Data Viewer: https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer*

BEST PRACTICE #3. Ecosystems Often Rely on Both Groundwater and Surface Water

GDEs are plants and animals that rely on groundwater for all or some of its water needs, and thus can be supported by multiple water sources. The presence of non-groundwater sources (e.g., surface water, soil moisture in the vadose zone, applied water, treated wastewater effluent, urban stormwater, irrigated return flow) within and around a GDE does not preclude the possibility that it is supported by groundwater, too. SGMA defines GDEs as "ecological communities and species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface" [23 CCR §351(m)]. Hence, depth-to-groundwater data should be used to identify whether NC polygons are supported by groundwater and should be considered GDEs. In addition, SGMA requires that significant and undesirable adverse impacts to beneficial users of surface water be avoided. Beneficial users of surface water include environmental users such as plants or animals[19], which therefore must be considered when developing minimum thresholds for depletions of interconnected surface water.

GSAs are only responsible for impacts to GDEs resulting from groundwater conditions in the basin, so if adverse impacts to GDEs result from the diversion of applied water, treated wastewater, or irrigation return flow away from the GDE, then those impacts will be evaluated by other permitting requirements (e.g., CEQA) and may not be the responsibility of the GSA. However, if adverse impacts occur to the GDE due to changing groundwater conditions resulting from pumping or groundwater management activities, then the GSA would be responsible (Figure 4).

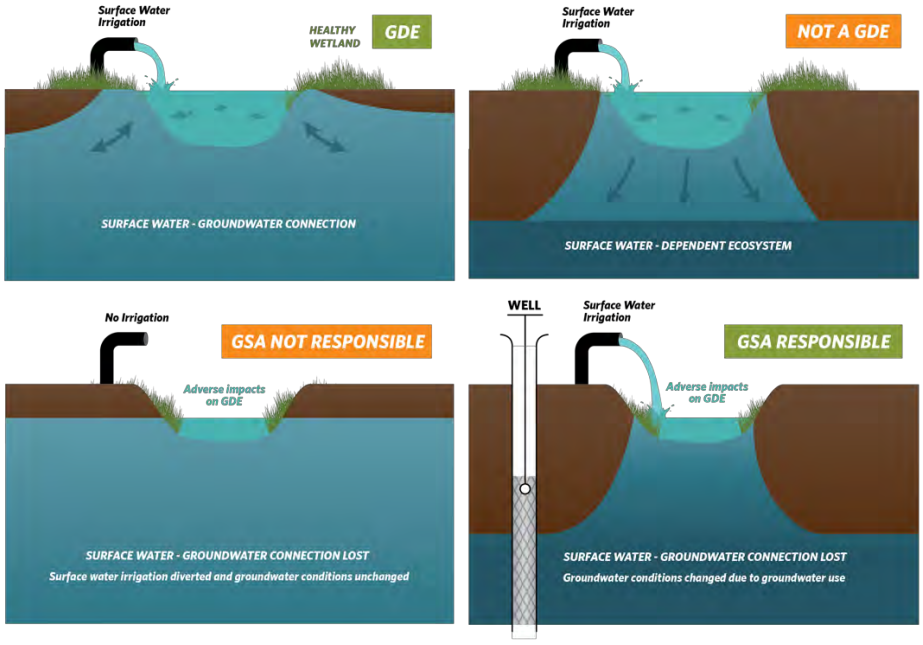


Figure 4. Ecosystems often depend on multiple sources of water. Top: (Left) Surface water and groundwater are interconnected, meaning that the GDE is supported by both groundwater and surface water. **(Right)** Ecosystems that are only reliant on non-groundwater sources are not groundwater-dependent. **Bottom: (Left)** An ecosystem that was once dependent on an interconnected surface water, but loses access to groundwater solely due to surface water diversions may not be the GSA's responsibility. **(Right)** Groundwater dependent ecosystems once dependent on an interconnected surface water system, but loses that access due to groundwater pumping is the GSA's responsibility.

[19] *For a list of environmental beneficial users of surface water by basin, visit: https://groundwaterresourcehub.org/gde-tools/environmental-surface-water-beneficiaries/*

BEST PRACTICE #4. Select Representative Groundwater Wells

Identifying GDEs in a basin requires that groundwater conditions are characterized to confirm whether polygons in the NC dataset are supported by the underlying aquifer. To do this, proximate groundwater wells should be identified to characterize groundwater conditions (Figure 5). When selecting representative wells, it is particularly important to consider the subsurface heterogeneity around NC polygons, especially near surface water features where groundwater and surface water interactions occur around heterogeneous stratigraphic units or aquitards formed by fluvial deposits. The following selection criteria can help ensure groundwater levels are representative of conditions within the GDE area:

- Choose wells that are within 5 kilometers (3.1 miles) of each NC Dataset polygons because they are more likely to reflect the local conditions relevant to the ecosystem. If there are no wells within 5km of the center of a NC dataset polygon, then there is insufficient information to remove the polygon based on groundwater depth. Instead, it should be retained as a potential GDE until there are sufficient data to determine whether or not the NC Dataset polygon is supported by groundwater.

- Choose wells that are screened within the surficial unconfined aquifer and capable of measuring the true water table.

- Avoid relying on wells that have insufficient information on the screened well depth interval for excluding GDEs because they could be providing data on the wrong aquifer. This type of well data should not be used to remove any NC polygons.

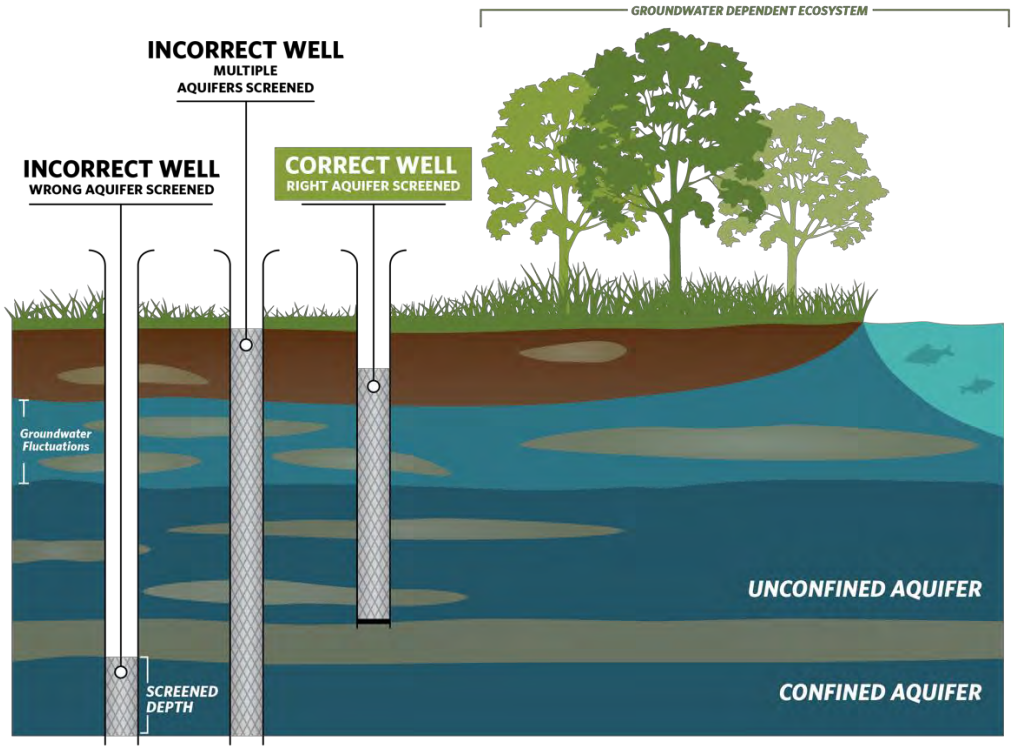


Figure 5. Selecting representative wells to characterize groundwater conditions near GDEs.

BEST PRACTICE #5. Contouring Groundwater Elevations

The common practice to contour depth-to-groundwater over a large area by interpolating measurements at monitoring wells is unsuitable for assessing whether an ecosystem is supported by groundwater. This practice causes errors when the land surface contains features like stream and wetland depressions because it assumes the land surface is constant across the landscape and depth-to-groundwater is constant below these low-lying areas (Figure 6a). A more accurate approach is to interpolate **groundwater elevations** at monitoring wells to get groundwater elevation contours across the landscape. This layer can then be subtracted from land surface elevations from a Digital Elevation Model (DEM)[20] to estimate depth-to-groundwater contours across the landscape (Figure b; Figure 7). This will provide a much more accurate contours of depth-to-groundwater along streams and other land surface depressions where GDEs are commonly found.

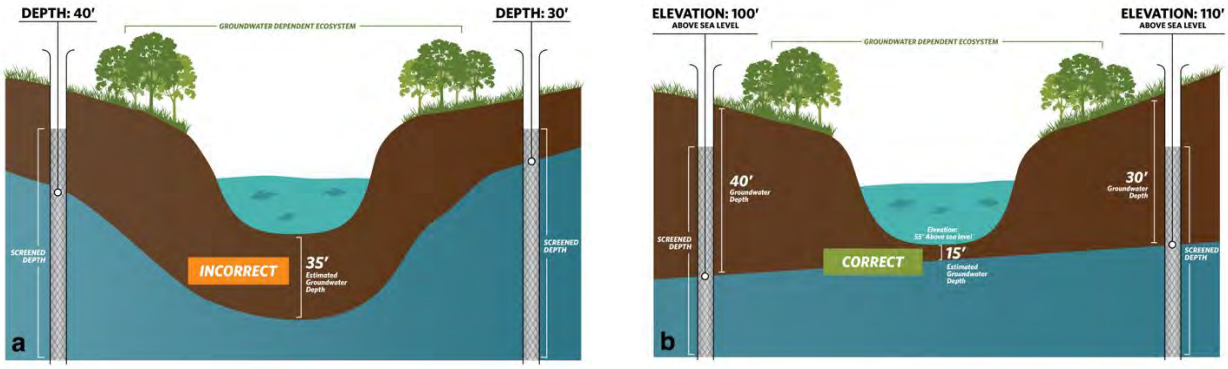


Figure 6. Contouring depth-to-groundwater around surface water features and GDEs. (a) Groundwater level interpolation using depth-to-groundwater data from monitoring wells. **(b)** Groundwater level interpolation using groundwater elevation data from monitoring wells and DEM data.

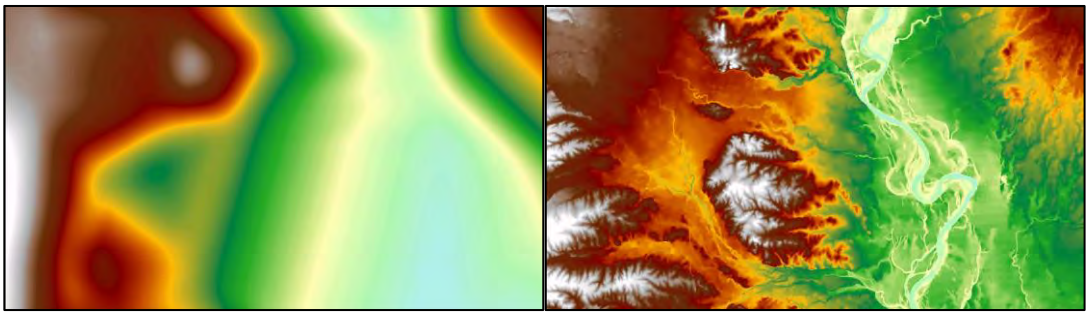


Figure 7. Depth-to-groundwater contours in Northern California. (Left) Contours were interpolated using depth-to-groundwater measurements determined at each well. **(Right)** Contours were determined by interpolating groundwater elevation measurements at each well and superimposing ground surface elevation from DEM spatial data to generate depth-to-groundwater contours. The image on the right shows a more accurate depth-to-groundwater estimate because it takes the local topography and elevation changes into account.

[20] USGS Digital Elevation Model data products are described at: https://www.usgs.gov/core-science-systems/ngp/3dep/about-3dep-products-services and can be downloaded at: https://iewer.nationalmap.gov/basic/

BEST PRACTICE #6. Best Available Science

Adaptive management is embedded within SGMA and provides a process to work toward sustainability over time by beginning with the best available information to make initial decisions, monitoring the results of those decisions, and using the data collected through monitoring programs to revise decisions in the future. In many situations, the hydrologic connection of NC dataset polygons will not initially be clearly understood if site-specific groundwater monitoring data are not available. If sufficient data are not available in time for the 2020/2022 plan, **The Nature Conservancy strongly advises that questionable polygons from the NC dataset be included in the GSP until data gaps are reconciled in the monitoring network.** Erring on the side of caution will help minimize inadvertent impacts to GDEs as a result of groundwater use and management actions during SGMA implementation.

KEY DEFINITIONS

Groundwater basin is an aquifer or stacked series of aquifers with reasonably well-defined boundaries in a lateral direction, based on features that significantly impede groundwater flow, and a definable bottom. *23 CCR §341(g)(1)*

Groundwater dependent ecosystem (GDE) are ecological communities or species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface. *23 CCR §351(m)*

Interconnected surface water (ISW) surface water that is hydraulically connected at any point by a continuous saturated zone to the underlying aquifer and the overlying surface water is not completely depleted. *23 CCR §351(o)*

Principal aquifers are aquifers or aquifer systems that store, transmit, and yield significant or economic quantities of groundwater to wells, springs, or surface water systems. *23 CCR §351(aa)*

ABOUT US

The Nature Conservancy is a science-based nonprofit organization whose mission is *to conserve the lands and waters on which all life depends*. To support successful SGMA implementation that meets the future needs of people, the economy, and the environment, TNC has developed tools and resources (www.groundwaterresourcehub.org) intended to reduce costs, shorten timelines, and increase benefits for both people and nature.

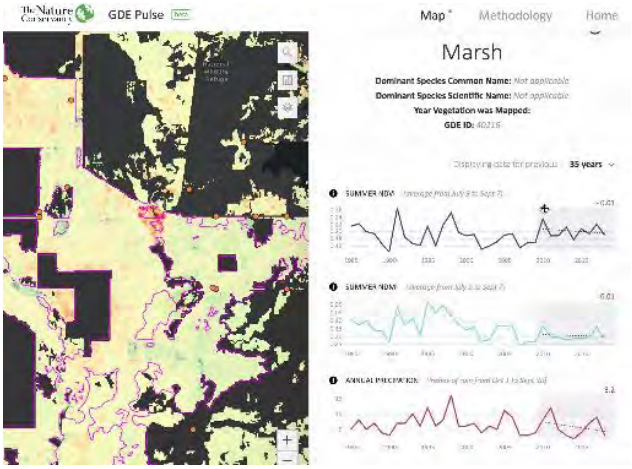
Attachment E

GDE Pulse

A new, free online tool that allows Groundwater Sustainability Agencies to assess changes in groundwater dependent ecosystem (GDE) health using satellite, rainfall, and groundwater data.

The Nature Conservancy
Protecting nature. Preserving life.®

Visit
https://gde.codefornature.org/



Remote sensing data from satellites has been used to monitor the health of vegetation all over the planet. GDE pulse has compiled 35 years of satellite imagery from NASA's Landsat mission for every polygon in the Natural Communities Commonly Associated with Groundwater Dataset[21]. The following datasets are included:

Normalized Difference Vegetation Index (NDVI) is a satellite-derived index that represents the greenness of vegetation. Healthy green vegetation tends to have a higher NDVI, while dead leaves have a lower NDVI. We calculated the average NDVI during the driest part of the year (July - Sept) to estimate vegetation health when the plants are most likely dependent on groundwater.

Normalized Difference Moisture Index (NDMI) is a satellite-derived index that represents water content in vegetation. NDMI is derived from the Near-Infrared (NIR) and Short-Wave Infrared (SWIR) channels. Vegetation with adequate access to water tends to have higher NDMI, while vegetation that is water stressed tends to have lower NDMI. We calculated the average NDVI during the driest part of the year (July–September) to estimate vegetation health when the plants are most likely dependent on groundwater.

Annual Precipitation is the total precipitation for the water year (October 1st – September 30th) from the PRISM dataset[22]. The amount of local precipitation can affect vegetation with more precipitation generally leading to higher NDVI and NDMI.

Depth to Groundwater measurements provide an indication of the groundwater levels and changes over time for the surrounding area. We used groundwater well measurements from nearby (<1km) wells to estimate the depth to groundwater below the GDE based on the average elevation of the GDE (using a digital elevation model) minus the measured groundwater surface elevation.

[21] *The Natural Communities Commonly Associated with Groundwater Dataset is hosted on the California Department of Water Resources' website: https://gis.water.ca.gov/app/NCDatasetViewer/#*

[22] The PRISM dataset is hosted on Oregon State University's website: http://www.prism.oregonstate.edu/

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

September 12, 2019

Via Mail and Electronic Mail

MKGSA Groundwater Sustainability Plan Public Comments
Paul Hendrix
c/o Tulare Irrigation District
P.O. Box 1920
Tulare, California 93275

Email: midkaweah@gmail.com

Subject: Comments on the Mid-Kaweah Draft Groundwater Sustainability Plan

Dear Mr. Hendrix:

The California Department of Fish and Wildlife (Department) Central Region is providing comments on the Mid-Kaweah Draft Groundwater Sustainability Plan (GSP) prepared by Mid-Kaweah Groundwater Sustainability Agency (Mid-Kaweah GSA, MKGSA), pursuant to the Sustainable Groundwater Management Act (SGMA). As trustee agency for the State's fish and wildlife resources, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of such species (Fish & Game Code §§ 711.7 and 1802).

Development and implementation of GSPs under SGMA represents a new era of California groundwater management. The Department has an interest in the sustainable management of groundwater, as many sensitive ecosystems and species depend on groundwater and interconnected surface waters. SGMA and its implementing regulations afford ecosystems and species specific statutory and regulatory consideration, including the following as pertinent to Groundwater Sustainability Plans:

- Groundwater Sustainability Plans should identify and consider impacts to groundwater dependent ecosystems (GDEs) pursuant to 23 CCR § 354.16(g) and Water Code § 10727.4(l);

- Groundwater Sustainability Agencies should consider all beneficial uses and users of groundwater, including environmental users of groundwater pursuant to Water Code §10723.2 (e); and Groundwater Sustainability Plans should identify and consider potential effects on all beneficial uses and users of groundwater pursuant to 23 CCR §§ 354.10(a), 354.26(b)(3), 354.28(b)(4), 354.34(b)(2), and 354.34(f)(3);

- Groundwater Sustainability Plans should establish sustainable management criteria that avoid undesirable results within 20 years of the applicable statutory deadline, including depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water pursuant to 23 CCR § 354.22 *et seq*. and Water Code §§ 10721(x)(6) and 10727.2(b) and describe monitoring networks that can identify adverse impacts to beneficial uses of interconnected surface waters pursuant to 23 CCR § 354.34(c)(6)(D); and

- Groundwater Sustainability Plans should account for groundwater extraction for all Water Use Sectors including managed wetlands, managed recharge, and native vegetation pursuant to 23 CCR §§ 351(al) and 354.18(b)(3).

Accordingly, the Department values SGMA groundwater planning that carefully considers and protects groundwater dependent ecosystems and fish and wildlife beneficial uses and users of groundwater and interconnected surface waters.

COMMENT OVERVIEW

The Department supports ecosystem preservation in compliance with SGMA and its implementing regulations based on Department expertise and best available information and science.

The Department recommends the GSP provide additional information and analysis that considers all environmental beneficial uses and users of groundwater in its sustainability management criteria and better characterize or consider surface water-groundwater connectivity. In addition, the Department is providing additional comments and recommendations below.

COMMENTS AND RECOMMENDATIONS

The Department comments are as follows:

1. **Comment #1 Environmental Beneficial Users:** (Introduction, 1.5.2 Beneficial Uses and Users, starting on page 1-23): Environmental beneficial uses and ecosystem users of water are not adequately considered throughout the plan. DF-001

    a. *Issue*: Though the GSP identifies 'environmental and ecosystem interests' on the list of interest-based categories to be considered per Water Code 10723.2, these interests are not specified nor considered in a meaningful way. For example, on the bottom of page 1-23, the narrative paragraph lists beneficial users of groundwater in the basin but excludes

any mention of environmental users. In Section 1.5.2.10, page 1-25, the GSP lists 'Environmental and Ecosystem Interests,' but unlike the other beneficial users, these interests are identified only as representative environmental organizations, not as the specific groundwater end user (e.g., groundwater dependent ecosystems). The lack of specificity around and consideration of environmental beneficial users perpetuates throughout the plan. For example:

i. On page 3-2, first paragraph, the sustainability goal is entirely 'enterprise' focused and does not mention any environmental beneficial users of groundwater.

ii. Similarly, undesirable results largely do not reflect potential impacts to environmental beneficial uses and users of water. These users are excluded from the analysis and effects of undesirable results or their inclusion is cursory and dismissive. For example, on page 3-9, the discussion around Interconnected Surface Waters undesirable results acknowledges and accepts the potential for the temporary loss of riparian vegetation, which does not align with General Plan Open Space and Conservation Element objectives that seek to maintain or enhance riparian habitat as presented on page 1-14.

DF-001 (contd.)

iii. On page 3-8, the GSP notes that any "undesirable results caused by habitat loss within stream channels will be evaluated on a case-by-case basis and independent of other undesirable results". This statement effectively separates instream habitat undesirable results from the GSP undesirable result analysis for all other beneficial users without specifics as to how these 'cases' may be managed. Also, habitat 'loss' suggests permanence, which may mean once a 'case' is identified, it could be too late to mitigate significant impacts to environmental beneficial uses and users of groundwater.

b. *Recommendation*: The Department recommends the GSP identify specific habitats and species that depend on groundwater in the subbasin and define for these beneficial users undesirable results and related causes. The Department recommends reviewing and evaluating the Critical Species Lookbook (TNC 2019) for threatened and endangered species within the basin, as well as for narrative on species and habitat groundwater dependence that can be a model for describing environmental beneficial uses and users of groundwater in the GSP.

2. **Comment #2 Interconnected Surface Waters** (Multiple Sections/Pages): The GSP offers an inconsistent and incomplete analysis of interconnected surface waters and related sustainable management criteria (SMC).

    a. *Issue*: On page 5-1, the GSP establishes 'non-applicability' of Interconnected Surface Waters sustainable management criteria, but poorly justifies and inconsistently applies this conclusion. Below are a series of GSP excerpts and CDFW comments.

        i. On page 3-4[1], the undesirable result analysis for Interconnected Surface Waters states, "Depletions of interconnected surface waters are minimal and, to the extent they occur, impact only vegetation along the banks of unlined channels within the forebay regions of the aquifer system where natural channels exhibit gaining reaches from time to time. Undesirable results may occur should any such groundwater-dependent vegetation disappear from locations of known historic existence."

        ii. On page 3-5 states "Groundwater elevations shall serve as the sustainability indicator and metric for chronic lowering of groundwater levels and, by proxy, for and interconnected surface waters. Justification for use of groundwater elevations as a proxy in this instance is provided in Section 5."

        iii. On page 3-7 states, "The water level sustainability indicator is to serve, by proxy, for establishing interconnected surface waters. Periodic comparisons of surface water elevations and flowrate depletions in applicable stream channels and adjacent groundwater will be pertinent to this establishment."

        iv. On page 3-9 states, "Water bodies, primarily stream channels, which become temporally disconnected throughout the year from the underlying water table may experience the disappearance of

DF-002

[1] Even though potential undesirable results are defined for Interconnected Surface Waters depletions, the causes for these depletions are not identified in *Section 3.2.1.5 Causes Leading to Undesirable Results: Interconnected Surface Water*. Causes leading to undesirable results for all other applicable SMC are identified.

adjacent vegetative habitat which may be considered as a beneficial use of groundwater. Such occurrences are generally restricted to the upper reaches of applicable channels in the forebay region of the aquifer system near the Sierra foothills. The consensus among Subbasin GSAs and stakeholders is that the intermittent nature of this vegetative habitat is such that its temporary loss does not rise to the level of an undesirable result."

Each of the above statements suggest that the basin has some surface water groundwater interconnectivity, and that groundwater elevation will serve as a proxy metric for Interconnected Surface Waters monitoring. The last sentence for page 3-9 above, suggests the consensus is more the expressed opinion of the stakeholders and not based on scientific or engineering verification.

v. On page 4-14, states, "As stated previously, the interconnection of surface water and groundwater was disrupted many decades ago in the MKGSA. Therefore, a monitoring network and monitoring is not required for this GSA."

vi. On page 5-18 states "Insufficient information and flow data exist with which to gauge seasonal connections and relative importance of any vegetative habitat known to intermittently exist along stream channel banks."

DF-002 (contd.)

The above two statements suggest that the GSP is dismissing all groundwater surface water connectivity as non-existent, despite an absence of data and previous suggestion that there is some degree of interconnectivity. Notably, the data gaps identified in the plan do not include Interconnected Surface Waters (see pages 2-2 and 4-14); and though the GSP proposes use of groundwater elevation as a proxy for Interconnected Surface Waters depletions on page 3-7, no further justification or application of that proxy metric is included.

b. *Recommendations*: To reconcile the inconsistent and inadequate consideration of Interconnected Surface Waters depletions in the GSP, the Department recommends the MKGSA consider:

i. Installing shallow groundwater monitoring wells near potential GDEs and Interconnected Surface Waters, potentially pairing multiple-completion wells with streamflow gauges for improved understanding of surface water-groundwater interconnectivity.

ii. Identifying the estimated quantity, timing, and location of streamflow depletions in the subbasin per 23 CCR 354.28 (c)(6)(A). If this information is unavailable, identify and define a timely and clear approach to estimating these values.

iii. Re-evaluating sustainable management criteria based on an improved understanding of Interconnected Surface Waters and based on undesirable results for environmental beneficial users of groundwater and Interconnected Surface Waters.

DF-002 (contd.)

3. **Comment 3 Sustainable Management Criteria** (Sustainable Management Criteria, 5.3 Minimum Thresholds, starting on page 5-2): Sustainable management criteria allow for decades of continued groundwater decline in this subbasin designated as 'Critically Overdrafted.'

   a. *Issue*: These sustainability criteria suggest that groundwater elevations at all representative wells in the subbasin can continue to decrease for the next 20 years, dropping further from historically low groundwater elevations during drought years, without witnessing undesirable results. The subbasin is characterized by DWR as 'Critically Overdrafted,' meaning "continuation of present water management practices [in the basin] would probably result in significant adverse overdraft-related environmental, social, or economic impacts" (CDWR 2019). However, according to statements in the GSP, the basin has not experienced undesirable results, nor will it under projected 2040 groundwater levels "barring significant and unreasonable impacts on existing wells and freshwater storage" as stated on page 5-3; therefore, minimum thresholds allow for continued groundwater depletions. Specifically, "minimum thresholds were set at the water level projections for 2040 using the same trend in groundwater levels from 2006 to 2016" as stated on page 5-3, effectively allowing for 20 years of groundwater table declining trends and mirroring trends that contributed to the subbasin's Critically Overdrafted status. Conceptually, there is a disconnect between the subbasin's 'Critically Overdrafted' designation and the GSP's claim that the basin has not experienced undesirable results, nor will continue to have undesirable results if groundwater levels continue to decrease.

   DF-003

   b. *Recommendation*: The Department recommends the MKGSA reconsider minimum thresholds and measurable objectives, accounting for undesirable results for fish and wildlife beneficial uses and users of

groundwater and interconnected surface water, to design sustainable management criteria that reflect a 'Critically Overdrafted' subbasin designation by seeking to improve current groundwater conditions rather than allowing for continued aquifer depletions over the next two decades.

DF-003 (contd.)

4. **Comment #4 Section 5.3.5 Minimum Thresholds - Interconnected Surface Waters** on pages 5-7 to 5-8 and **Appendix 2A Section 2.10 Kaweah Subbasin Basin Setting Components. Groundwater-Dependent Ecosystems**. Starting on page 146, the GDE identification section, pursuant to 23 CCR § 354.16 (g), is based on very limited information to demonstrate exclusion of ecosystems that may depend on groundwater.

    a. *Issue*: Methods applied to the Natural Communities Commonly Associated with Groundwater (NCCAG) dataset to eliminate potential GDE's are not robust.

        i. Depth to Groundwater: The removal of areas with a depth to groundwater greater than 50 feet in Spring 2015 relies on a single-point-in-time baseline hydrology, specifically a point in time that is several years into a historic drought when groundwater levels were trending significantly lower due to reduced surface water availability. Exclusion of potential GDEs based on this singular groundwater elevation measurement is questionable because it does not consider representative climate conditions (i.e., seasons and a range of water type years) and it does not account for GDEs that can survive a finite period of time without groundwater access (Naumburg et al. 2005), but that rely on groundwater table recovery periods for long term survival.

DF-004

        ii. Adjacent to Surface Water: The GSP did not fully evaluate potential GDEs that depend on adjacent losing surface water bodies and a GDE's adaptability and opportunistic nature in accessing water supply. The GSP assumption that these potential GDEs are accessing and primarily dependent on surface water is based on proximity to a surface water source, but this assumption is poorly justified and there is no acknowledgement of the potential for shifting reliance between surface and ground water. Additionally, GDEs that are near interconnected surface water bodies may depend on sustained groundwater elevations that stabilize the gradient or rate of loss of surface water, meaning that ecosystems near interconnected surface waters may depend on sustainable groundwater elevations. Therefore, it is possible that

any of these potential GDEs rely on groundwater during specific seasons or water year types.

b. *Recommendations:* The Department recommends the MKGSA consider the following for information gathering related to GDEs:

i. Depth to Groundwater: Develop a hydrologically robust baseline which includes areas with a depth to groundwater greater than 50 feet that relies on multiple, climatically representative years of groundwater elevation and that accounts for the inter-seasonal and inter-annual variability of GDE water demand.

ii. Adjacent to Surface Water: Re-evaluate potential GDEs that are in proximity to a losing surface water body. The Department recommends the GSP be more conservative and all-inclusive until there is evidence that the overlying ecosystem has no significant dependence on groundwater across seasons and water year types. The Department advises that these riparian GDE beneficial users of groundwater and surface water are carefully considered in the analysis of undesirable results and minimum thresholds for depletions of interconnected surface waters.

DF-004 (contd.)

iii. Include additional references for evaluation: The Department recognizes that NCCAG (Klausmeyer et al. 2018) provided by California Department of Water Resources (CDWR) is a good starting reference for GDE's; however, the Department recommends the GSP include additional resources for evaluating GDE locations. The Department recommends consulting other references, including but not limited to the following tools and other resources: the California Department of Fish and Wildlife (CDFW) Vegetation Classification and Mapping Program (VegCAMP) (CDFW 2019A); the CDFW California Natural Diversity Database (CNDDB) (2019B); the California Native Plant Society (CNPS) Manual of California Vegetation (CNPS 2019A); the CNPS California Protected Areas Database (CNPS 2019B); the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (2018); the USFWS online mapping tool for listed species critical habitat (2019); the U.S. Forest Service CALVEG ecological grouping classification and assessment system (2019); and other publications by Klausmeyer et al. (2019), Rohde et al. (2018), The Nature Conservancy (TNC) (2014), and Witham et al. (2014).

CONCLUSION

In conclusion, the Mid-Kaweah Draft GSP needs to address all SGMA statutes and regulations, and the Department recommends the GSP seriously consider fish and wildlife beneficial uses and interconnected surface waters. The Department recommends that the MKGSA consider the above comments before the GSP is submitted to the Department of Water Resources (DWR). The Department appreciates the opportunity to provide comments on the Mid-Kaweah Draft GSP. If you have any further questions, please contact Dr. Andrew Gordus at Andy.Gordus@wildlife.ca.gov or (559) 243-4014 x 239.

Sincerely,

Julie A. Vance
Regional Manager, Central Region

Enclosures (Literature Cited)

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WESTCHESTER
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September 13, 2019

MKGSA Groundwater Sustainability Plan Public Comments
c/o Tulare Irrigation District
P.O. Box 1920
Tulare, CA 93275

Re: Mid-Kaweah Public Review Draft Groundwater Sustainability Plan

Thank you for the opportunity to comment on the Mid-Kaweah GSP. I appreciate the efforts that have gone into this plan and generally feel like the Plan is heading in a good direction.

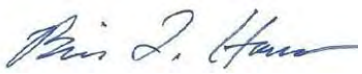
I do have some clarifying comments regarding the Project and Management Actions in Section 7 of the Plan. Specifically, the concept of on-farm recharge covered in Section 7.3.4. My comments are as follows:

1. It would be helpful to understand how on-farm recharge water quantities will be credited and accounted for. Will there be any losses applied, or "leave-behind?"
2. Will individual water user accounts be created to manage the credits?
3. In addition to on-farm recharge, I would like to see some further discussion on private water user/landowner recharge projects such as recharge basins and subsurface recharge system projects. With these projects, the same questions outlined above regarding how recharge will be credited and accounted for would be applicable.

WG-001

It would be beneficial to see these items further defined in the Plan, but if specifics on such Projects and Management Actions cannot be quantified at this time, I would at least like to see the Plan outline a process of how such projects and actions could be developed post Plan, and prior to implementation.

Sincerely,



Brian L. Hauss
Vice President

Gmail

Paul Hendrix <midkaweah@gmail.com>

GSP Public Comments

1 message

Kelly, Tamara <tkelly@calwater.com> Mon, Sep 16, 2019 at 3:16 PM
To: "midkaweah@gmail.com" <midkaweah@gmail.com>
Cc: "Hurley, Michael" <mhurley@calwater.com>

Mid-Kaweah Board,

The California Water Service Company (Cal Water) appreciates the opportunity to comment on the Draft Mid-Kaweah Groundwater Sustainability Plan (Mid-Kaweah GSP). Cal Water serves over 2 million customers throughout the State of California and is the primary water provider for the approximately 140,000 urban customers in the City of Visalia and surrounding areas. We commend all the parties for their efforts to develop a groundwater sustainability plan that ensures the proper management of the groundwater resources of the basin.

As noted in the draft GSP, there are a number of significant management actions to be undertaken by the affected parties in the coming years to implement the plan. In particular, the development of the pumping allocation program, refinement of the Water Accounting Framework, and the cost allocation process for basin-wide management and project implementation activities will require significant coordination among and input from the impacted parties. Cal Water looks forward to being a direct participant in the management of the GSA as we ensure the sustainable management of the Kaweah Subbasin.

CW-001

Michael Hurley
Water Resource Manager
California Water Service
323-722-8601

Quality. Service. Value.
calwater.com

And

Groundwater Sustainability Plan Comments
by
Richard J. Garcia

September 16, 2019

Mid-Kaweah Groundwater Sustainability Agency
c/o Tulare Irrigation District
P.O. Box 1920
Tulare, CA 93275

Email: midkaweah@gmail.com

Dear M-KGSA Management and Staff,

In 2015 it was my honor to be selected with ten other concerned citizens to join the *M-KGSA Advisory Committee*. Our group's members bring an extraordinary mix of backgrounds and interests to the table and we all share the common goal of helping find long term solutions to the valley's alarming groundwater crisis. I congratulate the agency's staff and engineering consultants in their efforts to negotiate the challenging world of SGMA mandates and deadlines.

Sadly this spring Bob Ludekens one of our original members died after a heroic battle with cancer. Bob brought a lot of practical experience and was eager to share his ideas regarding realistic groundwater sustainability goals and strategies with GSA decision makers. Unfortunately time ran out for Bob… before he could be heard.

In my opinion the current M-KGSA *Groundwater Sustainability Plan* is an incomplete document that fails to monitor and protect the basin's natural streams and waterways. Throughout the plan statements are made minimizing the importance of protecting interconnected waterways that support and feed the underground aquifers we are tasked to sustain. The *Kaweah River, Saint Johns River* and Visalia's many beautiful creeks are all interconnected parts a working delta that deserver's protection and better management. Below is an example of the dismissive language used repeatedly throughout the plan:

"Water bodies, primarily stream channels, which become temporally disconnected throughout the year from the underlying water table may experience the disappearance of adjacent vegetative habitat which may be considered as a beneficial use of groundwater. Such occurrences are generally restricted to the upper reaches of applicable channels in the forebay region of the aquifer system near the Sierra foothills. The consensus among Subbasin GSAs and stakeholders is that the intermittent nature of this vegetative habitat is such that its temporary loss does not rise to the level of an undesirable result. As stated previously, the interconnection of surface water and groundwater was disrupted many decades ago in the MKGSA. Therefore, a monitoring network and monitoring is not required for this GSA"

RG-001

Neighboring *Kaweah River Sub-Basin GSA's* such as the *Eastern Kaweah, Greater Kaweah* and several *Kings County GSAs* are also serviced by flows from the *Tule* and *Kings Rivers.* If a solution is to be found, neighboring intra-basin GSAs must cooperate and coordinate with each other to monitor and protect these shared waterways if sustainability plans are to succeed.

A comprehensive Groundwater Sustainability Plan must consider its impact on our rivers, creeks, canals and ditches. If they are not valued and protected, what is to keep avaricious agencies from proposing upstream pipeline projects to curtail seepage and "save" water for downstream surface water customers at the expense of the entire basin's water table?

Using new technologies the Agency's consultants have collected an impressive amount of new geological and hydrological data. Water audits and "Water Budget" discussions are interesting exercises, and the airborne geophysical data collection efforts are intriguing. This new data will build upon the existing work of the *Kaweah Delta Water Conservation District*, an entity that should perhaps play a bigger role in formulating the basin's plans. They have been working on the problem for a long time and they are the connection to the U.S. Army Corps of Engineers. Ideally, the Corps should be part of this discussion. Flood control and recharge efforts are not exclusive. RG-002

I would like to see better computerized graphics. Use the well log data from cities, public water agencies and public schools to create the dynamic 3D models that will show the public how bad reality is. RG-003

Respectfully,

Richard J. Garcia

KINGS COUNTY WATER DISTRICT

Ernest A. Taylor
President

Steven P. Dias
Vice-President

Joseph Freitas

Barry McCutcheon

Michael Murray

Dennis Mills
Manager-Secretary

200 North Campus Dr.
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Phone: (559) 584-6412
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September 16, 2019

VIA EMAIL
MKGSA Groundwater Sustainability Plan Public Comments
Email: midkaweah@gmail.com; jph@midkaweah.org

RE: ***MKGSA Groundwater Sustainability Plan Comments***

Mr. Hendrix,

This letter is on behalf of the Kings County Water District (the District or Kings CWD) and seeks to provide the District's comments on the Mid-Kaweah GSA's DRAFT Groundwater Sustainability Plan (MK GSP). The District understands that the Mid-Kaweah GSA's website (https://www.midkaweah.org/documents) states that comments will be "accepted until 11:59 p.m., September 16, 2019". However, the length of the MK GSP will require additional time for the District to develop a complete set of comments. It is hoped that the Mid-Kaweah GSA will accept the following comments with the understanding that additional comments will likely follow upon completion of the District's review.

Generally the District would draw the Mid-Kaweah GSA's (MK GSA) attention to the following topics:

1) There did not appear to be much information or discussion on declining groundwater levels. As this is one of the primary issues the Sustainable Groundwater Management Act (SGMA) was developed to address, it seems that this historic information should be central and flow to what will be undertaken by the MK GSA to address the declines. KC-001

2) There did not appear to be a discussion of historic groundwater flow directions and whether recent groundwater flow directions are a departure from historic norms. This would seem critical to any evaluation of groundwater flows across GSA or Subbasin boundaries. KC-002

3) There did not appear to be any discussion or evaluation of the lack of Friant Division CVP surface water deliveries in Water Yeats 2014 or 2015 and how that unique changed condition impacted local groundwater levels, groundwater storage or subsidence. KC-003

4) The District did not find any information or estimate of groundwater pumping in the MK GSA that is being used outside of the MK GSA area by landowners that have ranches that cross GSA or Subbasin boundaries. KC-004

5) The Executive Summary appears to be a placeholder and does not seem to be developed enough or meet DWR requirements about helping laymen. KC-005

The following are more specific comments with sections and page numbers referenced as per the MK GSA website post.

In Section 3.1 – Sustainability Goal, page 3-2 there is a listing of how the Sustainability Goal will be achieved, which includes this statement *"Application of the Kaweah Subbasin Hydrologic Model (KSHM) – incorporating the initial selection of projects and management actions by the Subbasin GSAs – and its simulation output is summarized in the Subbasin Coordination Agreement to help explain how the sustainability goal is to be achieved within 20 years of GSP implementation."* The District views that the referenced simulation is only an indication of what may result if certain actions are taken. Please consider revising. KC-006

Section 3.2.1.2 – Groundwater Storage, page 3-4 includes this statement *"Given assumed hydrogeologic parameters of the Subbasin, direct correlations exist between changes in water levels and estimated changes in groundwater storage."* The District views that this statement is misleading. In order to relate groundwater levels to change in storage, many significant regional assumptions must be made to develop the estimates. The District views that a reliable correlation can only be developed with significantly more information about local aquifer properties than is currently available. Also, this statement ignores the reality that some groundwater amounts may be somewhat bound in formations while other amounts may be more available for extraction. Please consider revising. KC-007

In Section 3.2.1.3 – Land Subsidence, page 3-4, the section does not mention the connection between subsidence and dewatering saturated clay formations. This could lead to the misunderstanding that subsidence can occur everywhere that groundwater levels fall below minimum thresholds. Please consider revising. KC-008

Section 3.2.1.4 – Degraded Water Quality, page 3-4, includes this statement, *"Undesirable results associated with water quality degradation can result from pumping localities and rates, as well as other induced effects by implementation of a GSP, such that known migration plumes and contaminant concentrations are threatening production well viability are causes of Undesirable results."* This statement is very confusing. Please revise to clarify. KC-009

Also Section 3.2.1.4 includes this statement, *"Well production depths too may draw out contaminated groundwater, both from naturally occurring and man-made constituents which, if MCLs are exceeded, may engender Undesirable results."* Many local geologic formations contain aquifers with naturally concurring substances like Arsenic and Uranium. The District views that groundwater quality issues relating to local geologic properties, regardless of State MCLs, cannot be viewed as contamination or indicators of Undesirable Results. Please consider revising. KC-010

Section 3.2.1.5 – Interconnected Surface Waters, page 3-4, includes this statement, *"Depletions of interconnected surface waters are minimal and, to the extent they occur, impact only vegetation along the banks of unlined channels within the forebay regions of the aquifer system where natural channels exhibit gaining reaches from time to time."* The District views that depletions of interconnected surface water would also negatively impact deliveries of surface water to right holders due to the increased losses to groundwater. Please consider revising. KC-011

Section 3.2.2.1 – Defining Undesirable Results for Groundwater Levels, page 3-5, includes this statement, *"With respect to water-level declines, undesirable results occur when one-third of the representative monitoring sites in all three GSA jurisdictions combined exceed their respective minimum threshold water level elevations. Should this occur, a determination shall be made of the then-current GSA water budgets and resulting indications of net reduction in storage. Similar determinations shall be made of adjacent GSA water budgets in neighboring subbasins to ascertain the causes for the occurrence of the undesirable result."* This approach, depending on implementation, would appear to be detrimental to areas that rely on groundwater recharge during wet years to justify needed pumping in dry years. For instance, an area that has no available surface water in a drought year would be viewed differently than one that had a little available if only the water budget for the one year was involved in the evaluation. Please consider revising. KC-012

Section 3.2.2.2 – Defining Undesirable Results for Groundwater Storage, page 3-5, contains a statement about there being a direct relationship between change in storage and groundwater levels. Please see the District's previous comment on Section 3.2.1.2. Please consider revising. KC-013

In Section 3.2.3.2 – Potential Effects from reductions in Groundwater Storage, page 3-8, the District would view that reduced groundwater storage also impacts beneficial users by reducing the amount of supply potentially available during a drought (when very little surface water is available for existing uses). This section does not seem to address this potential effect. Please consider revising. KC-014

In Section 3.2.3.3 – Potential Effects from continued Land Subsidence, page 3-8, the District would view that continued land subsidence would also increase the flood risks to residents and critical facilities (hospitals, prisons, domestic and municipal wells, etc.) in and around flood zones. Please consider revising. KC-015

In Section 4.10.1.1 – Groundwater Elevation and Storage Data Gaps, page 4-15, the District would view the following as additional data gaps: 1) aquifer characteristics to inform the assumptions currently being made, 2) well construction information for many existing wells and related information on how much water is being pumped in the confined aquifer versus the unconfined aquifer, 3) direct measurements of the amount of groundwater being pumped in agricultural areas, 4) information on bound versus more recoverable groundwater, 5) more accurate information on the base of fresh groundwater across the subbasin, 6) information to validate or criticize the HCM and aquifer descriptions from recent SkyTEM efforts. Please consider revising. KC-016

In Section 4.10.1.2 – Groundwater Quality Data Gaps, page 4-15, the District would view the following as additional data gaps: 1) regionally, there is very little data on water quality at specific depths because of current well construction (screens across hundreds of feet), 2) The groundwater quality of many rural residential home owners is not understood by local GSAs. Please consider revising. KC-017

In Section 4.10.1.3 – Land Subsidence Data Gaps, page 4-15, the District would view the following as additional data gaps: 1) there is almost no information on what geologic zone is subsiding in this area, 2) the number of well compression failures, 3) the impact of subsidence to local flood zones, and 4) if land subsidence has any correlation to groundwater quality. Please consider revising.

KC-018

Should you or the other partners in the MK GSA have any questions or require any further information regarding these comments, please contact me at (559) 584-6412, or kcwdh2o@sbcglobal.net.

Sincerely,

Dennis Mills

Dennis Mills
Kings CWD, General Manager

Attachments: none

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J. Paul Hendrix
Executive Director
Mid Kaweah Groundwater Sustainability Agency
jph@midkaweah.org

[sent via email]

September 16th, 2019

Re: Comments on Mid Kaweah GSA Draft Groundwater Sustainability Plan

Dear Mid Kaweah GSA Advisory Committee Members and Board Members:

Leadership Counsel for Justice and Accountability works alongside low income communities of color in the San Joaquin Valley and the Eastern Coachella Valley. As is most relevant here, we work in partnership with community leaders in the communities of Matheny Tract, Soults Tract and Lone Oak Tract to advocate for local, regional and state government entities to address their community's needs for the basic elements that make up a safe and healthy community, including: safe and affordable drinking water, affordable housing, effective and safe transportation, efficient and affordable energy, green spaces, and clean air.

We have been engaged in the Sustainable Groundwater Management Act (SGMA) implementation process because most of the communities with which we work are wholly dependent on groundwater for their drinking water supplies, and many have already experienced groundwater quality and supply issues. Communities we work with have not been included in decision-making about their precious water resources, and their needs are not at the forefront of such decisions. In 2012, California recognized the Human Right to Water for domestic purposes, and required that state agencies consider this human right in their activities. State law also requires that GSAs avoid disparate impacts on protected classes. SGMA's requirements for a transparent and inclusive process, presents an opportunity in the context of groundwater management to meaningfully include disadvantaged communities in decision-making, and to create groundwater management plans that understand their unique vulnerabilities, are sensitive to their drinking water needs, and avoid causing disparate negative impacts on low-income communities of color.

We submit these comments to elevate our concerns that the Mid Kaweah Groundwater Sustainability Agency's (GSAs) Draft of its Groundwater Sustainability Plan (Draft GSP) does not adequately analyze or incorporate input from disadvantaged communities and domestic wells, and will create a disparate impact on protected classes unless modified to effectively protect drinking water resources for disadvantaged communities.

We include herein our comments with respect to deficiencies in the Draft GSP as well as recommendations for improvements. We have also attached a Focused Technical Review of the drinking water impacts of the current Draft GSP. We conducted the Focused Technical Review in collaboration with Self-Help Enterprises, with whom we work closely in the region.

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Table of Contents

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The Draft GSP is Incomplete, and Must Include Additional Information In Order to be Reviewed by the Public

The Draft GSP omits critical data, and does not give DWR or the public sufficient information to evaluate compliance with state law or the impact of the plan on beneficial users. Specifically, the Draft GSP has not clearly evaluated the impact of the plan on domestic well users and disadvantaged communities, which are likely to cause a disparate impact on protected groups pursuant to state civil rights law. Further, the GSP has not committed to a clear program to address those impacts. The GSP also does not contain sufficient information on groundwater contamination in the GSA area, and does not clearly show how the actions of the other GSAs in the subbasin will achieve sustainability throughout the subbasin. The GSA also does not provide adequate information about the plan for continued public engagement during GSP implementation. More information about each of these gaps in data and information is included below. LC-001

The GSP cannot be adopted until this key information is made available to the public. The GSA must incorporate this information into the Draft GSP before the Draft GSP can be effectively reviewed by the public or by DWR.

The Draft GSP Will Have Disparate Impacts on Residents in the MKGSA Subbasin Unless Modified to Protect Domestic Well Users and Disadvantaged Communities

Mid Kaweah GSA must prioritize drinking water as an essential pillar of the proposed groundwater sustainability plan. The Draft GSP will cause significant, unreasonable and disparate impacts on protected groups as a result of the sustainability goals that it has set, and has not committed to a concrete plan to prevent or mitigate those impacts. LC-002

Under SGMA, the GSA is tasked with managing groundwater in a way that does not cause "significant and unreasonable impacts" to the beneficial uses and users of groundwater in the subbasin. The GSA's activities cannot avoid impacts only on certain types of beneficial users; under SGMA it must "consider the interests of" an enumerated list of all types of beneficial users, including domestic well users and disadvantaged communities on domestic wells and community water systems.[1] Furthermore, state law provides that no person shall, on the basis of race, national origin, ethnic group identification, and other protected classes, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination

[1] Water Code § 10723.2.

under, any program or activity that is conducted, operated, or administered by the state.[2] In addition, the state's Fair Employment and Housing Act guarantees all Californians the right to hold and enjoy housing without discrimination based on race, color, or national origin.[3] Lastly, the Department of Water Resources is required to consider the Human Right to Water in its evaluation of the GSA's proposed Groundwater Sustainability Plan, so the drinking water impacts of the GSP are of utmost importance in its approval.[4]

Small disadvantaged communities of color within the San Joaquin Valley are disproportionately impacted by unsustainable groundwater use, falling groundwater tables, dry drinking water wells, subsidence, and water quality degradation.[5] As described in more detail below, and analyzed in the attached Focused Technical Review, domestic well users are de minimis pumpers in the GSA area, but the policies proposed in the Draft GSP for managing groundwater levels and groundwater quality will likely fully or partially dewater approximately 86% of domestic wells,[6] creating a disproportionate impact on domestic well users. Water quality will not be monitored in proximity to private domestic wells, since drinking water contaminants will only be tested for compliance where more than 50% of the pumping around a representative monitoring well is for drinking water purposes. Furthermore, the GSA has proposed a potential program to assist domestic well users and small systems with addressing these impacts, but the program is not concrete or detailed and the GSA board has not committed to implementing the program. The negative impacts discussed in this letter, which will be allowed by the Draft GSP and may not be addressed through an effective drinking water protection program, will likely be disproportionately felt by low income communities of color, and are thus discriminatory on the basis of race, color, ancestry, and national origin.

LC-002 (contd.)

In order to prevent disparate impacts, the Mid Kaweah GSA must reassess the GSP's potential disparate impacts and include robust and proactive policies, projects, and management actions to protect vulnerable disadvantaged communities and the projected 85% of domestic wells from

[2] Gov. Code § 11135 ["No person in the State of California shall, on the basis of sex, race, color, religion, ancestry, national origin, ethnic group identification, age, mental disability, physical disability, medical condition, genetic information, marital status, or sexual orientation, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded directly by the state, or receives any financial assistance from the state."]; Gov. Code § 65008 [Any discriminatory action taken "pursuant to this title by any city, county, city and county, or other local governmental agency in this state is null and void if it denies to any individual or group of individuals the enjoyment of residence, land ownership, tenancy, or any other land use in this state…"]; Government Code §§ 12955, subd. (l) [unlawful to discriminate through public or private land use practices, decisions or authorizations].

[3] Gov. Code § 12900 et seq.

[4] Water Code § 106.3.

[5] Feinstein et al., "Drought and Equity in California" (January 2019); Balazs et al., "Social Disparities in Nitrate Contaminated Drinking Water in California's San Joaquin Valley," Environmental Health Perspectives, 19:9 (September 2011); Balazs et al., "Environmental Justice Implications of Arsenic Contamination in California's San Joaquin Valley," Environmental Health Perspectives, 11:84 (November 2012); Flegel et al., "California Unincorporated: Mapping Disadvantaged Communities in the San Joaquin Valley" (2013).

[6] Focused Technical Review, p. 4.

disparate impacts.[7] The sections below provide recommendations on some ways that the GSA could do so.

LC-002 (contd.)

Basin Setting Lacks Information on Drinking Water Issues and Groundwater Quality

The SGMA regulations require GSPs to include "[g]roundwater quality issues that may affect the supply and beneficial uses of groundwater, including a description and map of the location of known groundwater contamination sites and plumes."[8] The Draft GSP does not contain information about groundwater quality issues, or a map of known groundwater contamination sites and plumes. This information is critical to ensuring that beneficial users are not harmed by increased groundwater contamination resulting from the GSA's groundwater management activities. This information is particularly important for domestic well owners and small disadvantaged communities on small community water systems, whose drinking water supply is most vulnerable to groundwater contamination. Without such information, the GSA cannot measure the impact of groundwater contamination, and therefore cannot protect the drinking water needs of these vulnerable groups.

LC-003

To effectively consider the interests of these types of beneficial users, and avoid a disparate impact on protected groups pursuant to state civil rights law, Mid Kaweah GSA must:

- Include information on groundwater quality issues that may affect the supply and beneficial uses of groundwater, including a description and a map of the location of known groundwater contamination sites and plumes.
- Include adequate information regarding past, current and potential drinking water issues affecting small disadvantaged communities and domestic well users in the GSA area, including drinking water contamination, dry wells, and other drinking water supply and quality issues.

Monitoring Network Does Not Monitor Impacts On Domestic Well Users

Pursuant to 23 CCR § 354.34, GSAs must monitor impacts to groundwater for drinking water beneficial users, particularly domestic well users and disadvantaged communities,[9] and must avoid disparate impacts on protected groups pursuant to state law.[10]

The monitoring network as described in the Draft GSP fails to capture drinking water impacts on domestic wells. Representative monitoring wells are the only wells that the GSA will use to measure its compliance with its sustainable management criteria. The Draft GSP establishes two types of representative monitoring wells in the groundwater quality monitoring network: wells that will monitor for only three contaminants of concern that are harmful for agricultural production, and wells that will monitor for ten additional drinking water contaminants. The Draft GSP states that representative monitoring wells will only monitor for agricultural contaminants when over 50% of "pumping" nearby is for agriculture. This means that none of the

LC-004

[7] Focused Technical Review, p. 2.

[8]

[9] Water Code § 10723.2.

[10] Gov. Code § 11135; Gov. Code § 65008; Government Code §§ 12955, subd. (l).

representative monitoring wells will capture groundwater quality or supply impacts to domestic wells outside of public water systems. It is also unclear whether the water quality monitoring wells will capture impacts to domestic wells across the GSA areas because the GSP does not include well construction information for a majority of the water quality representative monitoring wells, so the public and DWR cannot evaluate whether the wells are sampling at the depths of the zones used for drinking water purposes by domestic well users and community water systems in the GSA area.[11]

The GSA mentions that it may conduct domestic well sampling, which could be added into the groundwater quality monitoring network data. This program, if implemented effectively and if enough wells are tested with adequate frequency, could ensure that domestic wells are also being monitored for compliance with minimum thresholds. In order to avoid drinking water contamination from groundwater management activities, the GSA should include this program in its Management Actions, and provide a clear timeline and strategy for developing and implementing this program.

LC-004 (contd.)

As the attached Focused Technical Report shows, the water quality monitoring network does not cover a large portion in the west of the GSA area, which includes at least 200 domestic wells and several public water systems for DACs and schools.[12] The GSP must demonstrate how the monitoring network will be able to monitor for impacts to beneficial users in this area.

In developing this monitoring network, the GSA has not considered the interests of this beneficial user group and is likely to cause a disparate impact on the protected groups dependent on domestic wells.

The insufficiency of the monitoring network poses a significant threat to the validity of the Plan at large, and therefore must be addressed immediately. The GSA must do the following:

- Improve groundwater quality monitoring network to include monitoring wells in the western portion of the GSA area, ensuring that impacts to domestic wells and water systems in this area are monitored for compliance with groundwater quality goals.
- Monitor for compliance with drinking water contaminants across all representative monitoring wells.
- All representative monitoring wells for groundwater quality must test for all Title 22 contaminants.
- The GSA must invest in constructing more dedicated monitoring wells and needs to explain how they plan to transition current wells in the monitoring network into dedicated monitoring wells.
- Include a domestic well sampling program in the GSP's Management Actions, and provide a clear timeline and strategy for developing and implementing this program.

[11] Focused Technical Report, p. 6.
[12] Focused Technical Report, p. 5.

Management Areas Put Drinking Water Resources for Disadvantaged Communities and Domestic Well Users at Risk

The SGMA regulations allow GSAs to establish Management Areas "based on differences in water use sector, water source type, geology, aquifer characteristics, or other factors," for the purpose of identifying "different minimum thresholds, measurable objectives, monitoring, or projects and management actions."[13] However, it may not do so in a way that causes disparate impacts on a group protected by state civil rights law, or has not adequately "considered the interests of" all types of beneficial users.

The Management Areas that the GSA proposes to establish will likely have disproportionately negative impacts on domestic well users and disadvantaged communities. The Draft GSP states that the GSA will establish Management Areas along to the borders of local water and irrigation districts within the GSA, so that each district can manage groundwater its own jurisdiction. However, some districts are only accountable to the needs of agricultural pumping, and do not have representation of drinking water users on their boards. For example, Tulare Irrigation District will be managing a wide area that includes small communities and domestic well owners; however, the irrigation district's board and clientele only reflect agricultural pumping needs. Additionally, East Tulare Villa, a disadvantaged community that depends on drinking water from the City of Tulare, is not included in the same management area as the City of Tulare, which does not allow effective protection of the community's water resources. Therefore this division of Management Areas means that all beneficial users' interests will not be considered in the management of areas where drinking water and agricultural pumping interests are present, and will likely lead to disparate impacts on protected groups.

LC-005

Instead, a tool for protecting drinking water for disadvantaged communities and domestic wells is creating Management Areas around clusters of domestic wells and around disadvantaged communities, with a buffer around the area where the vulnerable drinking water users are located, and setting more protective groundwater quality and groundwater levels minimum thresholds in those areas. This ensures that there are no localized impacts to drinking water resources from groundwater levels dropping or from contaminant plumes being drawn towards large quantities of groundwater pumping.

Therefore, we recommend that the GSA:

- Form Management Areas around clusters of domestic wells and around disadvantaged communities in the GSA area, with a buffer around the area where the vulnerable drinking water users are located, and set groundwater quality and groundwater levels minimum thresholds that will protect drinking water resources in those areas.

[13] 23 CCR § 351

Sustainability Goal Does Not Comply with SGMA

GSAs must establish a sustainability goal that "culminates in the absence of undesirable results within 20 years."[14] Undesirable results are the point at which there are "significant and unreasonable impacts" from the six sustainability indicators set out in SGMA: chronic lowering of groundwater levels, reduction of groundwater storage, seawater intrusion, degraded water quality, land subsidence, depletions of interconnected surface water.[15] Also fundamental to SGMA is the obligation that GSAs must "consider the interests of" an enumerated list of beneficial users, including "holders of overlying groundwater rights, including...domestic well owners" and "disadvantaged communities, including, but not limited to, those served by private domestic wells or small community water systems."[16] Therefore, the sustainability goal must be based on impacts from the six sustainability indicators, particular with respect to the impacts that they will have on beneficial users.

However, instead of basing on impacts from any of the six sustainability indicators on beneficial users, the Kaweah subbasin sustainability goal focuses primarily on "the viability of existing enterprises of the region," the "water needs of existing enterprises," and local plans that create "economic and population growth." This sustainability goal focuses on water for industry, is counter to the intent of SGMA, and frustrates the goals of the law because it does not take into account the needs of or "significant and unreasonable" impacts on all types of beneficial users in the GSA area. LC-006

This sustainability goal should not focus on economic growth, but rather must consider the interests of all beneficial user groups in the GSA area. The sustainability goal therefore must have co-equal quals of preserving water resources for many uses, including drinking water, environmental, urban, and agricultural.

Their discussion of the Sustainability Goal also focuses on augmenting supply, and only implementing Management Actions "where necessary." Even if all projects are implemented and sustainable management criteria are complied with in the plan, many vulnerable drinking water users will still be impacted, and the GSA has not committed to implementing its domestic well and small systems management action. Instead, the GSA should focus simultaneously on projects and management actions to ensure sustainability and protect drinking water resources.

Furthermore, the means by which the GSA states it will achieve this sustainability goal, through a "glidepath" approach, is geared towards protecting agricultural interests, and is likely to have severe impacts on the drinking water resources of domestic well users.

The sustainability goal states that it will be reached by the combined efforts of all three GSAs. However, the coordination agreement does not clearly show how the sustainability goal will be achieved, or how actions by other GSAs in the subbasin could impact the Mid Kaweah GSA area. However, given that 86% of domestic wells are already at risk of full or partial dewatering from the GSA's proposed minimum thresholds, we know that groundwater users in the Mid

[14] 23 CCR § 354.24
[15] Water Code § 10721(w).
[16] Water Code § 10723.2.

Kaweah GSA cannot afford to be further impacted by overpumping in neighboring GSAs. Therefore, we recommend that the We further recommend that the Mid Kaweah GSA set a clear sustainability goal for its own local GSA area, and ensure that the coordination agreement with the other Kaweah subbasin GSAs does not negatively impact its sustainability goal.

In order to have a sustainability goal that complies with SGMA and avoids disparate impacts on protected groups under state law, the Mid Kaweah GSA must:

- Agree on a subbasin-wide sustainability goal that protects all types of beneficial users equitably, avoiding disparate impacts on protected groups.
- Work with Kaweah Subbasin GSAs to clearly define how their combined actions will achieve sustainability, and include a thorough explanation of this collective effort in the coordination agreement or each GSP.
- Set a clear sustainability goal for its own local GSA area.
- Ensure that the coordination agreement with the other Kaweah subbasin GSAs does not negatively impact the Mid Kaweah GSA's local sustainability goal.
- Use the numerical groundwater model to evaluate the change in water levels at representative monitoring wells through 2040, both with and absent of the proposed Projects and Management Actions, and relative to the proposed measurable objectives and minimum thresholds.
- Use the above analysis to show how all types of beneficial users in the GSA area will be impacted by the proposed glidepath approach.
- Ensure that projects and management actions are implemented simultaneously, in order to equitably protect all beneficial users' groundwater needs.

LC-006 (contd.)

The Draft GSP's Sustainable Management Criteria for Groundwater Levels are not Adequate

The sustainable management criteria for groundwater levels must be made after considering the interests of all beneficial user groups, including domestic well users and disadvantaged communities.[17] These policy decisions must also avoid disparate impacts on protected groups pursuant to state and federal law.[18]

LC-007

The GSA has not shown how they have considered the interests of beneficial users including domestic well owners and disadvantaged communities. The resulting impact from the proposed sustainable management criteria will likely lead to disparate impacts on protected groups pursuant to state and federal law.

[17] Water Code § 10723.2.
[18] Gov. Code § 11135; Gov. Code § 65008; Government Code §§ 12955, subd. (l).

Furthermore, the Draft GSP does not show how the sustainable management criteria for groundwater levels will comply with the sustainability goal to "preserve the quality of life or support population growth."

LC-007 (contd.)

Undesirable Result

Undesirable results are the point at which "significant and unreasonable" impacts on beneficial users caused by declining groundwater levels. The SGMA regulations require GSAs to justify their undesirable results by including the "[p]otential effects on the beneficial uses and users of groundwater."[19] GSAs must also describe the "processes and criteria relied upon to define undesirable results."[20]

The Draft GSP's undesirable results for groundwater levels are inadequate because significant and unreasonable impacts will occur without triggering an undesirable result. The Draft GSP states that "one-third of the representative monitoring sites in all three GSA jurisdictions combined exceed their respective minimum threshold water level elevations."[21] Violating one-third of the minimum thresholds of the entire subbasin's representative monitoring wells would have unreasonably severe impacts on domestic well users, particularly given that reaching the minimum thresholds in the Mid Kaweah GSA alone would dewater 71% of domestic wells in the Mid Kaweah GSA area and partially dewater an additional 15% of domestic wells.[22] The Draft GSP acknowledges the serious financial impact of having to drill deeper wells, well failures, and the increased energy costs of pumping water from lower depths, but the undesirable result for groundwater levels does not prevent either of these impacts.[23] Furthermore, the vast majority of wells the GSA would allow to go dry before triggering plan failure would be overwhelmingly upon domestic well users and disadvantaged communities, causing a disparate impact in violation of state law. In order to avoid these disparate impacts, the GSA must change the undesirable result or define its own local undesirable result to prevent widespread drinking water impacts to protected groups in the GSA area.

LC-008

In order to avoid a violation of state civil rights law and avoid causing significant and unreasonable impacts as required by the SGMA, the GSA must:

- Include a local undesirable results definition that makes it clear that the GSA will locally define and address an undesirable result within its service area and protect beneficial users of groundwater.

Minimum Thresholds

The groundwater levels sustainable management criteria set by the GSAs must be the point that, "if exceeded, may cause undesirable results."[24] Therefore it must have the purpose of avoiding

LC-009

[19] 23 CCR § 354.26.
[20] 23 CCR § 354.26.
[21] Mid Kaweah GSA Draft GSP p. 3-5, dated July 2019.
[22] Focused Technical Report, p. 4. Our analysis shows a much larger impact on domestic wells than the evaluation of well impacts in the Draft GSP.
[23] Mid Kaweah GSA Draft GSP p. 3-8, dated July 2019.
[24] 23 CCR § 354.28.

LC-008 (contd.)

"significant and unreasonable" impacts on beneficial users caused by declining groundwater levels.[25] For groundwater levels specifically, GSAs must place minimum thresholds for each monitoring site at the level "that may lead to undesirable results."[26] Under the SGMA regulations, the GSA should provide a description of "the information and criteria relied upon to establish minimum thresholds," an explanation of how the proposed minimum thresholds will "avoid undesirable results," and "how minimum thresholds may affect the interests of beneficial uses and users of groundwater."[27] The GSA must also consider that drinking water use has been recognized as the "highest use of water" by the California legislature, and should consult with stakeholders to ensure that the minimum threshold is set is such a way as to guarantee the human right to drinking water to all individuals in the subbasin.[28]

The Mid Kaweah GSA's approach to setting minimum thresholds does not "consider the interests of" drinking water beneficial users. The GSA's proposed minimum thresholds would allow the current rate of pumping (established by the trend from 2006 to 2016) to continue at least until 2040, and possibly after 2040. The GSA contains an evaluation of well impacts that shows that 21% of wells will go dry, but our analysis shows a much larger impact: taking into account well screen intervals on domestic wells in the GSA, the attached Focused Technical Report shows that 71% of the domestic wells in the GSA will be fully dewatered at the minimum threshold, and an additional 15% will be partially dewatered.[29] The GSA has therefore chosen to allow large amounts of pumping to occur at the potential expense of up to 86% of the domestic wells in the GSA area. Since domestic well users are de minimis pumpers and are not part of this aquifer-depleting pumping, this will be a disproportionately negative impact on domestic users, the majority of whom belong to a group protected by state civil rights law. This therefore will cause a disparate impact in violation of state civil rights law.

LC-009 (contd.)

In order to show that it has considered impacts on domestic well users and disadvantaged communities, and ensure that it is not causing a disparate impact on groups protected from such impact by state civil law, the GSA must conduct an analysis of how many wells will be impacted by reaching this minimum threshold, in particular domestic wells and small community system wells in disadvantaged communities. It should also quantify the increased pumping costs associated with the increased lift at the projected water levels. Then, it must measure whether the impacts to wells and household finances are "significant and unreasonable" by consulting with domestic well owners and disadvantaged communities. If its current choice of minimum threshold will cause a disparate impact or cause significant and unreasonable impacts to these beneficial user groups, it must modify its minimum threshold to comply with its legal obligations.

The Mid Kaweah GSA must set minimum thresholds that consider the interests of drinking water beneficial users and do not create a disparate impact on protected groups by doing the following:

[25] 23 CCR § 354.26.
[26] 23 CCR § 354.28.
[27] 23 CCR § 354.28.
[28] Water Code § 106.
[29] Focus Technical Report, p. 4.

- Accurately evaluate the number of wells that will be impacted should water levels reach the proposed minimum thresholds, taking into account their well screen depth, and the increased pumping costs associated with the increased lift at the projected water levels.

- Consider drinking water impacts in shaping minimum thresholds, and ensuring that protected groups are protected from disparate and disproportionately negative impact.

- The GSA must show how it has considered the needs of all beneficial users, including drinking water users, in setting its minimum thresholds, by publishing the above analysis in the GSP and showing how it consulted with domestic well users and disadvantaged communities to set a minimum threshold that avoids significant and unreasonable impacts to their beneficial user groups.

LC-009 (contd.)

- In order to protect drinking water users, the GSAs should place the minimum threshold at a level above where the shallowest domestic well is *screened* in each Threshold Area.

- Provide a robust drinking water protection program to prevent impacts to drinking water users and mitigate drinking water impacts that occur.

Measurable Objectives

The SGMA regulations require the GSA to set measurable objectives and interim milestones that "achieve the sustainability goal for the basin within 20 years of Plan implementation and to continue to sustainably manage the groundwater basin over the planning and implementation horizon." Measurable objectives must be more ambitious than the minimum thresholds, and must be the point at which the GSA has determined that it will not exceed its sustainable yield, and therefore avoid "significant and unreasonable" impacts on beneficial users.

The GSA has taken the 2006-2016 trend line and set the measurable objective for 2040 at the groundwater elevation reached by the trend line in 2030. The GSA has not evaluated how this groundwater elevation will affect domestic well users and disadvantaged communities, whose critical drinking water resources will be impacted by a decline in groundwater levels. In fact, the attached Focused Technical Report shows that approximately 64% of domestic wells in the GSA area will be dewatered if groundwater levels reach the measurable objectives, and an additional 9% of domestic wells will be partially dewatered. The GSA cannot therefore have considered the interests of this beneficial user group in determining its measurable objectives, and is likely to have a disparate impact on a protected group if it pursues this course of action.

LC-010

In order to show that it has considered impacts on domestic well users and disadvantaged communities, and ensure that it is not causing a disparate impact on groups protected from such impact by state civil law, the GSA must conduct a complete analysis of how many wells will be impacted by this measurable objective, in particular domestic wells and small community system wells in disadvantaged communities. It should measure whether the impacts to wells are "significant and unreasonable" by consulting with domestic well owners and disadvantaged communities. If its current measurable objective will cause a disparate impact or cause

significant and unreasonable impacts to these beneficial user groups, it must modify its measurable objective to comply with its legal obligations.

It is also unclear how the measurable objectives will achieve the sustainable yield. The GSA must clarify how achieving the measurable objectives at all representative monitoring wells will cumulatively result in attaining the sustainable yield for the GSA area.

The GSA must include the following in its Draft GSP to bring its measurable objectives into compliance with law:

- The GSA must clarify how its measurable objectives will achieve the sustainable yield.
- The GSA must analyze how many wells will be fully or partially dewatered at the groundwater elevation of the proposed measurable objective.
- The GSA must show how it has considered the needs of all beneficial users, including drinking water users, in setting its measurable objectives, by publishing the above analysis in the GSP and showing how it consulted with domestic well users and disadvantaged communities to set a measurable objective that avoids significant and unreasonable impacts to their beneficial user groups.

LC-010 (contd.)

The Draft GSP Fails to Adequately Address Groundwater Quality

SGMA charged GSAs with the responsibility to protect water quality through groundwater management,[30] and requires that the GSA consider the interests of all beneficial users including domestic well users and disadvantaged communities.[31] This Draft GSP fails to incorporate performance measures and management criteria with respect to contaminants that impact human health including those contaminants with established primary drinking water standards, and in doing so, fails to conform with the requirements of SGMA. The Draft GSP leaves drinking water users in the subbasin vulnerable to increased drinking water contamination from the GSA's groundwater management activities or from the lack of adequate groundwater management in the subbasin. The GSA has not shown how it has considered the interests of beneficial users including domestic well owners and disadvantaged communities in shaping groundwater quality sustainable management criteria.[32] Furthermore, as described in more detail below, the monitoring network for groundwater quality does not monitor or manage groundwater impacts for any domestic wells. The resulting impact from the proposed sustainable management criteria, will likely lead to disparate impacts on protected groups, in conflict with state and federal law.[33]

LC-011

Minimum Threshold

GSAs must place groundwater quality minimum thresholds for each monitoring site at the level "that may lead to undesirable results."[34] Under the SGMA regulations, the GSA should provide a

LC-012

[30] Water Code § 10721(w)(4); 23 CCR § 354.28(c)(4).
[31] Water Code §§ 10727.2(d)(2); 10721(x)(4)
[32] Water Code § 10723.2.
[33] Gov. Code § 11135; Gov. Code § 65008; Government Code §§ 12955, subd. (l).
[34] 23 CCR § 354.28.

LC-011 (contd.)

description of "the information and criteria relied upon to establish minimum thresholds," an explanation of how the proposed minimum thresholds will "avoid undesirable results," and "how minimum thresholds may affect the interests of beneficial uses and users of groundwater."[35] The GSA must also consider that drinking water use has been recognized as the "highest use of water" by the California legislature,[36] and should consult with stakeholders to ensure that the minimum threshold is set is such a way as to guarantee the human right to drinking water to all individuals in the subbasin.

The Draft GSP does not protect domestic wells from drinking water contamination resulting from groundwater management activities. The Draft GSP states that the number of contaminants of concern (COC) monitored at each representative monitoring well will vary by the "dominant use" of groundwater around each representative monitoring well, and that the "dominant use" is measured as "more than 50% of the pumping" around the well. Since agricultural pumping will always dominate domestic well pumping, this means that no representative monitoring wells outside of cities and community water systems will monitor for drinking water contaminants. This leaves the vast majority of domestic wells in the GSA area unmonitored and unprotected from groundwater quality impacts. This policy decision has not considered the interests of this beneficial user type, and will cause a disparate impact on protected groups pursuant to state civil rights law. The GSA should instead monitor for drinking water contaminants at all representative monitoring wells.

LC-012 (contd.)

Another concern is that there are only 4 representative monitoring wells detecting contamination from groundwater management activities outside of the cities of Tulare and Visalia.[37] This will allow for contamination to occur undetected in these areas, where domestic well users and disadvantaged communities depend on groundwater for their vital drinking water resources. The GSA must immediately increase the number of representative wells in these areas of the GSA in order to avoid a disparate impact on protected groups

Also, the proposes minimum threshold is not sufficient to protect against significant and unreasonable impacts to drinking water, because it does not protect against all primary drinking water contaminants. The GSA only proposes to monitor for compliance with MCLs for six drinking water contaminants of concern "where applicable": arsenic, nitrate, chrome-6, DBCP, 123-TCP, and PCE.[38] The GSA does not present a rationale to justify why these six drinking water contaminants were chosen, and why it chose not to monitor for other drinking water contaminants. This Draft GSP allows the GSA to conduct groundwater management in a way that contaminates domestic wells, and allows the GSA to cause increased contamination from other drinking water contaminants. It also allows the GSP to cause increased contamination in other drinking water contaminants known to increase from groundwater management activities, such as uranium.[39] As written, the groundwater quality minimum threshold puts all drinking

[35] 23 CCR § 354.28.
[36] Water Code § 106.
[37] Draft GSP, p. 4-14.
[38] Draft GSP, p. 3-6
[39] Smith et al., "Overpumping Leads to California Arsenic Threat," Nature Communications (June 2018) [arsenic discharge from clay correlated with overpumping]; Jurgens et al., "Effects of Groundwater Development on

water at risk of contamination from drinking water contaminants that are not included in the six contaminants of concern. The impacts of this contamination will be particularly felt by domestic wells, which are most vulnerable to drinking water contamination, and are not going to be monitored for compliance with any drinking water contamination that may result from the GSA's groundwater management activities.

The GSA must therefore monitor for compliance with drinking water contaminants in all areas where drinking water wells are present, including domestic wells. The GSA must monitor for compliance with MCLs for all primary drinking water contaminants, hexavalent chromium and PFOSs/PFOAs (both of which are known to cause serious health impacts but do not have MCLs currently), as well as for contaminants that are known to increase due to groundwater pumping and groundwater management activities such as uranium.[40]

It is unclear when groundwater quality minimum thresholds will be triggered. We know that another GSA in the subbasin requires ten years of data before a minimum threshold for groundwater quality will be triggered. The Mid Kaweah GSP seems to communicate that a minimum threshold at a representative monitoring well will be triggered when a contaminant violates the MCL, and the GSA finds that its groundwater management activities were the cause of the increased contamination, and that the GSA will "coordinate [its] activities such that they do not result in an exceedance of any MCL."[41] The GSP must clarify how these minimum thresholds will be triggered, and must require an immediate response to an MCL violation. If the GSA waits ten years to find a minimum threshold violation, that policy will likely result in communities experiencing many years of severe drinking water contamination before the GSA corrects groundwater pumping that is pulling a contaminant plume into their drinking water supply, halts recharge or irrigation activities causing uranium discharges or nitrate flushing, or curbs groundwater pumping that is causing an increase in groundwater contamination (e.g., arsenic discharge from clay).[42] The communities most vulnerable to these types of drinking water impacts are domestic well owners and disadvantaged communities, and this policy will likely result in a disparate impact on protected groups under state civil rights law. Therefore the GSA must ensure that a minimum threshold violation will be found when a single test finds an MCL violation, and a correlation is found with the GSA's groundwater management activities.

LC-012 (contd.)

To bring the groundwater quality minimum thresholds into compliance with SGMA and state civil rights law, the GSA must:

- Monitor for compliance with all established primary drinking water standards, hexavalent chromium, and PFOSs/PFOAs, at *all* representative monitoring wells, as well as

Uranium" (November 2010) [strong correlation between high bicarbonate irrigation and recharge water and leaching of uranium from shallow sediments to groundwater].

[40] Id.

[41] Draft GSP, p. 5-12.

[42] Smith et al., "Overpumping Leads to California Arsenic Threat," Nature Communications (June 2018) [arsenic discharge from clay correlated with overpumping]; Jurgens et al., "Effects of Groundwater Development on Uranium" (November 2010) [strong correlation between high bicarbonate irrigation and recharge water and leaching of uranium from shallow sediments to groundwater].

contaminants that are known to increase with groundwater management activities, such as uranium.

- Ensure that all representative monitoring wells are measuring for concentrations of the contaminants of concern, including all drinking water contaminants, every month.
- Ensure that minimum thresholds will be triggered after one test shows a violation of the MCL, and clarify this trigger process in the GSP.
- Immediately plan for, fund and construct new representative monitoring wells or evaluate existing wells to ensure that representative monitoring wells are monitoring for impacts to domestic well users outside of the cities of Tulare and Visalia.
- Implement a Drinking Water Observation Plan to trigger GSA action when contamination spikes occur. Please see more information about the types of projects that could be implemented when a Drinking Water Observation Plan is triggered in our comments about Projects and Management Actions.

LC-012 (contd.)

The Proposed Undesirable Result for Groundwater Quality is Inadequate

Undesirable results are the point at which "significant and unreasonable" impacts on beneficial users caused by degraded groundwater quality. The SGMA regulations require GSAs to justify their undesirable results by including the "[p]otential effects on the beneficial uses and users of groundwater."[43] GSAs must also describe the "processes and criteria relied upon to define undesirable results."[44] The undesirable result cannot have a disparate impact on protected groups pursuant to state civil rights law.

The Mid Kaweah GSA has defined a groundwater quality undesirable result as "one-third of all Subbasin designated water quality monitoring sites exhibit a minimum threshold exceedance, and those exceedances are all associated with GSA actions."[45] Like the groundwater levels minimum threshold, this definition of undesirable results is inadequate because significant and unreasonable impacts will occur without triggering an undesirable result. Violating water quality standards in one-third of the minimum thresholds of the entire subbasin's representative monitoring wells would have unreasonably severe impacts on drinking water users. Furthermore, the vast majority of wells the GSA would allow to become contaminated before triggering plan failure would be overwhelmingly upon domestic well users and disadvantaged communities, causing a disparate impact in violation of state law. The GSP states that the GSA discussed these impacts with Advisory Committee members, but it cannot have held an informed discussion because it did not have data on the actual potential impact to beneficial users. In order to avoid these disparate impacts, the GSA must change the undesirable result or define its own local undesirable result to prevent widespread drinking water impacts to protected groups in the GSA area.

LC-013

[43] 23 CCR § 354.26.
[44] 23 CCR § 354.26.
[45] Draft GSP, p. 3-6.

In order to comply with SGMA and state civil rights law, the GSA must:

- Define its own local interpretation of the subbasin's undesirable result.
- Consider the impact of its undesirable impact on all types of beneficial users in the GSA area by evaluating the potential groundwater quality impact to beneficial users. Publish this analysis in the GSP, and show how it was used to define the undesirable results.
- Ensure that this undesirable result does not cause a disparate impact on protected groups under state civil rights law.

LC-013 (contd.)

Projects and Management Actions

The GSA must consider the interests of beneficial users including domestic well owners and disadvantaged communities[46] and avoid disparate impacts on protected groups.[47] In light of the impacts on domestic well users and disadvantaged communities from the policy decisions discussed above, the GSP must therefore include Projects and Management Actions that protect domestic well users and disadvantaged communities from the drinking water impacts that will occur from the GSA's policy decisions. As noted above and on the attached Focused Technical Report, the minimum thresholds for groundwater levels put more than 86% of domestic wells in the GSA area at risk of full or partial dewatering, and the groundwater quality sustainability goals leave domestic wells unprotected from increased contamination. Furthermore, the GSP cannot create a disparate impact on protected groups pursuant to state law. Without proactive policies and projects to mitigate forthcoming disparate impacts, communities and homes belonging to protected groups based on race, national origin and ethnicity will experience a disproportionately negative impact in violation of state civil rights law. Because the GSP as written will cause a disparate impact on protected groups, and does not consider the interests of domestic well users or disadvantaged communities, the GSP must include projects to prevent and mitigate those impacts.[48]

LC-014

The Draft GSP's chapter on Projects and Management Actions contains two projects that may help protect against disparate impacts, but those projects as written are not sufficient to prevent disparate impacts. The recharge basin next to Okieville is a positive step in the right direction towards protecting Okieville's drinking water supply and quantity.

The Small Systems/Domestic Well Owner Assistance program could help prevent disparate impacts and show that the GSA has considered the interests of domestic well owners and small systems, but the GSA's Board of Directors has not committed to doing this program, and does not define how the assistance measures will be implemented or funded. Before adoption, the Mid Kaweah GSA must clearly commit to projects and management actions to prevent disparate impacts on vulnerable water users, and have defined timelines for those projects.

The Draft GSP's potential groundwater extraction allocation program also raises

[46] Water Code § 10723.2.
[47] Gov. Code § 11135; Gov. Code § 65008; Government Code §§ 12955, subd. (l).
[48] Gov. Code § 11135; Gov. Code § 65008; Government Code §§ 12955, subd. (l).

concerns from the perspective of domestic well users and disadvantaged communities. Such a scheme could negatively impact critical drinking water resources if the GSA does not ensure that small systems, in addition to domestic wells, are exempt from pumping restrictions.

In order to prevent disparate impacts on protected groups, and show that it has considered the interests of all beneficial users including domestic well users and disadvantaged communities, the GSA should consider the following projects and management actions:

- ***Clearly Commit to a Drinking Water Protection Program for the Mid Kaweah GSA Service Area:***

    - The GSP contains a potential program to assist domestic well owners and small water systems obtain solutions to drinking water issues in the GSA area. This is a step in the right direction, but needs a more solid commitment and a defined scope and proposed activities. We recommend some parameters for a potential program below, and are glad to work with the GSA on shaping an effective program for preventing drinking water impacts from declining groundwater levels, increased groundwater contamination, and subsidence.

    - We recommend that the GSA consider the following factors in approving such a program:

        - Eligible activities in the program should include: drilling of new wells or deepening wells if homes' wells go dry due to declining groundwater levels, increased energy costs from pumping from deeper depths,[49] assistance in connecting to larger water systems.

        - Any project funded by the program must be guided by the residents or communities that are recipients of program benefits. Community input into a project will ensure project success, by learning from resident experience and knowledge to shape a project that will best suit their drinking water needs.

        - The GSA must ensure that the program is accessible for all residents who may need its assistance. The program should work with local agencies and organizations to spread information about the program, should not require residents to opt in to the program, and the GSA must provide translated materials regarding the program.[50]

        - Such a program must be proactive, rather than reactive. We recommend that Mid Kaweah GSA implement a Drinking Water Observation Plan (DWOP) that will serve as a warning system so that the GSA is aware of when wells are going dry, or when wells are going to become

LC-014 (contd.)

[49] Recent research has concluded that "in the Tulare Lake area, with an average well depth of 120 feet, pumping would require 175 kWh per acre-foot of water. In the San Joaquin River and Central Coast areas, with average well depths of 200 feet, pumping would require 292 kWh per acre-foot of water."

[50] Gov. Code, §§ 7293, 7295

contaminated from groundwater management activities, so it can take action to prevent drinking water impacts before they occur. This DWOP should trigger proactive measures wherein the GSA should act before wells lose production capacity or before wells become contaminated, to ensure that community members are not left without access to safe and reliable drinking water.

- Wherever possible, and whenever it is the community's preference, the GSA should strive to assist residents on domestic wells and small community water systems with connecting to larger drinking water systems. If consolidation is not possible, the GSAs should support the deepening of wells, installation of treatment facilities or POE/POU treatment in homes and offset the increased energy costs for pumping water from a lower level. In the interim, the GSA should collaborate with local and state agencies to provide emergency bottled water for consumption and sanitary purposes.

- ***Recharge Basins In or Near Disadvantaged Communities and Domestic Well Clusters:*** The Mid Kaweah GSA should replicate projects like the Okieville project throughout the GSA area wherever DACs and clusters of domestic wells exist. The GSA should opt for these kinds of recharge projects with health co-benefits over on-farm recharge, which is likely lead to accelerate groundwater contamination.

LC-014 (contd.)

- ***Require Basin-Wide Metering, Particularly for Large-Scale Production Wells*****:** The GSP establishes that one of the Management Actions that it will undertake is a study on different options to measuring groundwater extraction. We recommend that the GSA prioritize basin-wide metering of all extractors that are not de minimis extractors. In order to ensure achievement of the GSA's sustainability goal by 2040, and compliance with its sustainable management criteria, GSAs are prescribed the authority to meter all production wells in the subbasin,[51] and metering is the only mechanism by which the GSA can procure accurate groundwater extraction data. Without this precise data, the GSA cannot create an accurate water budget. Therefore, the GSA must utilize the authority vested by the state to meter non-de minimis pumpers, fill data gaps and protect vulnerable domestic water users from groundwater decline.[52]

- ***Establish Pumping Buffer Zones:*** For areas vulnerable to declining water levels and loss of production capacity, Mid Kaweah GSA should adopt management actions that establish geographical protection areas (buffer zones) by establishing bans, pumping limitations or community-specific management areas around disadvantaged communities

[51] California Water Code section 10727.4 states that "a groundwater sustainability plan shall include, where appropriate and in collaboration with the appropriate indices" include "efficient water management practices...for the delivery of water and water conservation methods to improve the efficiency of water use."

[52] Section 10725.8 (a) - A groundwater sustainability agency may require through this groundwater sustainability plan that the use of every groundwater extraction facility within the management area of the groundwater sustainability agency be measured by a water-measuring device satisfactory to the groundwater sustainability agency."

and domestic well clusters. In order to implement this policy, the Mid Kaweah GSA can consider incentivizing or requiring the fallowing of fields around disadvantaged communities , or protective water conservation projects. This practice will protect shallow or vulnerable wells from the impacts of over-pumping and cones of depression. Furthermore, this buffer must be protective enough to ensure that disadvantaged communities and residents reliant on domestic wells do not experience localized impacts from nearby pumping activities. This action should not be used to allow more pumping elsewhere in the subbasin, and needs to be coupled with a strong demand reduction policy across the basin.

- ***Support Water System Consolidations:*** The GSA must help fund a consolidation projects to connect nearby residents on wells to a larger water system that can treat the water, or pay for other water filtration solutions.

Broad Considerations for Projects and Management Actions

The following elements must be incorporated into the Projects and Management Actions section of the GSP in order to avoid a disparate impact on protected groups in the GSA area:

- ***Timelines:*** Projects benefiting disadvantaged communities must contain specific timelines and commitments to ensure achievement of sustainability and protection of drinking water resources for disadvantaged communities. Implement projects to benefit disadvantaged communities in a reasonably timely manner, and concurrently with projects that benefit other beneficial users, so as to avoid disparate impacts on groups protected under state civil rights law.

LC-014 (contd.)

- ***Information Accessibility:*** Detailed information on projects must be available to the public online, as appendices to the GSP, and in a public workshop during a public comment period. In reading the shortlist projects descriptions, we had several questions about project details, which could be easily answered by providing more information on the projects. In order to better inform stakeholders on these projects and why they are being prioritized over others, more information on these projects needs to be made available, both in the plan and through more opportunities for in-person public comment.

- ***Multi-Benefit Projects:*** Encourage multi-benefit projects such as wetlands restoration or stormwater drainage ponds that would eliminate flooding and increase groundwater recharge in disadvantaged communities.

- ***Funding Projects:*** Although there are multiple short-term funding sources to leverage for SGMA-related projects, the Mid Kaweah GSA operating budget must be a reliable source of funding over the long-term of GSP implementation, and the GSA cannot rely on grant funding for long-term projects and programs that benefit disadvantaged communities. Furthermore, any proposed assessments that will pay for projects may not place a disproportionate financial burden on disadvantaged communities.

Draft GSP Does not Contain Adequate Plans for Community Engagement in Plan Implementation

Public outreach has been a critical part of the SGMA implementation process and will continue to be critical in implementing the GSP. The first chapter of the Draft GSP contains a brief description of community engagement during GSP implementation, stating that the GSA will continue notifying the public through email, postings, and social media about GSA board and committee meetings, and the GSA will do additional presentations as resources allow. does not contain adequate information regarding the plan implementation schedule and public process, annual reporting, or the potential to make amendments to the GSP. In the annual report outline proposed by the GSA, public outreach is not included in any of the key sections. Additionally, in the initial GSP implementation budget, there is no budget set aside for public outreach. This engagement is not enough to ensure that all beneficial user groups are considered, or that a wide diversity of stakeholders are included in GSP implementation decisions.

LC-015

The GSP must establish processes by which it will seek and incorporate feedback from the public on an ongoing basis through direct outreach to disadvantaged communities and public workshops that are held at convenient locations and times and accessible in multiple languages. Additionally, proposed reconsiderations must be publicly noticed and circulated for public review and comment prior to final adoption.

To ensure that the GSP is implemented properly, the GSA must do the following:

- The GSA must include a plan for public outreach for the GSP implementation process. This plan should include translation services in order to meaningfully consult with and consider the interest of all beneficial users. Workshops and meetings must be at an accessible time and locations for all stakeholders
- The GSA must include public outreach as part of the annual reporting.
- The GSA must budget for public outreach. The budget should include translation services in order to meaningfully consult with and consider the interest of all beneficial users.
- Clarify in the GSP that the plan may be modified as data becomes available, and that the GSA will seek and accept feedback from the public on an ongoing basis throughout plan implementation.
- Clarify that any modification to the GSP must be in writing, noticed and provide sufficient time for public review and feedback.

Other Legal Considerations

The Draft GSP Threatens to Infringe on Water Rights

LC-016

In enacting SGMA, the legislature found and declared that "[f]ailure to manage groundwater to prevent long-term overdraft infringes on groundwater rights."[53] The test of SGMA further notes

[53] AB 1739 (2014).

that "[n]othing in this part, or in any groundwater management plan adopted pursuant to this part, determines or alters surface water rights or groundwater rights under common law or any provision of law that determines or grants surface water rights."[54] As discussed in detail above, the Draft GSP allows continued overdraft above the safe yield of the basin, such that drinking water wells (especially domestic wells) will continue to go dry, infringing on the rights of overlying users of groundwater. The GSP must be revised to protect the rights of residents of disadvantaged communities and/or low-income households who hold water rights to groundwater.

LC-016 (contd.)

The Draft GSP Conflicts with the Reasonable And Beneficial Use Doctrine

The "reasonable and beneficial use" doctrine, to which SGMA expressly must comply,[55] is codified in the California Constitution. It requires that "the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare." (Cal Const, Art. X § 2; *see also United States v. State Water Resources Control Bd.* (1986) 182 Cal.App.3d 82, 105 ["…superimposed on those basic principles defining water rights is the overriding constitutional limitation that the water be used as reasonably required for the beneficial use to be served."].)

LC-017

The reasonable and beneficial use doctrine applies here given the negative impacts of the Draft GSP on groundwater supply and quality, which are likely to unreasonably interfere with the use of groundwater for drinking water and other domestic uses. As the Draft GSP authorizes waste and unreasonable use, it conflicts with the reasonable and beneficial use doctrine and the California Constitution.

The Draft GSP Conflicts with the Public Trust Doctrine

The "public trust" doctrine applies to the waters of the State, and establishes that "the state, as trustee, has a duty to preserve this trust property from harmful diversions by water rights holders" and that thus "no one has a vested right to use water in a manner harmful to the state's waters."[56]

LC-018

The "public trust" doctrine has recently been applied to groundwater where there is a hydrological connection between the groundwater and a navigable surface water body.[57] In *Environmental Law Foundation*, the court held that the public trust doctrine applies to "the extraction of groundwater that adversely impacts a navigable waterway" and that the government has an affirmative duty to take the public trust into account in the planning and allocation of

[54] Water Code § 10720.5(b).
[55] Water Code § 10720.1(a).
[56] *United States v. State Water Resources Control Bd.* (1986) 182 Cal.App.3d 82, 106; *see also Nat'l Audubon Soc'y v. Superior Court* (1983) 33 Cal.3d 419, 426 ["before state courts and agencies approve water diversions they should consider the effect of such diversions upon interests protected by the public trust, and attempt, so far as feasible, to avoid or minimize any harm to those interests."].
[57] *Environmental Law Foundation v. State Water Resources Control Bd.* (2018) 26 Cal.App.5th 844, 844.

water resources.[58] The court also specifically held that SGMA does not supplant the requirements of the common law public trust doctrine.[59] In contrast to these requirements, the Draft GSP does not consider impacts on public trust resources, or attempt to avoid insofar as feasible harm to the public's interest in those resources.

LC-018 (contd.)

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The GSP must protect the area's most vulnerable drinking water users, and we welcome the opportunity to discuss our recommendations to ensure compliance with state law. We hope to continue to collaborate with GSA staff and consultants to ensure that the Mid Kaweah GSA's final GSP protects drinking water for disadvantaged communities and domestic well owners in the GSA area. We are also in communication with the Department of Water Resources about current GSP development activities in the San Joaquin Valley, and hope to successfully work with GSAs, communities and DWR to ensure that groundwater management is equitable and sufficiently protective of vital drinking water resources.

Sincerely,

/s/

Amanda Monaco
Water Policy Coordinator
Leadership Counsel for Justice and Accountability

CC:

Amanda Peisch-Derby
Senior Engineer, Department of Water Resources

Encl:
Focused Technical Review

[58] *Id.* at 856-62.
[59] *Id.* at 862-870.

Self-Help Enterprises

A Nonprofit Housing and Community Development Organization

September 16, 2019

Mid-Kaweah Groundwater Sustainability Agency
144 S. I Street, Suite N
Tulare, CA 93274

Submitted electronically to: midkaweah@gmail.com; jph@midkaweah.org

Re: Comments on the Draft Mid-Kaweah Groundwater Sustainability Plan (GSP)

Dear Mid-Kaweah Groundwater Sustainability Agency:

On behalf of Self-Help Enterprises (SHE), we would like to offer several comments and recommendations in response to the Mid-Kaweah Groundwater Sustainability Agency (MKGSA) draft Groundwater Sustainability Plan (GSP) that was released for a 45-day public comment period on July 31, 2019.

SHE is a nationally recognized housing and community development organization whose mission is to work together with low-income families to build and sustain healthy homes and communities. To date, SHE has supported SGMA implementation through hosting several technical capacity building workshops and assisting communities to participate in Groundwater Sustainability Agency (GSA) meetings.

Our comments and recommendations are provided in an effort to protect the drinking water sources of the vulnerable, and often underrepresented, groundwater users that SHE works with. These users of groundwater that then utilize it for beneficial purposes include: domestic well owners, community water systems, public water systems, schools, and severely disadvantaged (SDAC) or disadvantaged communities (DAC). The submitted comments are intended to assist MKGSA in developing a groundwater sustainability plan that accomplishes the following objectives:

1. Understands disadvantaged communities' unique vulnerabilities and adequately addresses their drinking water needs;
2. Avoids developing groundwater management actions that cause negative impacts to drinking water supplies or cause a disparate impact on low-income communities of color; and
3. Achieves the objectives required by the GSP regulations and California's Human Right to Drinking Water in order to ensure the Mid-Kaweah GSP adequately addresses the requirements necessary for GSP approval by the Department of Water Resources (DWR).

The Department of Water Resources (DWR) will be considering AB 685, which established the Human Right to Water as state law, when reviewing and approving GSPs. GSPs that do not support access to sufficient and affordable quantities of drinking water, or GSPs that impact access to safe drinking water, may require costly and time-consuming revisions prior to approval from DWR.

Detailed comments and recommendations for individual sections of the GSP are included below. SHE partnered with Leadership Counsel for Justice and Accountability (LCJA) to conduct a focused technical review of certain sections of the GSP. Findings of this review are included as "Focused Technical Review" and some of these findings are incorporated and/or referenced in this comment letter.

Here is a summary of a few key comments and recommendations:

Basin Setting

Appendix 2A of the draft GSP includes a discussion of the Basin Setting for the subbasin; however, it is not specific to the MKGSA area and it is difficult to readily understand what parts of this assessment are specifically applicable to the MKGSA. Moreover, the lack of a summary highlighting the main conditions affecting groundwater use and users within MKGSA boundaries challenges a more comprehensive understanding of the key messages and how the data will be further utilized in other sections of the GSP. It is therefore recommended that the GSP include a specific discussion of the Basin Setting and trends within the MKGSA area, particularly pertaining to the groundwater conditions in Section 2 of the GSP. The discussion of local challenges in a single section within the draft GSP would improve the ability of the public to evaluate the basin setting assumptions for reasonableness and completeness to prevent and mitigate undesirable results.

Sustainability Goal

The Kaweah Subbasin sustainability goal draft included in the Mid-Kaweah draft GSP focuses on protecting groundwater for industry uses over quality of water for human consumption, which is counter to the intent of SGMA, and does not reflect the collaborative stakeholder-driven process that took place over the course of several MKGSA Advisory Committee and Kaweah Subbasin Management Team meetings. Upon release of the draft GSP, SHE staff held a community GSP review session in Okieville. At the workshop, participants questioned if agricultural enterprises should be prioritized over human consumption. The proposed sustainability goal fails to meet the requirements of SGMA. SHE recommends ensuring that the sustainability goal includes language that demonstrates MKGSA's intent to support the protection of the Human Right to Water by "preserv[ing] the viability of cities and existing agricultural enterprises as well as the viability of school districts, smaller communities, and households relying on shallow domestic wells," as previous drafts of this statement indicated. Beginning in November 2018 and continuing over the course of several meetings, the MK Advisory Committee spent copious amounts of time discussing what should and should not be included in the Sustainability Goal statement. While perspectives varied, there was general support among committee members to set a Sustainability Goal that includes a protective stance toward groundwater quality, but this was not incorporated into the language. This is disappointing as SHE would like to see clear, proactive steps taken to improve groundwater quality including the requirement for drinking water supplies, which had been included previously in the final draft of the MKGSA, but that has been removed since then. This language has been replaced with a weaker stance for disadvantaged communities instead aiming to "maintain the viability of existing enterprises...both agricultural and urban." Additionally, there is no mention of water quality in the goal statement, and buried within the bullet points that follow is an inadequate note that the GSA will collaborate with other agencies to "decelerate ongoing water quality degradation where feasible."

Groundwater Levels

The current approach to setting Minimum Thresholds (MTs) and Undesirable Results (URs) for groundwater levels does not take into account the needs or potential impacts to public water systems and domestic well users. The draft GSP identifies an impact to 21% of rural/domestic wells. However, SHE's Focused Technical Review identified several data gaps and based on this evaluation, the actual impacts could be much higher with the usability of over 71% of domestic wells in the MKGSA area at risk of being significantly impacted if water levels reach the proposed MTs. MKGSA should set stricter minimum thresholds near vulnerable communities and areas with a high density of domestic wells to avoid disproportionate impacts on protected groups. We also recommend including a definition of a local undesirable result that clearly indicates how MKGSA will locally define and address an undesirable result within its service area and protect beneficial users of groundwater.

Groundwater Quality

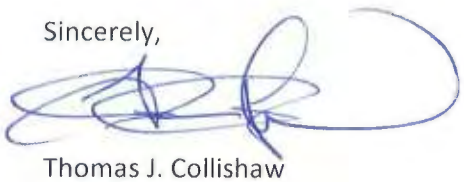
The draft GSP has utilized a good approach by establishing minimum thresholds and measurable objectives based on maximum contaminant levels (MCLs) for contaminants of concern for municipal use. However, the water quality monitoring network for municipal use is not spaced evenly across the area and the analysis presented does not clearly illustrate how the MOs/MTs will adequately ensure that significant impacts to the long-term viability of the groundwater resource will be avoided— particularly for domestic water well users and S/DACs. Please provide a more detailed explanation of how the proposed water quality MT approach and monitoring network will result in protection of groundwater for S/DACs and other drinking water beneficial users. We also recommend developing a warning system that informs MKGSA stakeholders when contaminants of concern have reached 80% of the MCL and expanding the groundwater quality monitoring network near the DACs of Okieville. As an example, the MKGSA could consider incorporating a Representative Monitoring Well (RMW) for both the confined aquifer below the Corcoran Clay and the unconfined aquifer above the Corcoran Clay. Data collected could help in determining if established water quality minimum thresholds and quantifiable measurements of sustainability are met in this SDAC.

Projects and Management Actions - Well Impact Prevention/Mitigation Program

A good partnership has been initiated between Okieville and Tulare Irrigation District (TID) in order to construct a recharge basin upgradient of the community that can bring mutual benefits. This type of partnership can enhance community engagement in projects, increase community awareness of the issues being addressed and establish a framework to support disadvantaged communities in their efforts to secure access to safe and reliable water. SHE also greatly appreciates MKGSA and stakeholder interests in providing assistance to small water systems and domestic well owners without the financial impacts to lower or replace their pump and well facilities. As the assistance measures described in the draft GSP have not yet been approved to be carried out, SHE would like to further express the importance in providing such an assistance program to prevent and mitigate potential impacts to drinking water users. As noted previously, residents that attended the Okieville GSP review workshop questioned if agricultural enterprises should be prioritized over human consumption, expressed concerns over potential impacts to shallow domestic wells and expressed support for the implementation of a mitigation program. Implementing an assistance program and having a robust plan to protect important drinking water sources for small water systems and domestic well owners is demanding of drinking water consumption as a priority. SHE looks forward to the opportunity to support MKGSA in developing a mitigation program that ensures the protection of important drinking water sources and is considerative of MKGSA constraints. Specific considerations for establishing this type of program are provided further in this letter.

Thank you for reviewing this letter and for the consideration of our comments on the draft GSP. We look forward to working with the MKGSA to ensure that the GSP is protective of the drinking water sources of vulnerable, and often underrepresented, groundwater stakeholders. Please do not hesitate to contact us with any questions or concerns, or if you would like to meet to further discuss these important sets of issues.

Sincerely,



Thomas J. Collishaw
President/CEO

Attachments

Focused Technical Review:
July 31, 2019 Mid-Kaweah GSA Public Review Draft Groundwater Sustainability Plan

Water Levels

The draft Groundwater Sustainability Plan (GSP) developed by the Mid-Kaweah Groundwater Sustainability Agency (MKGSA) sets the minimum thresholds (MTs) for groundwater levels as the groundwater levels projected through 2040 based on the average groundwater level decline observed over the 2006-2016 time period. Similarly, the MKGSA sets the measurable objectives (MOs) for groundwater levels as the groundwater levels projected through 2030 using the same declining water level trend. This approach is intended to represent continued long-term drought conditions. The draft GSP defines the undesirable result (UR) for chronic lowering of water levels as being when one-third of the representative monitoring sites in the Kaweah Subbasin (subbasin), across all three GSAs, exceed their respective MTs. This approach is consistent with the approach used in the East and Greater Kaweah GSPs and leaves key beneficial users in the subbasin, specifically domestic well users and members of disadvantaged communities (DACs), potentially vulnerable to impacts. While an assistance program is identified in the draft GSP, that program currently lacks key details that would make it a robust mitigation measure for these beneficial users.

- The draft GSP presents water level MTs by: (1) hydrogeologic zones that reportedly share similar groundwater conditions and hydrogeologic behavior (Table 5-2); and (2) by Representative Monitoring Wells (RMWs) (Table 5-3). According to the draft GSP, the hydrogeologic zone MTs are based on the average of the RMW MTs for a particular area. As stated in Section 5.3.1.3, "Consistent with this requirement, the minimum elevation thresholds in this Plan are set at specific levels based on four different hydrogeologic zones as defined herein." However, well impact analyses are performed based on the MTs developed for each individual RMW, and the MOs are only established at the RMWs (i.e., not by hydrogeologic zones). **Based on the conflicting information presented in the draft GSP, it is not clear which set of MT values will be used for compliance purposes through the GSP implementation phase. Sustainable Management Criteria (SMC), including MTs and MOs, should be clearly identified and applied consistently in the GSP.**
- As shown on **Figure 1**, the MKGSA area includes over 750 domestic wells, three DWR-designated DACs[1] (i.e., Tulare, Matheny Tract, Okieville, and Waukena) with a collective population of over 63,000 people, and two additional small communities adjacent to Tulare that are dependent on groundwater for drinking water purposes (i.e., Soults Tract, and Lone Oak Tract). The MKGSA also includes 13 community water systems, 11 of which have less than 300 service connections but collectively serve over 5,300 people. Despite this broad and diverse dependence on groundwater for drinking water use, the approach to setting water level MTs/MOs and URs does not explicitly take these drinking water beneficial users into account. As described above, the MTs for each threshold region are set based on an assumed trajectory of decreasing water levels over the next 20 years, without regard to well depths or other potential impacts. The draft GSP acknowledges

[1] Designated at the Census Place and Tract levels.

that impacts to small water systems and domestic wells will be greater than impacts to other well users, but according to the draft GSP, the MTs were determined to be acceptable with the implementation of potential assistance measures (Section 5.3.1.3). **However, according to Section 7.4.8.1 of the draft GSP, none of the identified potential assistance measures for small water systems and domestic wells have been approved by the MKGSA Board and it is not clear how the assistance measures will be implemented or funded. The GSP should describe how this approach is protective of the diverse drinking water users in the MKGSA without a clear implementation plan for the identified assistance measures.**

- **Table 1** below identifies the current groundwater elevation and the MO and MTs for RMWs near DACs and other groundwater-dependent communities in the MKGSA. The groundwater level MT in the vicinity of these communities is an average of 118 feet lower than current conditions. In the area of Okieville[2] (Chart 1 below), the MT is 171 feet lower than current conditions, and in north Tulare, the MT is 192 feet lower than current conditions. Even if groundwater levels are maintained at the proposed MOs, groundwater levels will drop by an average of 87 feet from current water levels in these areas. The draft GSP states that, based on stakeholder input, "the largest impact on declining groundwater levels historically was the dewatering of some wells, forcing homeowners, businesses, farmers, and other groundwater well owners to drill new replacement wells" (Section 5.3.1.2). **Given that the subbasin is in critical overdraft and negative impacts have already been experienced by beneficial users in the MKGSA due to declining water levels, the GSP should explain how a projected additional water level decline of nearly 200 feet in some areas will result in sustainable conditions for beneficial users. The GSP should consider and quantify both the potential dewatering of wells and the increased pumping costs associated with the increased lift at the projected lower water levels.**

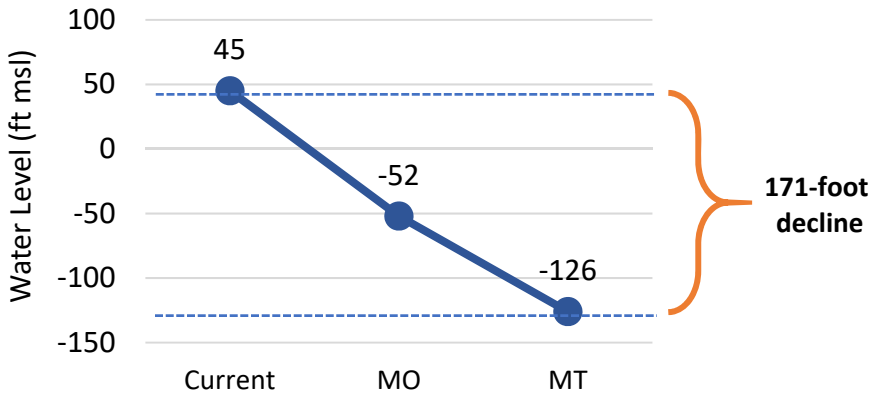
Table 1
Groundwater Elevation Sustainable Management Criteria
Near Selected Communities

Community	Nearby RMW	Current Groundwater Elevation (ft msl)*	MO (ft msl)	MT (ft msl)
Okieville	KSB-1071	45	-52	-126
Waukena	KSB-0922	70	19	-22
Soults Tract/ Lone Oak Tract/ Matheny Tract	KSB-1538	130	83	62
Tulare (mid)	KSB-1695	140	13	72
Tulare (north)	KSB-1628	100	-21	-92
Average Change from Current Elevation (ft)			**-87**	**-118**

* ft msl = feet mean sea level; typically 2017-2018 water levels.

[2] Many members of the Okieville community now receive drinking water from the newly-established Okieville/ Highland Acres Mutual Water Co., which operates a nearly 1,000-foot deep well. However, approximately 20 households in this community and more in the surrounding areas still depend on private wells and thus are at greater risk of impacts from declining water levels.

Chart 1
Groundwater Level Decline Associated with MOs and MTs Near Okieville (RMW KSB 1071)



- The draft GSP includes a limited evaluation of well impacts (Section 5.3.1.3 and Appendix 5c) that compares the known screened intervals of agricultural, public, and domestic wells with the projected 2040 groundwater elevation at each well to estimate the number of wells that would be dewatered. The results of the well impact analyses are categorized by zone and well type. However, this analysis does not appear to actually evaluate the potential well impacts based on either the hydrogeologic zones MTs (Table 5-2) or the RMWs MTs/MOs (Table 5-3). In addition, which wells are within the MKGSA and the locations of these wells that are expected be impacted are not clearly stated or mapped in the draft GSP. **Therefore, the well impact analyses performed in the draft GSP does not appear to actually evaluate the potential impacts to subbasin wells associated with the MTs/MOs developed by the MKGSA. Since the MOs are also based on projected declining water level trends, a well impact analyses should also be performed on the MOs. Furthermore, locations of potentially impacted wells should be provided in order to assess the well impacts specific to DACs, small water systems, and other sensitive users within the MKGSA.**
- Based on the well impact evaluation in Section 5.3.1.3 and Appendix 5C, "18 percent of agricultural wells, 9 percent of public wells, and 21 percent of rural residential wells including domestic wells, would be subject to groundwater levels that would be below their constructed depth" if water levels reach the MTs, as identified at the hydrogeologic zone level. This assessment appears to have been done relative to the bottom of the total well construction depth. However, water supply wells become unusable or subject to decreased performance and longevity as water levels fall within the screened interval, which will occur before water levels reach the bottom of the well. **Therefore, the actual number of domestic wells that would be significantly impacted at the proposed water level MTs would be expected to be higher than represented in the draft GSP.**
- **Figure 2** shows the approximate locations of domestic wells and water level RMWs (including the proposed new wells) within the MKGSA area. For purposes of this evaluation, a one-mile radius is shown around each RMW for which ground surface elevations (GSEs) were provided in the draft GSP. Based on available well construction information, the well screens of the domestic wells located within this one-mile radius are compared to the proposed MOs and MTs for the RMWs with

provided GSE data. For purposes of this assessment, a well is identified as *fully dewatered* if the MT is below or at the bottom of the well screen interval and a well is identified as *partially dewatered* at if the MT is below or at the midpoint of the well screen interval. Approximately 30% of domestic wells in the MKGSA are located within the one-mile buffer of RMWs with both MT/MO and GSE data. When water levels reach MTs, approximately 71% of these domestic wells would be expected to be fully dewatered and an additional 15% of these wells would be expected to be partially dewatered. Even at the MO water levels, approximately 64% of these domestic wells would be expected to be fully dewatered and 9% of these wells would be expected to be partially dewatered. These estimates are much higher than the 21% of rural residential/domestic wells identified as being impacted in Section 5.3.1.3 of the draft GSP. We acknowledge that this is a "quick and dirty" assessment of domestic well impacts; however, these results do not appear to be consistent with the analysis presented in the draft GSP. Further, as identified in a previous comment, the draft GSP is not clear on whether MTs are intended to be applied at the RWM-level or the hydrogeologic zone level. Given that the hydrogeologic zone MTs are the average of the RMW MTs, the way the criteria are applied may have a significant difference in the level of impacts experienced at localized areas. **The GSP should present a thorough and robust analysis, supported by maps, that identifies: (1) what domestic wells are likely to be impacted (including partially dewatered) at the MTs and at the MOs, and (2) the location of the likely impacted wells with respect to DACs and other communities and systems dependent on groundwater. Also, pursuant to 23 CCR § 352.4, the GSP should include GSEs for all RMWs.**

- Given that water levels in one-third of all RMWs across all three subbasin GSAs must drop below MTs in order for an UR to be triggered, **significant and unreasonable impacts could occur within significant portions of the subbasin without triggering a subbasin UR. The draft GSP should include a local UR definition that makes it clear that the MKGSA will locally define and address an UR within its service area and protect beneficial users of groundwater.**

Water Quality

The draft GSP sets the MTs for water quality at Maximum Contaminant Levels (MCLs) or the Agricultural Water Quality Objectives (WQOs) at each RMW based on the dominant beneficial use for that monitoring well. The MOs for water quality were set at 75% of the MCLs or WQOs. The draft GSP further defines the UR for degraded water quality as being when one-third of the RMWs in the subbasin exceed an MT. Section 2.2 of the draft GSP identifies arsenic, nitrate, certain volatile organics, and 1,2,3-trichloropropane (TCP) as Constituents of Concern (COCs) for the MKGSA due to concentrations near MCLs or due to increasing trends. The draft GSP further identifies the following constituents to be measured where applicable (Section 3.2.2.4): arsenic, nitrate, chromium-6, dibromochloropropane (DBCP), TCP, tetrachloroethylene (PCE), sodium, chloride, perchlorate, total dissolved solids (TDS). For the reasons identified below, the water quality monitoring network and analysis presented in the draft GSP does not clearly illustrate how the MOs/MTs will be sufficient to ensure that the stated water quality UR of impacting the long-term viability of the groundwater resource, particularly for domestic water users and DACs, will be avoided.