

**CONSENT TO ASSIGNMENT OF AGREEMENT, PERMITS AND CONTRACTS**  
**AND**  
**RELEASE AND INDEMNIFICATION AGREEMENT**

This CONSENT TO ASSIGNMENT OF AGREEMENT, PERMITS AND CONTRACTS, AND RELEASE AND INDEMNIFICATION AGREEMENT ("Consent") is made as of November \_\_\_\_, 2022, by Aquilogic, Inc., a Nevada corporation having a principal address of 245 Fischer Avenue, Suite D-2, Costa Mesa, CA 92626 ("Consultant"), Three Valleys Municipal Water District, a municipal water district having an address at 1021 E. Miramar Ave., Claremont, CA 91711 ("Assignor"), and Cadiz Inc., a Delaware corporation having a principal address of 550 South Hope Street, Suite 2850, Los Angeles, CA 90071 ("Cadiz"), together with their successors and permitted assigns (collectively, "Parties").

**RECITALS:**

A. Assignor entered into that certain Agreement for Professional Services with Consultant, dated July 16, 2019, a true and correct copy of which is attached hereto as Exhibit 1 ("Professional Services Agreement"), with said Professional Services Agreement pertaining to studies related to the Cadiz Valley Water Conservation, Recovery and Storage Project ("Water Project"), in which Assignor holds an option to purchase water. The studies addressed by the Professional Services Agreement are to implement a data collection and analysis program (the "Study Program") to provide this improved understanding of the hydrology of the groundwater basins and surrounding features in the vicinity of the Water Project. In particular, the Study Program will provide greater clarity on the nature and degree of any hydraulic connection between Bonanza Spring and the alluvial aquifer in the Fenner Valley, if any such connection exists.

B. As a condition precedent to executing the Professional Services Agreement, Assignor also entered into a July 19, 2019 letter agreement with Cadiz, a true and correct copy of which is attached hereto as Exhibit 2 (the "Letter Agreement"), which required Cadiz to reimburse Assignor for the cost of the Study Program.

C. San Bernardino County ("County") served as a Responsible Agency for the environmental analysis of the Water Project under the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) and authorized the groundwater withdrawals under the County's Desert Groundwater Ordinance as conditioned by its Groundwater Management, Monitoring, and Mitigation Plan.

D. Along with the Santa Margarita Water District ("SMWD"), the County may convene and appoint a member to serve on a Technical Review Panel ("TRP") to evaluate data pertinent to project operations, background conditions and potential impacts of the Water Project over time. The TRP may make recommendations to the County and/or County may request recommendations from the TRP on additional monitoring, mitigation, and modification to the Water Project.

E. The County and/or SMWD, acting through the TRP ("Assignee" or collectively "Assignees"), are the most logical and directly interested governmental entities involved in review and regulation of the Water Project and would likely receive the greatest benefit from overseeing the Study Program.

F. Assignor agrees to assign all of Assignor's benefits under the Professional Services Agreement, the Letter Agreement, and the Study Program to Assignees pursuant to the terms of this Consent. Cadiz and Consultant consent and agree to the termination of Assignor's obligations under the Professional Services Agreement, the Letter Agreement, and the Study Program (collectively, "Obligations"), and to the assignment to Assignees of Assignor's right, title and interest in and to the Professional Services Agreement, Letter Agreement, and the Study Program, including but not limited to any reports, surveys, data, technical information, pending applications, permits, licenses, approvals and other work product accomplished thereunder (collectively "the Assigned Matters").

G. Assignor, Consultant and Cadiz understand the work undertaken in connection with the Assigned Matters may be phased and restricted to amounts less than \$200,000 per year, in the discretion of the Assignees.

**NOW THEREFORE**, for good and valuable consideration, the Parties agree as follows:

1. All of Assignor's duties and responsibilities with respect to the Obligations are hereby terminated. Assignor agrees to assign all right, title and interest in and to the Assigned Matters to Assignees within five (5) business days of receiving a request by Cadiz or Consultant.

2. Consultant hereby consents to the termination of Assignor's duties and responsibilities with respect to the Obligations, and represents and warrants as of the date hereof that its performance and work completed to date is current and according to the terms of the Professional Services Agreement, and agrees that the Assigned Matters may be assigned by Assignor to Assignee(s).

3. Cadiz hereby consents to the termination of Assignor's duties and responsibilities with respect to the Obligations and agrees that the Assigned Matters may be assigned by Assignor to Assignee(s).

4. Assignor agrees to reasonably coordinate and cooperate with the Parties to this Consent to ensure that Assignee(s) is substituted for Assignor in any existing permit applications and study requests associated with the Professional Service Agreement.

5. Assignee(s) is/are an intended third-party beneficiary of this Consent.

#### **CONSENTS:**

In connection therewith, the Parties hereto acknowledge and agree as follows:

A. Assignor and Consultant have not breached any provision of the Professional Services Agreement, including but not limited to by operation of this Consent. Assignor and Cadiz have not breached any provision of the Letter Agreement, including but not limited to by operation of this Consent. Further, it is expressly understood and agreed by the Parties that, except for those rights specifically created by this Consent, Consultant and Cadiz, and each of them, on their behalf and

on behalf of their owners, shareholders, directors, board members, principals, officers, employees, subsidiaries, partners, limited partners, joint venture participants, affiliates, parent companies, predecessors, agents, heirs, representatives, executors, attorneys, spouses, successors, and assigns, and all other such persons, firms, corporations, associations, or partnerships associated with them, and all those now or later acting on their behalf release as follows: Assignor releases and forever discharges Consultant and Cadiz, and Consultant and Cadiz release and forever discharge Assignor (including their officers, directors, employees, agents, representatives, successors, and assigns), from and against any and all claims, demands, causes of action, obligations, damages, liabilities, losses, costs, and/or expenses, including attorney's fees, of any kind or nature whatsoever, past or present, ascertained or unascertained, whether or not known, suspected, or now claimed in connection with all matters pertaining to, in any way related to, and/or arising out of the Obligations and/or the Assigned Matters.

B. It is further understood and agreed by the Parties that all rights or benefits available under Section 1542 of the California Civil Code, and any similar law of any state or territory of the United States, are hereby expressly waived as to claims which the Parties do not know or suspect to exist at the time they execute this Consent. In this regard, California Civil Code Section 1542 specifically provides as follows:

**“A general release does not extend to claims that the creditor or releasing party does not know or suspect to exist in his or her favor at the time of executing the release and that, if known by him or her, would have materially affected his or her settlement with the debtor or releasing party.”**

C. The Parties understand and acknowledge the significance and consequence of the specific waiver set forth in this Consent and hereby assume full responsibility for any injury, loss, damages, or liability that each may hereafter incur by reason of, or related to, the matters released herein. The Parties agree as a further consideration and inducement for this compromise and release of claims that the releases contained herein shall apply to all unknown and unanticipated injuries, losses, damages, and liabilities resulting from the matters released herein, except this release shall not extend to any breach by Assignor, Consultant, or Cadiz of any of said Party's respective obligations under this Consent.

D. Cadiz shall indemnify and hold Assignor and its officers, directors, shareholders, agents, and employees, harmless from and against all claims and liabilities of any kind arising out of, in connection with, or resulting from, the Professional Services Agreement, the Study Program, the Obligations, and/or the Assigned Matters except for breach of this Consent, and defend Assignor and its officers, directors, shareholders, agents, and employees from any suits or actions at law or in equity and to pay all court costs and counsel fees incurred in connection therewith.

E. Any notice or other communication between the Parties for purposes of complying with the terms of this Consent shall be given in writing and shall be addressed or delivered to the respective addresses set forth below (or to such other

address, including email, as may be subsequently designated by the intended recipient by written notice) and shall be delivered by personal delivery, by nationally recognized overnight courier service or by prepaid registered or certified United States mail (return receipt requested). All notices shall be deemed effective when received by the intended recipient:

**Assignor:** Three Valleys Municipal Water District  
Attention: Matt Litchfield  
1021 E. Miramar Avenue  
Claremont, CA 91711-2052

**Consultant:** Aquilogic, Inc.  
245 Fischer Avenue, Suite D-2  
Costa Mesa, CA 92626  
Attention: Anthony Brown

**Cadiz:** Cadiz Inc.  
550 South Hope Street, Suite 2850  
Los Angeles, CA 90071  
Attention: Stanley Speer

F. This Consent may be executed in counterpart originals.

**CONSENTEE:**

CADIZ INC.

By: 

Stanley Speer

**ASSIGNOR:**

THREE VALLEYS MUNICIPAL WATER DISTRICT

By: 

Matthew H. Litchfield

**CONSULTANT:**

AQUILOGIC, INC.

By: 

Anthony Brown

# **EXHIBIT 1**

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CONSENT TO ASSIGNMENT OF AGREEMENT, PERMITS AND CONTRACTS  
AND  
RELEASE AND INDEMNIFICATION AGREEMENT

**AGREEMENT FOR PROFESSIONAL SERVICES  
BETWEEN  
THREE VALLEYS MUNICIPAL WATER DISTRICT  
AND  
AQUILOGIC, INC.**

THIS AGREEMENT is made this 16 day of July 2019, by and between the THREE VALLEYS MUNICIPAL WATER DISTRICT, a Municipal Water District organized and operating pursuant to California Water Code Section 71000 et seq. (hereinafter referred to as the "DISTRICT"), and Aquilogic, Inc. (hereinafter referred to as "CONSULTANT").

**RECITALS**

WHEREAS, the DISTRICT desires to contract with CONSULTANT to provide professional services as described in the proposal provided by the Consultant dated June 11, 2019 (see Exhibit A); and  
WHEREAS, CONSULTANT is willing to contract with the DISTRICT to provide such services;  
and  
WHEREAS, CONSULTANT holds itself as duly licensed, qualified, and capable of performing said services; and  
WHEREAS, this Agreement establishes the terms and conditions for the DISTRICT to retain CONSULTANT to provide the services described herein for the Project.

**COVENANTS**

NOW, THEREFORE, in consideration of the faithful performance of the terms and conditions set forth herein, the parties hereto agree as follows:

**ARTICLE I  
ENGAGEMENT OF CONSULTANT  
AND AUTHORIZATION TO PROCEED**

1.1 **ENGAGEMENT:** The DISTRICT hereby engages CONSULTANT, and CONSULTANT hereby accepts the engagement, to perform certain services described in Section 2.1 of this Agreement.

1.2 **AUTHORIZATION TO PROCEED:** Authorization for CONSULTANT to proceed with all or a portion of the work described in Section 2.1 of this Agreement will be granted in writing by the DISTRICT as soon as both parties sign the Agreement and all applicable insurance and other security documents required pursuant to Section 6.3 of this Agreement are received and approved by the DISTRICT. CONSULTANT shall not proceed with said work until so authorized by the DISTRICT and shall commence work immediately upon receipt of the Notice to Proceed.

1.3 **NO EMPLOYEE RELATIONSHIP:** CONSULTANT shall perform the services provided for herein as an independent contractor, and not as an employee of the DISTRICT. The DISTRICT shall have ultimate control over the work performed for the Project. CONSULTANT is not to be considered an agent or employee of the DISTRICT for any purpose and shall not be entitled to

participate in any pension plans, insurance coverage, bonus, stock, or similar benefits that the DISTRICT provides for its employees. CONSULTANT shall indemnify the DISTRICT for any tax, retirement contribution, social security, overtime payment, or workers' compensation payment which the DISTRICT may be required to make on behalf of CONSULTANT or any employee of CONSULTANT for work performed under this Agreement.

## **ARTICLE II SERVICES OF CONSULTANT**

2.1 **SCOPE OF SERVICES:** The scope of services to be performed by the CONSULTANT under this Agreement are described in the Scope of Work attached hereto as Exhibit "A" and incorporated herein by this reference ("Scope of Work"), and shall, where not specifically addressed, include all related services ordinarily provided by the CONSULTANT under same or similar circumstances.

2.2 **PREVAILING WAGES:** In accordance with the provisions of the California Labor Code, CONSULTANT shall secure the payment of compensation to employees. To the extent required by the California Labor Code, CONSULTANT shall pay not less than the prevailing rate of per diem wages as determined by the Director, Department of Industrial Relations, State of California.

2.3 **HOURS AND WORKING CONDITIONS:** It is stipulated and agreed that all provisions of law applicable to public contracts are a part of this Agreement to the same extent as though set forth herein and will be complied with by CONSULTANT. CONSULTANT shall comply with all applicable provisions of the California Labor Code relating to working hours and the employment of apprentices on public works projects.

## **ARTICLE III RESPONSIBILITIES OF THE DISTRICT AND OF CONSULTANT**

3.1 **DUTIES OF THE DISTRICT:** The DISTRICT, without cost to CONSULTANT, will provide all pertinent information necessary for CONSULTANT's performance of its obligations under this Agreement that is reasonably available to the DISTRICT unless otherwise specified in the Scope of Work, in which case the CONSULTANT is to acquire such information. The DISTRICT does not guarantee or ensure the accuracy of any reports, information, and/or data so provided.

3.2 **REPRESENTATIVE OF DISTRICT:** The DISTRICT will designate **Tim Kellett** as the person to act as the DISTRICT's representative with respect to the work to be performed under this Agreement. Such person will have complete authority to transmit instructions, receive information, and interpret and define the DISTRICT's policies and decisions pertinent to the work.

3.3 **DUTIES OF CONSULTANT:** CONSULTANT shall perform the Project work in such a manner as to fully comply with all applicable professional standards of care, including professional quality, technical accuracy, timely completion, and other services furnished and/or work undertaken by CONSULTANT pursuant to this Agreement. The CONSULTANT shall cause all work and deliverables to conform to all applicable federal, state, and local laws and regulations.

3.4 **APPROVAL OF WORK:** The DISTRICT's approval of work or materials furnished hereunder shall not in any way relieve CONSULTANT of responsibility for the technical adequacy of its work. Neither the DISTRICT's review, approval or acceptance of, nor payment for any of the services

shall be construed to operate as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.

#### **ARTICLE IV PAYMENTS TO CONSULTANT**

4.1 **PAYMENT:** The DISTRICT will pay CONSULTANT for work performed under this Agreement, which work can be verified by the DISTRICT, on the basis of the following: CONSULTANT shall exercise its good faith best efforts to facilitate a full and clear definition of the scope of all assigned work so that the amount set forth in Section 4.3 of this Agreement will cover all tasks necessary to complete the work. The amount set forth in Section 4.3 of this Agreement is the maximum compensation to which CONSULTANT may be entitled for the performance of services to complete the work for the Project, unless the Scope of Work or time to complete the work is changed by the DISTRICT in writing in advance of the work to be performed thereunder. Adjustments in the total payment amount shall only be allowed pursuant to Section 6.4 of this Agreement. In no event shall CONSULTANT be entitled to compensation greater than the amount set forth in Section 4.3 of this Agreement where changes in the Scope of Work or the time for performance are necessitated by the negligence of CONSULTANT or any subcontractor performing work on the Project.

4.2 **PAYMENT TO CONSULTANT:** Payment will be made by the DISTRICT within thirty (30) calendar days after receipt of an invoice from CONSULTANT, provided that all invoices are complete, and product and services are determined to be of sufficient quality by the DISTRICT.

4.3 **ESTIMATED CHARGES:** The total estimated charges for all work under this Agreement are \$974,711.00 and such amount is the cost ceiling as described herein. The total estimated charges stated herein constitute the total amount agreed to.

4.4 **COST FOR REWORK:** CONSULTANT shall, at no cost to the DISTRICT, prepare any necessary rework occasioned by CONSULTANT's negligent act or omission or otherwise due substantially to CONSULTANT's fault.

#### **ARTICLE V COMPLETION SCHEDULE**

5.1 **TASK SCHEDULE:** The work is anticipated to be completed in accordance with the schedule agreed upon by DISTRICT and CONSULTANT at the time that a Notice to Proceed is issued by DISTRICT.

5.2 **TIME OF ESSENCE:** CONSULTANT shall perform all services required by this Agreement in a prompt, timely, and professional manner in accordance with the agreed upon schedule. Time is of the essence in this Agreement.

#### **ARTICLE VI GENERAL PROVISIONS**

6.1 **COMPLIANCE WITH FEDERAL, STATE, AND LOCAL LAWS:** CONSULTANT shall at all times observe all applicable provisions of Federal, State, and Local laws and regulations including, but not limited to, those related to Equal Opportunity Employment.



6.2 SUBCONTRACTORS AND OUTSIDE CONSULTANTS: No subcontract shall be awarded by CONSULTANT if not identified as a subcontractor in the Scope of Work unless prior written approval is obtained from the DISTRICT.

6.3 INSURANCE: CONSULTANT shall secure and maintain in full force and effect, until the satisfactory completion and acceptance of the Project by DISTRICT, such insurance as will protect it and the DISTRICT in such a manner and in such amounts as set forth below. The premiums for said insurance coverage shall be paid by the CONSULTANT. The failure to comply with these insurance requirements may constitute a material breach of this Agreement, at the sole discretion of the DISTRICT.

CONSULTANT shall procure and maintain during the performance of this Agreement policies of insurance as follows:

Workers' Compensation: CONSULTANT shall maintain Workers' Compensation insurance, as required by law in the State of California, and Employers' Liability Insurance (including disease coverage) in an amount not less than \$1,000,000.00 per occurrence. This insurance shall also waive all right to subrogation against the DISTRICT, its Board of Directors, officers, employees, representatives, and agents.

General Liability: CONSULTANT shall maintain general liability insurance including provisions for contractual liability, independent contractors, and broad form property damage coverage. This insurance shall be on a comprehensive, occurrence basis form with a standard cross liability clause and endorsement (ISO CG 2010 or equivalent). DISTRICT shall be named as an additional insured, and the limit for this insurance shall be not less than \$1,000,000.00 per occurrence, combined single limit for bodily injury and property damage.

Automobile Liability: CONSULTANT shall maintain automobile liability insurance with coverage for any vehicle including those owned, leased, rented or borrowed. This insurance shall have an endorsement naming the DISTRICT as an additional insured and with a standard cross liability clause and endorsement (ISO CG 2010 or equivalent). The limit amount for this insurance shall be not less than \$1,000,000.00 per occurrence, combined single limit for bodily injury and property damage.

Professional Liability: CONSULTANT shall maintain professional liability insurance with coverage for wrongful acts, errors, or omissions committed by CONSULTANT in the course of work performed for the DISTRICT under this Agreement. This insurance shall include coverage for liability assumed under this Agreement when CONSULTANT's wrongful acts, errors, or omissions cause such liability. The limit for this insurance shall be not less than \$1,000,000.00 per claim.

6.4 CHANGES IN SCOPE OR TIME: If the DISTRICT requests a change in the Scope of Work or time of completion by either adding to or deleting from the original scope or time of completion, an equitable adjustment shall be made, and this Agreement shall be modified accordingly.

6.5 INDEMNITY:

- (a) CONSULTANT shall defend, indemnify and hold DISTRICT, including its directors, officers, employees and agents, harmless from and against any and all claims, demands, causes of action, suits, debts, obligations, liabilities, losses, damages, costs, expenses, attorney's fees, awards, fines, settlements, judgments or losses of whatever nature, character, and description, with respect to or arising out of the work to be performed under this Agreement, including without limitation, any and all such claims, demands, causes of action, suits, debts, obligations, liabilities, losses, damages, costs, expenses, attorney's fees, awards, fines, settlements, judgments or losses of whatever nature, character, and description, arising by reason of death or bodily injury to one or more persons, including the employees of CONSULTANT; injury to property of any kind,

including loss of use; or economic damages of any kind, caused by, or arising out of, any alleged or actual act or omission, regardless of whether such act or omission is active or passive, by CONSULTANT, any of CONSULTANT's subcontractors or DISTRICT, including their respective directors, officers, employees, agents and assigns, excepting only such matters arising from the sole negligence or willful misconduct of the DISTRICT.

- (b) It is the intent of the parties to this Agreement that the defense, indemnity and hold harmless obligation of CONSULTANT under this Agreement shall be as broad and inclusive as may be allowed under California Civil Code §§ 2778 through 2784.5, or other similar state or federal law.

6.6 EXAMINATION OF RECORDS: All original drawings, specifications, reports, calculations, and other documents or electronic data developed by CONSULTANT for the Project shall be furnished to and become the property of the DISTRICT. CONSULTANT agrees that the DISTRICT will have access to and the right to examine any directly pertinent books, documents, papers, and records of any and all the transactions relating to this Agreement.

6.7 ASSIGNMENT: Neither party shall assign or transfer its interest in this Agreement without written consent of the other party. All terms, conditions, and provisions of this Agreement shall inure to and shall bind each of the parties hereto, and each of their respective heirs, executors, administrators, successors, and assigns.

6.8 AUTHORITY: The individuals executing this Agreement represent and warrant that they have the legal capacity and authority to sign this Agreement on behalf of and to so bind their respective legal entities.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first written above.

CONSULTANT

THREE VALLEYS MUNICIPAL WATER  
DISTRICT

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

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

\_\_\_\_\_  
(Print Name and Title)

  
Matthew H. Litchfield  
General Manager

\_\_\_\_\_  
Date

  
Date

including loss of use; or economic damages of any kind, caused by, or arising out of, any alleged or actual act or omission, regardless of whether such act or omission is active or passive, by CONSULTANT, any of CONSULTANT's subcontractors or DISTRICT, including their respective directors, officers, employees, agents and assigns, excepting only such matters arising from the sole negligence or willful misconduct of the DISTRICT.

- (b) It is the intent of the parties to this Agreement that the defense, indemnity and hold harmless obligation of CONSULTANT under this Agreement shall be as broad and inclusive as may be allowed under California Civil Code §§ 2778 through 2784.5, or other similar state or federal law.

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6.7 ASSIGNMENT: Neither party shall assign or transfer its interest in this Agreement without written consent of the other party. All terms, conditions, and provisions of this Agreement shall inure to and shall bind each of the parties hereto, and each of their respective heirs, executors, administrators, successors, and assigns.

6.8 AUTHORITY: The individuals executing this Agreement represent and warrant that they have the legal capacity and authority to sign this Agreement on behalf of and to so bind their respective legal entities.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first written above.

CONSULTANT

By:



Anthony Brown, CEO

(Print Name and Title)

July 18, 2019

Date

THREE VALLEYS MUNICIPAL WATER  
DISTRICT

By:



Matthew H. Litchfield  
General Manager

7/16/19

Date

## **EXHIBIT A**

### **SCOPE OF WORK**

June 11, 2019

Matthew H. Litchfield, P.E.  
General Manager  
**Three Valleys Municipal Water District**  
1021 E. Miramar Avenue  
Claremont, CA 91711-2052

sent via email to:  
[mlitchfield@tvmwd.com](mailto:mlitchfield@tvmwd.com)

**Re.: Proposal to Implement Recommendations Contained within the Report of the  
Independent Peer Review Panel for the GMMMP for the Cadiz Project**

Dear Mr. Litchfield:

**Aquilologic** is pleased to provide this proposal to Three Valleys Municipal Water District (Three Valleys) to implement certain recommendations contained within the "Report of the Independent Peer Review Panel, for the Groundwater Management, Monitoring, and Mitigation Plan (GMMMP) for the Cadiz Valley Groundwater Conservation, Recovery and Storage Project" (the Cadiz Project), dated February 5, 2019 (the Peer Review Panel Report; **aquilologic**, 2019).

## **1. Background**

In late 2018, Three Valleys convened an Independent Peer Review Panel (the Review Panel) to review the GMMMP for the Cadiz Project (the Review). The panel consisted of the following parties:

- Anthony Brown of Aquilologic, Inc. (**aquilologic**), panel leader
- Tim Parker of Parker Groundwater - Technology, Innovation, Management, Inc.
- Mark Wildermuth of Wildermuth Environmental, Inc. , and
- Dave Romero of Balleau Groundwater Inc.

### **1.1 Panel Objectives**

The focus of the Review was to evaluate whether the GMMMP was sufficient to ensure that the proposed pumping at the Cadiz Project would not result in Potential Significant Adverse Impacts to Critical Resources (Undesirable Results) that could not be effectively mitigated. The objectives of the Panel were to assess whether the GMMMP (ESA, 2012b):

- Provided sufficient management and monitoring to identify any Undesirable Results that could occur in response to proposed groundwater pumping at the Cadiz Project
- Provided effective Corrective Measures (i.e., mitigation) to address any Undesirable Results that do occur

In addition, where deemed necessary, the Panel was to provide recommendations for management, monitoring, and mitigation procedures, and recommend additional work to improve the understanding of the hydrology of the Cadiz Project area.

## **1.2 Panel Conclusions**

The Review Panel concluded in the Peer Review Panel Report (aquilogic, 2019) that the GMMMP provides appropriate and sufficient management and monitoring to identify Undesirable Results that could occur in response to proposed pumping at the Cadiz Project. In addition, the GMMMP provides effective Corrective Measures to address any Undesirable Results in the long-term. The Panel also recommended a number of complementary additions that could be made to the GMMMP, where such additions are feasible to implement.

## **2. Cadiz Project**

The Cadiz Project is located at the confluence of the Fenner, Orange Blossom Wash, Bristol and Cadiz watersheds in eastern San Bernardino County. Within this closed basin system, groundwater percolates and migrates downward from the higher elevations and eventually flows to Bristol and Cadiz dry lakes where it evaporates after mixing with the highly saline groundwater zone under the dry lakes. The portion that evaporates is lost from the groundwater basin and is unable to support beneficial uses. The fundamental purpose of the Cadiz Project is to conserve the substantial quantities of groundwater that are presently wasted and lost to evaporation to create a local water supply alternative for Southern California. Under the conservation and recovery component of the Cadiz Project, an average of 50,000 acre-feet per year (AFY) of groundwater would be pumped from the basin over a 50-year period.

## **3. Study Objectives**

Many of the recommendations presented within the Review Panel Report (aquilogic, 2019) are focused on providing a better understanding of hydrologic conditions at, and in the vicinity of, Bonanza Spring. Therefore, the goal of the work proposed herein is to implement a data collection and analysis program (the Study Program) to provide this improved understanding. In particular, the Study Program will provide greater clarity on the nature and degree of hydraulic connection between Bonanza Spring and the alluvial aquifer in the Fenner Valley below, if such exists. Further, the Study Program will provide baseline monitoring (i.e., hydrologic and biological conditions) in the vicinity of Bonanza Spring prior to the proposed pumping at the Cadiz Project.

Since the submission of the Peer Review Report (aquilogic, 2019), State Senators Richard Roth, Anthony Portantino and Benjamin Allen, and Assembly Member Laura Friedman have sponsored Senate Bill (SB) 307. SB307 proposes to establish a new and added review of the Cadiz Project

prior to the use of excess capacity in a publicly-owned water conveyance facility to transfer water. Specifically, upon application by a transferor, the State Lands Commission will be asked to determine that the proposed transfer will not adversely affect the natural or cultural resources, including groundwater resources or habitat, of federal or state lands. The completion of this study is intended to be responsive to this evaluation.

#### **4. Study Program Approach**

We would recommend that the Study Program be implemented in the following three phases:

- I. Development of a Study Plan
- II. Implementation of the Study Program
- III. Preparation of a Study Program Report

The Study Program will include many of the recommendations provided by the Review Panel in their Report. However, the Review Panel Report does not provide details as to how the recommendations should be implemented. In addition, other parties may have ideas as to how the recommendations could be implemented, and the Study Program objectives satisfied. Thus, the full nature and extent of the Study Program will need to be developed prior to program implementation. A preliminary outline, schedule, and budget for the Study Program is provided in this proposal. However, once the full scope has been set within the Study Plan (Phase I), then a more definitive schedule and budget for the implementation of the full Study Program (Phase II) and subsequent reporting (Phase III) can be provided.

#### **5. Phase I Scope of Work**

The Phase I scope of work includes the following tasks:

1. Study Plan Team
2. Study Program Development Workshop
3. Study Plan (Expert Review Report Recommendation No. 1)
4. Quality Assurance Project Plan (QAAP) (Recommendation No. 2)
5. Data Management System (DMS) (Recommendation No. 3)
6. Document Repository (Recommendation No. 4)
7. Permits/Approvals

##### **5.1 Task I.1: Study Plan Team**

To implement the Study Program, **aquilogic** will need technical support for certain aspects of the Study Program beyond our areas of expertise (i.e., geophysics, fractured rock geology, geochemistry, biology, and desert ecology). Thus, the following consultants will be retained to assist in the development of the Study Plan:



- Paul Bauman, Senior Hydro-geophysicist, Advisian
- Miles Kenney, Principal Geologist, Kenney Geosciences
- Professor Dave Kreamer, University of Nevada at Reno (UNR), Geochemistry
- Tamara Klug, Principal Biologist, Cardno
- Professor Edith Allen, University of California at Riverside (UCR)

The Review Panel Report presents the collective opinions of four independent professionals. It is also recognized that other parties may have other technical recommendations that, if implemented, might better satisfy the objectives of the Study Program specified herein. In particular, certain opponents to the Cadiz Project may have technical experts whose input would help make the Study Program more successful. Therefore, we will contact the following environmental organizations and regulatory agencies to see if they would be willing to have representatives participate in developing the Study Plan:

- Center for Biological Diversity (CBD)
- National Parks Conservation Association (NPCA)
- Sierra Club
- Nature Conservancy
- Mojave Desert Land Trust (MDLT)
- US Department of Interior, Bureau of Land Management (BLM)
- California Department of Water Resources (DWR)
- California Department of Fish and Wildlife (DFW)
- US Fish and Wildlife Service (USFWS)

**Aquilogic**, retained consultants, and representatives from environmental organizations and regulatory agencies will collectively constitute the Study Plan Team. These parties will be provided the Report of the Independent Peer Review Panel (including appendices) and other key documentation to familiarize themselves with the Cadiz Project.

## **5.2 Task I.2: Study Program Development Workshop**

We would recommend that the Study Plan Team meet to finalize the scope of the Study Program and basic content of the Study Plan. Once members of the Study Plan Team have been finalized, **aquilogic** will circulate a doodle poll to identify two days when all members are available. We are targeting a date in mid-July for the meeting. It is hoped that the meeting can take place at a location close to the Cadiz Project (e.g., Palm Springs). For those members of the Study Plan Team that have not been to the Cadiz Project location, a site visit will be organized to coincide with the workshop. The site visit will take place the day before the workshop.

Representatives from Three Valleys, Fenner Valley Water Authority (FVWA), County of San Bernardino, and other key stakeholders will be invited to participate in the workshop.



Given the need to expedite the implementation of the Field Program and the time needed to obtain permits/approvals for certain aspects of the Field Program, **aquilogic** will begin drafting the Study Plan content before the workshop. Once the workshop has been conducted, the draft Study Plan will be revised to reflect decisions made during the workshop.

### **5.3 Task I.3: Study Plan (Recommendation No. 1)**

Once the scope of the Study Program has been finalized by the Study Plan Team at the workshop, the Study Plan will be drafted. The Study Plan will include details regarding data management, analyses, and interpretation for all aspects of the Study Program. All data collection, management, analyses, and interpretation will then be conducted in general accordance with a Study Plan. At a minimum, the Study Plan will include the following recommendations contained within the Peer Review Report:

1. Geophysical survey at Bonanza Spring (Recommendation No. 5)
2. Installation of monitoring wells at Bonanza Spring (Recommendation No. 6)
3. Installation of a weather station at Bonanza Spring (Recommendation No. 7)
4. Spring flow monitoring at springs (Recommendation No. 8)
5. Vegetation monitoring at the springs (Recommendation No. 9)
6. Groundwater monitoring of representative wells pertinent to the Study Program (Recommendation No. 10)
7. Updates to the groundwater flow model (Recommendation No. 14)

**Aquilogic** will prepare a draft Study Plan. The draft plan will be circulated to the Study Plan Team, Three Valleys, FVWA, and other key stakeholders for review and comment. Pertinent comments will be addressed and the plan will be finalized.

### **5.4 Task I4: QAAP (Recommendation No. 2)**

To improve the accuracy, representativeness, and defensibility of the data collection program, more detailed quality assurance/quality control (QA/QC) procedures will be developed. The QA/QC procedures will be detailed within a quality assurance project plan (QAPP). All data collection will then be implemented and documented in accordance with the QAPP.

### **5.5 Task I.5: DMS (Recommendation No. 3)**

**Aquilogic** will obtain the following from consultants that have worked previously on the Cadiz Project, such as CH2M.Hill, TLF Consulting, Geoscience Support Services (GSSI), and Kenney Geosciences:

- existing data and data structure (e.g., excel spreadsheets, access database)
- geographic information system (GIS) platforms, including shape files

- key graphics in native format (e.g., AutoCAD)
- groundwater flow model files (e.g., Groundwater Vistas)

**aquilogic** will then develop a formal data management system (DMS) for the Cadiz Project. The DMS will contain all historical and new data collected as part of the Cadiz Project, including all data collected as part of the Study Program. The data will be categorized by type, location, and date, as well as other data-pertinent fields. The DMS for the Cadiz Project will be built using off-the-self software with a graphical user interface (GUI) that operates within a GIS platform (e.g., ArcGIS). This will facilitate data input, data mapping, and data interpretation (e.g., by SpatialAnalyst). The DMS will only be accessible to parties approved by Three Valleys, FVWA, Cadiz, and/or **aquilogic**.

#### **5.6 Task I.6: Document Repository (Recommendation No. 4)**

It is important that stakeholders have access to all technical documents pertinent to the Cadiz Project, regardless of whether they support or oppose the project. Therefore, an online repository will be established to host all technical reports as they are finalized and delivered to the County, as required by the GMMMP.

#### **5.7 Task I.7: Permits/Approvals**

Much of the Study Program (e.g., geophysical survey, spring flow monitoring, new monitoring wells) will be conducted on Federal lands; that is, land managed by the BLM. Thus, approvals from BLM to access the land and conduct data collection for the Study Program will be needed. The BLM may also require approval from the USFWS to implement the work. USFWS will require that the areas where work will be performed be “cleared” by an approved biologist/ecologist to ensure no threatened or endangered species will be impacted by the field work. **Aquilogic** will contact BLM and USFWS to determine what they require in a submittal for approval of the field work. If required, we will then compile the necessary information and submit it to BLM and USFWS.

In addition to Federal approvals, permits from the County of San Bernardino will be needed to drill and install monitoring wells. **Aquilogic** will submit the necessary information to obtain these permits.

Given the anticipated scope of work, permits/approvals from State agencies should not be required. **Aquilogic** will coordinate with FVWA and ESA (the consultant retained by Cadiz to prepare the Final Environmental Impact Report (FEIR) (ESA, 2012a)) and the County of San Bernardino to determine what actions need to be taken, if any, for the Study Program to comply with the California Environmental Quality Act (CEQA).

## **6. Preliminary Phase II Scope of Work**

As noted, the full scope of the Study Program will be established by the Study Plan Team (Tasks I.1 and I.2 herein). Once the full scope has been developed, a proposal will be provided to Three Valleys that details the scope, schedule, and budget for the complete Study Program. For planning purposes, a preliminary schedule and “ball-park” budget are provided herein. At a minimum, Phase II will include the tasks described below (as recommended in the Peer Review Report).

### **6.1 Task II.1: Geophysical Survey at Bonanza Spring (Recommendation #5)**

To provide additional information on the geologic structure and hydrogeology in the vicinity of Bonanza Spring, geophysical mapping will be conducted in the area immediately above, and for some distance below, the spring. The objectives of the geophysical survey would be to delineate structural features (i.e., faults) and other structural deformation, identify potential fracture lineaments with increased fracture aperture and density (i.e., groundwater bearing potential), map the bedrock surface below the unconsolidated deposits south of the spring, and map the groundwater surface above and below the spring. Advisian will be retained as the geophysical contractor to plan and implement the geophysical mapping. The mapping may include shallow seismic surveys, surface EM, TDEM, and ERT.

Whatever geophysical techniques are recommended by Advisian, it is important to have control points to help interpret the geophysical data. Borehole logs and down-hole geophysical logs (i.e., eLogs) for existing wells will provide this control. If wells proximate to the geophysical surveys do not have geophysical logs but have poly-vinyl chloride (PVC) casing, then they can be logged using EM, natural gamma, temperature, and EC down-hole tools. If these wells have steel casing, then down-hole logging will be limited to gamma, temperature, and EC. The existing geological mapping (Kenney and TLF, 2018) will also provide some control for the geophysical survey at Bonanza Spring.

### **6.2 Task II.2: Monitoring Wells (Recommendation No. 6)**

To provide additional information on hydrogeologic conditions between Bonanza Spring and the alluvial aquifer in the Fenner Valley below, the following additional monitoring wells will be installed:

- Immediately below the spring (i.e., within 100 yards) with casings discretely screened in unconsolidated deposits beneath and adjacent to the stream fed by the spring, if they contain groundwater, and in the fractured bedrock beneath these deposits
- At the limits of the alluvial aquifer (e.g., one mile southeast of Bonanza Spring)

The first set of monitoring wells in the unconsolidated deposits and fractured bedrock below Bonanza Spring will provide data that cannot be obtained from any existing monitoring wells. Therefore, this set of wells is the most important additional monitoring wells needed to evaluate groundwater conditions at Bonanza Spring.

### **6.3 Task II.3: Weather Station (Recommendation No. 7)**

A weather station, or at least a rain gauge, will be installed in the bedrock watershed that supports flow at Bonanza Spring. This will assist in evaluating the relationship between precipitation, recharge, and spring flow.

### **6.4 Task II.4: Spring Flow Gauges (Recommendation No. 8)**

Given the smaller scale of the bedrock watershed that supports Bonanza Spring, the responses at these springs to individual hydrologic events (e.g., precipitation) are generally observed over short time frames (i.e., days rather than months). These short-term responses are also valuable in assessing responses to longer-term hydrologic events (e.g., seasonal precipitation, climatic changes, sustained pumping), and the impact these can have on future spring flows. Therefore, more frequent monitoring will be conducted at the Bonanza, Whiskey, and Vontrigger springs.

Higher-frequency flow monitoring will be conducted using a transducers and data-logger to monitor ponded water depth at defined locations at the springs. If available, a multi-parameter probe will be used to monitor depth/flow, EC, and temperature at the same frequency. Alternatively, EC and temperature could be manually monitored on a monthly basis. Data-loggers will be downloaded during manual monitoring and sampling events. Other parameters, such as pH, water coloration, and observations of riparian vegetation, will be conducted quarterly. In addition, the exact geographic location and elevation of the spring emergence will be mapped using a global positioning system (GPS) annually or after a change in location is observed during other monitoring activities.

Prior to any monitoring of spring flows, including manual monitoring, a correlation between ponded water depth and flow will be developed. This is normally done for a location immediately downstream of the spring where the stream profile is defined and constrained (e.g., where it crosses bedrock) or where the profile can be artificially constrained (e.g., construction of a v-notch weir). A location with a naturally confined profile will be identified. Ponded water depth and flow measurements will be taken at that location on several occasions during different flow conditions (e.g., low-flow, regular flow, storm-flow) to develop the correlation. Depending on water depth, flow measurements will be taken using flow meters or a salt-slug method.

Spring quality samples will be collected quarterly at Bonanza, Whiskey, and Vontrigger springs. The samples will be analyzed for the parameters specified in the GMMMP (ESA, 2012b).

#### **6.5 Task II.5: Vegetation Monitoring (Recommendation No. 9)**

Cardno and Professor Allen will be retained to provide terrestrial ecology support to the Study Program. Together, they will develop a scientifically appropriate, standardized methodology to monitor vegetation below the springs. This might include defined transects across the stream below the springs, and identification and quantification of species at points along the transects over time. Such a standardized methodology will allow changes in vegetation to be tracked over time. Field vegetation mapping will be conducted annually.

#### **6.6 Task II.6: Groundwater Monitoring (Recommendation No. 10)**

Periodic groundwater monitoring and sampling will be conducted to evaluate the hydrologic connection between Bonanza Spring and the alluvial aquifer in Fenner Valley below. Pressure transducers and data-loggers will be installed in the following wells to record groundwater levels on an hourly basis:

1. 6N15E1
2. 6N16E6
3. 6N15E29
4. 5N14E24
5. 5N14E16
6. 5N15E3
7. Up to three new well casings installed at Bonanza Spring (see Task II.2)

Groundwater levels will also be monitored manually on a monthly basis at these wells and up to six additional monitoring wells (locations to be determined) from September 2019 through June 2020. The data-loggers will be downloaded during the monthly monitoring events. In addition, groundwater temperature and electrical conductivity (EC) will also be measured at these monitoring wells on a monthly basis.

Groundwater samples will be collected from the above listed nine wells (six existing and three proposed herein) in October 2019 and March 2020. Water samples will also be collected at Bonanza, Whiskey, and Vontrigger springs in October 2019 and March 2020. All water samples will be analyzed in the field for temperature, potential hydrogen (pH), and EC. Samples will also be sent to a State-certified water testing laboratory and analyzed for the parameters listed in the GMMMP (ESA, 2012b). In addition, selected samples will be submitted for isotopic analysis (as determined by Dr. Kreamer).

## **6.7 Task II.7: Updated Groundwater Flow Model (Recommendation No. 14)**

Numerical groundwater flow models have already been developed for the Cadiz Project (GSSI, 2011; CH2M.Hill, 2011). These numerical models present a reasonable representation of groundwater conditions for most areas of the watersheds tributary to the Cadiz Project; however, they were based on a limited data-set and include significant assumptions and hydrogeologic judgement.

In the GMMMP (ESA, 2012b), Annual Monitoring Reports will be prepared and these reports will contain "Updated groundwater flow, transport and variable density model results." It is also anticipated that the Decision-Making Process outlined in the GMMMP (ESA, 2012b) will use any updated numerical modeling to perform ongoing evaluations of Undesirable Results, as well as design and assess the effects of any possible mitigation actions. Therefore, it would be reasonable to better define the scope of model updates.

The Panel recommends that numerical groundwater modeling be updated. The initial update will include the following:

- An expansion of the model domain to include all of Cadiz Dry Lake - this will allow more detailed analysis of the possible Undesirable Results at Cadiz Dry Lake, and will eliminate concerns about drawdown intercepting a current boundary condition at Cadiz Dry Lake
- An expansion of the model domain to include the Clipper Mountains as active cells - this will allow for further analysis of flows at Bonanza Spring
- Update the water budget in consideration of data collected since the prior update.

After this initial update, the numerical groundwater modeling can then be used to further evaluate potential Undesirable Results that may be caused by the proposed pumping at the Cadiz Project. The modeling will also be used to assess the effectiveness of the mitigation actions proposed in the GMMMP (ESA, 2012b) and evaluate alternative mitigation actions (Task II.11).

## **6.8 Task II.8: Alternative Mitigation Actions (Recommendation No. 15)**

The County of San Bernardino imposed a requirement under the GMMMP that limited the aquifer drawdown to 80 feet within two miles of the center of the Cadiz Project well-field in the first 15 years of operation and 100 feet over the life of the Cadiz Project. The most common Corrective Measure in the GMMMP (ESA, 2012b) to prevent or alleviate Undesirable Results is to reduce or modify pumping at the Cadiz Project well-field (e.g., well cycling, individual pump rate adjustments). Such an action, as a stand-alone Corrective Measure, will likely be effective in the long-term; however, it may not alleviate certain impacts in a reasonable timeframe due to the response lag in the hydrologic system (e.g., groundwater levels would continue to decline at



locations distant from the well-field for decades after pumping ceased). Therefore, the GMMMP included some Corrective Measures for specific Critical Resources. The following resource-specific measures would either prevent ongoing impact or alleviate impact in a reasonable time frame:

- Bonanza Spring – the installation of a possible horizontal well immediately above Bonanza Spring, as provided in the FEIR (ESA, 2012a)
- Brine Resources – the installation of deeper brine recovery wells at the dry lakes to maintain mineral strip-mining operations, as proposed in the GMMMP (ESA, 2012b)
- Saline Intrusion – the extraction of brackish groundwater or injection of fresh water along the saline-fresh water interface, as proposed in the GMMMP (ESA, 2012b)

More details regarding these resource-specific measures needs to be developed. In addition, additional evaluation of these potential resource-specific measures is recommended, including analysis using an updated numerical groundwater flow model.

In addition to these resource-specific measures, it is recommended that the following additional Corrective Measures be evaluated:

- Bonanza Spring – The injection of water at the edge of the alluvial aquifer in Fenner Valley below Bonanza Spring to “cut-off” the propagation of the cone of depression beyond the injection area
- Bonanza Spring – The injection of water into water-bearing fractures immediately above Bonanza Spring to maintain groundwater levels in the watershed that supports flow at the spring
- Bonanza Spring – the temporary provision of water for flow and habitat maintenance (e.g., a water tank and pipe to the spring head)
- Brine Resources – the injection of water at the saline-fresh water interface to “cut-off” the propagation of the cone of depression beyond the injection area (this could be combined with injection to halt the migration of the saline-fresh water interface – see above)
- Air quality – the spraying of water on areas prone to dust generation

More details regarding these potential alternative mitigation measures needs to be developed. Their feasibility (effectiveness, implementability, and cost) should be evaluated, including analysis using numerical groundwater modeling. Their effectiveness should examine both short-term effectiveness in preventing continued adverse impact, and their long-term effectiveness at alleviating impacts in a reasonable period of time.

## **7. Phase III: Study Program Reporting**

As noted, the full scope of the Study Program will be established by the Study Plan Team (Tasks I.1 and I.2 herein). Once the full scope has been developed, a proposal will be provided to Three Valleys that details the scope, schedule, and budget for the complete Study Program. In addition, a separate proposal will be submitted that details the scope, schedule, and budget for Study Program reporting. For planning purposes, a preliminary schedule and “ball-park” budget are provided herein. It is anticipated that reporting will include the tasks described below.

### **7.1 Task III.1: Quarterly Updates**

Quarterly webinars will be hosted by **aquilogic** to provide updates on the progress of the Study Program. The following will be invited to participate in the webinars:

- Study Plan Team
- Three Valleys
- FVWA
- Other stakeholders

### **7.2 Task III.2: Draft Study Program Report**

**Aquilogic** will prepare a draft Study Program Report. The draft report will be circulated to the Study Plan Team for review.

### **7.3 Task III.3: Study Program Findings Presentations**

**Aquilogic** will prepare the following PowerPoint presentations that summarizes the draft findings from the Study Program:

- Detailed presentation for the Study Plan Team report workshop (see Task III.4)
- Confidential summary presentation for Three Valleys and FVWA
- Summary presentation for other stakeholders and the public

Once the Study Program Report has been finalized (Task III.5), **aquilogic** will revise the above presentations.

### **7.4 Task III.4: Study Program Report Workshop**

The Study Plan Team will meet to discuss the draft findings from the Study Program. Study Plan Team members will be requested to circulate written comments on the draft Study Program Report prior to the workshop. Written comments, and other comments expressed during the workshop, will be discussed and addressed during the workshop.



## 7.5 Task III.5: Finalize the Study Program Report

Once comments from the Study Plan Team have been addressed, a final draft Study Program Report will be prepared by **aquilogic**. The final draft will be submitted to Three Valleys and FVWA for review and comment. Pertinent comments from Three Valleys and FVWA will be addressed and a Final Study Program Report prepared by **aquilogic**.

## 8. Schedule and Budgets

The table below provides the schedule and budget for the Study Program. As noted, the budget for Phases II and III provides “ball-park” estimates. Once the exact scope of the Study Program has been established after the Study Program Workshop, a more detailed budget will be provided for these phases.

#	Phase/Task	Start	End	Sub-total	Budget
<b>Phase I</b>					
1	Study Plan Team	Jul-19	Jul-19	\$2,150	\$7,525
2	Study Program Workshop	Jul-19	Jul-19	\$10,750	\$39,625
3	Study Plan	Jul-19	Aug-19	\$12,900	\$17,200
4	QAAP	Jul-19	Aug-19		\$8,600
5	DMS	Aug-19	Jul-20		\$64,500
6	Document Repository	Aug-19	Jul-20		\$8,600
7	Permits/Approvals	Jul-19	Sep-19		\$25,800
<b>Phase I Total</b>					<b>\$171,850</b>
<b>Phase II</b>					
1	Geophysical Survey at Bonanza Spring	Sep-19	Sep-19		\$75,000
2	Monitoring Wells at Bonanza Spring	Oct-19	Oct-19		\$90,000
3	Weather Station at Bonanza Spring	Sep-19	Jul-20		\$15,000
4	Spring Flow Monitoring	Sep-19	Jul-20		\$30,000
5	Vegetation Monitoring	Sep-19	Jul-20		\$30,000
6	Groundwater Monitoring	Oct-19	Jul-20		\$80,000
7	Updated Groundwater Flow Model	Nov-19	Mar-20		\$150,000
8	Alternative Mitigation Actions	Feb-20	May-20		\$50,000
<b>Phase II Total</b>					<b>\$520,000</b>
<b>Phase III</b>					
1	Quarterly Updates (3)	Dec-19	Jun-20	\$12,900	\$19,350
2	Draft Study Program Report	May-20	Jun-20	\$43,000	\$64,500
3	Study Program Findings Presentations	Jun-20	Jul-20		\$17,200
4	Study Program Report Workshop	Jun-20	Jun-20	\$10,750	\$28,875
5	Finalize the Study Program Report	Jun-20	Jul-20		\$25,800
<b>Phase III Total</b>					<b>\$155,725</b>
<b>Study Program Total</b>					<b>\$847,575</b>



15% contingency	\$127,136
<b>TOTAL</b>	<b>\$974,711</b>

All work will be billed on a time and materials basis according to the attached fee schedule, up to the total amount specified. It is understood that work on a particular task can exceed the budgeted amount. However, should supplemental budget be required to complete the entire scope, a change order will be provided for your approval. No such supplemental or additional work will be performed without prior authorization to proceed from the Client. Should you request that additional or supplemental work be performed, we will invoice you for this work on a time and materials basis. However, we will confirm your request via email prior to starting on such work.

## 9. Closing

We appreciate the opportunity to submit this proposal to Three Valleys. Should you have any questions, please do not hesitate to contact me at (949) 939-7160.

Sincerely,  
aquilologic, Inc.

Anthony Brown  
CEO and Principal Hydrologist

## REFERNECES

Aquilologic. 2019. Report of the Independent Peer Review Panel, for the Groundwater Management, Monitoring, and Mitigation Plan (GMMMP) for the Cadiz Valley Groundwater Conservation, Recovery and Storage Project (the Cadiz Project). Dated February 5, 2019

Environmental Science Associates (ESA). (2012a). Final Environmental Impact Report (FEIR) for the Cadiz Valley Water Conservation, Recovery, and Storage Project. SCH# 2011031002. July.

ESA. (2012b). Groundwater Management, Monitoring, and Mitigation Plan (GMMMP) for The Cadiz Valley Groundwater Conservation, Recovery and Storage Project. September.

# **EXHIBIT 2**

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CONSENT TO ASSIGNMENT OF AGREEMENT, PERMITS AND CONTRACTS  
AND  
RELEASE AND INDEMNIFICATION AGREEMENT



BOARD OF DIRECTORS

Brian Bowcock  
David D. De Jesus  
Carlos Goytia  
Denise Jackman  
Bob Kuhn  
John Mendoza  
Joseph T. Ruzicka

GENERAL MANAGER/CHIEF ENGINEER

Matthew H. Litchfield, P.E.

July 17, 2019

Mr. Scott Slater  
Cadiz, Inc.  
550 South Hope Street, Suite 2850  
Los Angeles, CA 90071

**Re: Cadiz Water Project – Implementation of Recommendations  
Contained within the Report of the Independent Peer Review Panel for  
the GMMMP**

Dear Mr. Slater:

The Three Valleys Municipal Water District ("TVMWD") holds an option agreement to participate in the Cadiz Water Project ("Project"). The Project underwent a lengthy environmental review process as well as the County of San Bernardino ("County") adopting a comprehensive Groundwater Management, Monitoring and Mitigation Plan ("GMMMP"). The environmental impact report (EIR) and the GMMMP approved for the Project were validated in California Superior and Appellate Courts. Subsequently, Cadiz funded a peer review of the GMMMP that recommended enhancements to the approved GMMMP in 2018.

On June 19, 2019, The TVMWD Board of Directors approved moving forward with the first phase of the Implementation of the Peer Review Panel's recommended enhancements outlined in attached proposal by Aquilogic, Inc. Funding for the subject enhancements is to be provided by Cadiz, Inc. in the amount of \$974,711.00. Please provide a check in the amount of \$974,711.00 made payable to Three Valleys Municipal Water District. Once payment is received by TVMWD, a Notice to Proceed will be issued to Aquilogic, Inc.

Please let me know if you have any questions. I can be reached at (909) 621-5568.

Sincerely,

A handwritten signature in blue ink, appearing to read 'M. Litchfield', with a stylized flourish at the end.

Matthew H. Litchfield, P.E.  
General Manager/Chief Engineer  
Three Valleys Municipal Water District

Enclosure: Aquilogic, Inc. Proposal

cc: Anthony Brown, Aquilogic, Inc.  
James Linthicum, TVMWD  
Tim Kellett, TVMWD