



**Bear Valley Basin**  
**Groundwater Sustainability Agency (BVBGSA)**  
C/O City of Big Bear Lake, Department of Water and Power  
Attention: Reginald A. Lamson  
PO Box 1929 Big Bear Lake, CA 92315

## **Meeting Agenda**

Board Meeting held at  
Big Bear City Community Services District  
139 E Big Bear Blvd, Big Bear, CA 92314  
October 4, 2019 at 4:00 pm

In compliance with the Americans with Disabilities Act, if you are a disabled person and you need a disability related modification or accommodation to participate in this meeting, please contact Reggie Lamson at (909) 866-5050. Requests must be made as early as possible and at least one full business day before the start of the meeting. Documents and material relating to an open session agenda item that are provided to the Board of Directors not less than 72 hours prior to a regular meeting will be available for public inspection and copying at 41972 Garstin Drive, Big Bear Lake, CA 92315 or on our web site at [bvbgsa.org](http://bvbgsa.org).

### **BOARD MEMBERS**

Bob Ludecke, Chairman  
John Green, Vice Chairman  
Craig Hjorth, Treasurer  
James Miller, Secretary

### **OPEN SESSION**

### **CALL MEETING TO ORDER**

### **PLEDGE OF ALLEGIANCE**

### **PUBLIC FORUM**

The public may address the Board by completing a speaker card. All remarks shall be addressed to the Board as a body only. There is a three minute maximum time limit when addressing the Board. Please note that California law prohibits the Board from taking action on any item not appearing on the agenda.

### **1. CONSENT CALENDAR**

**1.1 Approve Minutes of the Board Meeting Dated May 7, 2019**

### **2. ITEMS REMOVED FROM CONSENT CALENDAR**

### **3. DISCUSSION/ACTION ITEMS**

#### **3.1 Approve Agreement for the preparation of the Bear Valley Basin Groundwater Sustainability Plan (GSP)**

Board to review and considering approving an Agreement for the GSP.

#### **3.2 Approve the Amended and Restated Memorandum of Understanding (MOU)**

Board to review and consider approving an amended and restated MOU.

#### **3.3 Resolution No. 2019-XX – Adopt Santa Ana Watershed Project Authority (SAWPA) One Water One Watershed (OWOW) Plan Update 2018**

Board to discuss and consider adopting the SAWPA OWOW Plan Update 2018, the integrated Regional Water Management Plan for the Santa Ana River Watershed.

#### **3.4 Replenish Big Bear Workshop for Local Agency Boards**

Board to discuss and consider setting a date for the next Replenish Big Bear Workshop.

#### **3.5 Public Notice of BVBGSA Meetings and Workshops in the San Bernardino Sun**

Board to discuss and consider whether to publish notices of BVBGSA meetings and workshops in the San Bernardino Sun.

#### **3.6 Management and Board Member Discussion**

Board members and/or staff to identify matters for future BVBGSA Agenda Items.

### **ADJOURNMENT**

**BOARD OF BEAR VALLEY BASIN  
GROUNDWATER SUSTAINABILITY AGENCY**  
**MEETING MINUTES**  
**May 07, 2019**

**OPEN SESSION**

A meeting of the Bear Valley Basin Groundwater Sustainability Agency Board of Directors was called to order at 4:00 p.m. on May 7, 2019 by Chairman Ludecke at 139 E. Big Bear Boulevard, Big Bear City, California 92314.

**BOARD MEMBERS PRESENT:**

Bob Ludecke, Chair  
John Green, Vice Chair  
Craig Hjorth, Treasurer  
Jim Miller, Secretary

**PLEDGE OF ALLEGIANCE**

Jim Miller, Secretary

**PUBLIC FORUM:**

No comments from the public.

Chair Ludecke thanked Liz Harris for her contribution to the BVBGSA Board and welcomed Jim Miller to the BVBGSA Board.

**1. ELECTION OF BOARD OFFICERS AND MEETING LOCATION FOR 2019**

*Motion made by Treasurer Hjorth, seconded by Vice-Chair Green and carried 4-0 to elect Bob Ludecke as Chair.*

*AYES: Ludecke, Green, Hjorth, Miller*

*NOES: -*

*ABSTAIN: -*

*Motion made by Secretary Miller, seconded by Treasurer Hjorth and carried 4-0 to elect John Green as Vice Chair.*

*AYES: Ludecke, Green, Hjorth, Miller*

*NOES: -*

*ABSTAIN: -*

*Motion made by Vice Chair Green, seconded by Secretary Miller and carried 4-0 to elect Craig Hjorth as Treasurer.*

*AYES: Ludecke, Green, Hjorth, Miller*

*NOES: -*

*ABSTAIN: -*

*Motion made by Vice Chair Green, seconded by Treasurer Hjorth and carried 4-0 to elect Jim Miller as Secretary.*

*AYES: Ludecke, Green, Hjorth, Miller*

*NOES: -*

*ABSTAIN: -*

*Motion made by Treasurer Hjorth, seconded by Vice Chair Green and carried 4-0 to hold BVBGSA Board Meetings at Big Bear City Community Services District for Fiscal Year 2019/20.*

*AYES: Ludecke, Green, Hjorth, Miller*

*NOES: -*

*ABSTAIN: -*

## **2. CONSENT CALENDAR**

### **1.1 Approve Minutes of Board Meeting Dated May 30, 2018.**

### **1.2 Approve Minutes of the Replenish Big Bear Workshop Dated July 17, 2018**

*Motion made by Vice Chair Green, seconded by Treasurer Hjorth and carried 3-0 to approve the Consent Calendar.*

*AYES: Ludecke, Green, Hjorth*

*NOES: -*

*ABSTAIN: - Miller*

## **3. ITEMS REMOVED FROM CONSENT CALENDAR**

None

## **4. DISCUSSION/ACTION ITEMS**

### **4.1 Present Audit for Fiscal Year 2017/18**

Board confirmed that there were no negative comments in the Audit.

*Motion made by Treasurer Hjorth, seconded by Secretary Miller and carried 4-0 to adopt the Audit as presented for Fiscal Year 2017/18.*

*AYES: Ludecke, Green, Hjorth, Miller*

*NOES: -*

*ABSTAIN: -*

### **4.2 Independent Audit Services**

Board discussed the evaluation of proposals was qualification based and that the recommended audit firm was also the lowest price.

*Motion made by Treasurer Hjorth, seconded by Vice Chair Green and carried 4-0 to award Lance, Sol & Lunghard a three-year audit services and preparation of the Controller's Report agreement.*

*AYES: Ludecke, Green, Hjorth, Miller*

*NOES: -*

*ABSTAIN: -*

### **4.3 Water Quality Testing Expenses for the Replenish Big Bear Project**

Board discussed there are two types of water quality testing required for the Replenish Big Bear Project: (1) BBARWA's influent and effluent; and (2) MWD's lake water quality and the potential impact on groundwater. Both BBARWA and MWD will collect the water samples and send the samples out for laboratory analysis. The Board also discussed that staff is attempting to obtain grant funds for preliminary costs associated with the Replenish Big Bear Project.

*Motion made by Secretary Miller, seconded by Treasurer Hjorth and carried 4-0 to approve revising the Environmental Impact Report and preliminary engineering budget for the Replenish Big Bear Project to \$2.0M.*

*AYES: Ludecke, Green, Hjorth, Miller*

*NOES: -*

*ABSTAIN: -*

#### **4.4 Ratify Adoption of Memorandum of Understanding (MOU) for Cost Sharing Procedures**

Board discussed and confirmed the MOU includes the recent vote to approve additional funds for the engineering budget and that any change to the cost sharing procedures requires a new MOU.

*Motion made by Treasurer Hjorth, seconded by Vice Chair Green and carried 4-0 to ratify the cost sharing MOU.*

*AYES: Ludecke, Green, Hjorth, Miller*

*NOES: -*

*ABSTAIN: -*

#### **4.5 Replenish Big Bear Workshop for Local Agency Boards**

Board received an update from the Administrator regarding grant funding opportunities with Santa Ana Watershed Project Authority (SAWPA) and the United States Bureau of Reclamation (USBR). Also, the General Managers of the Local Agencies shared they will be visiting the California State Assembly Budget Subcommittee on May 8, 2019 to discuss grant funding opportunities for the Replenish Big Bear Project.

*Motion made by Secretary Miller, seconded by Vice Chair Green and carried 4-0 to hold a second workshop with the Local Agency Boards and the public in August/September 2019 with the date to be determined.*

*AYES: Ludecke, Green, Hjorth, Miller*

*NOES: -*

*ABSTAIN: -*

#### **4.6 Relationship Between the BVBGSA and the Replenish Big Bear Project**

Board discussed and requested that when a staff member from any of the four Local Agencies will be speaking about the Replenish Big Bear Project, they let the Board know. The Board also requested an email contact list for the Board and Local Agency staff.

#### **4.7 DWR Bear Valley Basin Reprioritization Update**

Board discussed that the Bear Valley Basin is being recommended by the Department of Water Resources to be reprioritized as from "Medium" to "Very Low".

#### **4.8 BVBGSA Website**

The Board discussed and agreed to create a BVBGSA website and that the BVBGSA website would contain links to the Local Agencies websites and be maintained by the DWP.

*Motion made by Vice Chair Green, seconded by Treasurer Hjorth and carried 4-0 for BVBGSA to have a website, hosted by WIX, maintained by DWP for up to \$1,000 a year.*

*AYES: Ludecke, Green, Hjorth, Miller*

*NOES: -*

*ABSTAIN: -*

#### **4.9 Budget Alternatives for Fiscal Year 2019/20**

The Boar discussed items to be included in the FY2019/20 BVBGSA Budget and instructed staff to prepare a budget for Board consideration at the next BVBGSA Board meeting.

*Motion made by Treasurer Hjorth, seconded by Vice Chair Green and carried 4-0 to prepare a budget for the BVBGSA for Fiscal Year 2019/20.*

*AYES: Ludecke, Green, Hjorth, Miller*

*NOES: -*

*ABSTAIN: -*

#### **Management and Board Members Discussion**

Vice Chair Green stated that it might be a good idea to also publish notice of BVBGSA meetings and workshops in the San Bernardino Sun. This item will be presented to the full Board for consideration at the next BVBGSA Board meeting.

#### **ADJOURN**

No additional business came before the Board. At 5:10 p.m., Chair Ludecke adjourned the meeting.

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Jim Miller, Secretary to the Board



# Bear Valley Basin Groundwater Sustainability Agency Agenda Report

**DATE:** October 4, 2019

**TO:** Board of Directors

**FROM:** Reginald A. Lamson, Administrator

**RE:** **Award Agreement for a Groundwater Sustainability Plan**

## **Background & Discussion:**

In September 2014, the Sustainable Groundwater Management Act (SGMA) was signed into law to provide for sustainable management of groundwater basins as defined by the California Department of Water Resources (DWR). In May 2017, the Bear Valley Basin Groundwater Sustainability Agency (BVBGSA) was formed as the local Groundwater Sustainability Agency (GSA) for the Bear Valley Basin. In October 2017, the BVBGSA applied for grant funding with the DWR to fund the preparation of a Groundwater Sustainability Plan (GSP) for the Bear Valley Basin.

Based on the award of grant funding from the DWR, on August 29, 2019, the BVBGSA published a comprehensive Request for Proposal (RFP) for the preparation of the Bear Valley Basin GSP. The RFP was published in the local newspaper, local agencies websites, and emailed to interested consultants. Proposals were due by end of day September 27, 2019.

We received a number of emails from consultants declining to submit proposals due to workload and budget concerns. We received one responsive proposal from Thomas Harder & Co. Groundwater Consulting. Thomas Harder has completed groundwater studies, groundwater monitoring programs, and groundwater well construction projects in the Bear Valley for multiple clients for over twenty years. Thomas Harder & Co. is confident that they can complete the GSP for the specified budget.

## **Financial Impact:**

The proposed budget for the Bear Valley Basin GSP is \$177,000 which will be fully funded by grant funds from the California Department of Water Resources.

## **Recommendation:**

Approve Agreement with Thomas Harder & Co. for the preparation of the Bear Valley GSP.

## **Attachment:**

- 1) RFP for the Preparation of the Bear Valley Basin GSP.
- 2) Thomas Harder & Co.'s proposal.

# Request for Proposal for the Preparation of the Bear Valley Basin Groundwater Sustainability Plan

August 29, 2019

Proposal Due Date: September 27, 2019

Bear Valley Basin Groundwater Sustainability Agency





Table of Contents

I. Introduction ..... 3

II. Scope of Work..... 3

    Work Plan..... 5

III. Program Schedule ..... 13

IV. Questions Regarding This RFP ..... 13

V. Proposal Requirements ..... 13

VI. Selection Criteria..... 14

VII. Interview (if needed) ..... 15

VIII. Agreement / Insurance Requirements ..... 15

## I. Introduction

In September 2014, the Sustainable Groundwater Management Act (SGMA) was signed into law and codified at California Water Code, § 10720 et seq. The legislative intent of the SGMA is to, among other goals, provide for sustainable management of groundwater basins and sub-basins defined by the California Department of Water Resources (DWR), to enhance local management of groundwater, to establish minimum standards for sustainable groundwater management, and to provide specified local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater.

In May 2017, in accordance with California Water code § 10723(a), the Bear Valley Basin Groundwater Sustainability Agency (BVBGSA) was formed as a local Groundwater Sustainability Agency (GSA) by way of a joint powers agreement for the Bear Valley Basin (Basin). The BVBGSA is a “local agency” comprised of the Big Bear City Community Services District (BBCCSD), the City of Big Bear Lake Department of Water and Power (BBLDWP or DWP), and the Big Bear Municipal Water District (BBMWD). In October 2017, the Big Bear Area Regional Wastewater Agency (BBARWA) was added to the BVBGSA.

The SGMA requires GSAs in high and medium priority basins to develop and implement a Groundwater Sustainability Plan (GSP). The GSPs are detailed road maps for how groundwater basins will reach long term sustainability. According to the DWR in the DWR Bulletin 118, No. 8-009, the Basin was identified as unadjudicated and designated as a medium priority basin. As such, the BVBGSA was required to develop and implement a GSP.

In October 2017, the BVBGSA authorized a grant application to obtain grant funding from the DWR under the 2017 Sustainable Groundwater Planning Grant Program pursuant to the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1) (Water Code, § 79700 et seq.) to prepare a GSP for the Basin.

## II. Scope of Work

This scope of this project is the preparation of the Bear Valley Basin GSP. The GSP will meet the requirement of Title 23 California Code of Regulations, § 350 through 358.6 and the SGMA (Water Code § 10720 et seq.) as well as subsequent amendments or requirements set forth by the DWR within the GSP development timeframe. The GSP will include a description of the: (1) plan area; (2) basin setting; (3) sustainability management criteria; (4) monitoring program; (5) projects and management actions to achieve sustainability within twenty (20) years; and (6) GSP implementation. It shall meet all procedural and substantive requirements identified in GSP regulations and be completed before May 31, 2020.

Under Water Code § 10723.2, the BVBGSA is to consider the interests of all beneficial uses and users of groundwater in developing and implementing a GSP for the Basin. The BVBGSA has identified the following uses and users whose interest will be considered during the development and operation of the BVBGSA and the development and implementation of the GSP through stakeholder outreach and other mechanisms established by the BVBGSA:

1.  Holders of Overlying Groundwater Rights 
  - Mooncamp Private Well Owners
  - Baldwin Lake Private Well Owners
  - Camp Whittle
  - Camp Oaks
  - Big Bear Shores RV Resort
2.  Municipal Well Operators 
  - Big Bear City Community Services District
  - City of Big Bear Lake, Department of Water and Power
3.  Public Water Systems 
  - God's Country Water Co., LLC
  - North Shore Mutual Water Company
  - The BVBGSA/JPA Member Agencies
    - Big Bear Municipal Water District
    - Big Bear City Community Services District
    - City of Big Bear Lake, Department of Water and Power
    - Big Bear Area Regional Wastewater Agency
4.  Local Land Use Planning Agencies 
  - City of Big Bear Lake
  - County of San Bernardino
5.  Environmental Users of Groundwater 
  - Big Bear Area Regional Wastewater Agency
6.  Surface Water Users 
  - Bear Valley Mutual Water Company
  - Snow Summit and Bear Mountain Ski Resorts
7.  The Federal Government 
  - United States Forest Service
8.  California Native American Tribes 
  - San Manuel Band of Mission Indians
  - Morongo Band of Mission Indians
  - Cahuilla Band of Mission Indians
9.  Disadvantaged Communities 
  - City of Big Bear Lake
  - County of San Bernardino
10.  CASGEM Agencies 
  - City of Big Bear Lake, Department of Water and Power
  - Big Bear City Community Services District

Successful implementation of the Project will result in the development of a GSP that can be used as tool to reasonably and equitably manage the Basin to protect and enhance Basin health by identifying a 20-year sustainability goal and the efforts needed to meet that objective. The GSP sub-objectives are the following:

1. Organize and expand existing datasets into a comprehensive, systematic database to effectively support ongoing collection and analysis of hydrogeological data within the entire Basin.
2. Build upon existing management practices and formalize a standard methodology for the regular analysis and reporting of hydrogeological data to enable informed management decisions regarding groundwater production and water conservation targets within the BVBGSA service area.
3. Identify a 20-year sustainability goal for the Basin and develop an implementation plan with projects and management actions to achieve this goal.

## Work Plan

The Work Plan of the GSP will build upon the existing Ground Water Monitoring and Management Plan (GWMP) developed by the DWP and include the following tasks:

### **Task 1: Project Management**

#### **1.1 Project Management, Progress Reports and Grant Reporting**

- Track and update schedule and budget, as well as provide progress updates to the BVBGSA, interested parties, and the DWR.
- Submit quarterly progress and final reports to the DWR.
- Coordinate with the BVBGSA staff and other outside individuals and agencies with relevant information for GSP development.

#### Deliverable(s)

- Monthly, quarterly, and final progress reports

#### **1.2 GSP Presentations and Document Review Meetings**

- Plan, organize, and conduct calls, meetings and presentations with the BVBGSA for internal review of the GSP development and deliverables.
- Plan, organize, and conduct calls, meetings and presentations with the BVBGSA and interested parties for external review of the GSP development and deliverables. It is anticipated that there will be up to three (3) meetings.

#### Deliverable(s)

- Agendas and meeting materials

### **Task 2: Data Compilation and Organization**

#### **2.1 Data Requests and Review**

- Update and verify existing datasets and organize into a systematic project database to support hydrogeological analyses, conceptual model development, and evaluation of sustainability indicators. The task organizes, updates and expands existing databases including but not limited to:

- Climate and hydrological information (e.g., rainfall amounts, evapotranspiration (ET), surface water flows)
  - Soils, topography, geology
  - Land use mapping
  - Water supply sources and deliveries
  - Hydrogeologic data: well construction data, geologic logs, pumping test information
  - Well locations
  - Groundwater users, uses, and measured and estimated pumping
  - Groundwater levels
  - Water quality data
  - Aquifers and aquitards
  - Streamflow data
  - Satellite imagery
- Conduct a preliminary search for publicly available relevant materials and documents to support GSP development and compile necessary references, including published literature, local agency studies (e.g., water recycling) and planning documents such as the GWMP and General Plans. A list of technical studies and references will be maintained throughout the GSP preparation. Referenced materials that are not generally available to the public would be compiled electronically for submittal to the DWR as identified in **Reg. § 354.4**. Referenced documents are anticipated to include:
- 2003 Groundwater Monitoring and Management Plan
  - BBLDWP and BBCCSD 2015 Urban Water Management Plans
  - Geohydrology of Big Bear Valley, California: Phase 1 – Geologic Framework, Recharge, and Preliminary Assessment of the Source and Age of Groundwater, USGS 2012
  - DWP Technical Review Team meeting materials and minutes
  - 1999 Perennial Yield Study, Geoscience
  - 2001 Perennial Yield Update for DWP, Geoscience
  - 2006 Perennial Yield Update for DWP, Geoscience
  - USGS Perennial Yield Study
  - 2017 Shay Pond Study for CDFW, Harder (includes Erwin subunit water budget)
  - Lake William and North Shore studies
  - Bear Valley Water Sustainability Study, WSC 2016
  - Recycled Water Master Plan, Final Draft Report, CH2MHill 2005
  - City of Big Bear Lake General Plan
  - County of San Bernardino General Plan
- A data request log will be used to track remaining data needs.

#### Deliverable(s)

- GSP supporting data and document database.
- Data request log(s).

## **2.2 Organize Data Management System**

- Develop a data management system (DMS) capable of storing and reporting information relevant to development or implementation of the GSP by **Reg. § 352.6**. This task would

begin with initial data collection efforts and review of existing monitoring programs (Task 2.1) and would be linked closely to development of the monitoring program (Task 3.4), including consistency with the goals and objectives defined for the monitoring program. The DMS will be comprised of Microsoft Excel and/or Microsoft Access databases as well as Geographic Information System (GIS) geodatabases.

#### Deliverable(s)

- DMS

### **Task 3: Plan Contents Preparation**

#### **3.1 Introduction and Administrative Information**

- Document the BVBGSA's legal authorities, and the organization and management structure through which the BVBGSA will prepare the GSP. Summarize an estimate of the costs to implement the GSP and how the BVBGSA plans to meet those costs as identified in Task 5. This step would fulfill requirements of the GSP regulations contained in **Reg. § 354.2-354.6**.

#### Deliverable(s)

- See Task 5

#### **3.2 Plan Area and Basin Setting**

##### *3.2.1 Description of plan area*

- Identify the state, federal, and local agencies in the Basin and describe the authority of each relating to water resources and land use. Develop GIS maps and summarize information on jurisdictions, water purveyor service area, wells in the Basin, and existing land use designations, etc., as detailed in **Reg. § 354.8 a, b**.
- Identify existing monitoring and management programs (**Reg. § 354.8 c, d, e**) and provide a description of how such programs may be incorporated into the GSP, including preliminary evaluation of monitoring networks, data gaps and monitoring protocols and standards. Describe how the BVBGSA will conduct monitoring in the future. Compilation of data and information must adhere to applicable standards for data, reporting, monitoring, and GIS, when applicable (**Reg. § 352**).
- Summarize General Plans, specific plans, and other planning documents affecting land use and water use (**Reg. § 354.6 f**) considering the following: (1) how the land use plans could affect the ability of the BVBGSA to achieve sustainable groundwater management over the planning and implementation horizon; (2) how GSP implementation could affect the water supply assumptions of land use plans; and (3) how implementation of land use plans outside the Basin could affect the ability of the BVBGSA to achieve sustainable management. Additionally, summarize the San Bernardino County (County) well permitting process, local well ordinances, and relevant zoning codes and policies that have been adopted by the County.
- Summarize management elements that may be included per **Reg. § 354.8 g**.

Deliverable(s)

- See Task 5

3.2.2 *Basin setting*

- **Hydrogeologic Conceptual Model (HCM)**

Utilize existing descriptions, cross-sections, and maps to summarize the HCM. Required items to be described are listed in **Reg. § 354.14 (b)**. Description of additional items would be warranted (e.g., climate information) to provide a complete understanding and to support later sections of the GSP. Develop scaled cross sections as required by **Reg. § 354.14 (c)**. Develop maps as required by **Reg. § 354.14 (d)**.

- **Groundwater Conditions**

Use the best available information to document groundwater elevations, groundwater storage, groundwater quality, land subsidence, interconnected surface water systems and groundwater-dependent ecosystems as required by **Reg. § 354.16**. Seawater intrusion is not applicable.

Document groundwater levels (**Reg. § 354.16 (a)**), which are primary indicators of groundwater conditions (and eventual sustainability). Prepare hydrographs in accordance with GSP requirements and to fill critical data gaps. Electronic hydrographs will be submitted to the DWR.

Document groundwater quality (**Reg. § 354.16 (d)**).

Document interconnected surface water systems and groundwater dependent ecosystems (GDEs). In addition, **Reg. § 354.16 (f)** calls for an estimate of the quantity and timing of surface water depletions. Document information available on subsidence (**Reg § 354.16 (e)**).

- **Prepare Water Budgets**

As outlined in **Reg. § 354.18**, the water budget analysis includes:

- Descriptions of inflows, outflows, and change in storage
- Where overdraft conditions occur, quantification of overdraft over a period of average years
- Quantification of current, historical, and projected water budgets
- Description of groundwater supply used or available or groundwater recharge or in-lieu use
- Water budget information needs to be reported in clear and concise tabular and graphical form

Additionally, define the geographic area, groundwater storage, volume and study period(s) used in the water budget analysis.

Quantify basin balance, identify overdraft when and where it occurs, and estimate sustainable yield. (**Reg. § 354.18 (b)**).

### 3.3 Sustainable Management Criteria

- Utilize the hydrogeologic conceptual model, groundwater conditions, and water budgets to define and evaluate sustainability for the Basin per the requirements for developing sustainable Management Criteria as provided in **Reg. Sub article 3, § 354.22 - § 354.30**. Define the sustainability goal, undesirable results, minimum thresholds, measurable objectives and milestones.

- **Sustainability Goal**

Define how groundwater may be managed over the 20-year planning and implementation horizon that culminates in the absence of undesirable results. Summarize information from Task 3.2.2 used to establish the sustainability goal, the measures to be implemented for operation within sustainable yield, and how the sustainability goal is likely to be achieved within 20 years and maintained through the planning and implementation horizon. It is anticipated that this will be based on the previously established sustainable management framework that is currently being implemented by the DWP Technical Review Team.

- **Undesirable Results**

Define undesirable results (**Reg. § 354.26**), by evaluating the five sustainability indicators (all except seawater intrusion) in terms of:

- Chronic lowering of groundwater levels
- Reduction of groundwater storage
- Degradation of water quality, including contaminate migration
- Land subsidence
- Depletion of connected surface water with adverse impacts on beneficial uses

- **Minimum Thresholds**

Quantify minimum thresholds (**Reg. § 354.28**) for each sustainability indicator to define undesirable results. Describe each minimum threshold including: how they were established for each relevant sustainability indicator, how minimum thresholds have been selected to avoid causing undesirable results, how minimum thresholds may affect interests of beneficial uses/users of groundwater or land uses/property interests, and how each minimum threshold will be quantitatively measured for each relevant sustainability indicator.

- **Measurable Objectives**

Establish measurable objectives (**Reg. § 354.30**), or quantifiable goals for the maintenance or improvement of specified groundwater conditions related to each sustainability indicator to achieve the sustainability goal. Establish measurable objectives using the same metrics as for minimum thresholds.

Describe each measurable objective, how the measurable objectives are established for each sustainability indicator, and how a reasonable margin of operational flexibility was established for each measurable objective. A reasonable path also must be described to



achieve and maintain the sustainability goal including a description of interim 5-year milestones for each relevant sustainability indicator.

Deliverable(s)

- See Task 5

### 3.4 Monitoring Network

- Summarize the development of monitoring networks and protocols for the GSP as provided by **Sub article 4 Monitoring Networks** and **Reg. § 352.2 Monitoring Protocols**. Best Management Practices (BMPs) include the Data Quality Objective (DQO) process, through which a monitoring network is designed to fulfill explicitly stated sustainability goals and objectives, with identification of the data and analytical methods to evaluate sustainability indicators, definition of performance criteria, and development of a plan for obtaining data.

Describe the monitoring program and how to monitor for each sustainability indicator as provided by **Reg. § 354.34**. The monitoring network shall ensure adequate coverage of sustainability indicators, appropriate density of sites, and frequency of measurements to demonstrate short-term, seasonal, and long-term trends. The description must also document links to the corresponding sustainability indicators, minimum thresholds, measurable objectives, and milestones. Incorporate streamlining as allowed through Representative Monitoring and use of groundwater levels as proxies (**Reg. § 354.36**).

Describe Monitoring Protocols for data collection and monitoring (**Reg. § 352.2**). Provide descriptions of the regular review, assessment and improvement of the Monitoring Network (**Reg. § 354.38**) including filling data gaps and a five year assessment.

Deliverable(s)

- See Task 5

### 3.5 Projects and Management Actions

- Develop an implementation program to meet the sustainability goal as provided by **Reg. § 354.44**. Describe projects (herein including management actions, programs, and projects) considering the following:
  - Measurable objective expected to benefit from the project
  - Circumstances for implementation
  - Public noticing
  - Permitting and regulatory process
  - Time-table for initiation, completion, and accrual of benefits
  - Expected benefits and how they will be evaluated
  - How the project or management action will be accomplished
  - Legal authority required
  - Estimated costs and plans to meet those costs (economic analysis and finance strategy)
  - Management of groundwater extractions and recharge
  - Relationship to additional GSP elements as described in Water Code §10727.4.

In addition to the above, describe the steps to identify projects, provide screening against to-be-defined criteria, conduct feasibility evaluation and ranking, and select/prioritize projects for implementation.

The BVBGSA entities are currently developing the Replenish Big Bear Project, which includes a groundwater recharge component, and will be documented in the GSP.

Deliverable(s)

- See Task 5

**Task 4: Outreach and Stakeholder Plan**

- Plan, organize, and conduct calls, meetings, and presentations with the interested parties including groundwater users, stakeholders, and the general public, to inform parties about the project progress and relevant reports and data. Materials will be disseminated to these parties in advance of the meetings to allow sufficient time to review. It is anticipated that there will be up to three (3) meetings.

Deliverable(s)

- Agendas and meeting materials
- Summarize activities involving notification and communication by the BVBGSA with interested parties including a list of public meetings regarding the GSP and comments received. Develop a Communication Section providing the details required in **Reg. § 354.10(d)** including:
  - An explanation of the BVBGSA's decision making process
  - Identification of opportunities for public engagement and a discussion of how public input and response will be used
  - A description of how the BVBGSA encourages the active involvement of diverse social, cultural, and economic elements of the population within the Basin
  - The method the BVBGSA shall follow to inform the public about progress implementing the GSP, including the status of projects and actions

Deliverables

- See Task 5

**Task 5 Plan Implementation**

- Develop the steps, schedule, and a fiscal strategy for implementing the GSP. Describe an estimate of GSP implementation costs (**Reg. § 354.6**), a schedule for implementation, a plan for required annual reporting, and a process for required periodic evaluations.
- Environmental compliance and permitting is not anticipated to be applicable to this Project because it is not approving any specific projects or authorizing any further activities. Any projects identified in Task 3.5 will undergo separate environmental compliance and permitting as required for the specific project. Furthermore, the GSP is exempt from CEQA review pursuant to State CEQA Guidelines sections 15307 and 15308 as an action authorized

by state law and taken by a regulatory agency that will assure the maintenance, restoration, or enhancement of a natural resource and the environment.

#### Deliverables

- Agendas and meeting materials.

### **Task 6            GSP Document Preparation**

#### **6.1    Prepare the Administrative Draft GSP**

- Summarize and document the work from previous tasks in one compiled document. This document will only be circulated within the BVBGSA agencies and select interested parties.
- The Administrative Draft GSP should contain the following chapters:
  - Introduction and Administrative Information Chapter
  - Plan Area Chapter
  - Basin Setting, Water Budget and Sustainable Yield Chapter
  - Sustainable Management Criteria Chapter
  - Monitoring Network Chapter
  - Projects and Management Actions Chapter
  - Plan Implementation Chapter

#### Deliverables

- Administrative Draft GSP

#### **6.2    Prepare the Draft GSP**

- Revise based on comments on the Administrative Draft GSP and new information. This document will be circulated amongst the BVBGSA agencies, interested parties, and the general public.
- Hold a public hearing on the Draft GSP.

#### Deliverables

- Draft GSP
- Public hearing on the Draft GSP.

#### **6.3    Prepare the Final Draft GSP**

- Revised based on comments on the Draft GSP, public hearing, and new information.
- Compile necessary supporting documentation, submit to the DWR and all relevant interested parties. This document will be circulated amongst the BVBGSA agencies, interested parties, and the general public.

#### Deliverables

- Final Draft GSP and relevant supporting documentation
- Submittal of the Final Draft GSP to the DWR

### III. Program Schedule

A proposed schedule is shown below:

- Proposals Due: September 27, 2019
- Possible Interviews: October 2-4, 2019
- Board Adoption of Consulting Firm: October 2019
- GSP Kick-off Meeting: October 2019
- Administrative Draft of the GSP: May 2020
- BVBGSA Adoption of the Final Draft GSP: June 2020
- Final Draft GSP Submittal to the DWR: June 2020

The above scheduled dates are tentative and the BVBGSA retains the sole discretion to adjust the above schedule. Nothing set forth herein shall be deemed to bind the BVBGSA to award a contract and the BVBGSA retains the sole discretion to cancel or modify any part of or all the RFP at any time.

### IV. Questions Regarding This RFP

Any relevant questions concerning this RFP shall be directed in writing to Reggie Lamson at [rlamson@bbldwp.com](mailto:rlamson@bbldwp.com) **prior to 3:00 p.m. September 20, 2019**. Answers to questions will be sent by September 24, 2019 to all prospective respondents and uploaded to BVBGSA's website: [www.bvbgsa.org](http://www.bvbgsa.org). No answers will be given on an individual basis.

### V. Proposal Requirements

Proposals submitted in response to this request shall not exceed 30 pages in its entirety, including appendices and all collateral materials.

1. Firm Profile The proposal shall include the consultant's office location, number of employees, years in business and specialized capabilities relating to groundwater consulting and groundwater sustainability
2. Experience, Qualifications, and References The proposal shall include the consultant's work experience and qualifications to perform the services outlined in the RFP as well as, past clients and projects related or similar to the scope of work for this RFP. Past client information must include project scope; project dates; project budget; and current contact information for a client representative. References may be contacted.
3. Proposed Approach The proposal shall contain the consultant's proposed approach to prepare the GSP including development of the Outreach and Communications Plan, the development of the Technical Memorandum describing the DMS, and the development of the final draft GSP.
4. Schedule The proposal shall include a detailed schedule to complete the final draft GSP, based on the schedule given in Section III of this RFP.

5. Fee Proposal The proposal shall contain detailed and specific cost pricing information relative to performing all tasks described in this RFP. The fee proposal shall be submitted in a sealed separate envelope.

## VI. Selection Criteria

The proposals will be evaluated based on the following criteria:

- Responsiveness to the RFP (10%)
- Related Company and Staff Experience to Similar Projects (20%)
- Project Understanding (40%)
- Approach and Schedule for the Requested Services (20%)
- Fee for the Requested Services (10%)

Proposals will be examined for compliance with all the requirements of this RFP. Proposals that do not comply may be subject to disqualification without further consideration in the BVBGSA's sole discretion.

Prices provided by consultants in response to this RFP are considered valid for 90 days from the proposal due date. The BVBGSA intends to award the contract within this time but may request an extension from the consultants to hold pricing, until negotiations are complete, and the contract is awarded.

In submitting a proposal in response to this RFP, each consultant is certifying that it takes no exceptions to this RFP including, but not limited to, the attached Sample Agreement. If any exceptions are taken, such exceptions must be clearly noted in the proposal and may be reason for rejection of the proposal. As such, each consultant is directed to carefully review this RFP, the Sample Agreement and the insurance and indemnification provisions therein.

BVBGSA reserves the right to reject any or all proposals, select by proposal review only or interview as needed. Consultants may be selected to make an in-person brief presentation after which a final selection will be made. The successful consultant will be selected based on information provided in response to the RFP, in-person presentations, if needed, and the results of the BVBGSA's research and investigation.

The BVBGSA reserves the right to cancel this RFP at any time prior to the award of a contract without obligation in any manner for proposal preparation, interview, fee negotiation or other marketing costs associated with this RFP. Issuance of this RFP and receipt of proposals does not commit the BVBGSA to award a contract. The BVBGSA expressly reserves the right to postpone the proposal for its own convenience, to accept or reject any or all proposals received in response to this RFP, to negotiate with more than one consultant concurrently, or to cancel all or part of this RFP.

Pursuant to Michaelis, Montanari, & Johnson v. Superior Court (2006) 38 Cal.4th 1065, proposals submitted in response to this RFP shall be held confidential by the BVBGSA and shall not be subject to disclosure under the California Public Records Act (Cal. Government Code § 6250 et seq.) until either the BVBGSA and the successful consultant have entered into an agreement or the BVBGSA has rejected all proposals. All correspondence with the BVBGSA including responses to this RFP will become the exclusive property of the BVBGSA and will become public records under the California Public Records Act. Furthermore, the BVBGSA will have no liability to the consultant or other party as a result of any public disclosure of any proposal or the agreement.

If a consultant desires to exclude a portion of its proposal from disclosure under the California Public Records Act, the consultant must mark it as such and state the specific provision in the California Public Records Act which provides the exemption as well as the factual basis for claiming the exemption. For example, if a consultant submits trade secret information, the Consultant must plainly mark the information as “Trade Secret” and refer to the appropriate section of the California Public Records Act which provides the exemption as well as the factual basis for claiming the exemption. Although the California Public Records Act recognizes that certain confidential trade secret information may be protected from disclosure, the BVBGSA may not be in a position to establish that the information a consultant submits is a trade secret. If a request is made for information marked “Confidential”, “Trade Secret” or “Proprietary”, The BVBGSA will provide consultants who submitted the information with reasonable notice to seek protection from disclosure by a court of competent jurisdiction.

Consultants may protest a contract award if the consultant believes that the award was inconsistent with BVBGSA policy or this RFP is not in compliance with law. A protest must be filed in writing with the BVBGSA (email is not acceptable) within five (5) business days after receipt of notification of contract award. Any protest submitted after 2:00 p.m. of the fifth (5th) business day after notification of contract award will be rejected by the BVBGSA as invalid and the consultant’s failure to timely file a protest will waive the consultant’s right to protest the contract award. The consultant’s protest must include supporting documentation, legal authorities in support of the grounds for the protest and the name, address and telephone number of the person representing the consultant for purposes of the protest. Any matters not set forth in the protest shall be deemed waived. The BVBGSA will review and evaluate the basis of the protest provided the protest is filed in strict conformity with the foregoing. Action by the BVBGSA relative to the protest will be final and not subject to appeal or reconsideration. The procedure and time limits set forth herein are mandatory and are the consultant’s sole and exclusive remedy in the event of protest.

Failure to comply with these procedures will constitute a waiver of any right to further pursue the protest, including filing a Government Code claim or legal proceedings related to the same.

## **VII. Interview (if needed)**

The proposed key personnel from a short list of consultants may be requested to present the team and their qualifications at an in-person interview. The interview format will include an opportunity for the short listed consultants to provide a 30 minute presentation on the project approach. The presentation will be followed by a question/answer period with the project team’s key personnel.

## **VIII. Agreement / Insurance Requirements**

The consultant selected for the GSP shall be expected to execute an agreement in substantially the form of the sample Professional Services Agreement (included as Appendix A). If any exceptions are taken to any of the terms in the Agreement, the consulting firm should note exemptions in the proposal. Proposals submitted by consultants unwilling to execute the BVBGSA’s Professional Services Agreement may be rejected at the BVBGSA’s sole discretion.



## BEAR VALLEY BASIN GROUNDWATER SUSTAINABILITY AGENCY PROFESSIONAL SERVICES AGREEMENT

### 1. PARTIES AND DA

This Agreement is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 201\_\_\_\_, by and between the Bear Valley Basin Groundwater Sustainability Agency, a municipal organization organized under the laws of the State of California with its principal place of business at 41972 Garstin Drive, Big Bear Lake, California 92315 (“BVBGSA”) and [ **INSERT NAME\_\_\_\_** ], a [ **INSERT TYPE OF ENTITY - CORPORATION, PARTNERSHIP, SOLE PROPRIETORSHIP OR OTHER LEGAL ENTITY** ] with its principal place of business at [ **INSERT ADDRESS** ] (“Consultant”). BVBGSA and Consultant are sometimes individually referred to as “Party” and collectively as “Parties.”

### 2. RECITALS.

2.1 BVBGSA. The BVBGSA is a local agency organized under the laws of the State of California, with power to contract for services necessary to achieve its purpose.

2.2 Consultant. Consultant desires to perform and assume responsibility for the provision of certain professional services required by the BVBGSA on the terms and conditions set forth in this Agreement. Consultant represents that it is experienced in providing [ **INSERT TYPE OF SERVICES** ] services to public clients, is licensed in the State of California, and is familiar with the plans of BVBGSA.

2.3 Project. BVBGSA desires to engage Consultant to render such services for the [ **INSERT NAME OF PROJECT** ] project (“Project”) as set forth in this Agreement.

### 3. TERMS.

#### 3.1 Scope of Services and Term.

3.1.1 General Scope of Services. Consultant promises and agrees to furnish to the BVBGSA all labor, materials, tools, equipment, services, and incidental and customary work necessary to fully and adequately supply the professional [ **INSERT TYPE OF SERVICES** ] consulting services necessary for the Project (“Services”). The Services are more particularly described in Exhibit “A” attached hereto and incorporated herein by reference. All Services shall be subject to, and performed in

accordance with, this Agreement, the exhibits attached hereto and incorporated herein by reference, and all applicable local, state and federal laws, rules and regulations.

3.1.2 Term. The term of this Agreement shall be from **[INSERT START DATE\_\_]** to **[INSERT ENDING DATE ]**, unless earlier terminated as provided herein. Consultant shall complete the Services within the term of this Agreement and shall meet any other established schedules and deadlines.

### 3.2 Responsibilities of Consultant.

3.2.1 Control and Payment of Subordinates; Independent Contractor. The Services shall be performed by Consultant or under its supervision. Consultant will determine the means, methods and details of performing the Services subject to the requirements of this Agreement. BVBGSA retains Consultant on an independent contractor basis and not as an employee. Consultant retains the right to perform similar or different services for others during the term of this Agreement. Any additional personnel performing the Services under this Agreement on behalf of Consultant shall also not be employees of BVBGSA and shall at all times be under Consultant's exclusive direction and control. Consultant shall pay all wages, salaries, and other amounts due such personnel in connection with their performance of Services under this Agreement and as required by law. Consultant shall be responsible for all reports and obligations respecting such additional personnel, including, but not limited to: social security taxes, income tax withholding, unemployment insurance, disability insurance, and workers' compensation insurance.

3.2.2 Schedule of Services. Consultant shall perform the Services expeditiously, within the term of this Agreement, and in accordance with the Schedule of Services set forth in Exhibit "B" attached hereto and incorporated herein by reference. Consultant represents that it has the professional and technical personnel required to perform the Services in conformance with such conditions. In order to facilitate Consultant's conformance with the Schedule, BVBGSA shall respond to Consultant's submittals in a timely manner. Upon request of BVBGSA, Consultant shall provide a more detailed schedule of anticipated performance to meet the Schedule of Services.

3.2.3 Conformance to Applicable Requirements. All work prepared by Consultant shall be subject to the approval of BVBGSA.

3.2.4 Substitution of Key Personnel. Consultant has represented to BVBGSA that certain key personnel will perform and coordinate the Services under this Agreement. Should one or more of such personnel become unavailable, Consultant may substitute other personnel of at least equal competence upon written approval of BVBGSA. In the event that BVBGSA and Consultant cannot agree as to the substitution of key personnel, BVBGSA shall be entitled to terminate this Agreement for cause. As discussed below, any personnel who fail or refuse to perform the Services in a manner acceptable to the BVBGSA, or who are determined by the BVBGSA to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project or a threat to the safety of persons or property, shall be promptly removed from the Project by the Consultant at the request of the BVBGSA. The key personnel for performance of this Agreement are as follows: **[INSERT NAMES\_\_]**.

3.2.5 BVBGSA's Representative. The BVBGSA hereby designates **[INSERT NAME OR TITLE\_\_]**, or his or her designee, to act as



its representative for the performance of this Agreement (“BVBGSA’s Representative”). BVBGSA’s Representative shall have the power to act on behalf of the BVBGSA for all purposes under this Contract. Consultant shall not accept direction or orders from any person other than the BVBGSA’s Representative or his or her designee.

3.2.6 Consultant’s Representative. Consultant hereby designates **[ INSERT NAME OR TITLE ]**, or his or her designee, to act as its representative for the performance of this Agreement (“Consultant’s Representative”). Consultant’s Representative shall have full authority to represent and act on behalf of the Consultant for all purposes under this Agreement. The Consultant’s Representative shall supervise and direct the Services, using his best skill and attention, and shall be responsible for all means, methods, techniques, sequences and procedures and for the satisfactory coordination of all portions of the Services under this Agreement.

3.2.7 Coordination of Services. Consultant agrees to work closely with BVBGSA staff in the performance of Services and shall be available to BVBGSA’s staff, consultants and other staff at all reasonable times.

3.2.8 Standard of Care; Performance of Employees. Consultant shall perform all Services under this Agreement in a skillful and competent manner, consistent with the standards generally recognized as being employed by professionals in the same discipline in the State of California. Consultant represents and maintains that it is skilled in the professional calling necessary to perform the Services. Consultant warrants that all employees and subcontractors shall have sufficient skill and experience to perform the Services assigned to them. Finally, Consultant represents that it, its employees and subcontractors have all licenses, permits, qualifications and approvals of whatever nature that are legally required to perform the Services, including a City Business License, and that such licenses and approvals shall be maintained throughout the term of this Agreement. As provided for in the indemnification provisions of this Agreement, Consultant shall perform, at its own cost and expense and without reimbursement from the BVBGSA, any services necessary to correct errors or omissions which are caused by the Consultant’s failure to comply with the standard of care provided for herein. Any employee of the Consultant or its sub-consultants who is determined by the BVBGSA to be uncooperative, incompetent, a threat to the adequate or timely completion of the Project, a threat to the safety of persons or property, or any employee who fails or refuses to perform the Services in a manner acceptable to the BVBGSA, shall be promptly removed from the Project by the Consultant and shall not be re-employed to perform any of the Services or to work on the Project.

3.2.9 Laws and Regulations. Consultant shall keep itself fully informed of and in compliance with all local, state and federal laws, rules and regulations in any manner affecting the performance of the Project or the Services, including all Cal/OSHA requirements, and shall give all notices required by law. Consultant shall be liable for all violations of such laws and regulations in connection with Services. If the Consultant performs any work knowing it to be contrary to such laws, rules and regulations and without giving written notice to the BVBGSA, Consultant shall be solely responsible for all costs arising therefrom. Consultant shall defend, indemnify and hold BVBGSA, their officials, directors, officers, employees and agents free and harmless, pursuant to the indemnification provisions of this Agreement, from any claim or liability arising out of any failure or alleged failure to comply with such laws, rules or regulations. Consultant

agrees to certify that the consultant, any employee of the consultant, or sub-contractor engaging in work for the BVBGSA has not been debarred by the federal or state government.

### 3.2.10 Insurance.

3.2.10.1 Time for Compliance. Consultant shall not commence the Services under this Agreement until it has provided evidence satisfactory to the BVBGSA that it has secured all insurance required under this section. In addition, Consultant shall not allow any subcontractor to commence work on any subcontract until it has provided evidence satisfactory to the BVBGSA that the subcontractor has secured all insurance required under this section.

3.2.10.2 Minimum Requirements. Consultant shall, at its expense, procure and maintain for the duration of the Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Agreement by the Consultant, its agents, representatives, employees or subcontractors. Consultant shall also require all of its subcontractors to procure and maintain the same insurance for the duration of the Agreement. Such insurance shall meet at least the following minimum levels of coverage:

(A) Minimum Scope of Insurance. Coverage shall be at least as broad as the latest version of the following: (1) *General Liability*: Insurance Services Office Commercial General Liability coverage (occurrence form CG 0001); (2) *Automobile Liability*: Insurance Services Office Business Auto Coverage form number CA 0001, code 1 (any auto); and (3) *Workers' Compensation and Employer's Liability*: Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance.

(B) Minimum Limits of Insurance. Consultant shall maintain limits no less than: (1) *General Liability*: One Million Dollars (\$1,000,000) per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with general aggregate limit is used, either the general aggregate limit shall apply separately to this Agreement/location or the general aggregate limit shall be twice the required occurrence limit; (2) *Automobile Liability*: One Million Dollars (\$1,000,000) per accident for bodily injury and property damage; and (3) *Workers' Compensation and Employer's Liability*: Workers' Compensation limits as required by the Labor Code of the State of California. Employer's Liability limits of One Million Dollars (\$1,000,000) per accident for bodily injury or disease.

3.2.10.3 Professional Liability. Consultant shall procure and maintain, and require its sub- consultants to procure and maintain, for a period of five (5) years following completion of the Services, errors and omissions liability insurance appropriate to their profession. Such insurance shall be in an amount not less than \$1,000,000 per claim and shall be endorsed to include contractual liability.

3.2.10.4 Insurance Endorsements. The insurance policies shall contain the following provisions, or Consultant shall provide endorsements on forms supplied or approved by the BVBGSA to add the following provisions to the insurance policies:

(A) General Liability. The general liability policy shall be endorsed to state that: (1) the BVBGSA, its officials, officers, employees, agents and volunteers shall be covered as additional insureds with respect to the Services or operations performed by or on behalf of the Consultant, including materials, parts or equipment furnished in connection with such work; and (2) the insurance coverage shall be primary insurance as respects the BVBGSA, their officials, officers, employees, agents and volunteers, or if excess, shall stand in an unbroken chain of coverage excess of the Consultant's scheduled underlying coverage. Any insurance or self-insurance maintained by the BVBGSA, their officials, officers, employees, agents and volunteers shall be excess of the Consultant's insurance and shall not be called upon to contribute with it in any way.

(B) Automobile Liability. The automobile liability policy shall be endorsed to state that: (1) the BVBGSA, their officials, officers, employees, agents and volunteers shall be covered as additional insureds with respect to the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by the Consultant or for which the Consultant is responsible; and (2) the insurance coverage shall be primary insurance as respects the BVBGSA, their officials, officers, employees, agents and volunteers, or if excess, shall stand in an unbroken chain of coverage excess of the Consultant's scheduled underlying coverage. Any insurance or self-insurance maintained by the BVBGSA, their officials, officers, employees, agents and volunteers shall be excess of the Consultant's insurance and shall not be called upon to contribute with it in any way.

(C) Workers' Compensation and Employers Liability Coverage. The insurer shall agree to waive all rights of subrogation against the BVBGSA, their officials, officers, employees, agents and volunteers for losses paid under the terms of the insurance policy which arise from work performed by the Consultant.

(D) All Coverages. Each insurance policy required by this Agreement shall be endorsed to state that: (A) coverage shall not be suspended, voided, reduced or canceled except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the BVBGSA; and (B) any failure to comply with reporting or other provisions of the policies, including breaches of warranties, shall not affect coverage provided to the BVBGSA, their officials, officers, employees, agents and volunteers.

3.2.10.5 Separation of Insureds; No Special Limitations. All insurance required by this Section shall contain standard separation of insureds provisions. In addition, such insurance shall not contain any special limitations on the scope of protection afforded to the BVBGSA, their officials, officers, employees, agents and volunteers.

3.2.10.6 Deductibles and Self-Insurance Retentions. Any deductibles or self-insured retentions must be declared to and approved by the BVBGSA. Consultant shall guarantee that, at the option of the BVBGSA, either: (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the BVBGSA, their officials, officers, employees, agents and volunteers; or (2) the Consultant shall procure a bond guaranteeing payment of losses and related investigation costs, claims and administrative and defense expenses.

3.2.10.7 Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating no less than A: VIII, licensed to do business in California, and satisfactory to the BVBGSA.

3.2.10.8 Verification of Coverage. Consultant shall furnish BVBGSA with original certificates of insurance and endorsements effecting coverage required by this Agreement on forms satisfactory to the BVBGSA. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf and shall be on forms provided by the BVBGSA if requested. All certificates and endorsements must be received and approved by the BVBGSA before work commences. The BVBGSA reserves the right to require complete, certified copies of all required insurance policies, at any time.

3.2.11 Safety. Consultant shall execute and maintain its work so as to avoid injury or damage to any person or property. In carrying out its Services, the Consultant shall at all times be in compliance with all applicable local, state and federal laws, rules and regulations, and shall exercise all necessary precautions for the safety of employees appropriate to the nature of the work and the conditions under which the work is to be performed. Safety precautions as applicable shall include, but shall not be limited to: (A) adequate life protection and life saving equipment and procedures; (B) instructions in accident prevention for all employees and subcontractors, such as safe walkways, scaffolds, fall protection ladders, bridges, gang planks, confined space procedures, trenching and shoring, equipment and other safety devices, equipment and wearing apparel as are necessary or lawfully required to prevent accidents or injuries; and (C) adequate facilities for the proper inspection and maintenance of all safety measures.

### 3.3 Fees and Payments.

3.3.1 Compensation. Consultant shall receive compensation, including authorized reimbursements, for all Services rendered under this Agreement at the rates set forth in Exhibit "C" attached hereto and incorporated herein by reference. The total compensation shall not exceed [ **INSERT WRITTEN DOLLAR AMOUNT** ] (\$ **[INSERT NUMERICAL DOLLAR AMOUNT ]**) without written approval of BVBGSA's [ **INSERT TITLE** ]. Extra Work may be authorized, as described below; and if authorized, said Extra Work will be compensated at the rates and manner set forth in this Agreement.

3.3.2 Payment of Compensation. Consultant shall submit to BVBGSA a monthly itemized statement which indicates work completed and hours of Services rendered by Consultant. The statement shall describe the amount of Services and supplies provided since the initial commencement date, or since the start of the subsequent billing periods, as appropriate, through the date of the statement. BVBGSA shall, within forty-five (45) days of receiving such statement, review the statement and pay all approved charges thereon.

3.3.3 Reimbursement for Expenses. Consultant shall not be reimbursed for any expenses unless authorized in writing by BVBGSA.

3.3.4 Extra Work. At any time during the term of this Agreement, BVBGSA may request that Consultant perform Extra Work. As used herein, "Extra Work" means any work which is determined by BVBGSA to be necessary for the proper

completion of the Project, but which the Parties did not reasonably anticipate would be necessary at the execution of this Agreement. Consultant shall not perform, nor be compensated for, Extra Work without written authorization from BVBGSA's Representative.

**3.3.5 Prevailing Wages.** Consultant is aware of the requirements of California Labor Code Sections 1720, et seq., and 1770, et seq., as well as California Code of Regulations, Title 8, Section 16000, et seq., ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. If the Services are being performed as part of an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and if the total compensation is One Thousand Dollars (\$1,000) or more, Consultant agrees to fully comply with such Prevailing Wage Laws. BVBGSA shall provide Consultant with a copy of the prevailing rates of per diem wages in effect at the commencement of this Agreement. Consultant shall make copies of the prevailing rates of per diem wages for each craft, classification or type of worker needed to execute the Services available to interested parties upon request, and shall post copies at the Consultant's principal place of business and at the project site. Consultant shall defend, indemnify and hold the BVBGSA, their elected officials, officers, employees, volunteers and agents free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or alleged failure to comply with the Prevailing Wage Laws.

Effective April 1, 2015, if the services are being performed as part of an applicable "public works" or "maintenance" project, then pursuant to Labor Code Sections 1725.5 and 1771.1, the Consultant and all subconsultants must be registered with the Department of Industrial Relations. Consultant shall maintain registration for the duration of the project and require the same of any subconsultants. This project may also be subject to compliance monitoring and enforcement by the Department of Industrial Relations. It shall be Consultant's sole responsibility to comply with all applicable registration and labor compliance requirements

### **3.4 Accounting Records.**

**3.4.1 Maintenance and Inspection.** Consultant shall maintain complete and accurate records with respect to all costs and expenses incurred under this Agreement. All such records shall be clearly identifiable. Consultant shall allow a representative of BVBGSA during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Consultant shall allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of three (3) years from the date of final payment under this Agreement.

### **3.5 General Provisions.**

#### **3.5.1 Termination of Agreement.**

**3.5.1.1 Grounds for Termination.** BVBGSA may, by written notice to Consultant, terminate the whole or any part of this Agreement at any time and without cause by giving written notice to Consultant of such termination, and specifying the effective date thereof, at least seven (7) days before the effective date of such termination. Upon termination, Consultant shall be compensated only for those services

which have been adequately rendered to BVBGSA, and Consultant shall be entitled to no further compensation. Consultant may not terminate this Agreement except for cause.

3.5.1.2 Effect of Termination. If this Agreement is terminated as provided herein, BVBGSA may require Consultant to provide all finished or unfinished Documents and Data and other information of any kind prepared by Consultant in connection with the performance of Services under this Agreement. Consultant shall be required to provide such documents and other information within fifteen (15) days of the request.

3.5.1.3 Additional Services. In the event this Agreement is terminated in whole or in part as provided herein, BVBGSA may procure, upon such terms and in such manner as it may determine appropriate, services similar to those terminated.

3.5.2 Delivery of Notices. All notices permitted or required under this Agreement shall be given to the respective Parties at the following address, or at such other address as the respective parties may provide in writing for this purpose:

**BVBGSA**

Bear Valley Basin  
Groundwater Sustainability Agency  
41972 Garstin Drive  
P.O. Box 1929  
Big Bear Lake, CA 92315  
Attn: Reginald A. Lamson

**Consultant**

[ INSERT NAME ]  
[ INSERT ADDRESS ]  
[ INSERT ADDRESS ]  
Attn: [ INSERT NAME ]

Such notice shall be deemed made when personally delivered or when mailed, forty-eight (48) hours after deposit in the U.S. Mail, first class postage prepaid and addressed to the Party at its applicable address. Actual notice shall be deemed adequate notice on the date actual notice occurred, regardless of the method of service.

3.5.3 Ownership of Materials and Confidentiality.

3.5.3.1 Documents & Data; Licensing of Intellectual Property. This Agreement creates a non-exclusive and perpetual license for BVBGSA to copy, use, modify, reuse, or sublicense any and all copyrights, designs, and other intellectual property embodied in plans, specifications, studies, drawings, estimates, and other documents or works of authorship fixed in any tangible medium of expression, including but not limited to, physical drawings or data magnetically or otherwise recorded on computer diskettes, including, without limitation, any Computer Aided Design and Drafting ("CADD") data, which are prepared or caused to be prepared by Consultant under this Agreement ("Documents & Data"). Consultant shall require all subcontractors to agree in writing that BVBGSA is granted a non-exclusive and perpetual license for any Documents & Data the subcontractor prepares under this Agreement. Consultant represents and warrants that Consultant has the legal right to license any and all Documents & Data. Consultant makes no such representation and warranty in regard to Documents & Data which were prepared by design professionals other than Consultant or provided to Consultant by the BVBGSA. BVBGSA shall not be limited in any way in its use of the Documents & Data at any time, provided that any such use not within the purposes intended by this Agreement shall be at

BVBGSA's sole risk. Any CADD data delivered to BVBGSA shall not include the professional stamp or signature of an engineer, architect, or any other licensed professional, but shall be followed with a hard copy with such stamp or signature.

3.5.3.2 Confidentiality. All ideas, memoranda, specifications, plans, procedures, drawings, descriptions, computer program data, input record data, written information, and other Documents and Data either created by or provided to Consultant in connection with the performance of this Agreement shall be held confidential by Consultant. Such materials shall not, without the prior written consent of BVBGSA, be used by Consultant for any purposes other than the performance of the Services. Nor shall such materials be disclosed to any person or entity not connected with the performance of the Services or the Project. Nothing furnished to Consultant which is otherwise known to Consultant or is generally known, or has become known, to the related industry shall be deemed confidential. Consultant shall not use BVBGSA's name or insignia, photographs of the Project, or any publicity pertaining to the Services or the Project in any magazine, trade paper, newspaper, television or radio production or other similar medium without the prior written consent of BVBGSA.

3.5.4 Cooperation; Further Acts. The Parties shall fully cooperate with one another, and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Agreement.

3.5.5 Attorney's Fees. If either Party commences an action against the other Party, either legal, administrative or otherwise, arising out of or in connection with this Agreement, the prevailing party in such litigation shall be entitled to have and recover from the losing party reasonable attorney's fees and all other costs of such action.

3.5.6 Indemnification. To the fullest extent permitted by law, Consultant shall defend, indemnify and hold the BVBGSA, their officials, officers, employees, volunteers, and agents free and harmless from any and all claims, demands, causes of action, costs, expenses, liability, loss, damage or injury, in law or equity, to property or persons, including wrongful death, in any manner arising out of, pertaining to, or relating to any negligence, errors or omissions, recklessness, or willful misconduct of Consultant, its officials, officers, employees, agents, consultants, and contractors arising out of or in connection with the performance of the Consultant's Services, including without limitation the payment of all consequential damages, expert witness fees, and attorneys fees and other related costs and expenses. Consultant shall defend, at Consultant's own cost, expense and risk, any and all such aforesaid suits, actions or other legal proceedings of every kind that may be brought or instituted against the BVBGSA, their officials, officers, employees, agents, or volunteers. Consultant shall pay and satisfy any judgment, award or decree that may be rendered against BVBGSA or their officials, officers, employees, agents, or volunteers, in any such suit, action or other legal proceeding. Consultant shall reimburse BVBGSA and their officials, officers, employees, agents, and/or volunteers, for any and all legal expenses and costs incurred by each of them in connection therewith or in enforcing the indemnity herein provided. Consultant's obligation to indemnify shall not be restricted to insurance proceeds, if any, received by the BVBGSA, their officials, officers, employees, agents, or volunteers.

3.5.7 Entire Agreement. This Agreement contains the entire Agreement of the Parties with respect to the subject matter hereof, and supersedes all prior negotiations, understandings or agreements. This Agreement may only be modified by a writing signed by both Parties.

3.5.8 Governing Law. This Agreement shall be governed by the laws of the State of California. Venue shall be in San Bernardino County.

3.5.9 Time of Essence. Time is of the essence for each and every provision of this Agreement.

3.5.10 BVBGSA's Right to Employ Other Consultants. BVBGSA reserves right to employ other consultants in connection with this Project.

3.5.11 Successors and Assigns. This Agreement shall be binding on the successors and assigns of the Parties.

3.5.12 Assignment or Transfer. Consultant shall not assign, hypothecate, or transfer, either directly or by operation of law, this Agreement or any interest herein without the prior written consent of the BVBGSA. Any attempt to do so shall be null and void, and any assignees, hypothecates or transferees shall acquire no right or interest by reason of such attempted assignment, hypothecation or transfer.

3.5.13 Construction; References; Captions. Since the Parties or their agents have participated fully in the preparation of this Agreement, the language of this Agreement shall be construed simply, according to its fair meaning, and not strictly for or against any Party. Any term referencing time, days or period for performance shall be deemed calendar days and not work days. All references to Consultant include all personnel, employees, agents, and subcontractors of Consultant, except as otherwise specified in this Agreement. All references to BVBGSA include its elected officials, officers, employees, agents, and volunteers except as otherwise specified in this Agreement. The captions of the various articles and paragraphs are for convenience and ease of reference only, and do not define, limit, augment, or describe the scope, content, or intent of this Agreement.

3.5.14 Amendment; Modification. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing and signed by both Parties.

3.5.15 Waiver. No waiver of any default shall constitute a waiver of any other default or breach, whether of the same or other covenant or condition. No waiver, benefit, privilege, or service voluntarily given or performed by a Party shall give the other Party any contractual rights by custom, estoppel, or otherwise.

3.5.16 No Third Party Beneficiaries. There are no intended third party beneficiaries of any right or obligation assumed by the Parties.

3.5.17 Invalidity; Severability. If any portion of this Agreement is declared invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions shall continue in full force and effect.

3.5.18 Prohibited Interests. Consultant maintains and warrants that it has not employed nor retained any company or person, other than a bona fide employee working solely for Consultant, to solicit or secure this Agreement. Further, Consultant warrants that it has not paid nor has it agreed to pay any company or person, other than a bona fide employee working solely for Consultant, any fee, commission, percentage, brokerage fee, gift



or other consideration contingent upon or resulting from the award or making of this Agreement. For breach or violation of this warranty, BVBGSA shall have the right to rescind this Agreement without liability.

For the term of this Agreement, no member, officer or employee of BVBGSA, during the term of his or her service with BVBGSA, shall have any direct interest in this Agreement, or obtain any present or anticipated material benefit arising therefrom.

3.5.19 Equal Opportunity Employment. Consultant represents that it is an equal opportunity employer and it shall not discriminate against any subcontractor, employee or applicant for employment because of race, religion, color, national origin, handicap, ancestry, sex or age. Such non-discrimination shall include, but not be limited to, all activities related to initial employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination.

3.5.20 Labor Certification. By its signature hereunder, Consultant certifies that it is aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for Workers' Compensation or to undertake self- insurance in accordance with the provisions of that Code, and agrees to comply with such provisions before commencing the performance of the Services.

3.5.21 Authority to Enter Agreement. Consultant has all requisite power and authority to conduct its business and to execute, deliver, and perform the Agreement. Each Party warrants that the individuals who have signed this Agreement have the legal power, right, and authority to make this Agreement and bind each respective Party.

3.5.22 Counterparts. This Agreement may be signed in counterparts, each of which shall constitute an original.

### 3.6 Subcontracting.

3.6.1 Prior Approval Required. Consultant shall not subcontract any portion of the work required by this Agreement, except as expressly stated herein, without prior written approval of BVBGSA. Subcontracts, if any, shall contain a provision making them subject to all provisions stipulated in this Agreement.

[SIGNATURES ON FOLLOWING PAGE.]

BEAR VALLEY BASIN GROUNDWATER [INSERT CONSULTANT'S NAME]  
SUSTAINABILITY AGENCY

By: \_\_\_\_\_  
Reginald A. Lamson  
Administrator

By: \_\_\_\_\_  
(INSERT NAME)  
(Insert Title)

**EXHIBIT “A”**  
**SCOPE OF SERVICES**  
**[INSERT SCOPE]**

**EXHIBIT “B”****SCHEDULE OF SERVICES**

THE CONSULTANT SHALL DILIGENTLY AND CONTINUOUSLY UNDERTAKE THROUGH COMPLETION ALL WORK REQUIRED UNDER THIS AGREEMENT

**EXHIBIT “C”**  
**COMPENSATION**

**[INSERT RATES & AUTHORIZED REIMBURSABLE EXPENSES]**

BEAR VALLEY BASIN  
GROUNDWATER  
SUSTAINABILITY AGENCY

September 27, 2019



PROPOSAL FOR PREPARATION OF THE

# BEAR VALLEY BASIN GROUNDWATER SUSTAINABILITY PLAN



Thomas Harder & Co.  
Groundwater Consulting



**REGINALD LAMSON, PE**

Bear Valley Basin GSA  
 PO Box 1929, Big Bear Lake, CA  
 92315  
 (909) 866-5050  
 rlamson@bbldwp.com

**PROPOSAL FOR**

Bear Valley Basin  
 Groundwater Sustainability Plan

**THOMAS HARDER & CO.**

1260 N. Hancock Street, Suite 109  
 Anaheim, CA 92807  
 Phone: (714) 779-3875

**DEAR MR. LAMSON**

The Bear Valley Basin Groundwater Sustainability Agency (BVBGSA) was formed in response to the Sustainable Groundwater Management Act of 2014 (SGMA). As part of the SGMA implementation, the California Department of Water Resources (DWR) initially ranked the Bear Valley Groundwater Basin as a medium priority basin, requiring the formation of the BVBGSA and preparation of a Groundwater Sustainability Plan (GSP) for the GSA area, which includes the service areas for the Big Bear City Community Services District, City of Big Bear Lake Department of Water and Power, Big Bear Area Regional Wastewater Agency, and the Big Bear Municipal Water District.

The BVBGSA applied for and received a grant from DWR to fund the preparation of the GSP. Following award of the grant, DWR reclassified the Bear Valley Basin as a very low priority basin, but encouraged the BVBGSA to continue with the planned preparation of a GSP.

Given the fact that natural precipitation is the sole source of water supply to the valley, the BVBGSA member agencies have already been proactive in implementing many of the groundwater monitoring and management elements required by SGMA in effort to protect this critical resource. Based on previous experience with ongoing groundwater management efforts in the valley and feedback from the BVBGSA members, it is our team's understanding that there are no significant sustainability concerns among the BVBGSA members or the stakeholders and that preparation of this GSP will be a streamlined effort to coordinate the various monitoring and management plans into a single comprehensive document that complies with the law and facilitates easier reporting for the BVBGSA in the future. As part of this process, SGMA also requires the BVBGSA to meaningfully engage with the stakeholders to help ensure that the plan considers all beneficial uses and users of groundwater.

In response to your Request for Proposals, I have partnered with Water Systems Consulting (WSC) to give you a team that is uniquely qualified to prepare the GSP for the BVBGSA. Over the past 20 years, I have enjoyed the opportunity to develop an extensive knowledge and understanding of the hydrogeology of the Big Bear Valley through my participation and technical direction of multiple perennial yield evaluations, groundwater quality investigations, test drilling projects, and municipal well constructions.

WSC brings to the team a comprehensive knowledge of the water infrastructure of the area and, through their technical direction of the Replenish Big Bear Project, is in the best position to leverage their previous work with the BVBGSA members to efficiently define the projects and management actions needed to move BVBGSA forward in a coordinated way. Our team has already worked successfully and collaboratively with each other and with each of the member agencies of the BVBGSA to provide needed water supply reliability for the area. We are uniquely qualified to give the BVBGSA a GSP that is coordinated, comprehensive, and meets the requirements of SGMA.

**Our project team gives you:**

**Unmatched local knowledge.** Our team completed the majority of the groundwater work within the Big Bear Valley and has worked with all of the key stakeholders. This local water resources experience, knowledge, and relationships puts us in a great position to be able to develop a GSP in the most efficient manner possible.

**Develop a pathway to sustainability.** Our team has an extensive understanding of the groundwater management challenges and opportunities in the Big Bear Valley from our experience working with and listening to the BVBGSA members. We will leverage this understanding to develop clear sustainability goals and management actions that support a shared vision for the management of the basin.

**Guide an efficient GSP development process.** Our team brings unmatched working knowledge of the Big Bear Valley Basin and has a significant amount of the data required for the GSP, allowing us to perform the early planning tasks efficiently. Through past work, our firms have developed a seamless working relationship while helping our clients achieve their goals.

**Build support and foster engagement.** WSC's proven facilitation and stakeholder engagement team has experience effectively facilitating the development of regional, multi-agency water management plans throughout California. We will navigate the member agencies through the GSP development process, engage key stakeholders, and ensure that the process meets the intention of SGMA.

Through the years, I have taken a personal interest in the sustainable management of the groundwater resources of the Big Bear Valley. On behalf of my project team I want to express our great interest in continuing our technical support to you.

**Sincerely,**



.....  
**THOMAS HARDER,**

**PG, CHG**

PROJECT MANAGER / PRINCIPAL IN CHARGE



# TH&CO IS BEAR VALLEY'S LEADING HYDROGEOLOGICAL CONSULTING FIRM

TH&Co is a full-service hydrogeological consulting company that specializes in providing clients with sound hydrogeological advice and effective and sustainable groundwater resource solutions. For more than three decades, Thomas Harder has been providing technical direction for municipalities, cities, special districts, investor-owned utilities and regulatory agencies to develop sustainable groundwater resources for the economy and well-being of the residents of California. From on-going participation on the City of Big Bear Lake Department of Water Groundwater Management Technical Review Team, to basin management and adjudication in southern California, to Sustainable Groundwater Management Act (SGMA) compliance in the California Central Valley, Mr. Harder has played a key role in providing the technical support basin managers need to inform management decisions.

TH&Co's specialized staff of nine professional geoscientists include three California Certified Hydrogeologists and four groundwater flow modelers, each with experience in providing technical support for the development of Groundwater Sustainability Plans in support of SGMA compliance. TH&Co is headquartered in Anaheim and our proposed project team will serve BVBGSA out of this office.



TH&Co provides the leadership, innovation, and technical resources that BVBGSA needs to deliver a successful GSP that is efficient and defensible, and that meets all the requirements of SGMA.

To deliver this project, TH&Co has pulled together a team of experts that have unparalleled knowledge of the Basin and the unique needs of Big Bear Valley. Together, TH&Co and WSC are prepared to work with the Agency to unite the Basin stakeholders, effectively communicate throughout the process, and deliver a successful GSP that benefits the entire Basin.

## WHY SELECT THE TH&CO AND WSC TEAM?

- **History and Technical Knowledge**
- **Responsive Team**
- **Existing Relationship**

# TH&CO'S TEAM BRINGS GSP EXPERTISE

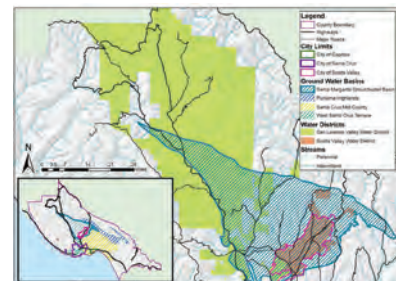
TH&CO and WSC have developed GSPs, groundwater models, innovative water resources projects, and other relevant work both directly and tangentially related to SGMA. Our team understands what it takes to develop a successful, inclusive, and defensible GSP. From our work on GSPs in other basins, we have existing tools, processes, and relationships that will create efficiencies and improve the quality of our work. Our extensive work in Big Bear Valley means we understand how to carefully schedule and execute the delivery of projects that meet your budgetary requirements while also benefiting and supporting other projects, such as Replenish Big Bear.

Members of our team have extensive experience leading groundwater and water resources projects within Big Bear and the Bear Valley Basin, which means our team already has most of the existing data required for this project. Our team understands the Basin data available and brings an appreciation for specific local needs. We can utilize the data and experience from a fact-based and solution-based standpoint to promote constructive dialogues. This experience will reduce the amount of time required from BVBGSA staff and limit duplicated effort or the time for historical research to become familiar with the basin needs. Throughout the process, our team will effectively engage staff and stakeholders as efficiently as possible.

# MEMBERS OF OUR TEAM ARE WORKING ON SIX OTHER GSPS AND ARE EQUIPPED TO SKILLFULLY DEVELOP A DEFENSIBLE GSP

Thomas Harder of TH&Co has participated in the preparation of three GSPs (Tule Subbasin, Rosedale-Rio Bravo Water Storage District chapter of the Kern Groundwater GSP, and mid-Kaweah GSP). His knowledge of the Big Bear Valley and experience with SGMA compliance make him highly qualified to prepare the basin setting and monitoring network sections of the Big Bear GSP.

WSC's expert team working on three GSPs (San Luis Obispo Valley Basin, Arlington Basin, and Santa Margarita Basin). The Santa Margarita Basin is located in Santa Cruz County where most of the communities rely on groundwater for their water supply and sustainable management of the basin is crucial for the region.



## WSC IS YOUR LOCAL EXPERT

Our team of experts bring years of experience working for the many entities within Big Bear Valley including, BVBGSA, BBLDWP, BBMWd, BBARWA, and BBCCSD.

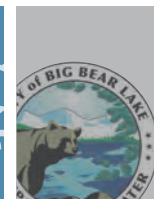
Supporting the **\$44.5 million** Replenish Big Bear Project



Developed the **GSP Grant Application**



Over **20 years** experience working in the Bear Valley Basin



Delivering over **\$33 million** in CIP work

On the following pages, you will find descriptions of directly relevant projects that TH&Co and WSC have worked on.

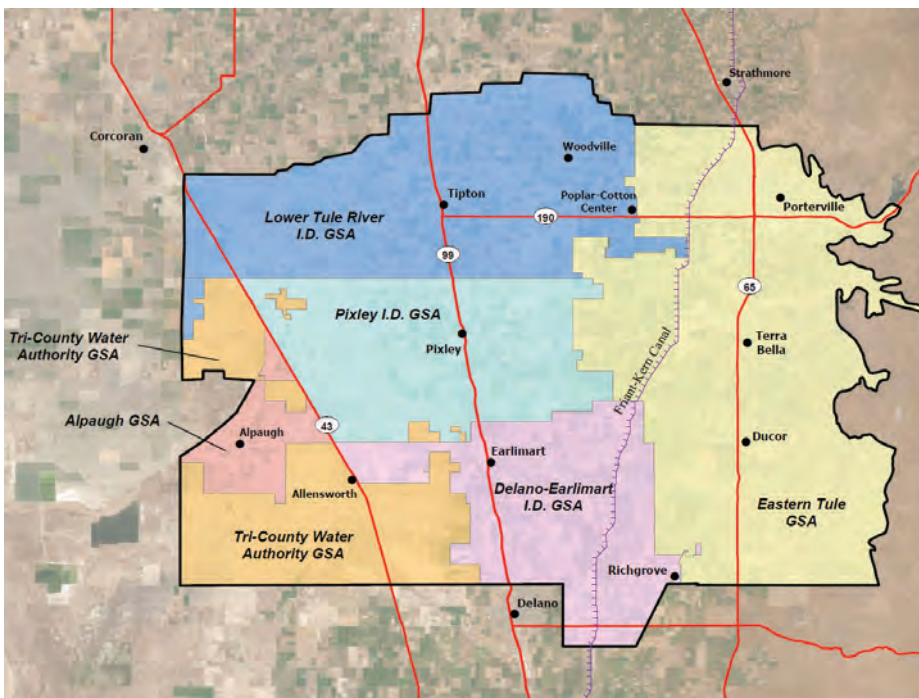
# SGMA COMPLIANCE FOR THE TULE SUBBASIN

## TULE SUBBASIN TECHNICAL ADVISORY COMMITTEE

TH&Co has played a key role in assisting basin managers in the Tule Subbasin comply with the requirements of the SGMA for this critically overdrafted and high priority basin. TH&Co's primary role has been hydrogeological support with respect to:

- Development of a hydrogeological conceptual model and detailed surface water and groundwater budget for the basin;
- Development of a calibrated numerical groundwater flow model of the basin for use in estimating Sustainable Yield and evaluating projects and management actions;
- Preparation of the Basin Setting portion of the GSPs;
- Preparation of a basin-wide monitoring plan, which included a data management system; and
- Analysis of land subsidence related to groundwater withdrawal and identification of management areas to address land subsidence in areas of critical infrastructure.

The Tule Subbasin consists of six separate GSAs, each with their own GSP. TH&Co worked closely with the GSAs to develop a coordination agreement that included coordinated data collection methodologies and sustainable management criteria. TH&Co also worked closely with each of the GSAs to develop, refine and analyze future projects and management actions that will help the basin achieve sustainability by 2040, in accordance with SGMA requirements. The GSPs for the six GSAs in the basin are currently advertised for public review.



### KEY STAFF

Thomas Harder, Jim Van de Water, Ben Lewis

### REFERENCE

Mr. Richard L. Schafer  
559-734-1348  
rschafer@rlsmap.com

### PROJECT DATES

2016- Present

### BUDGET

\$950,000



# SAN LUIS OBISPO VALLEY BASIN GROUNDWATER SUSTAINABILITY PLAN

## SAN LUIS OBISPO COUNTY

WSC is managing the development of the San Luis Obispo Valley Basin GSP for the County of San Luis Obispo. WSC is responsible for project administration, the Projects and Management Actions chapter, implementation of the Communications and Engagement Plan, and is involved in developing the integrated groundwater-surface water model. Throughout the project, WSC has a leadership role scheduling, administering, and facilitating numerous public meetings and workshops. Tasks include developing staff reports, agendas, presentations, and outreach materials to a broad spectrum of public and private stakeholders. The project has been budgeted for just over \$1.4 million.

WSC's team recently completed the first of seven GSA workshops where stakeholders were engaged in the GSP process and feedback was gathered from the public. The workshop was well received by stakeholders and the public that attended. Outreach and communications materials included a handout targeted for the public and other stakeholders. The team is also managing a custom groundwater communications portal that captures stakeholder information to a database for knowledge transfer over time.



### KEY STAFF

Michael Cruikshank,  
Tiffany Meyer

### REFERENCE

Mr. Dick Tzou  
805-781-4473  
dtzou@co.slo.ca.us

### PROJECT DATES

March 2019 - Present

### BUDGET

\$1.4 million

# RELEVANT LOCAL PROJECTS



## GROUNDWATER MONITORING AND MANAGEMENT PLAN

### CITY OF BIG BEAR LAKE DEPARTMENT OF WATER AND POWER (BBLDWP)

Thomas Harder has been providing hydrogeological services to the agencies in the Big Bear Valley since 1998. He worked with the BBLDWP to develop a comprehensive groundwater monitoring and management plan to collect the data necessary to more completely understand the state of groundwater levels in their service area.

The Big Bear Groundwater Monitoring and Management Plan lead to the development of a Technical Review Team (TRT), on which Mr. Harder still participates. The TRT meets biannually in Big Bear to review recent groundwater level trends, address the adequacy of the monitoring network, and discuss potential management actions to address areas of groundwater level concern. Management actions can include shifting pumping from areas of groundwater level concern to areas with more stable groundwater levels.

#### KEY STAFF

Thomas Harder

#### PROJECT DATES

2003 - Ongoing

#### BUDGET

\$2,000 annually



## REPLENISH BIG BEAR

### BIG BEAR AREA REGIONAL WASTEWATER AGENCY ON BEHALF OF THE BVGSA

WSC evaluated conceptual recycled water use alternatives to retain treated water in the Valley and create a sustainable water resource to augment the potable water supply. Alternatives were analyzed based on treatment and regulatory requirements, water supply yield, social and environmental benefits, and life-cycle cost. The selected project includes treatment process upgrades and discharge of highly treated effluent to Big Bear Lake, where it can then be extracted for irrigation of the golf course (which provides in-lieu groundwater recharge) and direct recharge in Sand Canyon, if needed to sustain the groundwater basin. It also provides an alternate source of water to Shay Pond so that groundwater currently used for that purpose can be conserved. This work was foundational in identifying the most beneficial approach to groundwater recharge in the Valley and will directly support the Projects and Management Actions Element of the GSP. WSC is also providing strategic communications support to gain awareness of the potential beneficial uses, identify and secure funding, and communicate project benefits to local, State, and Federal stakeholders.

#### KEY STAFF

Laine Carlson

#### PROJECT DATES

August 2015 - Present

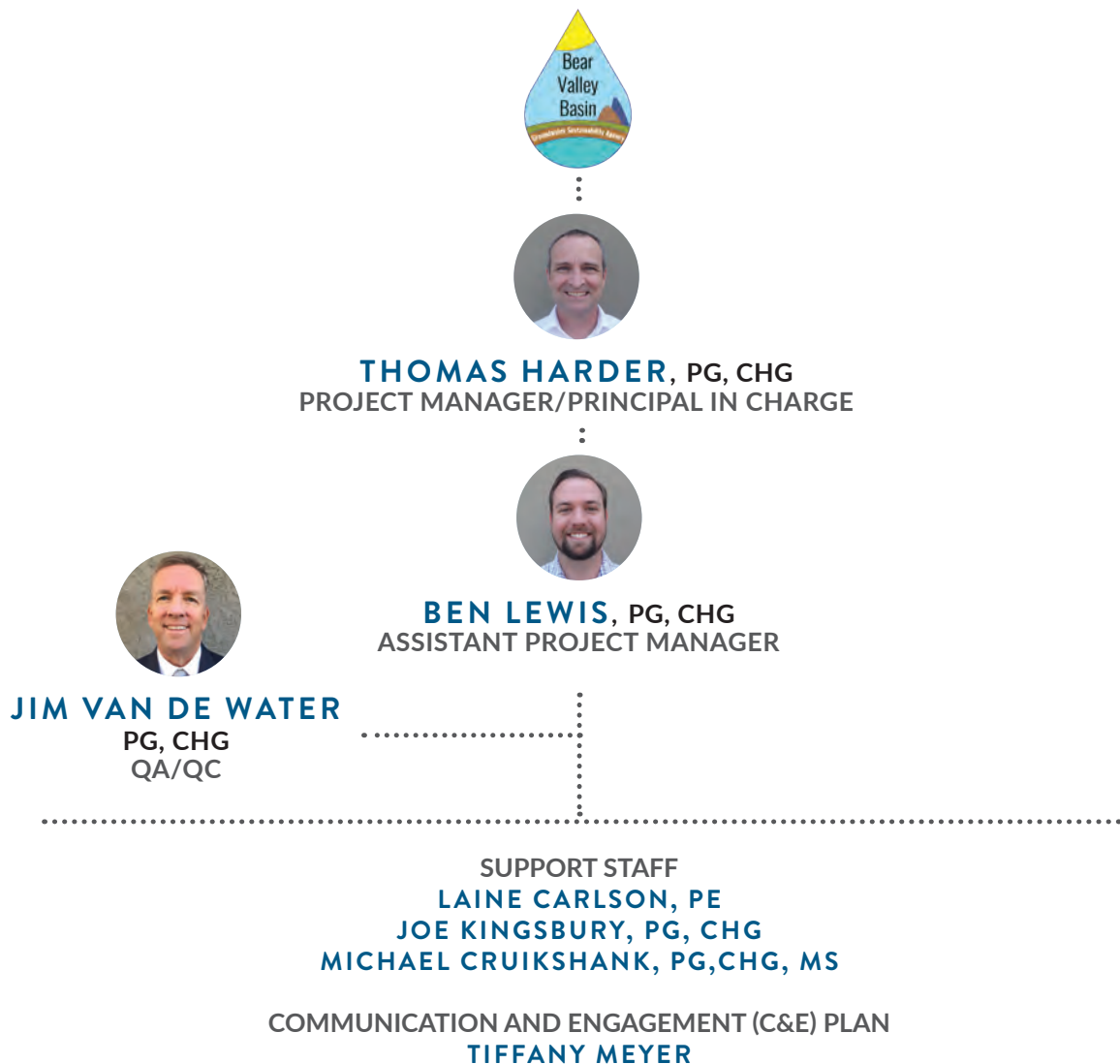
#### BUDGET

Three contracts totaling \$1,093,000

# QUALIFICATIONS OF TEAM

TH&Co's proposed project team is functionally organized to take advantage of the strengths of our expert staff within a streamlined structure to provide the highest level of responsiveness and quality. Mr. Harder is a certified hydrogeologist with more than 30 years of experience working in basins throughout Southern California. He will be supported by colleagues, Mr. Ben Lewis and Mr. Jim Van de Water. In addition to TH&Co's internal resources, he will be supported by a strategically selected team, including Replenish Big Bear's Project Manager, Laine Carlson, and WSC's expert hydrogeologists, Michael Cruikshank and Joe Kingsbury, who can deploy any necessary resources to support the development of the GSP.

TH&Co has more than 21-years of basin and regional knowledge and will leverage its data and local expertise to streamline data collection and the development of the GSP. Additionally, WSC and Mr. Harder have a seamless relationship working in the region through our collaborative effort on BBARWA's Waste Discharge Requirements Permit Update. **Resumes for each member of the TH&Co/WSC Team are included at the end of this proposal.**



# PROJECT UNDERSTANDING

Our experienced and multi-disciplinary team understands groundwater sustainability from every aspect—technical, funding, governance, and stakeholder involvement. As a partner, we will work with the Groundwater Sustainability Agency (GSA) and basin stakeholders to deliver understandable explanations of complex hydrogeologic concepts and apply our knowledge of Sustainable Groundwater Management Act (SGMA) requirements to develop practical and effective strategies that achieve sustainable groundwater management in the most cost-effective and practical manner possible.

## State of the Basin as we know it

The Big Bear Valley Basin covers approximately 30 square miles within the San Bernardino Mountains in southern San Bernardino County. The Big Bear Valley extends from Big Bear Lake Dam on the west to the eastern portion of Baldwin Lake on the east. The basin is characterized by two major watersheds, each of which encompasses the two primary surface water features in the area: Big Bear Lake and Baldwin Lake. Groundwater in the Big Bear Valley is produced from three primary geologic formations: unconsolidated or semi-consolidated alluvial sediments, fractures in granitic bedrock, and fractures and cavities in carbonate bedrock. Groundwater production wells that typically have the highest yields are constructed within the aquifers of the alluvial sediments. Currently, the entire municipal water supply in Big Bear Valley is from groundwater as there is no means of importing water into the area. The Replenish Big Bear project plans to utilize recycled water to supplement the groundwater supply.

The perennial yield (i.e. safe yield or sustainable yield) of the Big Bear Valley Basin has been estimated to be approximately 5,000 acre-feet/year. To date,

annual groundwater production in the Valley has never exceeded the perennial yield estimate and groundwater levels periodically recover to historical high conditions during wet periods. However, due to relatively limited aquifer storage in the basin, groundwater levels can vary widely between periods of relatively high precipitation and periods of low precipitation. As such, it is critical to monitor and manage groundwater levels to ensure adequate supplies during periods of prolonged drought. Since 2003, the Big Bear Lake Department of Water and Power (BBLDWP) has implemented a groundwater monitoring and management program that has been successful at managing groundwater supplies to address periodic drought conditions, including the recent dry period between 2011 and 2017. Big Bear City Community Services District (BBCCSD) has also implemented a successful monitoring and management program in their portion of the basin. Given the fact that the Bear Valley Basin is already relatively well managed, our approach for preparing the BVBGSP is to simply build on what has already been accomplished and bring it into compliance with SGMA.

**Based on WSC’s understanding of the GSA’s goals for the GSP and SGMA requirements, our approach to development of a supported, defensible, and efficient GSP includes:**



Leveraging existing knowledge and data to expedite the development of the GSP to the greatest extent possible under SGMA requirements.



Building upon our team’s communication and engagement experience in other basins and using the existing outreach channels in Bear Valley to reduce cost and drive collaboration.



Maximizing the value of the GSP by drawing upon our knowledge and experience of the Bear Valley’s water stakeholders, issues, and efforts to set the Valley up for long-term success.



## The TH&Co team understands key schedule drivers for the project

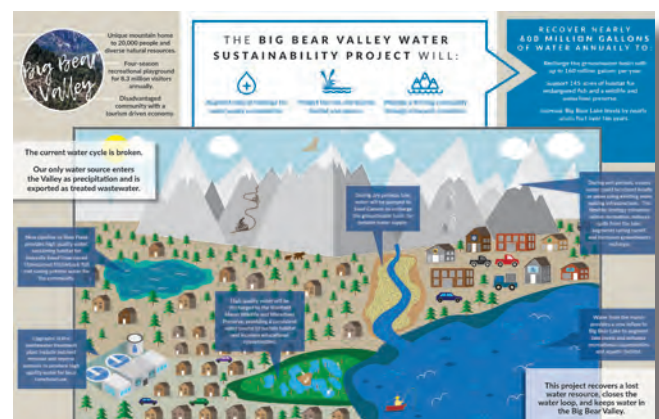
WSC understands the project schedule included in the RFP is based on the schedule included in the GSA's grant agreement with DWR for preparation of the GSP, and shows completion of the Final Draft GSP by June 2020. While it is possible for the proposed technical work to be conducted in that time period, SGMA requires GSAs to meaningfully engage with stakeholders throughout development of the GSP, which will extend the overall timeline required to complete the GSP. Additionally, the Bear Valley Basin was recategorized to a very low priority basin after the grant application was prepared, so there is no longer a required deadline by which to

prepare a GSP. Understanding that the GSA would still like to complete the GSP in a timely manner, we are proposing an expedited 16-month schedule. It is recommended that the GSA seek a schedule extension from DWR in the grant agreement that provides at least 16 months to complete the GSP, with an additional buffer if possible to allow more time for reviews and stakeholder coordination, if needed. It would be reasonable to request an extension up to January 31, 2022, which was the deadline specified in the Projects Proposal Solicitation Package for the GSP grant.

## TH&Co and WSC will leverage previous work and align with on-going efforts in Big Bear Valley

The members of the GSA have been evaluating opportunities for supplemental water supplies in the Big Bear Valley for over 50 years, both individually and in partnership with other agencies. There have been 35 studies evaluating water solutions for Big Bear Valley, including numerous recycled water studies that evaluated 9 different project alternatives. There have also been several imported water studies that demonstrated that importing water to the Big Bear Valley comes with an extremely high cost and limited availability in dry years, making this an undesirable option. Beginning in 2015 during the recent drought, the members of the GSA partnered together on a renewed effort, called the Bear Valley Water Sustainability Project, and worked with WSC and TH&Co to identify and advance the most beneficial recycled water alternative to keep this water in the community and provide sustainable water for the future. The selected project, which is now known as Replenish Big Bear, includes several proposed elements that contribute to groundwater sustainability: (1) recycled water discharge to sustain habitat in Shay Pond, which will enable BBCCSD to conserve groundwater currently used for that purpose; (2) irrigation of the golf course to provide in-lieu recharge of the groundwater basin by resting the existing golf course wells; and (3) direct groundwater recharge in Sand Canyon to increase groundwater

supplies, if needed in the future. The GSA members engaged many local stakeholders throughout the development of Replenish Big Bear and received positive feedback about the benefits the project provides to the community and the confidence that this is the right solution. During preparation of this GSP, our team will leverage that prior work and build on the previous stakeholder engagement efforts to optimize our approach to Projects and Management Actions, as well as Stakeholder Engagement.



**WSC has developed outreach materials for Big Bear Valley that can be leveraged to engage stakeholders in the preparation of the GSP.**



# APPROACH

## Task 1: Project Management



### Task 1: Project Management

- **Task 1.1** Project Management, Progress Reports, and Grant Reporting
- **Task 1.2** GSP Presentations and Document Review Meetings

#### Deliverables:

- Monthly, quarterly, and final progress reports
- Agendas and meeting materials

TH&Co's Project Manager will provide oversight, manage communication, assign resources, and coordinate work efforts of the Consultant Team (TH&Co and WSC) to align with the GSP priorities and achieve cost-effective performance.

The Consultant Team understands that the GSA will provide grant administration services and be the point of contact to

the DWR. The monthly invoices and clear, concise progress reports generated by TH&Co will assist the GSA in developing the quarterly invoices and progress reports to DWR. The TH&Co Team will assist the County and City to prepare a draft Project Completion Report in accordance with DWR specifications.

### 1.1 Project Management Progress Reports and Grant Reporting

TH&Co's approach to effectively manage the GSP development process includes:

- **Progress Updates.** We will prepare progress updates that document project activities, progress, and an overall budget and schedule status to be submitted to the BVBGSA with each monthly invoice.
- **Grant Reports.** We will prepare quarterly and final progress reports and submit to the DWR.

- **Coordination.** We will work with the BVBGSA staff and other parties and agencies with relevant information for GSP development.

### 1.2 GSP Presentations and Document Review Meetings

Based on the TH&Co Team members' extensive experience in the Bear Valley Basin, we are proposing an accelerated schedule to complete the GSP in under two years corresponding to GSP meetings and GSA workshops from the project kick-off meeting to the adoption of the GSP (See proposed schedule).

- The TH&Co Team will plan, schedule, conduct, and document a project kickoff meeting with representatives from the GSA members, other interested stakeholders, and key staff from the TH&Co Team. The purpose of the kickoff meeting will be to make introductions, review the overall project objectives and scope of work, discuss project schedule and budget, and review roles and responsibilities.

We will coordinate six (6) GSP meetings to present interim results, discuss project methodologies, and review draft and final deliverables. It is assumed that the Project Manager along with key TH&Co Team members will attend all GSP meetings and when presenting information at three (3) GSA workshops. Budget includes meeting preparation and travel time.

## Task 2: Data Compilation and Organization



### Task 2 Data Compilation and Organization

#### Deliverables:

- GSP supporting data and document database
- Data request log(s)
- DMS

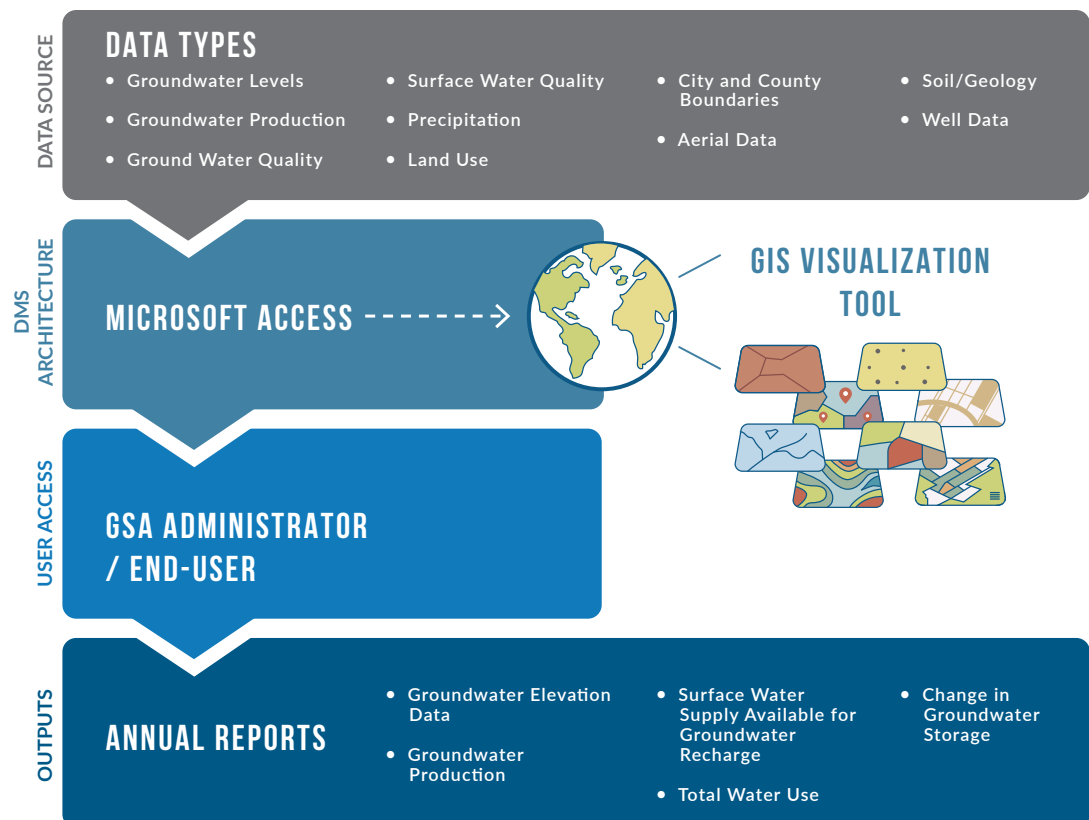
SGMA requires development of a Data Management System (DMS) to organize and efficiently present data collected from the basin. Over the years, TH&Co has compiled a hydrogeological database in Microsoft Access for use in hydrogeological studies and management of the basin. The current database includes data on wells and boreholes, groundwater levels, groundwater production, and groundwater quality. For these data types, it will only be necessary to append what is already in the database, saving time and money.

Our approach for this task is to first work with the BVBGSA stakeholders to identify a DMS that will best meet your needs. This will include identifying the types of data needed for the database, the

format in which the data will be needed, and the most useful means for disseminating data. Once the data types have been identified, TH&Co will review the existing datasets, identify needed data to append the database, and send a data request letter to the agencies requesting the data. As these data are received, TH&Co will append the existing MS Access database to bring it up to date. A data request log will be created to keep track of remaining data needed.

It is assumed that a primary use of the database will be to efficiently present data required for Annual Reports, which will be required on April 1 of each year. The budget for this task assumes that the relational database will be coupled with a Geographic Information System (GIS) (ESRI ArcGIS 10 or equivalent) for efficient preparation of maps and data needed for annual reports. Required maps will include groundwater elevation contour maps, groundwater production data, total water use, and change in groundwater storage.

The structure of the final database, including data organization, data types, user access and security, and reporting will be included in a stand-alone chapter within the BVBGSP.



## Task 3: Plan Contents Preparation



### Task 3 : Plan Contents Preparation

- **Task 3.1** Introduction and Administration Information
- **Task 3.2** Plan Area and Basin Settings
- **Task 3.3** Sustainable Management Criteria
- **Task 3.4** Monitoring Network
- **Task 3.5** Projects and Management Actions

#### Deliverables:

- See Task 5

The Plan Area section will provide the geographical and managerial context for the BVBGSP. Included in this section will be maps showing the boundaries of the basin, jurisdictional boundaries including those of each member agency of the BVBGSA, land use designations, and locations of wells. This section will also include a description of existing groundwater monitoring and management programs and how those will be

incorporated into the BVBGSP.

Given the aggressive schedule and limited budget for preparation of the BVBGSP, efficiency in the preparation process will be essential. The work conducted in this task will build on the expertise and considerable knowledge of the Big Bear Valley Basin by teaming partner Thomas Harder. Mr. Harder brings to the team a thorough knowledge of the hydrogeology of the basin, a history with the management of the basin, and a thorough knowledge of the SGMA GSP process, which will maximize our ability to meet the schedule for preparation of the BVBGSP. TH&Co also developed the GIS shapefiles and map of the BVBGSA area that was used in defining the basin boundary modifications for the DWR and already has developed most of the GIS files necessary for development of this section from previous work. As such, there will be no learning curve for the development of the Plan Area and Basin Setting sections of the BVBGSP.

### Basin setting: Hydrogeologic Conceptual Model, groundwater conditions, water budgets

The TH&Co/WSC team will develop a Basin Setting section that is in full compliance with California Code of Regulations Title 23, Division 2, Chapter 1.5, Subchapter 2, Article 5, Subarticle 2. The basin setting section will address the entire Bear Valley Basin (No. 8-009) as updated in 2017. The Basin Setting section will include the following primary subsections:

1. **Hydrogeologic Conceptual Model (\$354.14)**
2. **Groundwater Conditions (\$354.16)**
3. **Water Budget (\$354.18)**
4. **Management Areas (\$354.20)**

### Hydrogeological Conceptual Model

The hydrogeologic conceptual model is a description of the groundwater flow system of the Bear Valley Basin and how it interacts with surface water and land use in the area. The conceptual model will include a description of the geologic setting, basin boundaries, surface water features, areas of groundwater recharge and discharge, and principal aquifers and aquitards. The hydrogeologic conceptual model of the Bear Valley Basin will be developed in consideration of California Department of Water Resources' (DWR) Best Management Practices (BMP) for the preparation of hydrogeologic conceptual models. Work for this task will build on the extensive previous perennial yield studies, United States Geological Survey study, and data collected during test borehole and well drilling. The budget for this task includes presentation of two cross sections of the Big Bear Valley, as required by the regulations. TH&Co plans to use previously developed cross sections and modify them with updated data, as appropriate.

### Groundwater Conditions

The groundwater condition subsection will describe the current and historical groundwater conditions in the basin including groundwater occurrence and flow, groundwater storage, groundwater quality issues, land subsidence, interconnected surface water systems, and groundwater dependent

ecosystems. This section will include two groundwater contour maps depicting seasonal high and seasonal low groundwater conditions, hydrographs for key wells within the valley, and a map showing known groundwater contaminant sites. TH&Co will draw from the updated BVBGSA database for the groundwater levels necessary for the contour maps and hydrographs. TH&Co will also address the Shay Pond Stickleback habitat in the groundwater dependent ecosystems section.

## Water Budget

This section will describe a comprehensive accounting of the historical, current and projected future surface water and groundwater inflows and outflows to/from the Bear Valley Basin. Water budgets will be created for both surface water and groundwater. Inflow terms for a surface water budget include but are not limited to precipitation, stream inflow, and discharge to land surface from wells. Outflow terms include infiltration of precipitation, evaporation from surface water bodies, water releases from the dam, stream infiltration, return flow and consumptive use. For the groundwater budget, inflow terms include groundwater recharge from precipitation, stream infiltration, return flow, and subsurface inflow. Outflow terms include groundwater pumping, and evapotranspiration. The difference between the sum of inflow and outflow terms provides the change in groundwater storage for the basin. Based on the water budget and historical correlation of groundwater pumping and groundwater levels, TH&Co will document the sustainable yield of the Basin.

It is noted that SGMA Best Management Practices encourage the use of groundwater flow models for evaluating future projects and management actions and preparing future water budgets that account for the projects as well as potential climate change. However, given the robust nature of the existing monitoring network in the basin, the closed nature of the basin (there is not groundwater outflow), the demonstrated success of past management of the groundwater resources in the basin, and the low priority designation for the basin by DWR, it is our opinion that future water budgets, which will account for future projects (e.g. Replenish Big Bear) and climate change, can be developed without

a numerical groundwater flow model. It is further noted that the planning-level budget and schedule for preparation of the BVBGSP is not adequate to prepare a groundwater flow model. Should a groundwater flow model be determined to be necessary in the future, a separate scope of work and cost estimate can be developed at that time.

## Management Areas

The various stakeholders of the BVBGSA may identify different management areas if it is beneficial to implementation of the GSP. Reasons for delineating, management areas could include identification of unique minimum thresholds or measurable objectives that address the location-specific conditions or areas of specific projects or management actions. The TH&Co/WSC team will work with the BVBGSA stakeholders to identify management areas, where needed. If management areas are identified, this subsection of the Basin Setting will include maps showing the management area boundaries, monitoring features specific to the management areas, the reason for delineating the management areas, minimum thresholds and measurable objectives specific to each management area, and the level of monitoring and analysis specific to each area.

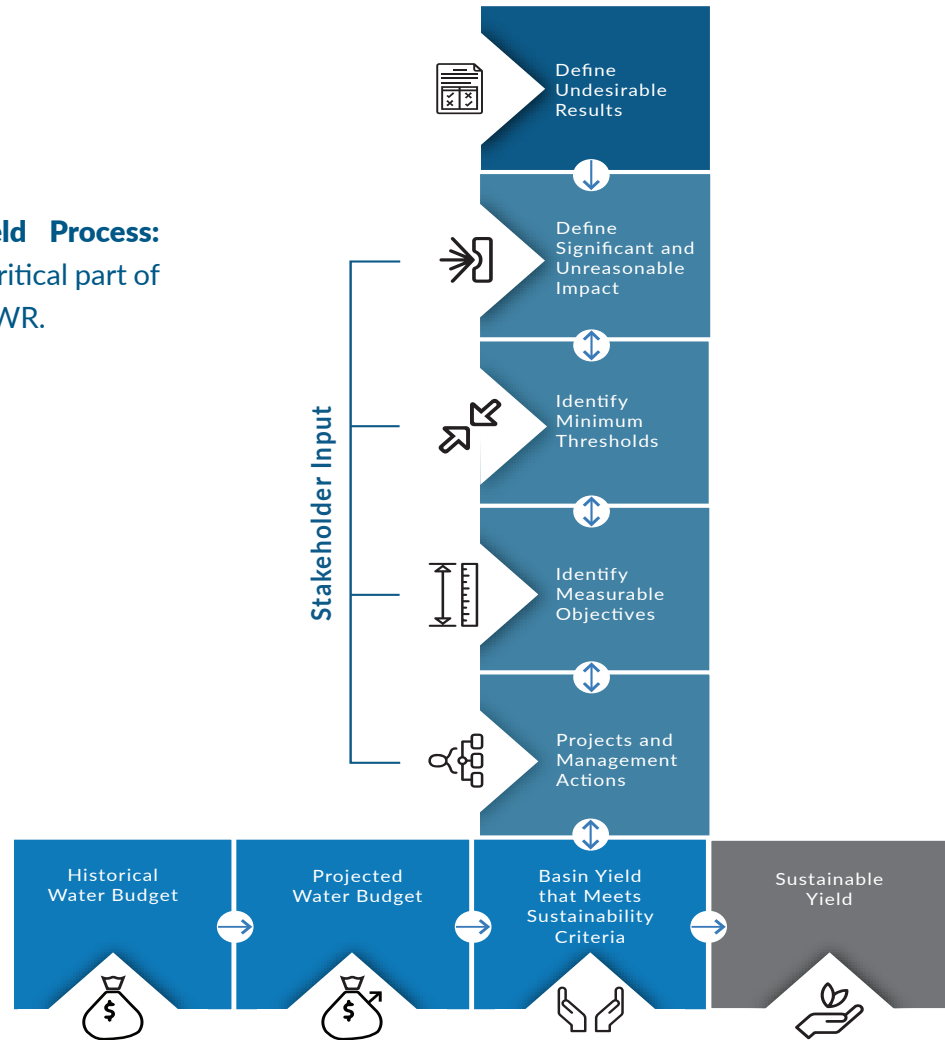
## Sustainable Management Criteria: Sustainability goal, undesirable results, minimum thresholds, measurable objectives

This section of the GSP includes the sustainability goal, identification of undesirable results, and development of quantitative measurable objectives and minimum thresholds for the sustainability indicators that define how a GSA will measure and demonstrate sustainability. DWR considers this section of the GSP to be the most critical because it defines what will constitute sustainable management of the basin. In contrast with the basin setting, which may include considerable uncertainty, DWR will expect to see clearly stated and technically supported sustainability criteria. The approach described below satisfies the Regulations Article 5, Subarticle 3 Sustainable Management Criteria (including § 354.22, 354.24, 354.26, 354.28, 354.30).

## Development of Sustainability Criteria

### SGMA Sustainable Yield Process:

This section is the most critical part of the GSP in the eyes of DWR.



A significant component of the GSP development process will be devoted to establishing the sustainability criteria. This will be an iterative process involving technical analysis, stakeholder input, and policy decisions by the GSA. The first step will be to define what constitutes significant and unreasonable effects to beneficial uses that might be caused by chronic lowering of groundwater levels, reduction in groundwater storage, water quality degradation, or depletion of interconnected surface water. This will require input from the stakeholders and policy decisions by the GSA. Then, together we will define quantitative goals (measurable objectives and minimum thresholds in SGMA terminology) for each sustainability indicator. The analysis will be augmented with hydrograph analysis and analytical calculations, as appropriate. The measurable objectives, minimum thresholds, and anticipated costs associated with managing to

meet them will be reviewed by the stakeholders. This review may cause the GSA to revisit the prior analysis of significant and unreasonable effects. Several iterations may be necessary to arrive at consensus on the sustainability indicators. This portion of the planning process has a significant potential for disagreement. Our team has the patience and facilitation skills needed to work through this process.

As mentioned above, sustainability will be defined using quantitative goals called measurable objectives and minimum thresholds. This means groundwater levels, quality, etc., will be defined at specific monitoring locations to determine whether the basin is being sustainably managed.

This task includes preparation of agendas and presentation materials for meetings and workshops, as needed.

## Monitoring Network

The Monitoring Networks section will be prepared in accordance with GSP Regulations Sections 354.34, 354.36, and 354.38. Given the relatively robust groundwater monitoring networks and monitoring programs that have already been established by the BVBGSA stakeholders to date, it is anticipated that this section will simply involve combining the existing plans into one document and conforming them to SGMA requirements. In consideration of this, the monitoring networks section will include the following:

- 1. A description of monitoring network objectives;**
- 2. A description of the monitoring network including the wells and other features to be used in the network;**
- 3. A scientific rationale for site selection;**
- 4. Maps showing the location of monitoring sites and tables summarizing monitoring features;**
- 5. Tables showing monitoring frequency;**
- 6. A description of how the monitoring network will provide the data necessary to monitor groundwater flow directions and gradients, estimate change in groundwater storage, monitor groundwater quality trends, and estimate depletions of surface water from groundwater extractions.**
- 7. A description of how the monitoring network addresses each of the SGMA sustainability indicators that are applicable to the BVBGSA;**
- 8. A description of the procedures and protocols for the collection, storage, and QA/QC of the data collected from the monitoring network.**
- 9. A description of data and reporting standards.**
- 10. Protocols for periodic review and evaluation of the monitoring network.**

In coordination with the identification of sustainable management criteria, a subset of the monitoring network may be designated as “representative monitoring sites,” which are monitoring locations at which compliance with the management criteria are assessed. The monitoring network section will include data graphs for each of the representative monitoring sites along with the interim milestones, measurable objectives, and minimum thresholds for those sites. On-going future data collection at these locations will determine performance with respect to the sustainability goals of the BVBGSA.

During the determination of sustainable management criteria, it may be determined that there are data gaps in the location, type, or adequacy of the existing monitoring network that prevents evaluation and demonstration of compliance with the BVBGSA's sustainability goals. In that event, TH&Co will identify the data gaps and recommended monitoring features to fill the data gaps in this section of the BVBGSP.

## Projects and Management Actions

The Bear Valley Basin GSP will identify and describe projects and management actions to achieve sustainability based on the sustainability goals developed in Task 2.3. The project and management action identification and prioritization process will be stakeholder driven and focused on the cost/benefit ratio of each proposed action and the contribution to the sustainability goals. Stakeholder participation and buy-in is critical and achieving this and requires a structured and transparent process to gain trust and achieve sustainability. Our approach to this process is outlined below and satisfies the Regulations Article 5, Subarticle 3 Sustainable Management Criteria (including § 354.22, 354.24, 354.26, 354.28, 354.30).

Stakeholder outreach will be facilitated through meetings with and dedicated workshops targeted to engage interested parties to discuss, evaluate, and select projects and appropriate management actions. To evaluate possible projects and management actions, our approach includes identifying projects and management actions based on needs that emerge through development of the GSP. Our general strategy is to (1) identify needs, including the amount of water that is required to meet current and potential future demands and achieve sustainability,



(2) configure projects to satisfy one or more of these needs, (3) quantify each project's/action's cost and contribution toward sustainability goals, (4) apply transparent evaluation process developed by stakeholders and (5) identify funding programs that align with the needs to be served by the candidate projects.

Potential projects/concepts that may be considered for Bear Valley include:

- Replenish Big Bear
- Conservation Projects

It is assumed that all of the potential projects and management actions have been evaluated in previous studies and the results will be updated, if needed, and summarized as part of this task.

Following the approval of the projects and management actions summary report, the WSC team will develop a plan of action for implementing the projects and management actions. The plan includes cost, schedule, annual reporting and a periodic assessment of progress towards sustainability.

## Task 4: Stakeholder Engagement



### Task 4 : Stakeholder Engagement

- Meaningfully Engage Stakeholders in Development of GSP

#### Deliverables:

- Stakeholder Communication and Engagement Plan (C&E Plan)
- Stakeholder outreach content and materials
- Three stakeholder workshops set at key GSP development milestones

SGMA requires GSAs to meaningfully engage stakeholders in the development of the GSP. This helps make sure that the plan considers all beneficial uses and users of groundwater and the impact that projects and management actions will have on those stakeholders. The final GSP must provide documentation of the engagement methods that were used by the GSA.

The Replenish Big Bear outreach effort has been very effective in building public understanding and buy-in on sustainable water management efforts throughout the Valley. That effort (led by WSC

and the BVBGSA members) includes a project brand, website, outreach materials, and regular public meetings. This platform provides a great framework to also communicate the Valley's efforts in sustainable groundwater management.

To optimize resources, capitalize on existing efforts, and fulfill SGMA's stakeholder engagement requirements, WSC recommends an approach that integrates directly with the broader Replenish Big Bear stakeholder outreach efforts. This includes the following activities:

### C&E Plan Development

**STAKEHOLDER MAPPING.** DWR has identified 11 stakeholder segments that represent all beneficial uses and users of groundwater in the state of California, and thereby those that will be the most affected by a GSP. Using these segments as a starting point, WSC will facilitate a 90-minute virtual workshop with the GSA team to identify the stakeholder segments present in the Bear Valley Basin, and all relevant organizations/individuals within each segment that should be notified of the GSP process and opportunities to participate. Finally, we'll help you identify which segments are top priority.

**Stakeholder Target List Development.** WSC will work in partnership with the client to build a target list of all identified stakeholders identified in the mapping exercise, including a target individual's name and email address. This will serve as your target distribution list for all outreach activities. If requested, we will also set up a MailChimp

**WSC led a SGMA 101 Workshop to engage stakeholders in the GSP process and cultivate understanding of groundwater sustainability indicators.**



account where your list can be managed, and email notifications easily distributed in a manner that's compliant with anti-Spam regulations (e.g., allowing stakeholders to unsubscribe).

**C&E Plan Development.** SGMA requires all GSAs to develop a written and publicly-reviewed Communications and Engagement Plan (C&E Plan) as part of their GSP development effort. Using the guidelines provided by DWR, WSC will develop a comprehensive C&E Plan, which outlines the stakeholders present in the affected basin and the tactics used to meaningfully engage them, is required by SGMA.

### Stakeholder Outreach

WSC will provide support to augment the Replenish Big Bear outreach efforts with content specific to the GSP development effort. Support will include:

- Develop website content and integrate into the Replenish Big Bear website. Content will include: GSP project overview; Frequently Asked Questions; How to Get Involved; Project timeline
- Create up to five brief project update blog articles, publish to the Replenish Big Bear web blog; articles will correlate with key GSP development milestones
- Create email project updates to stakeholder list; updates will correlate with articles and key GSP development milestones
- Workshop email invitations to stakeholder list
- Documentation of all stakeholder engagement activities for inclusion in the GSP as required by SGMA

## 4.3 Stakeholder Workshops

**WORKSHOP #1: SGMA AND GROUNDWATER 101.** This workshop should be scheduled at the earliest stages of the GSP with a goal of attendance by as many stakeholder segments as possible.

**Workshop Description:** The two-hour, in-person stakeholder workshop will provide participants with an overview of the SGMA in easy-to-understand terms, including an overview of the SGMA policy and why sustainable management of the Basin has been made a State priority. Presenters will describe what groundwater is and will show the current state of the Bear Valley Basin groundwater levels

and conditions. Attendees can expect an accessible presentation that will give a solid grounding in the policy, the region's approach to developing a GSP, and how the plan may affect them. Overall facilitation will be provided by WSC's seasoned facilitator, while the technical content will be presented by the TH&Co's principal hydrogeologist, Thomas Harder.

**Support Includes:** Workshop prep, workshop invitation development and distribution to target list, slide deck development, facilitation and session audio recording, post-workshop follow-up to stakeholder list including workshop summary and link to the audio recording and slide deck.

**WORKSHOP #2: SUSTAINABILITY MANAGEMENT CRITERIA.** This workshop should be scheduled as Sustainable management criteria are being developed.

**Workshop Description:** The five sustainability indicators include: 1) further groundwater level decline, 2) reduction in groundwater storage, 3) depletion of interconnected surface water bodies, 4) water quality degradation, and 5) land subsidence. Within these chapters, the undesirable results for each sustainability indicator will be defined. **Workshop #2: Sustainability Management Criteria** will take place at the beginning stage of this section's development. This is an interactive, two-hour workshop where stakeholders and decision makers will identify the desirable results and develop sustainability goals for the Bear Valley Basin.

**Support Includes:** Workshop prep, workshop invitation development and distribution to target list, slide deck development, facilitation and session audio recording, post-workshop follow-up to stakeholder list including workshop summary and link to the audio recording and slide deck.

**WORKSHOP #3: PROJECTS AND MANAGEMENT ACTIONS.**

This workshop should be scheduled after the sustainable management criteria have been identified and agreed upon.

**Workshop Description:** Chapters 9 and 10 identify projects, management actions, and the implementation plan that will bring groundwater use into balance and meet the sustainable management criteria identified.

**Workshop #3: Projects and Management Actions** will take place at the beginning stage of this section's



development. This is an interactive, two-hour workshop where stakeholders and decision makers will identify the projects and management actions required to bring the Bear Valley Basin to sustainability.

**Support Includes:** Workshop prep, workshop invitation development and distribution to target list, slide deck development, facilitation and session audio recording, post-workshop follow-up to stakeholder list including workshop summary and link to the audio recording and slide deck.

## Task 5: Plan Implementation



### Task 5 : Plan Implementation

- Task 5: Implementation

#### Deliverables:

- Agendas and Meetings Materials

WSC will prepare an implementation plan for the Bear Valley GSP. The plan will include planning level costs for the implementation of the projects and management actions identified in Task 3. Costs will include

estimates to administer the GSP, implementation of the monitoring program, developing annual reports and developing the five-year GSP updates during the 20 year path to sustainability by 2042.

## Task 6: GSP Document Preparation



### Task 6 : GSP Document Preparation

- Task 6.1: Prepare the Administrative Draft GSP
- Task 6.2: Prepare the Draft GSP
- Task 6.3: Prepare the Final Draft GSP

#### Deliverables:

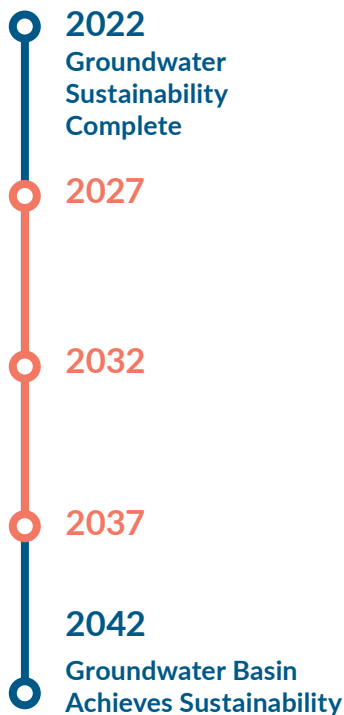
- Administrative Draft GSP
- Draft GSP
- Public hearing on the Draft GSP
- Final hearing on the Draft GSP
- Final Draft GSP and relevant supporting documentation
- Submittal of Final Draft GSP to the DWR

This task describes the scope of work for completing the draft and final GSP. We will prepare an outline for the GSP, an administrative draft of the GSP, a public review draft of the GSP, and a final draft of the GSP. Each GSP draft will include all required sections of the GSP, including appendices.

**Prepare Administrative Draft GSP.** The Consultant Team will prepare an administrative draft of the GSP that includes the GSP's supporting appendices (if applicable). The administrative draft will be reviewed by the GSA. After comments

on the administrative draft are received, they will be compiled and a response to comments will be prepared. Comments incorporated into the GSP will be used to prepare the public draft of the GSP.

**Prepare Public Draft and Final GSP.** The Consultant Team will prepare a public draft of the GSP and the GSP's supporting documentation. The public draft GSP will be circulated for public review and comment. After comments on the public draft are received, they will be compiled and a response to comments document will be prepared. Comments incorporated into the GSP will be used to prepare the final draft of the GSP. Once finalized, the GSP will be adopted by the GSA.



# Schedule

		2019		2020		2021							2022									
GSP Chapters		N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A			
Executive Summary																GSP Due - January 31, 2022						
Administrative Information	Chapter 1: Introduction			D			F															
	Chapter 2: Agency Information (§ 354.6)			D			F															
	Chapter 3: Description of Plan Area (§ 354.8)			D			F															
	Chapter 4: Hydro-geologic Conceptual Model (§ 354.14)						D	F														
Basin Setting	Chapter 5: Groundwater Conditions (§ 354.16)						D	F														
	Chapter 6: Water Budget (§ 354.18)						D	F														
Sustainable Goal Setting	Chapter 7: Sustainable Management Criteria (§ 354.22-30)							D	F													
	Chapter 8: Monitoring Networks (§ 354.34)							D	F													
Plan to Sustainability	Chapter 9: Projects and Management Actions (§ 354.44)								D	F												
	Chapter 10: Implementation Plan								D	F												
	Chapter 11: Notice and Communications (§ 354.10)		D		F																	
	Chapter 12: Inter-agency Agreements (§ 357.2-4)								D	F												
	Chapter 13: Reference Listv								D	F												
	Appendices								D	F												
	Draft GSP											AD	PD									
	Final GSP																F					

GSP Meeting			M	M	M	M	M	M	M	M	M	M	M	M	M				
GSA Workshops				W		W		W		W		W		W					

D = Draft
 F = Final
 AD = Admin Draft
 PD = Public Draft

# THOMAS E. HARDER, PG, CHG

*Principal Hydrogeologist*

## EDUCATION

B.S., Geology. California Polytechnic State University - Pomona, 1990

M.S., Geology with Honors. Emphasis in Hydrogeology, California State University – Los Angeles, 1995

## PROFESSIONAL REGISTRATIONS

California Professional Geologist (No. 6512)

Certified California Hydrogeologist (No. 588)

## PROFESSIONAL AFFILIATIONS

National Ground Water Association

Groundwater Resource Association of California

Wateruse Association

During his 30 years of professional experience, Mr. Harder's expertise spans a wide range of hydrogeological disciplines, including regional groundwater basin analysis, perennial yield (i.e. safe yield), artificial recharge, groundwater management, groundwater models, contaminant hydrogeology, and water wells.

Mr. Harder is an expert in the hydrogeology of the Big Bear Valley, having provided technical direction and analysis of 20 test boreholes, 22 monitoring wells, 13 municipal production wells, well siting studies, perennial yield studies, groundwater quality evaluations, artificial recharge, and groundwater management.

## PROFESSIONAL EXPERIENCE

2008 to Present: *Principal Hydrogeologist*, Thomas Harder & Co.; Anaheim, California

1998 to 2008: *Senior Geohydrologist*, Geoscience Support Services, Inc.; Claremont, California

1997 to 1998: *Principal Hydrogeologist, Geosciences Department Manager*, Parsons Engineering Science; Pasadena, California

1989 to 1997: *Senior Geologist*, Harding Lawson Associates; Irvine, California

## TECHNICAL COMMITTEE PARTICIPATION

2003 to Present: Big Bear Lake Department of Water Groundwater Management Technical Review Team

2016 - Present: Metropolitan Water District of Southern California Regional Recycled Water Recharge Scientific Advisory Panel

2011 to 2016: Kern Fan Monitoring Committee – Groundwater Model Technical Advisory Subcommittee

2010 to 2013: Chino Basin Recharge Master Plan Steering Committee

2009 to 2012: Chino Basin Watermaster Appropriative Pool and Advisory Committee

2002: Chino Basin Subsidence Technical Committee

# Ben Lewis

Senior Hydrogeologist

Mr. Lewis has more than eight years of professional experience with regional groundwater basin studies in the Greater Southern California and San Joaquin Valley regions with focuses on hydrogeologic basin assessments and groundwater management. Mr. Lewis has prepared numerous water balances, basin-scale hydrogeologic cross sections, and inputs to groundwater flow models. Mr. Lewis also has experience with land use evaluations, agricultural water demand analyses, analyses of aquifer properties, and surface water delivery analyses. His field experience includes observation during pilot borehole drilling, geophysical logging, isolated aquifer zone testing, well construction, well development, pumping tests, and groundwater quality sampling. Mr. Lewis holds a Bachelor of Science in Geology and is a California Professional Geologist and California Certified Hydrogeologist.

## EDUCATION

B.S., Geology. California State University, Fullerton, 2010

## PROFESSIONAL CERTIFICATION

California Professional Geologist No. 9347

California Certified Hydrogeologist No. 1047

## PROFESSIONAL EXPERIENCE

August 2010 to Present: *Senior Hydrogeologist*, Thomas Harder & Co., Anaheim, California

## PROFESSIONAL AFFILIATIONS

National Groundwater Association

South Coast Geological Society, 2018 President

## PROJECT EXPERIENCE

### Numerical Model of the Tule Subbasin – Porterville, CA

*Client: Tule MOU Group. 2017 - Present*

Developing a numerical groundwater flow model of the Tule Subbasin and surrounding areas in support of work for the Sustainable Groundwater Management Act. The five-layer, 1,500 square mile model incorporates and expands on the previously-prepared water budget of the Tule Subbasin. The model calibration period is from 1986 to 2017 with monthly stress periods.

### Arrastre Creek Well – Big Bear, CA

*Client: City of Big Bear Lake Department of Water and Power. 2013 -2014.*

Provided support during development of Bid Documents and Technical Specifications. Provided observation during the caliper log and deviation surveys and field inspection of well construction. The well was constructed to a total depth of 440 ft below ground surface.



# *Jim Van de Water, PG, CHG*

*Principal Hydrogeologist*

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## **EDUCATION**

B.S., Geology. State University of New York at Stony Brook, 1986

M.S., Hydrology and Water Resources, University of Arizona, 1989

## **PROFESSIONAL REGISTRATIONS**

California Professional Geologist (No. 6538)

Certified California Hydrogeologist (No. 508)

Arizona Registered Geologist (No. 61345)

## **PROFESSIONAL AFFILIATIONS**

National Ground Water Association

During his 30 years of professional experience, Mr. Van de Water has conducted numerous modeling studies throughout the United States in support of water supply, remediation system design, and risk assessment. His work has involved USEPA and state agencies in California, Nevada, Arizona, Utah, Indiana, New Jersey, and Hawaii. His primary expertise is in the development and application of deterministic and stochastic analytical groundwater flow and solute transport models and numerical groundwater flow and solute transport models in support of regional- and site-scale hydrogeologic investigations and risk assessment. In addition to modeling, his expertise includes groundwater sampling, monitoring well, extraction well, and injection well design and construction, aquifer testing and analysis using analytical and numerical methods, statistical analysis, and expert witness/litigation/mediation services.

## **PROFESSIONAL EXPERIENCE**

2014 to Present: *Principal Hydrogeologist*, Thomas Harder & Co.; Anaheim, California

1999 to 2014: *Independent Consulting Hydrogeologist*; Irvine, California

1995 to 1999: *Associate Hydrogeologist*, Harding Lawson Associates; Irvine, California

1994 to 1995: *Senior Hydrogeologist*, Bechtel Corporation; Norwalk, California

1992 to 1994: *Senior Hydrogeologist*, Multimedia Environmental Technology; Newport Beach, California

1991 to 1992: *Project Hydrogeologist*, Fluor Daniel; Irvine, California

1989 to 1991: *Staff Hydrogeologist*, McLaren-Hart; Irvine, California



# Laine E. Carlson, PE

## Professional Experience

### Education

BS, Civil Engineering, California State Polytechnic University, Pomona, CA

### Professional Registrations

Professional Engineer - Civil, California, No. C72424

### Certifications

SWRCB Registered T2 Water Operator #34907

SWRCB Registered D2 Water Operator #41981

### Professional Affiliations

American Water Works Association, Member

California Water Environment Association, Member

Mrs. Carlson has over 15 years of experience working for a public utility and as a consulting engineer, focusing on water, wastewater, and recycled water systems. Her experience includes project management, construction administration, capital improvement planning, hydraulic analysis, water and wastewater master planning, pipeline design, pump station design and analysis, and water standard development. She has developed an intimate understanding of how a water and sewer utility operates and the challenges they face. Her experience working in Big Bear Valley gives her the expertise to support the development of the GSP and leverage it to support the Replenish Big Bear project.

## Representative Projects

### **Big Bear Area Regional Wastewater Agency, Replenish Big Bear, Big Bear, CA.**

**Project Manager.** Evaluated conceptual recycled water use alternatives to retain treated water within Bear Valley and create a sustainable water resource to augment the region's potable water supply. Conceptual alternatives were analyzed based on treatment and regulatory requirements of use types, water supply yield, social and environmental benefits, and life cycle cost of the alternatives. WSC coordinated with several agencies in the region. WSC provided grant writing support and secured a \$75,000 State Water Resources Control Board Water Recycling Facilities Planning Grant.

**WDR Permit Update Technical Studies and Permit Update Support, Big Bear Regional Wastewater Agency, Big Bear, CA. Project Manager.** Provided project management, coordination, data collection and review, groundwater quality evaluation, and irrigation management plan services. The project also included developing the Lucerne Valley Facility Operations and Maintenance Manual.

**Sludge Dewatering Alternatives Analysis, Big Bear Area Regional Wastewater Agency, Big Bear, CA. Project Manager.** Supported the evaluation of alternatives, development of design criteria for dewatering technologies, vendor outreach, review of historical data to determine alternative operational strategies, and drafted a report with recommendations.

**City of Big Bear Lake Department of Water and Power, On-Call Engineering Services, Big Bear Lake, CA. Engineering Support.** Responsible for working as an extension of District staff to perform numerous as-needed tasks including updating District Standard Plans and Specifications, preparing graphics to pictorially demonstrate the system hydraulic operation for use in community outreach activities and creating a static pressure map utilizing GIS to depict areas with less than 40 psi.

**City of Big Bear Lake Department of Water and Power, 2013 Water System Improvements, Big Bear Lake, CA. Project Manager.** Prepared design plans and specifications for the Angel's Camp Reservoir, a 1.0 MG welded steel potable water reservoir. The project includes design of a 1,500 LF paved access road and 2,750 LF of 12-inch transmission main. Also preparing design plans for the Arrastre Creek Well Pumping Plant, which includes the pump station, a CMU building and site improvements.

**West Valley Water District, Cost Analysis for New Bunker Hill Groundwater Supply Alternatives, Rialto, CA. Project Manager.** Providing project management and coordination to help the District assess the cost of leasing two unequipped wells from Inland Valley Development Agency on the site of the former Norton Air Force Base. The wells, known as IVDA Well 2A and IVDA Well 3, will require a capital investment by the District to develop as a new water supply. Tasked with developing a comparative cost analysis to lease the IVDA wells, or drill and equip a new well in the Bunker Hill Basin.





## Tiffany Meyer

### Education

BA, English, Oregon State University

### Training

Cornell University, MBA Level Certificate, Marketing Strategy

Blackbird Studio for Writers, two-year intensive in creative writing

Nonviolent Communication training and practicum (150 hours)

Community Mediation training (40 hours)

Center for Diversity and the Environment, DEI training (2-1/2 days)

### Professional Experience

Ms. Meyer joined WSC in 2019 and brings 20 years of communications strategy, group facilitation, branding, and storytelling experience, including nearly a decade in the water conservation, renewable energy, and sustainable urban development industries.

A natural storyteller, her work focuses on building engaging, audience-centered narratives, editorial, and experiences that garner trust and inspire sustained behavior change. She has worked with a wide range of audiences including: c-suite executives, subject matter experts, elected officials, community members, and traditionally underrepresented or marginalized populations. Her approach champions the audience's perspective and information needs by employing research and design methods that actively engage audiences in the messaging and campaign design process. Ms. Meyer has experience leading communications and engagement efforts for GSPs, including facilitating stakeholder workshops.

### Representative Projects

**San Luis Obispo Valley Groundwater Basin Groundwater Sustainability Plan, City of San Luis Obispo, San Luis Obispo, CA. C&E Lead.** Leading communications efforts for the development of the Groundwater Sustainability Plan (GSP) for the San Luis Obispo Valley Groundwater Basin. The GSP is being developed by the County of San Luis Obispo and the City of San Luis Obispo, the two Groundwater Sustainability Agencies in the Basin. Ms. Meyer is managing outreach and engagement services including workshop facilitation.

**VenturaWaterPure Project, City of Ventura, Ventura, CA. Project Management Support.** Leading communications support for an innovative potable reuse project in Ventura. Developing handouts, presentations, and other collateral to share the project benefits with members of council, state officials, and the general public. The project will provide the City with a new reliable water source.

**Chino Basin Program, Inland Empire Utilities Agency, Ontario, CA. Communications Support.** Providing strategic communications support over the next two years for this unprecedented regional water treatment, storage and recharge program. The program is receiving state-wide attention for its innovative water exchange from arid Southern CA to Northern for Delta and salmon habitat protection. The \$385 million program includes a network of regional infrastructure improvements and requires complex stakeholder agreements. WSC work includes assessment and review of technical details and coordination with multiple internal departments, meeting facilitation, stakeholder strategy and communications, workshop material and presentation development, and website development. WSC led the brand development for the program, including establishing key messaging and brand guidelines that reach a diverse stakeholder and community base.

**Context Partners, Portland OR. Editor in Chief, *The Practice Papers* and Director of Thought Leadership.** Led market and stakeholder research and the development of a national content strategy to position firm expertise within targeted media and conference outlets. Built editorial content strategy, and managed day-to-day content production including abstract development, article pitching, securing publication in major media, and article development for ghost written bylines. Produced more than 25 articles and webinars for senior staff and secured publication in *Chief Executive*, *Stanford Social Innovation Review*, *Harvard Business Review*, *Hubspot*, and *Sustainable Brands*.



## Joseph Kingsbury, PG, CHG

### Education

BA, Geology, The Ohio State University, Columbus, OH

### Professional Registrations

Professional Geologist, California, No. 8680

Certified Hydrogeologist, California, No. 1019

### Presentations/Publications

Well Rehabilitation Prioritization. AWWA CA-NV Section, Rancho Mirage, California, 2018.

Operators Role in Maximizing Sustainable Groundwater Production. AWWA CA-NV Section, San Diego, California, 2016

Estimating Groundwater Underflow as a Source of Diluent Water for Indirect Potable Reuse. AWWA CA-NV Section, San Diego, California, 2016

### Professional Affiliations

American Water Works Association

American Ground Water Trust

Groundwater Resource Association

### Professional Experience

Mr. Kingsbury is a professional geologist and certified hydrogeologist with over 20 years of diversified experience with groundwater, geotechnical and environmental projects performed for numerous municipalities, state agencies, and private clients located throughout the southern and central California regions. His recent project expertise includes well siting assessments, preliminary and final municipal well designs, construction management and inspection (CMI) for municipal supply and injection wells, and well rehabilitation prioritization plans. Mr. Kingsbury has a keen ability to recognize how and when to initiate leadership and effective communication needed to maintain successful collaboration among groups consisting of technical and non-technical participants alike on water supply projects.

### Representative Projects

#### **Extension of Staff Support Services, Eastern Municipal Water District, Perris, CA.**

**Hydrogeologist.** WSC is providing extension of staff services to the District's Groundwater Development department on a variety of water resource projects. Tasks include overseeing inspection services during municipal supply production well installations, technical review of project deliverables and technical specifications, preparing RFPs, evaluating downhole surveys and pumping tests for new and existing production wells, and providing technical review support for groundwater modeling projects. Also, providing technical support for the development of a water quality pilot study which includes all aspects of planning, coordinating and conducting field demonstrations at two existing well sites.

#### **Central Coast Blue – Regional Groundwater Sustainability Study, Multiple Agencies, Pismo Beach, CA. Hydrogeologist.**

Providing technical support for a proposed test injection well and nested monitoring well during the preliminary design, funding, and environmental document support services for the Central Coast Blue project. Project design includes constructing a new advanced treatment facility to treat secondary wastewater effluent before injection via wells into the Santa Maria Groundwater Basin. Currently developing preliminary injection well site maps, construction layout maps, identifying land owners and piped water sources, evaluating well construction logistics, preparing preliminary well designs and technical specifications.

#### **North Pleasant Valley Desalter Project, City of Camarillo, Camarillo, CA.**

**Hydrogeologist.** Provided technical support during the review of post-construction conditions of three nested monitoring wells installed for a new Desalter Facility in the Fox Groundwater Basin that will treat brackish groundwater water using RO technology.

#### **Chino Basin Program Preliminary Design Report, Inland Empire Utilities Agency, Chino, CA. Staff Hydrogeologist.**

During development of the preliminary design report for the Chino Basin Program, assisted with preliminary design and costs for proposed injection wells.

#### **Golden State Water Company – Studebaker Well No. 3, Norwalk, CA.**

Served as project manager to provide site assessment, preliminary design report, technical specifications and bid package, CMI and final reporting for a replacement well (Studebaker No. 3). The well site is only 5,500 sq. ft. (min. requirement is typically 10,000 sq. ft. for new well construction) and is immediately adjacent to residential homes. This condition required careful consideration to maximizing the horizontal separation distance from the existing wells and providing adequate working space for the contractor, while meeting regulatory setback requirements.





# Michael Cruikshank, PG, CHG, MS

## Education

MS, Civil and Environmental Engineering, California State University, Fullerton, CA

BS, Geology, California State University, Fullerton, CA

## Professional Registrations

Professional Geologist, California, No. 8854

Certified Hydrogeologist, No. 994

Engineer-in-Training No. 142007

## Professional Affiliations

National Groundwater Association, Member

Groundwater Resources Association of California, Southern California Branch Treasurer

WaterReuse, Member

## Professional Experience

Mr. Cruikshank is a certified hydrogeologist and engineer with more than twelve years of professional experience. He has technical expertise in hydrogeologic basin analysis, water resource planning, and evaluating water quality. Mr. Cruikshank has managed projects in large stakeholder environments and assisted in the development of groundwater and surface water models that are used to make important water resource management decisions. His technical experience includes hydrologic data analysis, piezometric data collection and interpretation, production and monitoring well installation, well design, aquifer testing and analysis, managing field data collection programs, geographical information systems (GIS) applications, data management, data visualizations, and report graphics.

## Representative Projects

**San Luis Obispo Valley Groundwater Basin Groundwater Sustainability Plan, City of San Luis Obispo, San Luis Obispo, CA. Project Manager.** Mr. Cruikshank is leading the development of the Groundwater Sustainability Plan (GSP) for the San Luis Obispo Valley Groundwater Basin. The GSP is being developed by the County of San Luis Obispo and the City of San Luis Obispo, the two Groundwater Sustainability Agencies in the Basin. Mr. Cruikshank is providing technical services for the development of the plan, managing the project, and providing outreach and engagement services.

**Groundwater Sustainability Plan, Santa Margarita Basin, Santa Margarita Groundwater Agency, Santa Cruz County, CA. Senior Hydrogeologist.** Mr. Cruikshank is the project manager for WSC as part of a team that was selected to develop the groundwater sustainability plan for the Santa Margarita Basin in Santa Cruz County. Mr. Cruikshank is responsible for contributing to the Plan Area and Basin Setting chapters and is leading the development of the Projects and Management Actions chapter.

**Groundwater Sustainability Plan, Arlington Basin, Western Municipal Water District, Riverside, Ca. Senior Hydrogeologist.** Mr. Cruikshank is the project manager for WSC as part of a two-firm team that was selected to develop the groundwater sustainability plan for the Arlington Basin. Mr. Cruikshank is responsible for developing the sustainability criteria and implementation projects needed to achieve sustainability.

**Groundwater Sustainability Plan, Fox Canyon Groundwater Management Agency, Ventura County, CA. Senior Hydrogeologist.** Developed groundwater balances used in the Groundwater Sustainability Plans (GSP's) for the four groundwater basins within the Agency's jurisdiction: (1) Las Posas; (2) Arroyo Santa Rosa Valley; (3) Pleasant Valley; and (4) Oxnard. GSP regulations require that each Plan include a water budget for the basin. The budget accounts for and assesses the total annual volume of groundwater and surface water entering and leaving the basin, including historical, current, and projected water budget conditions, and the change in the volume of water stored. DBS&A's Distributed Parameters Watershed Model (DPWM) is being applied to evaluate key groundwater balance components including groundwater recharge by deep percolation of precipitation and irrigation and mountain front recharge.

**Central Coast Blue, Northern Cities Management Area, Pismo Beach, Ca. Senior Hydrogeologist.** As part of WSC's program management of Central Coast Blue, Mr. Cruikshank managed the development of a groundwater flow model focused in the Northern Cities Management Area (NCMA) of the Santa Maria Groundwater Basin (SMGB). SMGB is a coastal aquifer that has observed increased chloride concentrations in previous prolonged droughts and been drastically impacted by the current drought.

BEAR VALLEY BASIN  
GROUNDWATER  
SUSTAINABILITY AGENCY

September 27, 2019



PROPOSAL FOR PREPARATION OF THE

# BEAR VALLEY BASIN GROUNDWATER SUSTAINABILITY PLAN



Thomas Harder & Co.  
Groundwater Consulting





Task No.		Task Description	WSC												Thomas Harder & Co.										ALL FIRMS			
			Senior Engineer II	Senior Hydrogeologist	Outreach Specialist II	Associate Planner II	Outreach Specialist I	Staff Engineer II	Staff Geologist	Communications Support	Clerical/Admin	Total Labor Hours	Total Labor	Fee	Principal Hydrogeologist	Senior Hydrogeologist	Project Hydrogeologist	Staff Hydrogeologist	Graphics	Clerical	Total Labor Hours	Total Labor	Fee	Total Labor Hours	Total Labor	Total Fee		
		Billing rates, \$/hr	\$220	\$210	\$200	\$185	\$165	\$155	\$145	\$115	\$110				\$200	\$150	\$135	\$115	\$95	\$85								
1.0		Project Management	0	28	0	0	0	0	0	0	8	36	\$ 6,760.00	\$ 6,760.00	32	32	0	0	0	0	0	64	\$ 11,200.00	\$ 11,200.00	100	\$ 17,960.00	\$ 17,960.00	
1.1		Project Management, Progress Reports, and Grant Reporting		4							8	12	\$ 1,720.00	\$ 1,720.00	16	24						40	\$ 6,800.00	\$ 6,800.00	52	\$ 8,520.00	\$ 8,520.00	
		Deliverable: Monthly, Quarterly and Final Progress Reports																										
1.2		GSP Presentations and Document Review Meetings		24								24	\$ 5,040.00	\$ 5,040.00	16	8						24	\$ 4,400.00	\$ 4,400.00	48	\$ 9,440.00	\$ 9,440.00	
2.0		Data Compilation and Organization	0	8	0	0	0	0	16	0	0	24	\$ 4,000.00	\$ 4,000.00	14	16	12	40	0	0	0	82	\$ 11,420.00	\$ 11,420.00	106	\$ 15,420.00	\$ 15,420.00	
2.1		Data Requests and Review		8					16			24	\$ 4,000.00	\$ 4,000.00	8		12					20	\$ 3,220.00	\$ 3,220.00	44	\$ 7,220.00	\$ 7,220.00	
2.2		Organize Data Management System										0	\$ -	\$ -	6	16		40				62	\$ 8,200.00	\$ 8,200.00	62	\$ 8,200.00	\$ 8,200.00	
		Deliverable: Data Management System										0	\$ -	\$ -								0	\$ -	\$ -	0	\$ -	\$ -	
3.0		Plan Contents Preparation	12	35	0	2	0	28	4	0	0	81	\$ 15,280.00	\$ 15,280.00	92	136	80	98	34	4		460	\$ 64,440.00	\$ 64,440.00	541	\$ 79,720.00	\$ 79,720.00	
3.1		Introduction and Administrative Information	0	2	0	2	0	0	4	0	0	8	\$ 1,370.00	\$ 1,370.00	0	0	0	0	0	0		8	\$ 1,370.00	\$ 1,370.00				
		Deliverable: Administrative Draft GSP Chapter "Plan Area"		2		2			4																			
3.2		Plan Area and Basin Setting	0	8	0	0	0	0	0	0	0	8	\$ 1,680.00	\$ 1,680.00	54	80	80	90	14	0		318	\$ 45,280.00	\$ 45,280.00	326	\$ 46,960.00	\$ 46,960.00	
3.2.1		Description of Plan Area	2			0			0			2	\$ 420.00	\$ 420.00	4	8			8			20	\$ 2,760.00	\$ 2,760.00	22	\$ 3,180.00	\$ 3,180.00	
		Deliverable: Administrative Draft GSP Chapter "Plan Area"		2		0			0			2	\$ 420.00	\$ 420.00								0	\$ -	\$ -	2	\$ 420.00	\$ 420.00	
3.2.2		Basin Setting										0	\$ -	\$ -								0	\$ -	\$ -	0	\$ -	\$ -	
		Develop Hydrogeologic Conceptual Model, Document Groundwater Conditions, and Prepare Water Budgets		8					0			42	\$ 1,680.00	\$ 1,680.00	50	72	80	90	6			298	\$ 42,520.00	\$ 42,520.00	340	\$ 44,200.00	\$ 44,200.00	
		Deliverable: Administrative Draft GSP Chapter "Basin Setting, Water Budget, and Sustainable Yield"		4					0			4	\$ 840.00	\$ 840.00								0	\$ -	\$ -	4	\$ 840.00	\$ 840.00	
3.3		Sustainable Management Criteria	0	10	0	0	0	0	0	0	0	10	\$ 2,100.00	\$ 2,100.00	22	32	0	0	0	4		58	\$ 9,540.00	\$ 9,540.00	68	\$ 11,640.00	\$ 11,640.00	
		Define Sustainability Goals, Undesirable Results, Minimum Thresholds, and Measurable Objectives		6					0			6	\$ 1,260.00	\$ 1,260.00	16	16						32	\$ 5,600.00	\$ 5,600.00	38	\$ 6,860.00	\$ 6,860.00	
		Deliverable: Administrative Draft GSP Chapter "Sustainable Management Criteria"		4					0			4	\$ 840.00	\$ 840.00	6	16				4		26	\$ 3,940.00	\$ 3,940.00	30	\$ 4,780.00	\$ 4,780.00	
3.4		Monitoring Network	0	3	0	0	0	4	0	0	0	7	\$ 1,250.00	\$ 1,250.00	8	24	0	8	20	0		60	\$ 8,020.00	\$ 8,020.00	67	\$ 9,270.00	\$ 9,270.00	
		Identify Existing and Planned Monitoring Networks and Protocols		1					0			1	\$ 210.00	\$ 210.00	8	24		8	20			60	\$ 8,020.00	\$ 8,020.00	61	\$ 8,230.00	\$ 8,230.00	
		Deliverable: Administrative Draft GSP Chapter "Monitoring Network"		2				4				6	\$ 1,040.00	\$ 1,040.00								0	\$ -	\$ -	6	\$ 1,040.00	\$ 1,040.00	
3.5		Projects and Management Actions	12	12	0	0	0	24		0	0	48	\$ 8,880.00	\$ 8,880.00	8	0	0	0	0	0		8	\$ 1,600.00	\$ 1,600.00	56	\$ 10,480.00	\$ 10,480.00	
		Develop an Implementation Program and Identify Projects and Management Actions to Achieve Sustainability Goal	12	12				20				44	\$ 8,260.00	\$ 8,260.00	8							8	\$ 1,600.00	\$ 1,600.00	52	\$ 9,860.00	\$ 9,860.00	
		Deliverable: Administrative Draft GSP Chapter "Projects and Management Actions"	2	2				4				8	\$ 1,480.00	\$ 1,480.00								0	\$ -	\$ -	8	\$ 1,480.00	\$ 1,480.00	
4.0		Outreach and Stakeholder Plan	0	8	4	0	100	0	0	9	0	121	\$ 20,015.00	\$ 20,015.00	24	0	0	12	0	0		36	\$ 6,180.00	\$ 6,180.00	157	\$ 26,195.00	\$ 26,195.00	
4.1		Develop Outreach and Communications Plan		4			16					20	\$ 3,480.00	\$ 3,480.00								0	\$ -	\$ -	20	\$ 3,480.00	\$ 3,480.00	
4.2		Execute Outreach and Communications Plan		4	4		40			3		51	\$ 8,585.00	\$ 8,585.00								0	\$ -	\$ -	51	\$ 8,585.00	\$ 8,585.00	
		Attend 3 Meetings					16					16	\$ 2,640.00	\$ 2,640.00	24			12				36	\$ 6,180.00	\$ 6,180.00	52	\$ 8,820.00	\$ 8,820.00	
		Develop Communication Section					28			6		34	\$ 5,310.00	\$ 5,310.00								0	\$ -	\$ -	34	\$ 5,310.00	\$ 5,310.00	
5.0		Plan Implementation	6	6	0	0	0	0	16	0	0	28	\$ 4,900.00	\$ 4,900.00	8	0	0	0	0	0		8	\$ 1,600.00	\$ 1,600.00	36	\$ 6,500.00	\$ 6,500.00	
5.1		Define Steps, Schedule and Fiscal Strategy for Implementing the GSP	4	4					12			20	\$ 3,460.00	\$ 3,460.00	8							8	\$ 1,600.00	\$ 1,600.00	28	\$ 5,060.00	\$ 5,060.00	
		Deliverable: Administrative Draft GSP Chapter "Plan Implementation"	2	2				4				8	\$ 1,440.00	\$ 1,440.00								0	\$ -	\$ -	8	\$ 1,440.00	\$ 1,440.00	
6.0		GSP Document Preparation	6	14	0	0	0	32	0	0	0	52	\$ 9,220.00	\$ 9,220.00	16	44	0	48	48	24		180	\$ 21,920.00	\$ 21,920.00	232	\$ 31,140.00	\$ 31,140.00	
6.1		Prepare and Submit the Administrative Draft GSP		4				20				24	\$ 3,940.00	\$ 3,940.00	4	8		16	16	8		52	\$ 6,040.00	\$ 6,040.00	76	\$ 9,980.00	\$ 9,980.00	
		Deliverable: Administrative Draft GSP																										
6.2		Prepare and Submit the Draft GSP, Includes One (1) Public Hearing		6				6				18	\$ 3,510.00	\$ 3,510.00	8	20		24	24	8		84	\$ 10,320.00	\$ 10,320.00	102	\$ 13,830.00	\$ 13,830.00	
		Deliverables: Draft GSP and Public Hearing on the Draft GSP																										
6.3		Prepare the Final Draft GSP		4				6				10	\$ 1,770.00	\$ 1,770.00	4	16		8	8	8		44	\$ 5,560.00	\$ 5,560.00	54	\$ 7,330.00	\$ 7,330.00	
		Deliverables: Final Draft GSP and Relevant Supporting Documentation, and Submittal of the Final Draft GSP to the DWR																										
Column Totals			24	99	4	2	100	60	36	9	8	342	\$ 60,175.00	\$ 60,175.00	186	228	92	198	82	28		830	\$ 116,760.00	\$ 116,760.00	1,172	\$ 176,935.00	\$ 176,935.00	







# Bear Valley Basin Groundwater Sustainability Agency Agenda Report

**DATE:** October 4, 2019  
**TO:** Board of Directors  
**FROM:** David Lawrence, P.E., General Manager of BBARWA  
**RE:** **Amended and Restated Memorandum of Understanding**

## **Background & Discussion:**

On May 7, 2019, the BVBGSA Board of Directors ratified the adoption of the Memorandum of Understanding (MOU) which established cost sharing procedures and contribution amounts for the Replenish Big Bear Project (Project). Each member agency agreed to contribute funding of \$250,000 for a total of \$1.0 million of Phase I studies (preliminary engineering and environmental studies), by Water Systems Consulting, Inc. ("WSC") and Tom Dodson and Associates.

The current MOU is being amended to provide for additional cost-sharing contributions from each member agency to fund water quality sampling and Phase II of the Project, which totals \$1,000,000 in continued engineering with WSC and focuses on program management and engineering services including funding procurement, outreach support, stakeholder coordination, water quality sampling, and regulatory analysis and coordination.

SAWPA is preparing a Prop 1 Planning Grant application for the Replenish Big Bear Project requesting \$500,000. We will know the results of that application by January 2020 and we are hopeful for the application to be successful. If successful, each agency will be reimbursed \$125,000 for preliminary engineering and environmental costs.

## **Financial Impact:**

By execution of the Amended and Restated MOU, BBARWA, DWP, CSD and MWD will commit to additional cost-sharing contributions of \$250,000 each to fund the Phase II Studies and BVBGSA will continue to act as a clearinghouse for the collection of member agency contributions and reimbursement to BBARWA.

## **Recommendation:**

Approve Amended and Restated Memorandum of Understanding.

## **Attachment:**

Amended and Restated Memorandum of Understanding

## AMENDED AND RESTATED MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (“MOU”) ~~is~~ dated July 24, 2018 ~~(the “Effective Date”)~~ and ~~is made~~ by and among Bear Valley Basin Groundwater Sustainability Agency (“GSA”), the City of Big Bear Lake, Department of Water and Power (“DWP”), the Big Bear City Community Services District (“CSD”), the Big Bear Municipal Water District (“MWD”) and the Big Bear Area Regional Wastewater Agency (“BBARWA”) ” is hereby amended to provide an agreement by the Parties to provide additional contributions to fund a second phase of the Project (as defined below). GSA, DWP, CSD, MWD and BBARWA are jointly referred to as the “Parties,” and individually as a “Party.”

WHEREAS, the GSA is a joint powers authority formed by the other Parties on approximately October 18, 2017;

WHEREAS, the GSA is the local Groundwater Sustainability Agency for the Big Bear area responsible for implementing sustainable groundwater management and preventing “undesirable results” in groundwater basins designated as a medium or high priority basin by the California Department of Water Resources (“DWR”) in its Bulletin 118 inventory of California groundwater basins;

WHEREAS, future grants may be available to the GSA to reimburse the GSA or other Parties for projects undertaken to augment groundwater supplies or otherwise meet the goals of the Sustainable Groundwater Management Act (“SGMA”);

WHEREAS, BBARWA is a wastewater agency that operates the wastewater treatment facility in the Big Bear area, which is currently investigating the implementation of a reclamation project (“Project”);

WHEREAS, the Project, if implemented, may result in lake water and/or groundwater augmentation;

WHEREAS, BBARWA ~~will~~has contracted for \$1.0 million of the initial engineering and environmental studies (“Phase I Studies”) and will contract for \$1,000,000 for continued engineering studies (Phase II Studies) and BBARWA and MWD has contracted for water quality sampling (Water Quality studies) (together, the “Studies”) necessary to investigate the feasibility of implementing the Project which in total are estimated to cost \$2.0 million;

WHEREAS, BBARWA, DWP, CSD and MWD have each agreed to contribute \$250,000 to fund the Phase I Studies and \$250,000 to fund the Phase II and Water Quality Studies– (together, the “Contributions”);

WHEREAS, the GSA desires to act as a clearinghouse to collect the Contributions and distribute them to BBARWA;

WHEREAS, this Amended and Restated MOU is being executed to document the intent of the parties regarding the Contributions and reimbursements and possibly to provide further reimbursements to BBARWA should one or more grants be awarded to the GSA to offset the cost of the Project, Studies, or both.

NOW, THEREFORE, to facilitate the reimbursement of the Studies and potential future reimbursement of the Project, the Parties agree as follows:

### 1. CONTRIBUTIONS.

## Memorandum of Understanding

- A. BBARWA will invoice the GSA for the costs of the Studies as incurred. Along with such invoice, BBARWA will provide an accounting of total costs paid to date and the remaining available Contributions. Upon receipt of the invoice from BBARWA, the GSA shall promptly invoice each of the CSD, DWP and MWD (the "Contribution Agencies") for twenty-five (25) % of such invoice up to a total of \$500,000 per Contribution Agency. Each Contribution Agency shall make payment to the GSA in such amount within fifteen (15) days of the date of such invoice. The GSA shall, within 15 days of receipt of the Contributions, distribute the payments received to BBARWA. The GSA shall take all necessary steps to ensure that BBARWA is fully reimbursed for amounts due from the Contribution Agencies within 45 days of the date of BBARWA's invoice.
- B. Once BBARWA receives this Amended and Restated MOU executed by each of the Parties hereto, and once the initiation of the Studies are approved by the BBARWA Board, BBARWA will continue and complete the Studies.

## 2. POTENTIAL REIMBURSEMENT.

- A. When statutorily authorized, GSA shall seek one or more grants to reimburse BBARWA, CSD, DWP and MWD for the cost of the Studies, the Project, or both.
- B. If the GSA obtains such a grant for the Studies, the Project, or both, GSA shall, subject to all applicable laws and grant requirements, reimburse CSD, DWP, MWD and BBARWA for their respective costs of the Studies, the Project, or both, to the extent legally possible under the terms of the grant(s).

## 3. CONSIDERATION.

- A. In consideration for the Contributions, and assuming the Project is eventually implemented successfully, BBARWA, CSD, DWP and MWD will negotiate in good faith to agree upon a distribution of benefits produced by the Project including treated water.
- B. Nothing in this Amended and Restated MOU is intended to change any of the Parties' existing water rights.

## 4. TERMINATION

One or more of the Parties may, in its sole discretion, determine not to continue to participate in the Project by providing a sixty (60) days' written notice of such termination to each of the Parties. Such terminating Party will not be eligible for consideration, as indicated in Section 3 above.

## 5. COSTS

With respect to all activities undertaken in preparation and adoption of this Amended and Restated MOU, each Party shall bear its own costs and expenses

## 6. THIRD PARTY RIGHTS

Nothing in this MOU shall be construed to give any rights or benefits to anyone other than the Parties hereto.

## 7. COUNTERPARTS

## Memorandum of Understanding

This Amended and Restated MOU may be executed in counterparts, each of which shall have the effect of and be considered as an original of this Amended and Restated MOU.

**8. SUPERSEDE.**

This Amended and Restated MOU supersedes and replaces that Memorandum of Understanding entered into by the Parties on July 24, 2018.

**Signature Page for the Memorandum of Understanding by and among the Bear Valley Basin Groundwater Sustainability Agency, the City of Big Bear Lake, Department of Water and Power, the Big Bear City Community Services District, the Big Bear Municipal Water District and the Big Bear Area Regional Wastewater Agency**

**IN WITNESS WHEREOF**, this Amended and Restated Memorandum of Understanding has been executed by the Parties.

**BEAR VALLEY BASIN GROUNDWATER SUSTAINABILITY AGENCY**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**BIG BEAR AREA REGIONAL WASTEWATER AGENCY,**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**BIG BEAR CITY COMMUNITY SERVICES DISTRICT**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**BIG BEAR MUNICIPAL WATER DISTRICT**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_



Memorandum of Understanding

Date: \_\_\_\_\_

**CITY OF BIG BEAR LAKE, DEPARTMENT OF WATER AND POWER**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## AMENDED AND RESTATED MEMORANDUM OF UNDERSTANDING

The Memorandum of Understanding (“MOU”) dated July 24, 2018 by and among Bear Valley Basin Groundwater Sustainability Agency (“GSA”), the City of Big Bear Lake, Department of Water and Power (“DWP”), the Big Bear City Community Services District (“CSD”), the Big Bear Municipal Water District (“MWD”) and the Big Bear Area Regional Wastewater Agency (“BBARWA”) is hereby amended to provide an agreement by the Parties to provide additional contributions to fund a second phase of the Project (as defined below). GSA, DWP, CSD, MWD and BBARWA are jointly referred to as the “Parties,” and individually as a “Party.”

WHEREAS, the GSA is a joint powers authority formed by the other Parties on approximately October 18, 2017;

WHEREAS, the GSA is the local Groundwater Sustainability Agency for the Big Bear area responsible for implementing sustainable groundwater management and preventing “undesirable results” in groundwater basins designated as a medium or high priority basin by the California Department of Water Resources (“DWR”) in its Bulletin 118 inventory of California groundwater basins;

WHEREAS, future grants may be available to the GSA to reimburse the GSA or other Parties for projects undertaken to augment groundwater supplies or otherwise meet the goals of the Sustainable Groundwater Management Act (“SGMA”);

WHEREAS, BBARWA is a wastewater agency that operates the wastewater treatment facility in the Big Bear area, which is currently investigating the implementation of a reclamation project (“Project”);

WHEREAS, the Project, if implemented, may result in lake water and/or groundwater augmentation;

WHEREAS, BBARWA has contracted for \$1.0 million of the initial engineering and environmental studies (“Phase I Studies”) and will contract for \$1,000,000 for continued engineering studies (Phase II Studies) and BBARWA and MWD has contracted for water quality sampling (Water Quality studies) (together, the “Studies”) necessary to investigate the feasibility of implementing the Project which in total are estimated to cost \$2.0 million;

WHEREAS, BBARWA, DWP, CSD and MWD have each agreed to contribute \$250,000 to fund the Phase I Studies and \$250,000 to fund the Phase II and Water Quality Studies (together, the “Contributions”);

WHEREAS, the GSA desires to act as a clearinghouse to collect the Contributions and distribute them to BBARWA;

WHEREAS, this Amended and Restated MOU is being executed to document the intent of the parties regarding the Contributions and reimbursements and possibly to provide further reimbursements to BBARWA should one or more grants be awarded to the GSA to offset the cost of the Project, Studies, or both.

NOW, THEREFORE, to facilitate the reimbursement of the Studies and potential future reimbursement of the Project, the Parties agree as follows:

## Memorandum of Understanding

**1. CONTRIBUTIONS.**

- A. BBARWA will invoice the GSA for the costs of the Studies as incurred. Along with such invoice, BBARWA will provide an accounting of total costs paid to date and the remaining available Contributions. Upon receipt of the invoice from BBARWA, the GSA shall promptly invoice each of the CSD, DWP and MWD (the "Contribution Agencies") for twenty-five (25) % of such invoice up to a total of \$500,000 per Contribution Agency. Each Contribution Agency shall make payment to the GSA in such amount within fifteen (15) days of the date of such invoice. The GSA shall, within 15 days of receipt of the Contributions, distribute the payments received to BBARWA. The GSA shall take all necessary steps to ensure that BBARWA is fully reimbursed for amounts due from the Contribution Agencies within 45 days of the date of BBARWA's invoice.
- B. Once BBARWA receives this Amended and Restated MOU executed by each of the Parties hereto, and once the initiation of the Studies are approved by the BBARWA Board, BBARWA will continue and complete the Studies.

**2. POTENTIAL REIMBURSEMENT.**

- A. When statutorily authorized, GSA shall seek one or more grants to reimburse BBARWA, CSD, DWP and MWD for the cost of the Studies, the Project, or both.
- B. If the GSA obtains such a grant for the Studies, the Project, or both, GSA shall, subject to all applicable laws and grant requirements, reimburse CSD, DWP, MWD and BBARWA for their respective costs of the Studies, the Project, or both, to the extent legally possible under the terms of the grant(s).

**3. CONSIDERATION.**

- A. In consideration for the Contributions, and assuming the Project is eventually implemented successfully, BBARWA, CSD, DWP and MWD will negotiate in good faith to agree upon a distribution of benefits produced by the Project including treated water.
- B. Nothing in this Amended and Restated MOU is intended to change any of the Parties' existing water rights.

**4. TERMINATION**

One or more of the Parties may, in its sole discretion, determine not to continue to participate in the Project by providing a sixty (60) days' written notice of such termination to each of the Parties. Such terminating Party will not be eligible for consideration, as indicated in Section 3 above.

**5. COSTS**

With respect to all activities undertaken in preparation and adoption of this Amended and Restated MOU, each Party shall bear its own costs and expenses

**6. THIRD PARTY RIGHTS**

Nothing in this MOU shall be construed to give any rights or benefits to anyone other than the Parties hereto.

## Memorandum of Understanding

**7. COUNTERPARTS**

This Amended and Restated MOU may be executed in counterparts, each of which shall have the effect of and be considered as an original of this Amended and Restated MOU.

**8. SUPERSEDE.**

This Amended and Restated MOU supersedes and replaces that Memorandum of Understanding entered into by the Parties on July 24, 2018.

**Signature Page for the Memorandum of Understanding by and among the Bear Valley Basin Groundwater Sustainability Agency, the City of Big Bear Lake, Department of Water and Power, the Big Bear City Community Services District, the Big Bear Municipal Water District and the Big Bear Area Regional Wastewater Agency**

**IN WITNESS WHEREOF**, this Amended and Restated Memorandum of Understanding has been executed by the Parties.

**BEAR VALLEY BASIN GROUNDWATER SUSTAINABILITY AGENCY**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**BIG BEAR AREA REGIONAL WASTEWATER AGENCY,**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**BIG BEAR CITY COMMUNITY SERVICES DISTRICT**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**BIG BEAR MUNICIPAL WATER DISTRICT**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Memorandum of Understanding

**CITY OF BIG BEAR LAKE, DEPARTMENT OF WATER AND POWER**

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date:\_\_\_\_\_





# Bear Valley Basin Groundwater Sustainability Agency Agenda Report

**DATE:** October 4, 2019

**TO:** Board of Directors

**FROM:** Reginald A. Lamson, Administrator

**RE:** **Resolution No. 2019-XX – Adopt Santa Ana Watershed Project Authority (SAWPA) One Water One Watershed (OWOW) Plan**

**Background & Discussion:**

The Santa Ana Watershed Project Authority (SAWPA) is the Santa Ana River Watershed Integrated Regional Water Management (IRWM) Group which has the responsibility for developing and implementing the IRWM Plan and applying for regional funding through the California Department of Water Resources (DWR) IRWM Program. SAWPA's sub-committee, One Water One Watershed (OWOW) is responsible for updating the IRWM Plan for the Santa Ana River Watershed, which the Bear Valley is a part of.

The OWOW Plan is the planning document that outlines a sustainable water future for the region over a 20-year time horizon. OWOW works with all of the water agencies within the watershed to group similar projects together to more efficiently serve the entire region. The BVBGSA participated in the development of the OWOW Plan Update through stakeholder meetings held by SAWPA. On February 19, 2019, the SAWPA Board of Commissioners adopted the OWOW Plan Update 2018.

The BVBGSA is one of the group members pursuing grant funding through DWR's IRWM Implementation Grant Program. The Replenish Big Bear Project was ranked as the number one project based on the IRWM Plan Scoring Criteria and is eligible to apply for approximately \$4,500,000 in IRWM Implementation Grant funding from Proposition 1. In order to be eligible for this grant funding, the BVBGSA must adopt the current SAWPA OWOW Plan Update 2018 IRWM Plan.

**Financial Impact:**

The BVBGSA could receive over \$5,000,000 in grant funding to help fund the Replenish Big Bear Project.

**Recommendation:**

Approve Resolution No. 2019-XX, adopting the SAWPA OWOW Plan Update 2018 IRWM Plan.

**Attachment:**

Resolution No. 2019-XX, adopting the SAWPA OWOW Plan Update 2018 IRWM Plan

**RESOLUTION NO. 2019-XX**

**A RESOLUTION OF THE GOVERNING BOARD OF THE  
BEAR VALLEY BASIN GROUNDWATER  
SUSTAINABILITY AGENCY, ADOPTING THE SANTA  
ANA WATERSHED PROJECT AUTHORITY ONE WATER  
ONE WATERSHED PLAN UPDATE 2018, THE  
INTEGRATED REGIONAL WATER MANAGEMENT PLAN  
FOR THE SANTA ANA RIVER WATERSHED**

**WHEREAS**, the Bear Valley Basin Groundwater Sustainability Agency is a partner on the Replenish Big Bear Project and is pursuing grant funding through the California Department of Water Resources (DWR) Integrated Regional Water Management (IRWM) Implementation Grant Program.

**WHEREAS**, the Santa Ana Watershed Project Authority (SAWPA) is the Santa Ana River Watershed IRWM Regional Water Management Group which has the responsibility for developing and implementing the IRWM Plan; and applying for regional funding through the DWR IRWM Program.

**WHEREAS**, the Bear Valley Basin Groundwater Sustainability Agency staff participated in the development of the IRWM Plan through stakeholder meetings held by SAWPA.

**WHEREAS**, Replenish Big Bear was ranked as the number one project based on the IRWM Plan Scoring Criteria and is eligible to apply for approximately \$4,500,000 in IRWM Implementation Grant from Proposition 1, Round 1 funding.

**WHEREAS**, as a condition of the grant funding, the DWR requires that all project sponsors adopt their regional IRWM Plan. The One Water One Watershed (OWOW) Plan Update 2018 is the IRWM Plan for the Santa Ana River Watershed. The OWOW Plan is the planning document that outlines a sustainable water future for the region over a 20-year time horizon. On February 19, 2019, the SAWPA Board of Commissioners adopted the OWOW Plan Update 2018.

**NOW, THEREFORE**, the Governing Board of Bear Valley Basin Groundwater Sustainability Agency does hereby adopt the current SAWPA OWOW Plan Update 2018 Integrated Regional Water Management Plan.

**PASSED, APPROVED, AND ADOPTED** this 4<sup>th</sup> day of October 2019.

AYES:

NOES:

ABSTAIN:

ABSENT:

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Robert C. Ludecke, President,  
Board of Directors



ATTEST:

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James Miller, Secretary  
Board of Directors





# Bear Valley Basin Groundwater Sustainability Agency Agenda Report

**DATE:** October 4, 2019

**TO:** Board of Directors

**FROM:** Reginald A. Lamson, Administrator

**RE:** **Replenish Big Bear Workshop For Local Agency Boards**

**Background:**

At the May 7, 2019 BVBGSA Board Meeting, the Board agreed to hold a Replenish Big Bear Project workshop similar to the workshop held on July 17, 2018 with the Bear Valley Agency's Board members and the public.

Since the workshop in July 2018, the Replenish Big Bear team has been working on the Environmental Impact Report, meetings with regulators to determine operating permit requirements, water quality sampling, preliminary design, public outreach, and pursuing funding opportunities. In the next few months, we expect to hear back from the regulatory entities as well as, the award of grant funding opportunities. We propose to schedule a second workshop in January 2020 with the Local Agency Boards and the public to provide an update on the Replenish Big Bear.

**Financial Impact:**

\$2,000, which is covered in the public outreach portion of preliminary engineering.

**Recommendation:**

Discuss options for conducting a public workshop in January 2020





# Bear Valley Basin Groundwater Sustainability Agency Agenda Report

**DATE:** October 4, 2019

**TO:** Board of Directors

**FROM:** Reginald A. Lamson, Administrator

**RE:** **Public Notice of GSA Board Meetings in the SB Sun**

**Background:**

At the May 7, 2019 BVBGSA Board Meeting, the Board requested to add an agenda item on the next Board meeting to consider publishing Public Notice in the San Bernardino Sun for future GSA meetings and workshops. Staff researched the cost of said Public Notices and found the daily cost is approximately \$44/day depending on the size of the notice.

**Financial Impact:**

Approximately \$44/day for Public Notice publication in the SB Sun.

**Recommendation:**

Discuss options for publishing Board meeting announcements in the SB Sun.





# Bear Valley Basin Groundwater Sustainability Agency Agenda Report

**DATE:** October 4, 2019  
**TO:** Board of Directors  
**RE:** **Management and Board Member Discussion**

**Board Members:**

Bob Ludecke, Chairman  
 John Green, Vice Chairman  
 Craig Hjorth, Treasurer  
 James Miller, Secretary

**Management:**

David Lawrence, General Manager BBARWA  
 Mike Stephenson, General Manager MWD  
 Mary Reeves, General Manager CSD  
 Reginald Lamson, GSA Administrator/General Manager DWP