AGREEMENT FOR STORAGE AND RECOVERY OF NON-NATIVE WATER FROM THE SEASIDE GROUNDWATER BASIN

THIS AGREEMENT is made and entered into on February 1, 2019, by and between the SEASIDE BASIN WATERMASTER (the "WATERMASTER"), California-American Water Company (the "PRODUCER"), and the Monterey Peninsula Water Management District (the "DISTRICT") as follows:

Recitals

1. The WATERMASTER was created by the Amended Decision of the Monterey County Superior Court, filed February 9, 2007, Case No. M66343 (the "Decision"). This Decision was made for the purposes of managing and protecting the Seaside Groundwater Basin ("Basin") for the benefit of the businesses, individuals, and public agencies that overlie or extract groundwater from the Basin. PRODUCER and DISTRICT are parties to the Decision.

2. In February of 2010, the WATERMASTER, in accordance with Section III.3.L.3.j.xix and III.H.2 of the Decision, allocated 28,784 acre-feet of Storage in the Coastal and Northern Inland Subareas to the PRODUCER. In accordance with Section III.H.3 of the Decision, PRODUCER may use its Storage Allocation for the benefit of its customers and for other purposes as PRODUCER deems appropriate.

3. Section III.H.1 of the Decision states that the Parties shall be permitted to utilize available Storage space for "bona fide Groundwater Storage Projects." Further, Section III.Q of the Decision states that: (a) DISTRICT can store water for the benefit of DISTRICT in the Basin; and (b) the Decision preserves DISTRICT's statutory right to store water in subterranean reservoirs.

4. The PRODUCER and WATERMASTER have an existing *Agreement for Storage and Recovery of Non-Native Water from the Seaside Groundwater Basin* dated October 21, 2011, which authorizes PRODUCER to store 2,426 acre-fee per year of Non-Native water in, and to subsequently recover that stored water from, the Basin.

5. In accordance with the *Water Purchase Agreement for Pure Water Monterey Project* made by and between PRODUCER, DISTRICT, and MONTEREY ONE WATER ("M1W") (formerly the Monterey Regional Water Pollution Control Agency) dated September 19, 2016 (the "WPA"), incorporated herein by this reference, the DISTRICT will deliver for the benefit of PRODUCER advanced treated recycled water from the Pure Water Monterey project (the "AWT Water") to the Basin for injection, storage, and recovery from the Basin.

6. PRODUCER and DISTRICT have applied to the WATERMASTER for permission to, using PRODUCER's Storage Allocation, Store the AWT Water in, and subsequently recover that Stored Water from, the Basin.

7. Under the authorities granted to the WATERMASTER by the Decision, on October 3, 2018 the WATERMASTER approved the application of the PRODUCER and the DISTRICT and hereby grants permission to the PRODUCER and the DISTRICT to store Non-Native water/AWT Water in, and to recover that stored water from, the Basin, as described in and subject to the Terms and Conditions contained in this Agreement.

Terms and Conditions

NOW, THEREFORE, in consideration of the foregoing and the mutual promises contained herein, the parties hereto agree to the following terms and conditions:

1. Definitions. Unless otherwise specifically defined herein, the defined terms shall be given the same definition and meaning set forth in the Decision, as listed in Attachment A.

2. Storage Quantity. The PRODUCER is authorized to store, by means of direct injection by DISTRICT or M1W, 6,000 acre-feet per year of the AWT Water in the Basin, which includes AWT Water used to backflush an injection well that percolates into the ground. The DISTRICT is authorized, using the PRODUCER's Storage Allocation, to store by means of direct injection up to 4,000 acre-feet of the AWT Water for the PRODUCER's future use (the "Reserve Water"). In the event the WATERMASTER revises the Total Usable Storage Space of the Basin in accordance with Section III.H.4 of the Decision, or if one or more Alternative Producers converts entirely or in part from an Alternative Production Allocation to a Standard Production Allocation in accordance with Section III.B.3.e of the Decision, the PRODUCER's Storage Allocation may change, and this may affect the storage quantity authorized by this Agreement; however, any reduction in storage quantity will not result in a corresponding reduction in the amount of AWT Water actually stored at the time of the change. In such instance this Agreement will be modified to reflect these changes. Further, the parties may agree by written amendment to this Agreement to revise the storage quantities authorized herein.

3. Storage Location(s). The storage of water authorized under paragraph 2 above will be performed at the following location(s): see Attachment B.

4. Recovery Location(s). PRODUCER is authorized to recover the AWT Water stored at the location(s) described under paragraph 3 above, which recovery must be performed within the same Subarea of the Basin as the location(s) within which it was stored. PRODUCER will recover the AWT Water at the following location(s), or at such other locations as may be approved by WATERMASTER upon written request by PRODUCER or DISTRICT:

   A. Ord Grove Well #2, 1987 Park Ct., Seaside (Santa Margarita)
   B. Paralta Well, 2104 Paralta Ave., Seaside (Santa Margarita)

C. Luzern Well #2, 1984 Luzern St., Seaside (Paso Robles)
D. Playa Well #3, 1237 Playa Ave., Seaside (Paso Robles)
E. Plumas Well #4, 1453 Plumas Lane, Seaside (Paso Robles)
F. Santa Margarita ASR-1, 1910 General Jim Moore Blvd, Seaside (Santa Margarita)
G. Santa Margarita ASR-2, 1910 General Jim Moore Blvd, Seaside (Santa Margarita)
H. Seaside Middle School ASR-3, 2111 General Jim Moore Blvd, Seaside (Santa Margarita)
I. Seaside Middle School ASR-4, 2111 General Jim Moore Blvd, Seaside (Santa Margarita)
J. Fitch Park ASR-5, General Jim Moore Blvd, Seaside (Santa Margarita)
K. Fitch Park ASR-6, General Jim Moore Blvd, Seaside (Santa Margarita)

5. Recovery Quantity. The PRODUCER is initially authorized to recover (Extract) the full amount of the AWT Water actually Stored in accordance with this Agreement. However, due to the hydrogeologic characteristics of the Seaside Basin, naturally occurring losses of Stored Water may result in the WATERMASTER reducing the percentage of Stored Water that may be Extracted. Should the WATERMASTER determine that this needs to be done, this Agreement will be modified to reflect the reduced quantity of water that the PRODUCER may recover, and the technical basis for this determination will be provided to all PRODUCERs.

6. Water Quality. The DISTRICT hereby certifies that prior to the AWT Water being introduced into the Basin for Storage in accordance with this Agreement, all such water will meet all of the requirements imposed on the DISTRICT or M1W by permits and/or approvals issued to the DISTRICT or M1W by the California Regional Water Quality Control Board and any other water quality standards imposed by any other government entity, including without limitation the California Department of Public Health and the Monterey County Department of Environmental Health.

   DISTRICT shall ensure that the water quality characteristics of the AWT Water that will be stored under this Agreement meet the "Water Treatment Guarantee" as defined in the WPA, which definition is incorporated herein by this reference, which characteristics are considered by all parties to this Agreement to not pose a threat of harm to the Basin.

   DISTRICT agrees that prior to injecting any AWT Water into the Basin for Storage, it must provide to the WATERMASTER the geochemical interaction modeling assessment (including any recommended mitigation measures) ("Modeling Assessment") contemplated by the February 10, 2018 *Memorandum of Agreement Between the Seaside Basin Watermaster, the Monterey Peninsula Water Management District, California American Water Company, and Monterey One Water to Share in the Costs of Performing Geochemical Modeling of the Seaside Basin Groundwater Basin* (see Attachment C). If the Modeling Assessment recommends implementation of mitigation measures to avoid a Material Injury (as defined in the Decision) resulting from the injection of AWT Water into the Basin, DISTRICT must, prior to the initial injection of AWT Water, demonstrate

to the reasonable satisfaction of WATERMASTER that sufficient measures will be implemented to avoid Material Injury.

The Parties expect that desalinated water will not be present/injected into the Basin prior to the initial injection of AWT Water, therefore, in that case, any mitigation measures to be implemented prior to the initial injection of AWT Water shall not include any measures recommended as a result of the presence/injection of desalinated water. Any mitigation measures to be required as a result of the injection of desalinated water into the Basin will be addressed at the time a Storage and Recovery Agreement for desalinated water is presented to the WATERMASTER for consideration.

7. Carryover and Stored Water Credits. In accordance with Section III.F of the Decision, if during a particular Water Year the PRODUCER does not Extract from the Basin a total quantity equal to the PRODUCER's Standard Production Allocation for the particular Water Year, the PRODUCER may establish Carryover Credits, up to the total amount of the PRODUCER's Storage Allocation.

   However, in accordance with the Decision in no circumstance may the sum of the PRODUCER's Stored Water Credits and Carryover Credits exceed the PRODUCER's available Storage Allocation. Further, in accordance with Section III.H.5 of the Decision, unused (not Extracted) Stored Water Credits may be carried over from year to year, but due to the hydrogeologic characteristics of the Seaside Basin, naturally occurring losses of Stored Water may require Watermaster to discount the percentage of Stored Water that may be Extracted.

8. Measurement and Reporting of Extractions and Storage. In accordance with Section III.J of the Decision, the DISTRICT shall ensure that adequate measuring devices are installed, maintained, and used on all AWT Water injection facilities, and the PRODUCER shall ensure that adequate measuring devices are installed, maintained, and used on all of PRODUCER's Extraction facilities, as required by the WATERMASTER's Rules and Regulations and this Agreement.

   Beginning on the initial delivery of AWT Water to the Basin for Storage in accordance with this Agreement, the DISTRICT shall provide to the WATERMASTER a monthly injection report containing the following data for the preceding month:
   - The quantity of AWT Water that was injected by the DISTRICT for delivery to PRODUCER (defined as "Company Water" in the WPA, which definition is incorporated herein by this reference)
   - The quantity of AWT Water that was injected by the DISTRICT as Reserve Water
   - The location(s) where the water was injected

   Beginning on the initial delivery of Company Water by the DISTRICT to the PRODUCER in accordance with the WPA, the PRODUCER shall provide to the WATERMASTER, as part of each monthly Production Report, data for the reporting period stating:
   - The quantity of Company Water that was recovered (Extracted)
   - The location(s) where the Company Water was recovered (Extracted)

9. Indemnification. The PRODUCER shall assume the defense of, indemnify and hold harmless, the WATERMASTER, its officers, agents and employees from all claims, liability, loss, damage or injury of any kind, nature or description arising directly or indirectly from actions or omissions by the PRODUCER or any of its officers, agents, employees, or independent contractors relating to this Agreement, excepting claims, liability, loss, damage or injury which arise from the willful or negligent acts, omissions, or activities of an officer, agent or employee of the WATERMASTER.

   The DISTRICT shall assume the defense of, indemnify and hold harmless, the WATERMASTER, its officers, agents and employees from all claims, liability, loss, damage or injury of any kind, nature or description arising directly or indirectly from actions or omissions by the DISTRICT or any of its officers, agents, employees, or independent contractors relating to this Agreement, excepting claims, liability, loss, damage or injury which arise from the willful or negligent acts, omissions, or activities of an officer, agent or employee of the WATERMASTER.

10. Successors and Assigns. This Agreement, and all the terms and conditions hereof, shall apply to and bind the successors and assigns of the respective parties hereto; provided that the PRODUCER and the DISTRICT shall not assign this Agreement without prior written consent of the WATERMASTER.

11. Further Cooperation. Each of the parties agree to reasonably cooperate with each other, and to execute and deliver to the other all such documents and instruments, and to take such further actions, as may reasonably be required to give effect to the terms and conditions of this Agreement.

12. Interpretation. It is agreed and understood by the parties hereto that this Agreement has been arrived at through negotiation and that no party is to be deemed the party which prepared this Agreement within the meaning of Civil Code §1654. The provisions of this Agreement shall be interpreted in a reasonable manner to effect the purpose of the parties and this Agreement.

13. Disputes. If any dispute under this Agreement arises the parties shall first meet and confer in a good faith attempt to resolve the matter between themselves. Each partyshall make all reasonable efforts to provide to the other parties all the information that the party has in its possession that is relevant to the dispute, so that all parties will have ample information with which to reach a decision. If the dispute is not resolved by meeting and conferring, the matter shall be submitted to the Court for resolution pursuant to the Court's reserved jurisdiction as set forth in the Decision.

14. Modification. This Agreement may be amended, altered or modified only by a writing, specifying such amendment, alteration or modification, executed by authorized representatives of each of the parties hereto.

15. Attorney's Fees and Costs. In the event it should become necessary for any party to enforce

any of the terms and conditions of this Agreement by means of court action or administrative enforcement, the prevailing party/parties, in addition to any other remedy at law or in equity available to such party, shall be awarded from the non-prevailing party/parties all reasonable costs and reasonable attorney's fees in connection therewith, including the fees and costs of experts reasonably consulted by the attorneys for the prevailing party/parties.

16. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall be deemed to constitute one and the same instrument.

17. Written Notice. Written notice shall be deemed to have been duly served if delivered in person or by mail to the individuals and at the addresses listed below:

A. WATERMASTER: Administrative Officer
Seaside Basin Watermaster
P.O. Box 51502
Pacific Grove, CA 93950

B. PRODUCER: Director of Operations
California American Water
511 Forest Lodge Road, Suite 100
Pacific Grove, CA 93950

C. DISTRICT: General Manager
Monterey Peninsula Water Management District
5 Harris Court, Building G
Monterey, CA 93940

18. Conflicts with the Decision. The Parties believe this Agreement to be consistent with the terms of the Decision and agree that the PRODUCER's and DISTRICT's rights under this Agreement are subject to the Decision and in the event of any conflict between the provisions of this Agreement and the Decision, the Decision shall control.

19. Entire Agreement. This Agreement constitutes the entire and complete agreement between the parties regarding the subject matter hereof, and supersedes all prior or contemporaneous negotiations, understandings or agreements of the parties, whether written or oral, with respect to such subject matter.

20. Term. This Agreement shall be effective on the date it has been executed by all Parties and shall be coterminous with the WPA.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement consisting of seven (7) pages and three (3) attachments in triplicate on the date hereinabove written.

By_____
Paul Bruno
Chairperson

PRODUCER

By_____ 2/1/19
Garry Hofer
Vice President, Operations

DISTRICT

By_____
David Stoldt
General Manager

ATTACHMENT A

DEFINITIONS
(Excerpted from the Decision)

"Artificial Replenishment" means the act of the WATERMASTER, directly or indirectly, engaging in or contracting for Non-Native Water to be added to the Groundwater supply of the Seaside Basin through Spreading or Direct Injection to offset the cumulative Over-Production from the Seaside Basin in any particular Water Year pursuant to Section III.L.3.j.iii. It shall also include programs in which Producers agree to refrain, in whole or in part, from exercising their right to produce their full Production Allocation where the intent is to cause the replenishment of the Seaside Basin through forbearance in lieu of the injection or spreading of Non-Native Water.

"Carryover" means that portion of a Party's Production Allocation that is not Extracted from the Basin during a particular Water Year. Each acre-foot of Carryover establishes an acre-foot of Carryover Credit.

"Carryover Credit(s)" means the quantity of Water established through Carryover, that a Party is entitled to Produce from the Basin pursuant to Section III.F.

"Extraction," "Extractions," "Extracting," "Extracted," and other variations of the same noun or verb, mean pumping, taking, diverting or withdrawing Groundwater by any manner or means whatsoever from the Seaside Basin.

"Groundwater" means all Water beneath the ground surface in the Seaside Basin, including Water from Natural Replenishment, Artificial Replenishment, Carryover, and Stored Water.

"Natural Replenishment" means all processes by which Water may become a part of the Groundwater supply of the Seaside Basin without the benefit of the Physical Solution and the coordinated management it provides. Groundwater that occurs in the Seaside Basin as a result of the Physical Solution, which is not Natural Replenishment, includes, but is not limited to Storage, Carryover, and Artificial Replenishment.

"Non-Native Water" means all Water that would not otherwise add to the Groundwater supply through natural means or from return flows from surface applications other than intentional Spreading.

"Physical Solution" means the efficient and equitable management of Groundwater resources within the Seaside Basin, as prescribed by this Decision, to maximize the reasonable and beneficial use of Water resources in a manner that is consistent with Article X, Section 2 of the California Constitution, the public interest, and the basin rights of the Parties, while working to bring the Production of Native Water to Natural Safe Yield.

"Producer" means a Party possessing a Base Water Right.

"Standard Production Allocation" is the amount of Groundwater that a Producer participating in this allocation method may Produce from a Subarea of the Seaside Basin as provided in Section III.B.2, which is determined by multiplying the Base Water Right by the Operating Yield.

"Storage" means the existence of Stored Water in the Seaside Basin.

"Storage Allocation" means that quantity of Stored Water in acre feet that a Party is allowed to Store in the Coastal Subarea or the Laguna Seca Subarea at any particular time.

"Storage Allocation Percentage" means the percentage of Total Usable Storage Space allocated to each Producer proceeding under the Standard Production Allocation. Producers proceeding under the Alternative Production Allocation are not allocated Storage rights and, consequently, their share of the Total Usable Storage Space is apportioned to the Producers proceeding under the Standard Production Allocation. Pursuant to the terms of Section III.B.3, Parties proceeding under the Alternative Production Allocation enjoy a one-time right to change to the Standard Production Allocation. Due to the recalculation of the Storage Allocation Percentage necessitated when a Party changes to the Standard Production Allocation, the WATERMASTER will maintain the up-to-date Seaside Basin Storage Allocation Percentages.

"Storage and Recovery Agreement" means an agreement between WATERMASTER and a Party for Storage pursuant to Section III.L.3.j.xx.

"Store" and other variations of the same verb refer to the activities establishing Stored Water in the Seaside Basin.

"Stored Water" means (1) Non-Native Water introduced into the Seaside Basin by a Party or any predecessors-in-interest by Spreading or Directly Injecting that Water into the Seaside Basin for Storage and subsequent Extraction by and for the benefit of that Party or their successors-in-interest; (2) Groundwater within the Seaside Basin that is accounted for as a Producer's Carryover; or (3) Non-Native water introduced into the Basin through purchases by the WATERMASTER, and used to reduce and ultimately reverse Over-Production.

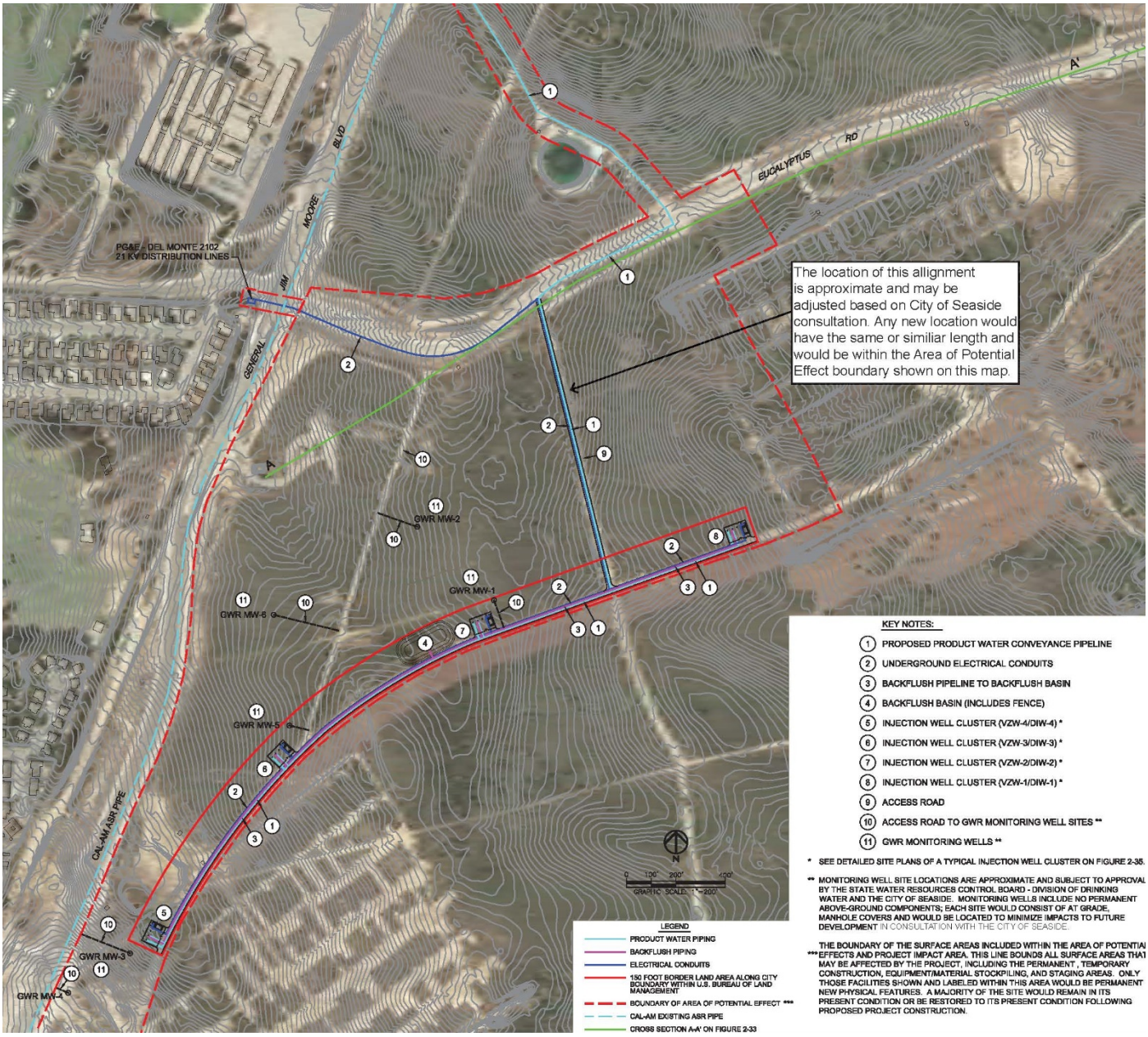
"Stored Water Credit" means the quantity of Stored Water augmenting the Basin's Retrievable Groundwater Supply, which is attributable to a Party's Storage and further governed by this Decision and a Storage and Recovery Agreement.

"Total Useable Storage Space" means the maximum amount of space available in the Seaside Basin that can prudently be used for Storage as shall be determined and modified by WATERMASTER pursuant to Section III.L.3.j.xix, less Storage space which may be reserved by the WATERMASTER for its use in recharging the Basin.

ATTACHMENT B

Delivery Point

AWT Water will be injected by DISTRICT or M1W into the Seaside Groundwater Basin using new injection wells. The proposed new Injection Well Facilities will be located east of General Jim Moore Boulevard, south of Eucalyptus Road in the City of Seaside, including up to eight injection wells (four deep injection wells, four vadose zone wells, in pairs identified as #5, #6, #7, and #8 in the figure below), six monitoring wells, and back-flush facilities.



ATTACHMENT C

MODELING AGREEMENT

MEMORANDUM OF AGREEMENT

BETWEEN THE SEASIDE BASIN WATERMASTER, THE MONTEREY PENINSULA WATER MANAGEMENT DISTRICT, CALIFORNIA AMERICAN WATER COMPANY, AND MONTEREY ONE WATER

TO SHARE IN THE COSTS OF PERFORMING GEOCHEMICAL MODELING OF THE SEASIDE BASIN GROUNDWATER BASIN

THIS AGREEMENT is made and entered into this _____10th_____ day of _____February_____, 2018, by and between the SEASIDE BASIN WATERMASTER, hereinafter referred to as the "WATERMASTER", and the MONTEREY PENINSULA WATER MANAGEMENT DISTRICT, hereinafter referred to as the "DISTRICT", CALIFORNIA AMERICAN WATER COMPANY, hereinafter referred to as "CAWC," and MONTEREY ONE WATER, hereinafter referred to as "M1W," as follows.

In this Agreement the terms "Party" and "Parties" refer to the WATERMASTER, the DISTRICT, CAWC, and/or M1W, either individually or collectively.

RECITALS:

A. The WATERMASTER was established for the purposes of administering and enforcing the provisions of the Amended Decision filed February 9, 2007 in Case No. M66343, California Superior Court, Monterey County ("Amended Decision").

B. Section L.3.j.xxi of the Judgment states in part "The Watermaster will monitor and perform or obtain engineering, hydrogeologic, and scientific studies concerning all characteristics and workings of the Seaside Basin, and all natural and human-induced influences on the Seaside Basin, as they may affect the quantity and quality of Water available for Extraction, that are reasonably required for the purposes of achieving prudent management of the Seaside Basin in accord with the provisions of this Decision."

C. Section L.3.j.xxiii of the Judgment states in part "The Watermaster will take any action within the Seaside Basin, including, but not limited to, capital expenditures and legal actions, which in the discretion of Watermaster is necessary or desirable to accomplish any of the following:

- Prevent contaminants from entering the Groundwater supplies of the Seaside Basin, which present a significant threat to the Groundwater quality of the Seaside Basin, whether or not the threat is immediate;
- Remove contaminants from the Groundwater supplies of the Seaside Basin presenting a significant threat to the Groundwater quality of the Seaside Basin;
- Determine the existence, extent, and location of contaminants in, or which may enter, the Groundwater supplies of the Seaside Basin;
- Determine Persons responsible for those contaminants; and
- Perform or obtain engineering, hydrologic, and scientific studies as may be reasonably required for any of the foregoing purposes.

D. The DISTRICT, CAWC, and M1W intend to submit application(s) to the WATERMASTER for Storage of Non-Native Water in the Seaside Basin ("Application(s)") in accordance with Section III.L.3.j.xx of the Amended Decision, which states in part: "The Watermaster will review applications for Storage in the Seaside Basin, regulate the Storage of Non-Native Water in the Seaside Basin, and issue Storage and Recovery Agreements, all as provided below. All applications for Storage in the Seaside Basin shall be considered and voted on before a noticed meeting of the Watermaster. However, all such applications shall be approved absent the issuance of findings that a Material Injury to the Seaside Basin or Producers will or is likely to occur as a result of the proposed Storage program and no reasonable conditions could be imposed to eliminate such risk. If a Storage application is approved, the Watermaster shall issue a Storage and Recovery Agreement. The Storage and Recovery Agreement may include, among other possible elements and/or provisions, the following conditions to avoid Material Injury: … (4) the particular Water quality characteristics that are required pursuant to the Storage and Recovery Agreement… and any other terms and conditions deemed necessary to protect the Seaside Basin and those areas affected by the Seaside Basin.”."

E. The DISTRICT, CAWC, and M1W propose to store Non-Native Water from the following sources: (1) ASR water produced by the DISTRICT; (2) desalinated seawater produced by CAWC's Monterey Peninsula Water Supply Project ("Desal Water"), and water produced by M1W's Pure Water Monterey project ("PWM Water"). As part of carrying out its duties and responsibilities under the Amended Decision, the WATERMASTER has requested that the Application(s) include a geochemical interaction modeling assessment investigating the potential for adverse geochemical reactions resulting from the introduction of these waters into the Seaside Basin and, if applicable, identifying measures to avoid such adverse reactions.

Terms and Conditions

In consideration of the mutual promises contained herein, the WATERMASTER, the DISTRICT, CAW, and M1W hereby agree to the following terms and conditions:

A. Work to be performed. The DISTRICT will contract directly with its consultant, Pueblo Water Resources, Inc. ("Consultant"), to perform modeling of the proposed groundwater storage and recovery projects to assess the geochemical interaction effects of introducing the non-native water from these projects into the native water in the Basin ("Work"). The Scope of Work and the estimated costs to perform this work are described in Attachment 1 to this Agreement. The DISTRICT will invite the staff of each of the Parties to this Agreement to attend any key milestone meetings and conference calls that are held between the DISTRICT and its Consultant as the Work is being performed, in order to enable each of the Parties to stay abreast of the work, raise pertinent questions in a timely manner, and provide input as appropriate.

The Parties hereto understand, as stated in Attachment 1, that it is difficult for the Consultant to accurately estimate the costs to perform the Work, and that the costs listed in the Estimated Fee Summary of Attachment 1 are the Consultant's best estimates. In the event it is determined, during the course of the Work, that the cost to complete the Work will be greater than the total cost listed in the Estimated Fee Summary, the Parties agree to meet and confer to reach agreement on a revised cost that will be shared as described in paragraph B below, so that the Work can be completed. Agreement on said revised cost shall not be binding on any Party unless and until that Party formalizes its agreement to the revised cost in writing to each of the other Parties.

B. Costs to be shared. The $68,679 cost to be shared is contained in the Estimated Fee Summary of Attachment 1. This cost will be shared in the following percentages:
Watermaster share = 0% ($0)
District share = 33 and 1/3% ($22,893)
CAWC share = 33 and 1/3% ($22,893)
M1W share = 33 and 1/3% ($22,893)

(In the event a revised cost is agreed to, as described in paragraph A above, these dollar figures will change).

As noted under the heading "Services Not Included" in Attachment 1, certain items are not included in the Consultant's scope of work or estimated costs. These items include:

- Laboratory fees
- Construction of site facilities
- Permit fees
- Cost of water, electricity, or other utilities, and
- Any other items not specifically included in the Consultant's scope of services.

The parties agree that the DISTRICT, CAWC, and M1W will each undertake and pay for these activities for their individual projects.

C. **Documents to be provided.** The DISTRICT will ensure that: (1) After completion of Tasks 1, 2, 3, 4, and 5, as described in Attachment 1, a Technical Memorandum or summary report will be prepared by the Consultant and provided by the DISTRICT to each of the other Parties, and (2) After completion of Task 6 an overall summary report will be prepared by the Consultant and provided by the DISTRICT to each of the other Parties.

D. **Payment of costs and reimbursement to the DISTRICT.** The DISTRICT will make progress payments to the Consultant as it satisfactorily performs the Work. After the satisfactory completion of the work, the DISTRICT will provide to CAWC and M1W copies of the invoices received from and payments made to the Consultant. Within 45 days of receiving those documents, CAWC and M1W will reimburse the DISTRICT for their respective shares of those costs.

E. **Term of Agreement.** The term of this Agreement shall commence on the date of its execution by all Parties, and shall continue in effect until the DISTRICT has been reimbursed as described in paragraph D above.

F. **Hold Harmless.** Under this Agreement the Parties do hereby agree to indemnify, defend, and hold the other Parties, their respective Board members, officers, employees, agents, and representatives harmless from and against any and all liability, claims, suits, actions, damages, and causes of action of any kind arising out of the indemnifying Party's use of the Work in the planning, design, and construction, operation, and maintenance of the indemnifying Party's projects.

G. **Venue**. This Agreement shall be governed by the laws of the state of California. The Parties agree that venue for any litigation arising out of this Agreement shall be exclusively vested in the state courts of the County of Monterey, or the United States District Court for the Northern District of California. Further, the prevailing Party shall be entitled to reasonable attorney fees and costs.

H. **Miscellaneous**. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which shall be deemed to constitute one and the same instrument. Paragraph headings are for convenience only and shall not be used in interpreting this Agreement. All Attachments to this Agreement are incorporated herein. This Agreement constitutes the entire agreement between the Parties with respect to the subject matter herein and may only be modified in a writing executed by all Parties. Each Party acknowledges that it participated in the drafting of this Agreement and agrees that any ambiguity herein shall not be construed against any Party as the drafter of the Agreement.

I. **Notices**. Written notice shall be deemed to have been duly served if delivered in person or by mail to the individuals and at the addresses listed below:

A. WATERMASTER: Technical Program Manager
Seaside Basin Watermaster
P.O. Box 51502
Pacific Grove, CA 93950

B. DISTRICT: General Manager
Monterey Peninsula Water Management District
5 Harris Court, Building G
Monterey, CA 93940

C. CAWC: Operations Manager, Central Division
California American Water
511 Forest Lodge Road, Suite 100
Pacific Grove, CA 93950

D. M1W: General Manager
Monterey One Water
5 Harris Court, Building D
Monterey, CA 93940

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the dates shown below.

WATERMASTER

Date: 2/20/18

By: _____
Ralph Rubio, Chair, Board of Directors

DISTRICT

Date: 2/12/18

By: _____
David Stoldt, General Manager

CAWC

Date: 2/7/18

By: _____
Eric Sabolsice, Director of Operations

MIW

Date: 2-14-18

By: Paul Sciuto, General Manager

ATTACHMENT 1

Scope of Work and Cost

to

Perform Modeling of Proposed Groundwater Recharge Projects to Assess the Geochemical Interaction Effects of Introducing Non-native Water from Those Projects into the Native Water in the Basin

November 17, 2017
Project No. 12-0048

Monterey Peninsula Water Management District
5 Harris Court, Building G
Monterey, California 93942

Attention: Mr. Jonathan Lear, Senior Hydrogeologist

Subject: Proposal for Seaside Groundwater Basin Geochemical Interaction Evaluation

Dear Mr. Lear:

In accordance with your request, Pueblo Water Resources, Inc. (PWR) is pleased to submit this proposal to provide a geochemical interaction evaluation of various managed aquifer recharge (MAR) projects currently planned to be implemented in the Seaside Groundwater Basin (SGB). Presented in this proposal is a detailed scope of work, estimated costs, and schedule to provide the requested services.

PURPOSE AND SCOPE

The purpose of the proposed work is to perform an initial geochemical interaction modeling assessment of various active and proposed MAR projects in the SGB. The only currently active MAR project is the Monterey Peninsula ASR Project, which injects treated excess Carmel River System water into 4 existing ASR wells (ASR-1 through ASR-4). Proposed MAR projects include the Pure Water Monterey and Monterey Peninsula Water Supply Project (MPWSP), which would inject advanced treated recycled water and desalinated seawater, respectively, into future injection wells in the SGB. The proposed activities and programs related to MAR in the SGB will ultimately result in the mixing and interaction of the following 4 waters:

- Santa Margarita Sandstone aquifer native groundwater
- Treated and disinfected Carmel River System water
- Treated water from the Pure Water Monterey project
- Desalinated seawater from the MPWSP

All of these waters will mix together in various proportions at various times within the geologic matrix of the Santa Margarita Sandstone aquifer (Tsm) within the SGB. The intermixing of these 4 waters and their individual and combined reactions with the minerals in the Tsm formation will result in a variety of geochemical reactions – these reactions may be beneficial (e.g., stabilization of water quality and reduction in corrosivity) or potentially problematic (e.g., precipitation of cementitous scales or evolution of gasses) – and would alter the quality of the

water recovered from the ASR wells and California American Water's (CAW) other municipal production wells in the SGB.

It is therefore prudent to investigate these geochemical reactions and to identify the potential for adverse reactions; and if present, to identify measures to avoid such adverse conditions. The investigation proposed herein will address these issues through a stepwise approach as discussed below.

Scope of Services

The above scenarios can be analyzed through utilization of geochemical simulations from various interaction models and chemical equilibrium databases. A geochemical interaction model has been developed by PWR in recent years to address the interaction of the Tsm mineralogy with Carmel River System waters and Native Tsm groundwater to address these same issues, and will be expanded to cover the more complex interactions of the 4 proposed project waters. PWR's existing geochemical model is based on the USGS geochemical interaction software PHREEQC-2, version 2.15.2697 combined with the robust Lawrence Livermore National Laboratory (LLNL) geochemical equilibrium database.

Implementation of the investigation will include the following tasks, which are structured to allow assessment of results at each step and provide the opportunity to modify the investigation or drop specific lines of analysis due to either fatal flaws or findings of no potential significance. A brief overview of the proposed scope or work by task is presented below:

Task 1 – Water Chemistry Data Compilation

Characterize the complete composition and character of the 4 water sources via laboratory and field analyses, or in the case of waters that do not currently exist (ie MPWSP desal plant water and Pure Water Monterey project effluent), quantitative process modeling estimations of water quality parameters (note that these process modeling estimations are not part of our services and would be provided by the project proponent's engineers). The initial step in this effort will be the preparation of a list of water chemistry parameters necessary for geochemical interaction modeling and a request for data for the injection source waters from the Pure Water Monterey and MPWSP project sponsors (MRWPCA and CAW, respectively). Data gaps will be identified and a Sampling and Analysis Plan (SAP) will be developed to fill any data gaps.

Task Deliverable: A Technical Memorandum (TM) summarizing the available water quality data for each of the project sources, and a SAP to fill-in missing data. *Note that no costs for collection of field or laboratory data are budgeted in this task. If additional sampling is necessary, such costs are assumed to be the responsibility of the respective source water generators or project proponents.*

Task Duration: 4 weeks

Task 2 – Aquifer Mineralogy Data Compilation

Characterize the mineral composition of the Tsm aquifer via empirical laboratory analysis of well cuttings and/or core samples. These data already exist for two of the ASR project wells (ASR-2 and ASR-3) that characterize the Tsm aquifer mineralogy at the two ASR facilities (Santa Margarita and Seaside Middle School, respectively); however, similar data will be needed for the Pure Water Monterey and MPWSP well facilities, and will need to be coordinated with the construction of the new wells for these projects. In addition, the older/existing mineralogical data may be incomplete for purposes of this new modeling effort. To maximize the quality and quantity of data available for this work, detailed protocols for sample collection and analytical testing will be provided.

Task Deliverable: A TM summarizing the mineral characterization of the Tsm, and protocol for the sample collection and analysis of upcoming Tsm mineralogy samples. *Note that no costs for field or laboratory analyses are budgeted for this task; but are reportedly included in the current budgets for the construction of the monitoring well for the Pure Water Monterey project in May 2018.*

Task Duration: 2 weeks

Task 3 – Geochemical Model Development

Develop a geochemical interaction model based on the data derived from Tasks 1 and 2 above, combined with the geochemical equilibrium databases discussed previously.

To complete this work, the existing model will be upgraded and expanded, including the addition of the most recent French Geological Survey (BRGM) Thermoddem V1.1 database and the Swiss (ETH Zurich) CHEMDATA17 database. The upgrades will allow further analysis of water quality stabilization, more accurate identification of sulfate/carbonate/siliceous scaling, and assessment of corrosivity issues in recovered waters.

Task Deliverable: A summary of model base and primary settings will be provided if requested.

Task Duration: 3 weeks

Task 4 – Model Mixing Ratios

Upon completion of Task 3, PWR will model a number of mixing ratios of the four water types. For the purpose of planning, there will be 21 mixtures of various percentage mixtures of the four water types; **Table 1** outlines the mixing ratios that will initially be modeled. The matrix of water mixtures presented in **Table 1** were chosen through discussions with MPWMD staff to bracket the potential extreme case mixing scenarios that might occur during program operations; this methodology should identify potential problem areas to avoid early in the investigation, which will allow additional efforts to analyze these scenarios if warranted.

PWR will analyze the geochemical stability of each of the individual waters, and perform the modeling of the proposed intermixing scenarios described above. The results of the

modeling will be analyzed and interpreted with specific attention to potentially adverse geochemical interactions such as mineral scale formation, gas evolution, and leaching/mobilization of deleterious compounds within the Tsm formation.

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Task Deliverable: A TM summarizing the results of the geochemical interaction modeling, and recommendations for additional model scenarios based on the initial output runs.

Task Duration: 6 weeks

Table 1. Summary of Mix Ratios for Geochemical Modeling

Mix No.	% Native Tsm Water	% Treated Carmel River Water	% Reclaimed PWM Water	% Desal Water
1	100	0	0	0
2	0	100	0	0
3	0	0	100	0
4	0	0	0	100
5	66	33	0	0
6	66	0	33	0
7	66	0	0	33
8	33	66	0	0
9	0	66	33	0
10	0	66	0	33
11	33	0	66	0
12	0	33	66	0
13	0	0	66	33
14	33	0	0	66
15	0	33	0	66
16	0	0	33	66
17	55	15	15	15
18	15	55	15	15
19	15	15	55	15
20	15	15	15	55
21	25	25	25	25

Task 5 – (Optional Task) Additional Focused Analysis

Based on the results of Task 4 above, PWR will identify those mixture simulations that show undesirable geochemical reactions (ie mineral precipitation or gas evolution) and will re-run those model simulations under various modifications of mix ratios and/or aquifer conditions

to identify methods of mitigating the observed adverse reactions and to identify potential operational scenarios which would prevent such adverse geochemical reactions from occurring.

Task Deliverable: A TM summarizing the results of the supplemental modeling and recommendations for project design and/or operational changes associated with enhancing recovered water quality or avoiding adverse geochemical reactions.

Task Duration: 4-6 weeks

Task 6 – Reporting

Upon the conclusion of tasks 1-5, PWR will develop an overall summary report and recommendations for process and/or operational changes for each project to reduce or avoid adverse geochemical reactions. PWR will also participate in two technical workshops with project stakeholders to discuss the impacts to the various regional projects, and participate in one presentation to the Watermaster Board to address questions and present findings.

Task Duration: 4 weeks

Task 7 – Project Management and Meetings

Provide routine project management, including invoicing, schedule management, project coordination and communication. This will include one intermediate and one final presentation of the evaluation findings and recommendations to the SGB Water Master Technical Advisory Committee (TAC).

Task Duration: Ongoing

Services Not Included

It should be noted that completion of this project will require services which are not included in our proposal; the costs for these items are presumed to be paid for by the project proponents under the provisions of the Storage Agreement. These items include (but are not limited to) the following:

- Laboratory fees;
- Construction of site facilities;
- Permit fees;
- Cost of water, electricity, or other utilities;
- Any other items not specifically included in PWR's scope of services.

ESTIMATED FEES AND SCHEDULE

Based on the scope of services presented herein, we estimate the fees for our services will be approximately *$51,365*, which will be billed on a time-plus-expenses basis in accordance with our current Fee Schedule (attached). An estimated fee summary worksheet is attached summarizing the estimated man-hours and costs per task/work item. The spreadsheet also identifies the cost total including Optional Task 5, as well as a 10 percent contingency which has been noted in the attached budget summary in the event that unforeseen project complications or constraints arise (total with optional task and 10% contingency is *$68,679*). We recommend the contingency be held for authorization by District staff upon written justification by PWR.

We understand that in order to authorize this work, your Board must first approve a formal contract amendment. Based on our current workload, we believe that we can commence work within two weeks of your authorization and that the work will be completed within approximately 4 months.

We appreciate the opportunity to provide ongoing assistance to the District on this important community water-supply project. If you require additional information regarding this or other matters, please contact me.

Sincerely,

PUEBLO WATER RESOURCES, INC.

Stephen P. Tanner, P.E.
Principal Engineer

SPT.rcm

Attachments: Cost Estimation Spreadsheet
2018 Fee Schedule

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT
Professional Services for SGB Geochemical Interaction Evaluation

PUEBLO water resources

PWR Project No.: 12-0048

ESTIMATED FEE SUMMARY

LABOR		Principal Professional	Senior Professional	Drafting	WP	Hours by Task	Estimated Task Cost
	Hourly Fee	$205	$185	$115	$95		
Task No.	Task Description						
1	Water Chemistry Data Compilation	22	-	-	12	34	$5,650
2	Aquifer Mineralogy Compilation	38	-	-	-	38	$7,790
3	Geochemical Model Development	48	-	-	-	48	$9,840
4	Model Mixing Ratios	67	-	-	-	67	$13,735
5	Additional Focused Analysis (OPTIONAL)	54	-	-	-	54	$11,070
6	Reporting	48	-	-	-	48	$9,840
7	PM and Meetings	22	-	-	-	22	$4,510
		-	-	-	-	0	$0
		-	-	-	-	0	$0
		-	-	-	-	0	$0
Hours by Labor Category:		299	0	0	12		
Costs by Labor Category:		$61,295	$0	$0	$1,140		
		Total Labor Hours (not inc. Optional Task):				257	
		Total Labor Costs (not inc. Optional Task):				$51,365	
		Total Labor Hours (inc. Optional Task):				311	
		Total Labor Costs (inc. Optional Task):				$62,435	

OTHER DIRECT COSTS (ODC's)				
Item	Units	Unit Price	No. of Units	Fee
Vehicle	Daily	$75		$0
Travel Per Diem	Daily	$150		$0
				$0
				$0
				$0
			Subtotal ODCs:	$0

OUTSIDE SERVICES					
Task No.	Item	Units	Unit Price	No. of Units	Fee
					$0
					$0
					$0
					$0
					$0
Subtotal Outside Services:					$0
Subtotal Outside Services w/ Markup (15%):					$0

COST SUMMARY	
Labor (not inc. Optional Task)	$51,365
Other Direct Costs	$0
Outside Services	$0
Subtotal (not inc. Optional Task):	$51,365
10 % Contingency (not inc. Optional Task)	$5,137
TOTAL ESTIMATED PROJECT COST (not inc. Optional Task):	$56,502
Task 5 (Optional)	$11,070
Subtotal (inc. Optional Task):	$62,435
10 % Contingency (inc. Optional Task)	$6,244
TOTAL ESTIMATED PROJECT COST (inc. Optional Task):	$68,679

PUEBLO WATER RESOURCES, INC
2018 FEE SCHEDULE

Professional Services

Principal Professional.....$205/hr
Senior Professional.....$190/hr
Project Professional.....$175/hr
Staff Professional.....$145/hr
Technician.....$135/hr
Illustrator.....$120/hr
Word Processing.....$100/hr

Other Direct Charges

Subcontracted Services..... Cost Plus 15%
Outside Reproduction..... Cost Plus 15%
Travel Expenses.....Cost Plus 15%
Per Diem*.....$150/day
Vehicle $75/day

Equipment Charges

Drilling Fluid Test Kit..... $100/day, $400/week
Field Water Quality Meter (Hach DR890)..... $75/day, $275/week
Orion ORP/pH/Temp Probe..... $75/day, $275/week
Water Level Probes (In-Situ Mini-Troll/Level Troll).....$100/day, $300/week
Fuji Ultrasonic Flowmeter.....$200/day, $750/week

*Regionally and seasonally specific to project.

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805.644.0470 • 805.644.0480 FAX

water recovered from the ASR wells and California American Water's (CAW) other municipal production wells in the SGB.

It is therefore prudent to investigate these geochemical reactions and to identify the potential for adverse reactions; and if present, to identify measures to avoid such adverse conditions. The investigation proposed herein will address these issues through a stepwise approach as discussed below.

Scope of Services

The above scenarios can be analyzed through utilization of geochemical simulations from various interaction models and chemical equilibrium databases. A geochemical interaction model has been developed by PWR in recent years to address the interaction of the Tsm mineralogy with Carmel River System waters and Native Tsm groundwater to address these same issues, and will be expanded to cover the more complex interactions of the 4 proposed project waters. PWR's existing geochemical model is based on the USGS geochemical interaction software PHREEQC-2, version 2.15.2697 combined with the robust Lawrence Livermore National Laboratory (LLNL) geochemical equilibrium database.

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Characterize the complete composition and character of the 4 water sources via laboratory and field analyses, or in the case of waters that do not currently exist (ie MPWSP desal plant water and Pure Water Monterey project effluent), quantitative process modeling estimations of water quality parameters (note that these process modeling estimations are not part of our services and would be provided by the project proponent's engineers). The initial step in this effort will be the preparation of a list of water chemistry parameters necessary for geochemical interaction modeling and a request for data for the injection source waters from the Pure Water Monterey and MPWSP project sponsors (MRWPCA and CAW, respectively). Data gaps will be identified and a Sampling and Analysis Plan (SAP) will be developed to fill any data gaps.

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Task Duration: 4 weeks

Task 2 – Aquifer Mineralogy Data Compilation

Characterize the mineral composition of the Tsm aquifer via empirical laboratory analysis of well cuttings and/or core samples. These data already exist for two of the ASR project wells (ASR-2 and ASR-3) that characterize the Tsm aquifer mineralogy at the two ASR facilities (Santa Margarita and Seaside Middle School, respectively); however, similar data will be needed for the Pure Water Monterey and MPWSP well facilities, and will need to be coordinated with the construction of the new wells for these projects. In addition, the older/existing mineralogical data may be incomplete for purposes of this new modeling effort. To maximize the quality and quantity of data available for this work, detailed protocols for sample collection and analytical testing will be provided.

Task Deliverable: A TM summarizing the mineral characterization of the Tsm, and protocol for the sample collection and analysis of upcoming Tsm mineralogy samples. *Note that no costs for field or laboratory analyses are budgeted for this task; but are reportedly included in the current budgets for the construction of the monitoring well for the Pure Water Monterey project in May 2018.*

Task Duration: 2 weeks

Task 3 – Geochemical Model Development

Develop a geochemical interaction model based on the data derived from Tasks 1 and 2 above, combined with the geochemical equilibrium databases discussed previously.

To complete this work, the existing model will be upgraded and expanded, including the addition of the most recent French Geological Survey (BRGM) Thermoddem V1.1 database and the Swiss (ETH Zurich) CHEMDATA17 database. The upgrades will allow further analysis of water quality stabilization, more accurate identification of sulfate/carbonate/siliceous scaling, and assessment of corrosivity issues in recovered waters.

Task Deliverable: A summary of model base and primary settings will be provided if requested.

Task Duration: 3 weeks

Task 4 – Model Mixing Ratios

Upon completion of Task 3, PWR will model a number of mixing ratios of the four water types. For the purpose of planning, there will be 21 mixtures of various percentage mixtures of the four water types; **Table 1** outlines the mixing ratios that will initially be modeled. The matrix of water mixtures presented in **Table 1** were chosen through discussions with MPWMD staff to bracket the potential extreme case mixing scenarios that might occur during program operations; this methodology should identify potential problem areas to avoid early in the investigation, which will allow additional efforts to analyze these scenarios if warranted.

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modeling will be analyzed and interpreted with specific attention to potentially adverse geochemical interactions such as mineral scale formation, gas evolution, and leaching/mobilization of deleterious compounds within the Tsm formation.

Task Deliverable: A TM summarizing the results of the geochemical interaction modeling, and recommendations for additional model scenarios based on the initial output runs.

Task Duration: 6 weeks

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Mix No.	% Native Tsm Water	% Treated Carmel River Water	% Reclaimed PWM Water	% Desal Water
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10	0	66	0	33
11	33	0	66	0
12	0	33	66	0
13	0	0	66	33
14	33	0	0	66
15	0	33	0	66
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Based on the results of Task 4 above, PWR will identify those mixture simulations that show undesirable geochemical reactions (ie mineral precipitation or gas evolution) and will re-run those model simulations under various modifications of mix ratios and/or aquifer conditions

to identify methods of mitigating the observed adverse reactions and to identify potential operational scenarios which would prevent such adverse geochemical reactions from occurring.

Task Deliverable: A TM summarizing the results of the supplemental modeling and recommendations for project design and/or operational changes associated with enhancing recovered water quality or avoiding adverse geochemical reactions.

Task Duration: 4-6 weeks

Task 6 – Reporting

Upon the conclusion of tasks 1-5, PWR will develop an overall summary report and recommendations for process and/or operational changes for each project to reduce or avoid adverse geochemical reactions. PWR will also participate in two technical workshops with project stakeholders to discuss the impacts to the various regional projects, and participate in one presentation to the Watermaster Board to address questions and present findings.

Task Duration: 4 weeks

Task 7 – Project Management and Meetings

Provide routine project management, including invoicing, schedule management, project coordination and communication. This will include one intermediate and one final presentation of the evaluation findings and recommendations to the SGB Water Master Technical Advisory Committee (TAC).

Task Duration: Ongoing

Services Not Included

It should be noted that completion of this project will require services which are not included in our proposal; the costs for these items are presumed to be paid for by the project proponents under the provisions of the Storage Agreement. These items include (but are not limited to) the following:

- Laboratory fees;
- Construction of site facilities;
- Permit fees;
- Cost of water, electricity, or other utilities;
- Any other items not specifically included in PWR's scope of services.

ESTIMATED FEES AND SCHEDULE

Based on the scope of services presented herein, we estimate the fees for our services will be approximately *$51,365*, which will be billed on a time-plus-expenses basis in accordance with our current Fee Schedule (attached). An estimated fee summary worksheet is attached summarizing the estimated man-hours and costs per task/work item. The spreadsheet also identifies the cost total including Optional Task 5, as well as a 10 percent contingency which has been noted in the attached budget summary in the event that unforeseen project complications or constraints arise (total with optional task and 10% contingency is *$68,679*). We recommend the contingency be held for authorization by District staff upon written justification by PWR.

We understand that in order to authorize this work, your Board must first approve a formal contract amendment. Based on our current workload, we believe that we can commence work within two weeks of your authorization and that the work will be completed within approximately 4 months.

We appreciate the opportunity to provide ongoing assistance to the District on this important community water-supply project. If you require additional information regarding this or other matters, please contact me.

Sincerely,

PUEBLO WATER RESOURCES, INC.

Stephen P. Tanner, P.E.
Principal Engineer

SPT.rcm

Attachments: Cost Estimation Spreadsheet
2018 Fee Schedule

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT
Professional Services for SGB Geochemical Interaction Evaluation

PUEBLO water resources

PWR Project No.: 12-0048

ESTIMATED FEE SUMMARY

LABOR		Principal Professional	Senior Professional	Drafting	WP	Hours by Task	Estimated Task Cost
	Hourly Fee	$205	$185	$115	$95		
Task No.	Task Description						
1	Water Chemistry Data Compilation	22	-	-	12	34	$5,650
2	Aquifer Mineralogy Compilation	38	-	-	-	38	$7,790
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6	Reporting	48	-	-	-	48	$9,840
7	PM and Meetings	22	-	-	-	22	$4,510
		-	-	-	-	0	$0
		-	-	-	-	0	$0
		-	-	-	-	0	$0
	Hours by Labor Category:	299	0	0	12		
	Costs by Labor Category:	$61,295	$0	$0	$1,140		
		Total Labor Hours (not inc. Optional Task):				257	
		Total Labor Costs (not inc. Optional Task):				$51,365	
		Total Labor Hours (inc. Optional Task):				311	
		Total Labor Costs (inc. Optional Task):				$62,435	

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Item	Units	Unit Price	No. of Units	Fee
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Travel Per Diem	Daily	$150		$0
				$0
				$0
				$0
			Subtotal ODCs:	$0

OUTSIDE SERVICES					
Task No.	Item	Units	Unit Price	No. of Units	Fee
					$0
					$0
					$0
					$0
					$0
Subtotal Outside Services:					$0
Subtotal Outside Services w/ Markup (15%):					$0

COST SUMMARY	
Labor (not inc. Optional Task)	$51,365
Other Direct Costs	$0
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Subtotal (not inc. Optional Task):	$51,365
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Task 5 (Optional)	$11,070
Subtotal (inc. Optional Task):	$62,435
10 % Contingency (inc. Optional Task)	$6,244
TOTAL ESTIMATED PROJECT COST (inc. Optional Task):	$68,679

12-0048_SGB_Geochem_Modeling_costs_draft_2017-11-17.xls 11/17/2017

PUEBLO WATER RESOURCES, INC
2018 FEE SCHEDULE

Professional Services

Principal Professional.....$205/hr
Senior Professional.....$190/hr
Project Professional.....$175/hr
Staff Professional.....$145/hr
Technician.....$135/hr
Illustrator.....$120/hr
Word Processing.....$100/hr

Other Direct Charges

Subcontracted Services..... Cost Plus 15%
Outside Reproduction..... Cost Plus 15%
Travel Expenses.....Cost Plus 15%
Per Diem*.....$150/day
Vehicle $75/day

Equipment Charges

Drilling Fluid Test Kit..... $100/day, $400/week
Field Water Quality Meter (Hach DR890)..... $75/day, $275/week
Orion ORP/pH/Temp Probe..... $75/day, $275/week
Water Level Probes (In-Situ Mini-Troll/Level Troll).....$100/day, $300/week
Fuji Ultrasonic Flowmeter.....$200/day, $750/week

*Regionally and seasonally specific to project.

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