San Gorgonio Pass Water Agency

- **DATE:** May 16, 2022
- TO: Board of Directors
- **FROM:** Lance Eckhart, General Manager
- **BY:** Lance Eckhart, General Manager

SUBJECT: CONJUNCTIVE USE PROJECT PLAN WITH SAN BERNARDINO MUNICIPAL WATER DISTRICT AND YUCAIPA VALLEY WATER DISTRICT

RECOMMENDATION

Authorize the General Manager to participate in the Conjunctive Use Project Plan (CUPP) with San Bernardino Municipal Water District (SBMWD) and Yucaipa Valley Water District (YVWD) at the next regular Board meeting.

PREVIOUS CONSIDERATION

• <u>Ongoing:</u> The Board has been discussing the concept of a local storage account with partner agencies for the last several years.

BACKGROUND

Since the mid-2010s, the Agency has discussed plans to implement a conjunctive use (banking) program with neighboring State Water Contractor SBVWMD. An opportunity exists for SBVMWD and its member agencies to increase groundwater levels (reduced pumping costs) and improve the water quality by recharging high-quality State Water Project (SWP) water within the San Bernardino/Bunker Hill Basin "Basin." Staff from SBVMWD, YVWD, and the Agency have determined that a 40,000 acre-foot storage project in the Basin could provide significant water security benefits for all agencies involved. The CUPP may establish a 20,000 acre-foot storage account for the Agency and YVWD.

ANALYSIS

The ability to bank water is an essential aspect of the Agency's growing water portfolio that needs to be developed further. The Agency may have challenges recharging all water available locally during wet years. This is especially true as the Agency's water portfolio expands and diversifies. Currently, the Agency has 10,000 acre-feet of storage in the Beaumont Basin Storage Account, and recharge is limited to the Brookside Recharge Facility and adjacent Beaumont Cherry Valley Water District ponds.

Not only is expanded storage/banking important to the Agency, but the CUPP also leverages SBVMWD's extensive recharge infrastructure. The program could provide a critical opportunity to mitigate opportunity costs associated with limited local capacity/recharge capabilities. Basically, the Agency could have another place to store water if local capacity and/or recharge constraints limit our ability to import in a given season. This may help address issues associated with more variable hydrology the state has seen in recent years. Initially, the return of banked water in the San Bernardino Basin will be through a paper water exchange with SBVMWD. Extraction facilities may be added, if needed, in the future to return wet water from the Basin into the Pass area.

The CUPP could also help the Agency store water by utilizing the 2018 SBVMWD/Agency Surplus Water Sale Agreement (attached). This agreement runs through 2032 and gives the Agency the first right of refusal to purchase up to 5,000 acre-feet of surplus water from SBVMWD. To date, surplus water has not been purchased. The CUPP may give the Agency a tool to easily purchase and store surplus SBVMWD water.

Storage accounts established through the CUPP would need to be approved by the Basin Technical Advisory Committee and the Western-San Bernardino Watermaster (SBVMWD local stakeholders). Groundwater modeling work is necessary to help stakeholder groups analyze the projects and understand CUPP impacts and benefits. SBVMWD solicited proposals for the modeling work, and Geoscience Inc. was selected to perform the work through a competitive process. A staff report from SBVMWD requesting authorization to enter into an agreement with Geoscience Inc., a proposed cost-share split between the SBVMWD, YVWD, and the Agency, and the proposal from Geoscience Inc. are attached.

FISCAL IMPACT

The Geoscience Inc. proposal to help define the CUPP is \$178,396. SBVMWD will manage the consultant contract. YVWD and the Agency will each reimburse SBVMWD a third of the contract costs. The Agency's total reimbursement cost-share to SBVMWD will be \$59,645.

The project is expected to take 6-9 months and is expected to fall within the FY 2022-23 General Fund Budget. The budget line is identified as 'Bunker Hill Banking and Recovery Program.'

<u>ACTION</u>

Authorize the General Manager to participate in the Conjunctive Use Project Plan with San Bernardino Municipal Water District and Yucaipa Valley Water District at the next regular Board meeting.

ATTACHMENTS

- 2018 SBVMWD/Agency Surplus Water Sale Agreement
- April 19, 2022, SBVMWD staff report
- Geoscience Inc. proposal for work associated with the Conjunctive Use Project Plan.

CONJUNCTIVE USE PROJECT PLAN WITH SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT **SAN GORGONIO PASS WATER AGENCY** 8 YUCAIPA VALLEY WATER DISTRICT



Establisho

SGPWA Workshop – May 16, 2022



A Banking Opportunity with Area Partners

<u>Conjunctive</u> <u>Use</u>

Coordinated use of surface water and groundwater.

Store when wet.

Recover when dry.

Active Management

• position yourself during the wet years so the resource is there in the dry years.



<u>Storage</u>

Recharge – Banking

Identified Current Issues:

- Water portfolio is growing.
- Higher Highs Lower Lows
- Capacity/Delivery constraints

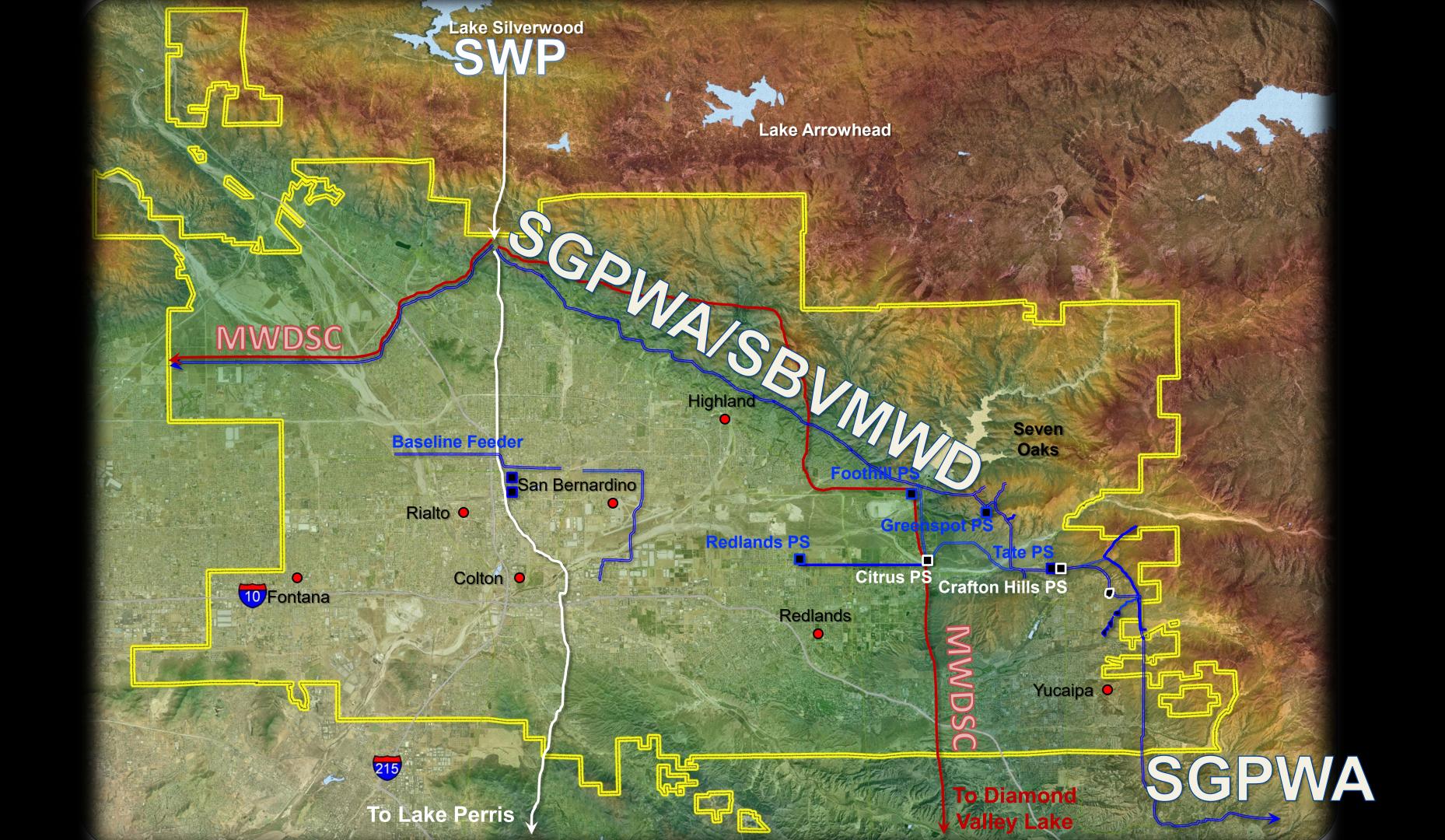
Potential Solutions:

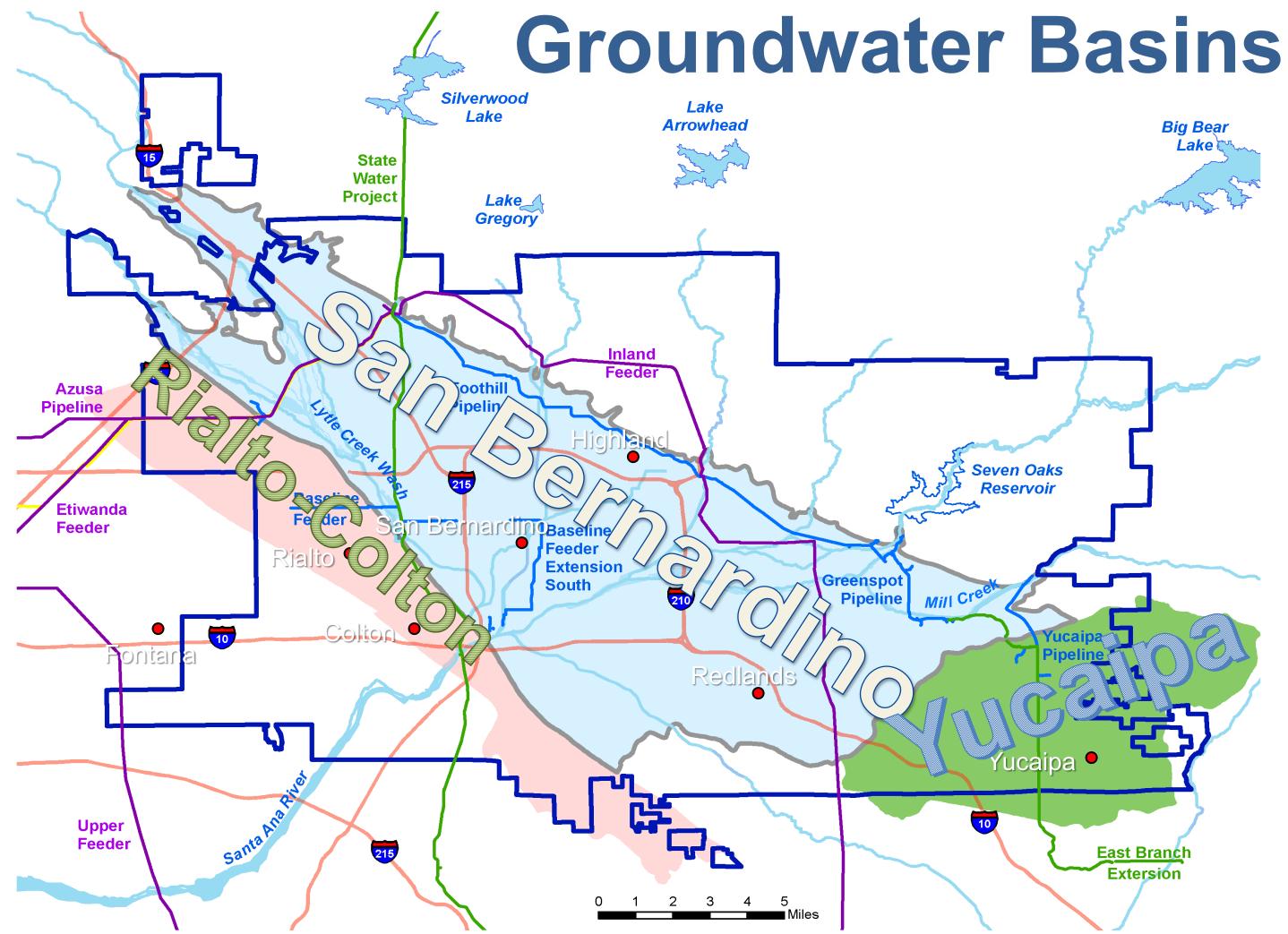
- Stores additional water from a growing portfolio.
- Captures highs Available in lows.
- Balances deliveries to fit within constraints.

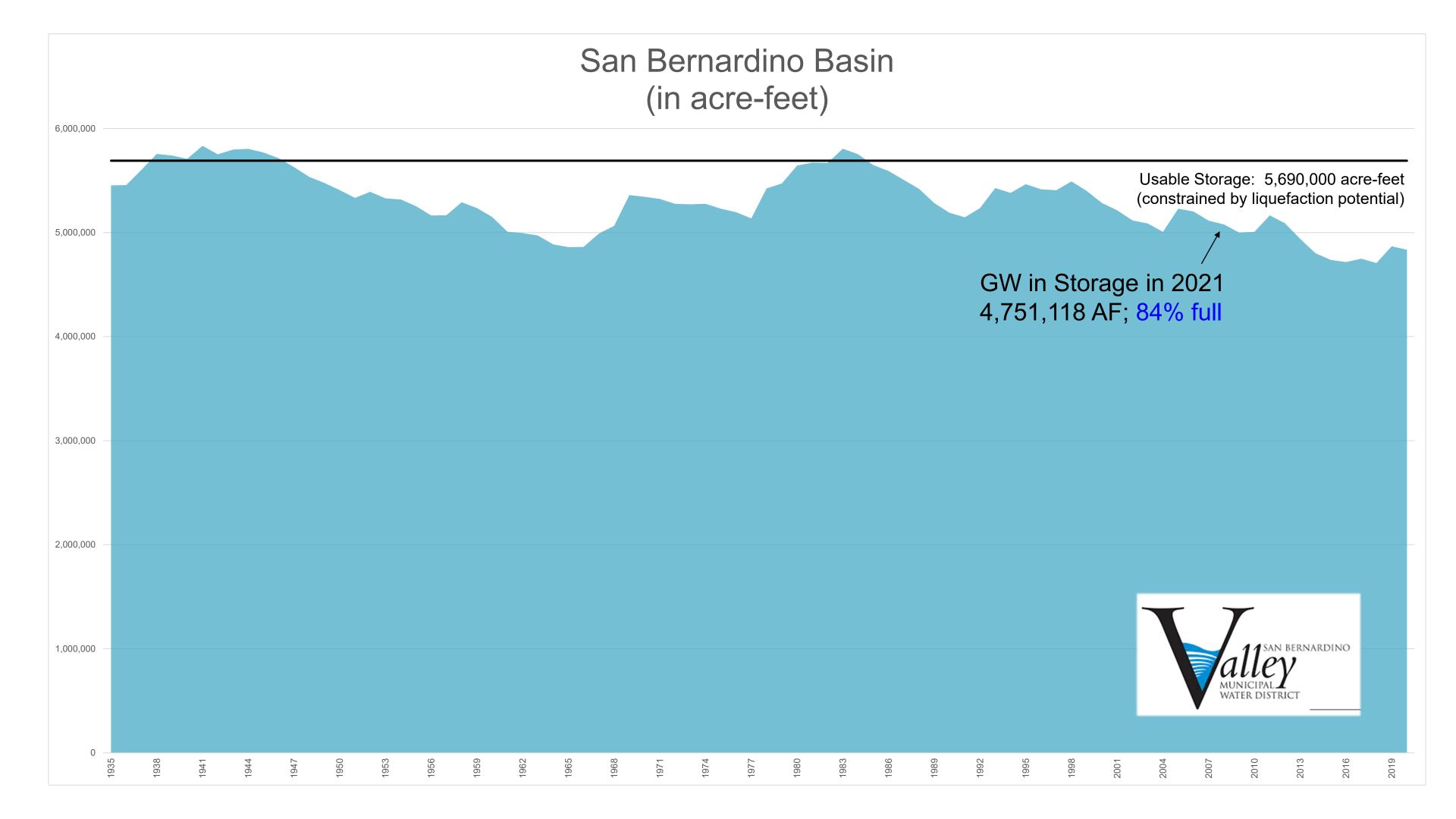


2020 Urban Water Management Plan









Path Forward

- Submitted to basin pumpers
- Includes modeling
- Provides impacts, if any

Plan

Approval

- Pumpers review proposal
- Pumpers identify
 project requirements
- Pumpers must approve



- A term sheet will be developed by the pumpers
- Approved term sheet will be drafted into an Agreement

Agreement







Recommendation

The Board of Directors authorize the General Manager to participate in the Conjunctive Use Project Plan with San Bernardino Municipal Water District and Yucaipa Valley Water District.









SURPLUS WATER SALE AGREEMENT

This Surplus Water Sale Agreement ("<u>Agreement</u>") is made and entered into as of <u>Agreement</u>") day of <u>Agreement</u>, 2018, by and between the SAN GORGONIO PASS WATER AGENCY ("Agency") and SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT ("District"). Agency and District are sometimes individually referred to herein as a "<u>Party</u>" and collectively as the "<u>Parties</u>".

RECITALS

A. Agency and District are state water contractors and regional water agencies that provide water on a wholesale basis to retail water providers and other public agencies within their respective service areas. There are two retail water providers that are within the service areas of both Agency and District. Those retailers are the Yucaipa Valley Water District and the South Mesa Water Company (collectively referred to as "Retailers"); and

B. Agency desires additional water supplies of all kinds to improve its water supply reliability, including wet year yield; and

C. Agency and District have a long history of cooperative efforts to serve water to their respective service areas, including water exchanges and sharing capacity in the East Branch Extension; and

D. District anticipates that from time to time, it may have surplus State Water Project water ("Surplus Water") that is surplus to the needs of its retail customers; and

E. District has adopted its Ordinance 79 which establishes procedures for the surplus and sale of surplus State Water Project Water; and

F. District desires to provide Agency the first right of refusal to purchase up to 5,000 acre-feet of District's Surplus Water per calendar year; and

G. Agency desires to purchase Surplus Water from District under the terms and conditions set forth in this Agreement and in a manner that is consistent with Ordinance 79.

NOW THEREFORE, in consideration of the foregoing recitals and the promises and covenants contained herein, the Parties agree as follows:

1. <u>Term of Agreement</u>.

The term of this Agreement shall commence on January 1, 2018 and end on December 31, 2032. ("<u>Term</u>").

2. <u>Purchase and Sale of Surplus Water.</u>

(a) District may determine, in its sole discretion, the amount of Surplus Water that will be available for purchase during each calendar year of the term of this Agreement. Notwithstanding the foregoing, if District determines that Surplus Water is available, District shall provide Agency the right of first refusal to purchase up to the first 5,000 acre feet of said Surplus Water.

(b) On or before June 15 of each year during the Term, District shall provide notice to Agency of the amount of Surplus Water that is available for purchase for that calendar year. Agency shall then have 30 days from the date of said notice to notify District of the amount of said Surplus Water that it wishes to purchase for that applicable year.

3. <u>Purchase Price for Surplus Water</u>.

The purchase price for Surplus Water delivered by District to Agency shall be the sum of the costs as calculated in subsections (a) and (b) below.

(a) The cost of the water shall be based on the State Water Project Table A allocation as determined for the applicable year as follows:

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| Final SWP Allocation | Cost Per Acre-Foot |
|-------------------------|--------------------|
| 0 - 20% | \$400 |
| 21 - 40% | \$300 |
| 41 - 60% | \$200 |
| 61 - 100% | \$100 |

(b) The power cost to move the Surplus Water through the State Water Project facilities, District facilities, and then to the Point of Delivery as defined herein, shall be paid as follows: (i) Agency shall pay to District power costs at the power cost rate established for the State Water Project for the applicable year. The actual power costs shall be reconciled on or before the end of the calendar year following the year of the delivery. In the event it is determined that Agency has underpaid power costs, Agency shall make payment for the amount owed to District within 30 days of said determination. In the event it is determined that Agency has overpaid power costs, Agency may elect to either receive payment from District within 30 days from the date of said determination or to apply said amount as a credit toward power costs for a subsequent year.

(c) On or before expiration of each 5-year period during the Term, the Parties shall meet and confer in good faith in regard to whether the amount and/or calculation of the purchase price should be changed. In the event the Parties cannot agree as to a new or different amount or calculation, then either Party shall have the right to terminate this Agreement. Unless a Party elects to so terminate this Agreement, the purchase price then in effect shall remain in effect unless or until the Parties reach an agreement to make any such change.

4. Delivery of Water.

(a) Point of Delivery. The physical point of delivery ("Point of Delivery") of Surplus Water pursuant to this Agreement includes, but is not limited to, the following locations:

| Delivery Location | Reach Number |
|---|------------------|
| Various locations in the San Bernardino Basin | EBX – 1, 2A, 2B, |
| | 2C |
| Various locations in the Yucaipa Basin | EBX-3B |
| Various locations in the Beaumont Basin; | EBX – 4A, 4B |

(b) Delivery Schedule. District will cooperate with Agency to coordinate for the delivery at the Point of Delivery upon a mutually agreeable delivery schedule.

5. <u>Use of Water in the San Gorgonio Pass Water Agency Service Area</u>. Agency shall only purchase the amount of Surplus Water that it is able to put to beneficial use within its service area.

6. <u>Resale of Surplus Water</u>. During the applicable year, Agency shall first offer to sell fifty percent (50%) of any Surplus Water to the Retailers, per the current pricing policy of Agency.

The Retailers share of Surplus Water described in this Section will be equally divided up to a Retailer share of two thousand (2,000) acre-feet. Any Retailer share more than 2,000 acre-feet will be offered to the Retailers in proportion to the amount of imported water each Retailer has purchased from Agency over the previous 3 calendar years.

Each Retailer shall notify Agency within 30 days of said offer as to whether, and to what extent, each Retailer desires to purchase Surplus Water. If one Retailer elects not to purchase any share, or elects to purchase less than its share, then the balance shall be made available to the other Retailer.

In the event the Retailers elect not to purchase all of the water described in this Section, Agency may purchase the remainder of the water.

7. <u>Regulatory Requirements</u>. The implementation of this Agreement shall be subject to satisfaction by District and Agency of applicable legal and regulatory requirements.

8. <u>Default and Termination</u>. In the event either Party fails to make any payment under this Agreement when due, or fails to perform any obligation otherwise required by this Agreement, the non-defaulting Party shall demand in writing that the defaulting Party cure such non-performance. The defaulting Party shall have ninety (90) days after receipt of such demand to cure. In the event the defaulting Party fails to cure a default within the ninety (90) day period, the non-defaulting Party may pursue any applicable action in law or equity including, but not limited to, termination, specific performance and/or damages for breach of this Agreement.

9. <u>Entire Agreement</u>. This Agreement contains the entire understanding between the Parties with respect to its subject matter, and supersedes all prior agreements, oral or written, and all prior or contemporaneous discussions or negotiations between the Parties. This Agreement cannot be amended except in writing signed by both Parties.

10. <u>No Waiver</u>. Any failure or delay on the part of either Party to exercise any right under this Agreement shall not constitute a waiver of the right, and shall not preclude such Party from exercising or enforcing the right, or any other provision of this Agreement, on any subsequent occasion.

11. <u>Notices</u>. All notices or other communications required or desired to be given pursuant to this Agreement shall be in writing and shall be hand-delivered or sent by a reputable overnight courier service providing delivery confirmation. Each such notice or communication shall be deemed to be duly given when hand-delivered or one (1) day after being deposited for next day delivery with an overnight courier. Each such notice or communication shall be

addressed to the Parties at their respective addresses set forth next to their signatures below, or such other address as a Party notifies the other in writing.

12. <u>Severability</u>. If any provision of this Agreement is finally determined by a court to be invalid or unenforceable as written, the provision shall, if possible, be enforced to the extent reasonable under the circumstances and otherwise shall be deemed deleted from this Agreement. The other provisions of this Agreement shall remain in full force and effect so long as the material purposes of the Agreement and understandings of the Parties are not impaired.

IN WITNESS WHEREOF, the Parties have executed this agreement as of the date first written above.

DISTRICT:

SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

SAN GORGONIO PASS WATER AGENCY

AGENCY:

By: Name: Title: Address: 380 G. Vander

By: Offrey Whomes

Name: Title:

Address: 1210 Beaumo Beaumont CA

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EXHIBIT A

Resale of Surplus Water Examples

| | | | Amount to I | Each Retailer |
|---------------|----------|----------------|------------------------------------|------------------------------------|
| Amount of | | Total Retailer | | |
| Surplus Water | SGPWA | Share | SMWC | YVWD |
| 1,000 AF | 500 AF | 500 AF | 250 AF | 250 AF |
| 2,000 AF | 1,000 AF | 1,000 AF | 500 AF | 500 AF |
| 5,000 AF | 2,500 | 2,500 AF | 1,000 AF + PROPORTION OF 500 | 1,000 AF + PROPORTION OF 500 |

PROPORTION OF 500: The remaining 500 AF will be proportioned per Section 6 of this agreement, in proportion to the amount of SWP water each retailer purchased over the previous three (3) years



DATE: April 19, 2022

TO: Board of Directors

- FROM: Heather Dyer, CEO/General Manager Adekunle Ojo, Manager of Water Resources
- **SUBJECT:** Consider authorizing the CEO/General Manager to execute a consulting services agreement with Geoscience, Inc. for the preparation of a Conjunctive Use Project Plan as part of the Three-Party Agreement between the San Gorgonio Pass Water Agency, Yucaipa Valley Water District, and Valley District

Staff Recommendation

Staff recommends the award of the contract for the preparation of a San Bernardino Basin Conjunctive Use Project Plan to Geoscience, Inc. in the amount \$178,936; Valley District's share of the cost is 1/3 or \$59,645.

<u>Summary</u>

This item was discussed at the Board of Directors Workshop – Engineering on April 12 and the Directors asked for the item to be brought to a regular Board meeting for consideration. Valley District is supporting the establishment of two separate 20,000-acre-foot storage accounts in the San Bernardino Basin, one for the Yucaipa Valley Water District (YVWD) and one for the San Gorgonio Pass Water Agency (Pass Agency), subject to the Terms and Conditions of the Conjunctive Use Guidelines of the Basin. The Conjunctive Use Project Plan (CUP Plan) will define the storage in details, perform groundwater modeling and project analysis, determine and mitigate impacts, and provide other pertinent information to assist the Basin Technical Advisory Committee (BTAC) and the Western-San Bernardino Watermaster to review and approve the proposal.

Geoscience was selected through a competitive process. A Request for Proposal was issued on December 9, 2021 and two proposals were received by the deadline from Geoscience, Inc. of San Dimas, CA and Geosyntec Consultants, Inc. of Pasadena. Geoscience's proposal is approximately \$18,000 lower in cost. Additionally, Geoscience has more experience and specific expertise in our basin to address key issues that may arise during the preparation of the CUP Plan than the other proposing firm. This item has been reviewed by the YVWD and Pass Agency General Managers and they will be taking the item to their respective Boards to approve their cost share. If approved

by the Board, Valley District will manage the contract on behalf of the parties and the project is expected to take 6-9 months to complete.

Background

Yucaipa Valley Water District is served imported water by both the San Gorgonio Pass Agency (Riverside County) and Valley District (San Bernardino County). Because of this geographic split, and the different water supply portfolios and rate structures of the two wholesale agencies, certain issues pertaining to reliability and equity emerged. As a result, in February 2019, a member of the YVWD Board approached both Valley District and the Pass Agency regarding these water supply reliability and financial equity concerns for the growing City of Calimesa and surrounding area in Riverside County served by YVWD. In response to this, the three agencies' Boards authorized their General Managers to participate in a facilitated process to evaluate alternatives and develop potential solutions to resolve the stated concerns. The overall goal of the collaborative process was to, first, fully understand the water supply issues in the Calimesa area and then determine how to best meet these needs. Based on the difficulties associated with jurisdictional boundary changes, facility-based and contractual alternatives to resolve the identified issues were preferred.

The commitment to store additional imported water in the San Bernardino Basin establishes a strong foundation for long-term interagency collaboration to meet common goals while resolving longstanding issues related to reliability and equity of water supply in the east end of our service area. Some of the imported water under this arrangement will come from the State Water Project purchased by Yucaipa and the Pass Agency and some will be "Nickel Water" acquired pursuant to the Pass Agency's 2017 contract with the Antelope Valley-East Kern Water Agency (AVEK), which allows the annual delivery of up to 1,700 acre-feet of non-SWP water to the Pass Agency through December 31, 2036 with the option for an additional twenty (20) years extension.

Fiscal Impact

The recommended three-way cost split is consistent with the cost share on other regional collaboration efforts that Valley District leads. The Pass Agency and YVWD will each reimburse Valley District a third of the project cost, \$119,290 in total. Valley District's cost share of \$59,645 will be included in the Fiscal Year 2022-2023 General Fund Budget; funding is available in the current budget under Budget Line 6360 (Consultants) to pay for any contractual expenses that may occur in the remaining days of the current fiscal year.

Attachment

Consulting Services Agreement

CONSULTING SERVICES AGREEMENT

THIS CONSULTING SERVICES AGREEMENT ("*Agreement*") is entered into as of April 19, 2022 ("*Effective Date*"), by and between San Bernardino Valley Municipal Water District, a municipal water district organized and operating under the Municipal Water District Law of 1911 ("*District*"), and Geoscience Support Services, Inc., a California corporation ("*Consultant*"). District and Consultant are sometimes referred to herein collectively as "*Parties*" and individually as "*Party*."

RECITALS

A. District is a public agency of the State of California and is in need of a qualified consultant to provide professional services for the following project:

| JOB NAME: | Preparation of a Conjunctive Use Project Plan and Related |
|-----------|---|
| | Groundwater Modeling |

JOB NUMBER: 1698 Three Party Agreement

B. Consultant is duly licensed in the State of California and has the necessary qualifications to provide such professional services.

C. The Parties desire to enter into this Agreement for the purpose of setting forth the terms and conditions upon which Consultant will render such professional services to District.

NOW, THEREFORE, the Parties agree as follows:

ARTICLE I SCOPE OF SERVICES TO BE PERFORMED, TIME OF PERFORMANCE AND TERM

1.1 <u>Term</u>. The term ("*Term*") of this Agreement shall commence on the Effective Date and shall automatically terminate upon earlier of: (a) June 30, 2023; or (b) the successful completion of Services (as defined below), unless earlier terminated.

1.2 <u>Scope of Services and Time of Performance</u>. During the Term of this Agreement, Consultant shall perform all services, and provide all materials, equipment, tools, labor, and expertise, necessary to furnish the professional services set forth in Consultant's proposal in response to the RFP ("*Proposal*"), a true and correct copy of which is attached as *Exhibit "A"* hereto and incorporated herein by reference (collectively, "*Services*"). All Services shall be performed in accordance with the timeframes set forth in the Proposal.

1.3 <u>Task Orders</u>. From time to time, the Parties may make changes to or authorize certain work set forth in the scope of Services, including without limitation issuing additional instructions, requiring additional work, or deleting work previously ordered, by executing one or more task orders (each a "*Task Order*"). The provisions of this Agreement shall apply to all such

Task Orders. The costs of each Task Order, or any modification of time for completion that might be required thereby, shall be mutually agreed upon in writing by District and Consultant before commencement of the work called for by such Task Order. A Task Order is a request for additional Services and/or changes to Services, and shall not be effective unless and until accepted in writing by both Parties. Consultant shall be solely responsible for all costs and expenses associated with any additional Services, including additional Services already performed, that have not been specifically agreed upon in writing by Consultant and District. As used in this Agreement, the term "*Services*" shall include Services added, deleted, or modified by any Task Order.

1.4 <u>Qualifications</u>. Consultant represents and warrants to District that it has the qualifications, experience, licenses, and facilities necessary to properly perform the Services in a timely, competent, and professional manner.

1.5 <u>Licenses</u>. Consultant shall, in accordance with applicable laws and ordinances, obtain and maintain at its expense all permits and licenses necessary to accomplish the Services. Failure to maintain a required permit or license may result in immediate termination of this Agreement.

1.6 <u>Standard of Care</u>. Consultant shall perform all Services in accordance with generally accepted professional practices and principles and in a manner consistent with the level of care and competence ordinarily exercised by members of the profession currently practicing under similar conditions and in compliance with all federal, state, and local laws, rules, regulations, or ordinances applicable to the Services.

1.7 <u>Relations with Construction Contractor</u>. Consultant shall not directly or indirectly communicate with or consult with any construction or other District contractor utilized in the project, except in the presence of or with the specific written consent of the District.

1.8 <u>Non-Exclusivity</u>. District agrees that Consultant may perform services in matters that are not substantially related to the Services for people or entities that are or might be adverse to District. Subject to the restrictions of this Section 1.8 and Sections 3.2 and 3.3, Consultant will have no obligation to limit or restrict the assignment of its consultants, employees, and principals to other projects as a result of their performance of the Services.

ARTICLE II COMPENSATION AND EXPENSES

2.1 <u>Compensation</u>. As full and complete compensation for the Services to be rendered by Consultant, District shall pay Consultant for all Services performed pursuant to this Agreement, inclusive of subconsultants and miscellaneous expenses, in the amount and on the schedule set forth in the Proposal ("*Compensation*"), which amount shall not exceed One Hundred and Seventy Eight Thousand Nine Hundred and Thirty Six Dollars Only (\$178,936) ("*Maximum Fee*"). To the extent different payment terms are set forth in a Task Order that conflict with the general payment terms set forth in the Proposal, the terms in the Task Order shall control. Consultant acknowledges and agrees that in no event shall Consultant receive or have a claim of any kind for any payment in excess of the Maximum Fee for any work, including additional Services under any Task Order, performed under this Agreement, unless such amount exceeding the Maximum Fee is specifically approved in writing by District.

2.2 <u>Billing Procedure</u>. On or before the tenth (10th) day of each month, Consultant will submit to District an accurate and complete statement ("*Invoice*") for Services actually performed during the previous month and other amounts due under this Agreement. Each Invoice shall include, at a minimum: (a) District's job name; (b) District's job number; (c) Consultant's point of contact for billing questions; (d) basis of billing; (e) total contract value; (f) total billing to date; (g) amount remaining in contract; (h) estimated percentage of completion at time of billing; and (i) a summary of Services actually performed during the billing period. Each Invoice shall be supported by such data substantiating Consultant's right to payment as District may reasonably require.

2.3 <u>Payment</u>. District shall pay to Consultant within thirty (30) calendar days after receipt of an Invoice, or the resolution of any billing dispute, all undisputed amounts. District may withhold a portion of an Invoice because of defective Services not remedied or unsatisfactory prosecution of the Services by Consultant. District will release any withheld funds upon Consultant satisfactorily remedying the issue that resulted in the withholding. District will not pay late fees to Consultant on the compensation due Consultant under the terms of this Agreement. Payment of any Invoice shall not constitute acceptance of any Services completed by Consultant, and the making of final payment shall not constitute a waiver of any claims by District for any reason whatsoever.

2.4 <u>Disputed Invoices</u>. In the event District disputes an Invoice, District shall provide a written explanation of the dispute to Consultant within thirty (30) days after receiving the Invoice. District and Consultant shall cooperate to resolve any disputed amount. District shall not be penalized for any reasonable dispute and shall not be obligated to pay any amount in dispute until the dispute has been resolved.

2.5 <u>Expenses</u>. District must pre-approve in writing each reasonable and necessary expense for which Consultant intends to seek reimbursement, which expenses are directly related to the performance of the Services. If pre-approved, such expenses for reasonable and necessary travel, lodging, or miscellaneous expenses incurred in the performance of this Agreement will be reimbursed to Consultant in accordance with District's general reimbursement policy. Consultant shall submit an Invoice of all incurred expenses accompanied by reasonable supporting documentation or transaction receipts. Invoices that fail to include reasonable supporting documentation or receipts will not be honored and District will have no obligation of any kind to reimburse Consultant for unsupported expenses listed on such Invoices.

2.6 <u>Taxes</u>. Any Taxes imposed by governing taxing authorities with respect to the Services will be the responsibility of Consultant. "*Taxes*" shall mean all taxes imposed with respect to the provision of the Services and associated amounts payable with respect to the Services, whether denominated as sales taxes, gross receipts taxes, transaction privilege taxes, use taxes, excise taxes, or otherwise.

ARTICLE III WORK PRODUCT; CONFIDENTIAL INFORMATION

3.1 <u>Project Data</u>. Consultant shall be exclusively responsible for obtaining from the appropriate sources, persons or third parties, all data and information necessary for the proper, timely and complete performance and satisfaction of the Services.

Work Product. Upon completion or other termination of this Agreement, 3.2 Consultant shall provide to District, and such other consultants approved by District, all papers, maps, models, designs, calculations, surveys, reports, data, notes, computer files, documents, drawings and other work product (collectively "Work Product") developed from or associated with the Services. Upon completion of the Services, Consultant shall provide one reproducible physical copy and one electronic copy of all final Work Product described in the Proposal, in forms acceptable to District. Consultant acknowledges that all Services performed or Work Product prepared for District by Consultant hereunder, including without limitation all data, calculations, reports, models, working notes, drawings, designs, improvements, trademarks, patents, copyrights (whether or not registered or patentable), and specifications developed or prepared by Consultant in connection with or related to such Services or Work Product shall become the sole and exclusive property of District, unless specifically otherwise agreed upon in writing by District and Consultant. Consultant hereby unconditionally assigns, transfers and conveys to District all rights, interests and claims of any kind related thereto, including copyright. Consultant shall promptly disclose such Work Product to District and, at the District's expense, perform all actions reasonably requested by District (whether during or after the Term) to establish and confirm such ownership (including, without limitation, executing any necessary assignments, consents, powers of attorney, and other instruments). Notwithstanding the preceding, all pre-existing intellectual property owned by Consultant which is incorporated in or utilized to develop the Services performed or Work Product prepared for District hereunder shall remain the sole and exclusive property of Consultant; provided, however, that Consultant grants to District a non-exclusive, perpetual, fully transferable, worldwide, royalty-free, limited license to use such pre-existing intellectual property in connection with such Services or Work Product. Consultant shall not be held liable for reuse of Work Product or modifications thereof by District or its representatives for any purpose other than the original intent of this Agreement, without written authorization of Consultant.

3.3 <u>Confidential Information</u>. Consultant acknowledges that during the Term it may receive or have access to certain information, observations, and data (including without limitation trade secrets, designs, ideas, products, research, software, financial data, and personal information) concerning the business or affairs of District which is designated as confidential or proprietary or should reasonably be understood to be confidential given the nature of the information and the circumstances surrounding its disclosure ("*Confidential Information*"). All Confidential Information is, and shall remain, the property of District. Consultant shall: (a) use all Confidential Information solely for the purpose of providing the Services described in this Agreement; (b) hold all Confidential Information in strict confidence; (c) protect all Confidential Information from dissemination to, and unauthorized access or use by, any third party, using the same level of care and discretion that it uses with its own similar information, which in no case will be less than commercially reasonable care; (d) restrict access to all Confidential Information to such of its personnel, agents, and/or subconsultants, if any, who have a need to have access in order to provide

the Services and who are under obligations of confidentiality substantially similar to those in this Agreement; and (e) return or destroy all Confidential Information of the other Party in its possession upon termination or expiration of this Agreement and promptly confirm such return or destruction. Consultant shall not sell or make any unauthorized use of any Confidential Information.

ARTICLE IV BOOKS AND RECORDS

4.1 <u>Books and Records</u>. Consultant shall keep and preserve for no less than four (4) years after the date of final billing or termination of this Agreement, whichever shall first occur, accurate and detailed records of all ledgers, books of account, invoices, vouchers, cancelled checks, and other documents or records evidencing or relating to the Services and disbursements charged to District under this Agreement (collectively, "*Books and Records*"). All Books and Records shall be maintained in accordance with generally accepted accounting principles and must be sufficiently complete and detailed so as to permit an accurate evaluation of the Services provided by Consultant under this Agreement. District and its agents shall be given full access to such Books and Records during normal business hours. District and its agents shall have the right to make copies of any of the said Books and Records.

4.2 <u>Work Product Documentation</u>. Consultant further agrees to maintain all design calculations and final Work Product on file in legible and readily accessible form. In addition to the requirements of Section 3.2, Consultant shall make copies of such material available to District, at District's sole cost and expense, and Consultant shall not destroy the originals of such materials and items, including any additions, amendments or modification thereto, unless District fails to object to such destruction upon Consultant providing District with sixty (60) days advance written notice, indicating that such material is scheduled to be destroyed.

ARTICLE V INDEPENDENT CONTRACTOR

5.1 <u>Status</u>. The Parties hereby acknowledge that in rendering the Services provided hereunder, Consultant shall be deemed to be an independent contractor and shall not be deemed in any way an agent, partner, or joint venturer of District. Consultant acknowledges and agrees that, as an independent contractor, it is solely responsible for the payment of any and all taxes and/or assessments imposed on account of payment to Consultant or the performance of Services by Consultant pursuant to this Agreement.

5.2 <u>Agency Restrictions</u>. Consultant understands and agrees that Consultant shall not represent itself to third parties to be the agent, employee, partner, or joint venturer of District. Furthermore, Consultant shall not make any statements on behalf of or otherwise purporting to bind the District in any contract or otherwise related agreement. Consultant further agrees and acknowledges that Consultant does not have the authority to and shall not sign any contract on behalf of District. Consultant shall not obligate District to do any other act that would bind District in any manner.

5.3 <u>Further Assurances</u>. Consultant shall furnish District with any documents or records that District reasonably believes necessary to properly and timely carry out the Services. District shall first tender written notice to Consultant regarding any documents or records that it reasonably believes necessary to properly carry out the Services. Consultant shall then have ten (10) days from the receipt of such notice to provide District with the requested documents or records.

ARTICLE VI TERMINATION

6.1 Termination. At any time during the Term of this Agreement, District may terminate this Agreement, in whole or in part, with or without cause, upon ten (10) working days' written notice to Consultant. Upon receipt of the termination notice, Consultant shall promptly discontinue Services except to the extent the notice otherwise directs. In the event District renders such written termination notice to Consultant, Consultant shall be entitled to compensation for all Services properly rendered prior to the effective date of the notice and all further Services set forth in the notice. District shall be entitled to reimbursement for any compensation paid in excess of Services properly rendered and shall be entitled to withhold compensation for defective Services or other damages caused by Consultant's work. Consultant acknowledges District's right to terminate this Agreement as provided in this Article VI, and hereby waives any and all claims for damages that might arise from District's termination of this Agreement. Consultant shall deliver to District and transfer title (if necessary) to all completed Work Product. District shall not be liable for any costs other than the charges or portions thereof which are specified herein. Consultant shall not be entitled to payment for unperformed Services, and shall not be entitled to damages or compensation for termination of Services.

ARTICLE VII CALIFORNIA LABOR CODE PROVISIONS FOR PUBLIC WORKS PROJECTS

7.1 <u>Prevailing Wage Rates</u>. Consultant is aware of the requirements of California Labor Code sections 1720 *et seq.* and 1770 *et seq.* (collectively, "*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 \$1,000 or more, Consultant agrees to fully comply with such Prevailing Wage Laws, if applicable. Consultant shall indemnify, defend, and hold harmless District and its directors, officers, employees, and agents from any claims, liabilities, costs, fines, penalties, or interest arising out of any failure or alleged failure of Consultant or its subconsultants to comply with the Prevailing Wage Laws. It shall be mandatory upon the Consultant and all subconsultants to comply with all California Labor Code provisions, including without limitation prevailing wages, employment of apprentices, hours of labor, and debarment of contractors and subcontractors. 7.2 <u>Registration</u>. If the Services are being performed as part of an applicable "public works" or "maintenance" project, in addition to the foregoing, then pursuant to California Labor Code sections 1725.5 and 1771.1, Consultant and all subconsultants must be registered with the Department of Industrial Relations ("*DIR*"). Consultant shall maintain registration for the duration of this Agreement and require the same of any of its subconsultants. This Agreement may also be subject to compliance monitoring and enforcement by the DIR. Consultant shall have sole responsibility to comply with all applicable registration and labor compliance requirements, including the submission of payroll records directly to the DIR.

7.3 <u>Labor Certification</u>. By its signature hereunder, Consultant certifies that it is aware of the provisions of California Labor Code section 3700, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and Consultant agrees to comply with such provisions before commencing the performance of any Services.

ARTICLE VIII PROJECT MANAGEMENT

8.1 <u>Consultant's Representative.</u> Johnson Yeh, PhD, PG, CHG ("*Consultant's Representative*") is hereby designated as the principal and representative of Consultant authorized to act on its behalf with respect to the Services specified herein and to make all decisions in connection herewith. Consultant shall not substitute Consultant's Representative without first notifying District in writing of Consultant's intent. District shall have the right to review the qualifications of said substitute. If District determines said substitute Consultant's Representative is unacceptable, Consultant shall submit alternate candidates until District determines the substitute Consultant Representative is acceptable.

8.2 <u>District's Representative</u>. Adekunle Ojo ("*District's Representative*") is hereby designated to represent District and except as otherwise provided herein authorized to act on its behalf with respect to the Services specified herein and to make all decisions in connection therewith. District may substitute District's Representative at any time upon written notice to Consultant.

ARTICLE IX INDEMNIFICATION; LIMITATION OF LIABILITY

9.1 Indemnification. Consultant shall indemnify, defend, and hold harmless District and District's directors, officers, employees, representatives, agents, affiliates, subsidiaries, predecessors, successors, and assigns from and against any and all claims, demands, losses, costs, expenses, obligations, liabilities, damages, judgments, fines, penalties, and deficiencies, including attorneys' fees (collectively, "*Claims*"), arising out of or related to any acts or omissions, or goods, products, or services made, furnished, or otherwise provided, or alleged to be made, furnished, or otherwise provided, by Consultant or Consultant's employees, representatives, agents, subconsultants, contractors, subcontractors, suppliers, successors, permitted assigns, or anyone acting on behalf of Consultant in connection with the performance of the Services. Consultant's indemnification responsibility with respect to the Services shall exist and continue regardless of the extent to which District may have reviewed and approved the Services performed by Consultant, except that Consultant shall not be responsible for any Claim attributable to the Services to the extent such Claim is attributable to a decision made by District with respect to which Consultant and District have specifically agreed in writing that District shall be the responsible party. Consultant's indemnification obligations shall not be affected by any insurance provisions or limitations of liability contained in this Agreement. Consultant's indemnification obligations shall continue in full force and effect notwithstanding the completion, expiration, or other termination of this Agreement.

Limitation of Liability. DISTRICT'S CUMULATIVE AGGREGATE LIABILITY 9.2 IN CONNECTION WITH THIS AGREEMENT, WHETHER ARISING UNDER CONTRACT OR BASED UPON A CLAIM OF STRICT LIABILITY, NEGLIGENCE, OR ANY OTHER TORT OR STATUTORY BASIS, SHALL BE LIMITED TO THE TOTAL PAYMENTS MADE BY DISTRICT TO CONSULTANT HEREUNDER DURING THE 12-MONTH PERIOD IMMEDIATELY PRECEDING THE EVENT UPON WHICH LIABILITY IS PREDICATED. IN NO EVENT WILL DISTRICT OR ANY OF ITS DIRECTORS, OFFICERS, EMPLOYEES, REPRESENTATIVES, AGENTS, OR AFFILIATES BE LIABLE FOR LOST PROFITS, LOST BUSINESS OPPORTUNITIES, LOST REVENUES, OR FOR EXEMPLARY, PUNITIVE, SPECIAL, INCIDENTAL, DELAY, INDIRECT, OR CONSEQUENTIAL DAMAGES OR THE LIKE, EACH OF WHICH IS HEREBY EXCLUDED BY AGREEMENT OF THE PARTIES REGARDLESS OF WHETHER SUCH DAMAGES WERE FORESEEABLE OR WHETHER DISTRICT HAS BEEN ADVISED OF THE POSSIBILITY THEREOF. THE PARTIES EACH ACKNOWLEDGE THAT THE FORGOING LIMITATION OF LIABILITY IS A MATERIAL CONDITION OF DISTRICT'S WILLINGNESS TO ENTER INTO THIS AGREEMENT, AND THAT DISTRICT WOULD NOT ENTER INTO THIS AGREEMENT BUT FOR SUCH LIMITATION.

ARTICLE X INSURANCE

10.1 <u>Insurance</u>. Consultant shall provide, pay for, and maintain in force at all times during the performance of the Services hereunder, the policies of insurance set forth below. Consultant shall provide original certificates of insurance and endorsements evidencing coverage on forms reasonably acceptable to District prior to commencing any Services under this Agreement and promptly upon request thereafter. The existence of the required insurance coverage under this Agreement shall not be deemed to satisfy, substitute for, or otherwise limit Consultant's indemnification obligations under this Agreement. Consultant acknowledges that the insurance coverage and the policy limits set forth in this Agreement constitute the minimum coverage and policy limits required.

(a) Commercial General Liability Insurance covering liabilities for death and personal injury, liabilities for loss of or damage to property, and contractual indemnity obligations with a combined single limit of \$1,000,000 per occurrence and \$2,000,000 in the aggregate.

(b) Automobile Liability Insurance for bodily injury or death and property damage, including coverage for owned, non-owned, leased, and hired auto, with a minimum \$1,000,000 per person and \$2,000,000 per occurrence.

(c) Workers' Compensation Insurance as required by applicable law.

(d) Employers' Liability Insurance with limits of at least \$1,000,000 per occurrence.

(e) Professional Liability Insurance/Errors and Omissions Liability Insurance appropriate to Consultant's profession, with limits of liability of not less than \$2,000,000 each claim/annual aggregate.

10.2 <u>Policy Requirements</u>. All insurance policies required pursuant to this Agreement shall:

(a) For all liability policies, include an additional insured endorsement at least as broad as ISO CG 2010 07 04 and consistent therewith naming as additional insureds "San Bernardino Valley Municipal Water District and its directors, officers, employees, representatives, agents, affiliates, subsidiaries, predecessors, successors, and assigns".

(b) Be on an "occurrence" basis, not a "claims-made" basis. The foregoing policies must contain an aggregate limit not less than the occurrence limit. The required limits may be satisfied by a combination of a primary policy and an excess or umbrella policy.

(c) Be primary and non-contributory with any insurance programs carried by or available to District.

(d) Waive all rights of subrogation and contribution against District and its insurers.

(e) Provide that coverage shall not be revised, cancelled or reduced until at least thirty (30) days' written notice of such revision, cancellation or reduction shall have been given to District. In the event any policies of insurance are revised, cancelled or reduced, Consultant shall prior to the revision, reduction or cancellation date, submit evidence of new insurance to District complying with this Agreement.

(f) Be issued by insurance companies which are qualified to do business in the State of California and which have a current rating of A-VIII or better in Best's Insurance Report.

10.3 <u>Subconsultant Insurance</u>. In the event Consultant subcontracts any portion of its performance, the agreement between Consultant and the subconsultant shall require the subconsultant to carry the same policies of insurance that Consultant is required to maintain pursuant to this Agreement.

ARTICLE XI REPRESENTATIONS AND WARRANTIES

11.1 <u>Representations and Warranties</u>. Each Party represents and warrants the following:

(a) Such Party is duly organized, validly existing, and in good standing under the laws of its state of formation or incorporation and has all requisite power and authority to conduct the business with which it conducts and proposes to conduct.

(b) All action on the part of such Party necessary for the authorization, execution, delivery, and performance of this Agreement, and the consummation of the transactions contemplated herein, has been properly taken and obtained in compliance with applicable law.

(c) Such Party has not entered into nor will either enter into any agreement (whether written or oral) in conflict with this Agreement or which would prevent such Party from performing its obligations under this Agreement.

(d) Such Party has the contacts and expertise, and will reasonably allocate its financial and time resources on a best efforts basis to enable it to perform its obligations hereunder.

ARTICLE XII MISCELLANEOUS

12.1 <u>Entire Agreement</u>. This Agreement contains the entire understanding between the Parties, and supersedes any prior understanding and/or written or oral agreements between them, respecting the subject matter of this Agreement. There are no representations, agreements, arrangements, or understandings, oral or written, by and between the Parties relating to the subject matter of this Agreement that are not fully expressed herein.

12.2 <u>Assignment</u>. Consultant may not assign its rights and obligations hereunder, in part or in whole, without the prior written consent of District, which consent may be granted or withheld in District's sole discretion.

12.3 <u>Succession</u>. This Agreement shall be binding upon and inure to the benefit of the Parties named herein and their respective successors and permitted assigns.

12.4 <u>No Third-Party Beneficiaries</u>. This Agreement shall not confer any rights or remedies upon any person or entity other than the Parties and their respective successors and permitted assigns.

12.5 <u>Headings</u>. The section headings contained in this Agreement are inserted for convenience only and shall not affect in any way the meaning or interpretation of this Agreement.

12.6 <u>Notices</u>. Any notice to be given or to be served upon either Party hereto in connection with this Agreement must be in writing and shall be deemed to have been given and received: (a) when personally delivered; (b) two (2) days after it is sent by Federal Express or similar overnight courier, postage prepaid and addressed to the Party for whom it is intended, at

that Party's address specified below; (c) three (3) days after it is sent by certified or registered United States mail, return receipt requested, postage prepaid and addressed to the Party for whom it is intended, at that Party's address specified below; or (d) as of the date of electronic mail transmission addressed to the Party for whom it is intended, at that Party's electronic mail address specified below, and provided that an original of such notice is also sent to the intended addressee by means described in clauses (a), (b), or (c) within two (2) business days after such transmission. Either Party may change the place for the giving of notice to it by thirty (30) days prior written notice to the other Party as provided herein.

| If to District: | San Bernardino Valley Municipal Water District Attn: Adekunle Ojo 380 East Vanderbilt Way San Bernardino, CA 92408 Telephone: (909) 387-9223 E-Mail: <u>adekunleo@sbvmwd.com</u> |
|-------------------|---|
| If to Consultant: | Geoscience Attn: Johnson Yeh 160 Via Verde, Ste. 150 Claremont, CA 91773 Telephone: (909) 451-6642 E-Mail: jyeh@geoscience-water.com |

12.7 <u>Governing Law; Venue</u>. This Agreement shall be governed by and interpreted in accordance with the laws of the State of California, excluding any choice of law provision that would apply the laws of any other jurisdiction. The Superior Court of the State of California in and for San Bernardino County shall have exclusive jurisdiction to adjudicate any dispute arising out of or relating to this Agreement. Each Party hereby consents to the jurisdiction of such court and waives any right it may otherwise have to challenge the appropriateness of such forum, whether on the basis of the doctrine of forum *non conveniens* or otherwise.

12.8 <u>Waivers</u>. No waiver by any Party of any default, misrepresentation, or breach of warranty or covenant hereunder, whether intentional or not, shall be deemed to extend to any prior or subsequent default, misrepresentation, or breach of warranty or covenant hereunder or affect in any way any rights arising by virtue of any prior or subsequent occurrence.

12.9 <u>Amendment</u>. Except as expressly provided otherwise herein, this Agreement may not be modified, altered, or changed in any manner whatsoever except by a written instrument duly executed by authorized representatives of both Parties.

12.10 <u>Severability</u>. If any provision of this Agreement shall be deemed or held to be invalid or unenforceable for any reason, such provision shall be adjusted, if possible, rather than voided, so as to achieve the intent of the Parties to the fullest extent possible. In any event, such provision shall be severable from, and shall not be construed to have any effect on, the remaining provisions of this Agreement, which shall continue in full force and effect.

12.11 <u>Time of the Essence</u>. Time is of the essence in the performance of each and every provision or obligation of this Agreement as to which time is an element.

12.12 <u>Release of Information and Advertising</u>. Consultant shall not, without the prior written consent of District, make any news release or other public disclosure regarding this Agreement.

12.13 <u>Construction</u>. The Parties have participated jointly in the negotiation and drafting of this Agreement. In the event an ambiguity or question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by the Parties and no presumption or burden of proof shall arise favoring or disfavoring any Party by virtue of the authorship of any of the provisions of this Agreement. Any reference to any federal, state, local, or foreign statute or law shall be deemed also to refer to all rules and regulations promulgated thereunder, unless the context requires otherwise. The word "including" shall mean including without limitation.

12.14 <u>Attorneys' Fees</u>. If any legal action is necessary to enforce or interpret the terms of this Agreement, the prevailing Party shall be entitled to reasonable attorneys' fees, reasonable expert witness fees, costs, and necessary disbursements in addition to any other relief to which that Party may be entitled.

12.15 <u>Counterparts</u>. This Agreement may be executed in any number of counterparts, each of which shall be deemed an original and all of which when taken together shall constitute one and the same instrument. Signatures may be delivered electronically or by facsimile and shall be binding upon the Parties as if they were originals.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties hereby execute this Agreement as of the Effective Date.

DISTRICT:

SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

By: _____

Name: _____

Its: _____

CONSULTANT:

GEOSCIENCE SUPPORT SERVICES, INC.

By: _____

Name: ______

Its: _____

EXHIBIT "A"

[Consultant's Proposal]

GEOSCIENCE

January 31, 2022

Proposal for

Preparation of a Conjunctive Use Project Project Plan and Related Groundwater Modeling

Johnson Yeh, PhD, PG, CHG

Principal Groundwater Modeler

main office
160 Via Verde, Suite 150, San Dimas, CA 91773
main | 909.451.6650
jyeh@geoscience-water.com



Project Understanding *Meet CUP Guidelines*

San Gorgonio Pass Water Agency (Pass Agency) and the Yucaipa Valley Water District (Yucaipa), (collectively Project Proponents) are working with the San Bernardino Valley Municipal Water District (Valley District), a San Bernardino Basin Watermaster, to store up to 20,000 acre-feet each, or 40,000 acre-feet total, of imported water in the San Bernardino Basin as part of a Joint Water Supply Agreement for the Calimesa Area. To use the basin for conjunctive use, the Project Proponents require approval from the Western-San Bernardino Watermaster (Watermaster). The purpose of this project is to assist the Project Proponents to prepare and submit the Conjunctive Use Project (CUP) plan, per the CUP Guidelines developed by the Basin Technical Advisory Committee (BTAC), to the BTAC for consideration. The BTAC will then make its recommendation to the Watermaster. Per the CUP Guidelines, the CUP Plan will define the project, consider basin losses during high groundwater conditions, perform groundwater modeling and project analysis, determine and mitigate impacts and provide other pertinent information to assist the BTAC and the Watermaster to review and approve the proposal.

Project Approach

Proven approach

Geoscience has worked extensively in the San Bernardino Basin and Upper Santa Ana River Basin to develop advanced modeling tools, including the Integrated Santa Ana River (SAR) Model, to better understand the effects of artificial recharge projects on surface and groundwater systems. Geoscience has the experience and expertise in this basin to thoroughly and efficiently address all the key issues that may arise during preparation of the Conjunctive Use Plan.

Key issues to develop this Conjunctive Use Plan

include verifying that State Water Project water is stored efficiently and avoids losses to rejected recharge, evapotranspiration, and underflow outflow and storing water does not adversely impact the movement of existing contaminate plumes. We will work closely with Pass Agency, Yucaipa, and Valley District to prepare a description of the means and schedule of recharge and recovery and develop the assumptions for the model predictive scenarios. The Upper Santa Ana River Integrated Model will be used to develop the CUP Plan. We will work with our sub-consultant partner, Kennedy Jenks Consultants (Kennedy Jenks), to estimate and provide anticipated costs associated with the project, including capital costs for possible new facilities, operational costs, energy costs, and administrative and other costs. The following sections discuss our proposed scope of work and deliverables.

Task 1: Define the Project

Subtask 1.1 Prepare A Description of the Means of Recharge and Recovery We will work closely with the Project Proponents to prepare a project description of the means of recharge and recovery including any new required facilities. Geoscience has worked extensively in the San Bernardino Basin, and developed the previous Bunker Hill Conjunctive Use Plan and the Integrated SAR Model. We have carefully reviewed and complied existing geohydrologic data including the recharge capacity of existing spreading grounds, production capacity of the existing wells, and contaminant plumes (e.g., perchlorate and TCE) that may potentially impact recharge and extraction operations from the CUP. Our team will work closely with Pass Agency, Yucaipa and Valley District to prepare a thorough project plan based on our understanding of the existing geohydrologic conditions in the basin.

Subtask 1.2 Develop CUP Recharge and Extraction Schedules

To assess potential impacts on groundwater levels and water quality from the CUP, we will develop recharge and extraction schedules for project scenarios and compare them with the Baseline Scenario (i.e., No Project Scenario). We will then use the Integrated SAR Model to evaluate CUP project scenarios. The proposed project scenarios, including recharge and extraction schedules, will be based on recharge water availability and future planned water demands. As part of developing the Integrated SAR Model, Geoscience has already developed future hydrologic assumptions based on an analysis of historical hydrologic conditions in the basin. We will evaluate both "No Project" and "Project" conditions under average hydrologic conditions (including wet and dry climatic cycles). We will work closely with the Project Proponents to develop recharge and extraction schedules.

Subtask 1.3 Estimate CUP Cost 1.3.1 Cost Estimates without New Extraction Wells

We will prepare the capital and O&M costs (including energy costs) for the facilities proposed under Task 1.1. We will review asbuilt drawings and the current status of the recharge and recovery facilities. The costs will assume that the 20,000 AF of recharge for Pass Agency and Yucaipa (40,000 AF total) in the San Bernardino Basin is achieved through existing recharge basins and the recovery is through exchange(s).

1.3.2 (Optional) Cost Estimates for New Extraction Wells

Should one or more of the Project Proponents require new extraction wells, Geoscience will prepare locations and drilling cost estimates, and Kennedy Jenks will prepare the equipping and conveyance cost estimates. Estimates will be an American Society of Professional Estimators (AACC) level 5 estimate based on conceptual design data.

Task 2: Determine and Mitigate Impacts (Groundwater Modeling and Project Analysis)

Subtask 2.1 Develop Assumptions for

Baseline (No Project) and CUP Predictive Model Scenarios

Geoscience has already developed rigorous future scenario assumptions as part of previous development of the Integrated SAR Model. This will lower the cost and expedite scenario assumption development needed for this project. We will work closely with Project Proponents to develop the major assumptions for Baseline (No Project) predictive model scenarios including the hydrologic base period, groundwater pumping, surface water diversion, and groundwater replenishment.

CUP predictive model scenarios will be identical to the Baseline scenario, but with the additional CUP recharge and pumping developed for Subtask 1.2, as well as any mitigation measures, if necessary. The modeling analysis will include evaporation loss occurring in the spreading grounds, and a one-time, leave-behind for the benefit of the San Bernardino Basin (equal to 5% of the water stored) for agencies mostly, or completely, outside of Valley District's service area. In developing the budget for this work, we have assumed that four model scenarios will be required, including one Baseline scenario (No Project) and three CUP scenarios.

Subtask 2.2 Run and Analyze Predictive Model Scenarios

We will prepare model input data, run model scenarios, and analyze model results. Various modeling computer codes will be used for this study including MODFLOW-NWT, MODPATH and MT3D-USGS.

The MODFLOW Groundwater Flow Model of the Upper Santa Ana River Integrated Model will be used to evaluate evaporation loss, changes in groundwater levels, underflow outflow to the Rialto-Colton Basin from the San Bernardino Basin, groundwater storage for various project scenarios, and potential liquefaction.

MODPATH is a particle-tracking software that will develop flow path lines and travel times in the vicinity of artificial recharge areas and contaminant plumes in the San Bernadino Basin using the results of groundwater flow model simulations. The MT3D-USGS groundwater solute transport model of the Upper Santa Ana River Integrated Model will be required to simulate groundwater quality (e.g., TCE (Norton and Redlands-Crafton plumes) and perchlorate) in the San Bernardino Basin.

By running the MODFLOW, MODPATH, and MT3D- USGS components of the Upper Santa Ana River Integrated Model, we will determine the optimal location and amounts of recharge and recovery to confirm that the CUP will operate efficiently.

Task 3: Prepare the Conjunctive Use Project Plan

Subtask 3.1 Prepare a Draft Conjunctive Use Project Plan

We will prepare a draft Conjunctive Use Project Plan summarizing the work results from Tasks 1 and 2, as discussed above, for Project Proponent review. This draft CUP Plan will include information required per CUP Guidelines including project definition, potential groundwater impacts, and mitigation measures. We will also include model descriptions, assumptions, and results in the report.

Subtask 3.2 Prepare a Final Conjunctive Use Project Plan

A Final Conjunctive Use Project Plan will be prepared incorporating comments on the draft Conjunctive Use Project Plan.

Deliverables for Task 3:

- Draft Conjunctive Use Project Plan
- Final Conjunctive Use Project Plan

Task 4: Meetings and Project Management

Subtask 4.1 Prepare for and Attend Meetings We will prepare for and attend four meetings including:

Kickoff meeting to discuss the project goals

and objectives, scope of work, work product, and schedule.

- Status update meetings (assumes four meetings) to discuss project locations, recharge and extraction schedule, major assumptions for predictive model scenarios, and modeling results
- BTAC meetings (assumes two meetings) to provide overview modeling assumptions, modeling results, and Conjunctive Use Project Plan.

Subtask 4.2 Project Management

We will coordinate project activities throughout the project. Project management includes any additional hours and costs to cover tasks related to any unforeseen issues or requests that arise during the Project.

Organizational Chart

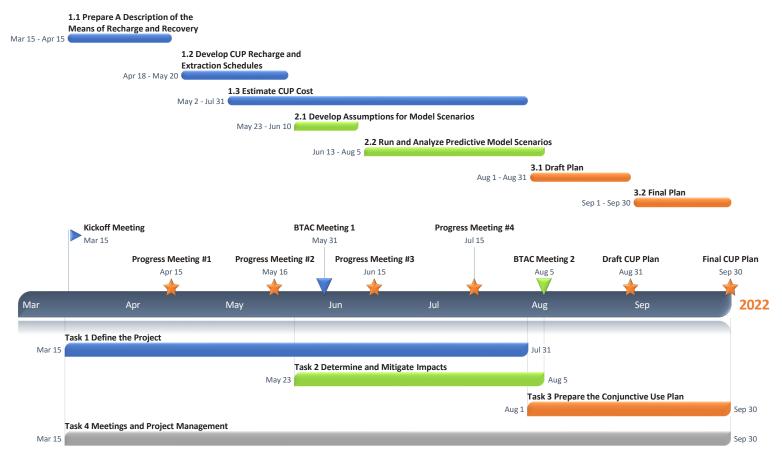
Experienced Staff



David Ferguson, PhD, PE - Recharge & Recovery Paul Chau, PE, CEM - Groundwater Recovery Connor Rutten, PE - Hydraulic Modeling Janet Hoffman, PE, CEM - Cost Estimator

Team contact information is provided in Appendix A

Project Schedule Expedite Plan Completion



Other Relevant Information

Proven Team and Performance

| Project Challenge | Approach to Meet Challenge | Benefit | Past Performance | | | | | |
|-----------------------------------|---|---|---|--|--|--|--|--|
| Comply with cooperative agreement | Same team that worked on the Bunker Hill Conjunctive Use Project Use existing and most up to date groundwater models | Expedite plan development Provide accurate and thorough data to inform decisions Comply wiht CUP Guidelines | Develop efficient recharge and extraction schedules without water quality impacts for the Bunker Hill CUP Developed and possess groundwater models used to develop plan in-house | | | | | |

Fee Schedule

| | | Sub-Consultant KJ | | | | | | | | | | | Totals | | | | | | | | | | |
|----------------------------------|---|-------------------------------|----------------------------|------------------------------|-----------------------------|---|-------------------------------|--------------------------------|-------------------|---------------------|---|--------------------|--------------------|--------------------|----------------------------|----------------------------|--------------|--------------------------------|-------------|---------------|----------------------|---------------------------------|------------|
| Task Description Hourly Rate: | | Principal Modeler \$289 | Senior Modoler \$264 | Senior Geohydro. \$235 | Project Modeler \$244 | Senior Associate Modeler \$210 | Associate Modeler \$196 | GSI/CAD Specialist \$155 | Clerical \$107 | GEOSCIENCE Labor | GEOSCIENCE Reimbursable GEOSCIENCE Expenses Sub-Total | Eng-Sci-9 \$310 | Eng-Sci-6 \$245 | Eng-Sci-3 \$190 | Project Admin. \$130 | Admin. Assist. \$110 | KJ Labor | KJ Reimbursable Expenses | KJ Sub-Tota | al GEOSCIENCE | Sub-Consultant KJ | Sub-Consultant Markup 10% | Total Cost |
| | | <i>↓_00</i> | <i>\</i> | ÷100 | <i> </i> | , | ŶĨĴŨ | <i></i> | | | | | <u>+</u> | Ų | | | | | | | | 10% | |
| | Task 1 - Define the Project | | | | T | | 1 | | | -11 | | | Τ | | | | П | | | | | | 0 |
| 1.1 | Prepare A Description of the Means of Recharge and Recovery | 2 | 8 | | | 20 | | | | \$ 6,890.00 | \$ 6,890.00 | | | | | | \$- | | \$ | - \$ 6,890.0 |)\$- | \$- | \$ 6,890 |
| 1.2 | Develop CUP Recharge and Extraction Schedules | 2 | 8 | | | 20 | | | | \$ 6,890.00 | \$ 6,890.00 | | | | | | \$- | | \$ | - \$ 6,890.0 | \$- | \$- | \$ 6,890 |
| 1.3 | Estimate CUP Cost | | | | | | | | | | | | | | | | | | | | | | |
| 1.3.1 | Cost Estimates without New Extraction Wells | | | | | | | | | \$- | \$ - | 8 | 26 | 14 | | 2 | \$ 11,730.00 | | \$ 11,730.0 | 0 | \$ 11,730.00 | \$ 1,173.00 | \$ 12,903 |
| 1.3.2 (Optiona | Cost Estimates for New Extraction Wells | | | 52 | | | | | | \$ 12,220.00 | \$ 12,220.00 | 12 | 36 | 16 | 2 | 2 | \$ 16,060.00 | | \$ 16,060.0 | 0 \$ 12,220.0 | \$ 16,060.00 | \$ 1,606.00 | \$ 29,886 |
| | Subtotal wiouth Optional Tasks (Task 1.1, 1.2 and 1.3.1): | 4 | 16 | 0 | . 0 | 40 | . 0 | 0 | 0 | \$ 13,780 | \$ - \$ 13,780 | 8 | 26 | 14 | 0 | 2 | \$ 11,730 | \$- | \$ 11,73 | 0 \$ 13,78 | \$ 11,730 | \$ 1,173 | \$ 26,683 |
| Sub | total with Optional Tasks (Task 1.1, 1.2, 1.3.1 and 1.3.2): | 4 | 16 | 52 | 0 | 40 | 0 | 0 | 0 | \$ 26,000 | \$ - \$ 26,000 | \$ 20 | \$ 62 | \$ 30 | \$ 2 | \$ 4 | \$ 27,790 | \$ - | \$ 27,790 | 0 \$ 26,000 | \$ 27,790 | \$ 2,779 | \$ 56,569 |
| | Task 2 - Determine and Mitigate Impacts (Groundwate | r Modeling an | id Project Ana | alysis) | | | | | | -0 | | | 1 | 1 | р. | - <u>P</u> | 4 | Ψ | | | | | 1 |
| 2.1 | Develop Assumptions for Baseline (No Project) and CUP Predictive Model Scenarios (Assuming 3 Project Scenarios) | 4 | 24 | | | 40 | 16 | | | \$ 19,028.00 | \$ 19,028.00 | | | | | | \$ - | | \$ | - \$ 19,028.0 |) \$ - | \$- | \$ 19,028 |
| 2.2 | Run and Analyze Predictive Model Scenarios (Assuming 3 Project Scenarios) | 8 | 64 | | | 64 | 80 | | | \$ 48,328.00 | \$ 48,328.00 | | | | | | \$ - | | \$ | - \$ 48,328.0 |)\$- | \$- | \$ 48,328 |
| | Subtotal: | 12 | 88 | 0 | 0 | 104 | 96 | 0 | 0 | \$ 67,356 | \$ - \$ 67,356 | 0 | 0 | 0 | 0 | 0 | \$- | \$- | \$ | - \$ 67,356 | \$- | \$ - | \$ 67,356 |
| | Task 3 - Prepare the Conjunctive Use Project Plan | | | | | | | | | <u></u> | | | | | | | - <u>1</u> | | | | | | |
| 3.1 | Prepare a Draft Conjunctive Use Plan | 4 | 24 | | | 24 | | 24 | | \$ 16,252.00 | \$ 16,252.00 | | | | | | \$ - | | \$ | - \$ 16,252.0 |)\$- | \$- | \$ 16,252 |
| 3.2 | Prepare a Final Conjunctive Use Plan | 2 | 8 | | | 12 | | 8 | | \$ 6,450.00 | \$ 6,450.00 | | | | | | \$- | | \$ | - \$ 6,450.0 |) \$ - | \$- | \$ 6,450 |
| | Subtotal: | 6 | 32 | 0 | 0 | 36 | 0 | 32 | 0 | \$ 22,702 | \$ - \$ 22,702 | 0 | 0 | 0 | 0 | 0 | \$- | \$- | \$ | - \$ 22,702 | \$ - | \$ - | \$ 22,702 |
| | Task 4 - Meetings and Project Management | | | | | | | | | -0 | | | | | | | 4 | | | | | | 1 |
| 4.1 | Prepare for and Attend Meetings (Assuming 1 Kickoff meeting, 4 project team meetings, and 2 BTAC meetings) | 8 | 40 | | | 8 | | | | \$ 14,552.00 | \$ 14,552.00 | 12 | 4 | | 2 | | \$ 4,960.00 | \$ 252.00 | \$ 5,212.0 | 0 \$ 14,552.0 |)\$ 5,212.00 | \$ 521.20 | \$ 20,285 |
| 4.2 | Project Management | 8 | 24 | | | 12 | | | 8 | \$ 12,024.00 | \$ 12,024.00 | | | | | | \$ - | | \$ | - \$ 12,024.0 |)\$- | \$- | \$ 12,024 |
| | Subtotal: | 16 | 64 | 0 | 0 | 20 | 0 | 0 | 8 | \$ 26,576 | \$ - \$ 26,576 | 12 | 4 | 0 | 2 | 0 | \$ 4,960 | \$ 252 | \$ 5,212 | 2 \$ 26,576 | \$ 5,212 | \$ 521 | \$ 32,309 |
| | TOTAL HOURS AND COST without Optional Task 1.3.2: | 38 | 200 | 0 | 0 | 200 | 96 | 32 | 8 | \$ 130,414 | \$ - \$ 130,414 | 20 | 30 | 14 | 2 | 2 | \$ 16,690 | \$ 252 | \$ 16,942 | 2 \$ 130,414 | \$ 16,942 | \$ 1,694 | \$ 149,050 |
| | TOTAL HOURS AND COST with Optional Task 1.3.2: | 38 | 200 | 52 | 0 | 200 | 96 | 32 | 8 | \$ 142,634 | \$ - \$ 142,634 | 32 | 66 | 30 | 4 | 4 | \$ 32,750 | \$ 252 | \$ 33,002 | 2 \$ 142,634 | \$ 33,002 | \$ 3,300 | \$ 178,936 |

Notes:

1 Reimbursable Expenses Include Subconsultant Fees, Mileage, and report reproduction costs.

GEOSCIENCE is aware of the requirements of California Labor Code Sections 1720 et seq. and 1770 et seq., which require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. The work GEOSCIENCE performs does not fall under prevailing wage rate categories. 2 Geoscience's Schedule and Consultants Fee included with this bid are valid for a period of 6 months assuming the starting date shown in the baseline Schedule.

3 Geoscience will manage work hours between employee classifications or utilize other employee classifications provided that the total project fee is not exceeded without prior approval from the Owner. Geoscience will first request approval from the Owner before work hours are managed between Tasks as listed in the Consultants Fee Schedule.

4 Services not Specifically Identified in the Scope of Work are not included in this Agreement for Professional Services.

5 One (1) round of comments and resulting deliverable revision is budgeted for the Draft Conjunctive Use Project Plan (Task 4.1). Reasonable efforts within this budget will be made to address responsive comments. If comments or suggested revisions require additional effort outside of the proposed scope of work, then the revisions will only be performed upon consultation with the Owner and through a contract modification. The Final/100% Document Review will not incorporate any new comments.

6 Budget for Task 2.0 is an allowance only and represents a credible scope and budget based on the known information and Consultant's experience with similar projects. Effort for these tasks is limited to the budget identified in the Consultant Fee Estimate. Additional effort required for model scenario runs that is a result of change in initial scenario assumptions, or other unforeseen conditions and/or model assumption changes, will only be provided as authorized by the Client through a contract modification.

7 Consultant will use existing, owner-furnished model(s) as-is. Consultant assumes that the existing model has clear documentation of pertinent files required for running the model and that model files will be provided in an editable electronic format.

8 Groundwater model input files and model output files that were used to generate the deliverables provided in this scope of services will be made available to the client in .txt file format if requested. Specialized spreadsheets, software, or other electronic tools used to expedite the processing of model input and output files are the intellectual property of Geoscience Support Services Inc. and will not be provided.

gssiwater.com



Appendix A Resumes

Resumes are provided on the following pages for all staff assigned to the project including:

Geoscience

- Johnson Yeh
- David Barnes
- Chris Coppinger
- Leo Liu
- Si Si

Kennedy Jenks

- Harold Glaser
- David Ferguson
- Paul Chau
- Connor Rutten
- Janet Hoffman

All team members can be reached at:

Geoscience Support Services, Inc. 160 Via Verde, Suite 150 San Dimas, CA 91773 p. (909) 451-6650 | f. (909) 451-6638

Kennedy Jenks 300 N. Lake Avenue, Suite 1020 Pasadena, CA 91101 p. (626) 568-4302