# AGREEMENT BETWEEN LASSEN COUNTY

# AND

# GEI CONSULTANTS, INC

**THIS AGREEMENT** is made between the COUNTY OF LASSEN, a political subdivision of the State of California (hereinafter "COUNTY"), and GEI Consultants Inc. a Massachusetts corporation, with a principal place of business at 2868 Prospect Park Drive, Suite 400, Rancho Cordova, CA 95670, (hereinafter "CONTRACTOR").

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

**WHEREAS** COUNTY has need for services to prepare a Groundwater Sustainability Plan for the Big Valley Groundwater Basin 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:

**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 February 19, 2019, through completion of all services.

**3. PAYMENT.**

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 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.**

Maurice L. Anderson, Director of the Lassen County Department of Planning and Building Services, is the designated representative of the COUNTY and will administer this Agreement for the COUNTY. Michael Cornelius, Sacramento Office Branch Manager, and Vice President. with CONTRACTOR is the authorized representative for CONTRACTOR. Changes in the designated representatives shall occur only by advance written notice to the other party.

**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
GEI Consultants, Inc.

Dated: 2/26/19

By: _____
Dan Wanket, GEI West Region
Operations Manager

Dated: 2/25/2019

By: _____
Michael Cornelius, Sacramento Office Branch
Manager, and Vice President

COUNTY

Dated: 2/19/2019

By: _____
~~Chris Gallagher~~, Chairman of the
Board of Supervisors
County of Lassen

Approved as to form:

By: _____ 2-13-19
Robert M. Burns
Lassen County Counsel

[1Contract Standard Professional Services Master v20150602]

## ATTACHMENT A
## AGREEMENT BETWEEN LASSEN COUNTY AND GEI CONSULTANTS, INC
## SCOPE OF SERVICES

A.1 SCOPE OF SERVICES AND DUTIES.

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

The work proposed here is based on the both the grant agreement between the County and DWR (4600012669) as well as the grant application submitted by COUNTY to DWR in November 2017. These documents are incorporated herein by reference. **Table 1** below shows the organization of the work in the DWR grant agreement and the proposed tasks that the CONTRACTOR Team will perform to support the County.

**Table 1:** Organization of Grant Scope of Work and Proposed Tasks

| Organization in DWR Grant Agreement | | Proposed Tasks for GEI Team | |
|---|---|---|---|
| Component 1 | Big Valley Basin Groundwater Sustainability Plan | | |
| Category (a) | Project Administration | Task 1a | Program Management and Grant Administration |
| Category (b) | Communication and Engagement | Task 1b | Communication and Engagement |
| Category (c) | GSP Development | Task 1c | GSP Development |
| Component 2 | Monitoring Well Installation | | |
| Category (a) | Planning, Design, Engineering and Environmental Documentation | Task 2a | MW Planning, Design, Engineering, and Environmental Documentation |
| Task 1 | CEQA | SubTask 2a.1 | CEQA |
| Task 2 | Permitting | Subtask 2a.2 | Permitting |
| Task 3 | Planning, Design, and Engineering | Subtask 2a.3 | Planning, Design, and Engineering |
| Category (b) | Monitoring Well Construction | Task 2b | Monitoring Well Construction |
| Category (c) | Water Quality Sampling | Task 2c | Water Quality Sampling |

The following describes CONTRACTOR's proposed scope of services to assist the County with implementation of DWR grant agreement number 4600012669 and develop a GSP for the BVGB. Tasks and deliverables are meant to generally correlate with the grant agreement.

**Task 1a – Program Management and Grant Administration**

CONTRACTOR will support the County to complete the activities described in Exhibit A of the DWR Agreement Component 1, Category (a): Project Administration. These activities include the management and coordination of grant activities, review of grant deliverables, and development and submission of documents to DWR which includes invoices, progress reports, and the final completion report. The bulk of this work will be performed by County staff, and CONTRACTOR will perform a supporting role. CONTRACTOR will do the following to support the County in completing this task:

- Submit invoices to the County for work performed by the CONTRACTOR Team
- Provide the County with draft progress and completion reports for review by County staff and submission to DWR

**Deliverables:**

- ☐ Monthly CONTRACTOR invoices submitted to County
- ☐ Draft quarterly progress reports
- ☐ Draft component completion reports
- ☐ Draft project completion report

**Assumptions:**

- County staff will review and finalize progress and completion reports prior to submittal to DWR
- County staff will submit all invoices, progress and completion reports, and other required grant documentation directly to DWR

**Task 1b – Communication and Engagement**

CONTRACTOR will support the County to complete the activities described in Exhibit A of the DWR Agreement Component 1, Category (b): Communication and Engagement (C&E). The successful development of the GSP will require a set of C&E activities, as listed below. Some of the work for satisfaction of the grant work plan will be performed by County staff. CONTRACTOR shall do the following:

- Work with GSA staff to develop a C&E Plan for the BVGB
- Support County staff in the implementation of the C&E Plan by:
    - Developing an online system for GSA staff to document outreach activities, which will track:
        - List of interested parties
        - Documentation of notifications and communications
        - List of public meetings held

        - Meeting summaries
        - Comments from stakeholders and responses
    - Support preparation for quarterly outreach meetings, including:
        - Agendas
        - Documents for distribution
        - PowerPoint presentations
        - Other presentation materials
    - Attend and present at outreach and coordination meetings
    - Produce final GSP outreach documentation, which are necessary for GSP completion and submittal

**Deliverables:**

- ☐ Draft and Final C&E Plan
- ☐ Online C&E tracking tool
- ☐ Outreach documentation for submission with the GSP
- ☐ Attendance and presentation at outreach and coordination meetings by CONTRACTOR Team staff

**Assumptions:**

- Up to 15 outreach and/or coordination meetings will occur in satisfaction of this task.
- CONTRACTOR Team staff may attend some meetings by teleconference as approved by County staff.

**Task 1c – GSP Development**

CONTRACTOR will develop the GSP content for the BVGB as described in Exhibit A of the DWR Agreement Component 1, Category (c): GSP Development.

The GSP will be developed through the following activities, each containing a "interim deliverables" generally corresponding to the chapters of the GSP. These interim deliverables will allow the County to document the progress of GSP development and be provided to DWR in quarterly progress reports. The final, assembled GSP will be submitted to DWR upon adoption by the GSAs.

***1) Administrative Information***

CONTRACTOR will prepare the draft Plan Area and Authority section for the GSP and a draft Coordination agreement between the two GSAs. To achieve this, CONTRACTOR shall do the following:

- Develop Plan Area and Authority section of the GSP, including:
    - Map of the GSAs' boundaries
    - Document GSA organization and legal authority to prepare a GSP
    - Describe the GSP area
    - Document existing management and general plans and their interactions with the GSP

    - Describe applicable land use elements
- Provide preliminary language to the GSAs for the draft coordination agreement
- Facilitate up to 3 meetings between the GSAs at the beginning of the GSP development process to refine language
- Provide a draft coordination agreement to the GSAs
- Facilitate up to 3 meetings between the GSAs near the end of the GSP development process to finalize the language in the coordination agreement
- Provide a final coordination agreement to the GSAs for approval

**Interim Deliverables:**

- ☐ Draft Coordination Agreement
- ☐ Draft Plan Area and Authority Section of the GSP
- ☐ Final Coordination Agreement

**Assumptions:**

- CONTRACTOR (or approved subcontractor) staff will attend up to 6 meetings in person or by teleconference as requested by the County.
- The GSAs will come to agreement on the content of the final coordination agreement and each will approve the agreement

***2) Hydrogeologic Conceptual Model***

CONTRACTOR will prepare the Hydrogeologic Conceptual Model (HCM) section of the GSP. To achieve this, CONTRACTOR shall assemble the following information required by the GSP regulations:

- Physical Components
- Regional Geologic and Structural Setting
- Lateral Basin Boundaries
- Definable Bottom of Basin
- Principal Aquifers and Aquitards
- Cross-Sections and Maps
    - Two scaled cross-sections
    - Map(s) of physical characteristics: topographic information, surficial geology, soil characteristics, surface water bodies, source and point of delivery for imported water supplies
- Map of Recharge Areas
    - Map delineating existing recharge areas that substantially contribute to the replenishment of the basin, potential recharge areas, and discharge areas

**Interim Deliverable:**

- ☐ Draft HCM section of the GSP

### *3) Groundwater Conditions*

CONTRACTOR will prepare the Groundwater Conditions section of the GSP. To achieve this, CONTRACTOR shall assemble the following information required by the GSP regulations:

- Written description of Current and Historical Groundwater Conditions
- Summary of Groundwater Elevations, including hydrographs for selected wells
- Change in storage calculations
- Descriptions of groundwater quality, interconnected surface water systems, and groundwater dependent ecosystems.

**Interim Deliverable:**

☐ Draft Groundwater Conditions section of the GSP

### *4) Water Budget*

CONTRACTOR will prepare the Water Budget section of the GSP. To achieve this, CONTRACTOR shall do the following as required by the GSP regulations:

- Identify a hydrologic base period
- Perform an evapotranspiration analysis
- Develop the following:
    - At least 10 years of historical water budgets
    - Current year water budget
    - 50-Year water budget forecast
    - Total surface water entering and existing the basin
    - Inflow to groundwater systems by source type
    - Outflow from groundwater systems by source type
    - Change in groundwater storage
    - Sustainable yield estimate

**Interim Deliverable:**

☐ Draft Water Budget section of the GSP

### *5) Management Areas*

The subdivision of the BVGB into Management Areas may be necessary for the successful development of the GSP. CONTRACTOR will prepare the Management Areas section of the GSP as necessary. To achieve this, CONTRACTOR shall do the following as required by the GSP regulations:

- Facilitate outreach to develop the management areas
- Describe each management area
- Describe the reason for the creation of the management area based on scientific information and/or stakeholder input
- Describe the level of monitoring and analysis for each management area
- Explain of how each management will not cause undesirable results, including outside the management area

**Interim Deliverable:**

❑ Draft Management Areas section of the GSP

***6) Sustainable Management Criteria***

CONTRACTOR will prepare the Sustainable Management Criteria (SMC) section of the GSP. To achieve this, CONTRACTOR shall do the following as required by the GSP regulations:

- Facilitate stakeholder outreach to develop the SMC
- Describe the sustainability goal developed through stakeholder outreach
- Develop the undesirable results narrative for each of the six sustainability indicators
- Facilitate stakeholder outreach to develop sustainability thresholds (minimum thresholds and measurable objectives)
- Evaluate the potential occurrence of undesirable results

**Interim Deliverable:**

❑ Draft SMC section of the GSP

***7) Monitoring Network***

CONTRACTOR will prepare the Monitoring Network section of the GSP. To achieve this, CONTRACTOR shall do the following as required by the GSP regulations:

- Facilitate stakeholder outreach to develop the monitoring network
- Develop monitoring networks for each of the six sustainability indicators
- Describe the monitoring rationale in consideration of management areas to achieve representative monitoring in the basin and for each management area and each principal aquifer including:
    - Location and frequency of monitoring
    - Maps of monitoring locations,
    - Protocols for monitoring
- Document minimum thresholds and measurable objectives for each of the representative monitoring wells for each sustainability indicator

**Interim Deliverable:**

❑ Draft Monitoring Network section of the GSP

***8) Monitoring Network Evaluation***

CONTRACTOR will perform an evaluation of the existing/available monitoring information prior to development of the preceding two sections of the GSP. To achieve this, CONTRACTOR shall evaluate the existing monitoring network and document the results in the memorandum, which will include:

- Monitoring protocols including technical standards and data collection methods
- Water quality sample analytes and parameters for the GSP
- List of analytical methods
- Rationale for selection of representative monitoring sites, network density, and monitoring frequency

- Perform a data gaps assessment which identifies critical data gaps that will need to be filled for the development of the GSP
- Network improvement plan, including assessment of the monitoring network for data gaps

**Interim Deliverable:**

☐ Data Gaps Assessment and Critical Data Gap Workplan Memorandum

☐ Data Collection and Monitoring Evaluation Memorandum

***9) Uplands Geologic Assessment***

CONTRACTOR will perform uplands field exploration of the geology of potential recharge areas in the uplands surrounding BVGB and document the results in a report. To achieve this, CONTRACTOR will:

- Ensure the assessment is performed by a geologist with experience in volcanic terrains
- Develop reconnaissance maps of the upland volcanic deposits
- Describe the volcanic rock mineralogy and texture for up to 30 samples
- Perform a chemical analysis for up to 20 samples
- Describe the critical features for identifying each volcanic unit

**Interim Deliverable:**

☐ Uplands Geologic Assessment Report

***10) Data Management System***

CONTRACTOR will develop a Data Management System (DMS) and prepare a Data Management Plan to support the GSP. To achieve this, CONTRACTOR shall do the following:

- Develop a Data Management Plan that describes flow of data starting from data collection and including QA/QC processes
- Develop a relational database structure to store the information needed for the GSP
- Develop an online interface and tools to view, query, upload, download, and generate reports in support of the GSP using information in the database.
- Populate the database with existing data
- Document the general use of the DMS in a user's guide

**Interim Deliverables:**

☐ Data Management Plan

☐ DMS populated with existing data

☐ DMS user guide

***11) Projects, Management Actions, and Adaptive Management***

CONTRACTOR will prepare a draft of the Projects and Management Actions section of the GSP. To achieve this, CONTRACTOR shall do the following as required by the GSP regulations:

- Facilitate stakeholder outreach to develop potential projects and management actions
- Evaluate and describe potential projects and management actions to achieve the sustainability goals
- Describe the following related to the projects and management actions
    - Measureable objectives
    - Groundwater extractions
    - Recharge management
    - Overdraft mitigation
    - Estimated costs
    - Plans to meet anticipated costs
- Describe for each project
    - Public noticing requirements
    - Permitting requirements
    - Timetable for initiation and completion of the project
    - Expected benefits and results
    - Procedures
    - Legal authority

**Interim Deliverable:**

❑ Draft Projects and Management Actions section of the GSP

***12) GSP Implementation Plan and Report Compilation***

CONTRACTOR will develop an Implementation Plan and compile the Plan for submittal to the GSAs and to DWR. To achieve this, CONTRACTOR will do the following:

- Write a Implementation Plan for inclusion in the GSP
- Compile the Final GSP
- Support County staff with the review and adoption process through the GSA governing bodies
- Support County staff with submittal of adopted GSP to DWR

**Interim Deliverable:**

❑ Final GSP for submittal to GSA governing bodies

**Task 1c Final Deliverables:**

❑ Drafts of each interim deliverable for inclusion in Quarterly Progress Reports

❑ Final GSP and proof of submittal to DWR

**Assumptions:**

- GSP will be adopted by each GSA

**Task 2a – Monitoring Well Planning, Design, Engineering and Environmental Documentation**

CONTRACTOR will support the County in the planning, design, engineering, and environmental documentation in support of constructing a set of monitoring wells. This task will support the

completion of the activities described in Exhibit A of the DWR Agreement Component 2, Category (a): Planning, Design, Engineering, and Environmental Documentation. This task will be performed in three subtasks as described below.

***Subtask 2a.1 – CEQA***

To support the preparation of CEQA documentation for the monitoring wells, CONTRACTOR will:

- Prepare CEQA documentation
- Assist the County to file the documents with the State Clearinghouse, County Clerk, and DWR Project Manager.
- Assist county to obtain CEQA concurrence from the State prior to well construction activities

**Deliverables:**

❑ CEQA documentation

**Assumptions:**

- CEQA documentation will be filed under the Information Collection provision of Article 19, Section 15306 (Class 6)

***Subtask 2a.2 – Permitting***

To support the preparation of permits for the monitoring wells, CONTRACTOR will:

- Provide well construction permits to the County
- Assist County staff to obtain encroachment permits as necessary

**Deliverables:**

❑ Well construction and encroachment permits

**Assumptions:**

- Wells will be constructed on County road easements (or property owned by the County) and all encroachment will be on County easements and property

***Subtask 2a.3 – Planning, Design, and Engineering***

To support the County in the planning, design, and engineering of the wells, CONTRACTOR will:

- Develop plans and specifications to construct and develop two shallow monitoring wells and one dual-completion monitoring well
- Ensure that the proposed wells are constructed in accordance with California Well Standards Bulletin 74-90 and 74-81, and County well ordinances
- Provide bid documents for release of competitive bid to contractors
- Select a qualified, licensed drilling contractor

**Deliverables:**

❑ Well design plans and specifications certified, signed and stamped by a California Registered Engineer of Professional Geologist for each well

❑ Bid Documents

**Assumptions:**

- Drilling contractor will be contracted through CONTRACTOR.

**Task 2b – Monitoring Well Construction**

CONTRACTOR will install two shallow monitoring wells and one dual completion monitoring well. The work will satisfy the activities described in Exhibit A of the DWR Agreement Component 2, Category (b): Monitoring Well Construction. The well will be constructed by the drilling contractor selected under Subtask 2a.3, with oversight by CONTRACTOR staff or subcontractors. To achieve this CONTRACTOR will:

- Obtain a contract with the driller selected under Subtask 2a.3
- Provide a geologist to describe and log sediments during drilling
- Provide oversight of the drilling contractor to ensure that the well is constructed to the specifications developed under Subtask 2a.3

**Deliverables:**

- ☐ Documentation of each dual-completion well and shallow, single-completion monitoring well installation
- ☐ Documentation of the addition of monitoring wells into CASGEM
- ☐ Monitoring Well Completion Report

**Task 2c – Water Quality Sampling**

CONTRACTOR will collect water quality samples from the monitoring and up to five additional wells as land owners permit. The work will satisfy the activities described in Exhibit A of the DWR Agreement Component 2, Category (c): Water Quality Sampling. To achieve this CONTRACTOR will:

- Coordinate with drillers and well owners to operate pumps for sample collection
- Collect samples according to industry standards
- Analyze the samples via a State-certified laboratory for general minerals, Title 22 drinking water metals, boron, hexavalent chromium, arsenic, and other necessary constituents identified in the Monitoring Network Evaluation.

CONTRACTOR will update the existing groundwater monitoring plan with the new CASGEM wells and seek acknowledgment from DWR that the monitoring plan meets the requirements for CASGEM compliance.

**Deliverables:**

- ☐ Water Quality Results Memorandum

**Assumptions:**

- Samples will be collected from the new monitoring wells and up to five additional wells if existing well owners are amenable to this sampling.
- Well owners will receive a copy of the laboratory report for their well

## A.2 SCHEDULE

**Table 3:** Schedule

| Task/Subtask | Name | Start Date | End Date | Deliverables |
|---|---|---|---|---|
| Task 1a | Program Management and Grant Administration | Upon Notice to Proceed | 4/30/2022 | Monthly GEI invoices submitted to County<br>Draft quarterly progress reports<br>Draft component completion reports<br>Draft project completion report |
| Task 1b | Communication and Engagement | Upon Notice to Proceed | 4/30/2022 | Draft and Final C&E Plan<br>Online C&E tracking tool<br>Outreach documentation for submission with the GSP<br>Attendance and presentation at outreach and coordination meetings |
| Task 1c | GSP Development | Upon Notice to Proceed | 4/30/2022 | Drafts of each interim deliverable for inclusion in Quarterly Progress Reports<br>Final GSP and proof of submittal to DWR |
| | *Interim Deliverables:* | | | |
| | 1) Administrative Information | Upon Notice to Proceed | 5/31/2019 | Draft and Final Coordination Agreements<br>Draft Plan Area and Authority Section of the GSP |
| | 2) Hydrogeologic Conceptual Model | 3/1/2019 | 11/30/2019 | Draft HCM section of the GSP |
| | 3) Groundwater Conditions | 5/1/2019 | 12/31/2017 | Draft Groundwater Conditions section of the GSP |
| | 4) Water Budget | 5/1/2019 | 12/31/2019 | Draft Water Budget section of the GSP |
| | 5) Management Areas | 12/1/2019 | 4/30/2020 | Draft Management Areas section of the GSP |
| | 6) Sustainable Management Criteria | 12/1/2019 | 6/30/2020 | Draft SMC section of the GSP |
| | 7) Monitoring Network | 3/1/2019 | 6/30/2020 | Draft Monitoring Network section of the GSP |
| | 8) Monitoring Network Evaluation | 3/1/2019 | 5/31/2019 | Data Gaps Assessment and Critical Data Gap Workplan Memorandum<br>Data Collection and Monitoring Evaluation Memorandum |
| | 9) Uplands Geologic Assessment | 1/1/2019 | 6/30/2019 | Uplands Geologic Assessment Report |
| | 10) Data Management System | 1/1/2019 | 5/31/2019 | Data Management Plan<br>Online DMS populated with existing data with DMS user guide |
| | 11) Projects, Management Actions, and Adaptive Management | 12/1/2019 | 12/31/2020 | Draft Projects and Management Actions section of the GSP |
| | 12) GSP Implementation Plan and Report Compilation | 12/1/2019 | 4/30/2022 | Final GSP for submittal to GSA governing bodies |
| Task 2a | MW Planning, Design, Engineering, and Environmental Documentation | Upon Notice to Proceed | 9/30/2019 | *See subtask deliverables below* |
| SubTask 2a.1 | CEQA | Upon Notice to Proceed | 9/30/2019 | CEQA documentation |
| Subtask 2a.2 | Permitting | Upon Notice to Proceed | 9/30/2019 | Well construction and encroachment permits |
| Subtask 2a.3 | Planning, Design, and Engineering | Upon Notice to Proceed | 9/30/2019 | Well design plans and specifications<br>Bid Documents |
| Task 2b | Monitoring Well Construction | 3/1/2019 | 10/31/2019 | Documentation of well completion<br>Documentation of the addition of monitoring wells into CASGEM<br>Monitoring Well Completion Report |
| Task 2c | Water Quality Sampling | 7/1/2019 | 11/30/2019 | Water Quality Results Memorandum |

**END OF ATTACHMENT "A"**

## ATTACHMENT B
## AGREEMENT BETWEEN LASSEN COUNTY AND GEI CONSULTANTS, INC

## PAYMENT

COUNTY shall pay CONTRACTOR as follows:

### B.1 Total CONTRACTOR Price

CONTRACTOR shall be paid up to $914,443 for completion of all work identified in Attachment A, including all subcontractors

### B.2 Payment

CONTRACTOR shall be paid on a time-and-materials basis for tasks specified in Attachment A.

**Table 2** below shows the breakdown of costs by task and subtask.

| Task/Subtask | | Grant Amount | County Staff Costs | Reimbursements for Previous County Costs | GEI Team Costs |
|---|---|---|---|---|---|
| Task 1a | Grant Administration | $ 65,118 | $30,300 | $23,442 | **$11,376** |
| Task 1b | Communication and Engagement | $ 130,853 | $31,000 | $0 | **$99,853** |
| Task 1c | GSP Development | $ 618,959 | $0 | $0 | **$618,959** |
| | **Subtotal:** | **$ 814,930** | **$61,300** | **$23,442** | **$730,188** |
| Task 2a | MW Planning, Design, Engineering, and Environmental Documentation | $ 11,436 | | | |
| SubTask 2a.1 | CEQA | | $0 | $0 | **$2,859** |
| Subtask 2a.2 | Permitting | | $0 | $0 | **$2,859** |
| Subtask 2a.3 | Planning, Design, and Engineering | | $0 | $0 | **$5,718** |
| Task 2b | Monitoring Well Construction | $ 152,251 | $0 | $0 | **$152,251** |
| Task 2c | Water Quality Sampling | $ 20,568 | $0 | $0 | **$20,568** |
| | **Subtotal:** | **$ 184,255** | **$0** | **$0** | **$184,255** |
| | **Total:** | **$ 999,185** | **$61,300** | **$23,442** | **$914,443** |

## B.3 Invoice Requirement

B.3.1 Invoices submitted by the CONTRACTOR shall include costs incurred in implementing the Contract during the period identified in the particular invoice; any appropriate receipts and reports for cost incurred; and indicate the CONTRACTOR personnel who have performed work during the invoice period. The cost paid for CONTRACTOR personnel shall be consistent with the rates identified in the Billing Rate Schedule shown in section B.3.3

B.3.2

CONTRACTOR shall cooperate fully and assist COUNTY in the submittal of invoices to DWR for Grant Agreement 4600012669 between DWR and COUNTY. CONTRACTOR is not a party to said Grant Agreement. CONTRACTOR shall be paid promptly for work performed pursuant to this Agreement only when the State of California Department of Water Resources has paid COUNTY for the corresponding work identified in Grant Agreement 4600012669.

B.3.3

The billing rates shall be in accordance with the following Fee Schedule and Payment Terms:

FEE SCHEDULE AND PAYMENT TERMS

**GEI Consultants Standard Fee Schedule ~~2018~~ 2019** 2017 MJC 2/25/2019

**FEE SCHEDULE**
Hourly Billing Rate
Personnel Category $ per hour
Staff Professional – Grade 1 $ 110
Staff Professional – Grade 2 $ 121
Project Professional – Grade 3 $ 133
Project Professional – Grade 4 $ 149
Senior Professional – Grade 5 $ 176
Senior Professional – Grade 6 $ 201
Senior Professional – Grade 7 $ 238
Senior Consultant – Grade 8 $ 267
Senior Consultant – Grade 9 $ 330
Senior Principal – Grade 10 $ 330
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Senior CADD Drafter and Designer $ 133
CADD Drafter / Designer and Senior Technician $ 121
Field Professional $ 103
Technician, Word Processor, Administrative Staff $ 99
Office Aide $ 77
These rates are billed for both regular and overtime hours in all categories.
Rates will increase up to 5% annually, at GEI's option, for all contracts that extend beyond

twelve (12) months after the date of the contract. Rates for Deposition and Testimony are increased 1.5 times.

**OTHER PROJECT COSTS**

**Subconsultants, Subcontractors and Other Project Expenses -** All costs for subconsultants, subcontractors and other project expenses will be billed at cost plus a 15% service charge. Examples of such expenses ordinarily charged to projects are subcontractors; subconsultants: chemical laboratory charges; rented or leased field and laboratory equipment; outside printing and reproduction; communications and mailing charges; reproduction expenses; shipping costs for samples and equipment; disposal of samples; rental vehicles; fares for travel on public carriers; special fees for insurance certificates, permits, licenses, etc.; fees for restoration of paving or land due to field exploration, etc.; state sales and use taxes and state taxes on GEI fees.

**Billing Rates for Specialized Technical Computer Programs** – Computer usage for specialized technical programs will be billed at a flat rate of $10.00 per hour in addition to the labor required to operate the computer.

**Field and Laboratory Equipment Billing Rates** – GEI-owned field and laboratory equipment such as pumps, sampling equipment, monitoring instrumentation, field density equipment, portable gas chromatographs, etc. will be billed at a daily, weekly, or monthly rate, as needed for the project. Expendable supplies are billed at a unit rate.

**Transportation and Subsistence** - Automobile expenses for GEI or employee owned cars will be charged at the rate per mile set by the Internal Revenue Service for tax purposes plus tolls and parking charges or at a day rate negotiated for each project. When required for a project, four-wheel drive vehicles owned by GEI or the employees will be billed at a daily rate appropriate for those vehicles. Per diem living costs for personnel on assignment away from their home office will be negotiated for each project.

**PAYMENT TERMS**

Invoices will be submitted monthly or upon completion of a specified scope of service, as described in the accompanying contract (proposal, project, or agreement document that is signed and dated by GEI and CLIENT).

Payment is due upon receipt of the invoice. Interest will accrue at the rate of 1% of the invoice amount per month, for amounts that remain unpaid more than 30 days after the invoice date. All payments will be made by either check or electronic transfer to the address specified by GEI and will include reference to GEI's invoice number.

**END OF ATTACHMENT "B"**

## ATTACHMENT C
## AGREEMENT BETWEEN LASSEN COUNTY AND GEI CONSULTANTS, INC ADDITIONAL PROVISIONS

None

**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:

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

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

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:

Maurice L. Anderson, Director
Planning and Building Services Department
707 Nevada Street, Suite 5
Susanville, CA 96130

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, 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.

The CONTRACTOR's indemnity requirements are limited to the conditions prescribed in California Civil Code 2782, as amended.

**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.13.1.1 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: 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 nine hundred and fourteen thousand, four hundred and forty three Dollars ($914,443). 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.

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.

**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 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

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.

**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":

Maurice L. Anderson
707 Nevada Street, Suite 5
Susanville, CA 96130

If to "CONTRACTOR":

Michael Cornelius
2868 Prospect Park Drive, Suite 400
Rancho Cordova, CA 95670

**END OF ATTACHMENT "D".**

## 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 of Lassen*
Board of Supervisors

**CHRIS GALLAGHER**
*District 1*
**DAVID TEETER**
*District 2*
**JEFF HEMPHILL**
*District 3*
**AARON ALBAUGH**
*District 4*
**TOM HAMMOND**
*District 5*

County Administration Office
221 S. Roop Street, Suite 4
Susanville, CA 96130
Phone: 530-251-8333
Fax: 530-251-2663

March 23, 2021

CERTIFIED RETURN RECEIPT
7017 0660 0000 6271 1758
Gavin Newsom
Governor, State of California
1303 10th Street
Sacramento, CA 95814

RE: Inquiry Regarding the February 16, 2020, Letter Requesting an Extension for Submittal of a Groundwater Sustainability Plan for the Big Valley Groundwater Basin (DWR Bulletin 118 Basin 5-004)

Dear Governor Gavin Newsom:

This letter is to request a response from you to our letters to you dated February 16, 2021, August 11, 2020 and November 17, 2020 (attached), in regard to preparation of the Groundwater Sustainability Plan (GSP) required to be submitted to the Department of Water Resources by January 31, 2022, pursuant to the Sustainable Groundwater Management Act of 2014 (SGMA), for the Big Valley Groundwater Basin. To date, we have not received communication of any type regarding said letter (by telephone, letter or email).

As stated in more detail in our previous letter, Government imposed COVID-19 restrictions have drastically limited our ability, and the public's willingness, to have the in-person public meetings necessary to prepare the required GSP. This has left both the Lassen and Modoc Groundwater Sustainability Agencies (GSAs) with few options. Many around the state have turned to internet-based meetings during this pandemic. However, conducting meetings through the internet is a poor substitution in Big Valley because there is not sufficient internet access. Further, we do not have sufficient resources to conduct internet-based meetings in a meaningful way. Again, our letter to you describes our challenges in great detail.

The GSP deadline is approximately 7 months away and it is clear that we do not have enough time to prepare a GSP supported by the level of public participation a plan of this magnitude deserves. Lassen County and the residents of Big Valley have accepted the responsibility

required by SGMA to prepare the GSP when no one else would. Neither Lassen County or Modoc County were required by SGMA to accept the responsibility (financially and in terms of land use responsibility) to serve as the GSAs for Big Valley, but that is exactly what we have done. We have more than demonstrated our willingness to meet the challenges presented by SGMA head-on. That said, if we are going to prepare this GSP, it is in the interest of everyone, including you, that it be done right.

This was a serious enough subject to warrant passage of SGMA and signature by the prior Governor. We can assure you that preparation of the GSP for the Basin is certainly a matter of direct concern to the citizens of Big Valley. As such, this Board deserves an answer to our letter, and, even more so, the citizens of Big Valley deserve the courtesy of an answer, even if the answer is contrary to our request. To give the GSP the service it truly deserves, we simply need a little more time or simply remove the Government imposed regulations. That's all.

Thank you for considering our request and we look forward to your prompt response.

Thank you in advance,

Aaron Albaugh

Aaron Albaugh, Chairman
Lassen County Board of Supervisors

AA:MLA:gfn

cc: Brian Dahle, Senator, California Senate
Megan Dahle, Assembly Member, California State Assembly
Modoc County Board of Supervisors as the Big Valley Modoc GSA
Big Valley Groundwater Basin Advisory Committee
Department of Water Resources

AMENDED IN ASSEMBLY MARCH 11, 2021

CALIFORNIA LEGISLATURE—2021–22 REGULAR SESSION

# ASSEMBLY BILL No. 754

**Introduced by Assembly Member Mathis**

February 16, 2021

~~An act relating to groundwater.~~ *An act to amend Sections 10720.7 and 10735.2 of the Water Code, relating to groundwater.*

LEGISLATIVE COUNSEL'S DIGEST

AB 754, as amended, Mathis. ~~Sustainable Groundwater Management Act.~~ *Sustainable groundwater management: groundwater sustainability plan.*

*Existing law, the Sustainable Groundwater Management Act, requires all groundwater basins designated as high- or medium-priority basins by the Department of Water Resources that are designated as basins subject to critical conditions of overdraft to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2020, and requires all other groundwater basins designated as high- or medium-priority basins to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2022, except as specified. The act authorizes the State Water Resources Control Board to designate a high- or medium-priority basin as a probationary basin if the basin is not entirely covered by an adopted groundwater sustainability plan or plans or a department-approved alternative by the applicable deadline. The act authorizes the board to adopt an interim plan for a probationary basin, as specified.*

*This bill would extend the deadline for all high- or medium-priority basins not subject to critical conditions of overdraft to be managed*

*under a groundwater sustainability plan or coordinated plans until January 31, 2023. The bill would make conforming changes to the authority of the board to designate a high- or medium-priority basin as a probationary basin for the failure to manage a basin under a groundwater sustainability plan or coordinated plan by the applicable deadlines.*

~~Existing law, the Sustainable Groundwater Management Act, requires all groundwater basins designated as high- or medium-priority basins by the Department of Water Resources that are designated as basins subject to critical conditions of overdraft to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2020, and requires all other groundwater basins designated as high- or medium-priority basins to be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans by January 31, 2022, except as specified.~~

~~This bill would state the intent of the Legislature to enact statutory changes relating to the Sustainable Groundwater Management Act.~~

Vote: majority. Appropriation: no. Fiscal committee: ~~no~~ *yes*. State-mandated local program: no.

*The people of the State of California do enact as follows:*

*SECTION 1. Section 10720.7 of the Water Code is amended to read:*

10720.7. (a) (1) By January 31, 2020, all basins designated as high- or medium-priority basins by the department that have been designated in Bulletin 118, as it may be updated or revised on or before January 1, 2017, as basins that are subject to critical conditions of overdraft shall be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans pursuant to this part.

(2) By January 31, ~~2022,~~ *2023*, all basins designated as high- or medium-priority basins by the department that are not subject to paragraph (1) shall be managed under a groundwater sustainability plan or coordinated groundwater sustainability plans pursuant to this part.

(b) The Legislature encourages and authorizes basins designated as low- and very low priority basins by the department to be managed under groundwater sustainability plans pursuant to this

part. Chapter 11 (commencing with Section 10735) does not apply to a basin designated as a low- or very low priority basin.

*SEC. 2. Section 10735.2 of the Water Code is amended to read:*

10735.2. (a) The board, after notice and a public hearing, may designate a high- or medium-priority basin as a probationary basin, if the board finds one or more of the following applies to the basin:

(1) After June 30, 2017, none of the following have occurred:

(A) A local agency has decided to become a groundwater sustainability agency that intends to develop a groundwater sustainability plan for the entire basin.

(B) A collection of local agencies has formed a groundwater sustainability agency or prepared agreements to develop one or more groundwater sustainability plans that will collectively serve as a groundwater sustainability plan for the entire basin.

(C) A local agency has submitted an alternative that has been approved or is pending approval pursuant to Section 10733.6. If the department disapproves an alternative pursuant to Section 10733.6, the board shall not act under this paragraph until at least 180 days after the department disapproved the alternative.

(2) The basin is subject to paragraph (1) of subdivision (a) of Section 10720.7, and after January 31, 2020, none of the following have occurred:

(A) A groundwater sustainability agency has adopted a groundwater sustainability plan for the entire basin.

(B) A collection of local agencies has adopted groundwater sustainability plans that collectively serve as a groundwater sustainability plan for the entire basin.

(C) The department has approved an alternative pursuant to Section 10733.6.

(3) The basin is subject to paragraph (1) of subdivision (a) of Section 10720.7 and after January 31, 2020, the department, in consultation with the board, determines that a groundwater sustainability plan is inadequate or that the groundwater sustainability program is not being implemented in a manner that will likely achieve the sustainability goal.

(4) The basin is subject to paragraph (2) of subdivision (a) of Section 10720.7, and after January 31, ~~2022,~~ *2023*, none of the following have occurred:

(A) A groundwater sustainability agency has adopted a groundwater sustainability plan for the entire basin.

(B) A collection of local agencies has adopted groundwater sustainability plans that collectively serve as a groundwater sustainability plan for the entire basin.

(C) The department has approved an alternative pursuant to Section 10733.6.

(5) The basin is subject to paragraph (2) of subdivision (a) of Section 10720.7, and either of the following have occurred:

(A) After January 31, ~~2022,~~ *2023,* both of the following have occurred:

(i) The department, in consultation with the board, determines that a groundwater sustainability plan is inadequate or that the groundwater sustainability plan is not being implemented in a manner that will likely achieve the sustainability goal.

(ii) The board determines that the basin is in a condition of long-term overdraft.

(B) After January 31, 2025, both of the following have occurred:

(i) The department, in consultation with the board, determines that a groundwater sustainability plan is inadequate or that the groundwater sustainability plan is not being implemented in a manner that will likely achieve the sustainability goal.

(ii) The board determines that the basin is in a condition where groundwater extractions result in significant depletions of interconnected surface waters.

(b) In making the findings associated with paragraph (3) or (5) of subdivision (a), the department and board may rely on periodic assessments the department has prepared pursuant to Chapter 10 (commencing with Section 10733). The board may request that the department conduct additional assessments utilizing the regulations developed pursuant to Chapter 10 (commencing with Section 10733) and make determinations pursuant to this section. The board shall post on its ~~Internet Web site~~ *internet website* and provide at least 30 days for the public to comment on any determinations provided by the department pursuant to this subdivision.

(c) (1) The determination may exclude a class or category of extractions from the requirement for reporting pursuant to Part 5.2 (commencing with Section 5200) of Division 2 if those extractions are subject to a local plan or program that adequately manages groundwater within the portion of the basin to which that plan or

program applies, or if those extractions are likely to have a minimal impact on basin withdrawals.

(2) The determination may require reporting of a class or category of extractions that would otherwise be exempt from reporting pursuant to paragraph (1) of subdivision (c) of Section 5202 if those extractions are likely to have a substantial impact on basin withdrawals or requiring reporting of those extractions is reasonably necessary to obtain information for purposes of this chapter.

(3) The determination may establish requirements for information required to be included in reports of groundwater extraction, for installation of measuring devices, or for use of a methodology, measuring device, or both, pursuant to Part 5.2 (commencing with Section 5200) of Division 2.

(4) The determination may modify the water year or reporting date for a report of groundwater extraction pursuant to Section 5202.

(d) If the board finds that litigation challenging the formation of a groundwater sustainability agency prevented its formation before July 1, 2017, pursuant to paragraph (1) of subdivision (a) or prevented a groundwater sustainability program from being implemented in a manner likely to achieve the sustainability goal pursuant to paragraph (2), (3), (4), or (5) of subdivision (a), the board shall not designate a basin as a probationary basin for a period of time equal to the delay caused by the litigation.

(e) The board shall exclude from probationary status any portion of a basin for which a groundwater sustainability agency demonstrates compliance with the sustainability goal.

~~SECTION 1. It is the intent of the Legislature to enact statutory changes to the Water Code relating to the Sustainable Groundwater Management Act.~~

O

# Big Valley Groundwater Basin Advisory Committee (BVAC)

# Unapproved Meeting Minutes

**BVAC Members:**
**Lassen County BVAC** – Aaron Albaugh, Board Representative; Gary Bridges, Alt. Board Representative; Kevin Mitchell, Public Representative; Duane Conner, Public Representative
**Modoc County BVAC** – Geri Byrne, Board Representative; Ned Coe, Alt. Board Representative; Jimmy Nunn, Public Representative; John Ohm, Public Representative

| | | |
|---|---|---|
| Wednesday, March 3, 2021 | 4:00 PM | Adin Community Center<br>605 Highway 299<br>Adin, CA 96006 |

BVAC Convene in Special Session.

Present: Committee Members: Byrne, Albaugh, Mitchell, Conner, Ohm, and Nunn (via Zoom).
Absent:

Also in attendance: BVAC Secretary Maurice Anderson
BVAC staff Gaylon Norwood
BVAC staff Tiffany Martinez
BVAC Recorder Brooke Suarez
Modoc County Counsel Sean Cameron (via Zoom)
BVAC Alt. Board Representative Gary Bridges

BVAC Chairman Byrne called the meeting to order at 4:21 p.m.

**Flag Salute:** Chairman Byrne requested John Ohm lead the Pledge of Allegiance.

**General Update by Secretary:** M. Anderson thanked all involved in working on the Big Valley Groundwater Sustainability Plan (GSP). He also thanked the board members for their work on the ad hoc committees. He also stated that Laura Snell would be facilitating the meeting.

**Matters Initiated by Committee Members:** Vice-Chairman Albaugh also recognized the staff from both counties that have been working on the GSP. He also thanked Farm Advisors David Lile and Laura Snell as well as fellow board members.

**Correspondence** (unrelated to a specific agenda item): None

**Approval of Minutes (February 3, 2021) –**

**A motion was made by Vice-chairman Aaron Albaugh to approve BVAC meeting minutes from February 3, 2021 with the addition of Modoc Counsel**

**in attendance via Zoom. The motion was seconded by Representative Kevin Mitchell. The motion was carried by the following vote:**

**Aye:** 6 – Byrne, Albaugh, Mitchell, Conner, Ohm, and Nunn.

**SUBJECT #1:**
Reports from Ad Hoc Committees on Sustainable Management Criteria, in preparation for the development of Revised Draft Chapter 7 (*Sustainable Management Criteria*) and Public Draft Chapter 8 (*Monitoring Networks*) of the Groundwater Sustainability Plan (GSP).

**ACTION REQUESTED:**

1. Receive report on **Sustainability Goal and Potential Projects**.
2. Receive public comment.
3. Provide direction to staff.

Laura Snell reviewed the GSP development process chart and where the board members were at in the process. She would like the board to finalize the draft versions of Chapters 7 and 8 of the GSP. She reviewed how to measure sustainability; minimum thresholds and measurable objectives are required in the GSP, interim milestones are not, but they would be helpful in the future. L. Snell reviewed the questions that were required to be answered for each sustainability criteria. GEI Consultants supplied notes and recommendations to the ad hoc committees (Exhibit A).

Vice-Chairman Albaugh presented the text the ad hoc committee had come up with for the sustainability goal. Chairman Byrne stated that they were looking to keep the statement brief with an emphasis on agriculture. T. Martinez said it took three meetings to come up with the text and then she went over the definitions (Exhibit B) of the wording within the text. The wording used is meant to protect the basin.

Discussion: Representative Mitchell wanted to include wording regarding "legal use of water" and Representative Nunn concurred. Modoc County Counsel Cameron questioned using the word "right" and suggested "just". Vice-Chairman Albaugh wanted wording in text regarding groundwater recharge as well. He also wanted to keep agriculture in the forefront of the text as agriculture is taking the brunt of the water issues in the state. Chairman Byrne agreed because if there is no agriculture in the valley there will be no community.

Public Comment: Gary Monchamp requested an elaboration of the text "environmental users". Julie was concerned with the wording "vested right of agricultural pursuits" as it makes all other water users secondary.

T. Martinez presented the potential projects the ad hoc committee had come up with. They included timber management on federal lands, juniper and pine reduction, drainage recharge, winter recharge (pasture and reservoirs), pond and plug or recharge ponds, dam construction, reservoir expansion, injection wells, and pumping from Pit River to Roberts Reservoir.

Discussion: Vice-Chairman Albaugh suggested broader wording of "pumping from Pit River to Roberts Reservoir" to "off stream storage". He then asked D. Fairman for further comments. D. Fairman said it is good to capture water in wet years but the GSP will need to identify what will be done in drought years such as reduction in pumping or water transfers from site A to site B. DWR will require feasible projects.

Public Comment: Gary Monchamp asked if the committee has talked about water rights. Jim Copp said the 240,000 acre feet allocated to Allen Camp Dam could be moved to reservoir expansion. Rodney Fricke brought up Ag. ASR which is being looked into by T. Martinez.

**ACTION REQUESTED:**

4. Receive report on **Groundwater Levels and Storage.**
5. Receive public comment.
6. Provide direction to staff.

Vice-Chairman Albaugh presented the wells the ad hoc committee are suggesting for monitoring purposes. Five of the new grant wells were picked and seven wells which are dispersed throughout the basin. The seven wells have a long history of monitoring and have a 16.5 foot drop trend. The minimum threshold is suggested to be 150 feet below the 2015 baseline. If the water level drops below this threshold then economic viability of pumping is lost anyway. Well analyses of chosen wells were handed out (Exhibit C).

Discussion: D. Fairman pointed out the two trend lines of all monitored wells and the 12 chosen wells which showed less of a decline. More than these 12 wells will need to be monitored, but these are the only wells that will be given minimum thresholds. Chairman Byrne asked if the owners of the wells will approve to monitoring and do we have backup choices if the owners don't. Vice-Chairman Albaugh stated that most likely we will have approval to monitor as these wells as they are already being monitored. Vice-Chairman Albaugh asked why we picked the five grant wells? L. Snell said it was because their water levels will not be driven up and down by pumping. Vice-Chairman asked if soil samples were taken of the grant wells for recharge purposes and the answer was yes, every five feet.

Public Comment: Julie said there are at least 50 wells in Adin but only about 18 are certified. She asked if the other 32 wells are illegal? T. Martinez responded that the shallow wells do not meet sanitary standards.

**ACTION REQUESTED:**

7. Receive report on **Water Quality.**
8. Receive public comment.
9. Provide direction to staff.

Water quality was presented by Laura Snell. Big Valley has good water quality. The ad hoc committee is recommending electrical conductivity as the threshold constituent. The higher the

us/cm number, the more conductivity it has. The recommendation is 250 us/cm. It is proposed that three new grant wells and two public water systems be monitored for water quality as well as using the data collected from other programs that are already monitoring for water quality.

Discussion: Vice-Chairman Albaugh recommends using the highest conductivity level as the threshold. L. Snell stated that at this level the water is brackish and not good for agricultural irrigation. D. Fairman suggested using crop tolerance specifics for a number. Vice-Chairman Albaugh questioned why we even have to measure water quality since it is so good and there are already so many water quality programs and requirements. T. Martinez suggested listing all the programs running currently in the GSP.

Public Comment: None

**ACTION REQUESTED:**

10. Receive report on **Subsidence.**
11. Receive public comment.
12. Provide direction to staff.

Representative Duane Conner presented on subsidence of which there is none. Drones fly over and take measurements and these measurements should be used to monitor for subsidence. The threshold should be three times the natural occurrence over a four-year period. The main thing to watch is the railroad lines.

Discussion: None

Public Comment: None

**ACTION REQUESTED:**

13. Receive report on **Depletion of Interconnected Surface Water.**
14. Receive public comment.
15. Provide direction to staff.

Tiffany Martinez presented the depletion of interconnected surface water which has had not historic issues. There is no threshold set and data will continue to be collected.

Discussion: Chairman Byrne stated that interconnected surface water will continue to be monitored but there is no data to support depletion. Representative Nunn agreed. Vice-Chairman Albaugh said the same should be done with water quality. D. Fairman reiterated that the GSP can not write off an issue, it must be addressed. Vice-Chairman Albaugh asked if there is any evidence of interconnectivity. D. Fairman said that a couple of monitors show evidence of interconnectivity. Representative Conner stated that if this is such a complicated subject then DWR can't prove that there is interconnectivity. Representative Nunn asked if this version of addressing this subject so minimally will be rejected by DWR?

Public Comment: Gary Monchamp asked if dye injections to monitor connectivity have ever been done? L. Snell answered that there is not much data and it is costly. D. Fairman stated the there is evidence that the Pit River has high salinity and that can be used as a tracer and that there may be other tracers that could be used. Randy George said flooding a field is not recharging and it would be better to build a dam.

**ACTION REQUESTED:**

16. Receive report on **Basin Boundary Modification.**
17. Receive public comment.
18. Provide direction to staff.

Representative Mitchell presented on basin boundary modification. He said that DWR left a lot of ground out of the boundary line that they established. The committee wants to resubmit a basin boundary modification.

Discussion: Vice-Chairman Albaugh stated that the last modification was denied because it was not scientific enough. The DWR boundary is not factual at all.

Public Comment: None

**ACTION REQUESTED:**

19. Receive report on **Mapping.**
20. Receive public comment.
21. Provide direction to staff.

No report given.

Discussion: The ad hoc committee on mapping asked what they were working on. T. Martinez will get information for them and then the ad hoc committee can meet. G. Norwood wants the draft Chapter 7, with direction from the ad hoc committees, to be presented at April meeting. D. Fairman can write Chapters 7 and 8. He will point out the data gaps that need to be addressed. Chairman Byrne said some of the ad hoc committees will need to meet again prior to writing the chapters. D. Fairman can write a list of questions for the committees.

G. Norwood reviewed the Brown Act as requested by Byrne. County Counsel Cameron told committee to reach out to him with any questions. The representatives should all file the 700 form.

Public Comment: Julie Purlee said the community has preemptive ability prior to DWR interference. Gary Monchamp was concerned with the 5000 acre foot deficit and could the committee please tie it all together. L. Snell said staff could create a flyer to clarify.

**Matters Initiated by the General Public** (regarding subjects not on the agenda**):** There will an outreach meeting on March 24, 2021 from 5:00 pm. to 7:00 pm. at the Adin Community Center. This outreach meeting will also be made available online.

**Establish next meeting date:** April 7, 2021at 4:00 pm. in Adin.

**Adjournment:** There being no further business, Chairman Byrne asked for a motion to adjourn.

> **A motion was made by Vice-Chairman Albaugh to adjourn the meeting which was seconded by Representative Conner at 6:44 pm.**

**The motion was carried by the following vote:**

> **Aye:** 6 – Byrne, Albaugh, Mitchell, Conner, Ohm, and Nunn.

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**No table of appendices entries found.**

## Abbreviations and Acronyms

| | |
|---|---|
| Basin | Big Valley Groundwater Basin |
| BVGB | Big Valley Groundwater Basin |
| BVAC | Big Valley Groundwater Basin Advisory Committee |
| DWR | Department of Water Resources |
| GSA | Groundwater Sustainability Agency |
| GSP | Groundwater Sustainability Plan |
| IM | Interim Milestone |
| MO | Measurable Objective |
| MT | Minimum Threshold |
| Regs | DWR's GSP Emergency Regulations, California Code of Regulation Title 23, Section 350 et seq. |

| | |
|---|---|
| SGMA | Sustainable Groundwater Management Act of 2014, California Code of Regulations, Title 23, Section 350 et seq. |
| SMC | Sustainable Management Criteria |
| USFS | United States Forest Service |

# 7. Sustainable Management Criteria (§ 354.22-30)

This chapter describes criteria and conditions that constitute sustainable groundwater management for the Big Valley Groundwater Basin (BVGB or Basin), also known as sustainable management criteria (or SMCs). Below are descriptions of key terms used in the Groundwater Sustainability Plan (GSP) Regulations (Regs) and described in this chapter.

- **Sustainability goal:** This is a qualitative, narrative description of the GSP's objective and desired conditions for the BVGB and how these conditions will be achieved. The Regs require that the goal should "culminate in the absence of undesirable results within 20 years". (§ 354.22)
- **Undesirable result:** This is a description of the condition(s) that constitute "significant and unreasonable" effects (results) for each of the six sustainability indicators:
    - Chronic lowering of groundwater *levels*
    - Reduction in groundwater *storage*
    - *Seawater intrusion* – Not applicable to BVGB
    - Degraded *water quality*
    - Land *subsidence*
    - Depletion of *interconnected surface water*
- **Minimum threshold (MT):** Numeric values that define when conditions have become undesirable ("significant and unreasonable"). Minimum thresholds are established for representative monitoring sites. Undesirable results are defined by minimum threshold exceedances and are considered by the Department of Water Resources (DWR) when determining if the Basin is sustainable (i.e., in compliance with the Sustainable Groundwater Management Act (SGMA)).
- **Measurable objective (MO):** Numeric values that reflect the desired groundwater conditions at a particular monitoring site. MOs are set for the same monitoring sites as the MTs.
- **Interim milestones (IMs):** Numeric values for every 5 years between the GSP adoption and sustainability (20 years) that indicate how the basin will reach the MO. IMs are optional criteria and not subject to enforcement.

**Figure 7-1** shows the relationship of the sustainability goal, undesirable results, and thresholds. **Figure 7-2** shows the relationship of the MT, MO, and IMs. In addition to these regulatory requirements, some Groundwater Sustainability Agencies (GSAs) in other basins have developed "action levels", between the MT and MO for each well to indicate where and when to focus projects and management actions.

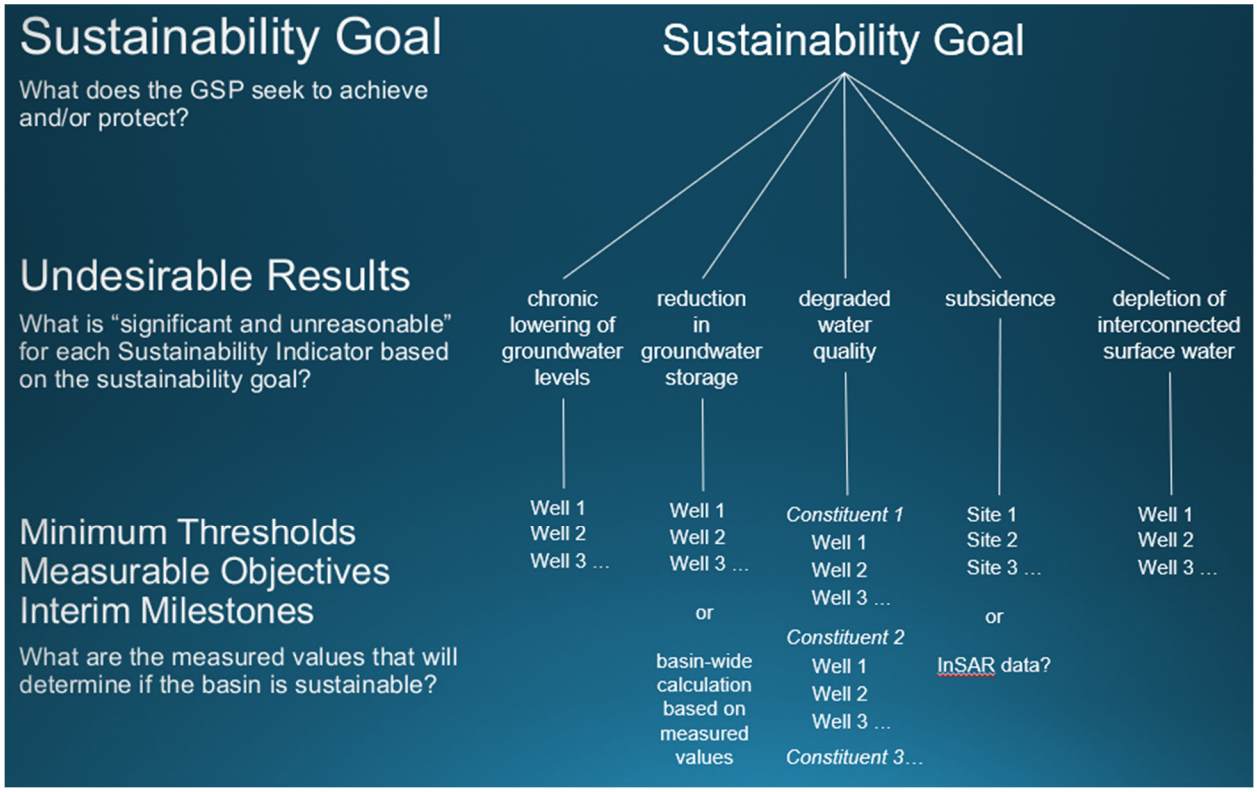


**Figure 7-1 Illustration of the relationship among the sustainability indicators**

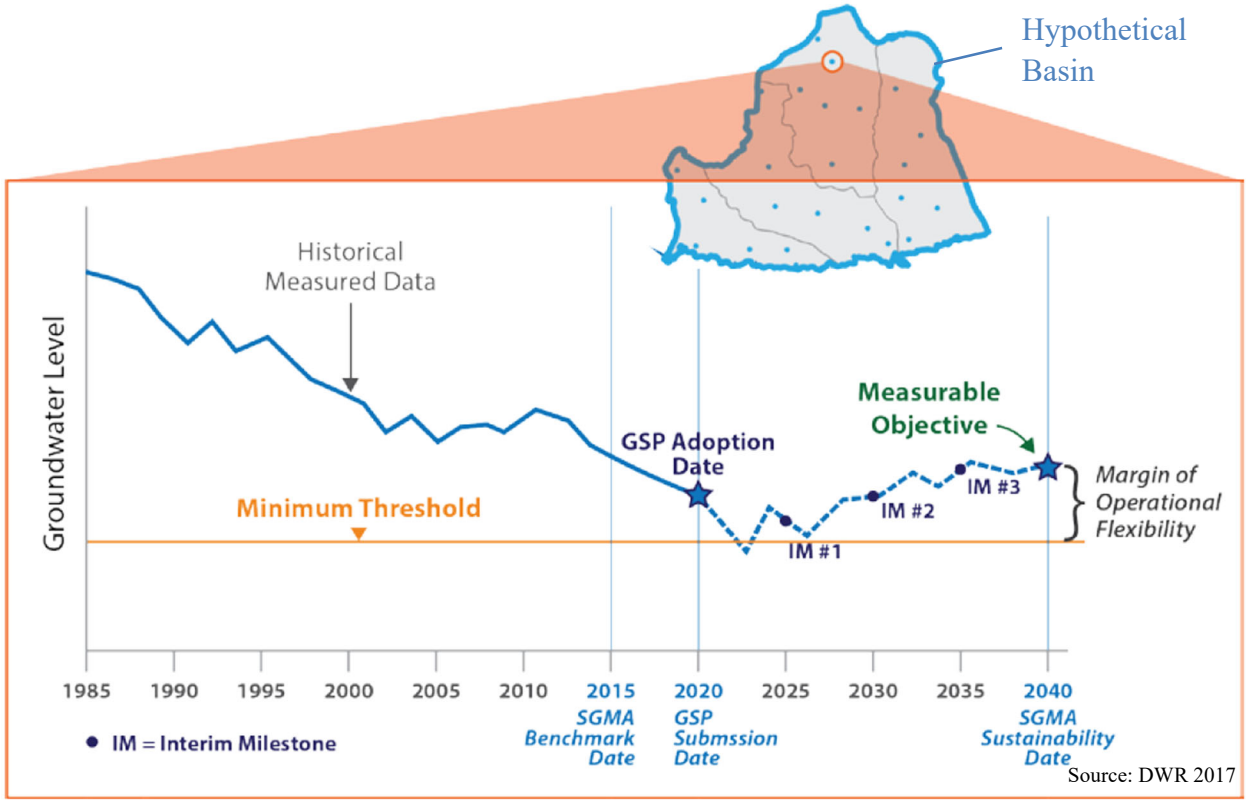


**Figure 7-2 Illustration of the relationship among the MTs, MOs, and IMs for a hypothetical basin**

# 7.1 Process for Establishing SMCs

These SMCs were developed by the GSAs through consultation with the Big Valley Advisory Committee (BVAC). The sustainability goal was developed by an ad hoc committee and presented to the larger BVAC, GSA staff, and the public for review and comment. The BVAC also formed ad hoc committees for each sustainability indicator and evaluated the data and information presented in Chapter 5 (groundwater conditions) and Chapter 6 (water budget). In consultation with GSA staff, each committee determined whether significant and unreasonable effects for each sustainability indicator have occurred historically and the likelihood of significant and unreasonable effects occurring in the future. The sections below reflect the guidance given to the GSAs by the ad hoc committees.

# 7.2 Sustainability Goal

## *Description*

The Big Valley Groundwater basin is located in the remote mountain area of Modoc and Lassen counties. The two counties are located in the extreme Northeastern portion of California, being bounded on the East by Nevada and on the North by Oregon. The Big Valley principal stream is the Pit River, a tributary of the Sacramento River. The upper reaches of the Pit River above Fall River Mills are a snow-fed high desert stream with a much more seasonal hydrograph.[i] The Pit River drains a sparsely populated volcanic highlands area in Modoc County's Warner Mountains, passing through the south end of the Cascade Range in a deep canyon northeast of Redding. The river is so named because of the pits, along with other bands of what is now the Pit River Tribe, the Achumawi dug to trap game that came to water at the river.[ii]

The Big Valley basin has a population of 1,046 residents and a projected slow growth of 1,086 by 2030, according to the Department of Water Resources Sustainable Groundwater Management Act basin prioritization dashboard. The largest township within the basin is Adin, California which had a population of two hundred and seventy-two (272) residents according to the 2010 Census. [iii] The community of Adin had a 2.43% decline in population from 2017 to 2018 and is located in Modoc County. Both Modoc and Lassen County are counties in California seeing a decline in population.[iv]

The Big Valley groundwater basin differs from many of California's groundwater basins due to the unpredictable climate which can see extreme cold and average warm temperatures making the growing season considerably shorter than the central valley. The Basin ranges in elevation of 4200 feet and 4100 feet and has been known for a deep freeze to occur in May. According to the Farmer's Almanac, the average growing season for the Big Valley basin is about one hundred (101) days. The typical crops for the Big Valley basin are low intensity and low value crops such as native pasture, grass hay, alfalfa hay, wild rice, and rangeland. The largest commodity surrounding the basin, managed primarily by the federal government, is the timber stands of

conifer forests and juniper that make up the majority of the watershed feeding the Pit River and other tributaries entering the Basin. Timber management is subject to federal and state regulations and can change drastically over time, due to the inconsistent practices of land management in these areas this is a concern for the Big Valley groundwater basin.

Historically, the primary economic stimulus for the basin was a robust timber industry. Due to increased environmental regulations, the timber industry has been diminished over time which has caused a great economic hardship to the Big Valley communities. The loss of jobs and the timber yield tax, which had historically provided financial support to the small rural schools, is evident in the many vacant building which once had thriving businesses. In addition to the loss of jobs, the reduced student enrollment in local schools has caused an economic hardship to the school district and is struggling to remain viable. The change in land management, has transformed a once thriving community to a "disadvantaged" and "severely disadvantaged" community as defined by the Department of Water Resources (DWR). The addition of the Sustainable Groundwater Management Act (SGMA), may increase the severity of the disadvantaged and severely disadvantaged communities in the Basin due to increased regulatory costs and may intensify rural decline.

In addition to timber, agriculture has been a consistent economic industry in the Big Valley basin. Many of the families who ranch and farm the land today, have sustained multi-generational operations cultivating the land for over a century. The ranchers and farmers have developed strategies to enhance the land with not only farming and ranching in mind, but also partnerships with agencies such as the Natural Resources Conservation Service (NRCS) and the U.S. Fish and Wildlife Partners for Fish and Wildlife Program to maintain and improve the condition of privately-owned land for the enhancement of plant and animal populations while addressing invasive plant and pest concerns. The Ash Creek Wildlife Refuge is an example of a local rancher who provided land for conservation efforts with an understanding that managed lands promote wildlife enhancement for the enjoyment of all. Farmers and rancher are continuing to implement innovative science-based practices to improve the overall condition of the Basin.

### *Modoc and Lassen County Coordination*

The Lassen and Modoc Groundwater Sustainability Agencies (GSA's) developed a Memorandum of Understanding (MOU) which detailed the coordination between the two GSA's. The MOU stated a Big Valley Advisory Committee (BVAC) was to be established to provide local input and direction on the development of a Groundwater Sustainability Plan (GSP). The Lassen and Modoc County GSA's solicited for applicants from their county to serve on the committee. The application process was open to all residents of the Big Valley basin and after an extensive public outreach process for applicants, the GSA's appointed two (2) local members and one (1) GSA member for each county. The Big Valley Advisory Committee has dedicated countless hours to reviewing the data and content of the Groundwater Sustainability Plan.

## *Sustainability Goal*

After careful consideration of all the available data and community input from interested parties, the GSA's have developed the following 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.***

The Big Valley basin sustainability goal will be culminated through a better understanding of the surface water and groundwater conditions over time. Several areas of identified data gaps have been established and while an estimated future water budget has been completed, its accuracy is uncertain since many assumptions had to be made due to the lack of available data. The monitoring network established under this plan including new and existing monitoring wells, inflow/outflow measurement of surface water, groundwater quality, land subsidence, understanding upland recharge, and an improved estimate of crop water use will collectively provide the GSA's a better understanding of the basin water budget and timely information regarding any changes or trends that may affect future beneficial uses of groundwater.

The implementation of projects such as winter recharge studies currently in progress will establish the feasibility of immediate actions the GSA's can take to improve basin conditions. A detailed off-season water budget has not been conducted on the Upper Pit River watershed and this has been identified as a data gap within the basin. The GSA's are working to locate funds to support an off-season and storage capacity water accounting to be conducted which will provide the amount of available surface water for potential winter recharge in the Basin. Additional research will be conducted on the available use of non-active surface water rights for storage. An additional stream gage is being installed at the top of the groundwater basin and will provide a more accurate reading of the amount of surface water entering the Big Valley basin from the Pit River. In addition, a surface water assessment is being conducted to understand if there are additional gaging locations which will benefit data collection and improve the accuracy of the water budget.

The understanding that has been gained by the GSA's is that with proper management and coordination with federal land owner partners, the Big Valley basin will remain sustainable for the benefit of all interested parties.

# 7.3 Undesirable Results

Undesirable results must be described for each sustainability indicator. To comply with §354.26 of the Regs, the narrative for each applicable indicator includes:

- *Description* of the "significant and unreasonable" conditions that are undesirable.
- Potential *causes* of the undesirable results.
- *Criteria* used to define when and where the effects are undesirable.
- Potential *effects* on the beneficial uses and users of groundwater, on land uses and property interests.

## 7.3.1 *Chronic lowering of groundwater levels*

For this section, it is necessary to understand that it is natural (and expected) that ground water levels will rise and fall over multiple years. This cycle is naturally occurring. The Big Valley Groundwater Basin, like all of California, is affected by drought periods. Of course, the GSAs do not have direct control over drought, but the GSAs can, and are, enacting various projects to improve management the drought periods experienced in the Basin (see Chapter 9, Projects and Management Actions). Monitoring groundwater levels also helps the GSAs to understand and recognize declining groundwater levels that may not be directly attributed to drought.

This section summarizes possible impacts from the chronic lowering of groundwater levels, introduces the groundwater levels sustainability indicator adopted through this GSP and summarizes some of the public interaction and dialogue that went into development of said sustainability indicator. Chapter 11 (Notice and Communications) documents the GSP development process more thoroughly. Also pertinent to this section is Chapter 5 (Groundwater Conditions), which details the historic water level trends and conditions.

Over the 2000 to 2018 timeframe, a drought period with significantly lower than average precipitation, 21 wells were monitored and water levels in 12 wells rose slightly or remained stable (positive trend or negative trend of 1 ft/yr or less) and 9 wells had declining water levels (downward / negative trend exceeding 1 ft/yr up to maximum of 3.1 ft/yr). Through public outreach, coordination with the Big Valley Groundwater Basin Advisory Committee (BVAC), and development of this GSP, it has been determined that historic water levels have not lowered to a level that is considered significant and unreasonable by the GSAs. In summary, there has not been widespread reports of wells becoming inoperable and agricultural producers have continued their longstanding practices. Again, this current and historic understanding of the Basin is discussed in other sections of this GSP.

As such, the measurable objective established in this section is set at the 2015 groundwater level for each well in the monitoring network (see chapter 8) because 2015 is the first year that SGMA became applicable. Moreover, 2015 is generally the lowest water level throughout the historic period of record, and, therefore, SGMA does not allow a higher (although potentially justifiable) measurable objective. As such, it has been determined that the 2015 groundwater levels provide the most appropriate measurable objective because of the limited negative results experienced in

the basin at this level. As detailed in chapter 5, there is insufficient justification for the establishment of a measurable objective at a higher groundwater level.

Through a coordinated online and in-person public outreach process performed with the BVAC, interested parties have determined that 150 feet below the Fall 2015 baseline level(s) is a conservative estimate of when pumping costs would exceed the value of the water for agricultural pursuits. In setting this level, it is recognized that there are currently data gaps that may necessitate adjustment of the minimum threshold at the five-year mandated update. A discussion regarding current data gaps can be found in section ____ (_____) of this GSP. The 150-foot minimum threshold has been recommended by the BVAC through public participation because it has been determined that lowering of levels in excess of 150 feet below 2015 would negatively and severely affect agricultural production. Pumping costs at that depth would likely result in a significant percentage of the agricultural production in the Basin becoming unprofitable (possible inclusion of analysis from Duane Conner regarding pumping costs at various depths). Thus, lowering of levels in excess of 150 feet below the 2015 level has been determined to be "significant and unreasonable."

The other sections of this chapter will discuss impacts to other sustainability indicators that may result if groundwater levels go more than 150 feet below the 2015 level. However, this section will briefly discuss possible impacts to domestic water users if levels fell by that amount. It is recognized that domestic wells are typically not as deep as agriculture or production wells. Despite this understanding, the minimum threshold was nonetheless set at 150 feet because, if the minimum were set at a higher level, it is likely that agricultural production in the Basin would be severely impacted. Agricultural producers need the operational flexibility to operate in the long drought periods experienced in California.

## Description

Agricultural production is the economic base of the community (see Chapter 1). If agricultural production were impacted to the degree expected if a higher minimum threshold were set, many of the residential wells would go into disuse because there would not be a need for those residences. The supporting agricultural economic base would not be present and a large part of the population would have to migrate out of the Basin. This disuse of said domestic well would not be because the well become inoperable. However, the beneficial use of the groundwater by many domestic users would still be impacted if the minimum threshold were set at a level that precluded successful agricultural production. A limited discussion regarding this dependency of the local economy on agriculture is found in Chapter 1 of this GSP (Introduction to Big Valley GSP).

Other plans, policies, and ordinances, not in the purview of this GSP, attempt, where feasible, to diversify the economic base of the community (e.g. County government). Again, the need and justification for such diversification is not the subject of this GSP. For this GSP, this interdependence is simply acknowledged. Accordingly, for this GSP, it has been determined that

it is more effective to mitigate impacts (where feasible) to domestic users for the establishment of a 150-foot minimum threshold, than it is to attempt to mitigate the impacts to agricultural producers (and by default other beneficial users) if they are deprived of the operational flexibility required to operate.

The sustainability goal recognizes the above-described importance of agriculture and the economic, cultural, and environmental benefits derived from agriculture in Big Valley. The goal recognizes the importance to sustain agriculture for its own benefit, but also the importance of agriculture to support other users (e.g. domestic, municipal, etc.). It cannot be overstated that residential use of groundwater in the Big Valley Groundwater Basin would be greatly diminished without the economic base provided to the community through agriculture. For agricultural pursuits to be viable, growers need a large margin of operational flexibility (see **Figure 7-2**) so that crops can be irrigated even during dry years. Accordingly, and consistent with the goal, 150 feet below the 2015 groundwater level was established as the minimum threshold. Significant and unreasonable lowering of groundwater levels is defined as the level where the energy cost to lift groundwater exceeds the economic value of the water for agriculture. (consider possible inclusion of Duane Conner's pumping data).

### Causes

Long term sustainability of groundwater is achieved when pumping and recharge are measured and balanced over multiple wet and dry cycles. When the groundwater pumping exceeds recharge, groundwater levels may decline. Similarly, when recharge exceeds pumping, groundwater levels may rise. Lower than average precipitation and snowpack over the last 20 years has resulted in declining groundwater levels in some parts of the Basin. A similar period of declining water levels occurred in the late 1980's through the middle of the 1990's. In the late 1990's, several years in a row of above average precipitation caused groundwater levels to fully recover. Future wet periods, enhanced recharge, increased storage, and addressing data gaps will likely cause groundwater levels to experience a similar recovery and maintain balance within the basin.

### Criteria

It is recognized that groundwater levels naturally fluctuate. That said, the GSAs have determined that some actions may be justified even before levels fall below the minimum threshold. Thus, the protocol discussed in this section have been developed to assist the GSAs in the identification of areas within the Basin where management actions and projects should be considered (see chapter 9, Projects and Management Actions). The GSAs define the analysis discussed below as an "Action Level." Action Levels are independent of the GSP regulatory requirements and are entirely at the discretion of the GSAs. Therefore, the definition of the term "Action Level" is also at the discretion of the GSAs. "Action Levels" and the associated protocol are defined as follows:

"Action Levels": When monitoring within the established monitoring network identifies the following ground water level trends, targeted projects or management actions may be considered, at the discretion of the GSAs. This protocol is operative after more than 1/3 of the wells included in the monitoring network (chapter 8) decline below the measurable objective (e.g. the fall 2015 baseline levels) for 5 consecutive years. The measured decline in said wells must be greater than 3 times the average decline that well experienced between 2000 and 2018 as shown in Appendix 7B, or water level declines must be more than 5 feet in one year at a representative well.

#### Effects

As discussed above, if groundwater levels were to fall below the minimum threshold, pumping costs would render agricultural pursuits in the affected areas unviable. Without agriculture, the unique culture, character of the community, and quality of life for Big Valley residents would be drastically changed. Reductions in agriculture would also affect wildlife who use irrigated lands as habitat and feeding grounds.

Low water levels could cause wells to go dry, requiring deepening, redrilling, or a new water source. This effect would be offset by a shallow well mitigation program, which would apply to wells that have gone dry because water levels have fallen below the measurable objective. Substandard (e.g., hand-dug wells) would not qualify for mitigation. Mitigation would rely on a "good neighbor" practice already demonstrated in the Basin and any state or federal funding that may be secured.

### 7.3.2 *Groundwater storage*

The discussion and analysis regarding groundwater levels is directly related to groundwater storage. The groundwater levels for the fall 2015 measurement for each of the wells in the monitoring network (see chapter 8, Monitoring Network) is established as the measureable objective for groundwater storage (identical to the groundwater levels measurable objective). The measurable objective is established at this level for storage for the same reasons discussed in the groundwater levels section. In summary, through public outreach, coordination with the BVAC, and analysis of available data, the GSAs have determined that groundwater storage has not reached significant and unreasonable levels historically. Similar to the groundwater levels minimum threshold, the minimum threshold for groundwater storage is established at 150 feet below the above measurable objective. The minimum threshold is set at this level for the same reasons discussed in the groundwater levels section.

Chapter 5 contains estimates of groundwater storage from 1983 to 2018 using groundwater contours from each year. During this period, as estimated using these contours, storage has fluctuated between a high of about 5,390,000 acre-feet in fall 1983 (and 1999) to a low of 5,214,000 acre-feet in Fall 2015. While groundwater conditions are shown to have lowered based

on the 20-year period being used, a local expert reviewed the hydrographs of wells throughout the Big Valley basin and found that over a thirty-seven-year period, the level of groundwater decline was less than XX feet (Duane Conner personal communication, April 7, 2021). This further illustrates the possibility of data gaps. The data gaps discussed in the groundwater levels section also apply to groundwater storage. The GSAs will work to correct these data gaps where possible (dependent primarily on the availability of state and local funding).

### Description

Like groundwater levels, significant and unreasonable reduction in groundwater storage is defined as a level that results in the energy cost to lift the groundwater exceeding the economic value of the water for agriculture or a significant number of domestic wells are affected.

### Justification of Groundwater Elevations as a Proxy

Again, the use of groundwater elevations as a substitute metric for groundwater storage is appropriate because change in storage is directly correlated to changes in groundwater elevation.

### Causes

Long-term sustainability of groundwater is achieved when pumping and recharge are measured and balanced over multiple wet and dry cycles. When the groundwater pumping exceeds recharge, groundwater levels may decline. Similarly, when recharge exceeds pumping, groundwater levels may rise. Lower than average precipitation and snowpack over the last 20 years has resulted in declining groundwater levels in some parts of the Basin. A similar period of declining water levels occurred in the late 1980's through the middle of the 1990's. In the late 1990's, several years in a row of above average precipitation caused groundwater levels to fully recover. Future wet periods, enhanced recharge, increased storage, and addressing data gaps will likely cause groundwater storage to experience a similar recovery and maintain balance within the basin.

### Criteria

As said, the measurable objective and the minimum threshold for groundwater levels and groundwater storage is exactly the same. The monitoring network described in chapter 8 is also exactly the same for both groundwater levels and storage. As such, the GSAs will use the voluntary and discretionary "Action Level" protocol described in the groundwater level section as a technique to improve management of groundwater when groundwater storage is below the measurable objective but above the minimum threshold.

### Effects

Please refer to the "Effects" discussion in the groundwater levels section of this chapter, as the content in both sections is exactly the same.

### 7.3.3 *Seawater intrusion*

§354.26(d) of the GSP Regs states that "An agency that is able to demonstrate that Undesirable Results related to one or more sustainability indicators are not present and are not likely to occur in a basin shall not be required to establish criteria for undesirable results related to those sustainability indicators."

The BVGB is not located near an ocean and ground surface elevations are over 4000 feet above mean sea level. Seawater intrusion is not present and is not likely to occur. Therefore, SMCs are not required for seawater intrusion as per §354.26(d) cited above.

### 7.3.4 *Degraded water quality*

The Big Valley groundwater basin is in one of the most remote and untouched areas of California. The sparsely populated valley has a rich biodiversity of wildlife and native species found on the privately-owned agriculture property throughout the basin. The Basin is predominantly used for low intensity and low value agriculture crops such as pasture, grass and alfalfa hay, and native rangelands. The selection of agricultural crops is due to the shorter growing season and colder temperatures which prevent the expansion of crop diversity within the basin. While this climate is considered a challenge to farmers and ranchers, it benefits the existence of excellent water quality within the Big Valley groundwater basin.

As described in Chapter 5, the groundwater quality conditions in the Basin are over all excellent (DWR 1963, USBR 1979). After a review of the best available data on water quality in the Basin, it was discovered that all of the constituents which were elevated above suitable thresholds are naturally occurring. There has been no increase in the level of concentrations over time, and several constituents have indications of improvement in recent decades compared to concentrations in the 1950's and 1960's (e.g. Arsenic and Manganese Figures 5-8 and 5-10). While the water quality is considered excellent in the Basin, water quality is an important issue to both agricultural and domestic users within the basin and they are working in coordination to retain the existence of excellent water quality. In 2018, the Upper Pit River Watershed Integrated Regional Water Management Plan 2017 Update was completed. This document conducted a thorough analysis of the entire Pit River Watershed and found no water quality issues within the Big Valley groundwater basin.

Agricultural users have partnered with agencies such as the Natural Resource Conservation Services (NRCS) to implement on site programs which are designed to improve water quality as detailed in Chapter 9 – Projects and Management Actions.

Domestic water users are also assisting in improving water quality within the basin through the community action. Through the civic process, Big Valley residents were engaged in the development of the Modoc county ordinance to deter outdoor marijuana grows and the unpermitted use of pesticides and rodenticides which may make their way into the groundwater and surface water. The domestic water users are also actively seeking to assist in code enforcement and reduce in amount of harmful debris within the Big Valley communities that

may cause water quality issues. Public outreach through the offices of Public Health, Environmental Health, and the Regional Recycling Group Recycle (RRG) Used Oil and Filter Campaign to assist in maintaining excellent water quality. These outreach efforts are further discussed in Chapter 9 – Projects and Management Actions.

The Sustainable Groundwater Management Act was not intended to regulate groundwater quality but to work in coordination with the many other programs and agencies who are tasked to maintain excellent water quality in the Basin. Below is a list of the many other programs currently being implemented to address water quality:

**Irrigated Lands Program (ILRP)** was initiated in 2003 to prevent agricultural runoff from impairing surface waters, and in 2012, groundwater regulations were added to the program**.**

**Waste Discharge Requirements Program -** Also known as the Non-Chapter 15 Permitting, Surveillance and Enforcement Program, is a mandated program issuing WDRs to regulate the discharge of municipal, industrial, commercial and other wastes to land that will or have the potential to affect groundwater.

**Central Valley Salinity Coalition (CVSC)** represents the stakeholder groups working with the Board in the CV-SALTS collaborative basin planning process.

**Basin Plans** - is adopted by the Regional Water Board and approved by the State Water Resources Control Board (State Board), and the Office of Administrative Law (OAL). The United State Environmental Protection Agency (USEPA) approves the water quality standards contained in the Basin Plan, as required by the Clean Water Act.

**Title 27 Program** - Effective July 1, 2018, various sections of California Code of Regulations, Title 27 were revised. Revisions to Title 27 were necessary in order to reorganize**,** update and incorporate new parameters for administering the Unified Program and accomplishing the objectives of coordination**,** consolidation**,** and consistency in the protection of human health**,** safety**,** and the environment**.**

**Total Maximum Daily Load Program (TMDL) Program -** TMDLs are established at the level necessary to implement the applicable water quality standards.

**Oil Field Program -** The USGS California Water Science Center is working in partnership with state and federal agencies to answer questions about oil and gas development and groundwater resources.

**Underground Storage Tank Site Cleanup Program (UTS) –** The purpose of the UST Program

is to protect the public health and safety, and the environment from releases of petroleum and other hazardous substances from USTs.

**National Pollutant Discharge Elimination System (NPDES) -** The NPDES permit program, created in 1972 by the Clean Water Act (CWA), helps address water pollution by regulating point sources that discharge pollutants to waters of the United States. The permit provides two levels of control: technology-based limits and water quality-based limits (if technology-based limits are not sufficient to provide protection of the water body).

**Nonpoint Source Program (NSP) – NSP** focuses and expands the State's efforts over the next 13 years to prevent and control nonpoint source pollution. Its long-term goal is to implement management measures by the year 2013 in order to ensure the protection and restoration of the State's water quality, existing and potential beneficial uses, critical coastal areas, and pristine areas. The State's nonpoint source program addresses both surface and ground water quality.

Section 5.4 also details the know groundwater contamination sites and plumes located in Bieber and NuBieber. These sites are currently being regulated by the Regional Water Quality Control Board (RWQCB) and contaminants associated with these sites have not been found in the main part of the aquifer, specifically the town of Bieber.

Due to the existence of excellent water quality in the basin, significant amount of existing water quality monitoring, and a robust effort to conduct conservation efforts by agricultural and domestic users, per §354.26(d), SMCs were not established for water quality degradation because Undesirable Results are not present and not likely to occur. At the 5-year updates of this GSP, data from various existing programs, including the RWQCB sites, public supply wells (regulated by the Division of Drinking Water), and electrical conductivity transducers installed by the GSAs at three wells (BVMW 1-2, 4-1, and 5-1) will be assessed to determine if degradation trends are occurring in the principal aquifer. At the five-year update, SMCs will be considered only if the trends indicate that undesirable results are likely to occur in the subsequent five years.

### *7.3.6 Land subsidence*

Local input provided at public outreach meetings identified areas of agricultural land leveling operations that were shown on the InSAR map as subsidence. The specific identified areas of subsidence are considered acceptable and necessary agricultural operations to promote efficient irrigation. Similar situations may occur throughout the basin and if identified through InSAR will be investigated. As detailed in Chapter 5, very minor areas of land subsidence have been observed in the Basin by the Continuous Global Positioning System site near Adin (CGPS P347, -0.6 inches over 11 years) and by the InSAR data provided by DWR (maximum of -3.3 inches over 4 years). The cause of these downward displacements has not been determined conclusively. Some subsidence is natural and unavoidable due to the movement of Tectonic

plates. Minor additional subsidence is acceptable in the absence of impacts on infrastructure (roadways, railroads, conveyance canals, and wells among others) or an increase in the flood risk.

Continued groundwater operations would cause only an additional 3 inches of subsidence over the next five years, which would not be likely to have significant impacts on infrastructure or flood risk. 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 updates of this GSP, data from GPS P347 and InSAR data provided by DWR will be assessed for notable subsidence trends that can be correlated with groundwater pumping. SMCs and undesirable results for subsidence will be established at the five-year update only if trends indicate significant and unreasonable subsidence is likely to occur in the subsequent five years.

### 7.3.5 *Depletion of interconnected surface water*

The Big Valley Groundwater basin has multiple streams which enter on the West and East portions of the basin. These streams are some of the most remote, least improved, and most pristine surface waters in all of California. All of the snow fed high desert streams entering into the basin have a seasonal hydrograph and can experience natural periods of reduced flows or complete cessation of flows late in the summer season or during drought periods. The Upper Pit River enters on the North portion of the basin and is also considered a snow fed high desert river which has had documented periods of reduced flows or a complete cessation of flow during drought periods.

The rivers and streams of the Basin are an important and vital resource for all interested parties. The agricultural industry has an extensive history of surface water use in the basin and has sustainably operated for over a century. Many of the surface water rights on farms and ranches are pre-1914 water rights. For all interested parties, there is need for a greater understanding of the possibility of the depletion of interconnected surface water in the Basin. It is nearly impossible to quantify surface water depletion impact based on flow alone, even in an area where there is good data, such as pumping quantity, deep aquifer groundwater elevation, precipitation, and surface flow. Many of these criteria are current data gaps in the Basin. Uncertainty in the amount of surface water entering the Basin has already been established and will continue to be a barrier in immediately determining if there is a depletion of interconnected surface water. Pumping data in the basin is also a data gap as there is no current monitoring system which annually measures the amount of water pumped. The connection between upland recharge areas and the unique volcanic geologic features surrounding the Basin are mostly unknown and make understanding the connectivity of surface and groundwater very difficult.

Furthermore, the number of wells located next to streams and the river in the basin are not quantified. While chapter 5 details the streams in Big Valley which may be interconnected by a "…continuous saturated zone to the underlying aquifer and the overlying surface water…". (DWR 2016), conclusive evidence of stream interconnection is not available. Therefore, there is a lack of evidence for depletions of streams. Figure 5-18 overlays the general direction(s) of

groundwater flow around the basin in relation to the major perennial streams. Also shown is the general direction of flow determined from the newly constructed well clusters near Adin and Lookout. The remaining clusters were constructed later and do not yet have a sufficient period of data to determine flow directions with certainty. The newly constructed monitoring wells will continue to gather data regarding the interconnection of surface water.

Chapter 4 identified data gaps related to the effect of Ash Creek, Pit River, and smaller streams on recharge. These data gaps may partially be filled once adequate data from the five monitoring well clusters are collected. Scientific research related to groundwater and surface water will improve over time. As this science is made available, the GSA's will work to locate funding for improved data depending on available staffing and financial resources.

Agricultural users have partnered with agencies such as the Natural Resource Conservation Services (NRCS) to implement on site programs which are designed to improve water conservation in the riparian area. These projects are detailed in Chapter 9 – Projects and Management Actions.

Due to the absence of data supporting undesirable results in the basin, significant history of wet and dry periods of stream flow and an established effort to conduct conservation efforts, per §354.26(d), SMCs were not established for interconnected surface water because Undesirable Results are not present and not likely to occur. At the 5-year updates of this GSP, data from newly established well clusters, new and historic stream gages, and the monitoring network detailed in chapter 9 will be assessed to determine if undesirable trends are occurring in the principal aquifer. At the five-year update, SMCs will be considered only if the trends indicate that undesirable results are likely to occur in the subsequent five years.

## 7.4 Management Areas

Management areas are not being established for this GSP.

## 7.5 References

Big Valley Advisory Committee (BVAC), 2021. During BVAC meetings, committee members have offered first-hand accounts of the widespread use of agricultural lands by waterfowl for feeding, while primarily using the state wildlife area for refuge.

Department of Water Resources (DWR), 1963. Northeastern Counties Ground Water Investigation. Bulletin 98.

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United States Bureau of Reclamation (USBR), 1979. Ground-Water Geology and Resources Appendix, Allen Camp Unit, California, Central Valley Project, California, Pit River Division, Allen Camp Unit, Definite Plan. October 1979.

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[ii] *Neasham, Ernest (1985). Fall River Valley An Examination of Historical Sources. Sacramento CA: The Citadel Press. p. 10.*

[iii] U.S. Geological Survey Geographic Names Information System: Adin, California

[iv] "State & County QuickFacts". United States Census Bureau. Archived from the original on July 28, 2011. Retrieved April 4, 2016.

Water quality
California Oil, Gas, and Groundwater (COGG) Program (usgs.gov)
CAWSC COGG (usgs.gov)
Total Maximum Daily Load Program - Background & Information | California State Water Resources Control Board
Underground Storage Tank Program - Cleanup | California State Water Resources Control Board
California NPS - Nonpoint Source Pollution - Water - Region 9 - EPA
About NPDES | National Pollutant Discharge Elimination System (NPDES) | US EPA