

**COST SHARING AGREEMENT FOR THE RIVERSIDE HABITAT, PARKS, AND
WATER PROJECT – PLANNING, ENVIRONMENTAL, AND DESIGN
BETWEEN
SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
AND CITY OF RIVERSIDE**

1. **PARTIES**

This Cost Sharing Agreement for the Riverside Habitat, Parks, and Water Project (“RHPWP”) (“Agreement”) is made and entered into this _____ day of _____, 2023, by and between the City of Riverside, a California charter city and municipal corporation (“Riverside”) and San Bernardino Valley Municipal Water District (“Valley District”), a municipal water district, sometimes also referred to herein jointly as “Parties” or individually as “Party.”

2. **RECITALS**

2.1 The Parties produce and serve water in areas including the Upper Santa Ana River Basin (the "Upper SAR Basin"). The Parties have undertaken and will undertake various projects regarding production, service, and conservation of water in the Upper SAR Basin, which projects may have environmental impacts to the Santa Ana Sucker (*Catostomus santanae*) and other species or habitats.

2.2 The Parties, together with nine other local public agencies in the Upper Santa Ana Basin, are working cooperatively with the relevant state and federal resource agencies to develop the Upper Santa Ana River Habitat Conservation Plan ("HCP") and other associated environmental permits to mitigate impacts to the Santa Ana Sucker and other species, and related aquatic, riparian and upland habitat. Tentatively, the entity that will implement and manage the Upper Santa Ana River Basin HCP will be called the Upper Santa Ana River Sustainable Resources Alliance (“River Alliance”).

2.3 While environmental review and finalization of the HCP progresses, the Parties desire to move forward on certain river and tributary restoration projects to facilitate the establishment, restoration and enhancement of environmental values on the Upper SAR Basin, its tributaries and associated riparian and upland habitat (the “Environmental Values”). These projects (collectively, as described further below, the “Restoration Projects”) will serve to mitigate the effects of activities proposed to be covered by the HCP, but have independent utility and will be of value should the HCP not be finalized and adopted.

2.4 The Parties entered into a Memorandum of Understanding in August 2019 with the intent to work cooperatively to evaluate components of the RHPWP and the Restoration Projects.

2.5 Restoration Projects. Valley District, as lead agency and on behalf of the River Alliance, is pursuing restoration efforts at Hidden Valley Creek, Hole Creek, Anza Creek, and Old Ranch Creek, as described in the Upper Santa Ana River Tributaries Restoration Project and Mitigation Reserve Program Final Environmental Impact Report that was approved by Valley

District's Board on November 19, 2019. These projects are referred herein as the "Restoration Projects."

2.6 Mitigation Project. Valley District has independently committed to providing improvements to the existing Hidden Valley Ponds ("Mitigation Project"), within the Hidden Valley Wildlife Area, for mitigation purposes to offset impacts from proposed water recharge maintenance activities at the Waterman Basins, located in the City of San Bernardino, and to the Cactus Basins, located in the City of Rialto. The Mitigation Project is considered as a separate project from the Restoration Projects.

2.7 Riverside owns and operates its Riverside Regional Water Quality Control Plant, a 46-million gallons per day ("MGD") sewer treatment plant, which discharges high-quality recycled water into the Santa Ana River (as defined below, the "RWQCP").

2.8 The RHPWP is an integrated regional recycled water pipeline that is proposed by the parties to deliver tertiary treated recycled water originating from the RWQCP to the Restoration Projects located at select tributaries along the Santa Ana River within the City of Riverside, as well as to landscape irrigation customers located within the City of Riverside. Exhibit 1, which is attached hereto and incorporated herein by this reference, depicts the RHPWP extent as well as the planned delivery locations to the River Alliance Restoration Projects.

2.8.1 The RHPWP has been divided into a West Branch Project and an East Branch Project. The West Branch Project originates at the RWQCP and traverses west along Jurupa Avenue to deliver recycled water to City of Riverside landscape irrigation customers as well as to the River Alliance Restoration Project sites at Hole Creek, and Hidden Valley Creek, and the Valley District Mitigation Project at Hidden Valley Wildlife Area. Based on the preliminary design report completed by the City of Riverside, the West Branch Project is anticipated to cost approximately \$25,500,000. The costs will be divided proportionally based on the facilities used to convey water to each site.

2.8.2 The East Branch Project would originate at the RWQCP and traverse east along Jurupa Avenue to deliver recycled water to City of Riverside landscape irrigation customers as well as to the River Alliance Restoration Project sites at Anza Creek and Old Ranch Creek. Recycled water will also be delivered to Tequesquite Arroyo, which is a separate project from the Restoration Projects ("Tequesquite Project") but was funded previously by Valley District and Western Municipal Water District for habitat benefits. The Tequesquite Project was temporarily improved under a separate mitigation effort related to the Santa Ana River Water Right permits held by Valley District and Western Municipal Water District. However, the site lacks a permanent supply of water and funding for long-term management, thus reducing its overall habitat benefits and the long-term sustainability of quality habitat for aquatic species. Delivering recycled water to the Tequesquite Project would add value to the overall restoration efforts of the River Alliance by improving the overall baseline condition for species and habitats that are integral to the conservation strategy associated with the HCP. The City of Riverside is preparing a preliminary design report for the East Branch Project.

2.8.3 Due to Valley District's desire to pursue restoration efforts at the Hidden Valley Creek Restoration Project site first, the Parties have agreed to move forward with the design efforts associated with the West Branch before completing the design of the East Branch.

2.9 The City of Riverside has an agreement with Western Municipal Water District dated November 20, 1968, obligating Riverside to discharge 15,250 acre-feet of effluent annually in the vicinity of Riverside Narrows. This discharge obligation supports the physical solution in the case of Orange County Water District v. City of Chino, et al., Orange County Superior Court Case No. 117628, also known as the Prado Settlement. If Riverside delivers more effluent than is required under this agreement, Riverside may in any given year reduce its adjusted contribution by the amount of such excess deliveries, but in no event shall Riverside's adjusted contribution be less than 13,420 acre-feet annually ("afa"). However, should the minimum obligation under the Prado Settlement be lowered to 34,000 acre-feet, then the amount of 13,420 shall be reduced to 12,420 afa.

2.10 In 2006, Riverside filed Wastewater Change Petition WW-0045 with the State Water Resources Control Board (the "Board") seeking to change the place of use and purpose of use of a portion of the effluent discharged from the RWQCP. Initially, Riverside sought to remove all flows above the 15,250 acre-feet of effluent volume committed to Western Municipal Water District. Instead, Riverside committed to discharging a minimum of 25,000 afa. The flows in excess of the 15,250 acre-feet of effluent were intended to offset any impacts to Santa Ana sucker potentially caused from removal of the discharge. The Board approved Wastewater Change Petition WW-0045 in 2008, with the obligation that Riverside would discharge a minimum of 25,000 afa.

2.10.1 After the Board's 2008 approval of Wastewater Change Petition WW-0045, incoming flows to the RWQCP began diminishing because of economic changes and a reduction in water use resulting from state-wide drought restrictions. To date, Riverside finds itself with minimal flows in excess of its 25,000 afa commitment, and desires to revise this commitment to enable the efficient use of recycled water for municipal uses as well as to support the environment and species residing within the river ecosystem by focusing discharge at strategic locations higher in the watershed.

2.11 Riverside plans to submit a wastewater change petition pursuant to Water Code section 1211. The planned revision proposes to continue discharging effluent as described in its 1968 discharge agreement with Western. However, the value of these discharges would be maximized by delivering the effluent to Hole Creek, and Hidden Valley Creek, and Hidden Valley Wetlands, thus improving habitat while also meeting the discharge agreement with Western. Riverside also proposes to enter into an agreement with Valley District on behalf of the River Alliance, to repurpose approximately 5,000 afa that was originally committed to the Santa Ana River as part of the 25,000 afa total obligated in the WW-0045 agreement with the State Board. The recycled water would be carried via pipeline and redistributed into newly restored tributaries which will convey the water to the Santa Ana River while also creating and sustaining habitat. The tributaries are named in Section 2.8.2 describing the East Branch. Riverside will be submitting a wastewater change petition prior to constructing the RHPWP and will not begin construction until the wastewater change petition is approved. Riverside assumes that the recycled water delivered to the Hidden Valley Wildlife area following approval of the new wastewater water change petition

will count towards meeting its 1968 discharge commitment. However, should these flows be identified at a later time to not count towards this discharge commitment, then Riverside would explore committing a portion of its available recycled water derived from the wastewater change petition through an exchange agreement with Valley District.

2.12 The Parties plan to progress on the RHPWP by evaluating the project under California Environmental Quality Act guidelines and by completing engineering design of the West Branch Project by entering into this cost sharing agreement. The preliminary design report for the West Branch of the RHPWP evaluated the project's capital and operations and maintenance components to identify each partner's proportional share of the project, which was used to determine the financial contributions within this Agreement.

2.13 The Parties anticipate future agreements will be prepared and considered related to design, construction, operation, maintenance, and water supply for the RHPWP.

3. AGREEMENT

In consideration of the foregoing recitals that are incorporated herein by this reference and the mutual terms and conditions herein, the Parties agree as follows:

3.1 Term. This Agreement shall be effective on the date of the last signature to this agreement, and shall remain in effect until June 30, 2028, unless terminated earlier as provided herein. The term of the Agreement may be extended until June 30, 2033, upon mutual agreement of the Parties. In the event of a material breach of this Agreement by any Party, this Agreement may be terminated upon a sixty (60) day written notice given by a non-breaching Party to the breaching Party. The sixty-day notice period shall be used by the Parties in an attempt to negotiate resolution of disputes and remedy any breach. In the event of termination or expiration of this Agreement, the parties shall continue to pay invoices for any approved work up to the termination or expiration date, which has not yet been completed.

3.2 Contract Administration. Valley District shall enter into a Professional Services Agreement ("PSA") with a consultant for the environmental services related to compliance with the California Environmental Quality Act ("CEQA"), National Environmental Policy Act ("NEPA") and other required environmental permits ("Environmental Compliance PSA"). Valley District may enter into an optional PSA with Geoscience Support Services should it be determined that the Wasteload Allocation Model (WLAM) that was developed for the SAWPA Basin Monitoring Program Task Force be needed. This PSA will be referred to as the Optional WLAM PSA. Valley District will serve as contract administrator for these PSAs. Riverside, through its Public Utilities Department, shall retain its in-house Water Engineering Design team for the design services for the West Branch Project, and shall serve as contract administrator for design services.

3.2.1 Services Agreement. The PSA pertaining to this cost sharing are described as follows and shall all be incorporated herein by this reference and shall be part of this Agreement.

(a) The Environmental Compliance cost proposal is attached hereto as Exhibit 2. Under the terms of the PSA, fees shall not exceed \$287,025. If the PSA exceeds the costs stated in this section, the Parties will meet and confer on an agreeable path forward.

(b) The engineering design estimate is attached hereto as Exhibit 3. Under the terms of this agreement, Riverside's fees for the design services shall not exceed \$1,700,000. In any event, if the final cost exceeds \$1,700,000, the Parties will meet and confer to discuss an agreeable path forward.

(c) The Optional WLAM cost proposal is attached hereto as Exhibit 4. Under the terms of the PSA, fees shall not exceed \$68,862. If the PSA exceeds the costs stated in this section, the Parties will meet and confer on an agreeable path forward.

3.2.2 Project Parties Participation and Invoices. Riverside and Valley District agree to participate in and each fund 50% of the proposed Services as follows:

Riverside: \$1,130,750

Valley District: \$1,130,750

4. **Each party shall track its respective project costs, which will be jointly compared and trued up every three months and at the end of each fiscal year. When necessary, invoices may be served on either party, in accordance with section 4.6 herein, no more than quarterly and shall be due and payable within 60 days' of receipt. GENERAL PROVISIONS**

4.1 This Agreement and any dispute hereunder shall be governed by and construed in accordance with the internal laws, other than the choice of laws, of the State of California.

4.2 No failure or delay in exercising any right, power or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any right, power or privilege hereunder.

4.3 This Agreement shall not be construed to amend or modify any other agreement between the Parties, which shall remain in all respects in full force and effect. This Agreement represents the entire agreement of the Parties in connection with the subject matter hereof and may be modified only in writing agreed to by all Parties. Further, this Agreement may be executed in counterparts.

4.4 The signatories hereto represent and warrant that they have been duly authorized to enter into this Agreement by the Party on whose behalf it is indicated that the person is signing and, by such signature, to bind such Party to the Agreement.

4.5 Any action at law or in equity brought by any of the Parties hereto for the purpose of enforcing a right or rights provided for by this Agreement shall be tried in a court of competent jurisdiction in the County of Riverside, State of California, and the Parties hereby waive all provisions of law providing for a change of venue in such proceedings to any other county.

4.6 Any notice required to be given hereunder shall be in writing and shall be personally served or given by mail. Any notice given by mail shall be deemed given when

deposited in the United States Mail, certified and postage prepaid, addressed to the Party to be served as follows:

To City of Riverside:

City of Riverside
Public Utilities Department
3750 University Avenue, 5th floor
Riverside, CA 92501
Attn: General Manager

To Valley District:

San Bernardino Valley Municipal
Water District
380 East Vanderbilt Way
San Bernardino, CA 92408
Attn: CEO/General Manager

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

4.8 No action or failure to act by any Party shall constitute a waiver of any right or duty afforded such Party under this Agreement, nor shall any such action or failure to act constitute approval of or acquiescence in any breach thereunder, except as may be specifically provided in this Agreement or as may be otherwise agreed in writing.

4.9 This Agreement constitutes the final, complete, and exclusive statement of the terms of the agreement between the parties pertaining to the subject matter of this Agreement and supersedes all prior and contemporaneous understandings or agreements of the Parties. No Party has been induced to enter into this Agreement by, and no Party is relying on, any representation or warranty outside those expressly set forth in this Agreement.

4.10 Each provision, term, condition, covenant and/or restriction, in whole and in part, of this Agreement shall be considered severable. In the event any provision, term, condition, covenant and/or restriction, in whole and/or in part, of this Agreement is declared invalid, unconstitutional, or void for any reason, such provision or part thereof shall be severed from this Agreement and shall not affect any other provision, term, condition, covenant and/or restriction of this Agreement, and the remainder of the Agreement shall continue in full force and effect.

4.11 The Parties acknowledge and agree that this Agreement is the product of mutual arms-length negotiations and accordingly, the rule of construction, which provides that the ambiguities in a document shall be construed against the drafter of that document, shall have no application to the interpretation and enforcement of this Agreement.

4.12 Titles and captions are for convenience of reference only and do not define, describe or limit the scope of the intent of the Agreement or any of its terms. Reference to section numbers are to sections in the Agreement unless expressly stated otherwise.

4.13 This Agreement shall be governed by and construed in accordance with the laws of the State of California in effect at the time of the execution of this Agreement.

4.14. The following exhibits attached hereto are incorporated herein to this Agreement by this reference:

- Exhibit "1" - Riverside Habitat, Parks, and Water Project Map
- Exhibit "2" - Environmental Compliance Cost Proposal
- Exhibit "3" - Engineering Design Estimate
- Exhibit "4" - Optional WLAM Cost Proposal

5. **SIGNATURE CLAUSE**

The Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives.

CITY OF RIVERSIDE, a California
charter city and municipal corporation

SAN BERNARDINO VALLEY MUNICIPAL
WATER DISTRICT, a California municipal
water district

By: _____
City Manager

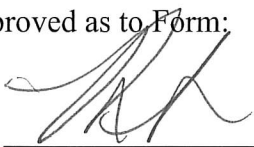
By: _____
Heather Dyer
CEO/General Manager

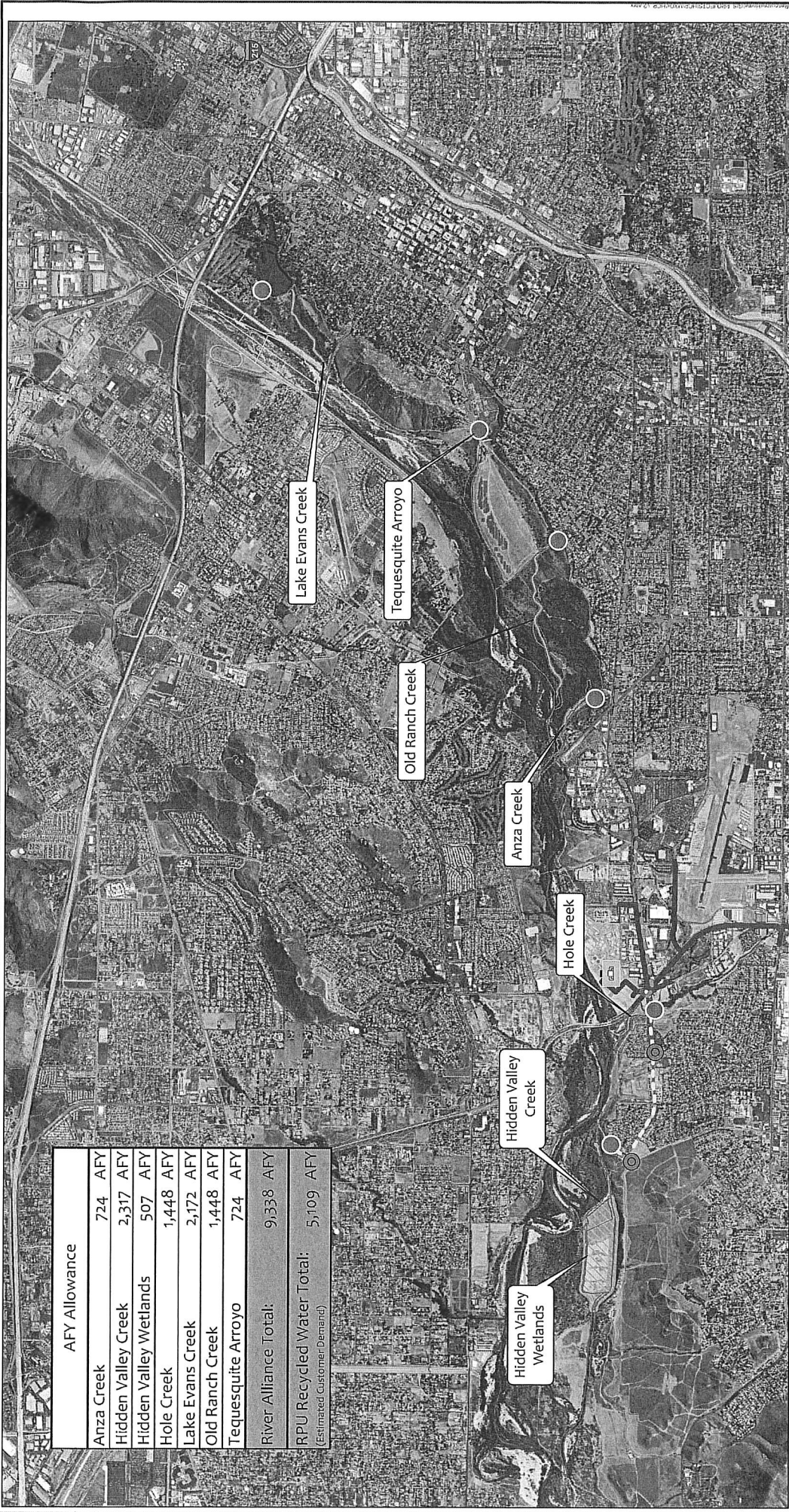
Attest: _____
City Clerk

Certified as to Availability of Funds:

By:  _____
Chief Financial Officer

Approved as to Form:

By:  _____
Deputy City Attorney



AFY Allowance	
Anza Creek	724 AFY
Hidden Valley Creek	2,317 AFY
Hidden Valley Wetlands	507 AFY
Hole Creek	1,448 AFY
Lake Evans Creek	2,172 AFY
Old Ranch Creek	1,448 AFY
Tequesquite Arroyo	724 AFY
River Alliance Total:	9,338 AFY
RPU Recycled Water Total: (Estimated Customer Demand)	5,109 AFY

Last Updated: 12/9/2021

 1 inch = 0.6 miles

 0 0.25 0.5 1 Miles

High Resolution
 60cm Imagery
High Resolution
 30cm Imagery
 Citations
 9.6m Resolution
 Metadata

Restoration
 Riverside Regional
 Water Quality
 Control Plant
 World Imagery
 Low Resolution
 15m Imagery

Existing Common
 Pipeline
 Creek
 Hidden Valley
 Wetlands
 HCP Sites
 Mitigation

Existing RW Pump
 Station
 River Alliance
 Proposed
 Discharge Point
 RPU Proposed
 Retail RW
 Customer

Proposed West
 Branch Extension
 RPU Only Line
Proposed East
 Branch Extension
Existing Line
 RW Pipeline

Riverside Habitat Parks and Water Project

Exhibit 1 Project Extent

WATER | ENERGY | LIFE

 CITY OF RIVERSIDE

 PUBLIC UTILITIES

Exhibit 2

Fee Schedule

Table 2: Cost Proposal
ESA Labor Detail and Expense Summary

Task #	Task Name/Description	2021 Employee Billing Rates										Subtotal	Project Technician I	Project Technician II	Project Technician III	Subtotal	Total Hours	Labor Price		
		Senior Director I	Director III	Director II	Director I	Managing Associate II	Senior Associate II	Associate III	Associate II	Associate I	Subtotal									
		\$ 275	\$ 260	\$ 245	\$ 225	\$ 205	\$ 170	\$ 145	\$ 135	\$ 115										
	Strauss																			
	Barnes																			
	Swetson																			
	Mulder																			
	Sako																			
	Burns																			
	Lau																			
	Smith																			
	Lau																			
	Director III																			
	Director II																			
	Director I																			
	Managing Associate II																			
	Senior Associate II																			
	Associate III																			
	Associate II																			
	Associate I																			
	Subtotal																			
	Subtotal																			
	Project Technician I																			
	Project Technician II																			
	Project Technician III																			
	Subtotal																			
	Total Hours	80	75	65	55	265	80	515	72	195	140	16	92	24	132	1,572				
	Total Labor Costs	\$ 22,000	\$ 19,750	\$ 16,170	\$ 13,050	\$ 60,680	\$ 13,500	\$ 74,820	\$ 9,720	\$ 23,540	\$ 23,540	\$ 2,080	\$ 10,120	\$ 2,160	\$ 14,360	\$ 285,700				
	Percent of Effort - Labor Hours Only	5.1%	4.8%	4.2%	3.7%	18.5%	5.1%	32.8%	4.6%	12.5%	12.5%	1.0%	5.9%	1.6%	8.4%	100.0%				
	Percent of Effort - Total Project Cost	7.9%	7.1%	5.8%	4.7%	21.8%	4.9%	26.9%	3.5%	8.1%	8.1%	0.7%	3.8%	0.6%	2.4%	95.7%				
	ES&S Labor Cost															\$ 285,700				
	Labor Cost Communication Fee															\$ 8,001				
	ESA Non-Labor Expenses																			
	Reimbursable Expenses																			
	ESA Equipment Usage																			
	Subtotal ESA Non-Labor Expenses															\$ 4,083				
	PROJECT TOTAL															\$ 278,784				

Attachment A
Cost Proposal: ESA Non-Labor Expenses Summary

Reimbursable Expenses	
Project Supplies	\$ -
Printing/Reproduction	\$ -
Document and Map Reproductions (CD + Digital Photo)	\$ -
Postage and Deliveries	\$ -
Mileage	\$ 750
Vehicle Rental	\$ -
Lodging	\$ -
Airfare	\$ -
Other Travel Related	\$ -
SCIC	\$ 2,200
Paleo	\$ 600
-	\$ -
Subtotal Reimbursable Expenses	\$ 3,550
15% Fee on Reimbursable Expenses	\$ 533
Total Reimbursable Expenses	\$ 4,083
TOTAL NON-LABOR EXPENSES	\$ 4,083

Exhibit 3: RPU Design Services for Riverside Habitat Parks and Water Project – West Branch

Description	Common Facilities	River Alliance Facilities	RPU Facilities	Totals
Construction	\$8,353,250	\$4,500,776	\$160,600	
Engineering - Design (10%)	\$835,325	\$450,078	\$16,060	\$1,301,463
Engineering - CM and Inspection (10%)	\$835,325	\$450,078	\$16,060	\$1,301,463
EIR and Focused Studies	\$700,000	-	-	
Existing 16-inch Pipeline	\$519,273	-	-	
RWQCP Existing Capital Improvements	\$3,750,000	-	-	
Subtotal	\$14,993,173	\$5,400,931	\$192,720	\$20,586,824
Contingency Construction (30%)	\$2,505,975	\$1,350,233	\$48,180	
Contingency Engineering - Design (30%)	\$250,598	\$135,023	\$4,818	\$390,439
Contingency Engineering - CM and Inspection (30%)	\$250,598	\$135,023	\$4,818	\$390,439
Contingency EIR and Focused Studies (30%)	\$210,000	-	-	
Subtotal Contingency	\$3,217,170	\$1,620,279	\$57,816	\$4,895,265
Total Capital Cost	\$18,210,343	\$7,021,211	\$250,536	\$25,482,090
Total Engineering - Design Plus Contingency (rounded)	\$1,085,923	\$585,101	\$20,878	\$1,700,000

Exhibit 4

GEOSCIENCE

The First Name in Groundwater

October 31, 2022

Mr. Chris Jones
Preserve System Program Manager
San Bernardino Valley Municipal Water District
380 East Vanderbilt Way
San Bernardino, CA 92408-3593

Re: Scope of Work and Cost Estimate to Provide Modeling Services for the Santa Ana River Sustainable Parks and Tributaries Water Reuse Project

Dear Chris:

Per your 7-Oct-22 email request, Geoscience Support Services, Inc. (Geoscience) has prepared this scope of work and cost proposal to provide modeling services for San Bernardino Valley Municipal Water District (Valley District), Riverside Public Utilities (RPU), and Environmental Science Associates (ESA) to support the Santa Ana River Sustainable Parks and Tributaries Water Reuse Project. This project will provide a portion of treated wastewater from the City of Riverside's Water Quality Control Plant (RWQCP) to Riverside streams (habitat), parks, and other recreation areas. Since this project will involve the surface discharge of treated wastewater, a National Pollutant Discharge Elimination System (NPDES) permit will be required. The project was modeled as part of the analysis for the Upper Santa Ana River Habitat Conservation Plan (HCP), Integrated Santa Ana River Model (Integrated Model), and the Santa Ana River Basin Monitoring Program Task Force Waste Load Allocation Model (WLAM) update, but changes in proposed project discharge locations and volumes have occurred after these initial modeling efforts. Therefore, updated model runs may be necessary to demonstrate that the proposed project will not degrade receiving waters. Such analysis would support the approval of the Environmental Impact Report (EIR), approval of the 1211 Wastewater Change of Use Petition, and future NPDES permitting from the Regional Board, while staying consistent with the Upper Santa Ana River HCP.

The following sections discuss the proposed scope of work, schedule, and cost estimate.

Scope of Work

For the purpose of this project, the following tasks are proposed.

PO Box 220 Claremont, CA 91711
t. 909.451.6650
f. 909.451.6638
www.gssiwater.com

- Task 1 – Identify a Path Forward that Updates the Prior Modeling Work to Reflect the Current Project Description
- Task 2 – Run Predictive Model Runs Utilizing the WLAM and the Integrated Model
- Task 3 – Prepare Draft and Final Technical Memorandum
- Task 4 – Project Management and Meeting Attendance

Task 1: Identify a Path Forward that Updates the Prior Modeling Work to Reflect the Current Project Description

Geoscience will review the previous WLAM and Integrated Model reports and evaluate assumptions from prior model runs. These modeling reports include:

- Santa Ana River Waste Load Allocation Model Update - Summary Report, Dated June 19, 2020
- Santa Ana River Waste Load Allocation Model Update - Supplemental Report, Dated September 21, 2021
- Upper Santa Ana River Integrated Model - Technical Memorandum No. 4: Major Assumptions of Predictive Scenarios, Dated February 8, 2019
- Upper Santa Ana River Integrated Model – Summary Report, Dated April 29, 2020

Specifically, Geoscience will review the prior modeling assumptions for WLAM Scenarios C, E, and F, and Integrated Model Scenario 2, which included simulation of the Sustainable Parks and Tributaries Water Reuse Project. After reviewing the prior model runs, Geoscience will work with Valley District, RPU, and ESA to revise scenario assumptions to reflect the most current project descriptions.

Once the revised assumptions are developed and confirmed, Geoscience will re-run the WLAM and the Integrated Model to update modeling results, as described below in Task 2.

Task 2: Run Predictive Model Runs Utilizing the WLAM and the Integrated Model

Task 2.1: Perform Three WLAM Scenario Runs

The following table shows the major assumptions for prior WLAM Scenarios C, E, and F. Once all the major and detailed assumptions are reviewed and revised under Task 1, Geoscience will re-run these three scenarios using the WLAM and analyze the modeling results to evaluate the surface flow discharge and concentrations for total dissolved solids (TDS) and total inorganic nitrogen (TIN), specifically in Reach 2 and Reach 3 of the Santa Ana River (SAR). The new modeling results will be compared to the prior approved WLAM modeling results for TDS and TIN concentrations, and changes will be summarized in the Draft and Final Technical Memorandum (Task 3).

Major Assumptions for Prior WLAM Scenarios C, E, and F

Model Scenario	Hydrologic Period	Model Conditions	Land Use	Recycled Water Discharge to Surface Water			TDS and TIN	
				Maximum Expected Discharge	Most Likely Discharge	Minimum Expected Discharge	Permit TDS	Permit TIN
C	WY 1950 - 2016	WY 2020	2012			X	X	X
E	WY 1950 - 2016	WY 2040	General Plan (2040)		X		X	X
F	WY 1950 - 2016	WY 2040	General Plan (2040)			X	X	X

Task 2.2: Perform One Integrated Model Scenario Run

In support of proposed HCP Covered Activities, several dozen model runs were made using the Integrated Model with varying assumptions and selected projects. After reviewing and revising the assumptions for the Sustainable Parks and Tributaries Water Reuse Project under Task 1, Geoscience will select the most appropriate predictive scenario from the previous Integrated Model analysis and re-run that scenario with the new assumptions. Model-simulated water levels, streamflow, and streambed percolation will be analyzed. These new modeling results will be compared to prior Integrated Model results and changes will be summarized in the Draft and Final Technical Memorandum (Task 3).

Task 2.3 (Optional): Perform Additional Two WLAM Scenario Runs

If the Team identifies the results from Task 2.1 and Task 2.2 to be problematic for the project and/or HCP effort, two additional WLAM predictive scenarios may be run under optional Task 2.3. This includes the development of new scenario assumptions, model input file preparation, and analysis of model results for surface flow discharge and TDS and TIN concentrations.

Task 2.4 (Optional): Perform Additional Two Integrated Model Scenario Runs

Similar to optional Task 2.3, optional Task 2.4 involves running two additional predictive scenarios using the Integrated Model, if requested by the Team. This includes development of new scenario assumptions, model input file preparation, and analysis of model results for water level change, streamflow, and water budgets.

Task 3: Prepare Draft and Final Technical Memorandum

Geoscience will prepare a draft technical memorandum summarizing all work conducted for this study. This technical memorandum will include discussion of the modeling approach and tools, model description, assumptions, and modeling results with accompanying figures and tables.

We will submit the draft technical memorandum to Valley District, RPU, and ESA for review and comment. A final technical memorandum will then be prepared that incorporates all comments received on the draft technical memorandum.

Task 4: Project Management and Meeting Attendance

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

We will also prepare for and attend four (4) one-hour meetings including one kick-off meeting, two project progress meetings, and one meeting to present the draft technical memorandum.

Schedule

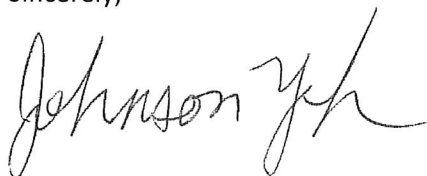
Proposed Tasks 1 through 4 presented above are anticipated to take approximately three months to complete, including two weeks for Valley District, RPU, and ESA to review the draft technical memorandum.

Cost Estimate

A breakdown of cost by task and anticipated staff participation is provided in attached Table 1. As shown, the total proposed cost for Task 1 through Task 4 without optional Tasks 2.3 and 2.4 is \$49,228. With the optional tasks, the total proposed cost is \$68,862.

If you have any questions, please contact me at (909) 451-6650

Sincerely,



Johnson Yeh, PhD, PG, CHG

Principal Geohydrologist

Encl.

Table 1

Cost Proposal for Professional Services
for the Santa Ana River Sustainable Parks and Tributaries Water Reuse Project

Task Description	GEOSCIENCE SUPPORT SERVICES, INC.										TOTALS		
	Principal Modeler \$289	Senior Modeler \$264	Project Modeler \$213	Senior Associate Modeler \$210	Associate Modeler \$196	GIS/CAD Specialist \$155	Total Geoscience Hours	Labor	Reimbursable Expenses ¹	Total Cost			
Hourly Rate:													
1.0 Identify a Path Forward that Updates the Prior Modeling Work to Reflect the Current Project Description	1	4	16				21	\$ 4,753		\$ 4,753			
2.1 Perform Three WLAM Scenario Runs	1	6	36				43	\$ 9,541		\$ 9,541			
2.2 Perform One Integrated Model Scenario Run	1	2	12	16			31	\$ 6,733		\$ 6,733			
2.3 Perform Additional Two WLAM Scenario Runs (Optional)	1	4	24				29	\$ 6,457		\$ 6,457			
2.4 Perform Additional Two Integrated Model Scenario Runs (Optional)	1	4	24	32			61	\$ 13,177		\$ 13,177			
3.0 Prepare Draft and Final Technical Memorandum	1	8	16	32		16	73	\$ 15,009		\$ 15,009			
4.0 Project Management and Meeting Attendance (Assumes 4 One-Hour Meetings)	4	36	4	8			52	\$ 13,192		\$ 13,192			
TOTAL HOURS AND COST WITHOUT OPTIONAL TASKS 2.3 and 2.4	8	56	84	56	0	16	220	\$ 49,228	\$ -	\$ 49,228			
TOTAL HOURS AND COST (Task 1 through Task 4)	10	64	132	88	0	16	310	\$ 68,862	\$ -	\$ 68,862			

Notes:

1. Reimbursable expenses include subcontract 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 attached Project 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 of 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.