

REQUEST FOR PROPOSAL

TO PROVIDE SUSTAINABLE GROUNDWATER MANAGEMENT ACT (SGMA) GROUNDWATER SUSTAINABILITY PLAN (GSP) IMPLEMENTATION FOR THE COUNTY OF LASSEN AND THE COUNTY OF MODOC, ACTING AS THE GROUNDWATER SUSTAINABILITY AGENCIES (GSAs) FOR THE BIG VALLEY GROUNDWATER BASIN

LASSEN COUNTY, CALIFORNIA

Request for Proposal Issue Date: September 15, 2022

Proposal Deadline: October 31, 2022 4:00 p.m.

I. PURPOSE

The purpose of this Request for Proposal (RFP) is to select a qualified consultant to provide services to assist the Lassen and Modoc County Big Valley Groundwater Basin Groundwater Sustainability Agencies (GSA) in the future implementation of the adopted Groundwater Sustainability Plan (GSP) and tasks required by the Sustainable Groundwater Management Act (SGMA).

The specific scope of work will be defined in contracts (see the County's standard contract template attached as Exhibit A) that will be developed as specific tasks arise. In summary, these tasks could include one or more of the following:

1. Provide technical assistance to the GSA following review of the GSP by the Department of Water Resources (DWR), and assist the GSA in the preparation of any amendments to the GSP required by said review;
2. Assist the GSA in GSP administration and public outreach;
3. Execute monitoring and data management as requested by the GSA;
4. Assist the GSA in the preparation of annual reports required by SGMA;
5. Assist the GSA in the plan evaluation that is required by SGMA every five years;
6. Assist the GSA in the preparation and submittal of grant applications to implement the GSP, or grant applications to provide other services to help in the implementation of the GSP;
7. Assist the GSA in the development and implementation of projects identified in the GSP;
8. Coordinate GSA activities with Modoc County, our partner GSA, which contains 28% of the Big Valley Groundwater Basin and with which we share one GSP;
9. Facilitate potentially stressful situations concerning state-level actions related to water and reactions of our local agricultural communities; and/or
10. Provide other services as requested by the GSA and agreed to in a contract between the GSA and the selected consultant.

Again, specific activities to be performed by the selected consultant will be identified in subsequent contracts that must be approved by the GSAs and by the selected consultant.

The purpose of this RFP is to identify the consultant the GSAs will contract with when specific tasks arise.

II. GENERAL INFORMATION

Lassen County is currently home to approximately 30,800 people with a land area totaling over three million acres. This rural county has a variety of commercial and industrial development opportunities and boasts convenient rail, highway, and airport access. The predominant sector of employment in Lassen County is Federal, State, and Local Government, which comprises over 50 percent of jobs in the County. Due to the relatively mild climate and natural beauty, Lassen County appeals to locals and visitors alike for year-round recreational activities.

Modoc County has a population of approximately 8,700 (2020 census) with a land area just under 2.7 million acres. Much of Modoc County is federal land and as such, federal agencies, including the United States Forest Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs and the United States Fish and Wildlife Service play a significant role in its economy and services. The county is very diverse geographically and is one of the most sparsely populated counties in California which creates abundant opportunities for recreation including wildlife viewing, fishing and hunting.

III. BACKGROUND

The Big Valley Groundwater Basin, California Department of Water Resources (DWR) Basin No. 5-004, is classified as a “medium” priority basin. The basin, spans a land area of about 144 square miles in Modoc and Lassen counties (28 and 72 percent respectively). To comply with the requirements set forth by the 2014 Sustainable Groundwater Management Act (SGMA) (California Water Code, Section 10720 et seq.), both counties have taken on the role of the Groundwater Sustainability Agency (GSA) for the portion of the basin within their jurisdictional boundaries. The Groundwater Sustainability Plan (GSP) was adopted by both County Boards of Supervisors on December 15, 2021 and submitted to DWR on January 27, 2022.

The Executive Summary of the adopted GSP is attached as Exhibit B, and the entire GSP can viewed at the following URL:

<https://sgma.water.ca.gov/portal/gsp/preview/95>

IV. SCOPE OF SERVICES

The selected consultant will provide technical support to the Big Valley GSA’s as directed under separate contract. Individual work efforts, specific tasks, assignments, deliverables and associated cost estimates will be described in acceptable detail in subsequent contracts. Consultant cost accounting, work description detail, and invoicing will track specific work efforts according to said contracts.

Any contracts executed pursuant to this RFP will be selected and approved as a coordinated effort by both the Lassen and Modoc GSAs with Lassen or Modoc County acting as the lead agency for contract implementation. The selected consultant will work closely with both the Modoc and Lassen County GSAs for the benefit of the entire Basin.

V. PROJECT MANAGEMENT

The consultant will manage the project and be held responsible for developing the documents required by any contract that may, in the future, be agreed to by the GSAs and by the selected consultant. The Lassen County's Planning and Building Services Department and the Modoc County Groundwater staff serves as staff to the GSAs and will assist the selected consultant as needed.

Each firm or individual interested in preparing a Proposal should provide the following:

- A statement that demonstrates a clear understanding of the potential projects and required services, including a discussion of how to best address the needs specific to Lassen and Modoc County including extensive experience in volcanic geology located in Modoc, Lassen, Siskiyou, or Shasta County, agriculture, and working with Northern California rural counties.
- A discussion of the consultant's specific qualifications and expertise for meeting the needs of the required services.
- Copies of GSPs or other SGMA related documents prepared by the consultant.
- A list of references, preferably of past clients for whom a GSP or other SGMA services, were provided.
- Consultant's current hourly and billing rates/fee schedule specifically identifying rates and fees to be charged for persons likely to be assigned and tasks required to carry out work pursuant to this Request for Proposals.

VI. SUBMISSION REQUIREMENTS

Proposal Deadline: October 31, 2022, 4:00 p.m.

ALL PROPOSALS MUST BE RECEIVED by the County of Lassen by **4:00 p.m.** (Pacific Daylight Time) October 31, 2022. Proposals received after **4:00 p.m.** (Pacific Daylight Time) **October 31, 2022**, or proposals sent by facsimile machine will be considered late and disqualified by the proposal evaluation committee.

Please submit three (3) physical copies of proposals and one electronic copy (MS Word Compatible) in a sealed envelope and clearly marked "Proposal for SGMA Services." The electronic copy should be on a flash drive.

The County of Lassen and the County of Modoc are not responsible for any costs incurred in the preparation of proposals, attendance at related interviews, or any work rendered by a firm prior to an “executed” Contract for Professional Services.

Although the format is discretionary, at a minimum, please include the following information:

1. The legal name of respondent(s), firm name, address, and telephone number(s). Indicate whether the proposing entity is a sole proprietorship, partnership, or corporation, and the state and year established. List key personnel who will be involved in decision-making, contract negotiation, and project development, including mailing address, email address, and phone and fax number(s).
2. A narrative description of the three most relevant prior public sector projects of the key personnel to be assigned to perform work pursuant to the submitted Proposal. Provide description of work performed by said individuals, including date, location, etc. Provide names of contact individuals who provided material assistance on the projects described.
3. A description of the consultant’s experience with rural public agencies. Provide a list of references from the rural public sector including name, title, agency, address, and phone number(s).
4. A narrative description of the approach to be used. Please identify objectives, proposed procedures and activities, and the measurable results that are anticipated.
5. Consultant should include a sample of any previous GSPs or SGMA related plans they have prepared.

Please mail or deliver the Proposal to the following location:

Gaylon F. Norwood
Deputy Director
Lassen County Planning and
Building Services Department
707 Nevada Street, Suite 5
Susanville, CA 96130

You may address any questions you may have to Deputy Director Gaylon Norwood, who can be contacted by phone at (530) 251-8269 or by email at gnorwood@co.lassen.ca.us.

VII. PROPOSAL EVALUATION

An evaluation committee composed of members from both the Lassen and Modoc GSA’s and staff will be assembled to review all proposals. The Lassen County Board of Supervisors and the Modoc County Board of Supervisors, retain the right to reject any and all proposals, and the committee will make the final decision. Selection will be made within 30 days of the proposal

deadline, if possible. A contract with a specific scope of work will be developed as the needed SGMA services arise.

The County of Lassen and the County of Modoc reserve the right to negotiate aspects of the project with the successful responder. The leading respondents may be invited for an interview and given the opportunity of an oral presentation of its proposal.

Proposals will be rated:

1) Understanding Scope of Work, Final Work Product	5 Points, Maximum
2) Clarity of Work Plan, Description of Services Offered	5 Points, Maximum
3) Budget	5 Points, Maximum
4) Project Leader and Team Qualifications and Relevant Experience	10 Points, Maximum
5) Demonstrated Understanding of Local Issues and Challenges	10 Points, Maximum
Maximum Possible Score:	35 Points

VIII. ADDENDA

Any subsequent changes in the RFP from the date of issuance to the date of submittal will result in an addendum by the issuing office to those parties who have provided the proper notice of interest in responding to the RFP.

IX. INSURANCE REQUIREMENTS

Proof of insurance is not required to be submitted with your proposal, but will be required prior to the County's award of any contract. Given the scope of services, appropriate insurance coverage will be required. Insurance Coverage and Amounts will be specified in the Contract document (see Exhibit A of this RFP).

X. NON-DISCRIMINATION

The Counties are an affirmative action employer. Consultants shall not discriminate in their employment with regard to race, color, religion, sex, or national origin. Qualified firms including small businesses and businesses owned by women, minorities and disabled persons are encouraged to submit proposals.

XI. CONFIDENTIALITY

The details of each response to this Request for Proposal are considered proprietary and will not be shared with competing consultants or the general public until after completion of the selection process. The proposals, when submitted, will become the property of the County of Lassen and will be prepared at the sole cost of the consultant. Brief public presentations may be required in subsequent stages of the selection process to the selection committee.

XIII RESOURCES

Exhibit A: Standard County Contract template

Exhibit B: Big Valley GSP Executive Summary

Exhibit A:

Standard County Contract Template

AGREEMENT BETWEEN LASSEN COUNTY

AND

*

Commented [BB1]: Insert the name of the other party to the contract here. Asterisks (*) indicate a place information is needed.

THIS AGREEMENT is made between the COUNTY OF LASSEN, a political subdivision of the State of California (hereinafter "COUNTY"), and *, with a principal place of business at *, (hereinafter "CONTRACTOR").

Commented [BB2]: Insert the name of the contractor in all capital letters.

This Agreement is made with reference to the following facts and circumstances:

Commented [BB3]: State the form of the business the contractor employs, for example:

- . California corporation
- . California non-profit corporation
- . California limited liability company
- . California general partnership
- . Sole proprietorship
- . Limited partnership

WHEREAS COUNTY has need for *and,

WHEREAS CONTRACTOR desires to provide those services.

In consideration of the services to be rendered, the sums to be paid, and each and every covenant and condition contained herein, the parties hereto agree as follows:

Commented [BB4]: State the type of services being provided.

1. SERVICES.

The CONTRACTOR shall provide those services described in Attachment "A". CONTRACTOR shall provide said services at the time, place and in the manner specified in Attachment "A".

2. TERM.

The term of the agreement shall be for the period of July 1, 20* through June 30, 20*.

Commented [BB5]: Fill in the beginning date of the agreement. Typically one fiscal year.

3. PAYMENT.

Commented [BB6]: Fill in the end date of the agreement. Typically one fiscal year.

COUNTY shall pay CONTRACTOR for services rendered pursuant to this Agreement at the time and in the amount set forth in Attachment "B". The payment specified in Attachment "B" shall be the only payment made to CONTRACTOR for services rendered pursuant to this Agreement. CONTRACTOR shall submit all billing for said services to COUNTY in the manner specified in Attachment "B".

4. FACILITIES, EQUIPMENT AND OTHER MATERIALS AND OBLIGATIONS OF COUNTY.

CONTRACTOR shall, at its sole cost and expense, furnish all facilities, equipment, and other materials which may be required for furnishing services pursuant to this Agreement.

COUNTY shall:

4.1 Pay the CONTRACTOR on the terms agreed upon herein in writing, provided that: (1) the CONTRACTOR timely submits appropriate invoices to the COUNTY, (2) the CONTRACTOR is not in breach of the terms and conditions of this Agreement, its attachments, or the standards or specifications referenced or applicable thereto; (3) the CONTRACTOR is not in

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violation of laws or regulations substantially impairing the value of the CONTRACTOR'S performance or the CONTRACTOR'S entitlement to payment; (4) funds to be paid to the CONTRACTOR are not the subject of any active levy, execution, claim, offset, or stop notice by any third party or the COUNTY; and (5) appropriate public funds are available to the COUNTY for such payment.

4.2 Retain ownership and have prompt access to any report, evaluations, intellectual property, findings, or data assembled/developed by CONTRACTOR under this Agreement.

5. ADDITIONAL PROVISIONS.

Those additional provisions unique to this Agreement are set forth in Attachment "C".

6. GENERAL PROVISIONS.

The general provisions set forth in Attachment "D" are part of this Agreement. Any inconsistency between said general provisions and any other terms or conditions of this Agreement shall be controlled by the other terms or conditions insofar as the latter are inconsistent with the general provisions.

7. DESIGNATED REPRESENTATIVES.

§, §, is the designated representative of the COUNTY and will administer this Agreement for the COUNTY. § is the authorized representative for CONTRACTOR. Changes in the designated representatives shall occur only by advance written notice to the other party.

Commented [BB7]: Identify by name the person assuming responsibility for administering this contract.

Commented [BB8]: Identify by title the person assuming responsibility for administering this contract.

Commented [BB9]: Once again, state the name of the person administering this contract. BB7 should be the same as BB9.

8. ATTACHMENTS.

All attachments referred to herein are attached hereto and by this reference incorporated herein. Attachments include:

Attachment A-Services
Attachment B-Payment
Attachment C-Additional Provisions
Attachment D-General Provisions
Attachment E-No Third Party Beneficiaries

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the dates shown opposite their respective signatures.

CONTRACTOR

Commented [BB10]: Insert name of contractor.

Dated: _____

By: _____

Commented [BB11]: Name and title of signor for contractor.

Dated: _____

By: _____
*

Commented [BB12]: Name and title of second signor for contractor, if necessary only.

COUNTY
County of Lassen

Dated: _____

By: _____
*

Commented [BB13]: Name and title of signor for County. To ascertain who is authorized to sign for County, compare amount of contract in light of County purchasing policy. This will either be the Dept Head, the CAO, or the Chairman of the Board.

Approved as to form:

By: _____
Amanda Uhrhammer
Lassen County Counsel

[1Contract Standard Professional Services Master v20210505]

ATTACHMENT A
AGREEMENT BETWEEN LASSEN COUNTY AND
*
SCOPE OF SERVICES

Commented [BB14]: Insert name of contractor.

A.1 SCOPE OF SERVICES AND DUTIES.

The services to be provided by CONTRACTOR and the scope of CONTRACTOR's duties include the following:

*

Commented [BB15]: Description of services to be provided, or scope of work. To the degree that separate paragraphs may be required, please utilize the following hierarchical structure:

A.1
 .A.1.1
 .A.1.1.1
A.2

END OF ATTACHMENT "A"

**ATTACHMENT B
AGREEMENT BETWEEN LASSEN
COUNTY AND**

*

Commented [BB16]: Insert name of contractor.

PAYMENT

COUNTY shall pay CONTRACTOR as follows:

*

Commented [BB17]: Describe payment amount or rate, maximum amount payable under this contract, and method of invoicing that must occur before payment is due.

END OF ATTACHMENT “B”

**ATTACHMENT C
AGREEMENT BETWEEN LASSEN COUNTY AND
*
ADDITIONAL PROVISIONS**

Commented [BB18]: Insert name of contractor.

Commented [BB19]: Set out here any other provisions particular to this contract not otherwise covered elsewhere.

END OF ATTACHMENT "C"

ATTACHMENT D

GENERAL PROVISIONS

D.1. INDEPENDENT CONTRACTOR. For all purposes arising out of this Agreement, CONTRACTOR shall be: an independent contractor and CONTRACTOR and each and every employee, agent, servant, partner, and shareholder of CONTRACTOR (collectively referred to as "The Contractor") shall not be, for any purpose of this Agreement, an employee of COUNTY. Furthermore, this Agreement shall not under any circumstance be construed or considered to be a joint powers agreement as described in California Government Code sections 6000, et seq., or otherwise. As an independent contractor, the following shall apply:

Commented [BB20]: These provisions, all of D, are important. They make up the backbone of the agreement. If you change them prior to submitting for Counsel approval you run the risk of substantially delaying review and perhaps causing a denial of approval.

D.1.1 CONTRACTOR shall determine the method, details and means of performing the services to be provided by CONTRACTOR as described in this Agreement.

D.1.2 CONTRACTOR shall be responsible to COUNTY only for the requirements and results specified by this Agreement and, except as specifically provided in this Agreement, shall not be subject to COUNTY's control with respect to the physical actions or activities of CONTRACTOR in fulfillment of the requirements of this Agreement.

D.1.3 CONTRACTOR shall be responsible for its own operating costs and expenses, property and income taxes, workers' compensation insurance and any other costs and expenses in connection with performance of services under this Agreement.

D.1.4 CONTRACTOR is not, and shall not be, entitled to receive from or through COUNTY, and COUNTY shall not provide or be obligated to provide the CONTRACTOR with workers' compensation coverage, unemployment insurance coverage or any other type of employee or worker insurance or benefit coverage required or provided by any federal, state or local law or regulation for, or normally afforded to, any employee of COUNTY.

D.1.5 The CONTRACTOR shall not be entitled to have COUNTY withhold or pay, and COUNTY shall not withhold or pay, on behalf of the CONTRACTOR any tax or money relating to the Social Security Old Age Pension Program, Social Security Disability Program or any other type of pension, annuity or disability program required or provided by any federal, state or local law or regulation for, or normally afforded to, an employee of COUNTY.

D.1.6 The CONTRACTOR shall not be entitled to participate in, or receive any benefit from, or make any claim against any COUNTY fringe benefit program including, but not limited to, COUNTY's pension plan, medical and health care plan, dental plan, life insurance plan, or other type of benefit program, plan or coverage designated for, provided to, or offered to COUNTY's employees.

D.1.7 COUNTY shall not withhold or pay on behalf of CONTRACTOR any federal, state or local tax including, but not limited to, any personal income tax owed by CONTRACTOR.

D.1.8. The CONTRACTOR is, and at all times during the term of this Agreement shall represent and conduct itself as, an independent contractor and not as an employee of COUNTY.

D.1.9 CONTRACTOR shall not have the authority, express or implied, to act on behalf of, bind or obligate the COUNTY any way without the written consent of the COUNTY.

D.2 LICENSES, PERMITS, ETC. CONTRACTOR represents and warrants to COUNTY that it has all

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licenses, permits, qualifications, and approvals of whatsoever nature which are legally required for CONTRACTOR to practice its profession. CONTRACTOR represents and warrants to COUNTY that CONTRACTOR shall, at its sole cost and expense, keep in effect or obtain at all times during the term of this Agreement any licenses, permits, and approvals which are legally required for CONTRACTOR to practice its profession at the time the services are performed.

D.3 CHANGE IN STATUTES OR REGULATIONS. If there is a change of statutes or regulations applicable to the subject matter of this Agreement, both parties agree to be governed by the new provisions, unless either party gives notice to terminate pursuant to the terms of this Agreement.

D.4 TIME. CONTRACTOR shall devote such time to the performance of services pursuant to this Agreement as may be reasonably necessary for the satisfactory performance of CONTRACTOR's obligations pursuant to this Agreement. Neither party shall be considered in default of this Agreement to the extent performance is prevented or delayed by any cause, present or future, which is beyond the reasonable control of the party.

D.5 INSURANCE.

D.5.1 Prior to rendering services provided by the terms and conditions of this Agreement, CONTRACTOR shall acquire and maintain during the term of this Agreement insurance coverage (hereinafter referred to as "the insurance") through and with an insurer acceptable to COUNTY. The insurance shall contain the following coverages:

D.5.1.1 Comprehensive general liability insurance including comprehensive public liability insurance with minimum coverage of One Million Dollars (\$1,000,000) per occurrence and with not less than One Million Dollars (\$1,000,000) aggregate; CONTRACTOR shall insure both COUNTY and CONTRACTOR against any liability arising under or related to this Agreement.

D.5.1.2 During the term of this Agreement, CONTRACTOR shall maintain in full force and effect a policy of professional errors and omissions insurance with policy limits of not less than One Million Dollars (\$1,000,000) per incident and One Million Dollars (\$1,000,000) annual aggregate, with deductible or self-insured portion not to exceed Two Thousand Five Hundred Dollars (\$2,500).

D.5.1.3 Comprehensive automobile liability insurance with minimum coverage of Five Hundred Thousand Dollars (\$500,000) per occurrence and with not less than Five Hundred Thousand Dollars (\$500,000) on reserve in the aggregate, with combined single limit including owned, non-owned and hired vehicles.

D.5.1.4 Workers' Compensation Insurance coverage for all of CONTRACTOR's employees and other persons for whom CONTRACTOR is responsible to provide such insurance coverage, as provided by Division 4 and 4.5 of the California Labor Code.

D.5.2 The limits of insurance herein shall not limit the liability of the CONTRACTOR hereunder.

D.5.3 In respect to any insurance herein, if the aggregate limit available becomes less than that required above, other excess insurance shall be acquired and maintained immediately. For the purpose of any insurance term of this Agreement, "aggregate limit available" is defined as the total policy limits available for all claims made during the policy period.

D.5.4 Except for automobile liability insurance, the insurance shall name the COUNTY and COUNTY's officers, employees, agents and independent contractors as additional insureds and shall

Commented [BB21]: As of June 2015, there is not a County-wide policy describing insurance requirements for contracts. The amount, type, or whether to require insurance at all is in the discretion of the signor for the County. Counsel's office strongly urges requiring contractor to have some form of insurance.

Commented [BB22]: This is often referred to as "malpractice insurance". Use where County is contracting with professionals such as engineers, surveyors, doctors, psychologists, other health care providers (hospitals, board and care facilities, etc), lawyers, and parties who are required to hold a professional license or certification of some kind. In some situations this clause may be omitted.

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include an endorsement that no cancellation or material change adversely affecting any coverage provided by the insurance may be made until twenty (20) days after written notice is delivered to COUNTY.

D.5.5 The insurance policy forms, endorsements and insurer(s) issuing the insurance shall be satisfactory to COUNTY at its sole and absolute discretion. The amount of any deductible payable by the insured shall be subject to the prior approval of the COUNTY and the COUNTY, as a condition of its approval, may require such proof of the adequacy of CONTRACTOR's financial resources as it may see fit.

D.5.6 Prior to CONTRACTOR rendering services provided by this Agreement, and immediately upon acquiring additional insurance, CONTRACTOR shall deliver a certificate of insurance describing the insurance coverages and endorsements to:

Commented [BB23]: Insert the name and address of the person responsible for administration of this Contract.

Upon COUNTY's request, CONTRACTOR shall deliver certified copies of any insurance policies to COUNTY.

D.5.7 CONTRACTOR shall not render services under the terms and conditions of this Agreement unless each type of insurance coverage and endorsement is in effect and CONTRACTOR has delivered the certificate(s) of insurance to COUNTY as previously described. If CONTRACTOR shall fail to procure and maintain said insurance, COUNTY may, but shall not be required to, procure and maintain the same, and the premiums of such insurance shall be paid by CONTRACTOR to COUNTY upon demand. The policies of insurance provided herein which are to be provided by CONTRACTOR shall be for a period of not less than one year, it being understood and agreed that twenty (20) days prior to the expiration of any policy of insurance, CONTRACTOR will deliver to COUNTY a renewal or new policy to take the place of the policy expiring.

D.5.8 COUNTY shall have the right to request such further coverages and/or endorsements on the insurance as COUNTY deems necessary, at CONTRACTOR's expense. The amounts, insurance policy forms, endorsements and insurer(s) issuing the insurance shall be satisfactory to COUNTY in its sole and absolute discretion.

D.5.9 Any subcontractor(s), independent contractor(s) or any type of agent(s) performing or hired to perform any term or condition of this Agreement on behalf of CONTRACTOR, as may be allowed by this Agreement (hereinafter referred to as the "SECONDARY PARTIES"), shall comply with each term and condition of this Section D.5 entitled "INSURANCE". Furthermore, CONTRACTOR shall be responsible for the SECONDARY PARTIES' acts and satisfactory performance of the terms and conditions of this Agreement.

D.6 **INDEMNITY.**

COUNTY shall not be liable for, and CONTRACTOR shall defend and indemnify COUNTY and its officers, agents, employees, and volunteers (collectively "County Parties"), against any and all claims, deductibles, self-insured retentions, demands, liability, judgments, awards, fines, mechanics; liens or other liens, labor disputes, losses, damages, expenses, charges or costs of any kind or character, including attorney's fees and court costs (hereinafter collectively referred to as "Claims"), which arise out of or are in any way connected to the work covered by this Agreement arising either directly or indirectly from any act, error, omission or negligence of CONTRACTOR or its officers, employees, agents, contractors, licensees or servants, including, without limitation, Claims caused by the concurrent negligent act, error or omission,

Commented [BB24]: IMPORTANT NOTE: There are three choices of Indemnification clauses – Class I, Class II, or Class III. Choose only one and delete the other two depending on the type of contract.

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whether active or passive of County Parties. CONTRACTOR shall have no obligation, however, to defend or indemnify County Parties from a Claim if it is determined by a court of competent jurisdiction that such Claim was caused by the sole negligence or willful misconduct of County Parties.

County shall not be liable for, and CONTRACTOR shall defend and indemnify COUNTY and its officers, agents, employees and volunteers (collectively 'County Parties'), against any and all claims, deductibles, self-insured retentions, demands, liability, judgments, awards, fines, mechanics' liens or other liens, labor disputes, losses, damages, expenses, charges or costs of any kind or character, including attorneys' fees and court costs (hereinafter collectively referred to as 'Claims'), which arise out of or are in any way connected to the work covered by this Agreement arising either directly or indirectly from any act, error, omission or negligence of CONTRACTOR or its officers, employees, agents, contractors, licensees or servants, including, without limitation, claims caused by the concurrent negligent act, error or omission, of County Parties. However, CONTRACTOR shall have no obligation to defend or indemnify County Parties against claims caused by the active negligence, sole negligence or willful misconduct of County Parties.

Commented [BB25]: Class I Indemnity

Generally required for all county service contracts, with the following exceptions:

construction contracts, consultant contracts which are "collateral to" construction contracts, such as architecture and engineering contracts, "acquisition" leases (i.e., County as tenant) contracts for the purchase of goods, only, and contracts with other self-insured public entities.

D.6.1. Claims Arising from Sole Acts or Omissions of COUNTY:

The County of Lassen (COUNTY) does hereby agree to defend and indemnify the *[OTHER PUBLIC AGENCY], its agents, officers and employees (hereinafter collectively referred to in this paragraph as *[OTHER PUBLIC AGENCY], from any claim, action or proceeding against *[OTHER PUBLIC AGENCY], arising solely out of the acts or omissions of County in the performance of this Agreement. At its sole discretion, *[OTHER PUBLIC AGENCY] may participate at its own expense in the defense of any claim, action or proceeding, but such participation shall not relieve county of any obligation imposed by this Agreement. *[OTHER PUBLIC AGENCY] shall notify County promptly of any claim, action or proceeding and cooperate fully in the defense.

Commented [BB26]: Class II Indemnity

Generally required for all County construction contracts and agreements with architects and engineers, which are "collateral" to construction contracts. Also, used in contracts for the sale of goods.

D.6.2. Claims arising From Sole Acts or Omissions of *[OTHER PUBLIC AGENCY]:

The *[OTHER PUBLIC AGENCY] hereby agrees to defend and indemnify the County of Lassen, its agents, officers and employees, (hereinafter collectively referred to in this paragraph as County), from any claim, action or proceeding against County, arising solely out of the acts or omissions of *[OTHER PUBLIC AGENCY] in the performance of this MOA. At its sole discretion, County may participate at its own expense in the defense of any claim, action or proceeding, but such participation shall not relieve *[OTHER PUBLIC AGENCY] of any obligation imposed by this Agreement. County shall notify *[OTHER PUBLIC AGENCY] promptly of any claim, action or proceeding and cooperate fully in the defense.

D.6.3. Claims Arising From Concurrent Acts or Omissions:

The County of Lassen (COUNTY) hereby agrees to defend itself, and the *[OTHER PUBLIC AGENCY] hereby agrees to defend itself, from any claim, action or proceeding arising out of the concurrent acts or omissions of County and *[OTHER PUBLIC AGENCY]. In such cases, county and *[OTHER PUBLIC AGENCY] agree to retain their own legal counsel, bear their own defense costs, and waive their right to seek reimbursement of such costs, except as provided in paragraph 5 below.

D.6.4. Joint Defense:

Notwithstanding paragraph D.6.3 above, in cases where COUNTY and *[OTHER PUBLIC AGENCY] agree in writing to a joint defense, County and *[OTHER PUBLIC AGENCY] may appoint joint defense counsel to defend the claim, action or proceeding arising out of the concurrent acts or omissions of *[OTHER PUBLIC AGENCY]. Joint defense counsel shall be selected by mutual agreement of County and *[OTHER PUBLIC AGENCY]. County and [OTHER PUBLIC AGENCY] agree to share

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the costs of such joint defense and any agreed settlement in equal amounts, except as provided in paragraph D.6.5 below. County and *[OTHER PUBLIC AGENCY] further agree that neither party may bind the other to a settlement agreement without the written consent of both County and *[OTHER PUBLIC AGENCY].

D.6.5. Reimbursement and/or Reallocation:

Where a trial verdict or arbitration award allocates or determines the comparative fault of the parties, County and *[OTHER PUBLIC AGENCY] may seek reimbursement and/or reallocation of defense costs, settlement payments, judgments and awards, consistent with such comparative fault.

Commented [BB27]: Class III Indemnity

Generally used only in county contracts with other self-insured public agencies.

D.7 CONTRACTOR NOT AGENT. Except as COUNTY may specify in writing, CONTRACTOR shall have no authority, express or implied, to act on behalf of COUNTY in any capacity whatsoever as an agent. CONTRACTOR shall have no authority, express or implied, pursuant to this Agreement to bind COUNTY to any obligation whatsoever.

D.8 ASSIGNMENT PROHIBITED. CONTRACTOR may not assign any right or obligation pursuant to this Agreement. Any attempted or purported assignment of any right or obligation pursuant to this Agreement shall be void and of no legal effect.

D.9 PERSONNEL. CONTRACTOR shall assign only competent personnel to perform services pursuant to this Agreement. In the event that COUNTY, in its sole discretion at any time during the term of this Agreement, desires the removal of any person or persons assigned by CONTRACTOR to perform services pursuant to this Agreement, CONTRACTOR shall remove any such person immediately upon receiving written notice from COUNTY of its desire for removal of such person or persons.

D.10 STANDARD OF PERFORMANCE. CONTRACTOR shall perform all services required pursuant to this Agreement in the manner and according to the standards observed by a competent practitioner of the profession in which CONTRACTOR is engaged. All products of whatsoever nature which CONTRACTOR delivers to COUNTY pursuant to this Agreement shall be prepared in a first class and workmanlike manner and shall conform to the standards of quality normally observed by a person practicing in CONTRACTOR's profession.

D.11 POSSESSORY INTEREST. The parties to this Agreement recognize that certain rights to property may create a "possessory interest", as those words are used in the California Revenue and Taxation Code section 107. For all purposes of compliance by COUNTY with Section 107.6 of the California Revenue and Taxation Code, this recital shall be deemed full compliance by the COUNTY. All questions of initial determination of possessory interest and valuation of such interest, if any, shall be the responsibility of the County Assessor and the contracting parties hereto. A taxable possessory interest may be created by this, if created, and the party in whom such an interest is vested will be subject to the payment of property taxes levied on such an interest.

D.12 TAXES. CONTRACTOR hereby grants to the COUNTY the authority to deduct from any payments to CONTRACTOR any COUNTY imposed taxes, fines, penalties and related charges which are delinquent at the time such payments under this Agreement are due to CONTRACTOR.

D.13 TERMINATION.

D.13.1 COUNTY shall have the right to terminate this Agreement at any time by giving notice in writing of such termination to CONTRACTOR. In the event COUNTY gives notice of termination, CONTRACTOR shall immediately cease rendering service upon receipt of such written notice and the following shall apply:

____ County Initials ATTACHMENT D, Page 5 Contractor Initials _____

D.13.1.1 CONTRACTOR shall deliver to COUNTY copies of all writings prepared by it pursuant this agreement. The term "writings" shall be construed to mean and include: handwriting, typewriting, printing, photocopying, photographing computer storage medium (tapes, disks, diskettes, etc.) and every other means of recording upon any tangible thing, and form of communication or representation, including letters, pictures, sounds, or symbols, or combinations thereof.

D.13.1.2 COUNTY shall pay CONTRACTOR the reasonable value of services rendered by CONTRACTOR to the date of termination pursuant to this Agreement not to exceed the amount documented by CONTRACTOR and approved by COUNTY as work accomplished to date; provided, however, that in no event shall any payment hereunder exceed _____ Dollars (\$* _____). Further provided, however, COUNTY shall not in any manner be liable for lost profits which might have been made by CONTRACTOR had CONTRACTOR completed the services required by this Agreement. In this regard, CONTRACTOR shall furnish to COUNTY such financial information as in the judgment of the COUNTY is necessary to determine the reasonable value of the services rendered by CONTRACTOR. In the event of a dispute as to the reasonable value of the services rendered by CONTRACTOR, the decision of the COUNTY shall be final. The foregoing is cumulative and does not affect any right or remedy which COUNTY may have in law or equity.

Commented [BB28]: Written out amount, e.g. "Ten Thousand and 50/100Dollars."

Commented [BB29]: Numeric amount with dollar sign, e.g. "\$10,000.50." This figure will usually be the maximum amount of the Contract (as shown in the payment provisions).

D.13.2 CONTRACTOR may terminate its services under this Agreement upon thirty (30) working days written notice to the COUNTY, without liability for damages, if CONTRACTOR is not compensated according to the provisions of the Agreement or upon any other material breach of the Agreement by COUNTY, provided that CONTRACTOR has first provided COUNTY with a written notice of any alleged breach, specifying the nature of the alleged breach and providing not less than ten (10) working days within which the COUNTY may cure the alleged breach.

D.14 OWNERSHIP OF INFORMATION. All professional and technical information developed under this Agreement and all work sheets, reports, and related data shall become and/or remain the property of COUNTY, and CONTRACTOR agrees to deliver reproducible copies of such documents to COUNTY on completion of the services hereunder. The COUNTY agrees to indemnify and hold CONTRACTOR harmless from any claim arising out of reuse of the information for other than this project.

D.15 WAIVER. A waiver by any party of any breach of any term, covenant or condition herein contained or a waiver of any right or remedy of such party available hereunder at law or in equity shall not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant or condition herein contained or of any continued or subsequent right to the same right or remedy. No party shall be deemed to have made any such waiver unless it is in writing and signed by the party so waiving.

D.16 COMPLETENESS OF INSTRUMENT. This Agreement, together with its specific references and attachments, constitutes all of the agreements, understandings, representations, conditions, warranties and covenants made by and between the parties hereto. Unless set forth herein, neither party shall be liable for any representations made, express or implied.

D.17 SUPERSEDES PRIOR AGREEMENTS. It is the intention of the parties hereto that this Agreement shall supersede any prior agreements, discussions, commitments, representations, or agreements, written or oral, between the parties hereto.

D.18 ATTORNEY'S FEES. If any action at law or in equity, including an action for declaratory relief, is brought to enforce or interpret provisions of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees, which may be set by the Court in the same action or in a separate action brought for that purpose, in addition to any other relief to which such party may be entitled.

____ County Initials ATTACHMENT D, Page 6 Contractor Initials _____

D.19 MINOR AUDITOR REVISION. In the event the Lassen County Auditor's office finds a mathematical discrepancy between the terms of the Agreement and actual invoices or payments, provided that such discrepancy does not exceed one percent (1%) of the Agreement amount, the Auditor's office may make the adjustment in any payment or payments without requiring an amendment to the Agreement to provide for such adjustment. Should the COUNTY or the CONTRACTOR disagree with such adjustment, they reserve the right to contest such adjustment and/or to request corrective amendment.

D.20 CAPTIONS. The captions of this Agreement are for convenience in reference only and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

D.21 DEFINITIONS. Unless otherwise provided in this Agreement, or unless the context otherwise requires, the following definitions and rules of construction shall apply herein.

D.21.1 **Number and Gender.** In this Agreement, the neuter gender includes the feminine and masculine, the singular includes the plural, and the word "person" includes corporations, partnerships, firms or associations, wherever the context so requires.

D.21.2 **Mandatory and Permissive.** "Shall" and "will" and "agrees" are mandatory. "May" is permissive.

D.22 TERM INCLUDES EXTENSIONS. All references to the term of this Agreement or the Agreement Term shall include any extensions of such term.

D.23 SUCCESSORS AND ASSIGNS. All representations, covenants and warranties specifically set forth in this Agreement, by or on behalf of, or for the benefit of any or all of the parties hereto, shall be binding upon and inure to the benefit of such party, its successors and assigns.

D.24 MODIFICATION. No modification or waiver of any provisions of this Agreement or its attachments shall be effective unless such waiver or modification shall be in writing, signed by all parties, and then shall be effective only for the period and on the condition, and for the specific instance for which given.

D.25 COUNTERPARTS. This Agreement may be executed simultaneously and in several counterparts, each of which shall be deemed an original, but which together shall constitute one and the same instrument.

D.26 OTHER DOCUMENTS. The parties agree that they shall cooperate in good faith to accomplish the object of this Agreement and, to that end, agree to execute and deliver such other and further instruments and documents as may be necessary and convenient to the fulfillment of these purposes.

D.27 PARTIAL INVALIDITY. If any term, covenant, condition or provision of this Agreement is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the provision and/or provisions shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

D.28 VENUE. It is agreed by the parties hereto that unless otherwise expressly waived by them, any action brought to enforce any of the provisions hereof or for declaratory relief hereunder shall be filed and remain in a court of competent jurisdiction in the County of Lassen, State of California.

D.29 CONTROLLING LAW. The validity, interpretation and performance of this Agreement shall be controlled by and construed under the laws of the State of California.

D.30 CALIFORNIA TORT CLAIMS ACT. Notwithstanding any term or condition of the Agreement, the provisions, and related provisions, of the California Tort Claims Act, Division 3.6 of the Government Code, are not waived by COUNTY and shall apply to any claim against COUNTY arising out of any acts or conduct under

____ County Initials ATTACHMENT D, Page 7 Contractor Initials _____

the terms and conditions of this Agreement.

D.31 TIME IS OF THE ESSENCE. Time is of the essence of this Agreement and each covenant and term herein.

D.32 AUTHORITY. All parties to this Agreement warrant and represent that they have the power and authority to enter into this Agreement in the names, titles and capacities herein stated and on behalf of any entities, persons, estates or firms represented or purported to be represented by such entity(s), person(s), estate(s) or firm(s) and that all formal requirements necessary or required by any state and/or federal law in order to enter into this Agreement are in full compliance. Further, by entering into this Agreement, neither party hereto shall have breached the terms or conditions of any other contract or agreement to which such party is obligated, which such breach would have a material effect hereon.

D.33 CORPORATE AUTHORITY. If CONTRACTOR is a corporation or public agency, each individual executing this Agreement on behalf of said corporation or public agency represents and warrants that he or she is duly authorized to execute and deliver this Agreement on behalf of said corporation, in accordance with a duly adopted resolution of the Board of Directors of said corporation or in accordance with the bylaws of said corporation or Board or Commission of said public agency, and that this Agreement is binding upon said corporation or public entity in accordance with its terms. If CONTRACTOR is a corporation, CONTRACTOR shall, within thirty (30) days after execution of this Agreement, deliver to COUNTY a certified copy of a resolution of the Board of Directors of said corporation authorizing or ratifying the execution of this Agreement.

D.34 CONFLICT OF INTEREST.

D.34.1 **Legal Compliance.** CONTRACTOR agrees at all times in performance of this Agreement to comply with the law of the State of California regarding conflicts of interest, including, but not limited to, Article 4 of Chapter 1, Division 4, Title 1 of the California Government Code, commencing with Section 1090 and Chapter 7 of Title 9 of said Code, commencing with Section 87100, including regulations promulgated by the California Fair Political Practices Commission.

D.34.2 **Advisement.** CONTRACTOR agrees that if any facts come to its attention which raise any questions as to the applicability of this law, it will immediately inform the COUNTY designated representative and provide all information needed for resolution of the question.

D.34.3 **Admonition.** Without limitation of the covenants in subparagraphs D.34.1 and D.34.2, CONTRACTOR is admonished hereby as follows:

The statutes, regulations and laws referenced in this provision D.34 include, but are not limited to, a prohibition against any public officer, including CONTRACTOR for this purpose, from making any decision on behalf of COUNTY in which such officer has a direct or indirect financial interest. A violation occurs if the public officer influences or participates in any COUNTY decision which has the potential to confer any pecuniary benefit on CONTRACTOR or any business firm in which CONTRACTOR has an interest of any type, with certain narrow exceptions.

D.35 NONDISCRIMINATION. During the performance of this Agreement, CONTRACTOR shall not unlawfully discriminate against any employee of the CONTRACTOR or of the COUNTY or applicant for employment or for services or any member of the public because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age or sex. CONTRACTOR shall ensure that in the provision of services under this Agreement, its employees and applicants for employment and any member of the public are free from such discrimination. CONTRACTOR shall comply with the provisions of the Fair Employment and Housing Act (Government Code Section 12900 et seq.). The applicable regulations of the Fair Employment Housing Commission implementing Government Code Section 12900, set forth in

____ County Initials ATTACHMENT D, Page 8 Contractor Initials _____

Chapter 5, Division 4 of Title 2 of the California Code of Regulations are incorporated into this Agreement by reference and made a part hereof as if set forth in full. CONTRACTOR shall also abide by the Federal Civil Rights Act of 1964 and all amendments thereto, and all administrative rules and regulation issued pursuant to said Act. CONTRACTOR shall give written notice of its obligations under this clause to any labor agreement. CONTRACTOR shall include the non-discrimination and compliance provision of this paragraph in all subcontracts to perform work under this Agreement.

D.36 JOINT AND SEVERAL LIABILITY. If any party consists of more than one person or entity, the liability of each person or entity signing this Agreement shall be joint and several.

D.37 TAXPAYER I.D. NUMBER. The COUNTY shall not disburse any payments to CONTRACTOR pursuant to this Agreement until CONTRACTOR supplies the latter's Taxpayer Identification Number or Social Security Number by providing COUNTY with a completed IRS Form W-9.

Commented [BB30]: Not required if Contractor is a corporation.

D.38 NOTICES. All notices and demands of any kind which either party may require or desire to serve on the other in connection with this Agreement must be served in writing either by personal service or by registered or certified mail, return receipt requested, and shall be deposited in the United States Mail, with postage thereon fully prepaid, and addressed to the party so to be served as follows:

If to "COUNTY":

Commented [BB31]: Insert here the name and address of the person responsible for administration of this Contract on behalf of the County.

If to "CONTRACTOR":

Commented [BB32]: Insert the name and address of the person responsible for administration of this Contract on behalf of the Contractor.

END OF ATTACHMENT "D".

_____ County Initials

ATTACHMENT D, Page 9

Contractor Initials _____

ATTACHMENT E

NO THIRD-PARTY BENEFICIARIES

This Agreement is made solely and specifically among and for the benefit of the parties to it, the COUNTY and the CONTRACTOR, and their respective successors and assigns, subject to the express provision of the agreement relating to successors and assigns, and no other person, has or will have any rights, interest, or claims under this Agreement as a third-party beneficiary or otherwise. This Agreement shall not establish any actionable duty of the County or County personnel inuring to any third party or to anyone claiming under or on behalf of such a third party.

END OF ATTACHMENT "E"

____ County Initials

ATTACHMENT E, Page 1

Contractor Initials _____

Exhibit B:

GSP Executive Summary

Executive Summary

ES.1. Introduction & Plan Area (Chapters 1 – 3)

The Big Valley Groundwater Basin (BVGB, Basin, or Big Valley) lies on the border of Modoc and Lassen counties in one of the most remote and untouched areas of California. The sparsely populated Big Valley has a rich biodiversity of wildlife and native species who live, feed and raise young on the irrigated lands throughout the Basin. The snow-fed high desert streams entering the Basin have seasonal hydrographs with natural periods of reduced flows or complete cessation of flows late in the summer season. The Pit River is the largest stream and is so named because of the practice, employed by the Achumawi and other Native American bands that are now part of the Pit River Tribe, of digging pits in the river channel when it went dry to expose water and trap game that came to water at the river. Farming and ranching in Big Valley date back to the late 19th and early 20th centuries, when families immigrated to Big Valley and made use of the existing water resources. A large amount of the land in the Basin is still owned and farmed by the families who homesteaded here.

Historically, agriculture was complemented by a robust timber industry as a key component of the economy for Big Valley, which supported four lumber mills. Due to regulations and policies imposed by state and federal governments, the timber industry has been diminished over time and subsequently caused a great economic hardship to the Big Valley communities. Stakeholders realize that the Sustainable Groundwater Management Act of 2014 (SGMA) will unfortunately cause a similar decline to agriculture. The change in land management has transformed once thriving communities in the Basin to “disadvantaged” and “severely disadvantaged” communities. Viable agriculture is of paramount importance to the residents of Big Valley because it supports the local economy and unique character of the community. As required by SGMA, stakeholders have developed a sustainability goal:

The sustainability goal for the Big Valley Groundwater Basin is to maintain a locally governed, economically feasible, sustainable groundwater basin and surrounding watershed for existing and future legal beneficial uses with a concentration on agriculture. Sustainable management will be conducted in context with the unique culture of the basin, character of the community, quality of life of the Big Valley residents, and the vested right of agricultural pursuits through the continued use of groundwater and surface water.

Lassen and Modoc counties are fulfilling their unfunded, mandated roles as Groundwater Sustainability Agencies (GSAs) to develop this Groundwater Sustainability Plan (GSP) after exhausting its administrative challenges to the California Department of Water Resources’ (DWR’s) determination that Big Valley qualifies as a medium-priority basin. Both counties are disadvantaged, have declining populations, and have no ability to cover the costs of GSP development and implementation.

The Basin, shown on **Figure ES-1**, encompasses an area of about 144 square miles (92,057 acres), with Modoc County representing 28 percent and Lassen County comprising 72 percent of the Basin by area. The Basin includes the towns of Adin and Lookout in Modoc County and the towns of Bieber and

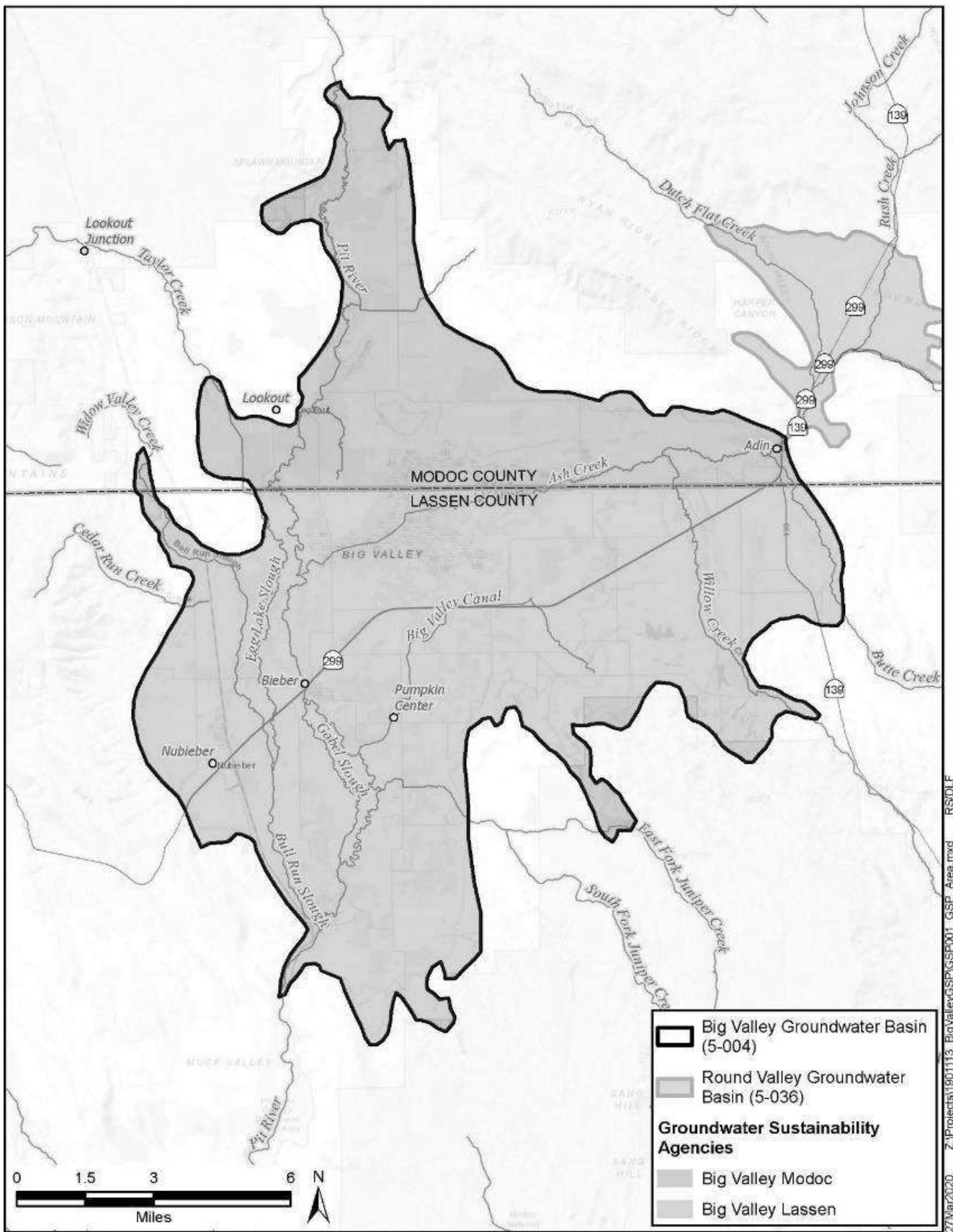


Figure ES-1 Groundwater Sustainability Agencies in Big Valley Groundwater Basin.

Source: DWR 2018d

Nubieber in Lassen County. The Ash Creek State Wildlife Area straddles both counties occupying 22.5 square miles in the center of the Basin in the marshy/swampy areas along Ash Creek. Land use in the BVGB is detailed in **Table ES-1**.

Table ES-1 2016 Land Use Summary by Water Use Sector

Water Use Sector	Acres	Percent of Total
Community ^a	250	<1%
Industrial	196	<1%
Agricultural	22,246	24%
State Wildlife Area ^b	14,583	16%
Managed Recharge	-	0%
Native Vegetation and Rural Domestic ^c	54,782	60%
Total	92,057	100%
Notes: ^a Includes the use in the communities of Bieber, Nubieber and Adin ^b Made up of a combination of wetlands and non-irrigated upland areas ^c Includes the large areas of land in the Valley which have domestic wells interspersed Source: See Chapter 6 – Water Budget for explanation of approach		

ES.2. Basin Setting (Chapters 4 – 6)

Hydrogeologic Setting

The topography of BVGB is relatively flat in the central area with increasing elevations along the perimeter, particularly in the eastern portions where Willow and Ash Creeks enter the Basin. This low relief in the Basin results in a meandering river morphology and widespread flooding during large storm events. The Basin is underlain by a thick sequence of sediment derived from the surrounding mountains of volcanic rocks and is interbedded with lava flows and water-lain tuffs. The volcanic material is variable in composition and is Miocene to Holocene age (23 million to several hundred years ago). The compositions of the lava flows are primarily basalt¹ and basaltic andesite², while pyroclastic³ ash deposits are rhyolitic⁴ composition. In general, the Basin boundary drawn by DWR was intended to define the contact between the valley alluvial deposits and the surrounding mountains of volcanic rocks. During development of this GSP, the Basin boundary has been found to be grossly inaccurate in many areas and is not clearly isolated from areas outside the valley floor. The mountains outside of the groundwater Basin capture and accumulate precipitation, which produces runoff that flows into BVGB. Moreover, DWR (1963) stated that these mountains serve as “upland recharge areas” and provide subsurface recharge to BVGB *via* fractures in the rock and water bearing formations that underlie the volcanics.

¹ Basalt is an extrusive (volcanic) rock with relatively low silica content and high iron and magnesium content.

² Andesite is an extrusive rock with intermediate silica content and intermediate iron and magnesium content.

³ Pyroclastic rocks are formed during volcanic eruptions, typically not from lava flows, but from material (clasts) ejected from the eruption such as ash, blocks, or “bombs.”

⁴ Rhyolitic rocks are extrusive with relatively high silica content and low iron and magnesium. Rhyolites are the volcanic equivalent of granite.

The Bieber Formation (TQb), formed in the Pliocene-Pleistocene age (5.3 million to 12 thousand years ago) and shown in **Figure ES-2**, is the main formation of aquifer material defined within the BVGB, and DWR (1963) estimates that it ranges in thickness from a thin veneer to over 1,000 feet. The formation was deposited in a lacustrine (lake) environment and is comprised of unconsolidated to semi-consolidated layers of interbedded clay, silt, sand, gravel, and diatomite. The coarse-grained deposits (gravel and sand) are aquifer material⁵ and are part of the Big Valley principal aquifer. The “physical bottom” has not been clearly encountered or defined but may extend 4,000 to 7,000 feet or deeper. The “practical bottom” of the aquifer is 1,200 feet because that depth encompasses the known production wells and water quality may be poorer below that depth. As required by SGMA, 1,200 feet is used as the “definable bottom” for this GSP. A single principal aquifer is used for this GSP because distinct, widespread confining beds have not been identified in the subsurface.

The Natural Resources Conservation Service (NRCS) Hydrologic Soils Group (HSG) classifications provide an indication of soil infiltration potential and ability to transmit water under saturated conditions based on hydraulic conductivities of shallow, surficial soils. Characterizing these soils is important because water must first penetrate the shallow subsurface to provide any chance of groundwater recharge. According to the HSG dataset, the Basin is composed of only soils with “slow” or “very slow” infiltration rates. While the soils are not highly permeable, some research has found that water can penetrate through these soils, indicating that managed aquifer recharge projects such as on-farm recharge may be viable.

Groundwater Conditions

Historic groundwater elevations are available from a total of 22 wells in Big Valley that are part of the CASGEM⁶ monitoring network, six located in Modoc County and 16 in Lassen County. In addition to these 22 wells, five well clusters were constructed in late 2019 and early 2020 to support the GSP. Groundwater level hydrographs from the historic wells show that most areas of the Basin have remained stable, and a few areas have seen some decline averaging 0.53 feet per year of groundwater level decline in the last 38 years.⁷

To determine the annual and seasonal change in groundwater storage, groundwater elevation surfaces⁸ were developed for spring and fall for each year between 1983 and 2018. **Figure ES-3** shows this information graphically, along with the annual precipitation. This graph shows that groundwater storage generally declines during dry years and stays stable or increases during normal or wet years. During the period from 1983 to 2000, groundwater levels dipped in the late 1980s and early 1990s, then recovered during the wet period of the late 1990s. After 2000, while most wells are still stable, a few wells have

⁵ Meaning the sediments contain porous material with recoverable water.

⁶ California Statewide Groundwater Elevation Monitoring Program

⁷ Average slope of the trend lines in Appendix 5A.

⁸ Groundwater elevation surfaces are developed from the known groundwater elevations at wells throughout the Basin and then estimating/interpolating elevations at intermediate locations *via* a mathematical method known as kriging. The kriging elevation surface is based on a grid covering the entire basin that has interpolated groundwater elevation values for each node of the grid.

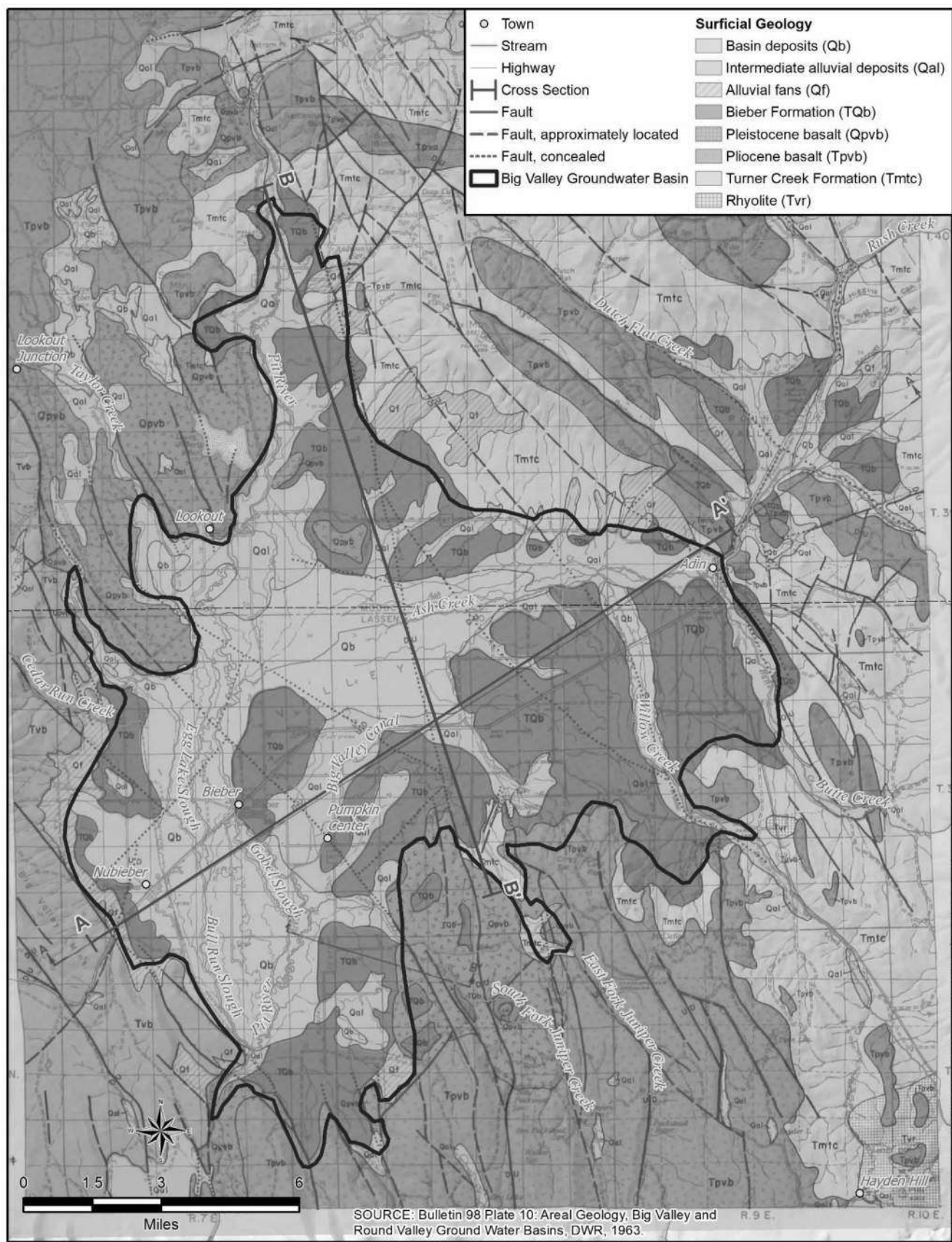


Figure ES-2 DWR 1963 Local Geologic Map.

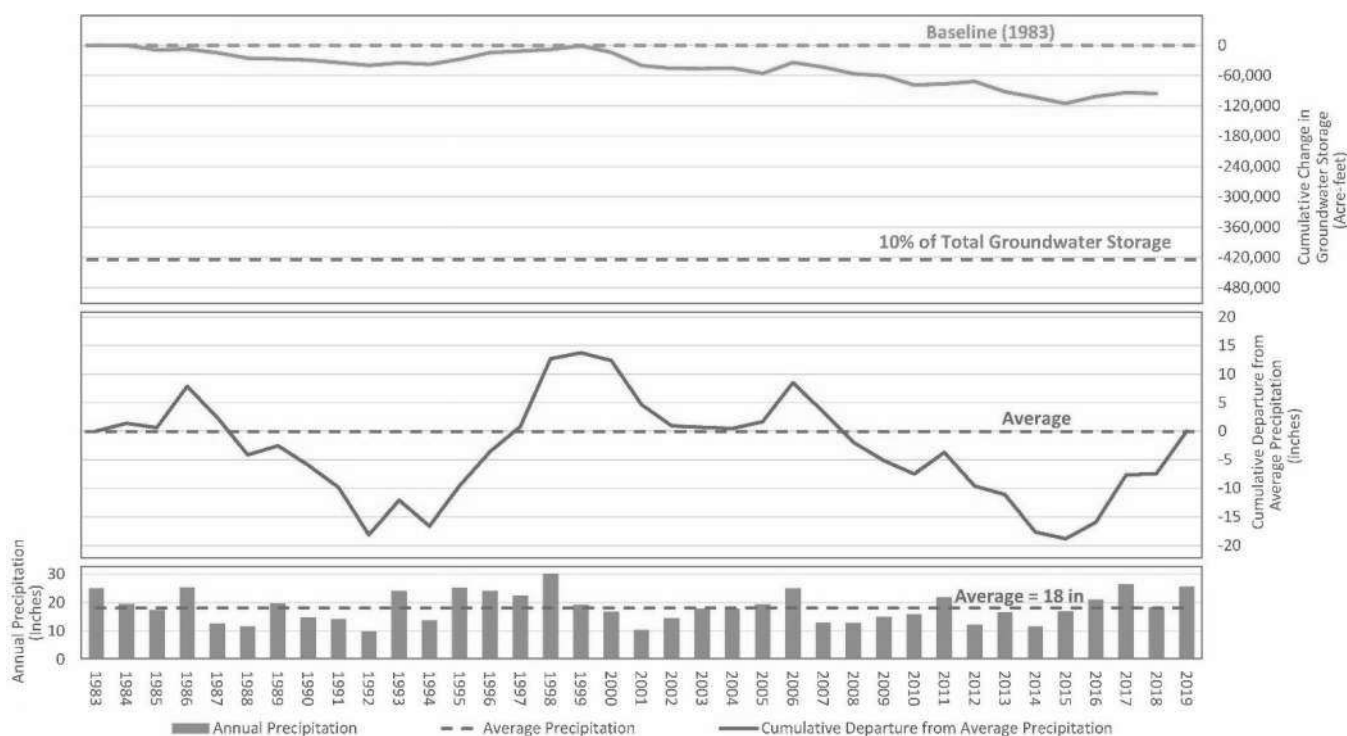


Figure ES-3 Cumulative Change in Groundwater Storage and Precipitation

generally declined, resulting in a reduction in overall groundwater storage. The amount of decline represents a cumulative reduction in storage of less than 2 percent of groundwater storage.⁹

Groundwater in the BVGB is generally of good- to excellent-quality (DWR 1963, United States Bureau of Reclamation [Reclamation] 1979). An analysis of available historic water quality indicates that some naturally occurring constituents associated with volcanic formations and thermal waters are slightly elevated. These elevated concentrations are extremely isolated and primarily not above thresholds that are a risk to human health nor does the water quality affect beneficial uses. There are no contamination plumes or cleanup sites that are likely to affect groundwater quality for beneficial use.

Water Budget

A historic water budget was developed for the 1983-2018 timeframe, shown in **Figure ES-4**. From this water budget analysis, a rough estimate for the sustainable yield is about 39,300 acre-feet per year (AFY) and a rough estimate of average annual overdraft is 5,000 AFY.

⁹ Based on assessment in Section 5.2, indicating storage has been reduced by about 96,000 AF since 1983 and using a total storage of about 5.2 million AF (92,057 acre basin area * 1,200 feet to definable bottom * 5% specific yield)

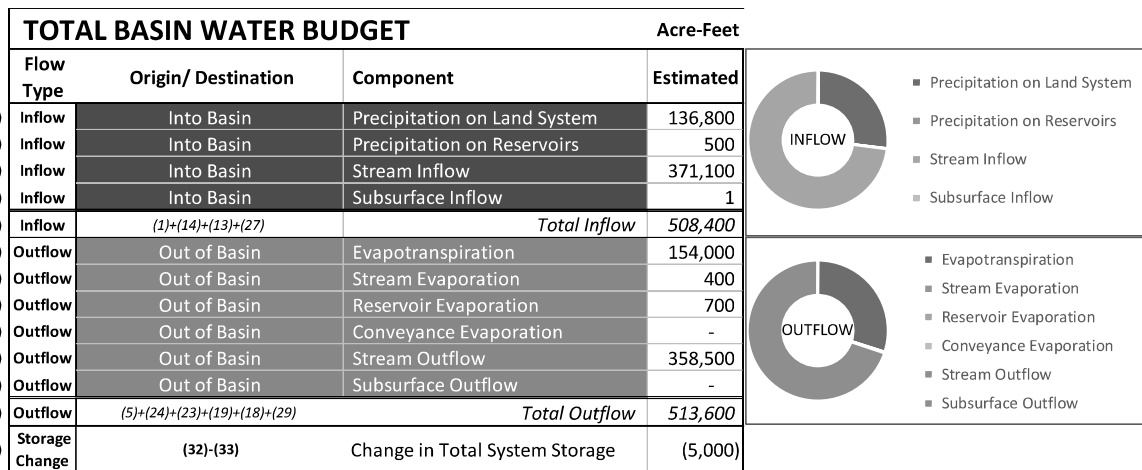


Figure ES-4 Average Total Basin Water Budget 1984-2018

ES.3. Sustainable Management (Chapters 7 – 9)

Sustainable Management Criteria

Sustainable Management Criteria (SMC) define the conditions that constitute sustainable groundwater management. The following is a description of the SMC for each of the six sustainability indicators:

- Groundwater Levels:** Do not allow groundwater levels to decline to a level where the energy cost to lift groundwater exceeds the economic value of the water for agriculture. The minimum threshold for each well in the monitoring network was determined to be the depth at which groundwater pumping becomes uneconomical for agricultural use.
- Groundwater Storage:** Groundwater levels are used as a proxy for this sustainability indicator because change in storage is directly correlated to changes in groundwater levels.
- Seawater Intrusion:** This sustainability indicator does not apply to Big Valley.
- Water Quality:** Due to the existence of excellent water quality in the Basin, a significant amount of existing water quality monitoring, generally low-impact land uses, and a robust effort to conduct conservation efforts by agricultural and domestic users, per §354.26(d), SMCs were not established for water quality because undesirable results are not present and not likely to occur. At the five-year update of this GSP, data from various existing programs will be assessed to determine if degradation trends are occurring in the principal aquifer.
- Land Subsidence:** Based on evaluation of subsidence data from a continuous GPS station and Interferometric Synthetic Aperture Radar (InSAR) provided by DWR, no significant subsidence has occurred. Therefore, per §354.26(d), SMCs were not established for subsidence because undesirable results are not present and not likely to occur. At the five-year update of this GSP, subsidence data will be assessed for any trends that can be correlated with groundwater pumping.
- Interconnected Surface Water:** Data for this sustainability indicator is limited. Currently there is no evidence to suggest that undesirable results have occurred or are likely to occur. At the five-year update, future data will be evaluated.

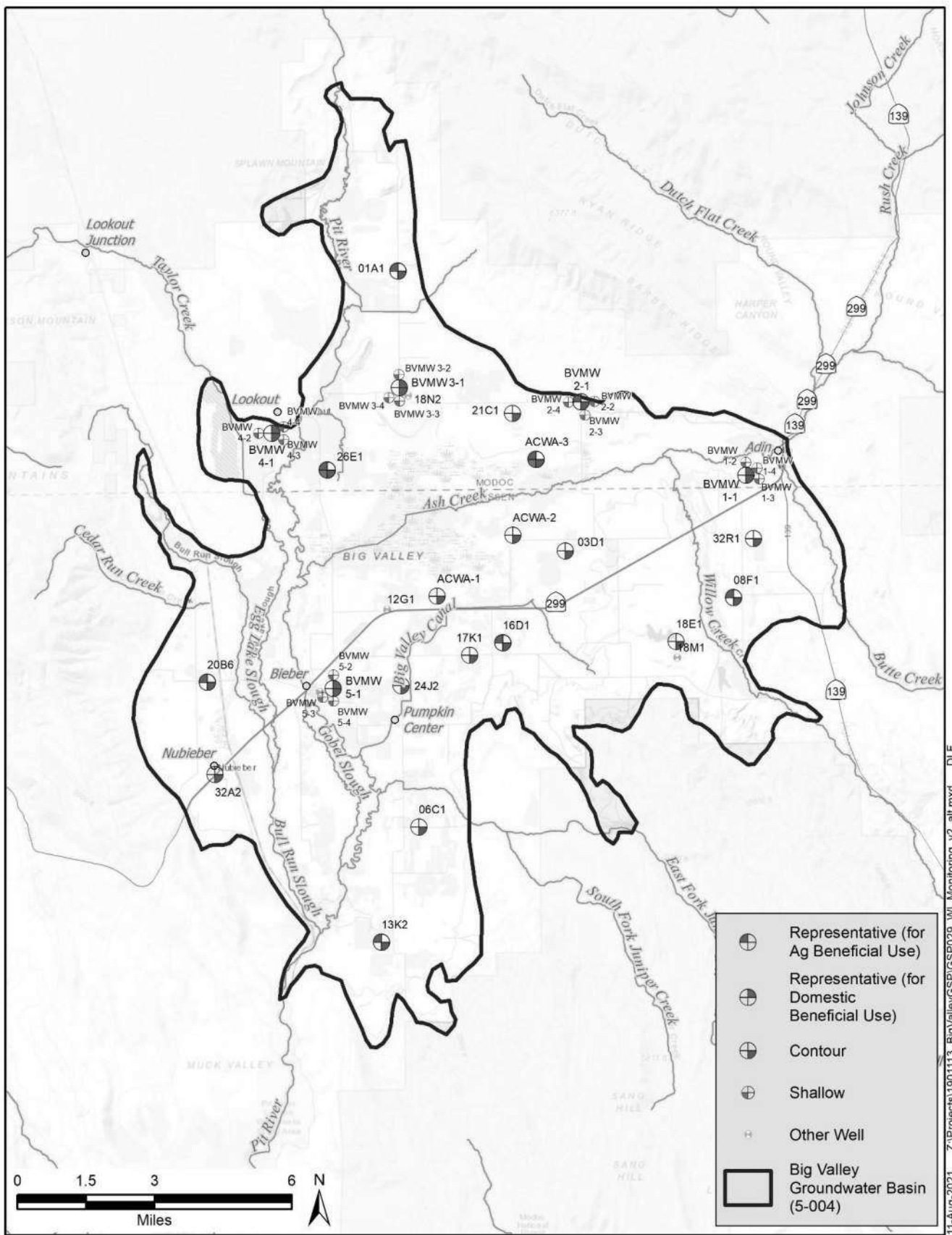
Monitoring Network

Monitoring networks are developed to promote the collection of data of sufficient quality, frequency, and distribution to characterize groundwater and related surface-water conditions in the Basin and to evaluate changing conditions that occur as the Plan is implemented. The GSAs developed monitoring networks for the parameters listed below. **Figure ES-5** shows the water level monitoring networks.

- Groundwater levels
- Groundwater storage *via* groundwater levels as proxy
- Shallow groundwater for interconnection of groundwater and surface water
- Groundwater quality
- Land subsidence
- Streamflow and climate
- Land use

Projects and Management Actions

Through an extensive planning and public outreach process, the GSAs have identified an array of projects and management measures that may be implemented to meet sustainability objectives in the BVGB. Some of the projects can be implemented immediately while others will take significantly more time for necessary planning and environmental review, navigation of regulatory processes, and implementation. The various projects and estimated timeline can be found in **Table ES-2**.



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Figure ES-5 Groundwater Level Monitoring Networks

155 **Table ES-2 Projects and Potential Implementation Timeline**

No.	Category	Description	Estimated Time for Potential Implementation (years)		
			0-2	2-8	>8
1	9.1 Recharge Projects	AgMAR	X	X	X
2		Drainage and Basin Recharge	X	X	X
3		Ag Injection Wells			X
4	9.2 Research and Data Development	Stream Gages	X		
5		Refined Water Budget	X	X	
6		Agro-Climate Station	X		
7		Voluntary Installation of Well Meters	X	X	
8		Adaptive Management	X	X	X
9		Mapping and Land Use	X	X	
10	9.3 Increased Storage Capacity	Expanding Existing Reservoirs		X	
11		Allen Camp Dam			X
12	9.4 Improved Hydrologic Function	Forest Thinning and Management	X	X	X
13		Juniper Removal	X	X	X
14		Stream and Meadow Restoration	X	X	X
15	9.5 Water Conservation	Irrigation Efficiency	X	X	
16		Landscaping and Domestic Water Conservation	X	X	
17		Conservation Projects	X	X	
18	9.6 Education and Outreach	Public Communication	X		
19		Information and Data Sharing	X	X	
20		Fostering Relationships	X		
21		Compiling Efforts	X	X	
22		Educational Workshops	X		

156 Note: AgMAR = Agricultural Managed Aquifer Recharge

157 ES.4. Plan Implementation (Chapters 10 – 11)

158 The GSP lays out a roadmap for addressing the activities needed for GSP implementation. Implementing this GSP
159 requires the following activities:

- 160 • **GSA Administration and Public Outreach:** The fundamental activities that will need to be performed by
161 the GSAs are public outreach and coordination of GSP activities. Public outreach will entail updates at
162 County Board of Supervisors' meetings and/or public outreach meetings. At a minimum the GSAs will
163 receive and respond to public input on the Plan and inform the public about progress implementing the
164 Plan as required by §354.10(d)(4) of the Regulations. Coordination activities would include ensuring
165 monitoring is performed, annual reports to DWR, five-year GSP updates, and coordinating projects and
166 management actions.
- 167 • **Monitoring and Data Management:** Data collection and management will be required for both annual
168 reporting and five-year updates. Monitoring data that will be collected and stored in the data management
169 system (DMS) for reporting will include water levels, precipitation, evapotranspiration, streamflow, water
170 quality, land use, and subsidence.

- **Annual Reporting:** According to §356.2 of the Regulations, the Big Valley GSAs are required to provide an annual report to DWR by April 1 of each year following the adoption of the GSP. The first annual report will be provided to DWR, with assistance by GEI, by April 1, 2022 and will include data for the prior Water Year (WY), which will be WY 2021 (October 1, 2020 to September 30, 2021), despite DWR's definition of a WY being inconsistent with what works for Big Valley¹⁰. The Annual Report will establish the current conditions of groundwater within the BVGB, the status of the GSP implementation, and the trend towards maintaining sustainability.
- **Plan Evaluation (Five-Year Update):** Updates and amendments to the GSP can be performed at any time, but at a minimum the GSAs must submit an update and evaluation of the plan every 5 years (§356.4). While much of the content of the GSP will likely remain unchanged for these five-year updates, the Regulations require that most chapters of the plan be updated and supplemented with any new information obtained in the preceding 5 years.

Cost of Implementation

Cost is a fundamental concern to the GSAs and stakeholders in the BVGB, as the Basin is disadvantaged and there is no revenue generated in the counties to fund the state-mandated requirements of SGMA. Therefore, the GSAs will rely on outside funding to implement this unfunded mandated Plan.

¹⁰ The water year defined by DWR runs from October 1-September 30 to accommodate for the unique Mediterranean and annual grass growing season in much of the state. It does not fit well in the mountainous and great basin areas of the state like Big Valley that are primarily perennial native vegetation and cropping systems which do not follow the same growing cycle. In the annual system, plants start growing around the end of October, but in the perennial system, plants are still growing from the prior water year and October and soon go dormant for winter. This also mirrors the way that water is used in these areas as well. The end of irrigation season extends into October in the perennial system making water measurements sometimes difficult and not truly marking the end of the irrigation season. (Snell 2021)