This meeting has been noticed according to the Brown Act rules. The Board of Directors meets regularly on the third Monday of each month, except in January, February and November. The meetings begin at 7:00 PM.

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

AGENDA
Regular Meeting
Board of Directors
Monterey Peninsula Water Management District
****
Monday, August 21, 2017
Closed Session – 5:30 pm
2999 Monterey Salinas Hwy., Monterey CA 93940
Regular Meeting – 7:00 pm
Conference Room, Monterey Peninsula Water Management District
5 Harris Court, Building G, Monterey, CA

Staff notes will be available on the District web site at
http://www.mpwmd.net/who-we-are/board-of-directors/bod-meeting-agendas-calendar/
by 5 PM on Friday, August 18, 2017.

The 7:00 PM Meeting will be televised on Comcast Channels 25 & 28. Refer to broadcast schedule on page 3.

5:30 pm Closed Session	As permitted by Government Code Section 54956 et seq., the Board may adjourn to closed or executive session to consider specific matters dealing with pending or threatened litigation, certain personnel matters, or certain property acquisition matters.

1. **Public Comment** – Members of the public may address the Board on the item or items listed on the Closed Session agenda.

2. **Adjourn to Closed Session**

3. **Conference with Legal Counsel – Existing Litigation (Gov. Code 54956.9 (a))**
   A. Application of California American Water to CPUC (No. 12-04-019) – Monterey Peninsula Water Supply Project
   B. MPWMD v. SWRCB; Santa Clara 1-10-CV-163328 – CDO – (6th District Appellate Case #H039154)

4. **Adjourn to 7 pm Session**

7:00 pm Regular Meeting

CALL TO ORDER/ROLL CALL

Board of Directors
Robert S. Brower, Sr., Chair – Division 5
Andrew Clarke, Vice Chair – Division 2
Brenda Lewis – Division 1
Molly Evans – Division 3
Jeanne Byrne – Division 4
Ralph Rubio, Mayoral Representative
Mary Adams, Monterey County Board of Supervisors Representative

General Manager
David J. Stoldt

This agenda was posted at the District office at 5 Harris Court, Bldg. G Monterey on Wednesday, August 16, 2017. Staff reports regarding these agenda items will be available for public review on 8/17/2017, at the District office and at the Carmel, Carmel Valley, Monterey, Pacific Grove and Seaside libraries. After staff reports have been distributed, if additional documents are produced by the District and provided to a majority of the Board regarding any item on the agenda, they will be available at the District office during normal business hours, and posted on the District website at www.mpwmd.net/who-we-are/board-of-directors/bod-meeting-agendas-calendar/. Documents distributed at the meeting will be made available in the same manner. The next regular meeting of the Board of Directors is scheduled for September 18, 2017 at 7 pm.

PLEDGE OF ALLEGIANCE

ADDITIONS AND CORRECTIONS TO AGENDA - The Clerk of the Board will announce agenda corrections and proposed additions, which may be acted on by the Board as provided in Sections 54954.2 of the California Government Code.

ORAL COMMUNICATIONS - Anyone wishing to address the Board on Consent Calendar, Information Items, Closed Session items, or matters not listed on the agenda may do so only during Oral Communications. Please limit your comment to three (3) minutes. The public may comment on all other items at the time they are presented to the Board.

CONSENT CALENDAR: The Consent Calendar consists of routine items for which staff has prepared a recommendation. Approval of the Consent Calendar ratifies the staff recommendation. Consent Calendar items may be pulled for separate consideration at the request of a member of the public, or a member of the Board. Following adoption of the remaining Consent Calendar items, staff will give a brief presentation on the pulled item. Members of the public are requested to limit individual comment on pulled Consent Items to three (3) minutes.

1. Consider Adoption of Minutes of July 17, 2017 Regular Meeting of the Board
2. Consider Renewal of Contract with JEA & Associates for Legislative and Administrative Services
3. Consider Approval of Budget for Groundwater Models for Seaside Groundwater Basin
4. Authorize Expenditure to Replace the Vertical Water Quality Profiling Device's Drive System in the Carmel River Lagoon
5. Authorize Expenditure for Passive Integrated Transponder (PIT) Tag Reading Equipment to Monitor Juvenile Steelhead Emigration and Eventual Adult Returns
6. Consider Funding for Community Water Conservation Demonstration Project at Martin Luther King Jr. Elementary School, 1713 Broadway Ave., Seaside
7. Consider Issuance of Lawn Removal Rebate to Monterey Peninsula Unified School District for Martin Luther King Jr. School
8. Consider Approval of 2017 Annual Memorandum of Agreement for Releases from Los Padres Reservoir among California American Water, California Department of Fish and Wildlife, and Monterey Peninsula Water Management District
   (*Exempt from environmental review per SWRCB Order Nos. 95-10, 98-04, 2002-0002 and 2016-0016, and Section 15268 of the California Environmental Quality Act (CEQA) Guidelines, as a ministerial project; Exempt from Section 15307, Actions by Regulatory Agencies for Protection of Natural Resources.*)
9. Authorize Funding for Pueblo Water Resources to Proceed with the Supplemental Sample Analysis Plan Water Quality Investigation
10. Consider Expenditure to Contract with the California Conservation Corps for Fall 2017 Vegetation Management Activities
11. Authorize Funds for Repair of Injection Valve at Aquifer Storage and Recovery Well Number 1

GENERAL MANAGER'S REPORT

12. Status Report on California American Water Compliance with State Water Resources Control Board Order 2016-0016 and Seaside Groundwater Basin Adjudication Decision

ATTORNEY'S REPORT

13. Report on 5:30 pm Closed Session of the Board

RECOGNIZE SURESH PRASAD FOR GOVERNMENT FINANCE OFFICERS ASSOCIATION EXCELLENCE IN FINANCIAL REPORTING AWARD

DIRECTORS' REPORTS (INCLUDING AB 1234 REPORTS ON TRIPS, CONFERENCE ATTENDANCE AND MEETINGS)

14. Oral Reports on Activities of County, Cities, Other Agencies/Committees/Associations

PUBLIC HEARINGS – Public comment will be received on each of these items. Please limit your comment to three (3) minutes per item.

15. Consider First Reading of Ordinance No. 177 - Amending Rules 11, 23, 23.5, 24, 25.5, 141, 142, 143, 144, and 154 (CEQA Section 15063 Initial Study; Negative Declaration will be presented at second reading pursuant to CEQA Section 15070.)
Action: *The Board will receive public comment on the first reading of Ordinance No. 177, and will consider scheduling a future date for second reading and adoption. The ordinance would amend rules related to Water permits, Water Use Permits, water efficiency requirements and Rebates.*

ACTION ITEMS – Public comment will be received on each of these items. Please limit your comment to three (3) minutes per item.

16. Consider Approval of Amendment to Agreement for Employment of General Manager
Action: *The Board will review the proposed amendment to the agreement for employment and consider adoption.*

INFORMATIONAL ITEMS/STAFF REPORTS The public may address the Board on Information Items and Staff Reports during the Oral Communications portion of the meeting. Please limit your comments to three minutes.

17. Receive Notice of Appointment to Carmel River Advisory Committee
18. Letters Received Supplemental Letter Packet
19. Committee Reports
20. Monthly Allocation Report
21. Water Conservation Program Report
22. Carmel River Fishery Report
23. Semi-Annual Financial Report on the CAWD/PBCSD Wastewater Reclamation Project
24. Monthly Water Supply and California American Water Production Report

ADJOURNMENT

Board Meeting Broadcast Schedule – Comcast Channels 25 & 28 View Live Webcast at Ampmedia.org	
Ch. 25, Mondays, 7 PM	Monterey, Del Rey Oaks, Pacific Grove, Sand City, Seaside
Ch. 25, Mondays, 7 PM	Carmel, Carmel Valley, Del Rey Oaks, Monterey, Pacific Grove, Pebble Beach, Sand City, Seaside
Ch. 28, Mondays, 7 PM	Carmel, Carmel Valley, Del Rey Oaks, Monterey, Pacific Grove, Pebble Beach, Sand City, Seaside
Ch. 28, Fridays, 9 AM	Carmel, Carmel Valley, Del Rey Oaks, Monterey, Pacific Grove, Pebble Beach, Sand City, Seaside

Upcoming Board Meetings			
Monday, September 18, 2017	Regular Board Meeting	7:00 pm	District conference room
Monday, October 16, 2017	Regular Board Meeting	7:00 pm	District conference room
Monday, November 13, 2017	Regular Board Meeting	7:00 pm	District conference room

ITEM: CONSENT CALENDAR

1. CONSIDER ADOPTION OF MINUTES OF THE JULY 17, 2017 REGULAR BOARD MEETING

Meeting Date:	**August 21, 2017**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Arlene Tavani**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.

SUMMARY: Attached as **Exhibit 1-A** are draft minutes of the July 17, 2017 Regular meeting of the Board of Directors.

RECOMMENDATION: District staff recommends approval of the minutes with adoption of the Consent Calendar.

EXHIBIT
1-A Draft Minutes of the July 17, 2017 Regular Meeting of the Board of Directors

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

EXHIBIT 1-A

DRAFT MINUTES
Regular Meeting
Board of Directors
Monterey Peninsula Water Management District
July 17, 2017

CALL TO ORDER/ROLL CALL

The meeting was called to order at 7:00 pm in the MPWMD conference room.

Directors Present:
Robert S. Brower, Sr. – Chair, Division 5
Andrew Clarke – Vice Chair, Division 2
Brenda Lewis – Division 1
Molly Evans – Division 3
Jeanne Byrne – Division 4
Mary Adams – Monterey County Board of Supervisors

Directors Absent: Ralph Rubio – Mayoral Representative

General Manager present: David J. Stoldt

District Counsel present: David Laredo

PLEDGE OF ALLEGIANCE

The assembly recited the Pledge of Allegiance.

ADDITIONS AND CORRECTIONS TO AGENDA

No changes.

ORAL COMMUNICATIONS

The following comments were directed to the Board during Oral Communications. **(a) Rudy Fischer**, Board Chair of Monterey One Water (MOW), announced that on July 10, 2017, the MOW Board authorized construction of the Pure Water Monterey (PWM) Advanced Water Purification Facility. Mr. Fischer thanked the Water Management District Board of Directors for its financial support in achieving the two agencies' mutual goal to complete the Pure Water Monterey project. **(b) Paul Sciuto**, General Manager of Monterey One Water, thanked the Board of Directors for attending the PWM groundbreaking ceremony. He presented each director with a plaque commemorating the event. He expressed appreciation to all the persons that worked to make the groundbreaking a success. **(c) Dan Turner**, resident of the City of Monterey, requested that the Board of Directors make a decision to fund a study on the cost for public ownership of California American Water. He stated that if the Water Management District agreed to fund the study, the expense and divisive politics of a public vote on the issue would be avoided.

On a motion by Clarke and second of Byrne, the Consent Calendar was adopted on a vote of 6 – 0 by Clarke, Byrne, Adams, Brower, Evans and Lewis. Rubio was absent.

CONSENT CALENDAR

Adopted.

1. Consider Adoption of June 19, 2017 Regular Board Meeting Minutes

Adopted.

2. Consider Adoption of Resolution 2017-13 - Election of Special District Risk Management Authority Board of Directors

Adopted.

3. Consider Adoption of Resolution 2017-14 Amending Table 2: Non-Residential Water Use Factors

Approved expenditure of $60,075.

4. Authorize Expenditure for Software Maintenance Agreements

Approved expenditure of $18,000.

5. Authorize Expenditure for IT Infrastructure Hardware Replacement

Approved expenditure of $49,000.

6. Authorize Expenditure for Board Room Audio Visual System Upgrade

Approved expenditure of $24,000.

7. Approve Expenditure to Corporation Service Company - Recording Fees

Confirmed.

8. Confirm Appointment to Ordinance No. 152 Oversight Panel

Approved.

9. Receive Draft Water Year 2016 Aquifer Storage and Recovery Project Summary of Operations Report

Adopted.

10. Consider Adoption of Treasurer's Report for May 2017

GENERAL MANAGER'S REPORT

11. Status Report on California American Water Compliance with State Water Resources Control Board Order 2009-0060 and Seaside Groundwater Basin Adjudication Decision

A summary of General Manager Stoldt's presentation is on file at the District office. He noted that as of July 1, 2017, water production for the 12-month-moving-average was 9,755 which was well below the production limit of 10,609. Therefore, there is no threat of water rationing. Customer water use totaled 6,774 acre-feet, which was a slight increase over 2016 water use for the same time period of 6,741. Stoldt reported that on July 1, 2017, the long-term averages for rainfall, unimpaired flow and usable storage were 154%, 291% and 102% respectively.

12. Update on Development of Water Supply Projects

Stoldt reported that the MOW Board approved a bid of $47,932 million for construction of the PWM Advanced Water Purification Facility. This bid was significantly below the $54 million unsuccessful bid received during the first round of bidding. Stoldt stated that the State Revolving Fund Loan will pay for PWM capital project costs and provide for reimbursement of some pre-construction costs. According to the existing cost-sharing agreement with MOW, the District will no longer be responsible to pay 75% of project costs. Stoldt announced that the Marina Coast Water District would consider approval of the conveyance pipeline at a cost of $23 million. He noted that the Water Management District recently submitted a letter to the State Water Resources Control Board regarding the interpretation of Condition 2 of the Cease and Desist Order.

Stoldt showed advertisements the Water Management District published recently in the Carmel Pine Cone and Monterey County Weekly, regarding Aquifer Storage and Recovery. The next installment of ads will focus on a summer conservation message.

ATTORNEY'S REPORT

13. Report on 5:30 pm Closed Session of the Board

3. Public Employee Performance Evaluation (Gov. Code 54957) – General Manager

District Counsel Laredo reported that a performance evaluation of the General Manager was conducted. The directors provided general direction to the Board Chair, but no specific action was taken.

DIRECTORS' REPORTS (INCLUDING AB 1234 REPORTS ON TRIPS, CONFERENCE ATTENDANCE AND MEETINGS)

14. Oral Reports on Activities of County, Cities, Other Agencies/Committees/ Associations

No reports were presented.

DISCUSSION ITEMS

15. Review Vacancies on List of Committee Assignments

The Directors discussed this item, but no action was taken. Board Chair Brower requested that within 30 days, each director submit to him a list of committees they prefer to serve on and the reason those committees were selected. The Chair would develop a new list of committee assignments for Board consideration at a future meeting.

The following persons addressed the Board during the public comment period on this item. **(a) Jason Campbell**, City of Seaside Council Member, stated that the City of Seaside should have greater representation on Board committees for several reasons such as: Seaside is the largest city in the District, and the Seaside Basin is an integral part of the water supply solution. **(b) Susan Schiavone** a resident of the City of Seaside and a member of the Ordinance No. 152 Oversight Panel, addressed the Board. She opined that over the past

sevcn years there appeared to be a pattern: Districts 1 and 3 were assigned to committees responsible for internal affairs, and Districts 3, 4 and 5 were assigned to committees responsible for external issues. She expressed support for rotation of directors to ensure representation on all committees and the position of Board Chair. **(c) Tom Rowley**, representing the Monterey Peninsula Taxpayers Association, proposed that representation by voter division on the Board of Directors should be replaced with representation from each land-use jurisdiction within the Water Management District. He stated that it will be important that each land-use jurisdiction be represented on the Board when a new water allocation plan is developed.

There was no discussion of the Informational Items/Staff Reports.

INFORMATIONAL ITEMS/STAFF REPORTS

16. **Letters Received**
17. **Committee Report**
18. **Monthly Allocation Report**
19. **Water Conservation Program Report**
20. **Quarterly Water Use Credit Transfer Status Report**
21. **Quarterly Carmel River Riparian Corridor Management Program Report**
22. **Carmel River Fishery Report for June 2017**
23. **Monthly Water Supply and California American Water Production Report**

The meeting was adjourned at 8:35 pm.

ADJOURNMENT

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Arlene M. Tavani, Deputy District Secretary

ITEM: CONSENT CALENDAR

2. CONSIDER RENEWAL OF CONTRACT WITH JEA & ASSOCIATES FOR LEGISLATIVE AND ADMINISTRATIVE SERVICES

Meeting Date:	**August 21, 2017**	**Budgeted:**	**Yes**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**Services & Supplies Professional Fees**
Prepared By:	**Arlene Tavani**	**Cost Estimate:**	**$35,000**

General Counsel Review: Approved.
Committee Recommendation: The Administrative Committee reviewed this item on August 14, 2017 and recommended approval.
CEQA Compliance: Action does not constitute a project as defined by CEQA Guidelines Section 15378.

SUMMARY: John Arriaga of JEA & Associates has worked with the Water Management District since May 2008 in implementing its legislative goals. As proposed, JEA and Associates would continue to undertake legislative and administrative activities to support the District's priorities during Fiscal Year 2017-2018. See the Scope of Services attached as **Exhibit 2-A**.

R**ECOMMENDATION:** The Committee should recommend that the Board approve the contract with JEA & Associates for a not-to-exceed amount of $35,000 for Fiscal Year 2017-2018.

IMPACT TO DISTRICT RESOURCES: The estimate for services includes $30,000 in monthly retainer fees of $2,500 per month, and $5,000 for chargeable expenses. The $2,500 retainer has remained unchanged over the District's eight year relationship with JEA & Associates. Funds for this expenditure are included in the FY 2017-2018 budget under Services and Supplies, Professional Fees.

EXHIBIT
2-A JEA & Associates Scope of Services for FY 2017-2018

MEMO

Date: July 17, 2017

To: David Stoldt, General Manager
Monterey Peninsula Water Management District

From: John E. Arriaga, President
JEA & Associates

Subj: MPWMD Agreement

Pursuant to your request I am attaching an agreement which includes a Scope of Work and Fee Structure. If you approve the document please mail back a signed copy to my office at : 770 L Street, Suite 1030, Sacramento, CA 95814.

Again, thank you again for providing our firm the opportunity to

work with you. Attachments

AGREEMENT

This AGREEMENT is entered into as of the date hereinafter specified by and between JEA & Associates and Monterey Peninsula Water Management District (MPWMD). WHEREAS MPWMD wishes to engage JEA & Associates to provide legislative and administrative services to MPWMD as outlined in the scope of services below.

NOW THEREFORE, the parties hereto do mutually agree to the following terms and conditions:

Scope of Services

1. JEA & Associates would propose to undertake legislative and administrative activities as directed and/or requested by the MPWMD, using our political and general experience to accomplish established goals. Specifically, working with the MPWMD on the State Water Resources Regional Control Board's (SWRCB's) Cease and Desist Order (CDO) for the California American Water (CAW) unauthorized diversions from the Carmel River and also working with the California Public Utilities Commission (CPUC) and other entities on this issue.

2. JEA & Associates would schedule, coordinate and participate in meetings with the Governor's Administration, the California Legislature, the CPUC, the SWRCB and others in addressing key issues and concerns regarding the CDO and attend public hearings of the CPUC, the SWRCB and of other agencies as requested and directed by the MPWMD.

3. Monitor Dept. of Water Resources (DWR) and SWRCB meetings/workshops and report to the MPWMD's staff on Commission policy and funding initiatives. Closely monitor the development of program criteria for Bond funds and assist the MPWMD staff with any project applications submitted for funding.

4. Recommend to MPWMD Board/staff program and project funding strategies and assist in the execution of the strategies with the DWR and SWRCB. Work with the MPWMD Board and appropriate staff in coordinating DWR and SWRCB tours of MPWMD projects and programs. Assist MPWMD in gaining legislative support for grant and funding applications before the DWR and SWRCB.

5. Monitor Legislature's policy and budget committee hearings on water, lobby/testify on behalf of the MPWMD on program allocation and budget earmarks as directed. Organize advocacy efforts with legislative leadership and political friends of the MPWMD to insure coordination of efforts on behalf of funding requests. Monitor and report on budget conference committee actions and advocate for budget "trailer" and/or "caboose" bill language for the MPWMD as may be required.

6. Recommend policy positions on specific pieces of legislation/budget items of importance/relevance to the MPWMD and advocate/lobby/testify on positions of the MPWMD before the Legislature, Governor's Office and any relevant state agency, board and commission. Provide copies of introduced or amended bills, committee analysis or reports and any relevant committee testimony on identified legislation/budget items. Obtain behind-the-scenes intelligence and vital information on legislative discussions/actions being contemplated by the Legislature, the Governor's Office or other interest groups.

7. Prepare and present written reports for the MPWMD as directed.

8. To enable JEA & Associates to carry out the prescribed scope of work, it is requested that the MPWMD provide our firm with technical assistance, expertise and information as may be necessary or required.

9. John Arriaga of JEA & Associates will be the principal contact from our firm and the responsible person in dealing with the MPWMD, its Board of Directors and staff as may be necessary. He will be assisted by Laurie Johnson and Erica Arriaga of the firm as may be required.

Fee Structure

JEA & Associates is prepared to provide the services as outlined in this proposal for a monthly retainer of $2,500 a month, due & payable on the first day of each month plus chargeable expenses. This amount/retainer is based on our anticipation of the workload. We would like an understanding that should its level of activity exceed 25 hours per month on a regular basis, our firm and the MPWMD will mutually discuss any adjustments to this fee schedule as it determines the actual scope of activity and volume of work found to be required to carry out the goals of the MPWMD. Chargeable expenses include travel and work-related entertainment expenses, which shall be expressly authorized by the MPWMD prior to such expenses being incurred.

This contract will be in effect July 1, 2017. Either party may terminate this Agreement, for any reason, upon not less than 30 days of prior written notice to the other party.

Signature:

_____ _____

John E. Arriaga **Date**
President
JEA & Associates

_____ _____

David Stoldt **Date**
General Manager
Monterey Peninsula Water Management District

ITEM: CONSENT CALENDAR

3. CONSIDER APPROVAL OF BUDGET FOR GROUNDWATER MODELS FOR SEASIDE GROUNDWATER BASIN

Meeting Date:	**August 21, 2017**	**Budgeted:**	**Yes**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**Water Supply Projects 1-2-1**
Prepared By:	**Dave Stoldt**	**Cost Estimate:**	**$50,000**

General Counsel Review: N/A
Committee Recommendation: The Administrative Committee reviewed this item on August 14, 2017 and recommended approval.
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.

SUMMARY: There are two pending efforts to model the Seaside Groundwater Basin for which District funding will be required: Geochemical Modeling and Recalibration and Updating of the Basin Model. Each is summarized below.

Geochemical Modeling: There are potential changes in groundwater quality as a result of the introduction of new sources of water to the Seaside Basin from the Monterey Peninsula Water Supply Project (MPWSP.) In its original form, wells from the Seaside Basin draw from "ancient" water that has resided for many years, as well as some natural replenishment from precipitation. Since 1998, Aquifer Storage and Recovery (ASR) has injected Carmel River water for later recovery. With the expected completion of the MPWSP in a few years, Pure Water Monterey water and desalinated water will be injected in the basin for later recovery. The potential interactions of these various sources of water needs to be investigated in order to ensure the long-term integrity of the basin. For example, a few years ago, arsenic concentrations in groundwater in Orange County spiked in a transient fashion later determined to be linked to injection of reverse osmosis water manufactured by the Orange County Water District Groundwater Replenishment Project. The geochemical model to be developed will examine the interactions of the different water types and the aquifer mineralogy. **Exhibit 3-A** attached provides an overview of the need for geochemical modeling. Such a modeling effort is expected to cost up to $50,000 and should be cost-shared by the District, Monterey One Water, and California American Water Company. A cost-sharing arrangement has not been determined. If each party, was responsible for 1/3rd of the estimated cost, the District's share would be $16,667. If the District was responsible for its portion of the Pure Water Monterey cost (75% of 33% of the cost), an additional $12,500 would be required, for a total of $29,167.

Recalibration and Updating of the Basin Model: As shown in **Exhibit 3-B**, the Seaside Basin Watermaster is considering recalibrating and updating its Seaside Groundwater Basin Model in 2018. The Model was developed for the Watermastcr by its consultant, HydroMetrics WRI, and was provided to Pure Water Monterey for use in performing modeling studies for the Pure Water

Monterey groundwater replenishment project. The Watermaster has asked that the District and Monterey One Water participate in cost-sharing. Such a modeling effort is expected to cost $46,000 and should be cost-shared by the District, Monterey One Water, California American Water Company, and non-Cal-Am pumpers. A cost-sharing arrangement has been proposed by the District and Monterey One Water as shown in **Exhibit 3-C** which the Watermaster has not yet agreed to. The cost sharing proposed would have the District cover 8% of the costs directly, as well as the District's portion of the Pure Water Monterey cost (75% of 42% of the cost), for a total of $18,170.

Adequate funds for both studies have been identified in the adopted Fiscal Year 2017-18 budget.

STAFF RECOMMENDATION: Staff recommends that the Committee recommend Administrative Committee approval of a not-to-exceed amount of $30,000 for the District's share of geochemical modeling in FY 2017-18 and an amount not-to-exceed $20,000 for the District's share of recalibration and updating the basin model. On August 8, 2017, the Water Supply Planning Committee voted 3 – 0 to recommend approval.

EXHIBITS

3-A PowerPoint on geochemical modeling
3-B Funding request and scope of work for recalibration and updating of basin model
3-C Cost sharing proposal for recalibration and updating of basin model

Potential Changes in Groundwater Quality Resulting from Introducing New Sources of Water into the Seaside Groundwater Basin

Jonathan Lear PG, CHg

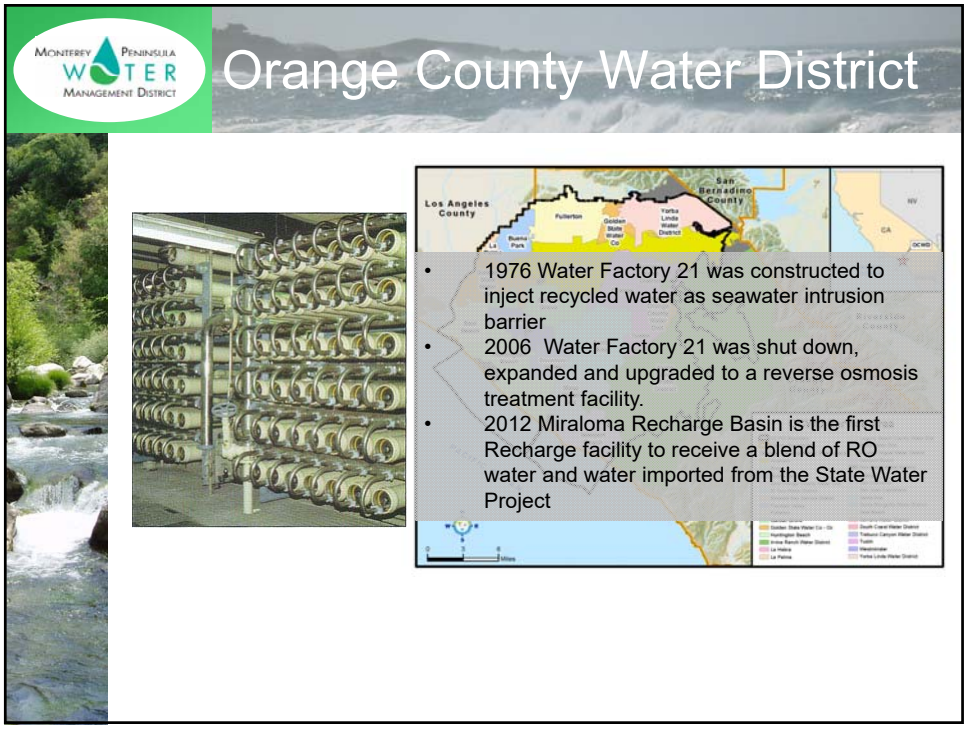
Senior Hydrogeologist

Potential Geochemical Reactions

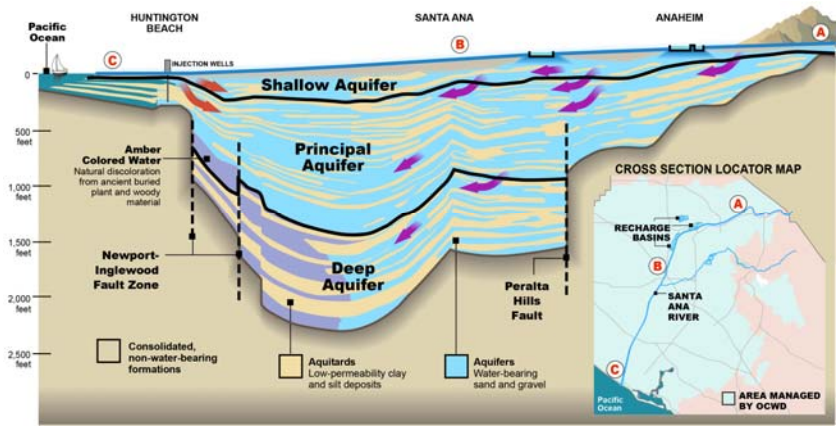
Presentation Overview

- **Case study: Orange County Water District**
- **Mission to protect and augment water supplies**
- **Water Supply Gap**
- **Plan to use Seaside Basin as storage for all sources of supplemental "new" supplies**
- **Water quality differences**
- **Project operations**
- **Geochemical interactions between different water types and aquifer mineralogy**


Monterey Peninsula Water Management District
OCWD replenishes the aquifer using its recharge facilities along the Santa Ana River in Anaheim.
5


Monterey Peninsula Water Management District
Orange County Water District
Los Angeles County
San Bernadino County
Fullerton
Buena Park
Yorba Linda Water District
NV
CA
OCWD
• 1976 Water Factory 21 was constructed to inject recycled water as seawater intrusion barrier
• 2006 Water Factory 21 was shut down, expanded and upgraded to a reverse osmosis treatment facility.
• 2012 Miraloma Recharge Basin is the first Recharge facility to receive a blend of RO water and water imported from the State Water Project

Cross Section of OCWD



Arsenic Occurrences in Groundwater

- Following mixing of water delivered from the State Water Project with Reverse Osmosis water produced at the upgraded Factory 21 plant, the Water District began to detect spikes of Arsenic in the groundwater.
- Arsenic spikes were transient and were later linked to the recharge of higher blend ratios of Reverse Osmosis water at the recharge facilities.
- Recharged water from Factory 21 had a resonance time in the ground from 6 months to 2 years, but the Arsenic spikes were not related to residence time.
- Stanford Professor, Scott Fendorf, discovered that is was not the residence time creating the Arsenic spikes, but rather the initial geochemical interactions between the clays in the aquifer and the low TDS RO water.
- Naturally occurring Arsenic was locked in the clays by Calcium and Magnesium ions. Naturally recharging water was not able to unlock the Arsenic, but RO water low in Calcium dissolved the ions from the clays and released the Arsenic.

Take Home Message

"It only takes a little Arsenic or other elements to contaminate a big aquifer. In Orange County the contaminant was Arsenic, but in other areas it may be Uranium, Chromium, Selenium, or Boron, as other examples" – Scott Fendorf

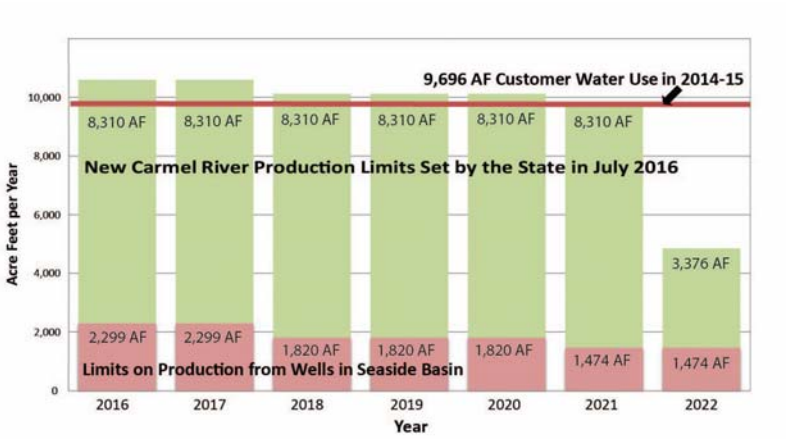
Take Home Message:

Mixing different water types can cause unexpected changes in geochemistry when reacting with aquifer matrix minerals.

District Mission Statement

- The Monterey Peninsula Water Management District's mission is to promote or provide for a long-term sustainable water supply, and to manage and protect water resources for the benefit of the community and the environment.
- Seaside Adjudication – Water quality implications and Material Damage

The Supply Gap

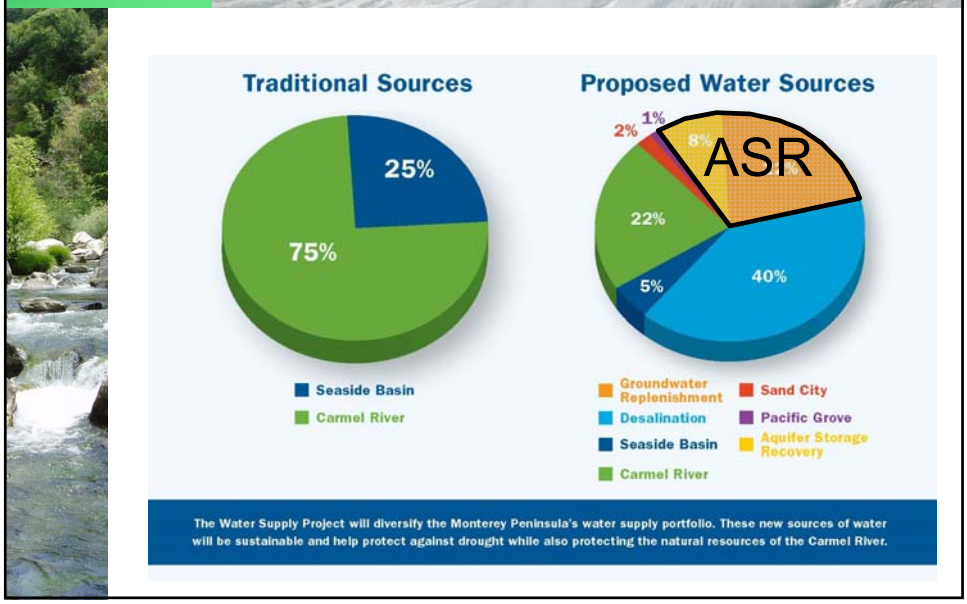


The Actual Water Supply Portfolio

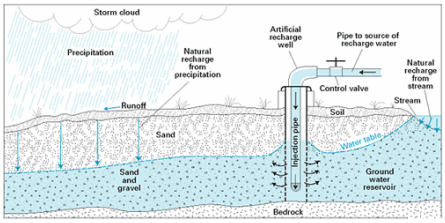
15,296 AFY

Desalination Project	6,252 AFY
ASR – Carmel River Water Rights / ASR – Treated Industrial and Storm water	4,800AFY
Los Padres Dam / Carmel River / Seaside Basin / Local Water Projects	4,244 AFY

Traditional vs Proposed



Seaside Groundwater Basin

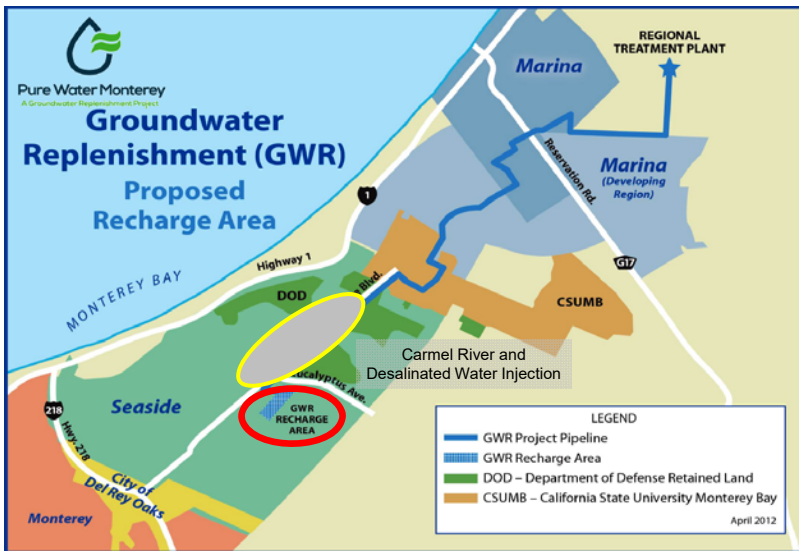


- As water supply projects are developed and begin to produce water to fill the supply gap, the Seaside Groundwater Basin is proposed to be utilized at the storage location for multiple sources of water.

Water Proposed to be Stored in Seaside Groundwater Basin

- **Native Seaside Groundwater** – Native groundwater in the Seaside Basin is devoid of dissolved oxygen, contains hydrogel sulfide, is fairly high in total dissolved solids, and has a oxidation reduction potential of – 220 mV.
- **Carmel River Water** – Water produced from Carmel Valley wells and treated at the BIRP plant. This water is relatively low in TDS, high in dissolved oxygen and contains a residual chlorine concentration from the treatment process.
- **PWM Product Water** – PWM water is highly treated wastewater and stormwater with RO and Micro Filtration. Product water will be chlorinated and post treated to restore minerals.
- **Desalinated Water** - Product water will be seawater treated to remove almos all salts and post treated to restore minerals.

Locations of Storage



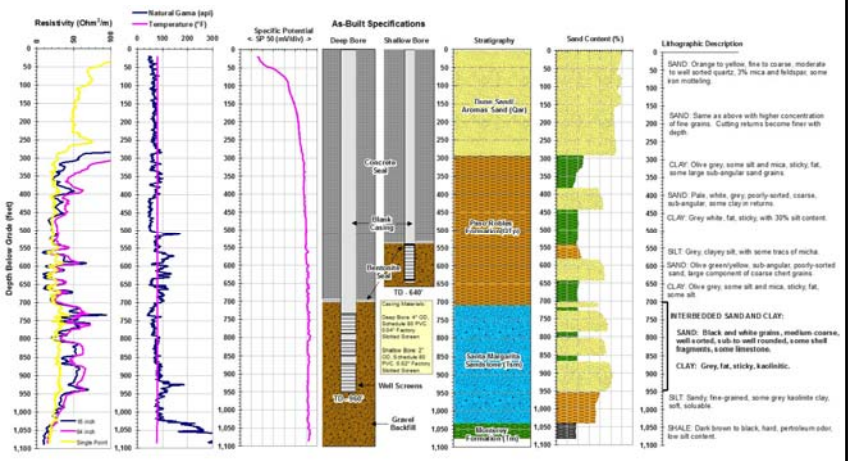
Project Operations

Climate drives the Carmel River ASR Injection Program and lower winter demand is proposed to drive the injection of desalinated water, but the PWM injection operations are proposed for 365 days a year. Due to the seasonality and climatic variability of the project operations, water mixing ratios in the Seaside basin will be transient.

Changes in Composition of Water

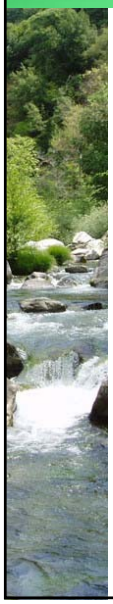
- **Wet Cycles** –System demand is low and Carmel River Water is available for injection which will result is a blend of PWM, Carmel River, and to a lesser extent, Desalinated water.
- **Drought** - Carmel River Water is unavailable so the blend of stored water will be more PWM and desalinated water banked in the winter.
- **Drought Reserve and Storage Payback** – PWM is proposing to establish a 1,000 AF drought reserve and CalAm has proposed to replenish the Seaside Groundwater Basin 700 AFY over 25 years.

Stratigraphy of Seaside Basin



Santa Margarita Sandstone

Santa Margarita Sandstone



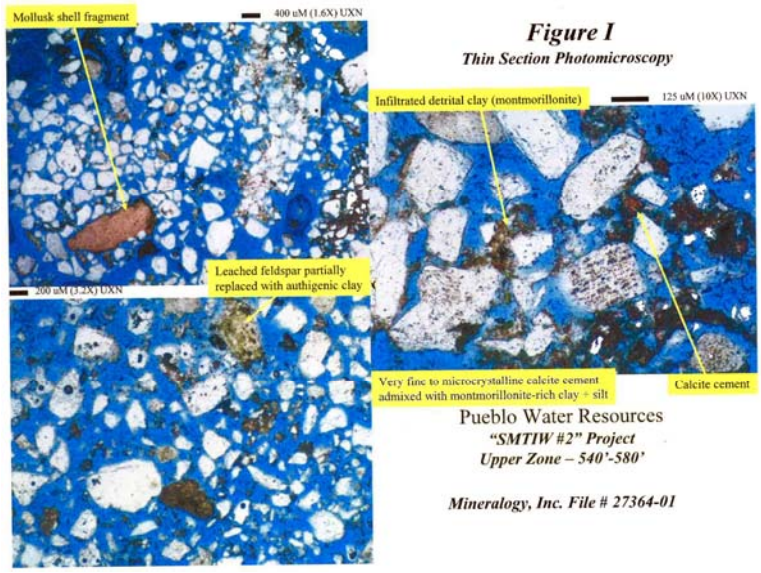


Figure I

Thin Section Photomicroscopy

Pueblo Water Resources

"SMTIW #2" Project

Upper Zone – 540'-580'

Mineralogy, Inc. File # 27364-01

Santa Margarita Sandstone

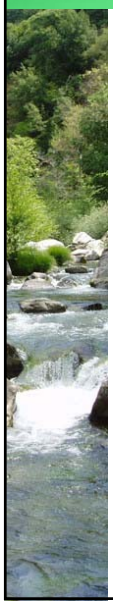
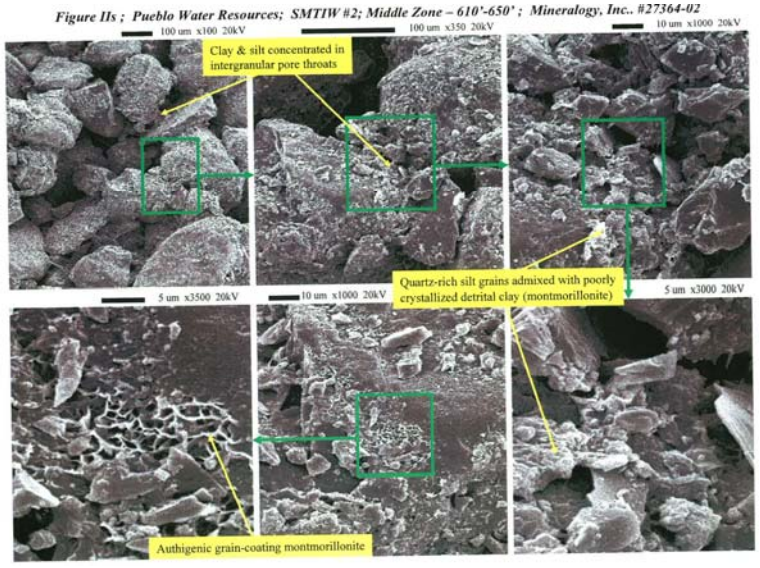
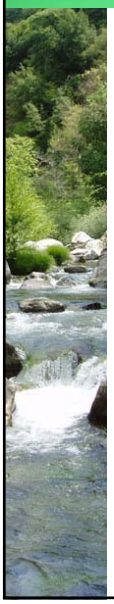


Figure IIs ; Pueblo Water Resources; SMTIW #2; Middle Zone – 610'-650' ; Mineralogy, Inc.. #27364-02



Geochemical Modeling



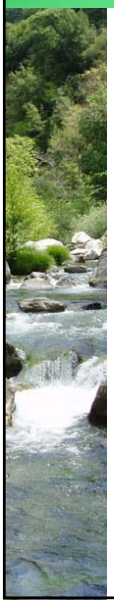
Defining Some Terms that Drive Geochemical Reactions

- **Aqueous speciation** – the distribution of individual ions and ion pairs in water
- **Saturation** – the state of an aqueous solution in chemical equilibrium with a particular solid phase
- **Undersaturation** – phase is thermodynamically favored to dissolve

Geochemical Modeling

- **Supersaturation** – phase is thermodynamically favored to form
- **Kinetics** – the rates of geochemical reactions
- **Mass Transfer** – moving mass between phases (solid, aqueous, gas)
- **Reactive Transport** – coupling flow and chemical reactions

Geochemical Modeling

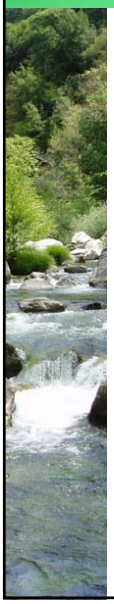


- Input Data – Good quality required!
- Water Chemistry - Use proper methods of filtration, preservation, and dilution
  - Measure field parameters (pH, Eh, D.O., temperature, alkalinity, specific conductance) at time of sample collection
  - Charge balance must be within acceptable limits
- Aquifer Material and Minerology
  - Thin section analysis
  - Electron scanning microscopy
  - Bench leaching tests

Modeling Process

- Reaction paths - solution composition as a function of reaction progress, quantities of secondary minerals formed, and composition of solid-solutions formed
- Time of reaction - kinetic rate laws and relative reaction rates based on temperatures and pressures

Output from Model



- Transport Processes – Advection, Hydrodynamic Dispersion and Diffusion
- Reactions on Mineral Surfaces, Adsorption, Ion exchange
- Mineral Dissolution and Precipitation, Thermodynamic model, Kinetic rate expressions
- Biochemical Processes

Tasks

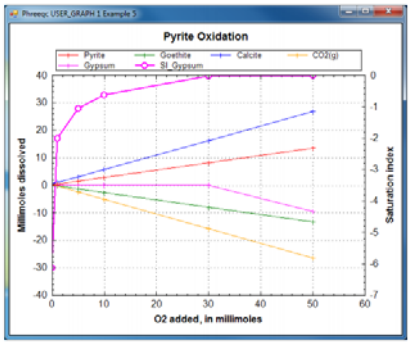
- Identify the different water qualities, quantities, flow paths, and residence times
- Characterize minerology of Santa Margarita Sandstone
- Collect water quality data to populate geochemical model
- Construct geochemical model and evaluate the effects of mixing differing water types in the Seaside Groundwater Basin.

Goals

- Create a model to evaluate geochemical reactions between differing water types and aquifer mineralogy to forecast best post-treatment conditioning for RO water
- Create a tool to evaluate and model water quality issues and forecast solutions if they arise after project operations begin
- Create a tool to test options and assist with permitting water projects

ASR Water Quality Modeling

Questions?



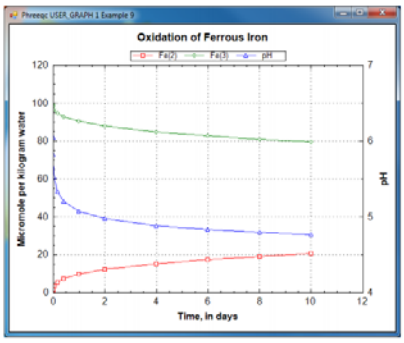


EXHIBIT 3-B

Seaside Basin Watermaster
P.O. Box 51502
Pacific Grove, CA 93950
(831) 641-0113

July 12, 2017

Monterey Regional Water Pollution Control Agency
Attention: Mr. Paul Sciuto, General Manager
5 Harris Court, Building D
Monterey, CA 93940

Monterey Peninsula Water Management District
Attention: Mr. David Stoldt, General Manager
5 Harris Court, Building G
Monterey, CA 93940

Subject: Recalibration and Updating of Seaside Groundwater Basin Model

Dear Mr. Sciuto and Mr. Stoldt:

The Seaside Basin Watermaster is considering recalibrating and updating its Seaside Groundwater Basin Model in 2018. The Model was developed for the Watermaster by our consultant, HydroMetrics WRI, and was provided to you free-of-charge for your use in performing modeling studies for your Pure Water Monterey groundwater replenishment project.

Attached is a preliminary proposal from HydroMetrics to perform this work. The proposal provides an explanation of why this work needs to be performed, and includes a preliminary estimate of approximately $46,000 to do this work (Task 1 of their proposal).

Because the Pure Water Monterey project will need to use the Model for further studies and reporting purposes, the Watermaster's Board of Directors believes it would be appropriate for your entities to share in the cost of recalibrating and updating the Model.

This letter is a request that you provide the Watermaster with an indication of your willingness to share in these costs. Over the next two months we will be developing a firm scope-of-work and cost to have HydroMetrics perform this work, and will be presenting it our Board for approval at their October 2017 meeting.

If you have any questions regarding this request, please contact me at (831) 375-0517 or by email at bobj83@comcast.net.

Sincerely,

Robert S. Jaques
Technical Program Manager

HydroMetrics WRI

1814 Franklin St., Suite 501
Oakland, CA 94612

Mr. Robert S. Jaques
Seaside Groundwater Basin Watermaster
83 Via Encanto
Monterey, CA 93940

March 24, 2017

Subject: Scope and Cost to Update the Seaside Basin Management Action Plan

Mr. Jaques:

Thank you for the opportunity to provide you with this scope and cost to update the Seaside Groundwater Basin's Basin Management Action Plan (BMAP). The scope we have put together addresses the BMAP items that were presented at the February 2017 Technical Advisory Committee meeting.

The Watermaster's first BMAP was completed in February 2009 (HydroMetrics LLC, 2009a). The BMAP constitutes the basic plan for managing the Seaside Groundwater Basin. The BMAP identifies both short-term actions and long-term strategies intended to protect the groundwater resource while maximizing the beneficial use of groundwater in the basin. It provides the Watermaster a logical set of actions that can be undertaken to manage the basin to its Safe Yield. Over the eight years since the BMAP was completed, the Watermaster has collected much groundwater level and quality data, and conducted various studies to improve the understanding of the basin. This improved understanding should be incorporated into an updated BMAP to facilitate ongoing responsible management of the groundwater resource.

At the time the 2009 BMAP was prepared, a groundwater model had not yet been developed for the basin, and the analysis contained in the BMAP was completed using analytical methods. Following the BMAP recommendation that a groundwater model be constructed to assist with groundwater management decisions, a calibrated model was completed in November 2009 (HydroMetrics LLC, 2009b). The model simulated

groundwater conditions in the basin between January 1987 and December 2008. In 2014, the model was updated with data through September 2013 (HydroMetrics WRI, 2014) but not recalibrated because its accuracy was still acceptable. The 2014 update found that the uncalibrated portion of the model (January 2009 – September 2013) tended to simulate higher groundwater levels than measured levels. Periodic recalibration of the model is necessary to ensure the model simulates groundwater levels within an acceptable industry standard accuracy. If simulated groundwater levels are not accurate this reduces the accuracy of all output from the model such as groundwater storage and water budget.

The scope of work provided below assumes the model will be used to develop estimates of groundwater storage, water budget, and safe yield; and to test impacts of potential management actions. The groundwater model was developed to assist in making basin management decisions, and for providing the simulated results that are required for analysis in the BMAP. As the model currently only includes input data through September 2013, groundwater storage, water budget, and safe yield estimates can only reliably be obtained from the model up through Water Year 2013. The model needs to be updated through Water Year 2016 to be used for current estimates. It is likely recalibration of the model will be required so that it more accurately simulates the historic low groundwater levels currently occurring in the basin.

The scope outlined below starts with an update and recalibration of the groundwater model, and then generally updates each of the main sections of the BMAP.

Task 1: Update Seaside Basin Groundwater Flow Model.

Subtask 1.1. Update Model Input Data.

Groundwater production, groundwater levels, injected water, and precipitation data will be sourced and compiled for input into the groundwater model. In addition to precipitation, estimates of storm water percolation, septic tank leakage, and system losses are also needed as they all contribute to the recharge of the basin. Most data are already available from MPWMD or Watermaster, but some other pumpers such as Cal Water Service and Marina Coast Water District, which do not fall under the Watermaster will be contacted for their data.

The updated model input data will be incorporated into the groundwater model. Once the model has been updated and is successfully running, hydrographs comparing measured and simulated groundwater levels will be prepared. The hydrographs produced will be the same ones used in the 2009 model report.

Subtask 1.3. Model Recalibration.
Model calibration is a process that involves varying relatively uncertain and sensitive parameters such as horizontal and vertical hydraulic conductivities, over a reasonable range of values. Calibration will be completed when simulated results match the measured data within an acceptable measure of accuracy, and when successive calibration attempts do not notably improve the calibration statistics. Estimating the effort involved in model calibration is difficult because there is no defined set of steps that can be followed. The costs provided with this scope reflect our best estimate, but additional costs may be necessary to complete calibration successfully.

Subtask 1.4. Model Update Technical Memorandum.
A Draft Technical Memorandum will be prepared documenting the model update and calibration results. After presenting the Tech Memo to the TAC and receiving comments, a Final Tech Memo will be prepared for submission to the Board. For purposes of the cost estimate, we have assumed HydroMetrics WRI will present the findings to the TAC and to the Board. One presentation will be in-person and one will be by telephone.

Task 2: Update BMAP Section 2 - State of the Seaside Groundwater Basin.
Subtask 2.1. Update Basin Conceptual Model. Since the 2009 BMAP was completed, a significant amount of modeling has been undertaken that has assisted in improving our hydrogeologic understanding of the basin. In particular, it has been found that the northern and eastern boundaries of the basin are dynamic and therefore change depending on pumping and recharge conditions. How this affects the movement of groundwater across the boundaries is important for managing the basin's groundwater resource.

Subtask 2.2. Analyze Groundwater Levels Trends. Since 2009, eight years of groundwater level data have been collected, some of it using data loggers that record groundwater levels multiple times a day. This has allowed us to vastly improve our understanding of both seasonal and long-term trends. The basin has also experienced a recent drought and Court-mandated pumping reductions. How groundwater levels have responded to these changes has also improved our understanding of the basin. Furthermore, protective groundwater elevations developed after the 2009 BMAP should be included and discussed in an updated BMAP.

Subtask 2.3. Update Estimates of Groundwater Storage. The updated BMAP will include updates of estimated total stored groundwater, usable storage space, and total useable storage space. The Watermaster is required under the Decision to recalculate Total Usable Storage Space and adjust the allocation as needed.

The groundwater model and protective groundwater elevations should be used to quantify these storage estimates for the Seaside Basin. The 2009 BMAP did not have the benefit of site specific protective elevations and thus used Ghyben-Herzberg generated elevations. This updated BMAP will instead use protective elevations developed using groundwater models that estimate onshore groundwater elevations that keeps the productive onshore aquifers fresh (HydroMetrics LLC, 2009b).

Subtask 2.4. Update Groundwater Budget. A current groundwater budget should be developed to enhance our understanding of the groundwater system. Similar to Subtask 2.3, the groundwater budget can be readily generated from groundwater model output. However, the groundwater model needs to be updated through September 2016 and recalibrated for it be used reliably to evaluate the current and historical water budget.

Subtask 2.5. Review Natural Safe Yield Estimates. The State of California has experienced a recent drought which has impacted natural aquifer recharge more than was anticipated in the 2009 BMAP. Also, even though pumping in recent years has been below the amounts required under the Decision, groundwater levels have continued to fall. This suggests that the Natural Safe Yield of 3,000 AFY in the Decision may be too high.

The water budget for each subarea together with the Zero Net Draft method of estimating Safe Yield will be used to reevaluate the Natural Safe Yield. The Zero Net Draft method relies on selecting a historical period of time that has the same starting and end mean depth to groundwater and comparing it to groundwater production for the same period. The groundwater production during that period can be considered a measure of the safe yield.

The reevaluated Safe Yield will be compared against other Safe Yield estimates that were included in the 2009 BMAP. If appropriate, a revised Safe Yield to replace the Decision-established Natural Safe Yield of 3,000 AFY will be provided for basin management purposes.

Task 3: Update Section 3 – Supplemental Water Supplies.

This section will be updated with current information on projects being considered to meet the long-term water needs in the Seaside Basin. Included will be MRWPCA's Pure Water Monterey groundwater replenishment project and Cal Am's Monterey Peninsula Water Supply Project (MPWSP). Recent Environmental Impact Reports will be used to update the information. If any other projects are in early planning stage, they will also be included in the update.

Task 4: Update Section 4 – Groundwater Management Actions.
This section will be updated to reflect actions and interim water supplies that have already been implemented, eliminate actions that are no longer viable, and add potential future actions and interim water supplies that could be implemented to address basin imbalances in the short-term before the long-term supply projects in Section 3 of the BMAP can be permitted, built and operated.

An example of a local management action would be to identify optimal extraction well locations such that those wells can make more efficient use of useable stored groundwater. The groundwater model is the most appropriate tool for this as it is able to simulate cumulative impacts by taking into account long-term projects and any other short-term projects while optimizing well locations.

It is beyond the scope of the BMAP update to prepare preliminary costs for potential future actions and interim water supplies. However, as cost is an important factor in deciding which actions to pursue, the Watermaster may need to engage a financial expert to provide preliminary cost estimates for those actions that do not already have cost estimates associated with them.

Task 5: Update Section 5 – Recommended Management Strategies.
After developing the groundwater management actions, we will present the results to the TAC with the purpose of soliciting input that will allow each action to be ranked in order of preference. The top actions will become recommended management strategies that the Watermaster should consider going forward.

Task 6: Prepare Draft, Final Draft and Final Updated BMAP.
A Draft Updated BMAP will be prepared that follows the format of the 2009 BMAP. After the TAC has reviewed the Draft Updated BMAP, comments received will be incorporated into a Final Draft Updated BMAP that will be presented to the Board. If comments are received from the Board, these will be included in a Final Updated BMAP. Up to 15 bound hardcopies will be provided to the Watermaster. We assume that HydroMetrics WRI will attend one TAC and one Board meeting in person to present the Updated BMAP.

Estimated Budget
The total cost to update and recalibrate the groundwater model through September 2016, and to update the BMAP is provided in Table 1.

Schedule
We expect it will take six weeks to develop the automated model update system and to update and recalibrate the groundwater model.

The Updated BMAP draft can be completed in approximately six weeks after the model update.

References

HydroMetrics LLC. 2009a. Basin Management Action Plan. Seaside Groundwater Basin, Monterey County, California, prepared for Seaside Groundwater Basin Watermaster. February.

HydroMetrics LLC. 2009b. Seaside Groundwater Basin Modeling and Protective Groundwater Elevations, prepared for Seaside Groundwater Basin Watermaster. November.

HydroMetrics WRI. 2014. Technical Memorandum – 2014 Seaside Groundwater Model Update, prepared for Seaside Groundwater Basin Watermaster. July 31.

Please call if you have any questions.

Sincerely,

Georgina King
Principal Hydrogeologist
HydroMetrics Water Resources Inc.

Table 1: Cost Estimate for Basin Management Action Plan Update

Tasks	HydroMetrics WRI Labor			Labor Total		Other Direct Costs	TOTALS
	Derrik Williams	Georgina King	Hanieh Haeri				
	President	Principal Hydrogeologist	Hydrologist				
Rates	$220	$195	$130	Hours	($)	($)	($)
Task 1: Update Groundwater Model & Recalibrate							
Subtask 1.1. Update Model Input Data	8	24	40	72	$ 11,640	$ -	$ 11,640
Subtask 1.2. Model Recalibration	40	8	90	138	$ 22,060	$ -	$ 22,060
Subtask 1.3. Model Update and Recalibration Technical Memorandum	12	28	32	72	$ 12,260	$ 200	$ 12,460
Subtotal Task 1	*60*	*60*	*162*	*282*	$ 45,960	$ 200	$ 46,160
Task 2: Update BMAP Section 2 - State of the Seaside Groundwater Basin							
Subtask 2.1. Update Basin Conceptual Model	1	8	2	11	$ 2,040	$ -	$ 2,040
Subtask 2.2. Analyze Groundwater Levels Trends	1	16	4	21	$ 3,860	$ -	$ 3,860
Subtask 2.3. Update Estimates of Groundwater Storage	4	4	16	24	$ 3,740	$ -	$ 3,740
Subtask 2.4. Update Groundwater Budget	4	4	16	24	$ 3,740	$ -	$ 3,740
Subtask 2.5. Review of Natural Safe Yield Estimates	4	10	16	30	$ 4,910	$ -	$ 4,910
Subtotal Task 2	*14*	*42*	*54*	*110*	$ 18,290	$ -	$ 18,290
Task 3: Update BMAP Section 3 – Supplemental Water Supplies	4	12	0	16	$ 3,220	$ -	$ 3,220
Task 4: Update BMAP Section 4 – Groundwater Management Actions	8	20	12	40	$ 7,220	$ -	$ 7,220
Task 5: Update BMAP Section 5 – Recommended Management Strategies	4	10	0	14	$ 2,830	$ -	$ 2,830
Task 6: Prepare Draft, Final Draft and Final BMAP	6	40	20	66	$ 11,720	$ 600	$ 12,320
TOTAL for GROUNDWATER MODEL UPDATE	60	60	162	282	$ 45,960	$ 200	$ 46,160
TOTAL for BMAP UPDATE	36	124	86	246	$ 43,280	$ 600	$ 43,880
TOTAL	*96*	*184*	*248*	*528*	$ 89,240	$ 800	$ 90,040

Notes

Other direct costs include travel expenses, office supplies, photocopies, postage, and equipment rental

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

July 31, 2017

Robert S. Jaques
Technical Program Manager
Seaside Basin Watermaster
PO Box 51502
Pacific Grove, CA 93950

Subject: Cost Sharing for Recalibration and Updating of Seaside Groundwater Basin Model

Dear Bob:

Thank you for your July 12th letter discussing the recalibration and updating of the Seaside Groundwater Basin Model. In that letter, you inquired about the willingness of our District and Monterey One Water to share in the cost of HydroMetrics to perform the work.

Both of our agencies stand ready to share in the cost of recalibration and updating of the Seaside Groundwater Basin Model.

One possible paradigm for cost sharing might be based on average annual production rights from the basin. For example:

Cal-Am	2021 Safe Yield	1,474 AF	
	Middle School average ASR	650 AF	
	Fitch Park average ASR	590 AF	
	Total Cal-Am	2,714 AF	32%
Non-Cal-Am Pumpers	2021 Safe Yield	1,526 AF	18%
MPWMD	Santa Margarita average ASR	650 AF	8%
Monterey One Water	Pure Water Monterey	3,500 AF	42%

That would result in our two public agencies supporting 50% of the cost. Please let me know your thoughts on this.

Sincerely yours,

David J. Stoldt
General Manager

ITEM: CONSENT CALENDAR

4. AUTHORIZE EXPENDITURE TO REPLACE THE VERTICAL WATER QUALITY PROFILING DEVICE'S DRIVE SYSTEM IN THE CARMEL RIVER LAGOON

Meeting Date:	**August 21, 2017**	**Budgeted:**	**Yes**
From:	**Dave Stoldt, General Manager**	**Program/ Line Item No.:**	**Aquatic Resources/ Fisheries 2-4-1 B**
Prepared By:	**Kevan Urquhart**	**Cost Estimate:**	**$38,031.25**

General Counsel Approval: N/A
Committee Recommendation: The Administrative Committee reviewed this item on August 14, 2017 and recommended approval.
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.

SUMMARY: In 2014, the District took over the operation of the California State Department of Parks and Recreation's (CDPR) vertical water quality profiler in the Carmel Lagoon that they had installed in 2008. A copy of that memorandum of agreement is attached as **Exhibit 4-A**. CDPR operated their Sonde for a little over two years before funding to support it expired.

The profiler and water quality probe set up is mounted on the Carmel Area Wastewater District's outlet pipe in the south arm of the lagoon. This profiler and its Xylem/YSI probe (known as a 'Sonde') collect salinity, dissolved oxygen, and temperature data at one meter increments, every four hours. It had not been operated for about four years, when we attempted to reactivate it. In 2015, CDPR also paid to add a turbidity probe to the Sonde, in expectation of future monitoring for the Carmel River Free project, being promoted by Big Sur Land Trust.

Fisheries Program staff attempted to operate the profiler for three years, but it had significant reliability problems. We expended ~$6,600 on repair services in 2014 – 2016 with the technician that built the device, but could not get it to operate reliably for more than a couple of months at a time. The original mechanical profiler installation was a custom design, manufactured by Kinnetic Laboratories Inc. in Santa Cruz. The technician that built and maintained the profiler has now retired and recommended that we either rebuild it from scratch, or purchase the only available off-the-shelf solution from Xylem/YSI. The Xylem/.YSI bid is attached as **Exhibit 4-B**.

While Fisheries staff collect data at least monthly at five sites in the lagoon, this is only useful for characterizing general trends, not for modelling or analysis of lagoon dynamics needed to evaluate any further lagoon restoration actions, including inflow improvements due to compliance with the Cease and Desist Order, Water Rights Order 20016-0016. The District and its partners who are interested in the data, need a reliable mechanical device to move the probe through the water column and control its sampling on a daily basis.

This bid from Xylem/YSI is the only option other than sending out a Request For Proposal (RFP) seeking bidders on a replacement custom installation, as was done originally by CDPR. The probe itself (the 'Sonde') is operating reliably. The Xylem/YSI mechanical profiler is the only non-custom device available for this installation.

We are seeking authorization for funds to cover the bid for hardware/software ($27,270.65), and installation ($5,800), and a 15% contingency ($4,960.60), since the vendor's agent could not reach the installation site on his bid visit, as the site was under water. The total is not to exceed $38,031.25

RECOMMENDATION: Staff recommends that the District Board authorize expenditure of budgeted funds in a not-to-exceed amount of $38,031.25, to cover the bid price and 15% contingency for the purchase and installation of a Xylem/YSY Model E78 fixed profiler. The Administrative Committee reviewed this item at its August 14, 2017 meeting and voted 2 to 0 recommend approval of the expenditure.

IMPACT TO STAFF/RESOURCES: The Fiscal Year 20017-2018 Budget includes $40,000 for the replacement of the mechanical profiler. The actual bid plus any unforeseen contingency will be less than that amount.

EXHIBITS

4-A 2014 MOU Between MPWMD and CDPR Regarding operation and Ownership of the Carmel River Lagoon Water Quality Profiler and Sonde

4-B 06/06/17 Xylem/YSI Bid to Replace the Lagoon Profiler Using the Existing Sonde and Probes

MEMORANDUM OF UNDERSTANDING BETWEEN THE MONTEREY PENINSULA WATER MANAGEMENT DISTRICT AND THE CALIFORNIA DEPARTMENT OF PARKS AND RECREATION REGARDING OPERATION AND OWNERSHIP, of the CARMEL RIVER LAGOON WATER QUALITY PROFILER AND SONDE

WHEREAS, the Monterey Peninsula Water Management District (MPWMD) and the California Department of Parks and Recreation (State Parks) have a cooperative working relationship for monitoring and management of the lower Carmel River and the Carmel River Lagoon; and

WHEREAS, State Parks currently operates, maintains and disseminates data from a Profiler and Sonde that provides valuable water quality data useful for the management of the Carmel River Lagoon, including multiple projects to mitigate the negative impacts of water withdrawals from the Carmel River watershed; and

WHEREAS, State Parks owns and manages the property known as Carmel River State Beach which includes the Carmel River Lagoon and has the ability to authorize and approve agreements for installation and operation of equipment and facilities within the property; and

WHEREAS, State Parks has requested that MPWMD assume responsibility for operation, maintenance and dissemination of data from the Carmel River Lagoon Water Quality Profiler and Sonde

NOW, THEREFORE, the parties hereto agree as follows:

1. State Parks agrees to transfer ownership of the Carmel Lagoon Water Quality Profiler and Sonde to MPWMD and allow MPWMD access to the equipment for maintenance.

2. MPWMD agrees to assume responsibility for all costs associated with maintenance, operation and dissemination of data from the profiler and sonde for a minimum of two years, until July 31, 2016.

3. MPWMD shall agree to provide data from the profiler and sonde on a monthly basis via email and/or posting on the web. Data shall be made available to members of the Carmel Lagoon TAC, Carmel Lagoon Stakeholders, and members of the public upon request.

4. MPWMD shall consult with Sate Parks, the Carmel Lagoon TAC, and Stakeholders regarding potential operation of the profiler and sonde beyond 2016.

In witness whereof, the parties hereto have executed this Agreement as set forth below:

Monterey Peninsula Water Management District

David Stoldt
General Manager

10-14-14
Date

California State Parks

Matt Fuzie
District Superintendent
California Department of Parks and Recreation

7/21/14
Date

xylem
Let's Solve Water

Quote Number: B145163

Quote Date: 6/6/2017

Quote Expiration Date:

Quotation Prepared For:

Kevan Urquhart

Monterey Peninsula Water Management District

Monterey, CA 93942-0085

(831) 658-5600

kevan@mpwmd.net

Submitted By:

Adam Willingham

adam.willingham@xyleminc.com

xylem
Let's Solve Water

Quote Number B145163

Proposal Summary

#	Product	Description	List Price	Qty	Ext. Price
1	141041570	6961 - Winch Controller, NEMA 4 Enclosure Includes; - Data Logger/Controller - Optional telemetry for real-time remote data acquisition - NEMA 4 electronics enclosure Specifications; - Minimum Profile Depth: 1-m - Maximum Profile Depth: 50-m - 100-m	$8,995.00	1	$8,995.00
2	141041580	6957 Fixed Winch Cover and Mount Assy - Fiberglass winch cover and Polyurethane mounting board - Yellow winch cover protects motor and cable	$1,685.00	1	$1,685.00
3	121031449	Underwater Cable Dummy Plug- Used to protect 6 Series stainless cable connector- Sonde to buoy cable	$56.65	1	$56.65
4	669501	6955 - Vertical Profiler Winch Assy 50 MeterRuggedized winch , all Delrin, PVC and SST parts	$13,225.00	1	$13,225.00
5	669553	6691 Profiler Cable- For applications 5-50 meters- Polyurethane outer jacket, Kevlar reinforced braid- Molded Sonde connector, Flying leads	$1,070.00	1	$1,070.00
6	200072	Software, LoggerNet Data Logger Software Base Station Connect and Scheduling Software (LoggerNet)- Used to send new programs to the system and schedule data retrieval for systems with telemetry.	$775.00	1	$775.00
7	669683	6976 - YSI Profile Wizard Software- Windows XP and later compatible- Works with all YSI Profiler Models- Easily configure a profiler mission and upload to the system using LoggerNet	$109.00	1	$109.00
8	203295	A/C Power Kit; 100-240 VAC, (20 ah Max Battery Size)A/C Power Option for NEMA enclosures. Comes with a 3 prong, North American power cord, 5 ft. in length.	$150.00	1	$150.00
9	202142	Crate,24x36x24,Wood (Fixed Profiler)	$275.00	1	$275.00
10	202368	RV50 Sierra Wireless RV50 Airlink Modem	$930.00	1	$930.00

Quote Number B145163

Subtotal: $27,270.65

Optional Items

These items are excluded from the overall quote totals.

#	Product	Description	List Price	Qty	Ext. Price
1	370462	On-Site Field Technician Services - One Field Technician on site for 2 days for specified services (See bottom of quote for details). **All On-Site Services must be scheduled at least 4 weeks in advance, includes all travel and living expenses** **Does not include materials, supplies or consumables** Please contact us if interested in options	$4,200.00	1	$4,200.00
2	HYP-SW-TERM-ISS-VIPER-BASIC	HYPACK ViPer - Visualization Profiler Software package for display of environmental data. Visually display data in graphical and gradient formats and export to 3rd party websites - includes support and software updates. 1-year subscription	$600.00	1	$600.00
3	Mountaining Hardware	Stainless Steel uni-strut hardware for custom mounting to existing sewer line.	$1,000.00	1	$1,000.00

Subtotal: $5,800.00

Total List Price	**$27,270.65**
Total Net Price	$27,270.65
Subtotal	$27,270.65
Grand Total	**$27,270.65**
Terms	Net 30
FOB	Origin

Quote Number B145163

http://www.xyleminc.com/en-us/Pages/terms-conditions-of-sale.aspx and incorporated herein by reference and made a part of the agreement between parties.

Quote Number B145163

Ordering Instructions:

Credit Card Reference This Quote Number	Call: (727) 565-2201
Purchase Order Include a Copy of Quote with PO	Email: orders@ysisystems.com Fax: (866) 778-8431 Mail: YSI Inc – Systems & Services Division Attn: Order Entry 9843 18th Street North, Suite 1200 St. Petersburg, FL 33716

- All purchase orders should be accompanied with a copy of this quote or clearly reference the quotation number.
- All purchase orders should have a complete billing and complete shipping address on the purchase order.
- For order acknowledgement please provide email address to send updates on order. Email Address:_____
- Taxes and Tariffs are additional and are not included in the above pricing unless explicitly stated as a line item.
- Shipping charges are additional and are not included in the above pricing unless explicitly stated as a line item.
- Tax Exempt customers must include their Tax ID on their Purchase Order. Proof of Tax Exempt status may be required.

Business Information:

YSI Incorporated

Tax Identification #: 31-0526418

Remit to Address for Orders:

Checks (Drawn on US Banks Only)

YSI Incorporated

PO Box 640373

Quote Number B145163

DUNS #: 004246716

Cincinnati OH 45264-0373

ACH (With ADDENDA Record)
US Bank NA
Cincinnati, OH 45202
Acct# 8506321; ABA# 042000013

Quote Number B145163

Warranty

General

YSI Integrated Systems, including standard sensors and accessories, are warranted for one year from date of purchase by the end user against defects in materials and workmanship. All cables are warranted for one year from date of purchase by the end user against defects in material and workmanship. The warranty period for chemicals and reagents is determined by the expiration date printed on their labels. Within the warranty period, YSI will repair or replace, at its sole discretion, free of charge, any product that YSI determines to be covered by this warranty. Third party sensors and items not manufactured by YSI are not covered under this warranty. The original manufactures warranty may apply to the end customer, warranty claims should be directed to original manufacturer.

To exercise this warranty, write or call your local YSI representative, or contact YSI Customer Service in St. Petersburg, Florida, USA (information at the bottom of this page). Send the product and proof of purchase, transportation pre-paid, to your local YSI representative or the Factory Service Center selected by YSI. Repair or replacement will be made and the product returned transportation pre-paid. Repaired or replaced products are warranted for the balance of the original warranty period or at least 90 days from date of repair or replacement.

Limitation of Warranty

This warranty does not apply to any YSI product damage or failure caused by (I) failure to install, operate or use the product in accordance with YSI's written instructions, (ii) abuse or misuse of the product, (iii) failure to maintain the product in accordance with YSI's written instructions or standard industry procedure. (iv) any improper repairs to the product, (v) use by you of defective or improper components or parts in servicing or repairing the product, or (vi) modification of the product in any way not expressly authorized by YSI.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. YSI's LIABILITY UNDER THIS WARRANTY IS LIMITED TO REPAIR OR REPLACEMENT OF THE PRODUCT, AND THIS SHALL BE YOUR SOLE AND EXCLUSIVE REMEDY FOR ANY DEFECTIVE PRODUCT COVERED BY THIS WARRANTY. IN NO EVENT SHALL YSI BE LIABLE FOR ANY SPECIAL. INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECTIVE PRODUCT COVERED BY THIS WARRANTY.

YSI Factory Service Centers

United States

YSI Integrated Systems & Services

9843 18th Street North, Suite 1200
St. Petersburg, FL 33716
Phone: 1-800-897-4151 Phone: 727-565-2201
E-Mail: systems@ysi.com

ITEM: CONSENT CALENDAR

5. AUTHORIZE EXPENDITURE FOR PASSIVE INTEGRATED TRANSPONDER (PIT) TAG READING EQUIPMENT TO MONITOR JUVENILE STEELHEAD EMIGRATION AND EVENTUAL ADULT RETURNS

Meeting Date:	**August 21, 2017**	**Budgeted:**	**Yes**
From:	**Dave Stoldt, General Manager**	**Program/ Line Item No.:**	**Aquatic Resources/ Fisheries 2-3-1 H**
Prepared By:	**Kevan Urquhart**	**Cost Estimate:**	**$7,497.01**

General Counsel Approval: N/A
Committee Recommendation: The Administrative Committee reviewed this item on August 14, 2017 and recommended approval.
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.

SUMMARY: The District has been cooperating with the National Marine Fisheries Service, Southwest Fisheries Science Center (NMFS-SWFSC) since 2013 to tag larger juvenile steelhead with half-duplex (HDX) Passive Integrated Transponder tags (PIT-tags). Tags are placed in steelhead released from the Sleepy Hollow Steelhead Rearing Facility (SHSRF), and in larger ones collected during our fall population monitoring. The goal is to see if there are any differences in out-migration, survival, and adult return rates of SHSRF-reared fish versus fish reared in the river. These studies will become part of the monitoring component of our impending Endangered Species Act. Section 10a(1)(a) permit for fish recues and rearing.

The Fisheries Program staff have been using a hand held scanner to resample any fish collected in each succeeding year's fish rescue efforts. NMFS-SWFSC also installed a tag-reading antennae array of standard design at the Carmel Area Wastewater Districts intake pipe in 2015, and tried a newer second experimental design installation near San Carlos Well early last winter 2016. The latter got blown out very quickly by peak winter storms. Neither of the two NMFS-SWFSC antennae arrays have yet detected very many juvenile fish, and no adults. NMFS-SWFSC has not expanded the number of their PIT antennae arrays as quickly as initially expected.

The District's Fisheries Program needs to add at least two more antennae arrays upstream in shallower water, where we are more likely to detect fish, in order to supplement the existing NMFS-SWFSC sites. We have chosen to place them at the Cal-Am Scarlette Well site and the new Sleepy Hollow Ford Bridge. A copy of the on-line order form for OregonRFID supplies is attached as **Exhibit 5-A** ($7435.35 + $61.66 shipping).

OregonRFID intends to produce a new tag antennae array controller that can read both HDX and full-duplex (FDX) tags very soon. If that antennae controller design becomes available later in 2017, we'll likely purchase one instead of a second HDX-only device. If OregonRFID does not produce its new device in 2017, the Fisheries Program may order an additional, more expensive

HDX+FDX array from another vendor later this year for approximately $25,000, but is delaying that purchase and installation until NMFS-SWFSC staff can finalize an installation design and component pricing with the vendor. The FDX tags have slightly better detection range, so fish tagged with them in future years may be more readily detectable. However, all fish released to date have been tagged with HDX tags, and NMFS-SWFSC has a few thousand of those left to use for tagging in 2017. Thus, a HDX array is primarily all that is needed for the next 3 years, and is much cheaper and a bit easier to install. Local NMFS-SWFSC staff also have a lot of experience with OregonRFID's HDX arrays, and can guide Fisheries Program staff in installing one, whereas they are still learning to use other vendor's FDX arrays elsewhere in California, and we will have to tap that expertise in the future.

RECOMMENDATION: Staff recommends that the District Board authorize an expenditure not-to-exceed $8,500, to cover the estimated costs of installing the District's first PIT tag antennae array, and buying a second portable tag reader for the SHSRF, to supplement the one used by the Fish Rescue and Population Survey crews. The Administrative Committee reviewed this item at its August 14, 2017 meeting and voted 2 to 0 to recommend approval of the expenditure.

IMPACT TO STAFF/RESOURCES: The Fiscal Year 20017-2018 Budget includes $65,000 for pilot studies to develop new monitoring methods steelhead related to our impending NMFS permit. The actual cost of this first of two additional arrays will be less than that amount.

EXHIBITS

5-A Draft OregonRFID Internet Order Form and Price List

EXHIBIT 5-A

Innovative tracking solutions since 2003

Your Shopping Cart Contents

[help (?)]

Select Go to Checkout to enter payment information.

Total Items: 165 Weight: 64.9625lbs Amount: $7,435.35

Qty.		Item Name	Unit	Total	
1	Update	 DataTracer FDX/HDX Reader with Bluetooth	$1,065.00	$1,065.00	
		• Portable options - External stick antenna			
2	Update	 Single Antenna HDX Reader	$1,855.00	$3,710.00	
150	Update	Twinax Cable	$7.50	$1,125.00	
Min: 10					
1	Update	 RTS Tuning Indicator/Sender	$195.00	$195.00	
2	Update	 ATC Auto Tuner	$275.00	$550.00	
1	Update	 Ceramic Tuning Tool	$14.50	$14.50	
1	Update	 AC Power Supply	$65.00	$65.00	
2	Update	 Marker Tag	$175.00	$350.00	
2	Update	 Bluetooth Serial Adapter with external antenna	$175.00	$350.00	
2	Update	 Synchronization cable	$2.00	$4.00	
1	Update	 5 pin synchronization connector	$6.85	$6.85	

Sub-Total: $7,435.35

Continue Shopping Update Checkout

Estimate Shipping

EXHIBIT 5-A

ITEM: CONSENT CALENDAR

6. CONSIDER FUNDING FOR COMMUNNITY WATER CONSERVATION DEMONSTRATION PROJECT AT MARTIN LUTHER KING JR. ELEMENTARY SCHOOL, 1713 BROADWAY AVE., SEASIDE

Meeting Date:	**August 21, 2017**	**Budgeted:**	**Yes**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**4-2-2-F, 4-2-2-H**
Prepared By:	**Stephanie Kister**	**Cost Estimate:**	**$30,000**

General Counsel Review: N/A
Committee Recommendation: On July 31, 2017 the Water Demand Committee recommended approval on a unanimous vote of 3 – 0. The Administrative Committee reviewed this item on August 14, 2017 and recommended approval.
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines section 15378.

SUMMARY: MPWMD wishes to partner with the Monterey Peninsula Unified School District (MPUSD) and others to remove a highly visible sloped section of turf and juniper along Broadway Avenue in Seaside at Martin Luther King Jr. School (MLK) and replace it with a Community Demonstration Garden (**Exhibits 6-A and 6-C**). The garden will consist of drought tolerant plantings, storm water infiltration features, a rain watering system, drip irrigation and interpretive educational signage (**Exhibit 6-B**). The proposed MPWMD budget for this project is $30,000.

PROJECT DESCRIPTION: MPUSD will provide the staff and equipment to remove most of the existing landscaping (some juniper will remain) and grade the hillside. Storm water infiltration basins will be installed along the bottom of the hillside, and a rainwater harvesting system will be installed along the front of the building to irrigate the area by gravity feed. Drought tolerant plants will be selected and sourced with the help of Return of the Natives (RON). RON will also organize, promote, and lead two garden parties where community members are invited to help install plants and help maintain them in the future. Additional plants and volunteer teams are available through MEarth and the Master Gardeners. MLK students will be invited to assist with the project by adding artwork and helping with planting. An efficient irrigation system may be installed to augment rainwater supplies during the establishment period.

MPWMD is collaborating with Monterey Regional Waste Management District to obtain compost and wood chips. California State University Monterey Bay (CSUMB) has offered to supply upper level science students at no charge to design the interpretive signage as part of their Service Learning requirements. Production and installation of the signage will be paid for out of this budget. Donations will be requested for all materials where possible. Further support may come from MPUSD's State Water Resources Control Board DROPS grant and Monterey One Water. When the project is complete, the landscape will be maintained by MPUSD staff, with support from periodic volunteer work groups from Shoreline Church, RON, and school staff/students.

Community Partners: MPUSD, Return of the Natives, CSU Monterey Bay, MEarth, Monterey One Water, Monterey Regional Waste Management District, California Landscape Contractors Association, and Save the Whales.

The total requested from MPWMD for this Community Demonstration Garden is $30,000 which is available in the Fiscal Year 2017-18 budgets for School Retrofits (26-05-781184) and Graywater/Rainwater Demo Project (26-05-781185).

RECOMMENDATION: Staff recommends the Committee support this Community Demonstration Garden and recommend that the Board approve funding not to exceed $30,000 for the Broadway Community Demonstration Garden project.

EXHIBITS

6-A Community Demonstration Garden Proposal

6-B Proposed CDG Plan

6-C Site Photos

U:\staff\Boardpacket\2017\20170821\ConsentClndr\06\Item-6.docx

Monterey Peninsula Water Management District
GRANT PROPOSAL
For
Monterey Peninsula Unified School District

Broadway Water Conservation Garden

Name of Applicant:	Monterey Peninsula Unified School District
Invoicing & Contract Name & Contact Information:	Brett McFadden, Associate Superintendent of Business Services (831) 645-1269 bmcfadden@mpusd.k12.ca.us 700 Pacific St, Monterey, CA 93940 or PO BOX 1031 Monterey CA 93942
Project Manager Name & Contact Information:	David Chandler, Coordinator of Renewable Energy and Conservation (831) 901-7376 dchandler@mpusd.k12.ca.us
Project Site Addresses:	1.. Martin Luther King School 1713 Broadway Ave, Seaside, CA 93955
Account:	City of Seaside Water: 04-7590-00
Proposed turf removal:	**Turf removal 13,424 sq feet** **Ice plant and Juniper removal/ management 8256 sq ft** **$30,000**
Proposed Projects:	Proposal will fund a start-up of Partnership Drought Tolerant Landscape Demonstration garden on the Broadway Avenue side of King Elementary. The demonstration garden will educate the community about water conserving landscapes. The design will include Sheet mulching, Cisterns, dry creek beds, succulent gardens, rain gardens, bio-swales as well as a variety of no-water landscapes.

Preliminary to proposed project

In spring 2014 MPUSD received a grant from MPWMD to install Hydro-point weather trak ET Pro controllers at the Cal Am serviced sites. The grant proposal was met and exceeded by installing all the controllers, as well as eliminating manual and battery operated zones.

Monterey Peninsula Unified School District
Monterey Peninsula Water Management District
Water Conservation Grant Proposal

In 2014 MPWMD funded a field retrofit and master water conservation Plan for Ord Terrace Elementary. This project has inspired MPUSD to commit to water conservation landscapes. Ord terrace eliminated 100% of the ornamental turf and replaced it with drought tolerant landscape. Water use has been reduced at Ord Terrace by 63%.

In summer of 2015 MPUSD funded and installed 27 Hydro-point weather trak ET controllers at the City of Seaside and Marina Coast water serviced sites. Making the districts irrigation fully controlled by Smart weather based irrigation controllers

In summer of 2015 MPUSD administration and board approved the use of water utility savings to be used to retrofit our fields irrigation, implement a turf removal plan and set up a turf maintenance program. The MPUSD Energy Program in collaboration with the facilities department has created a six year field retrofit plan and a six year Ornamental Turf removal plan.

In the 2015-16 school year MPUSD is implementing a 5th grade Eco- Ambassador program. Throughout the school year all 5th grade students will take classes from Return of the Native, Pacific Grove Museum and Monterey Art Council. Part of the goal of this program is to educate the students about water conservation and to create a Native garden with passive and active storm water catchment. The designs for these gardens are inspired by the professional designs funded by the Ord Terrace grant.

In 2016 City of Seaside and MPWMD funded $20,000 turf removal incentive for the 87,000 square feet of turf eliminated in the King Sports Complex field retrofit project.

As the Coordinator of Renewable Energy and Conservation. I am working diligently to conserve water across the whole school district. The momentum of the MPUSD water conservation plan is growing. MPUSD is committed to reduce the need for water across the district. By 2021 we have the goal of reducing ornamental turf by 65% and to retrofit every field with efficient irrigation systems including flow sensors and master valves. MPUSD has been asked to speak at a state level as a leader in school districts water conservation. MPUSD has reduced its water use by 58% compared to the base year of 2013.

In 2016 MPUSD was awarded a Drought Response Outreach Program for Schools Grant to implement Storm water LID projects and education at 4 Seaside Schools.

I look forward to working with MPWMD for many years.

Thank you

David Chandler

Coordinator of Renewable Energy and Conservation

APPLICATION ATTACHMENTS

ATTACHMENT 1

SITE Photo

ATTACHMENT 2

PROPOSED PLAN

Site	Project	
1. Martin Luther King Jr. School	Broadway demonstration Garden	Turf removal, Ice plant and juniper removal / management. MPWMD demonstration garden grant funds will be used to create a water conservation demonstration garden: Designs may include • Bio-swale • Cisterns • Succulent Gardens • Sheet Mulching • Scape and Mulch • Dry creek • Rain garden

ATTACHMENT 3

BUDGET

Monterey Peninsula Water Management District
LANDSCAPE GRANT PROPOSAL
MONTEREY PENINSULA UNIFIED SCHOOL DISTRICT

BUDGET $33,000

Turf removal 13,424 square feet
Juniper/ iceplant management/removal 8256
Total Area: 21680

Turf removal funds $1.38 per square foot: $30,000 (Plants, Cisterns, benches, landscape material)

MPUSD will provide In-Kind Matching funds: equipment and labor

ATTACHMENT 4

PROJECT TIMELINE

Upon MPWMD award of proposal MPUSD and MPWMD will start working on Design July-August. Turf removal/ storm water engineering would be complete February 2018. The demonstration garden would be ready to plant in Spring 2018. With an opening celebration Scheduled Summer 2018.

ATTACHMENT 5

MAINTENANCE PLAN

The MPUSD maintenance department will maintain the area. This maintenance will be scheduled monthly. In addition since it is a partnership volunteer groups will be scheduled 2-3 times a year for planting and maintenance.

David Chandler, the MPUSD Coordinator of Renewable Energy and Conservation, will oversee implementation of proposed irrigation projects.

ATTACHMENT 6

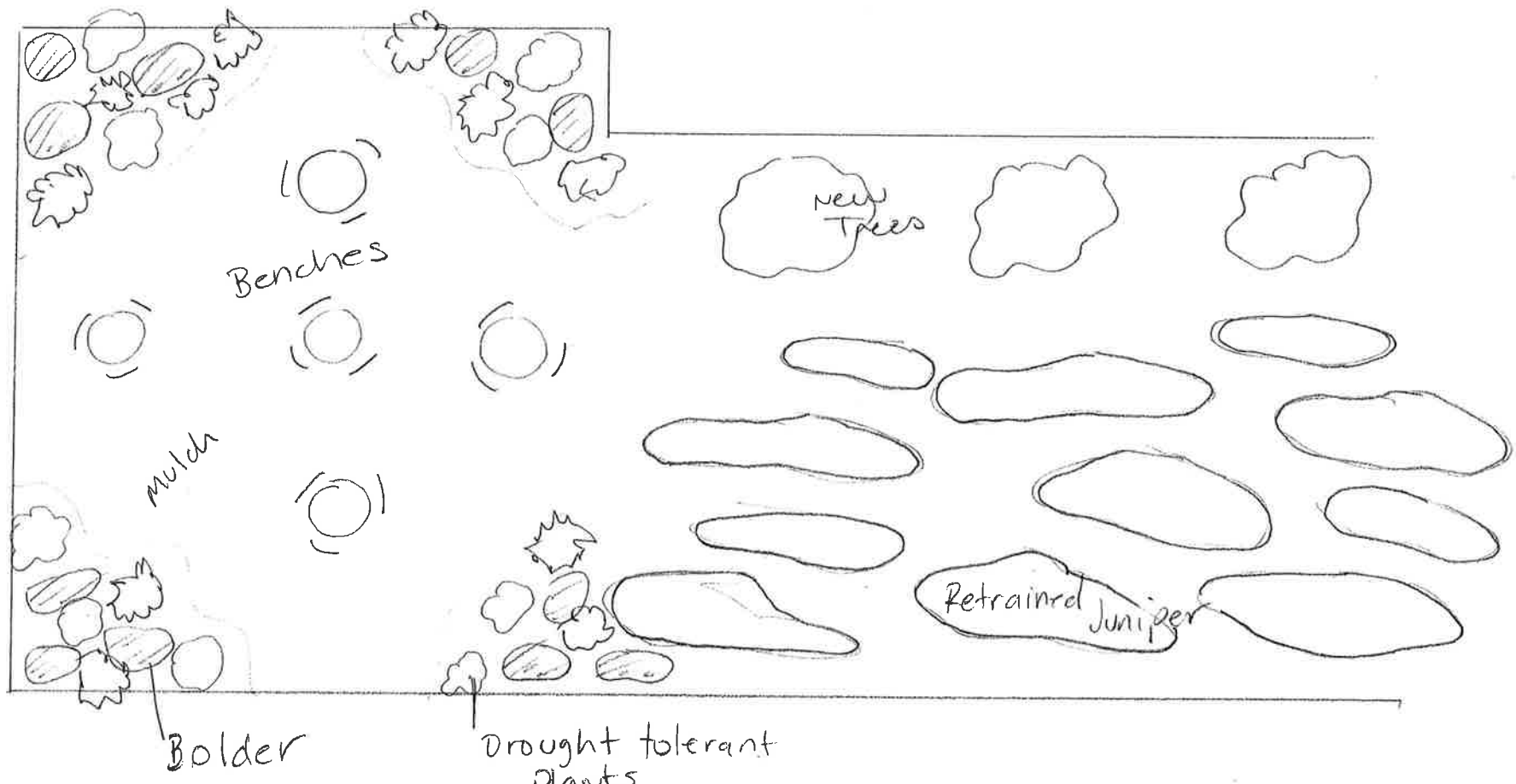
WATER SAVINGS

Currently Martin Luther King Jr. School has 24,332 square feet of irrigated non-essential grass. With the current size and irrigation efficiency the area proposed by this project would use 420,524 gallons of water annually. The new proposal would abandon the current irrigation and water using cisterns, gravity feed and hand watering. This area as a drought tolerant garden would use 66,583 gallons, 20%+ of that would be stored in cisterns. This proposal will reduce water use 353,941 gallons, a 84%+ reduction in water use.

ATTACHMENT 7

CURRENT LANDSCAPING INFORMATION

	H20 Requirement	Current Irrigation
Field	Turf (High) 13,424 sq. ft.	MP rotors



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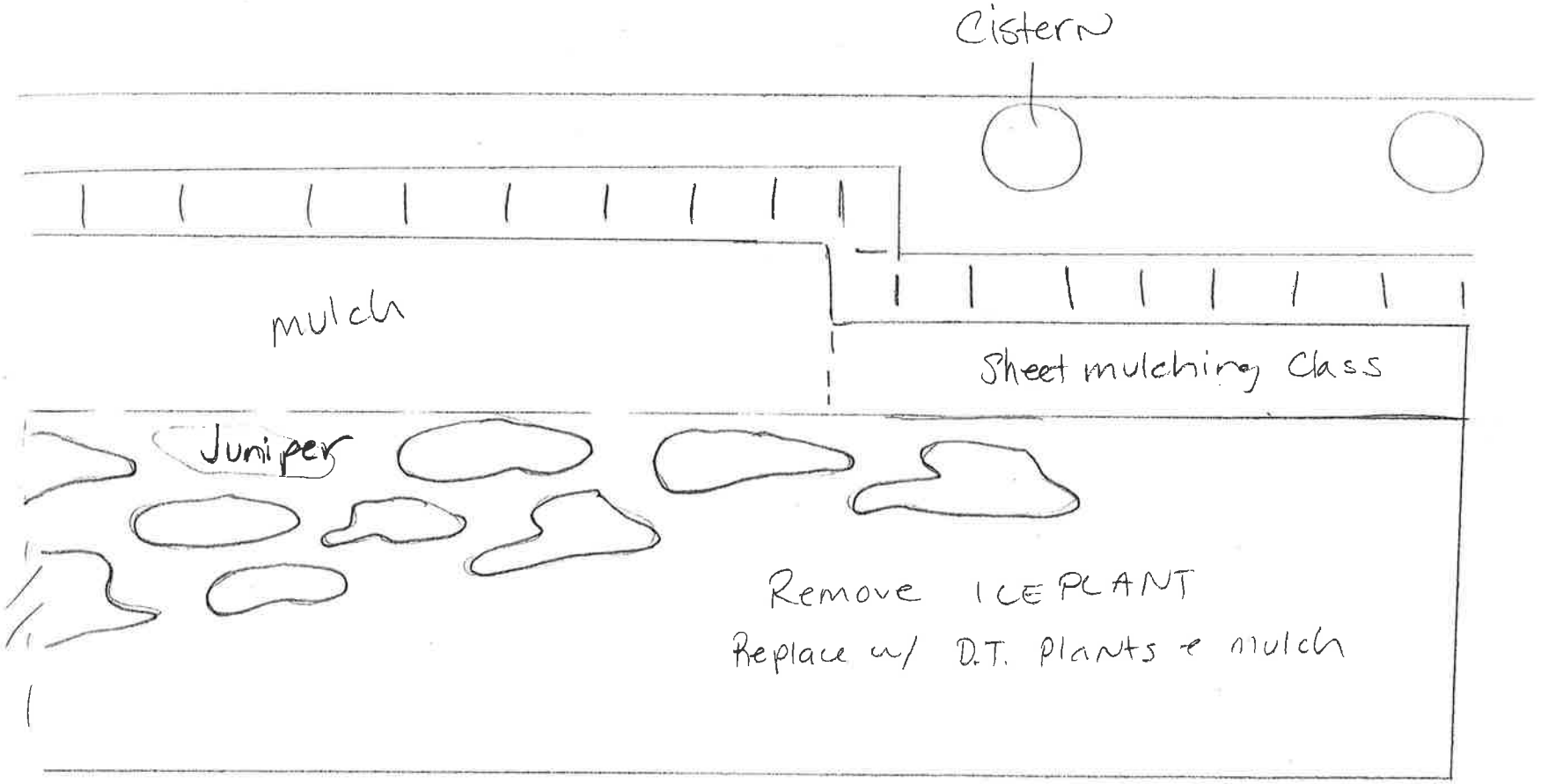
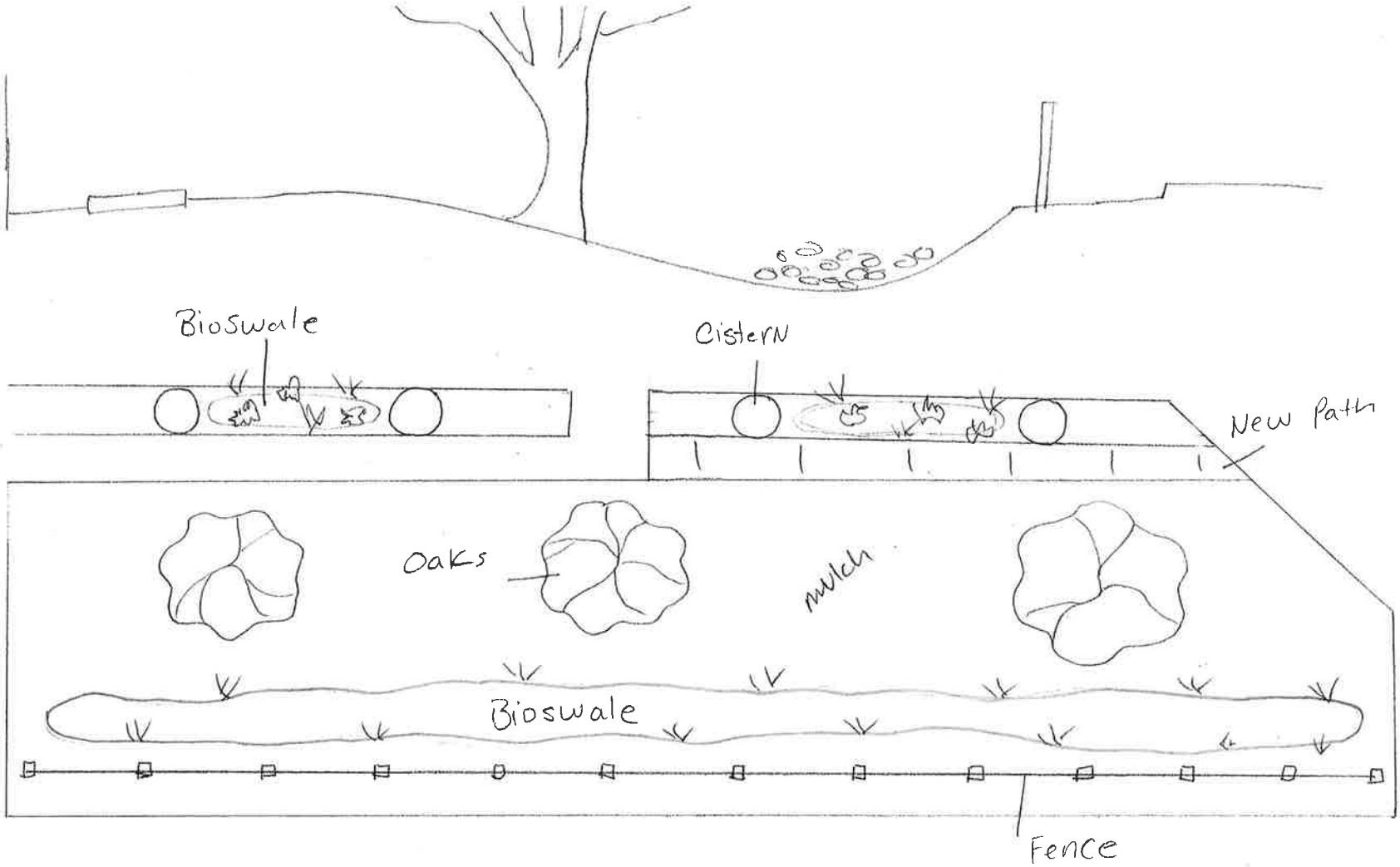


MIDDLE SECTION



UPPER SECTION

Lower Section

Middle Section

Upper Section

ITEM: CONSENT CALENDAR

7. CONSIDER LAWN REMOVAL REBATE REQUEST FROM MONTEREY PENINSULA UNIFIED SCHOOL DISTRICT FOR MARTIN LUTHER KING JR SCHOOL

Meeting Date:	**August 21, 2017**	**Budgeted: Yes**	
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**4-2-4-C**
Prepared By:	**Stephanie Kister**	**Cost Estimate:**	**$10,508**

General Counsel Review: N/A
Committee Recommendation: On July 31, 2017 the Water Demand Committee recommended approval on a unanimous vote of 3 – 0. The Administrative Committee reviewed this item on August 14, 2017 and recommended approval.
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines section 15378.

SUMMARY: District Rule 141, Water Conservation Rebates, allows a lawn removal rebate at a public facility to exceed the square-footage limitation of 2,500 square-feet, subject to Board approval. Earlier in 2017, the Board approved a rebate of $19,969 for the removal of turf on the athletic field at Martin Luther King Jr. School in Seaside which is served by the Seaside Municipal Water System. The Monterey Peninsula Unified School District (MPUSD) is now requesting a $10,508 rebate for the removal of an additional 10,508 square feet of irrigated turf at Martin Luther King Jr. School (**Exhibit 7-A**).

This MPUSD project removes non-essential turf areas at the entrance to the school and in the courtyard. The turf will be replaced with drought tolerant plants partially irrigated with rainwater. As the school is served by the Seaside Municipal Water System, rebates are funded by the MPWMD rebate account. There is approximately $40,000 available in this account for Fiscal Year 2017-18. Estimated water savings for this project is 276,952 gallons/year (0.85 AFA).

BACKGROUND: MPUSD has a goal to reduce ornamental turf by 65 percent and to retrofit every field with water efficient irrigation systems by 2021. In 2015, MPWMD approved lawn removal rebates for two California American Water supplied schools totaling $56,642

The MPUSD has been a leader on the Monterey Peninsula by completing significant water and energy conservation projects in the past five years. They have enacted a District Wide Master Water Conservation Plan which includes the removal of large quantities of non-essential irrigated turf area across the District. In the last seven years, they have retrofitted all their MPWMD properties to meet MPWMD's indoor water efficiency requirements and have removed 150,642 square-feet of non-essential turf. MPUSD records for December 2012 and March 2017 indicate the cumulative water savings from these projects totals more than 749 acre-feet! MPUSD's goal

is to reduce ornamental turf by 65 percent and to retrofit every irrigated field with water efficient irrigation systems by 2021.

In 2015-2016, MPUSD implemented a 5th grade Eco-Ambassador Program in partnership with Return of the Natives, Pacific Grove Museum, and the Arts Council for Monterey County. The goals of the program include educating the students about water conservation, creation of a native plant garden, and installing active rainwater catchment. MPUSD has applied for lawn removal rebates at various sites over the last four years and has used the money to fast-track their conservation efforts. The Eco-Ambassador Program is tied to the lawn conversion projects. The designs for the new gardens were inspired by the professional landscape designs created for Ord Terrace Elementary School which received a grant from MPWMD in 2014.

RECOMMENDATION: Staff recommends the Water Demand Committee approve the request and recommend to the Board that a Lawn removal rebate in the amount of $10,508 be granted for the MPUSD project at Martin Luther King Jr. School.

EXHIBIT
7-A MPUSD Proposal

Monterey Peninsula Water Management District
GRANT PROPOSAL
For
Monterey Peninsula Unified School District

Turf removal

Name of Applicant:	Monterey Peninsula Unified School District
Invoicing & Contract Name & Contact Information:	Brett McFadden, Associate Superintendent of Business Services (831) 645-1269 bmcfadden@mpusd.k12.ca.us 700 Pacific St, Monterey, CA 93940 or PO BOX 1031 Monterey CA 93942
Project Manager Name & Contact Information:	David Chandler, Coordinator of Renewable Energy and Conservation (831) 901-7376 dchandler@mpusd.k12.ca.us
Project Site Addresses:	1.. Martin Luther King School 1713 Broadway Ave, Seaside, CA 93955
Account:	City of Seaside Water: 04-7590-00
Proposed turf removal:	**Turf removal 10,508 sq feet** **Requesting $1 per square foot Turf removal incentive.** **$10,508**
Proposed Projects:	MPUSD's water conservation program is dedicated to improving schools landscape by creating drought tolerant educational learning gardens and environments. In 2017-18 with the funding of the Broadway Demonstration Garden all 23,932 square feet of non-essential turf will be removed and converted into high quality drought tolerate Landscapes.

Preliminary to proposed project

In spring 2014 MPUSD received a grant from MPWMD to install Hydro-point weather trak ET Pro controllers at the Cal Am serviced sites. The grant proposal was met and exceeded by installing all the controllers, as well as eliminating manual and battery operated zones.

In 2014 MPWMD funded a field retrofit and master water conservation Plan for Ord Terrace Elementary. This project has inspired MPUSD to commit to water conservation

landscapes. Ord terrace eliminated 100% of the ornamental turf and replaced it with drought tolerant landscape. Water use has been reduced at Ord Terrace by 63%.

In summer of 2015 MPUSD funded and installed 27 Hydro-point weather trak ET controllers at the City of Seaside and Marina Coast water serviced sites. Making the districts irrigation fully controlled by Smart weather based irrigation controllers

In summer of 2015 MPUSD administration and board approved the use of water utility savings to be used to retrofit our fields irrigation, implement a turf removal plan and set up a turf maintenance program. The MPUSD Energy Program in collaboration with the facilities department has created a six year field retrofit plan and a six year Ornamental Turf removal plan.

In the 2015-16 school year MPUSD is implementing a 5th grade Eco- Ambassador program. Throughout the school year all 5th grade students will take classes from Return of the Native, Pacific Grove Museum and Monterey Art Council. Part of the goal of this program is to educate the students about water conservation and to create a Native garden with passive and active storm water catchment. The designs for these gardens are inspired by the professional designs funded by the Ord Terrace grant.

In 2016 City of Seaside and MPWMD funded $20,000 turf removal incentive for the 87,000 square feet of turf eliminated in the King Sports Complex field retrofit project.

As the Coordinator of Renewable Energy and Conservation. I am working diligently to conserve water across the whole school district. The momentum of the MPUSD water conservation plan is growing. MPUSD is committed to reduce the need for water across the district. By 2021 we have the goal of reducing ornamental turf by 65% and to retrofit every field with efficient irrigation systems including flow sensors and master valves. MPUSD has been asked to speak at a state level as a leader in school districts water conservation. MPUSD has reduced its water use by 58% compared to the base year of 2013.

In 2016 MPUSD was awarded a Drought Response Outreach Program for Schools Grant to implement Storm water LID projects and education at 4 Seaside Schools.

In 2017 MPUSD has applied to MPWMD to remove 13,424 sqft of turf and create a partnership water conservation demonstration garden on Broadway Ave.

I look forward to working with MPWMD for many years.

Thank you

David Chandler

Coordinator of Renewable Energy and Conservation

APPLICATION ATTACHMENTS

ATTACHMENT 1

SITE Photo

Monterey Peninsula Unified School District
Monterey Peninsula Water Management District
Water Conservation Grant Proposal

ATTACHMENT 2

PROPOSED PLAN

Site	Project	
1. Martin Luther King Jr. School	Turf removal	Turf removal. Design and implement drought tolerant Landscapes and Learning environments.

ATTACHMENT 3

BUDGET

Monterey Peninsula Water Management District
LANDSCAPE GRANT PROPOSAL
MONTEREY PENINSULA UNIFIED SCHOOL DISTRICT
BUDGET $10508

Turf removal 10,508 square feet

Turf removal funds $1 per square foot: $10,508 (Plants, Cisterns, benches, landscape material)

MPUSD will provide In-Kind Matching funds: equipment and labor

ATTACHMENT 4

PROJECT TIMELINE

Upon MPWMD award of proposal MPUSD and MPWMD will start working on Design July-August. Turf removal/ storm water engineering would be complete February 2018. The demonstration garden would be ready to plant in spring 2018.

ATTACHMENT 5

MAINTENANCE PLAN

The MPUSD maintenance department will maintain the area. This maintenance will be scheduled monthly. In addition since it is a partnership volunteer groups will be scheduled 2-3 times a year for planting and maintenance.

David Chandler, the MPUSD Coordinator of Renewable Energy and Conservation, will oversee implementation of proposed irrigation projects.

ATTACHMENT 6

WATER SAVINGS

Currently Martin Luther King Jr. School has 24,332 square feet of irrigated non-essential grass. 10,504 sq ft of turf would use 329,051 gallons of water annually. The new proposal would abandon the current irrigation and water using cisterns, gravity feed and hand watering. This area as a drought tolerant garden would use 52,099 gallons, 20%+ of that would be stored in cisterns. This proposal will reduce water use 276,952 gallons, a 84%+ reduction in water use.

ATTACHMENT 7

CURRENT LANDSCAPING INFORMATION

	H20 Requirement	Current Irrigation
Field	Turf (High) 10,504 sq. ft.	MP rotors

ITEM: CONSENT CALENDAR

8. CONSIDER APPROVAL OF 2017 ANNUAL MEMORANDUM OF AGREEMENT FOR RELEASES FROM LOS PADRES RESERVOIR AMONG CALIFORNIA AMERICAN WATER, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, AND MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Meeting Date:	**August 21, 2017**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**Aquatic Resources and Hydrologic Monitoring 2**
Prepared By:	**Kevan Urquhart**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: Consistent with SWRCB WR Order Nos. 95-10, 98-04, 2002-0002, and 20169-0016.
ESA Compliance: Exempt from environmental review per SWRCB Order Nos. 95-10, 98-04, 2002-0002 and 2016-0016, and Section 15268 of the California Environmental Quality Act (CEQA) Guidelines, as a ministerial project; Exempt from Section 15307, Actions by Regulatory Agencies for Protection of Natural Resources.

SUMMARY: Representatives from the Monterey Peninsula Water Management District (MPWMD), California American Water (Cal-Am), the California Department of Fish and Wildlife (CDFW), and National Marine Fisheries Service (NMFS) met on July 6 and again on July 25, 2017 to negotiate the terms and conditions for the 2017 Memorandum of Agreement (MOA) for releases and diversions from Los Padres Reservoir to the Carmel River. As has been the case annually since 2010, concurrence was provided only on the minimum low-flow targets for 2017. CDFW and Cal-Am have not yet concurred on additional operational notification language to the existing MOA and are still in negotiation over it.

Based on current storage conditions and expected reservoir inflows, it was agreed that Cal-Am will maintain minimum flows in the Carmel River below Los Padres Dam (LPD) of 15.0 cubic feet per second (cfs) for August through November, relying on a combination of storage and the natural recovery of river base flows from above LPD, to sustain 15.0 cfs or more for December, and solely on the natural recovery of river base flows from above LPD, thereafter. Inflows to LPD for July through September were estimated from averages of actual flows in 2010 reduced 8% to better match the current flow recession pattern seen to date in 2017, whereas October through December inflows were conservatively represented by the median inflow for a "normal" Water Year Type.

As was the case last year, it is infeasible to set targets maintaining minimum flows at the District's Sleepy Hollow Weir gaging station, due to the variable and unpredictable effects of riparian diversions and summer temperatures on river flow. Nevertheless, the aforementioned release targets below LPD are expected to potentially produce minimum flows at the Sleepy Hollow Weir

of between 14.7 to 16.2 cfs during August through November, then potentially returning to estimated natural river flows of as much as 25.2 cfs in December 2017.

The "above normal" streamflow conditions to date in 2017 are projected to be representative of what can be expected for the remainder of the year, but the agencies decided to be more conservative and use "normal' streamflow conditions for low flow season planning.

Cal-Am ceased diversions from its wells upstream of the Narrows by July 31st, when Carmel River flow at the District's Don Juan Bridge gaging station in Garland Park dropped below 20 cfs for five consecutive days. These actions conform to State Water Resources Control Board (SWRCB) Order 2002-0002 and the 2001 NMFS Conservation Agreement with Cal-Am. The Draft 2017 MOA is included as **Exhibit 8-A**.

RECOMMENDATION: Staff recommends that the Board approve the 2017 MOA and direct the General Manager to sign the agreement.

BACKGROUND: Past MOAs determined minimum flow releases to the Carmel River below San Clemente Dam during the low-flow period (i.e., generally May through December), and the District entered annually into an agreement with Cal-Am and CDFW. Historically, the MOA specified the minimum release that must be maintained from San Clemente Reservoir to the Carmel River and the maximum diversion that was allowed from San Clemente Reservoir to Cal-Am's Carmel Valley Filter Plant (CVFP).

Cal-Am's ability to divert surface flow at San Clemente Dam or control outflow at that point is precluded forevermore by the implementation of the final year of the San Clemente Dam Removal and River Reroute Project completed in 2015. Absent a flow control structure at River Mile 18.61, the MOA must now be managed based on releases from Los Padres Dam at River Mile 24.80.

Based on current reservoir storage and projected "above normal" LPR inflow conditions for most of the remainder of Calendar Year 2017, it was agreed by all parties at the June 25, 2017 meeting that Cal-Am would:

a) follow the natural pattern of LPR inflow recession in July, then
b) maintain a minimum flow of 15.0 cfs for August through November from LPD to the Carmel River (as measured at MPWMD's Below Los Padres Gage), and
c) rely on the natural recovery of river base flows from above LPR, thereafter, in order to sustain an estimated natural river flows of 15.0 cfs or more in December 2017 (as measured at MPWMD's Below Los Padres Gage).

The projected monthly inflows, releases, diversions and storage values for the August - December 2017 period are shown on **Attachment A of Exhibit 8-A**. The parties will continue to monitor runoff throughout the year and may meet either in August or September to reconsider whether or not any further modifications are needed, if actual inflow and storage differ from the expectations. **Attachment A of Exhibit 8-A** also includes actual values for the October 2016 through June 2017 period, which are shown in bold type.[1]

[1] Bold type indicates final estimates and italic type indicates preliminary estimates.

To maximize the instream flow benefits from the proposed releases, the 2017 MOA also includes a condition that limits the amount of water pumped from Cal-Am's production wells in the Upper Carmel Valley (i.e., above the Narrows) to levels required for maintenance of the wells (**Exhibit 8-B**). This limitation and schedule also applies to the former Water West wells that are now owned and operated by Cal-Am. Similarly, the MOA includes a provision that Cal-Am will make all reasonable efforts to operate its Lower Carmel Valley production wells beginning with the most downstream well and moving to upstream wells as needed to meet system demand. This provision is consistent with Condition No. 5 of SWRCB Order 95-10.

While all parties agreed to the minimum flow targets shown in **Attachment A of Exhibit 8-A**, CDFW and Cal-Am did not discuss or agree to additional language requiring faster notification of any operational changes to the Cal-Am system that could result in the need to accelerate or expand fish rescues. CDFW provided draft language in 2010 that Cal-Am rejected, which resulted in the 2010 through 2016 Low Flow MOAs not being signed by CDFW. Cal-Am complied with the Low-Flow MOA targets in 2010 through 2016. District staff provided alternative draft language at a January 26, 2011 meeting which Cal-Am rejected as overly specific and unworkable. Cal-Am's current position is that CDFW must demonstrate the legal nexus requiring that such additional language be included in future Low Flow MOAs. Even if the Low Flow MOA shown in **Exhibit 8-A** is only signed by the District and Cal-Am, and not CDFW, as was the case in 2010 - 2016, we expect Cal-Am will once again comply with the low-flow targets for 2017.

The proposed MOA may be modified by mutual consent of all the parties and will be monitored weekly by representatives of the three parties. It should be noted that the releases and operations specified in the MOA are consistent with the releases and diversions that were proposed in the Quarterly Water Supply Strategy and Budget for Cal-Am for the July-September 2017 period, on June 8, 2017. If approved, the 2017 MOA becomes effective August 1, 2017, and extends through December 31, 2017.

IMPACT ON STAFF AND FISCAL RESOURCES: Due to the current "above normal" inflows that are likely to continue for the remainder of the year, the lower river is losing surface flow but has not yet begun drying-up after the last significant storms of the year between April 7-18, 2017. LPD ceased spilling on August 2, 2017. Roving steelhead rescue efforts in the tributaries began on May 5, 2017, but main-stem rescues have not yet been initiated. District staff do not know whether we will need to do very many main stem fish rescues or operate the District's Sleepy Hollow Steelhead Rearing Facility (SHSRF) in 2017, since minimum flows foreseeable for the Water Year could keep the river flowing to the lagoon for the remainder of 2017, as was the case in 2011.

EXHIBITS

8-A Draft 2017 Memorandum of Agreement between the State of California Department of Fish and Wildlife, California American Water, and the Monterey Peninsula Water Management District to Release Water into the Carmel River from Los Padres Reservoir

8-B Maintenance and Water Quality Pumping Schedule, 2017

EXHIBIT 8-A

2017 MEMORANDUM OF AGREEMENT AMONG THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, CALIFORNIA AMERICAN WATER, AND MONTEREY PENINSULA WATER MANAGEMENT DISTRICT TO RELEASE WATER INTO THE CARMEL RIVER FROM LOS PADRES RESERVOIR

THIS AGREEMENT is made this 1st day of August, 2017, among the California Department of Fish and Wildlife, ("Department"), California American Water, ("Cal-Am"), and the Monterey Peninsula Water Management District, (the "District"), with respect to the following.

RECITALS

A. The Department is required to conserve and protect the fish and wildlife resources of Los Padres Dam;

B. Cal-Am supplies water to the citizens of the communities of the Monterey Peninsula, Monterey County in accordance with SWRCB Order No. 95-10, as amended.

C. The District, through its rules and regulations, establishes a quarterly water supply strategy and budget for the Monterey Peninsula.

NOW THEREFORE, IT IS HEREBY AGREED:

DEFINITIONS

1. "Minimum pool at Los Padres Reservoir" means a surface water elevation of 980 feet above mean sea level, or 105 acre feet of storage.

2. "Water Release by Cal-Am at Los Padres Dam" into the Carmel River may occur from seepage through the dam, direct release from any discharge port, spillage over the crest of the dam, releases through the fish ladder or smolt emigration facility, releases from the lowest outlet at 980 feet NGVD, or any combination thereof.

DESIGNATION OF RESPONSIBILITIES

3. Cal-Am shall make water releases into the Carmel River channel below Los Padres Reservoir beginning August 2017 as follows and summarized in **Attachment A**: Cal-Am shall maintain 15.0 cubic feet per second (cfs) for August through December 2017 below Los Padres Reservoir, as measured at the District's Below Los Padres Gage, relying on the natural recovery of river base flows from above the reservoir to sustain flows thereafter.

4. The Russell Wells shall be limited to a combined total instantaneous diversion rate of not more than 0.5 cfs during low-flow periods as set forth in ordering Paragraph No. 4 of SWRCB Order WRO-2002-0002 (**Attachment B** hereto).

5. In the event that a significant change in projected runoff occurs in the basin during the duration of this Agreement, the parties will meet to discuss modifications to the scheduled reservoir releases and diversion.

EXHIBIT 8-A

6. Cal-Am shall limit operation of its wells in the Carmel Valley above the Narrows during low-flow periods as set forth in ordering Paragraph No. 2 of SWRCB Order WRO 2002-0002 (**Attachment B** hereto). Cal-Am shall notify the District and the Department of its maintenance pumping schedule in advance.

7. Cal-Am shall make reasonable efforts to operate the Lower Carmel Valley production wells in the sequence from the most downstream well and progress upstream as wells are needed and available for production. Cal-Am shall notify the District and the Department before operating its Scarlett No. 8 Well.

8. Cal-Am shall provide, upon request by the Department or the District, records of the Carmel Valley Filter Plant operation showing compliance with the provisions of this Agreement.

9. Cal-Am shall notify the District and the Department when the water elevation reaches 990 feet NGVD at Los Padres Reservoir, and Cal-Am shall not draw Los Padres Reservoir below minimum-pool elevation without obtaining specific written approval from the Department.

10. In the event that Cal-Am has not exceeded its annual production limit from both the Coastal Subareas of the Seaside Groundwater Basin and Carmel River sources, Cal-Am shall make every reasonable effort to produce water from the Coastal Subareas of the Seaside Basin before producing water from its Carmel River sources to preserve streamflow and instream habitat in the Carmel River for listed species, consistent with the production amounts specified in the Quarterly Water Supply Strategy and Budget for Cal-Am's main distribution system.

DISTRICT

11. The District shall take direct measurements of inflow to Los Padres Reservoir on a monthly basis through the duration of this Agreement.

ALL PARTIES

12. This Agreement is revocable upon ten days' written notice to all parties signatory to this Agreement.

13. This Agreement is entered into without prejudice to the rights and remedies of any party to the Agreement.

EFFECTIVE DATE AND TERM OF AGREEMENT

14. This Agreement is effective August 1, 2017 and shall remain in force until December 31, 2017. This Agreement may be modified or extended by mutual consent of all the parties.

EXHIBIT 8-A

EXECUTION

IN WITNESS WHEREOF, each party hereto has caused this Memorandum of Agreement to be executed by an authorized official on the day and year set forth opposite their signature.

California American Water

By: _____ _____
511 Forest Lodge Road Date
Pacific Grove, CA 93950

Monterey Peninsula Water Management District

By: _____ _____
P.O. Box 85 Date
Monterey, CA 93942-0085

California Department of Fish and Wildlife

By: _____ _____
1234 East Shaw Avenue Date
Fresno, CA 93710

Attachment A

Table 1 [Version 1e] - 8/07/17

2017 Low Flow Memorandum of Agreement & Quarterly Water Budget

Los Padres Reservoir: Release Schedule (All Values in Acre-Feet, except Cubic-Feet-per-Second as indicated)

Assuming July-September Flows at 92% of WYs 2010-2011, Then Median Normal WYT Flows for October-December, and Drawdown No Lower Than 1000' Elevation = 405 AF

Month Represents Water Year Type of:	**Wet**	**Normal**	**BelowNorm**	**ExtWet**	**ExtWet**	**AboveNorm**	**AboveNorm**	**ExtWet**	**ExtWet**	*AboveNorm*	*AboveNorm*	*AboveNorm*	*Normal*	*Normal*	*Normal*	
	Oct-16	**Nov-16**	**Dec-16**	**Jan-17**	**Feb-17**	**Mar-17**	**Apr-17**	**May-17**	**Jun-17**	*Jul-17*	*Aug-17*	*Sep-17*	*Oct-17*	*Nov-17*	*Dec-17*	*WY 2017*
Los Padres Reservoir																
Estimated Inflow	**518**	**804**	**2,760**	**41,973**	**46,035**	**13,060**	**9,837**	**4,461**	**2,300**	*1,337*	*827*	*612*	*333*	*752*	*2,324*	*124,524*
Evaporation	**20**	**5**	**2**	**16**	**16**	**34**	**21**	**42**	**50**	*59*	*60*	*44*	*19*	*11*	*2*	*369*
Outflow as @ BLP Gage																
Spillage	**0**	**0**	**1,233**	**41,035**	**45,186**	**12,104**	**8,923**	**3,497**	**1,357**	*0*	*0*	*0*	*0*	*0*	*0*	*113,335*
Combined Release (Ladder/Trap/980')	**445**	**549**	**922**	**922**	**833**	**922**	**893**	**922**	**893**	*1278*	*922*	*892*	*922*	*892*	*982*	*10,393*
Actual Mean Daily in CFS @ BLP Gage	**7.2**	**8.9**	**35.0**	**682.4**	**748.4**	**211.8**	**159.6**	**71.9**	**37.8**	*20.8*	*15.0*	*15.0*	*15.0*	*15.0*	*16.0*	
Targeted Min. Mean Daily Flow in CFS	**7**	**10**	**15**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	*n/a*	*15.0*	*15.0*	*15.0*	*15.0*	*15.0*	
Total Storage																
Beginning of Month	**869**	**922**	**1,172**	**1,775**	**1,775**	**1,775**	**1,775**	**1,775**	**1,775**	*1,655*	*1,655*	*1,500*	*1,176*	*568*	*417*	
End of Month	**922**	**1,172**	**1,775**	**1,775**	**1,775**	**1,775**	**1,775**	**1,775**	**1,775**	*1,655*	*1,500*	*1,176*	*568*	*417*	*1,757*	
Between Reservoirs																
Net Inflow from Tributaries	**116**	**278**	**653**	**26,966**	**29,138**	**7,305**	**3,586**	**2,271**	**970**	*398*	*134*	*49*	*18*	*84*	*581*	*71,864*
All Estimated Losses (Div. + E.T.)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	*68*	*58*	*53*	*37*	*21*	*16*	*179*
Sleepy Hollow Weir																
Total Estimated Release	**561**	**827**	**2,808**	**68,923**	**75,157**	**20,331**	**13,402**	**6,690**	**3,220**	*1,608*	*998*	*888*	*903*	*955*	*1,547*	*195,413*
Estimated Mean Daily Flow in CFS	**9.1**	**13.9**	**45.7**	**1120.9**	**1353.3**	**330.7**	**225.2**	**108.8**	**54.1**	*26.1*	*16.2*	*14.9*	*14.7*	*16.0*	*25.2*	

Notes:

1. The minimum pool requirement at Los Padres Reservoir is 105 acre-feet at elevation 980 ft.
2. Projected inflows for the July - September 2017 period are based on actual 2010 flows reduced 8%.
3. Projected inflows for the October - December 2017 period are deived from the median flows @ Sleepy Hollow Weir for a Normal WYT based on 1902-2015 data.
4. Inflows are apportioned Above and Below LPD, as actually occured in July - September 2010, then 95/5% in October, 90/10% in November, and 80/20% in December.
5. Estimated evaporation from LPR in July-December are actual measured values from 2010.
6. Releases and diversions are consistent with terms of the 2001 and 2006 Conservation Agreements between the NMFS and Cal-Am and with the conditions in SWRCB Order Nos. 95-10, 98-04, 2002-0002, and 2016-0016.
7. Numbers in **Bold** type are final reported numbers, and those in *Italics* are future estimates.

Attachment B

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WRO 2002 – 0002

In the Matter of Reconsideration of WR Order 2001-04-DWR
Implementing Condition 6 of Order WR 95-10 as Modified by
Order WR 98-04 Regarding Diversions by
California-American Water Company

SOURCE: Carmel River

COUNTY: Monterey

ORDER RECONSIDERING WR ORDER 2001-04-DWR

IT IS FURTHER ORDERED that Cal-Am shall comply with Condition 6 of Order WR 95-10, as modified by Order WR 98-04 as follows:

1. Cal-Am shall immediately upon issuance of this order cease withdrawal of water from the San Clemente Dam during low flow periods except during an emergency. "Emergency" means a system failure such as a pump failure, main breaks or fires, that jeopardizes the public health and safety. Hot weather demand alone shall not *per se* be an "emergency," but it is recognized that after taking appropriate conservation measures, if levels in the Clear Well fall below nine feet from the bottom of the tank, an emergency may exist and diversions at San Clemente or the utilization of other facilities may be necessary. Nine feet from the bottom of the tank is a minimum requirement established by California Department of Health Services regulations. In all cases, diversions at San Clemente Dam or the utilization of other facilities shall be undertaken in a manner that is least damaging to the fishery resources, and these emergency operations shall be for the shortest practicable time. Cal-Am shall notify and consult with NMFS, FWS, DFG, and the District prior to implementation of emergency operations. If there is no time for consultation, Cal-Am shall notify NMFS, FWS, DFG, and the District of its emergency operation as early as practicable within eight (8) hours after Cal-Am first becomes aware of the emergency. Cal-Am shall notify, by telephone or telefax, the Chief of the Division of Water Rights within 24 hours of the emergency or by noon of the first business day following the incident. For the purpose of this Order, "low flow periods" are defined as times when stream flow in the Carmel River at the Don Juan Bridge (RM 10.8) gage is less than 20 cfs for five consecutive days. Pursuant to its continuing authority over the public trust, the SWRCB may amend this order to modify the definition of "low flow periods" or to add additional flow requirements to protect steelhead in the Carmel River. The Chief of the Division of Water Rights (Chief) is delegated the authority to modify the definition of "low flow periods" and the authority to add flow requirements based on new information, after finding that any proposed change to the order would better protect steelhead in the Carmel River. The Chief is also delegated the authority to modify the flow requirements of this order, in response to any changes in the requirements imposed under the Endangered Species Act, as necessary to prevent this order from being in violation of the Endangered Species Act or unreasonably interfering with efforts to comply with the Endangered Species Act. Prior to making the finding and prior to making any change to the order, the Chief shall provide notice to the parties to this hearing and give them an opportunity to comment on the proposed change.

EXHIBIT 8-B

Maintenance & Water Quality Pumping Schedule*
2017

Wells	January	February	March	April	May	June	July	Aug	September	October	November	December
Los Laureles Well No. 5								14	5	9	6	4
Los Laureles Well No. 6								15	6	10	7	5
Garzas Well No. 3								21	11	16	13	11
Garzas Well No. 4								OOS	Well Maint	17	14	12
Panetta Well No. 1								28	18	23	20	18
Panetta Well No. 2								29	19	24	21	19
Robles Well No. 3								OOS	Rehabilitation	24	27	27

Upper Valley wells will be pumped 1 day per week, one week per month for minimum of 4 hours per day. (0800-1530)
Robles Well No. 3 is scheduled for rehabilitation Aug-Sept. and maintenance pumping will commence following

(< 20 cfs for 5 consecutive days at the Don Juan gauging station) or non-usage, the above schedule will be utilized.

Well sampling for Water Quality purposes may be in addition to above schedules and will be conducted after 8:0 a.m. and before 2:00 p.m. on an as need basis.
The wells need to run for approximately 20 min for this sampling.

ITEM: CONSENT CALENDAR

9. AUTHORIZE FUNDING FOR PUEBLO WATER RESOURCES TO PROCEED WITH THE SUPPLEMENTAL SAMPLE ANALYSIS PLAN WATER QUALITY INVESTIGATION

Meeting Date:	**August 21, 2017**	**Budgeted:**	**Yes**
From:	**David J. Stoldt General Manager**	**Program/ Line Item No.:**	**Water Supply Projects 1-2-1**
Prepared By:	**Jonathan Lear**	**Cost Estimate:**	**$120,137**

General Counsel Review: N/A
Committee Recommendation: The Administrative Committee reviewed this item on August 14, 2007 and recommended approval.
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines section 15378.

SUMMARY: As the District and CalAm move forward with their water supply projects, Pure Water Monterey and Desalination respectively, new sources of water will be manufactured, injected and stored in the Seaside Groundwater Basin. As a component of the permitting process, each project will require to enter into an agreement with the Seaside Watermaster to inject and store water in the Seaside Groundwater Basin. The Seaside Adjudication Decision requires that no actions by any groundwater producers cause material damage to any other groundwater producer. Because of this, a component of the agreement to store and recover water will require each project owner/operator to demonstrate that storage of their water will not cause damage to the Seaside Groundwater Basin or material damage to other groundwater producers.

DISCUSSION: Staff proposes to retain Pueblo Water Resources to assist the District with an investigation of water quality impacts and changes in water quality during Aquifer Storage and Recovery operations. Years of water quality data have been collected to meet regulatory requirements for the Regional Water Quality Control Board. These data have shown sporadic increases in some water quality parameters during aquifer storage and recovery cycles. While not fully understood, some of these data have led the District staff to believe the source of the water quality changes may be the interaction of injected water from the Carmel Valley Alluvial Aquifer with the minerology of the Santa Margarita Sandstone. The proposed sampling is designed to determine the geochemical process(es) occurring between injected water and the aquifer minerology and help with forecasting potential water quality changes associated with long-term water storage in the Seaside Groundwater Basin. The data set generated from this sampling will be used to populate a geochemical model that will demonstrate injection of Pure Water Monterey water will not cause damage to the Seaside Groundwater Basin or create long-term unintended changes in water chemistry.

In addition, District staff believes that a well calibrated geochemical model is a necessary tool to help predict and verify the geochemical interactions between the Seaside Groundwater Basin

minerology and the mixing of Carmel Valley Alluvial, Pure Water Monterey, Desalinated, and Native Seaside Basin groundwater. This geochemical model will also be used and maintained to manage future ASR operations targeting the Seaside Groundwater Basin to store water which is consistent with the District's Mission Statement to protect water resources.

RECOMMENDATION: Staff recommends the Board authorize the General Manager to enter into an agreement for $120,137 with Pueblo Water Resources to complete the Supplemental Sampling and Analysis Plan to generate the data necessary that will be used to construct a geochemical model of the Seaside Groundwater Basin.

BACKGROUND: The District completes annual water quality monitoring at the ASR facilities as outlined in the ASR Sample and Analysis Plan, which is a requirement for project operations by the Regional Water Quality Control Board. Because the chemistry of water produced from wells in Carmel Valley differs from the chemistry of the native groundwater in the Seaside Groundwater Basin, district staff and regulators have noticed water quality changes resulting from injection that cannot be explained by the simple mixing of two water types. Although the origin of the water quality changes are not understood completely, recent work has brought District staff to the hypothesis that changes in water chemistry are related to the dissolution of trace minerals that have been identified to exist in the Santa Margarita Sandstone.

IMPACT TO STAFF/RESOURCES: Funds for this project are included in the FY 2017-18 budget under "Water Supply Projects," line item 1-2-1. Funds expended to complete this work will be shared between the District and CalAm through the ASR Management and Operations agreement between the District and CalAm. Staff time will be utilized to aid the consultant in sample collection.

EXHIBITS

9-A Proposal for Supplemental Sample and Analysis Water Quality Investigation from Pueblo Water Resources

9-B Sample and Analysis Plan outlining annual ASR project monitoring as required by the Regional Water Quality Control Board

June 12, 2017
Project No. 12-0043

Monterey Peninsula Water Management District
Post Office Box 85
Monterey, California 93942-0085

Attention: Mr. Jonathan Lear

Subject: Supplemental SAP and Water Quality Investigation Assistance in FY 17-18

Dear Jonathan:

In accordance with our recent discussions, Pueblo Water resources, Inc. (Pueblo / PWR) is please to provide this supplemental proposal for assisting the District with the ongoing water quality investigations at the ASAR wells.

As you know, Pueblo has been assisting the District for the last 18+ months with an investigation of water quality impacts and changes in water quality during aquifer storage at the ASR-1 and ASR-2 wells. Findings from the investigation to date have identified sporadic increases in some water quality parameters while others have remained stable during aquifer storage; the data have also led to the investigation of the other ASR wells to ascertain both the occurrence for water quality changes, and to the nature of subsurface migration of injected waters within the Santa Margarita Sandstone (Tsm). Although the origin(s) of the water quality changes are not fully understood thus far, recent analytic and geochemical work has increased our knowledge base of Tsm chemistry and has brought us to a possible source of mineral dissolution in trace minerals that have been identified within the Santa Margarita Sandstone. Additional sampling, analyses, and geochemical modeling will be needed, however, to verify the current hypotheses and hopefully firmly demonstrate the geochemical process(es) associated long term water storage within the Tsm.

Our proposed services to assist the District with the continuing investigation include the following general tasks:

- Assist MPWMD staff with field sampling and monitoring activities.
- Develop an updated Supplemental Sampling and Analysis Plan (SSAP) for the FY 2017- 2018 period and coordinate with Cal-Am and DDW.
- Outside laboratory costs associated with water quality sampling.
- Outside specialty laboratory costs for detailed trace mineralogy analysis of Tsm matrix and well flushing residues.

- Meetings with MPWMD, Cal-Am, and DDW staff regarding the investigation progress and related issues to the DDW Water System Permit to recover waters from the ASR wells.

We have developed an estimate of the envisioned additional work needed based on the general scope and estimated laboratory fees discussed above. The total fee for the work is $109,215 , and is detailed in the attached manhour and cost spreadsheet. The estimate is based on our current fee schedule and recent laboratory cost quotations. As with our previous budget projections with the District, we also recommend a 10% contingency be allocated in the event that additional and/or unforeseen costs arise during the performance of the work (total with contingency is $120,137).

As always, we propose to perform these services on a time-plus-materials basis with periodic progress billings. We will not exceed the stated budget without prior notification to the District as to any changes in scope or cost that were beyond the proposed scope of services, and will not proceed with any additional work without your prior written authorization.

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

Sincerely,

Pueblo Water Resources, Inc.

Stephen P. Tanner, P.E.
Principal Engineer

SPT:rcm

Attachments: Manhour and Cost Estimation Spreadsheet

EXHIBIT 9-A

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Professional Services for ASR Project SSAP and Water Quality Investigation Assistance

Supplemental WQ Investigation - June 2017

PWR Project No.: 12-0043

ESTIMATED FEE SUMMARY

LABOR		Principal Professional	Senior Professional	Project Professional	Phd. Geochemist	Technician	Drafting	WP	Hours by Task	Estimated Task Cost
Hourly Fee		$195	$185	$155	$225	$115	$100	$90		
Task No.	Task Description									
1	SAP revisions and field sampling	150						-	150	$29,250
2	Geochemical Interaction Assessment	8			40			-	48	$10,560
3	Meetings with District and Cal-Am staff	45						-	45	$8,775
4	Additional TMs (2 assumed)	55						-	55	$10,725
		-	-	-	-	-	-	-	0	$0
Hours by Labor Category:		258	0	0	40	0	0	0		
Costs by Labor Category:		$50,310	$0	$0	$9,000	$0	$0	$0		
								Total Labor Hours:	298	
								Total Labor Costs:	$59,310	

OTHER DIRECT COSTS (ODC's)			Unit	No. of	
Task No.	Item	Units	Price	Units	Fee
1	Vehicle	Daily	$75	4	$300
1	Travel Per Diem	Daily	$150	4	$600
				Subtotal ODCs:	$900

OUTSIDE SERVICES			Unit	No. of	
Task No.	Item	Units	Price	Units	Fee
1	Outside Laboratory Fees - McCampbell	Lump Sum	$1,650	12	$19,800
1	Outside Laboratory Fees - Autec / Surface Science Wes	each	$8,250	3	$24,750
		0	$0	0	$0
					$0
Subtotal Outside Services:					$44,550
Subtotal Outside Services w/ Markup (10%):					$49,005

COST SUMMARY	
Labor	$59,310
Other Direct Costs	$900
Outside Services	$49,005
Subtotal:	$109,215
10 % Contingency	$10,922
TOTAL ESTIMATED PROJECT COST:	$120,137

PUEBLO water resources

MONTEREY PENINSULA
AQUIFER STORAGE AND RECOVERY PROJECT

SAMPLING AND ANALYSIS PLAN

Prepared for:

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

December 2012

MONTEREY PENINSULA
AQUIFER STORAGE AND RECOVERY PROJECT

GROUNDWATER SAMPLING AND ANALYSIS PLAN

INTRODUCTION

This Groundwater Sampling and Analysis Plan (SAP) has been developed for the Monterey Peninsula Aquifer Storage and Recovery (ASR) Project. The project is cooperatively implemented by the Monterey Peninsula Water Management District (MPWMD or District) and California American Water (CAW), and generally involves the diversion of excess winter/spring flows from the Carmel River system for recharge, storage and subsequent recovery in the Seaside Groundwater Basin (SGB). Treated (potable) drinking water from the CAW distribution system is injected into the Santa Margarita Sandstone aquifer in the SGB via three existing ASR wells located at two ASR facilities in the SGB. The injected water is stored within the aquifer and subsequently recovered into the CAW distribution system during dry periods. The overall objective of the project is to facilitate the conjunctive use of water supplies in the Carmel River system and SGB that will benefit the resources of both systems.

ASR operations generally consist of three components or phases: (1) injection of drinking-quality water into the aquifer through the ASR wells; (2) storage of the injected water within the aquifer; and, (3) recovery of the stored water by pumping at one or more of the ASR wells. Periodic samples of the injected, stored, and recovered waters are to be collected from the ASR wells and associated monitoring wells and analyzed for a variety of water-quality constituents pursuant to requirements of the Central Coast Regional Water Quality Control Board (RWQCB) for the project. The purpose of this SAP is to identify the locations, sample collection frequency, and parameters to be monitored as part of the project's ongoing water-quality data collection program. The project location and associated wells in the SGB are shown on **Figure 1** – Project Location Map.

GROUNDWATER MONITORING

Groundwater Monitoring Wells

ASR Project On-Site Wells. There are two ASR facilities located in the SGB; the Santa Margarita and Seaside Middle School ASR Facilities. Groundwater monitoring wells for collection of on-site water-quality samples include three ASR wells and two associated monitoring wells that have been constructed at the two ASR facilities. Two of the ASR wells are located at the Santa Margarita (SM) ASR Facility and are designated as SM ASR-1 and SM ASR-2. This facility is also referred to as the Phase 1 ASR Project. The third existing ASR well is located at the Seaside Middle School (SMS) ASR Facility and is designated as SMS ASR-3.

This facility is also referred to as the Phase 2 ASR Project[1]. All three existing ASR wells are completed solely within the Santa Margarita Sandstone (Tsm) aquifer.

In addition to the ASR wells, there are two on-site monitoring wells (one located at each ASR facility) that are also completed solely within the Tsm aquifer. SM MW-1 is located at the SM ASR Facility and is located in between SM ASR-1 and SM ASR-2, at distances of approximately 90 and 190 feet, respectively. SMS Deep MW is located at the SMS ASR Facility at a distance of approximately 20 feet from SMS ASR-3. An additional monitoring well is also located at the SMS ASR Facility that is completed within the overlying Paso Robles aquifer, designated as SMS Shallow MW. This well is instrumented with a submersible water-level transducer/data logger unit to observe the water-level response of this aquifer to ASR operations (it is not designed or equipped for collection of water-quality samples). The locations of the ASR wells and on-site monitoring wells are shown on **Figure 2** – Site Location Map. A summary of the on-site wells is presented in **Table 1** below:

Table 1. On-Site Wells Summary

Well ID	Distance from ASR Well (feet)			Aquifer Completed
	SM ASR-1	SM ASR-2	SMS ASR-3	
SM ASR-1	--	280	1,380	Tsm
SM ASR-2	280	--	1,235	Tsm
SM MW-1	90	190	1,325	Tsm
SMS ASR-3	1,380	1,235	--	Tsm
SMS Deep MW	1,380	1,240	20	Tsm
SMS Shallow MW	1,415	1,265	25	QTp

Table 1 Notes:

Tsm – Santa Margarita Sandstone aquifer
QTp – Paso Robles aquifer

Off-Site SGB Wells In addition to the on-site wells at the two ASR facility sites, submersible water-level transducer/data logger units have been installed at seven off-site District monitoring well sites in the SGB to observe the water-level response of the aquifer system to ASR operations. The locations of the off-site monitoring wells are shown on **Figure 1**. The distances from each of the project sites and aquifers monitored by the off-site wells are summarized in **Table 2** below:

[1] The Phase 2 ASR Project will consist of two ASR wells and associated facilities at the SMS ASR Facility. SMS ASR-4 is currently planned to be installed during summer/fall of 2012 and will be added to the SAP when completed and equipped for operation.

Table 2. Off-site Monitoring Wells Summary

Well ID	Distance from ASR Site (feet)		Aquifer Monitored
	SM	SMS	
Paralta Test	680	740	QTp & Tsm
Ord Grove Test	1,540	2,535	QTp & Tsm
Ord Terrace (Deep)	2,275	2,910	Tsm
FO-7 (Deep)	4,265	3,700	Tsm
FO-7 (Shallow)			QTp
PCA East (Deep)	6,390	6,200	Tsm
PCA East (Shallow)			QTp
FO-9 (Deep)	7,290	6,125	Tsm
FO-8 (Deep)	7,585	6,450	Tsm

Table 2 Notes:

Monitoring well distances are measured to centroid of each ASR site.
Tsm – Santa Margarita Sandstone aquifer
QTp – Paso Robles aquifer

In addition to water-level monitoring at the above off-site monitoring wells, CAW's Paralta well and PCA East Deep have been designated as off-site monitoring wells for periodic water-quality sampling as part of this SAP (refer to **Table 4**).

Groundwater Monitoring Equipment

The equipment required to perform the groundwater monitoring as prescribed in the SAP includes:

- Sampling Pumps
- Pressure Transducers/Data Loggers
- Electric Water Level Sounder
- Field Water Quality Monitoring Devices
- Flow-Thru Cell Device(s)
- Sample Containers
- Coolers and Ice

Each of the on-site wells is equipped with a dedicated pump. The ASR wells are equipped with water-lubricated, vertical line-shaft turbine pumps. SM MW-1, SMS Deep MW, and PCA East Deep are equipped with submersible sampling pumps. The flow rates for each monitored wells are measured using in-line flow meters. Sampling ports on the well-head piping at each well allow for the collection of grab samples during injection and pumping operations.

Field water-quality monitoring is to be performed using various instruments that allow for the field analysis of a variety of constituents, including but not limited to: chlorine residual, conductivity, dissolved oxygen, pH, temperature, redox/ORP, and Silt Density Index (SDI). The field water-quality monitoring devices are to be routinely calibrated as prescribed in the operating procedures manual for each device.

All of the ASR and monitoring wells are instrumented with dedicated pressure/level transducers and dataloggers. Reference-point elevations have been established by surveying on each of the monitored wells. Static water-levels in each of the wells are to be measured with an electric sounder on a quarterly basis (minimum) and the transducers calibrated accordingly. The transducers are to be programmed with the reference static water-level and the data-collection interval, which will measure and record the water level in each of the wells a minimum of four times per day.

Purging and Sampling

During injection periods, samples of the injectate are to be collected directly at one of the ASR wellheads while active injection is occurring. During storage periods, each of the ASR wells that has been utilized for injection during the season will be periodically purged and sampled. During recovery periods, one or more of the ASR well pumps will be operating and purging is continuous and sustained. Groundwater samples are also to be collected routinely during all three ASR periods (i.e., injection, storage and recovery) from both the on-site monitoring wells (SM MW-1 and SMS Deep MW) and periodically from the far-field off-site monitoring wells (Paralta and PCA-E Deep).

The existing pumps will be used to purge a volume equivalent to a minimum of three (3) casing volumes from the well prior to sampling. Purge water from the ASR wells during backflushing and sampling is to be discharged to the backflush pit at the SM ASR Facility and percolated back into the SGB. Water produced by the ASR well(s) during recovery period operations is to be discharged to the CAW potable water supply system (in accordance with Department of Public Health approvals). Purge water from the monitoring wells will be directed to either the SM backflush pit or to the ground away from the wellheads and percolated back into the SGB.

During purging and prior to sampling, field water-quality parameters of temperature, pH and specific conductance are to be monitored. Stabilization of these water-quality parameters will indicate when collection of a representative sample is obtainable.

Chain-of-Custody, Sample Handling, and Transport

All samples collected will be labeled in a clear and precise way for proper identification in the field and for tracking in the laboratory. All sample shipments for analyses will be accompanied by a chain-of-custody record. Forms will be completed and sent with the samples for each shipment. The chain-of-custody form will identify the contents of each shipment and

maintain the custodial integrity of the samples. Samples will be placed in a cooler for delivery to the laboratory.

Documentation Procedures

Field data will be recorded by field personnel on the attached Field Sampling Log Form and routinely submitted to the Project Manager for review and QA/QC. Field data will include the completed field sampling-log form and chain-of-custody records. At a minimum, documentation of each monitoring and sampling event will include the following information:

- Sample location and description
- Sampler's name(s)
- Date and time of sample collection
- Type of sampling equipment used
- Field instrument calibration procedures and results
- Field instrument readings
- Field observations and details related to analysis or integrity of samples (e.g., weather conditions, noticeable odors, colors, etc.)
- Sample preservation
- Shipping arrangements
- Name(s) of recipient laboratory
- Any deviations from SAP procedures

Project information will be filed by Water Year. The project file will contain project field data, correspondence, survey reports, laboratory reports, charts, tables, permits, and other project-related information. This information will be utilized in the preparation of the annual Summary of Operations Reports for the project.

LABORATORY PROGRAM

A complete list of constituents and constituent “groups” to be monitored as part of the ASR Project for injected, stored, and recovered waters is presented in **Table 3** below. **Table 4** summarizes the planned sample constituent group frequencies for each source for the injection, storage, and recovery periods.

Table 3. Analytic Testing Program Constituent Summary

Constituent	PQL	General Parameters	Disinfection Byproducts	Supple-mental	Field[1]
Group ID		**G-1**	**DBP**	**S-1**	**F-1**
Major Cations					
Calcium (Ca)	1 mg/L	✓			
Magnesium (Mg)	1 mg/L	✓			
Sodium (Na)	1 mg/L	✓			
Potassium (K)	0.5 mg/L	✓			
Major Anions					
Total Alkalinity (as $CaCO_3$)	10 mg/L	✓			
Sulfate (SO_4)	1 mg/L	✓			
Chloride	1 mg/L	✓	✓		
Nitrate as (NO3)	1 mg/L	✓			
Nitrite as (Nitrogen)	0.1 mg/L	✓			
General Physical					
pH	0.1 units	✓			✓
Temperature	0.5 ^{0}C				✓
Specific Conductance (EC)	10 uS	✓			✓
ORP (redox potential / Eh)[2]	10 mV				✓
Total Dissolved Solids (TDS)	10 mg/L	✓			
Metals					
Arsenic (As)	1 ug/L			✓	
Barium (Ba)	0.5 mg/L			✓	
Iron (Fe) (Total and Dissolved)	50 ug/L	✓			
Lithium (Li)	5 ug/L			✓	
Manganese (Mn) (Total and Dissolved)	10 ug/L	✓			
Molybdenum (Mo)	5 ug/L			✓	
Nickel (Ni)	10 ug/L			✓	
Selenium (Se)	5 ug/L			✓	
Strontium (Sr)	5 ug/L			✓	
Uranium (U)	1 pCi/L			✓	
Vanadium (V)	5 ug/L			✓	
Zinc (Zn)	0.5 ug/L			✓	
Miscellaneous					
Ammonia (as N)	0.05 mg/L	✓			
Boron (B)	0.05 mg/L	✓			
Chlorine residual (free)	0.1 mg/L				✓

Constituent	PQL	General Parameters	Disinfection Byproducts	Supple-mental	Field[1]
Group ID		**G-1**	**DBP**	**S-1**	**F-1**
Chloramines	50 ug/L		✓		
Dissolved Methane	0.5 ug/L			✓	
Dissolved Oxygen (DO)[2]	0.025 mg/L				✓
Gross Alpha	1 pCi/L			✓	
Hydrogen Sulfide (H_2S)	0.05 mg/L				✓
Total Nitrogen (N)	0.2 mg/L	✓			
Total Phosphorous	0.05 mg/L	✓			
Orthophosphate as P	0.05 mg/L	✓			
Radium 226	1 pCi/L			✓	
Silt Density Index (SDI)	0.1 units				✓
Total Kjehldahl N (TKN)	0.2 mg/L	✓			
Organic Analyses					
Total trihalomethanes	1 ug/L		✓		
Bromodichloromethane	1 ug/L		✓		
Bromoform	1 ug/L		✓		
Chloroform	1 ug/L		✓		
Dibromochloromethane	1 ug/L		✓		
Haloacetic Acids (HAA)	1 ug/L		✓		
Monobromoacetic Acid	1 ug/L		✓		
Monochloroacetic Acid	1 ug/L		✓		
Dibromoacetic Acid	1 ug/L		✓		
Dichloroacetic Acid	1 ug/L		✓		
Trichloroacetic Acid	1 ug/L		✓		
Total organic carbon (TOC)	0.1 mg/L	✓			
Dissolved organic carbon (DOC)	0.1 mg/L	✓			

Table 3 Notes:

1 – Field Parameters (Group F-1) must be taken concurrently with collection of all laboratory samples.
2 – ORP and DO must be analyzed utilizing a flow-thru cell device.

Table 4. Analytic Testing Program Schedule

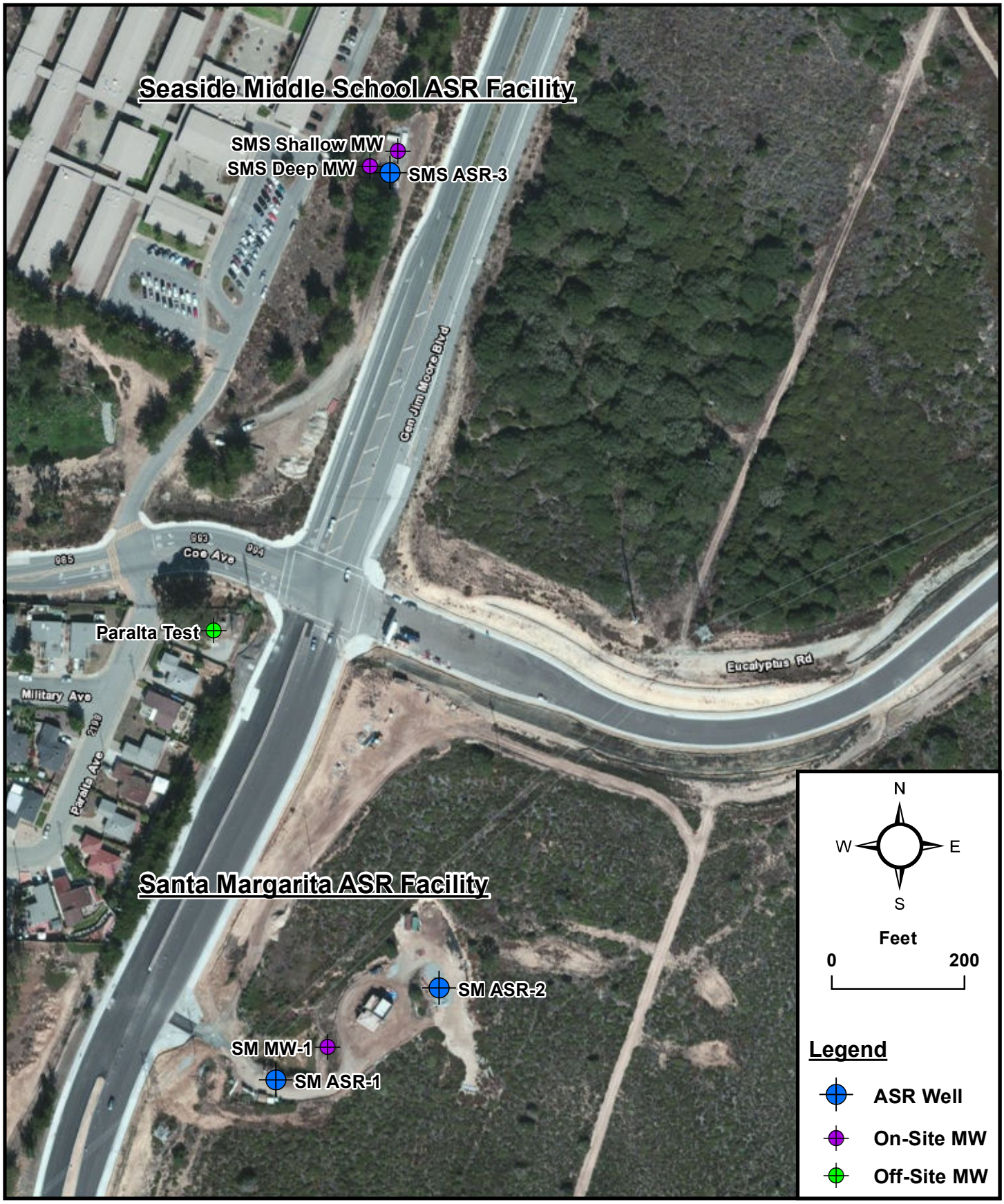
INJECTION PERIOD (active injection)							
Analyte Group	**Injectate**			**SM MW-1**	**SMS Deep MW**	**PCA East (deep)**	
F-1	Bi-Weekly			Bi-Weekly	Bi-Weekly	Semiannually	
DBP	Monthly			Quarterly	Quarterly	Semiannually	
G-1	Quarterly			Quarterly	Quarterly	Semiannually	
S-1	Quarterly			Quarterly	Quarterly	Semiannually	
STORAGE PERIOD (one month duration or longer)							
Analyte Group	**SM ASR-1**	**SM ASR-2**	**SMS ASR-3**	**SM MW-1**	**SMS Deep MW**	**PCA East (deep)**	
F-1	Monthly	Monthly	Monthly	Quarterly	Quarterly	Semiannually	
DBP	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Semiannually	
G-1	Quarterly	Quarterly	Quarterly	Semiannually	Semiannually	Semiannually	
S-1	Quarterly	Quarterly	Quarterly	Semiannually	Semiannually	Semiannually	
RECOVERY PERIOD							
Analyte Group	**SM ASR-1[1]**	**SM ASR-2**	**SMS ASR-3**	**SM MW-1**	**SMS Deep MW**	**Paralta**	**PCA East (deep)**
F-1	Bi-Weekly	Monthly	Monthly	Quarterly	Quarterly	Semiannually[2]	Semiannually
DBP	Quarterly	Quarterly	Quarterly	Semiannually	Semiannually	Semiannually[2]	Semiannually
G-1	Quarterly	Quarterly	Quarterly	Semiannually	Semiannually	Semiannually[2]	Semiannually
S-1	Quarterly	Quarterly	Quarterly	Semiannually	Semiannually	Semiannually[2]	Semiannually

Table 4 Notes:

1 – SM ASR-1 is currently the only ASR well authorized by DPH to recover into the CAW distribution system.
2 – Near the beginning and end of the SGB production/recovery season (e.g., in June and November).

PUEBLO water resources

FIGURE 1. PROJECT LOCATION MAP
Monterey Peninsula ASR Project
Sampling and Analysis Plan



PUEBLO water resources

FIGURE 2. SITE LOCATION MAP
Monterey Peninsula ASR Project
Sampling and Analysis Plan

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

PUEBLO water resources

Monterey Peninsula ASR Project
Field Sampling Log Form

Water Year: _____

Well ID: _____
Observer: _____
Date: _____
Observation Period: Start: _____ Stop: _____
Weather:

Purging & Water-Level Data		Notes:
ASR Period (injection, storage, recovery)		
Well Status (injecting, idle, pumping)		
Purge Rate (gpm)		
Totalizer Reading Start (gals)		
Totalizer Reading at Sampling (gals)		
Purge Volume (gals)		
Totalizer Reading End (gals)		
Static Water Level (ft btoc)[1]		
Datalogger Water Level (ft btoc)		

Field Water-Quality Parameter Data						
Time:						
Elapsed Time:						
Temperature (^{o}C)						
Conductivity (umhos/cm)						
pH						
ORP (mV)[2]						
Free Chlorine Residual (mg/L)						
Dissolved Oxygen (mg/L)[2]						
Silt Density Index						
Gas Volume (mL)						
H2S (mg/L)						
Visual Observations						

Sampling and Laboratory Data

Collection Time	Laboratory	Laboratory Analyses Requested (analyte group or other constituents)

Additional Information and Observations

Notes:
1 - Pump must be off a minimum of 10 minutes prior to measuring.
2 - ORP and Dissolved Oxygen must be analyzed utilizing a flow-thru cell device

ITEM: CONSENT CALENDAR

10. CONSIDER EXPENDITURE TO CONTRACT WITH THE CALIFORNIA CONSERVATION CORPS FOR FALL 2017 VEGETATION MANAGEMENT ACTIVITIES

Meeting Date:	**August 21, 2017**	**Budgeted:**	**Yes**
From:	**David J. Stoldt General Manager**	**Program/ Line Item No.:**	**Riparian Mitigations 2-1-4**
Prepared By:	**Thomas Christensen**	**Cost Estimate:**	**$14,000**

General Counsel Approval: N/A
Committee Recommendation: The Administrative Committee reviewed this item on August 14, 2017 and recommended approval.
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines section 15378.

SUMMARY: The Board will consider authorizing staff to contract with the California Conservation Corps (CCC), which will provide a crew of approximately 14 workers to help District staff carry out vegetation management activities on the Carmel River during the fall of 2017. Vegetation management this year will involve cutting, removing, and dragging large tree limbs out of the river bed and removing debris from the channel in preparation for potential high winter and spring river flows. The amount of work required this year warrants the use of CCC workers. This program is conducted in accordance with the District's "Guidelines for Vegetation Management and Removal of Deleterious Materials for the Carmel River Riparian Corridor."

RECOMMENDATION: Authorize the General Manager to enter into an agreement with the CCC to assist with Vegetation Management for a not-to-exceed amount of $14,000.

DISCUSSION: The District plans to perform in-channel vegetation management this fall at fifteen sites along the Carmel River. After last winter's high flows, many large trees have fallen across the Carmel River. If these trees are not cut into smaller sections there is an increased risk of streambank erosion along riverfront properties in multiple locations if winter flows rise above five-year return intervals (approximately 5,000 cubic feet per second). Erosion can occur as high flows are directed away from the center of the channel by vegetation and debris dams into streambanks.

IMPACT TO STAFF/RESOURCES: Funds for this project are included in the FY 2017-18 budget under "Riparian Mitigations," line item 2-1-4 Address Vegetation Hazards and Remove Trash, Account 24-03-787040.

EXHIBIT
None

ITEM: CONSENT CALENDAR

11. AUTHORIZE FUNDS FOR REPAIR OF INJECTION VALVE AT AQUIFER STORAGE AND RECOVERY WELL NUMBER 1

Meeting Date:	**August 21, 2017**	**Budgeted:**	**Yes**
From:	**David J. Stoldt General Manager**	**Program/ Line Item No.:**	**Water Supply Projects 1-2-1**
Prepared By:	**Jonathan Lear**	**Cost Estimate:**	**$24,950**

General Counsel Review: N/A
Committee Recommendation: The Administrative Committee reviewed this item on August 14, 2007 and recommended approval.
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines section 15378.

SUMMARY: While operating ASR over the 2017 ASR injection season, District staff noted that the valve controlling injection rate on the ASR 1 well was losing nitrogen gas at a steadily increasing rate from the injection valve control system. Following the close of the of the injection season, District staff investigated the source of the nitrogen leak at ASR 1 and with the help of a Baski Valve technician, determined the leak in the nitrogen control system is occurring at the connection point of the valve, which is set at 420 feet in the well. Fixing the leak requires the valve to be pulled from the well by a well contractor. With the status of the valve, the well is not operable in recovery mode and CalAm cannot use the well as a source to the system. ASR 1 is needed to recover the ASR water banked from the 2017 winter flows and shift the pumping from the River to the Seaside Groundwater Basin. Due to the emergency nature of the repairs needed to restore the source to the CalAm system, the contract has been initiated prior to this meeting and the work is set to begin on August 14, 2017.

RECOMMENDATION: Staff recommends the Board ratify the General Manager's decision to enter into an agreement for $24,950 with Zim Industries to pull, repair and reinstall the down hole flow valve in ASR 1.

BACKGROUND: The District and CalAm share the use of the ASR wells during operation of Aquifer Storage and Recovery. In the winter, District staff operates the wells to inject excess Carmel River flows, and in the summer, CalAm operates the wells as sources to their distribution system in order to shift production from the Carmel Valley Alluvial Aquifer. Currently only ASR 1 has a permit from the Department of Drinking Water to be used as a source to the system. ASR wells 2, 3, and 4 are currently going through the permitting process to be used as sources to the CalAm system.

IMPACT TO STAFF/RESOURCES: Funds for this project are included in the FY 2017-18 budget under "Water Supply Projects," line item 1-2-1. Funds expended to complete this work will be reimbursed to the District by CalAm through the ASR Management and Operations

agreement between the District and CalAm. Staff time will be utilized to provide project management and oversee field work.

EXHIBIT
11-A Proposal from Zim Industries to perform work on ASR 1

ZIM INDUSTRIES, INC.

4545 E. Lincoln Ave • Fresno, CA 93725
Ph. (559) 834-1551 • FAX (559) 834-5156
www.zimindustries.com

August 7, 2017

Monterey Peninsula Water Management District
Attn: Jon Lear
PO Box 85
5 Harris Court, Building "G"
Monterey, CA 93942-0085

Re: Santa Margarita ASR #1

Jon,

Zim Industries, Inc. is pleased to submit a cost estimate to remove pump to the Baski Valve that is not holding appropriate psi:

1.	Pull pump to Baski Valve (420' of 12" x 3 ½" x 2 7/16" water-flush)	1 LS	$10,000.00
2.	Reinstall pump	1 LS	$10,000.00
3.	Check for leaks on site	2 HR @ $300/HR	$600.00
		TOTAL	**$20,600.00**

Optional Items:

1.	Remove the remaining pump FCV (in addition to Item #1 above)	1 LS	$1,500.00
2.	Shipping & Handling Baski Valve to Colorado for inspection (1-Way)	1 LS	$750.00
3.	Teardown, inspect and reassemble bowl assy. (repairs are add'l)	1 LS	$600.00
4.	Reinstall complete pump w/ FCV (in addition to original Item #2)	1 LS	$1,500.00

In the event either party commences a legal proceeding (including litigation or arbitration) against the other party pertaining to this agreement, the prevailing party in such proceeding shall be entitled to recover from the non-prevailing party all reasonable attorneys' fees, expert fees, costs and other expenses incurred in connection therewith.

In no event shall Seller, and/or its employees, representatives, or subsidiaries, be liable to Buyer for any consequential, direct, indirect, punitive, incidental or special damages, whether foreseeable or unforeseeable, and whether or not Buyer has been advised of the possibility of such damage (including but not limited to rupturing, collapsing, telescoping, separating or other damage to Buyer's well), whether based upon lost goodwill, lost profits, loss of use of money, diminution or failure to crops, shortage of water, inability or failure to supply same, diminution or cessation of water flow, sanding or caving in of well, or for sand or chemical damage to pump, sprinklers, crops, soil, reservoirs, storage tanks, pipelines or any other equipment or property.

Owner agrees that this proposal shall become Exhibit "A" relating to Scope of Work and price of a formal agreement between Contractor & Owner

Estimated date to pull pump is week of August 14th to August 18th. Thank you and please contact me if you have any questions.

Sincerely,

Bob Zimmerer, VP/General Manager
Zim Industries, Inc.

ITEM: PUBLIC HEARING

15. CONSIDER FIRST READING OF ORDINANCE NO. 177 – AMENDING RULES 11, 23, 23.5, 24, 25.5, 141, 142, 143, 144, AND 154 (CEQA SECTION 15063 INITIAL STUDY; NEGATIVE DECLARATION WILL BE PRESENTED AT SECOND READING PURSUANT TO CEQA SECTION 15070.)

Meeting Date:	**August 21, 2017**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Stephanie Locke**	**Cost Estimate:**	**N/A**

General Counsel Review: Yes
Committee Recommendation: The Water Demand Committee reviewed the concept ordinance on February 13, 2017.
CEQA Compliance: CEQA Section 15063 Initial Study; Negative Declaration will be presented at second reading pursuant to CEQA Section 15070.

SUMMARY: Attached as **Exhibit 15-A** is Ordinance No. 177, "2017 Rule Amendment Ordinance." This ordinance amends and clarifies certain actions necessary to process, issue, and enforce requirements related to Water Permits, Water Use Permits, water efficiency requirements and Rebates. This ordinance also updates the calculation of capacity fees to include the full California American Water system and adds a Rebate for Meter Splits at Multi-Family Residential Sites.

The concepts in this ordinance were reviewed by the Water Demand Committee in February 2017. An Initial Study has been prepared and will be circulated for review prior to second reading. It is anticipated that a Negative Declaration will be appropriate for this ordinance.

DISCUSSION: Due to the light agenda for the August Board Meeting, staff recommends the ordinance be reviewed prior to the meeting with a copy of the Rules and Regulations available for reference. To keep the ordinance shorter, only pertinent portions of most rules are included.

The following summarizes the sections of Ordinance No. 177:

1. Rule 11 (Definitions) is amended to clarify definitions for "Expansion of Use," "Irrigation Design Plan", "Landscape Design Plan", "Meter Split", "Mixed Use", "Site", "Single-Parcel Connection System", "Sub-Potable Water" and "System Limits and to delete the definitions for "On-Site" and "Permit."

2. This ordinance amends Rule 23-A-1 to explain the procedure for removal of an unpermitted water fixture.

3. This ordinance clarifies Rule 23-B and adds a diagram showing how to plumb the fire and domestic service lines after the Water Meter. This methodology was agreed to between the local fire departments and California American Water in 2010.

4. Rule 23.5 is amended to remove/amend outdated language and to update the Rule to follow current agreements.

5. Rule 24 is amended to include the entire California American Water Service Area as all areas equally benefit from planning for, acquiring, reserving, and maintaining capacity in the water distribution facilities existing or to be constructed within the District.

6. Rule 25.5 is amended to clarify the date a Water Use Credit is established and to clarify that only lawfully installed water fixtures qualify for a Water Use Credit.

7. Rule 32 is amended to reflect current Production Limits for the California American Water system.

8. Rule 141 is amended to delete duplicative language, to reduce Rebates for toilets, to delete ice machines as efficient machines are a requirement, and to add a Rebate for Multi-Family Residential Meter Splits to encourage individual accountability for water use. This Rule is also amended to allow a second or subsequent Rebate for maintaining a High Efficiency Clothes Washer after the lifetime of the previously-Rebated machine in accordance with the recommendation of Consumer Reports.

9. This ordinance amends Rule 144 to allow an extension of six months after purchase or change in use to meet the requirements of Rule 142, and allows six month extensions until completion of the Remodel.

10. This ordinance deletes Rule 154 and moves the conservation message requirements to Rules 142 and 143.

RECOMMENDATION: Staff recommends approval of first reading of Ordinance No. 177.

EXHIBIT
15-A Draft Ordinance No. 177

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EXHIBIT 15-A

FIRST READING
ORDINANCE NO. 177

AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE MONTEREY PENINSULA WATER MANAGEMENT DISTRICT AMENDING RULES 11, 23, 23.5, 24, 25.5, 141, 142, 143, 144, AND 154

FINDINGS

1. The Monterey Peninsula Water Management District was created to address ground and surface water resources in the Monterey Peninsula area, which the Legislature found required integrated management, and was endowed with the powers set forth in the Monterey Peninsula Water Management District Law (Chapter 527 of the Statutes of 1977, found at West's Water Code, Appendix, Section 118-1, et seq.).

2. The Monterey Peninsula Water Management District has adopted and regularly implements water conservation and efficiency measures which, inter alia, set standards for the installation of plumbing fixtures in New Construction, and requires retrofit or replacement of existing plumbing fixtures upon Change of Ownership, Change of Use, and Expansion of Use, and for existing Non-Residential uses. The Monterey Peninsula Water Management District has general and specific power to cause and implement water conservation activities as set forth in Sections 325 and 328 of the Monterey Peninsula Water Management District Law.

3. The Monterey Peninsula Water Management District has found and determined that it is in the best interests of the Monterey Peninsula Water Management District and its inhabitants to define, implement and enforce water efficient plumbing standards and requirements for the conservation of Potable water supplies. Retrofit or replacement of existing plumbing fixtures lessens consumption of the limited water resources available on the Monterey Peninsula. Installation of water efficient plumbing fixtures reduces the burden of new, expanded or modified uses on the water resources.

4. This ordinance amends Rule 23-A-1 to explain the procedure for removal of an unpermitted water fixture.

5. This ordinance clarifies Rule 23-B and adds a diagram showing how to plumb the fire and

domestic service lines after the Water Meter. This methodology was agreed to between the local fire departments and California American Water in 2010.

6. Rule 23.5 is amended to remove/amend outdated language and to update the Rule to follow current agreements.

7. Rule 24 is amended to include the entire California American Water Service Area as all areas equally benefit from planning for, acquiring, reserving, and maintaining capacity in the water distribution facilities existing or to be constructed within the District.

8. Rule 25.5 is amended to clarify the date a Water Use Credit is established and to clarify that only lawfully installed water fixtures qualify for a Water Use Credit.

9. Rule 32 is amended to reflect current Production Limits for the California American Water system.

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11. This ordinance amends Rule 144 to allow an extension of six months after purchase or change in use to meet the requirements of Rule 142, and allows six month extensions until completion of the Remodel.

12. This ordinance deletes Rule 154 and moves the conservation message requirements to Rules 142 and 143.

13. This ordinance is processed under a California Environmental Quality Act (CEQA) Negative Declaration. An Initial Study and Notice of Intent to Adopt a Negative Declaration was prepared, circulated and filed with the Monterey County Clerk.

NOW THEREFORE be it ordained as follows:

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ORDINANCE

Section One: Short Title

This ordinance shall be known as the 2017 Rule Amendment Ordinance of the Monterey Peninsula Water Management District.

Section Two: Purpose

The Monterey Peninsula Water Management District enacts this ordinance to amend and clarify certain actions necessary to process, issue, and enforce requirements related to Water Permits, Water Use Permits, water efficiency requirements and Rebates. This ordinance also updates the calculation of capacity fees to include the full California American Water system and adds a Rebate for Meter Splits at Multi-Family Residential Sites.

Section Three: Amendment of Rule 11, Definitions

A. The following definitions in Rule 11 shall be amended as shown in bold italics (***bold italics***) and strikeout (~~strikethrough~~). Additions and amendments to Rule 11 shall require a global review of the Rules and Regulations to capitalize or amend defined terms. Numbering is provided for reference only. Terms defined in both Rule 11 and in Rule 142, Water Efficient Landscape Requirements, shall be amended in both Rules.

1. EXPANSION OF USE - "Expansion of Use" shall mean the addition of any ***Residential*** water fixture and/or increase to existing ***Non-Residential*** floor area.

2. IRRIGATION DESIGN PLAN – "Irrigation Design Plan" "IE" shall mean an irrigation plan and drawings designed and signed by a licensed Landscape Architect, Certified Irrigation Designer, licensed Landscape Contractor, or any other Person authorized to design an Irrigation System (see Sections ~~5500.1,~~ 5615, ~~5641~~, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agricultural Code).

3. LANDSCAPE DESIGN PLAN – "Landscape Design Plan" shall mean a plan (and drawings) that: (1) delineates and labels each Hydrozone; (2) identifies each Hydrozone as low, moderate, high water, or mixed water use; (3) identifies any Recreational Areas; (4) identifies areas permanently and solely dedicated to edible

plants; (5) identifies areas irrigated with Recycled Water; (6) identifies type of Mulch and application depth; (7) identifies soil amendments, type, and quantity; (8) identifies type and surface area of any Water Features; (9) identifies hardscapes (Pervious and non-Pervious); (10) identifies applicable storm water Best Management Practices; (11) identifies any applicable rain harvesting or catchment technologies; and (12) identifies any applicable Graywater discharge piping, system components and area(s) of distribution. A Landscape Design Plan must be signed by a licensed Landscape Architect, Certified Irrigation Designer, licensed Landscape Contractor, or any other Person authorized to design an Irrigation System (see Permitted Practices in California prepared by the Landscape Architects Technical Committee (LATC), the licensing and regulatory agency for the practice of landscape architecture in California~~Sections 5500.1, 5615, 5641, 5641.1, 5641.2, 5641.3, 5641.4, 5641.5, 5641.6, 6701, 7027.5 of the Business and Professions Code, Section 832.27 of Title 16 of the California Code of Regulations, and Section 6721 of the Food and Agricultural Code~~). "Landscape Design Plan" shall also be known as a "Planting Plan."

4. METER SPLIT - "Meter Split" shall mean the ***installation of MPWMD-***authorized ~~installation of~~ ~~individual~~ ~~Water Measuring Devices~~ ***Water Meters maintained by the Water Distribution System Operator*** ~~for~~ ~~more than one~~ to ***separately meter multiple*** ~~Water~~ User***s*** on a Site that ~~is, at the time of application~~ ***was*** supplied by ~~one~~ ***a single*** existing Connection.

5. MIXED USE – "Mixed Use" shall mean water used for domestic or other uses from any Water Distribution System or private Well where one ***W***~~w~~ater ***M***~~m~~eter or Connection supplies both Residential and Non-Residential uses, often within the same building. ***Mixed Use shall also refer to buildings with both Residential and Non-Residential Users where there is one or more Connections.***

6. ~~ON-SITE – "On-Site" shall mean located on the same Site~~.

7. ~~PERMIT – "Permit" shall mean any written approval by the staff or Board of the Monterey Peninsula Water Management District, based on an application, request, or appeal. This term shall include, but shall not be limited to, approvals referenced in Regulation II, "Permits", Regulation VI, "Fees", Regulation VII, "Appeals", and/or Regulation IX, "Variances".~~

8. SITE - "Site" shall mean any unit of land which qualifies as a Parcel under the Subdivision Map Act, and shall include all units of land: (1) which are contiguous to any other Parcel (or are separated only by a road or easement), and (2) which have identical owners~~, and (3) which have an identical present use~~. The term "Site" shall be given the same meaning as the term "Parcel".

9. SINGLE-PARCEL CONNECTION SYSTEM – "Single-Parcel Connection System" shall mean a Water Distribution System providing water to one or more ~~buildings or structures or providing water for irrigation purposes~~ ***uses*** on one individual Legal Parcel. The Well(s) or other Water Gathering Facility must be located on, overlying and serving the same individual Legal Parcel. If the single Parcel is subdivided into two or more separate Parcels, the Water Distribution System is now considered to be a Multiple-Parcel Connection System, regardless of Parcel ownership, unless the newly formed Legal Parcels each are served by a separate Well that has received a well construction permit from the Monterey County Health Department, and has been registered, metered, inspected and approved by the District within 180 days of the date of the final approval of the subdivision.

10. ~~SUB~~***NON***-POTABLE WATER - "~~Sub~~***Non***-~~p~~***P***otable Water" shall mean water which is not fit for human consumption ~~without treatment and shall include Reclaimed Water as that term is used in the Water Reclamation Law, and particularly in Section 13550 of the Water Code~~.

11. SYSTEM LIMITS – "System Limits" means the System (***P***production ***Limit***) and Expansion (Connection) Capacity of a Water Distribution System.

12. ***WATER DISTRIBUTION SYSTEM PERMIT – "Water Distribution System Permit" ("WDS Permit") shall mean an official document issued by MPWMD that authorizes a Water Distribution System from one or more Sources of Supply to serve specific Parcels.***

B. The Rules and Regulations of the District shall be searched and terms replaced as applicable due to changes resulting from amendments to Rule 11 adopted in this ordinance.

C. The word permit should be capitalized throughout the Rules and Regulations when it refers to a specific type of permit that is defined in the Rules and Regulations.

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Section Four: **Amendment to Rule 23-A-1 – Action on Application for a Water Permit to Connect to or Modify a Connection to an Existing Water Distribution System**

The following text shall be added to Rule 23-A-1, as shown in bold italics (***bold italics***), to clarify the process for removal of water fixtures added without a permit:

q. ***Removal of unpermitted water fixture. When a water fixture requiring a Water Permit by the District is installed without a Water Permit and the Applicant is unable to secure sufficient Allocation from a Jurisdiction or Entitlement, or if there is insufficient Water Credit on Site to permit the fixture, the Applicant shall remove the fixture and return the location to its original state where there is no evidence of the unpermitted water fixture.***

Section Five: **Amendments to Rule 23-B, Mandatory Conditions, Action on Application for a Water Permit to Connect to or Modify an Existing Water Distribution System**

Amendments are Rule 23-B-2 are shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~):

2. Construction of a New Structure.

   a. ~~All new water use permitted by the District shall install a separate water meter to each User.~~ ***Water Meters maintained by the Water Distribution System Operator shall be installed for each Residential and Non-Residential water User except as allowed in Rule 23-A-1-i-(3), (4), and (5).***

   b. All Non-Residential New Structures that include irrigated landscapes of 1,000 square-feet or greater shall utilize a separate Water Meter supplied by the Water Distribution System to measure all exterior water uses. All Residential irrigated landscapes of 5,000 square-feet or greater shall install a sub-meter to measure outdoor water use.

   c. All New Structures receiving a Water Permit after January 1, 2009, shall have separate water supply lines that tee off after the Water Meter to supply fire suppression service and domestic service ***as demonstrated in Figure 23-1, unless the User has separate Water Meters maintained by***

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the Water Distribution System Operator for fire and domestic services. This configuration~~s~~ shall facilitate installation of a Flow Restrictor in the domestic service without interfering with the fire suppression service.

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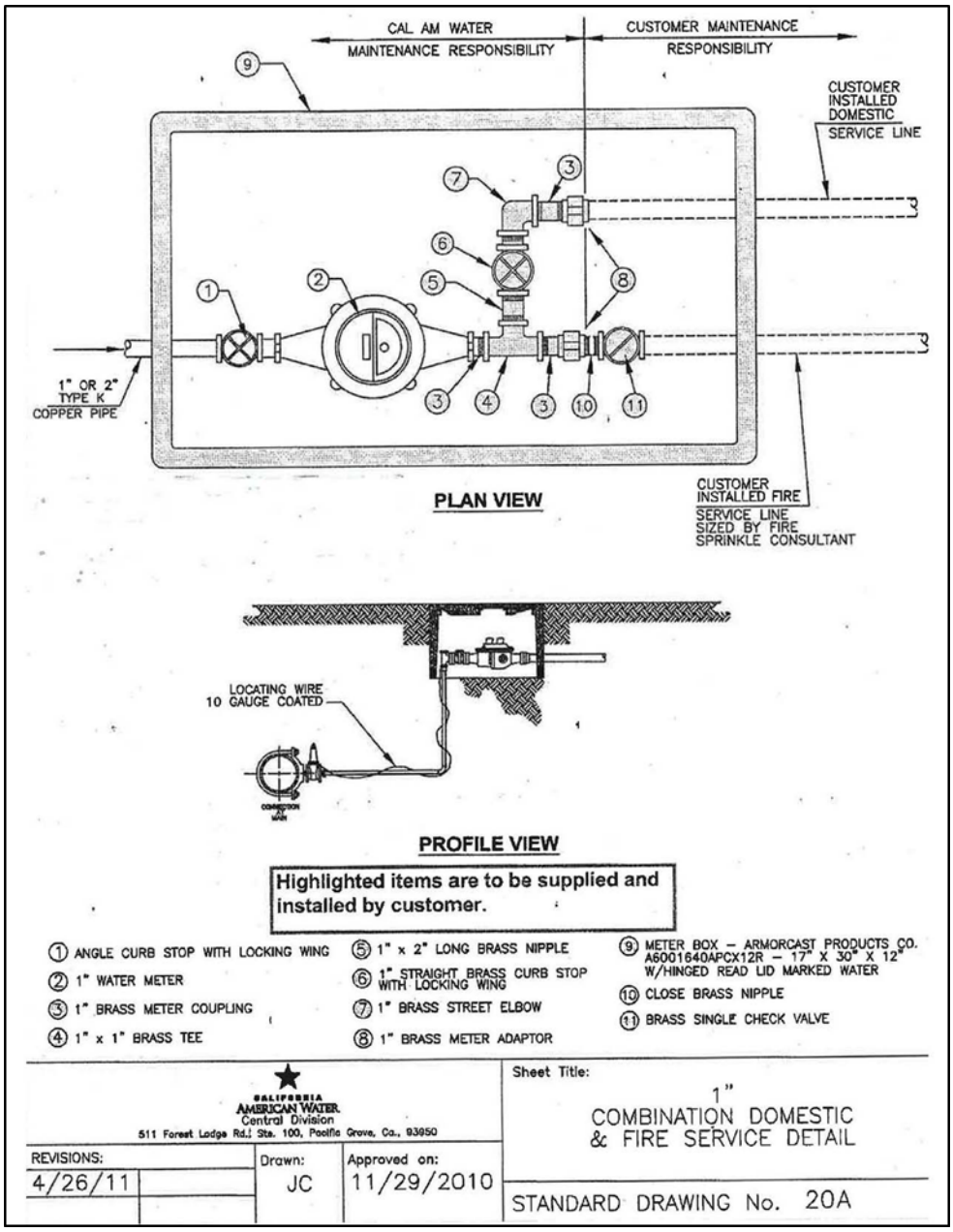
Figure 23-1



Section Six: **Amendments to Rule 23.5, Permits for Water from the Cal-Am Water Distribution System Dedicated for Use in Connection with the Plan to Finance the Recycled Water Project**

Rule 23.5 shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~).

~~**RULE 23.5 - PERMITS FOR WATER FROM THE CAL-AM WATER DISTRIBUTION SYSTEM DEDICATED FOR USE IN CONNECTION WITH THE PLAN TO FINANCE THE RECYCLED WATER PROJECT**~~

RULE 23.5 - Pebble Beach Company, J. Lohr Properties, Inc., and the Hester Hyde Griffin Trust Entitlements

A. ISSUANCE OF WATER USE PERMITS

~~The Board having selected the Fiscal Sponsor/Sponsors pursuant to Part II of Ordinance No. 39 and based upon the irrevocable commitment by those Sponsors to underwrite, be responsible for, assure and guarantee payment of the Financial Commitment (Capital Costs and Net Operating Deficiencies and Ancillary Project Costs of the Original Project recorded by the agreements required by Part VII of Ordinance No. 39),~~ MPWMD has granted ~~the~~ Water Entitlement***s*** ~~and the General Manager has issued Water Use Permits~~ to Pebble Beach Company ("PBC"), J. Lohr Properties, Inc. ("Lohr") ***for the subdivision known as Macomber Estates***, and the Hester Hyde Griffin Trust ("Griffin") authorizing the Expansion and ~~E~~extension of the Cal-Am Water Distribution System to provide water service and Connections for the benefit of the properties identified in the Fiscal Sponsorship Agreement (such properties being the "Benefited Properties" described in Exhibit A thereto as amended[1]). By virtue of the Water Entitlement, each Water Use Permit has granted a vested property interest upon one or more Benefited Properties for the use and benefit of a specified quantity of Potable water per year (in Acre-Feet) produced by the Water Distribution System owned and operated by the California American Water Company ("Cal-Am").

Water Use Permits shall be subject only to the following limitations:

[1] ***After July 1, 2022, Benefitted Properties not owned by Pebble Beach Company may include Residential and Non-Residential Sites.***

1. the Permit shall not limit the power of the Monterey Peninsula Water Management District ("MPWMD") to curtail water use in the event of any emergency caused by drought, or other threatened or existing water shortage, as defined in Section 332 of the Monterey Peninsula Water Management Act, including without limitation the power of MPWMD to terminate water service as a consequence of a violation of water use restrictions;

2. the Permit shall not relieve or reduce any obligation of the recipient of water to pay customary fees, Capacity Fees, User fees, surcharges, taxes, utility taxes, and/or any other customary monetary obligation which may be imposed by the California Public Utilities Commission, Cal-Am, MPWMD, or other Public Participants upon Water Users of the same class within the Cal-Am Service Area, including but not limited to fees and charges due and payable to MPWMD by reason of Rule 24 of MPWMD's Rules and Regulation nor shall such Permit limit the authority of Cal-Am or MPWMD to terminate water use for non-payment of such fees and charges;

3. the Permit shall enable present use of the Water Entitlement by PBC only upon its continuing financial assurance or guarantee relating to the payment of Net Operating Deficiencies for the Project; and

4. notwithstanding any other provision of this Rule:

    a. the Water Entitlement allocated to the Benefited Properties as a whole shall not exceed 380 AF,

    b. the water usage under the Water Entitlement on any Benefited Property shall not exceed the amount of the Water Entitlement allocated to such Benefited Property, measured in accordance with the Water Use Factors specified at the time of connection in the MPWMD Rules, as amended from time to time, and

    c. for purposes of collecting Capacity Fees and fees, the projected water usage of the Benefited Properties shall be calculated by MPWMD in the manner set forth in Rule 24.

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5. Further, notwithstanding any other provision of this Rule, once a new water Connection is established pursuant to a Water Use Permit and use of all or a portion of a Water Entitlement,

   a. no User of water through such Connection shall be entitled to preferential access to water over any other Water User of the Cal-Am Water Distribution System; and

   b. the fixtures on the Benefited Property served by that Connection shall be subject to verification of Water Use Capacity in the manner specified in the MPWMD Rules, as amended from time to time; and

   c. the use of water on the Benefited Property served by such Connection shall be accounted for by MPWMD in the manner specified at the time of Connection in the MPWMD Rules, as amended from time to time; and

   d. the restrictions of use set forth above shall be enforced as determined by MPWMD to be necessary.

6. The Revocation and termination of any Water Use Permit shall not diminish or otherwise adversely affect present actual use of water by reason of a prior Expansion or Extension of the Cal-Am Water Distribution System through any Connection previously made pursuant to such Water Use Permit, except that actual use of water may be reduced pursuant to the provisions of subparagraphs A-1 through A-5.

7. Permits issued pursuant to this Rule shall represent a vested property interest upon issuance and shall not be subject to Revocation or cancellation except as expressly set forth in subparagraph D below.

8. The Water Entitlement granted by each Water Use Permit shall not be subject to reallocation pursuant to MPWMD Rule 30, nor shall it be terminated or diminished by reason of any water emergency, water moratorium or other curtailment on the setting of meters for the Cal-Am Water Distribution System, nor shall it otherwise be subject to diminishment or Revocation, except in the event that a Water Use Permit is Revoked or cancelled or as otherwise provided by subparagraph D below.

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B. WATER USE PERMIT PROVISIONS

Each Water Use Permit issued by the General Manager shall identify, with respect to the Benefited Property:

1. the nature (Industrial/Commercial/Residential) and location of the water use to be applied to each Benefited Property, and the consistency of such water use with existing land use and zoning plans;

2. the number and nature of Connections projected for each Benefited Property; and

3. the amount of the Water Entitlement dedicated to, conveyed with, or separately conveyed to, the Benefited Property.

C. AMENDMENT OF WATER USE PERMITS

1. The Owner of any Benefited Property, shall, upon request, be entitled to an amendment to any Water Use Permit to reduce, or increase (up to the amount of the Water Entitlement specified in the Water Use Permit pursuant to subparagraph B-3 of this Rule), or change the number and type of Connections and water use with respect to that Benefited Property. In addition, the Owner of any Benefited Property not described in subparagraph C-2 or C-3 below shall, upon request, be entitled to an amendment to any Water Use Permit to reduce, or increase, or change the number and type of Connections and water use with respect to any Benefited Property owned by such Owner, provided that in no event shall the aggregate amount of annual water usage for the Benefited Properties owned by that Owner exceed the aggregate Water Entitlement allocated to the Benefited Properties of that Owner, and provided further that the reallocation of Connections shall be allowed only among those locations identified ~~in Exhibit A to the Fiscal Sponsorship Agreement (as such Exhibit has been amended after execution to expand the~~ ***as*** Benefited Properties~~)~~.

2. As an integral part of the conveyance of title to one or more Benefited Properties, Water Use Permits shall be conveyed and assigned to the

successors-in-interest to the Benefited Properties to which the pertinent portion of the Water Entitlement is dedicated.

3. Owners who have received a Water Use Permit from MPWMD for the portion of the Water Entitlement acquired by separate sale and conveyance from PBC pursuant to Section Three of Ordinance No. 109 shall be entitled to use up to the quantity of the Water Entitlement evidenced therein ~~only after the writings comprising the Supplemental Financial Commitment (as defined herein) have been received by MPWMD and then~~ only on the Benefited Property to which it applies. Such Owners shall not have the right to further sell or convey the Water Use Permit or the corresponding portion of the Water Entitlement for any ~~use other than Residential use or on any other Benefited Property~~.

D. REVOCATION, TERMINATION, OR MODIFICATION OF WATER USE PERMITS

Each Water Use Permit held by the Fiscal Sponsor shall provide that it shall be Revoked and terminated in the event that the Fiscal Sponsor shall default in any material manner upon its obligation, assurance and guarantee of the Financial Commitment for the Project, provided that nothing herein shall preclude PBC or any other subsequent Fiscal Sponsor from disputing in good faith any claim of default made by MPWMD nor shall MPWMD terminate or Revoke any Water Use Permit unless PBC or any subsequent Fiscal Sponsor shall have been given notice and a reasonable opportunity to cure any such default so long as such opportunity to cure shall not result in any payment default to the holders of the Certificate of Participation.

All Water Use Permits issued to evidence the Water Entitlement conveyed by PBC pursuant to Subsections C and D of Section Three of Ordinance No. 109 shall not be Revoked (as defined in Rule 11) or Terminated as defined herein with respect to the entire Water Entitlement so conveyed except as set forth in the following sentences.

Notwithstanding the preceding sentences of this Subsection D, the actual use on each of the properties to which a portion of the Water Entitlement is dedicated (after conveyance by PBC pursuant to Subsections C and D of Section Three of Ordinance No. 109) shall at all times remain subject to the limitations and

restrictions referenced in Subsections A through C of this Rule 23.5, which shall be enforced in the manner determined by MPWMD to be necessary. In order to facilitate enforcement of this limitation, MPWMD shall account for the use of water on the Benefited Property in the manner specified at the time of connection in the MPWMD Rules, as amended from time to time.

Moreover, each Water Use Permit which on or after January 1, 2075, embodies an annual Water Entitlement in excess of requirements for planned land uses on a Benefited Property or which purports to authorize usage in excess of the constitutional limitation to reasonable and beneficial use shall be subject to modification, Revocation, or termination in the sole discretion of MPWMD, such that the water usage authorized thereby shall not exceed such requirements and limitations.

Prior to any modification, termination or Revocation pursuant to this subparagraph D, the holder of the Water Use Permit shall be entitled to notice and a hearing, and any termination, Revocation, or modification shall be subject to appeal to the Board pursuant to Rule 70 of the MPWMD Rules and Regulations.

The Revocation, termination, or modification of any Water Use Permit shall not diminish or otherwise adversely affect present actual use of water by reason of prior Expansion or Extension of the Cal-Am Water Distribution System through any Connection previously made pursuant to such Water Use Permit, provided that each Water Use Permit holder shall be subject to such laws, ordinances, and regulations as are generally applicable to all similarly situated Users ~~(Residential Users within the Cal-Am Water Distribution System with lots classified by MPWMD as the same size)~~ actually using water from the Cal-Am Water Distribution System, and nothing herein is intended to or shall affect the ability to curtail or eliminate the actual use of water through any Connection previously made pursuant to a Water Use Permit to the extent such curtailment or elimination is authorized by such generally applicable laws, ordinances, or regulations applied in a non-discriminatory fashion to all similarly situated Users in the Cal-Am Water Distribution System ~~(Residential Users with lots classified by MPWMD as the same size)~~.

For example, Persons using water from the Cal-Am Water Distribution System are required to reduce their water usage in ***compliance with MPWMD Regulation XV*** ~~the various stages in MPWMD's Expanded Water Conservation and Standby~~

~~Rationing Plan~~, and may be penalized or their water service may be terminated for failing to reduce water usage as required. Similarly, such Persons must pay the rates and charges imposed for such water service, or their water service may be terminated.

E. CAL-AM SYSTEM EXPANSION/EXTENSION PURSUANT TO WATER USE PERMITS

Each Water Use Permit shall entitle the Owner of a Benefited Property to Potable water service to be provided by the Cal-Am Water Distribution System for such Benefited Properties, including the installation of water meters and mains as necessary notwithstanding the existence of a moratorium or a temporary delay on new Connections, upon payment of the fees required by subparagraph E-2 and ***a complete application for a Water Permit as described in Rule 21-B.*** ~~presentation to MPWMD by the Owner of the applicable Benefited Property of the following:~~

~~1. a. A statement by the Owner setting forth the annual Capacity of water that the Owner intends to use through such Expansion/Extension of the Cal-Am Water Distribution System, and the nature of the uses to which such water is intended to be applied; and~~

~~b. a valid municipal or county building permit which will allow construction upon the Benefited Property; and~~

~~c. a complete set of architectural contract drawings; or~~

~~d. other documentation sufficient for MPWMD to determine quantity and the Capacity for annual water use of the Benefited Property in the manner set forth at the time of connection in the MPWMD Rules, as amended from time to time, and the number and type of each requested Connection.~~

~~2~~***1***. The payment of any customary fees and Capacity Fees required by both Cal-Am and MPWMD of Water Users within the Cal-Am Service Area, calculated upon the basis of the annual water usage Capacity for the Benefited Property determined as set forth in ~~the preceding subsection E-1-d, including but not limited to fees and charges due by reason of~~ Rule 24

of MPWMD's Rules and Regulations.

2. Upon the filing of the information and payment of the fees required above, the General Manager shall issue a ***Water*** Permit pursuant to those provisions of Rule 23 authorizing ~~the Expansion/Extension of~~ ***a Connection to or modification of a water use on the California American Water Water Distribution System***~~, which *Water* Permit shall indicate the location, maximum usage measured as *Water Use* Capacity, and nature of each Connection requiring a present Expansion/Extension of the Cal-Am Water Distribution System~~. Customary fees and Capacity Fees shall be calculated based upon the Water Use Capacity for proposed or planned development upon Benefited Properties and calculated in the manner described in Rule 24. The water use represented by such ~~Expansions/Extensions~~ ***Connection to or modification*** of the Cal-Am Water Distribution System, shall not exceed the Water Entitlement evidenced by such Water Use Permit. In the event that an Owner of any Benefited Property requests an ~~Expansion/Extension~~ ***Connection to or modification*** of the Cal-Am Water Distribution System with respect to less than all of the Water Entitlement evidenced by such Water Use Permit, the General Manager shall make a record of the respective amounts deducted from and remaining under the pertinent Water Entitlement (as evidenced in the Water Use Permit).

3. The Owner of any Benefited Property to which the Owner has previously applied a portion of the Water Entitlement through prior ~~Expansions/Extensions~~ ***Connection to or modification*** of the Cal-Am Water Distribution System shall be entitled to increase the annual water use on such Benefited Property upon presentation of the information and payment of the fees set forth in this subparagraph E, provided that such increase does not cause the water use on the Benefited Property (or, in the case of PBC, PBC's Benefited Properties) to exceed the Water Entitlement owned by such Owner. Cal-Am shall be authorized to execute a contract with the Fiscal Sponsor to enable the provision of water service pursuant to subsections C and D of Section Three of Ordinance No. 109 consistent with the Water Entitlement evidenced by the Water Use Permit issued under this provision. Such agreement with Cal-Am shall at the Fiscal Sponsor's option be a condition precedent to the financing pursuant to Section Three of Ordinance No. 109 that is to pay for the Capital Costs of the Project Expansion. The actions required to be taken by the General Manager

pursuant to the foregoing provisions of this paragraph E shall be ministerial, non-discretionary acts which shall not be affected by any water moratorium, water emergency, Allocation decision or other curtailment on the setting of new water meters for the Cal-Am Water Distribution System and shall be enforceable by mandamus.

4. Nothing in the foregoing is intended to or shall affect the ability of MPWMD to curtail or eliminate the actual use of water through any Connection previously made pursuant to a Water Use Permit to the extent that such curtailment or elimination is authorized by other laws, ordinances, or regulations as are generally applicable to all similarly situated users ~~(Residential Users within the Cal-Am Water Distribution System with lots classified by MPWMD as the same size)~~ actually using water from the Cal-Am Water Distribution System, nor is it intended to provide or imply that any Water Use Permit holder shall not be subject to such generally applicable laws, ordinances, and regulations. For example, Persons using water from the Cal-Am Water Distribution System are required to reduce their water usage in the various stages in MPWMD's ~~Expanded Water Conservation and Standby Rationing Plan~~***Regulation XV, the 2016 Monterey Peninsula Water Conservation and Rationing Plan***, and may be penalized or their water service may be terminated for failing to reduce water usage as required. Similarly, such Persons must pay the rates and charges imposed for such water service, or their water service may be terminated.

F. PROCEDURE IN CASE OF INTERRUPTION OF RECYCLED WATER DELIVERIES

1. The provisions of this subparagraph F shall be applicable only after the Project Expansion is Completed. After the Project Expansion is Completed, if there is an Interruption in Recycled Water deliveries to any Recycled Water Irrigation Area, the temporary use of Potable water for irrigating each such Recycled Water Irrigation Area is authorized in the manner described in this Subsection F. Following written notice to MPWMD from an Owner of the affected area, CAWD, PBCSD and/or Cal-Am, CAWD, PBCSD and/or Cal-Am are authorized to turn on the Connection by which Potable water enters the distribution system serving the Recycled Water Irrigation Areas. Reports of the quantities of Potable water introduced into the Project

through this Connection on a daily basis shall be submitted to MPWMD each week throughout the Interruption.

2. Under normal circumstances, Potable water shall not be used for irrigation of a Recycled Water Irrigation Area for any longer than the period of time reasonably required to promptly and diligently complete repair or replacement or other activities necessary to restore Recycled Water service, provided that Potable water shall be made available for irrigating tees and greens during an Interruption without any limitation on the duration.

3. If Potable water has been used for irrigation of a Recycled Water Irrigation Area for 15 days , MPWMD may thereafter give notice of, and hold, a hearing (a) if it appears that the repair or replacement or other activities necessary to restore Recycled Water Service are not being completed promptly or diligently, or (b) upon the request of any interested party, who asserts that due to unique or unusual circumstances there may be a need to use Potable water for irrigation of a Recycled Water Irrigation Area for a period longer than the period of time reasonably required to promptly and diligently complete repair or replacement or other activities necessary to restore Recycled Water service. The purpose of the hearing is to determine the period of time during which, and what quantities of, Potable water shall continue to be supplied for irrigation of the affected Recycled Water Irrigation Area(s).

4. MPWMD shall give CAWD, PBCSD, Cal-Am, and the Owners of each affected Recycled Water Irrigation Area(s) not less than 30 days advance written notice for any such hearing, which notice shall set forth the basis of the hearing (as described in the preceding sentence).

5. Upon considering the evidence presented (including written materials that may be included in an Administrative Record), MPWMD may determine the period of time during which, and what quantities of, Potable water shall continue to be supplied for irrigation of the affected Recycled Water Irrigation Area(s). MPWMD shall give CAWD, PBCSD, Cal-Am, and the Owners of the affected Recycled Water Irrigation Area(s) written notice of such determination, and the determination shall be effective on the 15th day following service of the notice by personal delivery or by facsimile,

whereupon, each party shall immediately comply with the determination or timely challenge the same in court.

6. If MPWMD has adopted an ordinance in response to any emergency caused by drought, or other threatened or existing water shortage pursuant to section 332 of the Monterey Peninsula Water Management Law, said ordinance shall prevail over contrary provisions of this Subsection F.

7. If (1) an emergency or major disaster is declared by the President of the United States, or (2) a "state of war emergency," "state of emergency," or "local emergency," as those terms are respectively defined in Government Code section 8558, has been duly proclaimed pursuant to the California Emergency Services Act, with respect to all or any portion of the territory of MPWMD, the provisions of this Subsection F shall yield as necessary to respond to the conditions giving rise to the declaration or proclamation.

G. DEFINITIONS *IN RULE 23.5*

For the purpose of ~~Ordinance No. 109 and~~ Rule 23.5, the following words shall have the meanings set forth below. Other words which are defined in Rule 11 to the Rules and Regulations, when used in Rule 23.5 ~~or the ordinance~~ shall have the meanings set forth therein, unless the context otherwise indicates.

"Actual use of water" means the quantity of water that has passed through the water meter or meters installed to measure it.

"Ancillary Project Costs" means net revenues (gross revenues less allocable operation and maintenance costs and administrative and general costs as such terms are defined in accord with generally accepted utility practices), with respect to the Potable water, subject, from time to time, to the Water Entitlement, which Cal-Am shall not receive by reason of operation of the Project. Ancillary Costs shall not include any return on assets of Cal-Am which have been removed from the Water Distribution System rate base by reason of the Project. Ancillary Costs shall be reduced over time by net revenues received by Cal-Am by reason of sales of Potable water to the Benefited Properties following the first date of Project operation.

"Benefited Properties" means ***all real property within the boundaries of the unincorporated portions of the Del Monte Forest as defined in Exhibit "B" of the***

Supplemental Financial Commitment, as amended, and such additional real property as has been designated and included as Benefited Properties under the Fiscal Sponsorship Agreement pursuant to amendments thereto as approved by the MPWMD Board. ~~those properties described on Exhibit A hereto, within the Cal-Am Service Area on which a portion of the Water Entitlement may be utilized. All Benefited Properties are located in the unincorporated portion of the Del Monte Forest (the area shown on Exhibit B) except as otherwise noted in Exhibit A.~~

"Cal-Am" means the California American Water Company, a California corporation, its successors and assigns.

"Capital Costs" as applied to the Project or any portion thereof means all or any part of:

a. the cost of acquisition of all lands, structures, real or personal property rights, rights-of-way, franchises, easements, and interests acquired or used for the Project, inclusive of fees and commissions for acquisition;

b. the cost of construction of the Project, including without limitation, demolition, modification, replacement or renovation of existing structures, facilities, fixtures or equipment essential to the construction and operation of the Project; cost of improvements and materials; direct and indirect construction and administration expenses of each of the Public Participants properly allocable to the Project in accordance with generally accepted accounting principles; costs of painting, decorating, furnishing and landscaping; contractor and subcontractor profit; and costs related, by reason of the Project, to plumbing, mains, tanks, or pipes which are modified, replaced, or renovated, whether owned by Public Participants or others;

c. the cost of demolishing or removing any buildings, fixtures, equipment, or structures on land so acquired, including, without limitation, the cost of acquiring any lands to which such buildings or structures may be moved;

d. the cost of all new machinery, piping, equipment and furnishings, and the lesser of (i) the fair market value, or (ii) depreciated value for purposes of the applicable rate base, of machinery, piping, equipment and furnishings

made obsolete or unusable to Cal-Am or any of the Public Participants by reason of the Project to the extent not replaced by the Project;

e. costs of selling and issuing the Certificates of Participation, including, without limitation, the underwriter's discount;

f. interest on any funds advanced to permit payment of any of the Capital Costs prior to, during, and for a reasonable period after completion of the acquisition and construction of the Project as determined by PBC and MPWMD, including, without limitation, capitalized interest on the Certificates of Participation;

g. the Operating Reserve, as defined in the Fiscal Sponsorship Agreement;

h. the cost of architectural, engineering, planning, environmental analysis, financial, accounting, auditing and legal services, plans, specifications, estimates, administrative expenses, permits, fees, adverse claims, personnel and overhead costs (both direct and indirect, to the extent properly allocable to the Project in accordance with generally accepted accounting principles), and other expenses necessary or incident to determining the feasibility of construction of any portion of the Project or incident to the planning, construction, acquisition, or financing of any portion of the Project, subject to independent audit and review pursuant to the Supplemental Construction and Operation Agreement, including, without limitation:

*(*1.*)* payment during the construction period of the premiums for all title and other insurance, bonds, or undertakings required to be obtained and maintained with respect to any part of the Project, to the extent such amounts are not paid by any contractor who constructs or installs any portion of the Project;

*(*2.*)* payment of the taxes, assessments and other fees or charges, if any, that may become payable during the construction period with respect to any portion of the Project, or reimbursement thereof; and

*(*3.*)* payment of expenses incurred in seeking to enforce any remedy against any contractor or subcontractor in respect of any default

under a contract relating to the acquisition, construction or installation of any portion of the Project.

"Capital Costs of the Project Expansion" means costs falling within the preceding definition of Capital Costs that apply to the Project Expansion, and without limitation specifically includes payment of expenses incurred concerning the Project Expansion, the need therefore, and related matters beginning on January 1, 1995, and continuing through the drafting, negotiation, and execution of any and all agreements necessary or desirable to implement the design, construction, operation, and maintenance of the Project Expansion and any modifications thereof or thereto.

"CAWD" means the Carmel Area Wastewater District ~~(formerly known as the Carmel Sanitary District)~~, a public agency.

"CAWD/PBCSD" means both the Carmel Area Wastewater District and the Pebble Beach Community Services District~~, in reference to the Project~~.

"Certificates of Participation" means the Certificates of Participation issued by MPWMD in 1992 in the amount of $33.9 million to finance the Capital Costs of the Original Project.

"Completed" with respect to the Project Expansion shall mean that (1) all required permits or other approvals have been obtained, and (2) all construction activities for the advanced treatment components (being added to the tertiary treatment plant facilities of the Original Project), Forest Lake Reservoir, and all treatment and distribution facilities associated therewith, have been completed and tested in accordance with their respective approved plans, permits and other approvals, and (3) Forest Lake Reservoir has been filled to capacity with "Recycled Water" suitable for irrigation of all portions of the Recycled Water Irrigation Areas without the addition of any potable water thereto and otherwise meeting all regulatory and health standards for such usage, and (4) all portions of the distribution system are capable of delivering such Recycled Water to the Recycled Water Irrigation Areas. The Project Expansion shall be deemed Completed only if and when each of the events described in the preceding sentence have occurred.

"Construction and Operation Agreement" means the Wastewater Reclamation Project Construction and Operation Agreement among the Monterey Peninsula

Water Management District, Carmel Area Wastewater District, the Pebble Beach Community Services District, and the Pebble Beach Company, dated as of November 1, 1990, as it may be amended from time to time.

"Del Monte Forest" means the area of unincorporated Monterey County described and/or depicted on Exhibit "B"

"Financial Commitment" means the commitment of PBC, as the Fiscal Sponsor or any subsequent Fiscal Sponsor, to assume and guarantee payment of (1) the Capital Costs of the Original Project (including the payment of the principal of and interest on the Certificates of Participation or any bonds or other obligations issued by any Public Participant to finance such costs), and (2) the Net Operating Deficiencies of the Project until the Certificates of Participation (and any bonds or other obligations issued by any Public Participant to finance such costs) have been paid in full (or for any shorter periods as permitted by MPWMD), and (3) payment of all Ancillary Project Costs.

"Financing Implementation Agreement" means the Financing Implementation Agreement Relating to Wastewater Reclamation Project, dated as of November 1, 1992, by and between MPWMD and PBC, as it may be amended from time to time.

"Fiscal Sponsor" means PBC and any person or persons (including partnerships, corporations, municipal corporations, or other public entities) that may succeed PBC and assume, as the Fiscal Sponsor, all of PBC's obligations pursuant to Part II of Ordinance No. 39, Ordinance No. 109, the Fiscal Sponsorship Agreement, and any amendments thereof, which person or persons shall be obligated, and liable for, and capable of paying the Capital Costs and Net Operating Deficiencies of the Project.

"Fiscal Sponsorship Agreement" means the Wastewater Reclamation Project Fiscal Sponsorship Agreement between the Monterey Peninsula Water Management District and Pebble Beach Company, dated as of October 3, 1989, as it may be amended from time to time.

"Freed-up Water" means potable water which has been freed for new use by reason of Recycled Water deliveries from the Project. "Freed-Up Water" has the same meaning as "Franchise Water" in Ordinance No. 39.

"General Manager" means the General Manager of MPWMD.

"Interruption" means an interruption for longer than 12 hours in the supply of Recycled Water to a Recycled Water Irrigation Area.

"MPWMD" means the Monterey Peninsula Water Management District, a public agency.

"Net Operating Deficiency" as applied to the Project means, for any fiscal year or portion thereof, the difference between the Operating Revenues and the Operation and Maintenance Expenses for such period.

"Operation and Maintenance Expenses" as applied to the Project means all expenses and costs of management, operation, maintenance and repair of the Project, including, without limitation, payments to be made by the Public Participants under agreements with Cal-Am for the purchase of Potable water, and all incidental costs, fees and expenses incurred for such purpose properly chargeable to the Project in accordance with generally accepted accounting principles, including an allowance for depreciation, amortization, and obsolescence which is determined pursuant to generally accepted utility practices (subject to limitations set forth in the agreements applicable to the Project including but not limited to the Construction and Operation Agreement and the Fiscal Sponsorship Agreement), further provided, however, that Operation and Maintenance Expenses shall include all administrative expenses of MPWMD and PBC incurred in connection with, and properly allocable as an expense relating to the Project and the Certificates, and further provided however that Operation and Maintenance Expenses shall include an amount equal to any reduction in real property taxes allocated to MPWMD caused by a change in State law which results in a reduction of such tax allocation based on the collection of the Operating Revenues from the sale of the Recycled Water.

"Operating and Maintenance Reserve Fund," also called "O&M Reserve Fund," means a reserve maintained and held, pursuant to the Water Purchase Agreement and the Financing Implementation Agreement, separate and apart from other funds for the purpose of paying for Operations and Maintenance Expenses as they become due and payable to the extent Operating Revenues are insufficient to provide for such payments, providing working capital, and paying for routine and extraordinary repairs and replacements.

"O&M Reserve Requirement" means the amount calculated on or before July 1 of each year by the Management Committee to be equal to one quarter (1/4) of the projected amount of Operation and Maintenance Expenses for the immediately succeeding fiscal year as such amount may be revised upward or downward during the course of such fiscal year.

"Operating Revenues" as applied to the Project means all income, rents, rates, fees, charges and other moneys derived by the Public Participants from the ownership or operation of the Project, including, without limiting the generality of the foregoing: (i) all income, rents, rates, fees, charges or other moneys derived from the sale, furnishing and supplying of the reclaimed, sub-~~p~~*P*otable water (or from ~~*p*~~*P*otable water supplied in lieu thereof); (ii) insurance and condemnation proceeds resulting from damage to or destruction of the Project facilities, or from the condemnation of any of such facilities; and (iii) interest earned on all revenues mentioned in (i) and (ii) above or on any fund or account relating to the Project under the Trust Agreement (excluding any amounts required to be rebated to the United States pursuant to Section 148 of the Internal Revenue Code) provided, that such term shall not include customers' deposits or any other deposits subject to refund until such deposits have become the property of one of the Public Participants or the water supply surcharge retained by MPWMD in connection with the sale of Recycled Water in accordance with the Financing Implementation Agreement.

"Original Project" means and consists of (1) a tertiary treatment facility at the present CAWD wastewater treatment plant site, designed to produce at least 800 Acre-Feet per year of disinfected recycled water, (2) a distribution system which is capable of distributing the recycled water from the facility to a point of distribution in the Del Monte Forest for further distribution to the Recycled Water Irrigation Areas, and (3) recycled water irrigation systems on each of the Recycled Water Irrigation Areas, all of which were completed and became operational in 1994.

"Owner" means the holder (of record) of fee title to any Benefited Property.

"PBCSD" means the Pebble Beach Community Services District, a public agency.

"Project" means the Original Project and the Project Expansion.

"Project Expansion" means and consists of components intended to improve the Original Project, principally including (but not limited to) (a) the addition of advanced treatment components to the treatment facilities of the Original Project, and (b) the addition of storage, treatment, and distribution facilities at or associated with the Forest Lake Reservoir located within the Del Monte Forest.

"Public Participant" means any one or more of the following: the Monterey Peninsula Water Management District, the Carmel Area Wastewater District, formerly the Carmel Sanitary District, the Pebble Beach Community Services District, or any successor public agency including but not limited to any joint powers agency formed by one or more of the above agencies.

The meaning of the term "Recycled Water" depends upon whether or not the Project Expansion is Completed:

1.~~a.~~ Before the Project Expansion is Completed, "Recycled Water" shall mean water originating from the tertiary treatment facilities of the CAWD wastewater treatment plant.

2.b. After the Project Expansion is Completed, "Recycled Water" shall refer to water originating from said tertiary treatment facilities and thereafter receiving further treatment so as to be suitable for irrigation of the Recycled Water Irrigation Areas without the addition of any Potable water thereto (except during an Interruption as defined herein) and otherwise meeting all regulatory and health standards for such usage. Recycled Water meeting water quality standards agreed upon by the owners of the Recycled Water Irrigation Areas and CAWD/PBCSD shall be deemed "suitable for irrigation of the Recycled Water Irrigation Areas." "Recycled Water" has the same meaning as "Reclaimed Water."

"Recycled Water Irrigation Areas" means the golf courses and other vegetated areas located within the Del Monte Forest that are currently being irrigated with Recycled Water supplied by the Project or such golf courses and other vegetated areas wherever located that in the future may be irrigated with Recycled Water supplied by the Project.

"State Water Resources Control Board" and "SWRCB" each mean the state agency created pursuant to Water Code sections 174 and 175 which exercises the

adjudicatory and regulatory functions of the State of California in the field of water resources.

"Supplemental Financial Commitment" means all of the following:

1. the irrevocable written commitment by PBC to pay all Capital Costs of the Project Expansion, using funds raised through the sale of such portions of its Water Entitlement pursuant to Subsection C of Section Three of Ordinance 109 (combined with any funds which may be independently committed by PBC, IRWUG, CAWD, PBCSD, or any other entity willing to commit funds to the Capital Costs of the Project Expansion), and to continue to pay the Net Operating Deficiencies of the Project until the Certificates of Participation (and any bonds or other obligations issued by any Public Participant to finance such costs) have been paid in full (or for any shorter periods as permitted by MPWMD), and to continue to pay all Ancillary Project Costs; and

2. the written representation by each of PBC, CAWD, and PBCSD that each is prepared and intends forthwith to commence construction of the Project Expansion and to proceed diligently therewith until the Project Expansion is Completed.

"Terminate" means the withdrawal, without formal MPWMD action, of authority to act as previously provided by a valid permit or water service connection, whichever is applicable.

"Trust Agreement" means the Trust Agreement by and between First Trust of California, National Association, as Trustee and MPWMD dated as of November 1, 1992**,** relating to $33,900,000 Variable Rate Demand Certificates of Participation (Wastewater Reclamation Project) Series 1992, as it may be amended from time to time.

"Water Entitlement" means an aggregate of 380 Acre-Feet per year of Potable water which has been dedicated (as evidenced by Water Use Permits issued pursuant to Ordinance No. 39, the Resolution, and the Fiscal Sponsorship Agreement) to land within the jurisdiction of MPWMD for the purpose of providing for the payment of the Capital Costs, Ancillary Project Costs, and Net Operating Deficiencies of the Original Project. Ordinance No. 109 provides a

process by which a portion of the Water Entitlement held by PBC may be separately sold and conveyed and thereby be dedicated to other land within the Del Monte Forest with the proceeds therefrom to be applied to the costs of the Project Expansion and the Original Project as more specifically described therein.

"Water Purchase Agreement" means the Water Purchase Agreement by and among MPWMD, CAWD, and PBCSD dated as of November 1, 1992, as it may be amended from time to time.

"Water Use Permit" means a writing from MPWMD which evidences the dedication of the Water Entitlement as a present vested property right enuring to the use and benefit of one or more of the Benefited Properties. A Water Use Permit shall by non-discretionary ministerial action, cause the present Connection to or modification of the California American Water Distribution System for Benefited Properties upon designation of the location of use and upon payment of applicable Capacity Fees and fees, and issuance of a Water Permit as provided in Rule 23.5.

Section Seven: Amendments to Rule 24-D, Calculation of Capacity Fees

A. Rule 24-D (Calculation of Capacity Fees) shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~).

D. CALCULATION OF CAPACITY FEES

The Capacity Fee paid for a Water Permit shall be determined by multiplying the Adjusted Water Use Capacity by the current Capacity Fee. This charge shall be applied to each application for a Water Permit as follows:

1. Projects served by the ~~Main~~ California American Water Company System and Seaside Municipal Water Company shall pay 100 percent of the final calculation.

2. All other Water Distribution Systems including private Wells and other Water Distribution Systems ~~owned and/or operated by California American Water Company outside of the main system~~ shall pay 18.67 percent of the final calculation.

Section Eight: Amendments to Rule 25.5, Water Use Credits and On-Site Water Credits

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Rule 25.5 Sections A through F shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~). No other edits are made to Rule 25.5.

RULE 25.5 - WATER USE CREDITS AND ON-SITE WATER CREDITS

A. Except where a Water Permit has been abandoned, expired, Revoked, Suspended, or canceled under these Rules, a Person may receive a Water Use Credit for the permanent abandonment of some or all ~~of~~ ~~the~~ prior water use on that Site by one of the methods set forth in this Rule. Water Use Credits shall be documented by written correspondence between the District and the property owner, and shall remain valid unless ***expired or*** prohibited by this Rule. Water Use Credits shall not be documented by notice on a property title, except as specified in Rule 25.5-H. Except as allowed by Rule 28, Water Use Credits shall not be transferable to any other Site.

B. Water savings resulting from mandatory compliance with Regulation XIV, Water Conservation, shall not result in a Water Use Credit, with the exception of Table 4 retrofits. Such savings shall be set aside as permanent water conservation savings.

C. A Water Use Credit may be applied to and shall allow future water use on that Site at any time within a period of ***sixty (***60***)*** months ***from the date the Permanent Abandonment of Capacity occurred***. After the 60th month, the General Manager shall allow renewal of this Water Use Credit only upon verification that some or all water savings represented by that credit are current (i.e. no Water Permit or other use or transfer of the Water Use Credit has occurred). If all savings are not current, a pro-rata reduction shall occur. A single renewal period of 60 months shall be allowed; thereafter any remaining unused Water Use Credit shall expire.

D. A Water Use Credit on a Redevelopment Project that was documented prior to February 1, 2012, may, in addition to the time limits and in the manner set forth above, have its expiration date extended for two (2) additional periods of ~~sixty (~~60~~)~~ months each, to afford any such Redevelopment Project a maximum period of two hundred forty (240) months to use that credit.

E. The following types of Permanent Abandonment of Capacity shall qualify for a Water Use Credit under this Rule:

1. Demolition of a building or use that has been recognized by the District as being a lawful water use;

2. Demolition or removal of Exterior Restaurant Seats specifically permitted by debiting Water Use Capacity from an Allocation, Entitlement, ~~or~~ Water Credit ***or Water Use Credit***;

3. Permanent disconnection of a lawful water use from a Water Distribution System;

4. Residential removal of ***District-documented and lawful*** water fixtures ***listed in Rule 24, Table 1: Residential Fixture Unit Count Values and the associated plumbing for those fixtures so there is no evidence of the removed water fixture***;

5. Permanent installation of ***water fixtures or appliances that are designed to achieve greater water efficiency than mandated in District Rule 142 and Rule 143*** ~~non-mandated water fixtures or appliances~~.

6. Removal of established Lawn on sports fields at a Public School District Site.

F. To determine a Water Use Credit, the General Manager shall:

1. Verify that the reduction is one which is permanent (i.e. Permanent Abandonment of Use) ***and the date that Permanent Abandonment of Use occurred***.

2. Quantify the Water Use Capacity of the Site using the water use factors from Rule 24, Tables 1 and/or 2. If no factor is available on Table 2 or if the use is substantially different than any of the uses shown on Table 2, the General Manager may make an estimate based upon water records showing the average use over a minimum of eight (8) years.

3. Grant a Water Use Credit for the permanent removal of water using fixtures ~~providing that~~ ***if*** the fixture was properly and lawfully installed. Credit for fixtures listed in Rule 24-A-2 shall only receive a Water Use Credit upon

evidence of a Water Permit showing a debit to a Jurisdiction's Allocation and payment of related Capacity Fees.

Section Nine: Amendments to Rule 32, Water Resource System Production and Sales Limits

Rule 32 shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~).

A. RESOURCE LIMITS*

The total annual Production Limit from the Monterey Peninsula Water Resource System shall be ***established annually pursuant to Rule 160 and reflected in Table XV-4 as "Carryover Storage Needs for Next Year Demand".*** ~~increased &om 19,881 Acre-Feet to 20,686.52 Acre-Feet. California-American Water's annual water supply capacity limit shall be increased from a production level of 16,744 Acre-Feet to a production level of 17,640.81 Acre-Feet. Of this, 16,405.95 Acre-Feet shall be available for annual water sales to consumers within the California-American Water system due to system losses and unmetered consumption. Non-California American Water water production shall not exceed a level of 3,045.71 Acre-Feet per year.~~

~~**32-A reflects action taken by the Board of Directors through the various ordinances listed. However, action taken by the State Water Resources Control Board and the Seaside Adjudication put constraints on these numbers.*~~

~~*The effective limit on California American Water's annual production from the Carmel River and underlying Carmel Valley Alluvial Aquifer is 11,285 AFY as specified in State Water Resources Control Board Order No. WR95-10 adopted July 6, 1995. The effective limit on California American Water production from the coastal subarea of the Seaside Groundwater Basin is 3,504 AFY as specified in California American Water v. City of Seaside, et al (Case No. M66343) entered March 27, 2006. The effective total annual production limit for California American Water from the MPWRS is 14, 789 AFY.*~~

B. ACCOUNTING

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Each new water Connection or ***Water*** Permit for expanded water use shall be strictly accounted for, and each new water use shall be debited from ~~the water supply available to both the Monterey Peninsula Water Resource System, the Water Distribution System affected by that new or expanded water use, and debited~~ from the appropriate Jurisdiction or ***Entitlement*** ~~District Reserve Allocation~~.

Section Ten: Amendments to Rule 141, Water Conservation Rebates

A. Rule 141-A (Qualifying Devices) shall be amended to delete the list of Rebate eligible devices as the list is repeated in Rule 141-B, Table XIV-1, Rebate Amounts. Additions to this Rule are shown in ***bold italics*** and deletions are shown in ~~strikethrough~~.

RULE 141-A QUALIFYING DEVICES

Rebates are available for purchase of the following Qualifying Devices within the boundaries of the Monterey Peninsula Water Management District. Qualifying Devices and the associated Rebate amount are shown in Table XIV-1:

A. QUALIFYING DEVICES

Rebates are available for purchase of the following Qualifying Devices within the boundaries of the Monterey Peninsula Water Management District. Qualifying Devices and the associated Rebate amount are shown in Table XIV-1~~:~~**.**

~~1. High Efficiency Dishwasher;~~

~~2. High Efficiency Clothes Washer in a Residential use;~~

~~3. Instant-Access Hot Water System;~~

~~4. High Efficiency Toilet;~~

~~5. Zero Water Consumption Urinal;~~

~~6. One or more Cisterns installed as a component of an Irrigation System. Maximum available Rebate shall be for 25,000 gallons of Cistern storage capacity on a Qualifying Property;~~

7. ~~Smart Controller;~~

8. ~~Soil Moisture Sensors that control the irrigation cycles of a conventional automatic Irrigation System controller or Smart Controller. Gypsum block Soil Moisture Sensors shall not be included on the list of Qualifying Devices;~~

9. ~~Removal of established Lawn and replacement with low water use plants or permeable surfaces (maximum of 2,500 square feet);~~

10. ~~High Efficiency Urinal in a Residential use;~~

11. ~~Pint Urinal;~~

12. ~~Rotating Sprinkler Nozzle;~~

13. ~~Water Broom. Maximum available Rebate shall be for two Water Brooms per Qualifying Property;~~

14. ~~Commercial High Efficiency Clothes Washer at a Residential Site;~~

15. ~~Lawn removal Rebate at a Public facility may exceed the square footage limitation subject to Board approval.~~

16. ~~Cooling Tower Conductivity Controller;~~

17. ~~Water Efficient Ice Machine;~~

18. ~~X-ray film processor recirculation system;~~

19. ~~Cooling Tower Conductivity/pH Controller;~~

20. ~~Dry Vacuum Pump;~~

21. ~~Graywater Irrigation System;~~

22. ~~High Efficiency Connectionless Food Steamer;~~

23. ~~High Efficiency Commercial Dishwasher;~~

~~24. Retrofit of a medical equipment steam sterilizer that utilizes a continuous water flow with a water tempering device;~~

~~25. Ultra High Efficiency Toilet;~~

~~26. Toilet Flapper.~~

~~27. Removal of whirlpool (or jetted water system) bathtub in Visitor-Serving Facility;~~

~~28. Non-Residential Rebates for technology not listed in Rule 141 shall be considered on a case-by-case basis by the Water Demand Committee. The Water Demand Committee shall make a recommendation to the Board.~~

B. Rule 141-B, Table XIV-1, Rebate Amounts, shall be amended to reduce the Rebate for toilets, clarify that the Rebate for Pint Urinals and High Efficiency Clothes Washers are available only to Residential uses, delete the Rebate for ice machines (now a requirement in Rule 143), and add a Rebate for Meter Splits at Multi-Family Residential Sites. Additions to this Rule are shown in ***bold italics*** and deletions are shown in ~~strikethrough~~.

Table XIV-1
Rebate Amounts
Updated October 18, 2017

Qualifying Device	Maximum Rebate
High Efficiency Toilet	~~$100~~ ***$75***
Ultra High Efficiency Toilet	~~$150~~ ***$125***
Toilet Flapper	$15
Pint Urinal (***in a Residential use only)***	$250
Zero Water Consumption Urinal	$250
High Efficiency Dishwasher (Residential)	$125
High Efficiency Clothes Washer (Residential[1])	$500
Instant-Access Hot Water System (per Qualifying Property)	$200
On-demand hot water pump or point of source water heater (maximum of two per Qualifying Property)	$100
Graywater Irrigation System supplied by one Clothes Washer	$100

[1] ***Includes Residential appliances in a Common Laundry Room on a Multi-Family Residential Site.***

Graywater Irrigation System supplied by one or more Bathrooms that have a Bathtub/Shower connected to a Graywater Irrigation System. Residential limit: 4.	$100 per Bathroom
Non-Residential Graywater system	***Case-by-case basis***
Smart Controller	$100 for up to four stations. An additional $10 shall be available per station up to twenty (20) stations
Soil Moisture Sensor(s) on a conventional automatic Irrigation System (gypsum block Soil Moisture Sensors shall not qualify for Rebate)	$25
Cistern water tanks installed on Sites supplied with water from the Monterey Peninsula Water Resource System (per Qualifying Property)	$50 per 100 gallons for the first 500 gallons and $25 per 100 gallons of water storage capacity to a maximum storage capacity of 25,000 gallons
Lawn removal and replacement with low water use plants or permeable surfaces[1] (Prequalification required - See MPWMD Rule 141-F)	$1.00 per square-foot to a maximum of 2,500 square-feet
Rotating Sprinkler Nozzle (minimum purchase and installation of ten)	$4 each
Water Broom	$150
Commercial High Efficiency Clothes Washer ***in a Residential or Multi-Family Residential use***. ~~*A Multi-Family Residential Qualifying Property with a Common Laundry Room shall be considered a Non-Residential use.*~~	$1,000
Commercial Ozone Laundry System	$1,000
Cooling Tower Conductivity Controller	$1,000
Cooling Tower Conductivity/pH Controller	$2,500
~~CEE Tier II Water Efficient Ice Machine~~	~~$500~~
High Efficiency Connectionless Food Steamer (per compartment)	$1,500
Commercial Waterless Wok Stove	$5,000
Water Efficient Commercial Steam or Combi Oven	$2,500
High Efficiency Commercial Dishwasher	

[1] Lawn removal Rebate at a Public facility may exceed the square-footage limitation subject to Board approval.

Under counter model	$1,000
Single tank door type model	$1,500
Single tank conveyor	$2,000
Multi-tank conveyor	$2,500
~~Non-Residential Graywater Irrigation System~~	~~Inquire~~
X-ray film processor recirculation system	$2,500
Medical equipment steam sterilizer retrofit with a water tempering device	$1,500
Dry Vacuum Pump (per 0.05 HP to a limit of 4 HP)	$200
Multi-Family Dwelling Meter Split	***$100/dwelling unit***

C. Rule 141-C-3 (Eligibility) shall be amended as shown in ***bold italics*** (additions) and ~~strikethrough~~ (deletions) to allow subsequent Rebates for replacement of High Efficiency Clothes Washers after eight years, as recommended by Consumer Reports. Rebate applications for replacement of High Efficiency Clothes Washers that were denied in the past year due to a previous Rebate shall be processed.

3. Rebates shall be available only for the initial purchase of a Qualifying Device. Rebates shall not be issued for replacement of an existing Qualifying Device ~~with the exception of~~ ***except for*** High Efficiency Clothes Washers that have been removed from the Qualifying Property by a previous owner/tenant ***or that are being replaced after eight or more years***. Applicants submitting an application for a High Efficiency Clothes Washer Rebate on a Site that has previously qualified for a High Efficiency Clothes Washer Rebate may be required to provide information to substantiate a subsequent Rebate.

D. Rule 141-C-7-a shall be deleted as shown in strikethrough (~~strikethrough~~) and the section renumbered.

7. Non-Residential Rebates
   a. ~~Water Efficient Ice Machines shall be listed as CEE Tier II.~~

E. Rule 141-D (Conditions of Approval) shall be amended as shown in ***bold italics*** to clarify that a Rebate will be held until installation of the new Water Meter has been verified.

9. ***Multi-Family Dwelling Meter Split Rebates shall only be approved and processed after verification that a Water Meter has been installed by the Water Distribution System Operator.***

Section Eleven: Amendments to Rule 142, Water Efficiency Standards

Rule 142-D, Water Efficiency Standards, shall be amended to include the following text from former Rule 154:

24. Visitor-Serving and Public and Quasi-Public Facilities shall display in visible locations in all restrooms, kitchens, and dining areas, placards or decals approved by the District promoting public awareness of the need for water conservation and/or advising the public that waste of water is prohibited.

25. The owner and/or manager of rental property shall provide current and new tenants with information about the water conservation requirements, including the Water Waste and Non-Essential Water Use regulations of the District. This information shall be readily accessible on a tenant portal website with annual notification of its presence, or when notice is not provided electronically, the owner and/or manager shall annually provide written information to existing tenants and to new tenants as they move in.

26. Visitor-Serving Facilities shall promote towel and linen reuse programs by providing written notice in the rooms, whereby towels and linens are changed every three days or as requested by action of the guest.

27. Visitor-Serving Facilities shall provide written notice that drinking water is available only upon request. Notification of this requirement shall be provided on the table(s) or menu(s) of each facility. Visitor-Serving Facilities shall not provide drinking water from the Monterey Peninsula Water Resource System at the table unless specifically requested.

28. Facilities utilizing alternative sources of irrigation water (i.e. purified recycled water, Non-Potable Water, rainwater and Graywater, etc.) shall be encouraged to provide notice of the alternative supply, either by erecting a sign in compliance with local codes or by identifying the alternative supply in other venues such as in newsletters, websites, menus, etc.

Section Twelve: Amendments to Rule 143, Water Efficiency Standards for Existing Non-Residential Uses

Rule 142, Water Efficiency Standards for Existing Non-Residential Uses, shall be amended to

include the following text from former Rule 154:

M. ***Visitor-Serving and Public and Quasi-Public Facilities shall display in visible locations in all restrooms, kitchens, and dining areas, placards or decals approved by the District promoting public awareness of the need for water conservation and/or advising the public that waste of water is prohibited.***

N. ***The owner and/or manager of rental property shall provide current and new tenants with information about the water conservation requirements, including the Water Waste and Non-Essential Water Use regulations of the District. This information shall be readily accessible on a tenant portal website with annual notification of its presence, or when notice is not provided electronically, the owner and/or manager shall annually provide written information to existing tenants and to new tenants as they move in.***

O. ***Visitor-Serving Facilities shall promote towel and linen reuse programs by providing written notice in the rooms, whereby towels and linens are changed every three days or as requested by action of the guest.***

P. ***Visitor-Serving Facilities shall provide written notice that drinking water is available only upon request. Notification of this requirement shall be provided on the table(s) or menu(s) of each facility. Visitor-Serving Facilities shall not provide drinking water from the Monterey Peninsula Water Resource System at the table unless specifically requested.***

Q. ***Facilities utilizing alternative sources of irrigation water (i.e. purified recycled water, Sub-potable/non-potable Water, rainwater and Graywater, etc.) shall be encouraged to provide notice of the alternative supply, either by erecting a sign in compliance with local codes or by identifying the alternative supply in other venues such as in newsletters, websites, menus, etc.***

Section Thirteen: Deletion of Rule 144-D

Rule 144-D-4 shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~) to extend the time after Change of Ownership or Use to comply with the Water Efficiency Requirements of Rule 142.

4. The General Manager may conditionally extend the proof of retrofit requirement of this section where the seller, buyer, or ***Non-Residential*** tenant certifies that the structure will begin to be Remodeled or modified within one hundred and ~~twenty~~ ***eighty*** (~~120~~ ***180***) days of the Change of Ownership or Change of Use, that the structure will comply with Regulation XIV upon completion of construction, and the District shall be both contacted and allowed inspection of the property by District staff or its authorized agent ***upon project completion*** ~~within 180 days (i.e. six months) of the date of this requirement~~. Incremental extensions of ~~90~~ ***180*** days may be allowed until completion of the Remodel or modification.

Section Fourteen: Deletion of Rule 154 – Conservation Message Requirements

Rule 154 shall be deleted as the requirements have been moved to Rule 142 and Rule 143.

Section Fifteen: Publication and Application

The provisions of this ordinance shall cause the amendment and republication of Rules 11, 21, 24, 25.5, 60, 64, 141, 143, and 144 of the permanent Rules and Regulations of the Monterey Peninsula Water Management District.

Section Sixteen: Effective Date and Sunset

This ordinance shall take effect at 12:01 a.m. 30 days after second reading.

This Ordinance shall not have a sunset date.

Section Seventeen: Severability

If any subdivision, sentence, clause, or phrase of this ordinance is, for any reason, held to be invalid or unenforceable by a court of competent jurisdiction, such invalidity or unenforceability shall not affect the validity or enforcement of the remaining portions of this ordinance, or of any other provisions of the Monterey Peninsula Water Management District Rules and Regulations. It is the District's express intent that each remaining portion would have been adopted irrespective of the fact that one or more subdivisions, paragraphs, sentences, clauses, or phrases be declared invalid or unenforceable.

DRAFT

On motion of Director _____, and second by Director _____, the foregoing ordinance is adopted upon this ____ day of _____, 2017, by the following vote:

AYES:

NAYS:

ABSENT:

I, David J. Stoldt, Secretary to the Board of Directors of the Monterey Peninsula Water Management District, hereby certify the foregoing is a full, true, and correct copy of an ordinance duly adopted on the _____ day of _____, 2017.

Witness my hand and seal of the Board of Directors this _____ day of _____, 2017.

_____

David J. Stoldt, Secretary to the Board

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ITEM: ACTION ITEM

16. CONSIDER APPROVAL OF AMENDMENT TO AGREEMENT FOR EMPLOYMENT OF GENERAL MANAGER

Meeting Date:	**August 21, 2017**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item:**	**N/A**
Prepared By:	**David J. Stoldt**	**Cost Estimate:**	**$15,000**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines section 15378.

SUMMARY: On July 17, 2017 the Board met and discussed the General Manager's annual performance appraisal. The Board was very satisfied with the General Manager's performance and noted that the General Manager continues to perform at a high level advancing the Board's goals and direction. Specific highlights included development of 3-year and 1-year strategic goals, advancement of the Pure Water Monterey groundwater replenishment project, work on extending the Cease and Desist Order, and continuing to improve the District's public perception among community groups, businesses, elected officials, and individuals. Since the General Manager's last salary increase in 2015, he was recognized as the City of Pacific Grove's "Public Official of the Year" and the Monterey Peninsula Chamber of Commerce's "Ruth Vreeland Memorial Award Public Official of the Year."

The Chair reviewed a salary survey of comparable positions in the industry and on the Monterey Peninsula. As a result, the Board recommended an increase in the General Manager's annual compensation as reflected in **Exhibit 16-A**, attached.

RECOMMENDATION: Amend section III.A of the "Agreement for Employment of General Manager" to reflect the revised annual compensation, effective July 17, 2017.

EXHIBIT
16-A Amendment to Agreement for Employment of General Manager

EXHIBIT 16-A

AMENDMENT TO AGREEMENT FOR EMPLOYMENT OF GENERAL MANAGER

The following amendment has been made and entered into this 21st day of August, 2017, by and between the MONTEREY PENINSULA WATER MANGEMENT DISTRICT (the District) and DAVID JON STOLDT ("Stoldt"). It amends the salary provisions found in the Agreement for Employment of General Manager, dated June 20, 2016. The amendment shall have an effective date of July 17, 2017. In consideration of the mutual covenants contained herein, the parties agree to amend the General Manager's contract as follows, all other terms and conditions remaining the same:

III. COMPENSATION OF STOLDT.

A. Salary.

As General Manager, STOLDT shall receive base salary at the rate of Two Hundred and Twenty Thousand Dollars ($220,000) per year, effective July 17, 2017.

GENERAL MANAGER

_____
DAVID JON STOLDT

MONTEREY PENINSULA
WATER MANAGEMENT
DISTRICT

_____
ROBERT S. BROWER, CHAIR

ITEM: INFORMATIONAL ITEMS/STAFF REPORTS

17. RECEIVE NOTICE OF APPOINTMENT TO CARMEL RIVER ADVISORY COMMITTEE

Meeting Date:	**August 21, 2017**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Larry Hampson**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines section 15378.
CEQA Compliance: N/A

A list of the Carmel River Advisory Committee (Committee) members, their term ending dates, and the corresponding appointing Board members is provided in **Exhibit 17-A**. Committee members are appointed for terms expiring on June 30, or on the date the appointing Director is replaced, whichever occurs first. The following Committee members have been appointed by their respective Board members:

Committee Member	Appointing Board Member
Marjorie Ingram Viales	Brenda Lewis (Division 1)
Lorin Letendre	Andrew Clarke (Division 2)

The adoption of the Consent Calendar will document the appointment of these Committee members for a term ending June 30, 2019.

EXHIBITS
17-A Carmel River Advisory Committee Member Appointments as of August 21, 2017

EXHIBIT 17-A

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

CARMEL RIVER ADVISORY COMMITTEE
Appointments as of August 21, 2017

Committee Member	Term Ends	Appointed By
Marjorie Ingram Viales	June 30, 2019	Brenda Lewis (Div. 1)
Lorin Letendre	June 30, 2019	Andrew Clarke (Div. 2)
Keely Clifford	June 30, 2018	Molly Evans (Div. 3)
Unfilled	June 30, 2019	Jeanne Byrne (Div. 4)
Vincent Frumkin	June 30, 2018	Bob Brower (Div. 5)
Unfilled	June 30, 2018	Ralph Rubio (Mayoral Representative)
Unfilled	June 30, 2018	Mary Adams (Monterey County Board of Supervisors)

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ITEM: INFORMATIONAL ITEMS/STAFF REPORTS

18. LETTERS RECEIVED

Meeting Date:	**August 21, 2017**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Arlene Tavani**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A

Committee Recommendation: N/A

CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines section 15378.

A list of letters that were submitted to the Board of Directors or General Manager and received between July 11, 2017 and August 11, 2017 is shown below. The purpose of including a list of these letters in the Board packet is to inform the Board and interested citizens. Copies of the letters are available for public review at the District office. If a member of the public would like to receive a copy of any letter listed, please contact the District office. Reproduction costs will be charged. The letters can also be downloaded from the District's web site at www.mpwmd.net.

Author	Addressee	Date	Topic
Robert S. Jaques	David Stoldt	7/12/17	Recalibration and Updating of Seaside Groundwater Basin Model
Julie Vance	David Stoldt	7/19/17	Carmel River Lagoon Striped Bass Collection Coordination and Participation
Keith Van Der Maaten	David Stoldt	7/24/17	Results of Groundwater Data Collected by Helicopter

ITEM: INFORMATIONAL ITEMS/STAFF REPORTS

19. COMMITTEE REPORTS

Meeting Date:	**August 21, 2017**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Arlene Tavani**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.

Attached for your review as **Exhibit 19-A through Exhibit 19-C,** respectively, are minutes of the committee meetings listed below.

EXHIBIT
19-A Final Minutes of July 10, 2017 Administrative Committee Meeting
19-B Final Minutes of April 25, 2017 Water Demand Committee Meeting
19-C Final Minutes of March 13, 2017 Water Supply Planning Committee Meeting

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MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

EXHIBIT 19-A

FINAL MINUTES
Monterey Peninsula Water Management District
Administrative Committee
July 10, 2017

Call to Order
The meeting was called to order at 3:34 PM in the District Conference Room.

Committee members present: Andrew Clarke
Molly Evans

Committee members absent: Brenda Lewis - Chair

Staff present: David Stoldt, General Manager
Mark Dudley, Information Technology Manager
Stephanie Locke, Water Demand Manager
Sara Reyes, Sr. Office Specialist

Oral Communications
None

Items on Board Agenda for July 17, 2017

1. **Consider Adoption of Minutes of June 12, 2017 Committee Meeting**
   On a motion by Evans and second by Clarke, the minutes of the June 12, 2017 meeting were approved on a vote of 2 – 0 by Evans and Clarke.

2. **Authorize Expenditure for Software Maintenance Agreements**
   On a motion by Evans and second by Clarke, the committee recommended that the Board approve expenditures not-to-exceed $60,075 to purchase the following items:

Product	**Price**
ESRI ArcGIS Standard concurrent	$4400
ESRI ArcGIS Standard stand-alone	$1650
ESRI Extensions	$2500
Latitude Geographics GeoCortex	$6000
ESRI EDN	$1650
ArcGIS Server Two Core	$1375
Server networking	$3500
Backup, antivirus and MS office	$9500
Docuware (Financial)	$8000
Tyler Technologies (Financial)	$21500
TOTAL	**$60075**

The motion was approved on a vote of 2 – 0 by Evans and Clarke.

3. Authorize Expenditure of Funds for IT Infrastructure Hardware Replacement

On a motion by Clarke and second by Evans, the committee recommended that the Board authorize expenditures not-to-exceed $18,000 to purchase the following items:

Product	**Price**
Netapp Expansion Drives	$9200
Replacement staff laptops/tablets	$3800
Workstation Refresh	$5000
TOTAL	**$18000**

The motion was approved on a vote of 2 – 0 by Clarke and Evans.

4. Authorize Expenditure of Board Room Audio Visual System Upgrade

On a motion by Clarke and second by Evans, the committee recommended that the Board authorize expenditures not-to-exceed $49,000 to upgrade the Audio/Visual broadcasting system with the following items:

Product	**Price**
Tricaster computer/switcher	$20,000
PTZ Optics Camera and hardware (4)	$8000
Workstation Refresh	$5000
PTZ Optics Camera Controller	$800
Blonder Tongue HD Transmitter	$3500
Misc Hardware and cables	$2000
Amp Labor installation and testing	$2400
Cabling/General Contractor	$4400
Contingency	$2900
TOTAL	**$49,000**

The motion was approved on a vote of 2 – 0 by Clarke and Evans.

5. Approve Expenditure to Corporation Service Company – Recording Fees

On a motion by Evans and second by Clarke, the committee recommended that the Board approve the expenditure of $24,000 for recording fees. The motion was approved on a vote of 2 – 0 by Evans and Clarke.

6. Consider Adoption of Treasurer's Report for May 2017

On a motion by Clarke and second by Evans, the committee recommended the Board adopt the May 2017 Treasurer's Report and financial statements, and ratification of the disbursements made during the month. The motion was approved on a vote of 2 – 0 by Clarke and Evans.

Other Business

7. Review Draft July 17, 2017 Board Meeting Agenda

A revised agenda was distributed to the committee for review. No changes were made.

Adjournment

The meeting was adjourned at 4:01 PM.

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

EXHIBIT 19-B

FINAL MINUTES
Water Demand Committee of the
Monterey Peninsula Water Management District
April 25, 2017

Call to Order
The meeting was called to order at 3:05 pm in the MPWMD conference room.

Committee members present: Molly Evans, Chair
Jeanne Byrne
Andy Clarke

Committee members absent: None

Staff members present: David Stoldt, General Manager
Stephanie Locke, Water Demand Division Manager
Stephanie Kister, Conservation Analyst
Arlene Tavani, Executive Assistant

Comments from the Public: No comments.

Action Items

1. **Consider Adoption of February 13, 2017 Committee Meeting Minutes**
   On a motion by Byrne and second of Clarke, minutes of the February 13, 2017 committee meeting were adopted unanimously on a vote of 3 – 0 by Byrne, Clarke and Evans.

2. **Consider Rebate for a Laundry Water Recycling System at the Asilomar Conference Grounds**
   Byrne offered a motion to recommend that the Board of Directors approve issuance of a $20,000 rebate to Water City for the laundry water recycling system installed at Asilomar. The motion was seconded by Clarke and approved on a vote of 3 – 0 by Byrne, Clarke and Evans.

Set Next Meeting Date: No date was scheduled.

Adjournment
The meeting was adjourned at 3:20 pm.

5 Harris Court, Building G, Monterey, CA 93940 • P.O. Box 85, Monterey, CA 93942-0085
831-658-5600 • Fax 831-644-9560 • http://www.mpwmd.net

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

EXHIBIT 19-C

FINAL MINUTES
Water Supply Planning Committee of the
Monterey Peninsula Water Management District
March 13, 2017

Call to Order The meeting was called to order at 9:20 am in the MPWMD conference room.

Committee members present: Robert S. Brower, Sr. - Committee Chair
Jeanne Byrne
David Pendergrass

Committee members absent: None

Staff members present: David Stoldt, General Manager
Larry Hampson, Planning & Engineering Division Manager
Arlene Tavani, Executive Assistant

District Counsel present David Laredo

Comments from the Public
George Riley, representing Public Water Now, requested that the Water Management District Board of Directors discuss which water supply alternatives should move forward in the event that the desalination project proposed by California American Water is delayed by lawsuits or other reasons.

Action Items

1. Consider Adoption of Committee Meeting Minutes of February 8, 2017
On a motion by Pendergrass and second of Byrne, minutes of the February 8, 2017 committee meeting were approved unanimously on a vote of 3 – 0 by Pendergrass, Byrne and Brower.

Discussion Items

2. Discuss Status of Revisions to District Rules and Regulations
Stoldt stated that the Cease and Desist Order would be in effect for five more years, and during that time only the City of Seaside has water to issue from its Paralta allocation. He asked if the committee was interested in exploring options for creating opportunities in the jurisdictions such as expansion of areas that could benefit from water entitlements, and distribution of water credits that have expired or not been used. Also, should a District reserve be created for public benefit projects – which might be needed to avoid future local military base closures. Comments from the committee members follow. (a) Must clarify in the rules how the second bathroom deed restriction could be

removed when water becomes available. For example, water may be available from the Pacific Grove reclamation project for use in that city. (b) Could create a rule that defines di minimis water usage. This di minimis amount could be loaned for use and paid back from a future water supply project. (c) The question is, would these water sources be used for residential or commercial projects or both. (d) The jurisdictions should have control over allocation of the water. (e) The Water District should control allocation of the water. (f) An EIR must be prepared on establishment of a new allocation. (g) Any rule changes should allow water transfers from one site to another, and the sale of an entitlement so that the owner has incentive to allow use of the water. (h) Water entitlements, such as from the City of Sand City Desalination Project, might be loaned to a jurisdiction until water from a new water project is available for return to the entitlement holder. (i) Staff should move ahead on development of proposed rule changes.

During the public comment period on this item, George Riley expressed support for the concept of "di minimis water use" as long as the Water District manages water "at the margin" instead of acting as an enforcement agency.

3. Discuss Timing and Guiding Principles for Next Water Allocation Process

The committee reviewed this issue and suggested that a joint meeting or workshop of the Policy and Technical Advisory committees and the Board of Directors be scheduled to discuss a future allocation policy or program that would benefit the jurisdictions. It may be best to work with the jurisdictions on this issue before the Certificate for Public Convenience and Necessity on Cal-Am's desalination project is issued.

4. Discuss Monterey Peninsula Water Supply Project Draft EIR

Stoldt reported that Water District staff reviewed the EIR and was preparing comments that must be submitted by March 27, 2017. He updated the committee on some concerns that would be raised in the Water District's comments.

5. Update on Pure Water Monterey Project

Stoldt told the committee that the first round of bids for project construction were unsuccessful and the project would be bid again. A groundbreaking ceremony is scheduled for May 5, 2017. The California State revolving fund loan should be issued in late April 2017.

Stoldt advised the committee that bonds for the CAWD/PBCSD Wastewater Reclamation Project will be paid off in July 2022. He proposed that the Water District's regulations be updated to state that after July 1, 2022, the Pebble Beach water entitlement would no longer be restricted to residential projects only. The committee expressed agreement with that concept.

Set Next Meeting Date: A date was not scheduled.

Adjournment: The meeting was adjourned at 10:25 am

ITEM: INFORMATIONAL ITEM/STAFF REPORTS

20. MONTHLY ALLOCATION REPORT

Meeting Date:	**August 21, 2017**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program:** **Line Item No.:**	**N/A**
Prepared By:	**Gabriela Ayala**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.

SUMMARY: As of July 31, 2017, a total of **25.408** acre-feet **(7.4%)** of the Paralta Well Allocation remained available for use by the Jurisdictions. Pre-Paralta water in the amount of **35.923** acre-feet is available to the Jurisdictions, and **29.048** acre-feet is available as public water credits.

Exhibit 20-A shows the amount of water allocated to each Jurisdiction from the Paralta Well Allocation, the quantities permitted in July 2017 ("changes"), and the quantities remaining. The Paralta Allocation had no debits in July 2017.

Exhibit 20-A also shows additional water available to each of the Jurisdictions and the information regarding the Community Hospital of the Monterey Peninsula (Holman Highway Facility). Additional water from expired or canceled permits that were issued before January 1991 are shown under "PRE-Paralta." Water credits used from a Jurisdiction's "public credit" account are also listed. Transfers of Non-Residential Water Use Credits into a Jurisdiction's Allocation are included as "public credits." **Exhibit 20-B** shows water available to Pebble Beach Company and Del Monte Forest Benefited Properties, including Macomber Estates, Griffin Trust. Another table in this exhibit shows the status of Sand City Water Entitlement.

BACKGROUND: The District's Water Allocation Program, associated resource system supply limits, and Jurisdictional Allocations have been modified by a number of key ordinances. These key ordinances are listed in **Exhibit 20-C**.

EXHIBITS
20-A Monthly Allocation Report
20-B Monthly Entitlement Report
20-C District's Water Allocation Program Ordinances

EXHIBIT 20-A
MONTHLY ALLOCATION REPORT
Reported in Acre-Feet
For the month of July 2017

Jurisdiction	Paralta Allocation*	Changes	Remaining	PRE-Paralta Credits	Changes	Remaining	Public Credits	Changes	Remaining	Total Available
Airport District	8.100	0.000	5.197	0.000	0.000	0.000	0.000	0.000	0.000	5.197
Carmel-by-the-Sea	19.410	0.000	1.397	1.081	0.000	1.081	0.910	0.000	0.182	2.660
Del Rey Oaks	8.100	0.000	0.000	0.440	0.000	0.000	0.000	0.000	0.000	0.000
Monterey	76.320	0.060 Cr	0.263	50.659	0.000	0.030	38.121	0.000	2.325	2.618
Monterey County	87.710	0.000	10.717	13.080	0.000	0.352	7.827	0.000	1.891	12.960
Pacific Grove	25.770	0.000	0.000	1.410	0.000	0.022	15.874	0.000	0.133	0.155
Sand City	51.860	0.000	0.000	0.838	0.000	0.000	24.717	0.000	23.373	23.373
Seaside	65.450	0.000	7.834	34.438	0.000	34.438	2.693	0.000	1.144	43.416
TOTALS	**342.720**	**0.060 Cr**	**25.408**	**101.946**	**0.000**	**35.923**	**90.142**	**0.000**	**29.048**	**90.379**

Allocation Holder	Water Available	Changes this Month	Total Demand from Water Permits Issued	Remaining Water Available
Quail Meadows	33.000	0.000	32.320	0.680
Water West	12.760	0.000	9.207	3.553

* Does not include 15.280 Acre-Feet from the District Reserve prior to adoption of Ordinance No. 73.

EXHIBIT 20-B
MONTHLY ALLOCATION REPORT
ENTITLEMENTS
Reported in Acre-Feet
For the month of July 2017

Recycled Water Project Entitlements

Entitlement Holder	Entitlement	Changes this Month	Total Demand from Water Permits Issued	Remaining Entitlement/and Water Use Permits Available
Pebble Beach Co. [1]	233.83	0.000	26.029	207.801
Del Monte Forest Benefited Properties [2] **(Pursuant to Ord No. 109)**	131.170	0.535	47.969	83.201
Macomber Estates	10.000	0.000	9.595	0.405
Griffin Trust	5.000	0.000	4.829	0.171
CAWD/PBCSD Project Totals	**380.000**	**0.535**	**88.422**	**291.578**

Entitlement Holder	Entitlement	Changes this Month	Total Demand from Water Permits Issued	Remaining Entitlement/and Water Use Permits Available
City of Sand City	165.000	0.000	4.232	160.768
Malpaso Water Company	80.000	0.397	3.486	76.514
D.B.O. Development No. 30	13.950	0.000	1.088	12.862
City of Pacific Grove	66.000	0.000	0.000	66.000

Increases in the Del Monte Forest Benefited Properties Entitlement will result in reductions in the Pebble Beach Co. Entitlement.

Cypress Pacific	3.170	0.000	3.170	0.000

EXHIBIT 20-C

District's Water Allocation Program Ordinances

Ordinance No. 1 was adopted in September 1980 to establish interim municipal water allocations based on existing water use by the jurisdictions. Resolution 81-7 was adopted in April 1981 to modify the interim allocations and incorporate projected water demands through the year 2000. Under the 1981 allocation, Cal-Am's annual production limit was set at 20,000 acre-feet.

Ordinance No. 52 was adopted in December 1990 to implement the District's water allocation program, modify the resource system supply limit, and to temporarily limit new uses of water. As a result of Ordinance No. 52, a moratorium on the issuance of most water permits within the District was established. Adoption of Ordinance No. 52 reduced Cal-Am's annual production limit to 16,744 acre-feet.

Ordinance No. 70 was adopted in June 1993 to modify the resource system supply limit, establish a water allocation for each of the jurisdictions within the District, and end the moratorium on the issuance of water permits. Adoption of Ordinance No. 70 was based on development of the Paralta Well in the Seaside Groundwater Basin and increased Cal-Am's annual production limit to **17,619** acre-feet. More specifically, Ordinance No. 70 allocated 308 acre-feet of water to the jurisdictions and 50 acre-feet to a District Reserve for regional projects with public benefit.

Ordinance No. 73 was adopted in February 1995 to eliminate the District Reserve and allocate the remaining water equally among the eight jurisdictions. Of the original 50 acre-feet that was allocated to the District Reserve, 34.72 acre-feet remained and was distributed equally (4.34 acre-feet) among the jurisdictions.

Ordinance No. 74 was adopted in March 1995 to allow the reinvestment of toilet retrofit water savings on single-family residential properties. The reinvested retrofit credits must be repaid by the jurisdiction from the next available water allocation and are limited to a maximum of 10 acre-feet. This ordinance sunset in July 1998.

Ordinance No. 75 was adopted in March 1995 to allow the reinvestment of water saved through toilet retrofits and other permanent water savings methods at publicly owned and operated facilities. Fifteen percent of the savings are set aside to meet the District's long-term water conservation goal and the remainder of the savings are credited to the jurisdictions allocation. This ordinance sunset in July 1998.

Ordinance No. 83 was adopted in April 1996 and set Cal-Am's annual production limit at **17,621** acre-feet and the non-Cal-Am annual production limit at **3,046** acre-feet. The modifications to the production limit were made based on the agreement by non-Cal-Am water users to permanently reduce annual water production from the Carmel Valley Alluvial Aquifer in exchange for water service from Cal-Am. As part of the agreement, fifteen percent of the historical non-Cal-Am production was set aside to meet the District's long-term water conservation goal.

Ordinance No. 87 was adopted in February 1997 as an urgency ordinance establishing a community benefit allocation for the planned expansion of the Community Hospital of the Monterey Peninsula (CHOMP). Specifically, a special reserve allocation of 19.60 acre-feet of production was created exclusively for the benefit of CHOMP. With this new allocation, Cal-Am's annual production limit was increased to **17,641** acre-feet and the non-Cal-Am annual production limit remained at **3,046** acre-feet.

Ordinance No. 90 was adopted in June 1998 to continue the program allowing the reinvestment of toilet retrofit water savings on single-family residential properties for 90-days following the expiration of Ordinance No. 74. This ordinance sunset in September 1998.

Ordinance No. 91 was adopted in June 1998 to continue the program allowing the reinvestment of water saved through toilet retrofits and other permanent water savings methods at publicly owned and operated facilities.

Ordinance No. 90 and No. 91 were challenged for compliance with CEQA and nullified by the Monterey Superior Court in December 1998.

Ordinance No. 109 was adopted on May 27, 2004, revised Rule 23.5 and adopted additional provisions to facilitate the financing and expansion of the CAWD/PBCSD Recycled Water Project.

Ordinance No. 132 was adopted on January 24, 2008, established a Water Entitlement for Sand City and amended the rules to reflect the process for issuing Water Use Permits.

Ordinance No. 165 was adopted on August 17, 2015, established a Water Entitlement for Malpaso Water Company and amended the rules to reflect the process for issuing Water Use Permits.

Ordinance No. 166 was adopted on December 15, 2015, established a Water Entitlement for D.B.O. Development No. 30.

Ordinance No. 168 was adopted on January 27, 2016, established a Water Entitlement for the City of Pacific Grove.

ITEM: INFORMATIONAL ITEM/STAFF REPORTS

21. WATER CONSERVATION PROGRAM REPORT

Meeting Date:	**August 21, 2017**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Kyle Smith**	**Cost Estimate:**	**N/A**

Committee Recommendation: N/A
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.

I. MANDATORY WATER CONSERVATION RETROFIT PROGRAM

District Regulation XIV requires the retrofit of water fixtures upon Change of Ownership or Use with High Efficiency Toilets (HET) (1.28 gallons-per-flush), 2.0 gallons-per-minute (gpm) Showerheads, 1.2 gpm Washbasin faucets, 1.8 gpm kitchen, utility and bar sink faucets, and Rain Sensors on all automatic Irrigation Systems. Property owners must certify the Site meets the District's water efficiency standards by submitting a Water Conservation Certification Form (WCC), and a Site inspection is often conducted to verify compliance.

A. Changes of Ownership

Information is obtained monthly from *Realquest.com* on properties transferring ownership within the District. The information compared against the properties that have submitted WCCs. Details on **189** property transfers that occurred in July 2017 were added to the database.

B. Certification

The District received **29** WCCs between July 1, 2017, and July 31, 2017. Data on ownership, transfer date, and status of water efficiency standard compliance were entered into the database.

C. Verification

In July, 58 properties were verified compliant with Rule 144 (Retrofit Upon Change of Ownership or Use). Of the **58** verifications, **37** properties verified compliance by submitting certification forms and/or receipts. District staff completed **36** Site inspections. Of the **36** properties inspected, **21 (58%)** passed inspection. **None** of the properties that passed inspection involved more than one visit to verify compliance with all water efficiency standards.

Savings Estimate

Water savings from HET retrofits triggered by Rule 144 verified in July 2017 are estimated at **0.620** acre-feet annually **(**AFA). Water savings from retrofits that exceeded the requirement (i.e., HETs to Ultra High Efficiency Toilets) is estimated at **0.4200** AFA (42 toilets). Year-to-date estimated savings from toilet retrofits is **9.730** AFA.

D. CII Compliance with Water Efficiency Standards

Effective January 1, 2014, all Non-Residential properties were required to meet Rule 143, Water Efficiency Standards for Existing Non-Residential Uses. To verify compliance with these

requirements, property owners and businesses are being sent notification of the requirements and a date that inspectors will be on Site to check the property. This month, District inspectors performed **68** inspections. Of the **68** inspections certified, **45 (66%)** were in compliance. **None** of the properties that passed inspection involved more than one visit to verify compliance with all water efficiency standards; the remainder complied without a reinspection.

MPWMD is forwarding its CII inspection findings to California American Water (Cal-Am) for their verification with the Rate Best Management Practices (Rate BMPs) that are used to determine the appropriate non-residential rate division. Compliance with MPWMD's Rule 143 achieves Rate BMPs for indoor water uses, however, properties with landscaping must also comply with Cal-Am's outdoor Rate BMPs to avoid Division 4 (Non-Rate BMP Compliant) rates. In addition to sharing information about indoor Rate BMP compliance, MPWMD notifies Cal-Am of properties with landscaping. Cal-Am then conducts an outdoor audit to verify compliance with the Rate BMPs. During June 2017, MPWMD referred **13** properties to Cal-Am for verification of outdoor Rate BMPs.

E. Water Waste Enforcement

In response to the State's drought emergency conservation regulation effective June 1, 2016, the District has increased its Water Waste enforcement. The District has a Water Waste Hotline 831-658-5653 or an online form to report Water Waster occurrences at www.mpwmd.net or www.montereywaterinfo.org. There was **one** Water Waste responses during the past month. There were **no** repeated incidents that resulted in a fine.

II. WATER DEMAND MANAGEMENT

A. Permit Processing

District Rule 23 requires a Water Permit application for all properties that propose to expand or modify water use on a Site, including New Construction and Remodels. District staff processed and issued **106** Water Permits in June 2017. **Eighteen** Water Permits were issued using Water Entitlements (Pebble Beach Company, Malpaso Water, etc.). **No** Water Permits involved a debit to a Public Water Credit Account.

All Water Permits have a disclaimer informing applicants of the Cease and Desist Order against California American Water and that MPWMD reports Water Permit details to California American Water. All Water Permit recipients with property supplied by a California American Water Distribution System will continue to be provided with the disclaimer.

District Rule 24-3-A allows the addition of a second Bathroom in an existing Single-Family Dwelling on a Single-Family Residential Site. Of the **106** Water Permits issued in June, **seven** were issued under this provision.

B. Permit Compliance

District staff completed **72** Water Permit final inspections during July 2017. **Twelve** of the final inspections failed due to unpermitted fixtures. Of the **57** passing properties, **41** passed inspection on the first visit. In addition, **one** pre-inspection was conducted in response to Water Permit applications received by the District.

C. Deed Restrictions

District staff prepares deed restrictions that are recorded on the property title to provide notice of District Rules and Regulations, enforce Water Permit conditions, and provide notice of public access to water records. In April 2001, the District Board of Directors adopted a policy regarding the processing of deed restrictions. In the month of July, the District prepared **75** deed restrictions. Of the **106** Water Permits issued in July, **48 (45%)** required deed restrictions. District staff provided Notary services for **94** Water Permits with deed restrictions.

III. JOINT MPWMD/CAW REBATE PROGRAM

Participation in the rebate program is detailed in the following chart. The table below indicates the program summary for Rebates for California American Water Company customers.

	REBATE PROGRAM SUMMARY	June-2017	2017 YTD	1997 - Present
I.	Application Summary			
A.	Applications Received	114	830	23,741
B.	Applications Approved	84	656	18,613
C.	Single Family Applications	107	773	21,438
D.	Multi-Family Applications	5	43	1,191
E.	Non-Residential Applications	2	14	313

		Number of devices	Rebate Paid	Estimated AF	Gallons Saved	YTD Quantity	YTD Paid	YTD Est AF
II.	Type of Devices Rebated							
A.	High Efficiency Toilet (HET)	16	1576.00	0.667968	217,658	108	10,662.66	4.508784
B.	Ultra Low Flush to HET	27	2616.98	0.270000	87,980	235	23,104.43	2.35
C.	Ultra HET	0	0.00	0.000000	0	14	2,052.59	0.14
D.	Toilet Flapper	0	0.00	0.000000	0	2	30.00	0
E.	High Efficiency Dishwasher	13	1625.00	0.039000	12,708	100	12,500.00	0.3
F.	High Efficiency Clothes Washer	35	17499.97	0.563500	183,617	245	122,033.97	3.9445
G.	Instant-Access Hot Water System	0	0.00	0.000000	0	5	1,000.00	0
H.	On Demand Systems	1	100.00	0.000000	0	2	200.00	0
I.	Zero Use Urinals	0	0.00	0.000000	0	0	0.00	0
J.	High Efficiency Urinals	0	0.00	0.000000	0	0	0.00	0
K.	Pint Urinals	0	0.00	0.000000	0	0	0.00	0
L.	Cisterns	0	0.00	0.000000	0	16	14,303.75	0
M.	Smart Controllers	1	100.00	0.000000	0	2	240.00	0
N.	Rotating Sprinkler Nozzles	0	0.00	0.000000	0	0	0.00	0
O.	Moisture Sensors	0	0.00	0.000000	0	0	0.00	0
P.	Lawn Removal & Replacement	0	0.00	0.000000	0	4	59,832.00	4.906224
Q.	Graywater	0	0.00	0.000000	0	1	20,000.00	0
R.	Ice Machines	0	0.00	0.000000	0	0	0.00	0
III.	Totals: Month; AF; Gallons; YTD	93	23517.95	1.540468	501,963	734	265,959.40	16.149508

		2017 YTD	1997 - Present
IV.	Total Rebated: YTD; Program	265,959.40	5,697,490.99
V.	Estimated Water Savings in Acre-Feet Annually*	16.149508	529.768379

* Retrofit savings are estimated at 0.041748 AF/HET; 0.01 AF/UHET; 0.01 AF/ULF to HET; 0.003 AF/dishwasher; 0.0161 AF/residential washer; 0.0082 AF/100 square feet of lawn removal.

ITEM: INFORMATIONAL ITEMS/STAFF REPORTS

22. CARMEL RIVER FISHERY REPORT FOR JULY 2017

Meeting Date:	**August 21, 2017**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Beverly Chaney**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.
CEQA Compliance: N/A

AQUATIC HABITAT AND FLOW CONDITIONS: Carmel River flows dropped considerably in July making conditions for juvenile steelhead migration fair to poor while keeping the rearing conditions good to fair for young-of-the-year.

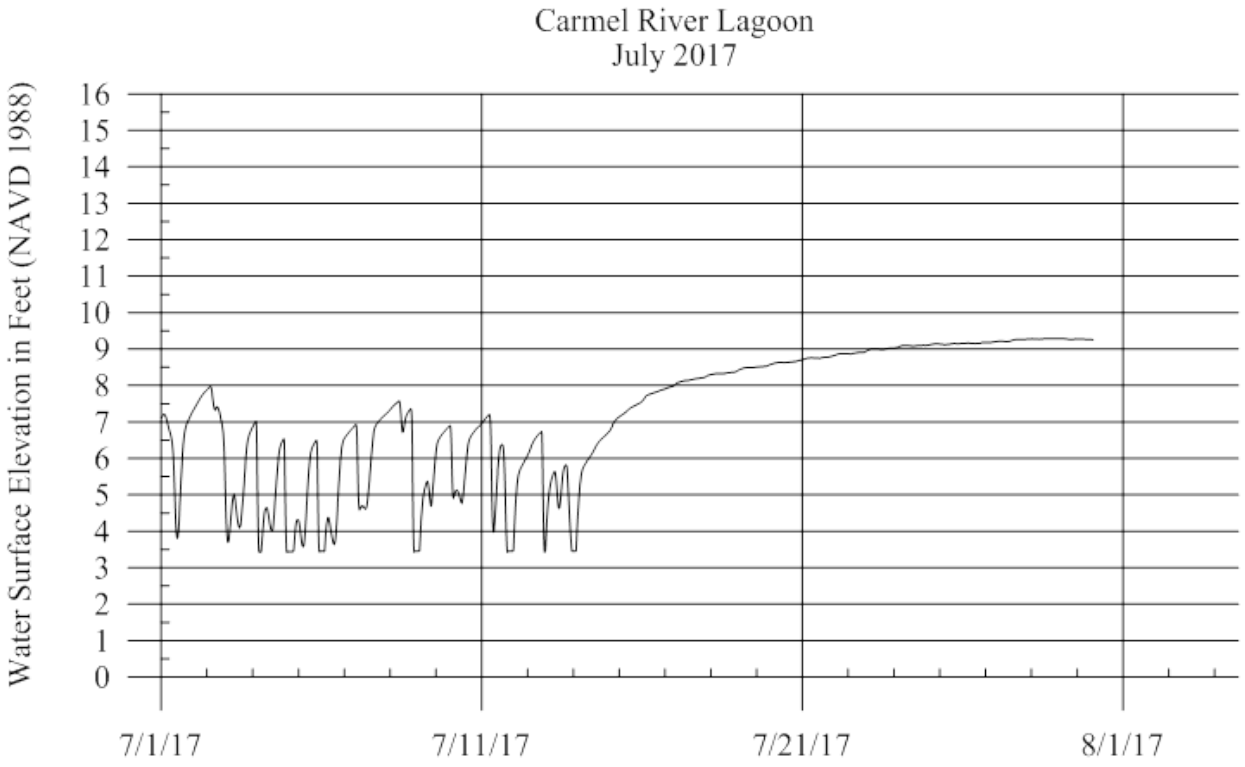
Mean daily streamflow at the Sleepy Hollow Weir ranged from 38 to 21 cfs (monthly mean 27.8 cfs) resulting in 1,710 acre-feet (AF) of runoff. Mean daily streamflow at Highway 1 gage ranged from 31 to 13 cfs (monthly mean 19.5 cfs), resulting in 1,200 AF of runoff.

There were 0.00 inches of rainfall in July as recorded at Cal-Am's San Clemente gauge. The rainfall total for WY 2017 (which started on October 1, 2016) is 32.22 inches, or 154% of the long-term year-to-date average of 20.96 inches.

CARMEL RIVER LAGOON: During July the water surface elevation (WSE) fluctuated with the tides then closed mid-month, ranging from approximately 3.4 - 9.3 feet above mean-sea-level (see graph below).

Water-quality profiles were conducted at five lagoon sites on July 10 when the mouth was open and the WSE was 3.47 feet. Conditions for steelhead varied with depth but were generally "fair" with salinity ranging from (0.9 - 28 ppt), and moderate dissolved oxygen (DO) levels (8 - 13 mg/l) and water temperatures (55 - 68) degrees Fahrenheit).

SUMMER STEELHEAD RESCUES: Staff continued conducting rescues in the tributaries (Potrero, Robinson Canyon, Hitchcock, and Cachagua Creeks) as they dried back. All fish were released into the Carmel River at the tributary's confluence. By the end of July, a total of 5,496 fish had been rescued (5,436 YOY, 32 1+ year olds, and 28 morts).


Carmel River Lagoon
July 2017
Water Surface Elevation in Feet (NAVD 1988)
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
7/1/17
7/11/17
7/21/17
8/1/17

ITEM: INFORMATIONAL ITEMS/STAFF REPORTS

23. SEMI-ANNUAL REPORT ON THE CAWD/PBCSD WASTEWATER RECLAMATION PROJECT

Meeting Date:	**August 21, 2017**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Suresh Prasad**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: The Administrative Committee reviewed this item on August 14, 2017 and recommended approval.
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines

This report relates to the original CAWD/PBCSD Wastewater Reclamation Project (Phase I) only and does not contain any information related to the CAWD/PBCSD Recycled Water Expansion Project (Phase II). On December 10, 1992, the Monterey Peninsula Water Management District (MPWMD or District) sold $33,900,000 worth of variable rate certificates of participation to finance the wastewater reclamation project in Pebble Beach. The tables below summarize the investment information on funds held for future use, disbursements, and interest rate trends on the outstanding certificates for the period January 1, 2017 through June 30, 2017. During the first reporting period in 2006, the Wastewater Reclamation Project's (Project) Operations and Maintenance Reserve and Renewal and Replacement Reserve accounts were transferred to the Carmel Area Wastewater District in accordance with the Project's Amended Construction and Operations Agreement dated December 15, 2004. The Project's Operations and Maintenance account (Bank of America) and Certificate of Participation accounts (U.S. Bank) remain under the control of the District and will continue to be reported on this report and future reports.

Par of 1992 Certificates $33,900,000

Investments as of June 30, 2017:

Description	Institution	Market Value	Rate/Yield	Term
Interest Fund	U.S. Bank	$327	0.00%	Daily
Certificate Payment Fund	U.S. Bank	$791	0.00%	Daily
Acquisition/Rebate Funds	U.S. Bank	$19	0.00%	Daily
Water Sales Revenue Acct.	Bank of America	$285,232	0.03%	Daily

Operation and Maintenance Disbursements**:**

MPWMD transferred advances in the amount of $1,901,000 from the Water Sales Revenue Account to the Carmel Area Wastewater District during this reporting period. Advance payments are provided in accordance with the terms and conditions of Section 5.5 (a) of the Operation and Maintenance Agreement.

As provided in the Water Purchase Agreement, the obligation of the District to make disbursements is a special obligation of the District, payable solely from net operating revenues of the project, monies in the Revenue Fund, and other funds described in the Trust Agreement. In no event, will disbursements be payable out of any funds or properties of the District other than such sources.

Principal and Interest on Certificates:

No principal payment was made by the Project during this reporting period. The outstanding balance on the Certificates is currently $13,900,000.

The interest rate on the Series 1992 Certificates was set initially at 2.30 percent per annum until December 16, 1992. On that date and weekly thereafter, so long as the certificates are in the variable mode, the Remarketing Agent, Stone & Youngberg, determines the rate of interest. Interest rates for this reporting period fluctuated between 0.61% and 0.92%.

On June 7, 2000, the Reclamation Management Committee noted that the Capital Interest Fund, used for payment of monthly interest on the outstanding certificates, would soon be exhausted. The Committee discussed the use of water sales revenue to make future interest payments. On July 3, 2000, the Reclamation Technical Advisory Committee affirmed the use of water sales revenue for interest payments when excess funds are available.

Effective July 1, 2013, the Reclamation Project water rates have been delinked from the California American Water Company potable rates. The rates are now set based on revenue requirement for the Project.

ITEM: INFORMATIONAL ITEMS/STAFF REPORT

24. MONTHLY WATER SUPPLY AND CALIFORNIA AMERICAN WATER PRODUCTION REPORT

Meeting Date:	**August 21, 2017**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Jonathan Lear**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.

Exhibit 24-A shows the water supply status for the Monterey Peninsula Water Resources System (MPWRS) as of **August 1, 2017**. This system includes the surface water resources in the Carmel River Basin, the groundwater resources in the Carmel Valley Alluvial Aquifer and the Seaside Groundwater Basin. **Exhibit 24-A** is for Water Year (WY) 2017 and focuses on four factors: rainfall, runoff, and storage. The rainfall and Streamflow values are based on measurements in the upper Carmel River Basin at Sleepy Hollow Weir.

Water Supply Status: Rainfall through **July** 2017 totaled **0.00 inches** and brings the cumulative rainfall total for WY 2017 to **32.22 inches,** which is **154%** of the long-term average through **July**. Estimated unimpaired runoff during **July** totaled **1,646 acre-feet (AF)** and brings the cumulative runoff total for WY 2017 to **194,659 AF,** which is **291%** of the long-term average through **July**. Data used to calculate usable storage for the MRWPRS was not received from CalAm in time to calculate usable storage and include it in the staff note for **July.**

Production Compliance: Under State Water Resources Control Board (SWRCB) Cease and Desist Order No. 2016-0016 (CDO), California American Water (Cal-Am) is allowed to produce no more than 8,310 AF of water from the Carmel River in WY 2017. Through **July**, using the CDO accounting method, Cal-Am has produced **5,344 AF** from the Carmel River (including ASR capped at 600 AF, Table 13, and Mal Paso.) In addition, under the Seaside Basin Decision, Cal-Am is allowed to produce 2,251AF of water from the Coastal Subareas and 48 AF from the Laguna Seca Subarea of the Seaside Basin in WY 2017. Through **July**, Cal-Am has produced **1,849 AF** from the Seaside Groundwater Basin. Through **July**, **2,345 AF** of Carmel River Basin groundwater have been diverted for Seaside Basin injection; **901 AF** have been recovered for customer use, and **491 AF** have been diverted under Table 13 water rights. Cal-Am has produced **7,194 AF** for customer use from all sources through **July**. The 12-month rolling average of production is **9,921 AF**, is below the rationing threshold of **10,609 AF**. A breakdown of Cal-Am's production for WY 2017 is included as **Exhibit 24-B**. **Exhibit 24-C** shows production by source. Some of the values in this report may be revised in the future as Cal-Am finalizes their production values and monitoring data.

EXHIBITS
24-A Water Supply Status: **August 1, 2017**
24-B Monthly Cal-Am Diversions from Carmel River and Seaside Groundwater Basins: WY 2017
24-C Monthly Cal-Am production by source: WY 2017

EXHIBIT 24-A

Monterey Peninsula Water Management District
Water Supply Status
August 1, 2017

Factor	Oct – July 2017	Average To Date	Percent of Average	Water Year 2016
Rainfall (Inches)	32.22	20.96	154%	22.25
Runoff (Acre-Feet)	193,013	66,866	291%	44,644
Storage [5] (Acre-Feet)	NA	30,820	NA	29,990

Notes:

1. Rainfall and runoff estimates are based on measurements at San Clemente Dam. Annual rainfall and runoff at Sleepy Hollow Weir average 21.1 inches and 67,246 acre-feet, respectively. Annual values are based on the water year that runs from October 1 to September 30 of the following calendar year. The rainfall and runoff averages at the Sleepy Hollow Weir site are based on records for the 1922-2016 and 1902-2016 periods respectively.

2. The rainfall and runoff totals are based on measurements through the dates referenced in the table.

3. Storage estimates refer to usable storage in the Monterey Peninsula Water Resources System (MPWRS) that includes surface water in Los Padres and San Clemente Reservoirs and ground water in the Carmel Valley Alluvial Aquifer and in the Coastal Subareas of the Seaside Groundwater Basin. The storage averages are end-of-month values and are based on records for the 1989-2016 period. The storage estimates are end-of-month values for the dates referenced in the table.

4. The maximum storage capacity for the MPWRS is currently 37,639 acre-feet.

5. Data was not received in time from CalAm to calculate MPWRS Storage value for end of July.

EXHIBIT 24-B

Production vs. CDO and Adjudication to Date: WY 2017

(All values in Acre-Feet)

Year-to-Date Values	MPWRS					Water Projects and Rights				MPWRS and Projects Total [8]
	Carmel River Basin [2, 6]	Seaside Groundwater Basin			MPWRS Total	ASR Recovery	Table 13 [7]	Sand City [3]	Water Projects and Rights Total	
		Coastal	Laguna Seca	Ajudication Compliance						
Target	5,445	1,401	38	1,439	**6,884**	900	491	250	**1,641**	**8,615**
Actual [4]	5,344	1,613	236	1,850	**7,194**	901	491	206	**1,598**	**8,301**
Difference	101	-212	-198	-411	**-310**	-1	0	44	**43**	**314**
WY 2016 Actual	6,590	1,373	251	1,624	**8,214**	304	137	113	**554**	**8,631**

1. This table is current through the date of this report.
2. For CDO compliance, ASR, Mal Paso, and Table 13 diversions are included in River production per State Board.
3. Sand City Desal, Table 13, and ASR recovery are also tracked as water resources projects.
4. To date, 2345 AF and 491 AF have been produced from the River for ASR and Table 13 respectively.
5. All values are rounded to the nearest Acre-Foot.
6. For CDO Tracking Purposes, ASR production for injection is capped at 600 AFY.
7. Table 13 diversions are reported under water rights but counted as production from the River for CDO tracking.
8. Actual total is the sum of MPWRS, ASR Recovery and Sand City Production. Table 13 is tracked as River production for CDO.

Monthly Production from all Sources for Customer Service: WY 2017

(All values in Acre-Feet)

	Carmel River Basin	Seaside Basin	ASR Recovery	Table 13	Sand City	Mal Paso	Total
Oct-16	408	271	155	0	15	8	856
Nov-16	358	177	150	0	7	8	699
Dec-16	342	301	0	10	14	2	669
Jan-17	313	225	0	91	20	9	658
Feb-17	344	158	0	91	26	9	628
Mar-17	415	158	0	101	28	9	711
Apr-17	428	148	0	98	28	9	711
May-17	573	214	0	101	27	8	924
Jun-17	525	83	287	0	16	8	918
Jul-17	547	115	310	0	24	8	1,004
Aug-17							
Sep-17							
Total	**4,253**	**1,850**	**901**	**491**	**206**	**77**	**7,778**
WY 2016	**5,854**	**1,319**	**304**	**137**	**113**	**0**	**7,727**

1. This table is produced as a proxy for customer demand.
2. Numbers are provisional and are subject to correction.

Rationing Trigger: WY 2017

12 Month Moving Average	9,921	10,609	Rule 160 Production Limit

California American Water Production by Source: Water Year 2017

	Carmel Valley Wells [1]						Seaside Wells [2]						Total Wells			Sand City Desal		
	Actual		Anticipated [3]		Under Target		Actual		Anticipated		Under Target		Actual	Anticipated	Acre-Feet Under Target	Actual	Anticipated	Under Target
	Upper	Lower	Upper	Lower	Upper	Lower	Coastal	LagunaSeca	Coastal	LagunaSeca	Coastal	LagunaSeca						
	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet
Oct-16	0	408	0	446	0	38	397	29	350	5	-47	-24	833	801	-32	15	25	10
Nov-16	0	358	0	281	0	-77	308	19	350	3	42	-16	685	634	-51	7	25	18
Dec-16	74	390	0	588	-74	198	283	19	100	3	-183	-16	765	691	-74	14	25	11
Jan-17	116	724	130	678	14	-46	209	16	100	3	-109	-13	1065	911	-154	20	25	5
Feb-17	93	747	130	563	37	-184	142	16	100	3	-42	-13	997	796	-201	26	25	-1
Mar-17	195	878	271	672	76	-206	138	20	100	3	-38	-17	1231	1,046	-185	28	25	-3
Apr-17	212	811	130	833	-82	22	128	20	100	4	-28	-16	1171	1,067	-104	28	25	-3
May-17	199	814	130	924	-69	110	184	29	125	4	-59	-25	1226	1,183	-43	27	25	-2
Jun-17	0	525	0	638	0	113	338	32	186	5	-152	-27	895	829	-66	16	25	9
Jul-17	0	547	0	905	0	358	388	36	190	5	-198	-31	971	1,100	129	24	25	1
Aug-17																		
Sep-17																		
To Date	**889**	**6,201**	**791**	**6,528**	**-98**	**327**	**2,515**	**236**	**1,701**	**38**	**-814**	**-198**	**9,841**	**9,058**	**-783**	**206**	**250**	**44**

Total Production: Water Year 2017

	Actual	Anticipated	Acre-Feet Under Target
Oct-16	848	826	-22
Nov-16	692	659	-33
Dec-16	780	716	-64
Jan-17	1,086	936	-150
Feb-17	1,023	821	-202
Mar-17	1,259	1,071	-188
Apr-17	1,199	1,092	-107
May-17	1,254	1,208	-46
Jun-17	910	854	-56
Jul-17	996	1,125	129
Aug-17			
Sep-17			
To Date	**10,046**	**9,308**	**-738**

1. Carmel Valley Wells include upper and lower valley wells. Anticipate production from this source includes monthly production volumes associated with SBO 2009-60, 20808A, and 20808C water rights. Under these water rights, water produced from the Carmel Valley wells is delivered to customers or injected into the Seaside Groundwater Basin for storage.

2. Seaside wells anticipated production is associated with pumping native Seaside Groundwater (which is regulated by the Seaside Groundwater Basin Ajudication Decision) and recovery of stored ASR water (which is prescribed in a MOA between MPWMD , Cal-Am, California Department of Fish and Game, National Marine Fisheries Service, and as regulated by 20808C water right.

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Supplement to 8/21/17 MPWMD Board Packet

Attached are copies of letters received between July 11, 2017 and August 11, 2017. These letters are listed in the August 21, 2017 Board packet under Letters Received.

Author	Addressee	Date	Topic
Robert S. Jaques	David Stoldt	7/12/17	Recalibration and Updating of Seaside Groundwater Basin Model
Julie Vance	David Stoldt	7/19/17	Carmel River Lagoon Striped Bass Collection Coordination and Participation
Keith Van Der Maaten	David Stoldt	7/24/17	Results of Groundwater Data Collected by Helicopter

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Seaside Basin Watermaster
P.O. Box 51502
Pacific Grove, CA 93950
(831) 641-0113

July 12, 2017

Monterey Regional Water Pollution Control Agency
Attention: Mr. Paul Sciuto, General Manager
5 Harris Court, Building D
Monterey, CA 93940

Monterey Peninsula Water Management District
Attention: Mr. David Stoldt, General Manager
5 Harris Court, Building G
Monterey, CA 93940

Subject: Recalibration and Updating of Seaside Groundwater Basin Model

Dear Mr. Sciuto and Mr. Stoldt:

The Seaside Basin Watermaster is considering recalibrating and updating its Seaside Groundwater Basin Model in 2018. The Model was developed for the Watermaster by our consultant, HydroMetrics WRI, and was provided to you free-of-charge for your use in performing modeling studies for your Pure Water Monterey groundwater replenishment project.

Attached is a preliminary proposal from HydroMetrics to perform this work. The proposal provides an explanation of why this work needs to be performed, and includes a preliminary estimate of approximately $46,000 to do this work (Task 1 of their proposal).

Because the Pure Water Monterey project will need to use the Model for further studies and reporting purposes, the Watermaster's Board of Directors believes it would be appropriate for your entities to share in the cost of recalibrating and updating the Model.

This letter is a request that you provide the Watermaster with an indication of your willingness to share in these costs. Over the next two months we will be developing a firm scope-of-work and cost to have HydroMetrics perform this work, and will be presenting it our Board for approval at their October 2017 meeting.

If you have any questions regarding this request, please contact me at (831) 375-0517 or by email at bobj83@comcast.net.

Sincerely,

Robert S. Jaques
Technical Program Manager

1814 Franklin St., Suite 501
Oakland, CA 94612

Mr. Robert S. Jaques
Seaside Groundwater Basin Watermaster
83 Via Encanto
Monterey, CA 93940

March 24, 2017

Subject: Scope and Cost to Update the Seaside Basin Management Action Plan

Mr. Jaques:

Thank you for the opportunity to provide you with this scope and cost to update the Seaside Groundwater Basin's Basin Management Action Plan (BMAP). The scope we have put together addresses the BMAP items that were presented at the February 2017 Technical Advisory Committee meeting.

The Watermaster's first BMAP was completed in February 2009 (HydroMetrics LLC, 2009a). The BMAP constitutes the basic plan for managing the Seaside Groundwater Basin. The BMAP identifies both short-term actions and long-term strategies intended to protect the groundwater resource while maximizing the beneficial use of ground water in the basin. It provides the Watermaster a logical set of actions that can be undertaken to manage the basin to its Safe Yield. Over the eight years since the BMAP was completed, the Watermaster has collected much groundwater level and quality data, and conducted various studies to improve the understanding of the basin. This improved understanding should be incorporated into an updated BMAP to facilitate ongoing responsible management of the groundwater resource.

At the time the 2009 BMAP was prepared, a groundwater model had not yet been developed for the basin, and the analysis contained in the BMAP was completed using analytical methods. Following the BMAP recommendation that a groundwater model be constructed to assist with groundwater management decisions, a calibrated model was completed in November 2009 (HydroMetrics LLC, 2009b). The model simulated

groundwater conditions in the basin between January 1987 and December 2008. In 2014, the model was updated with data through September 2013 (HydroMetrics WRI, 2014) but not recalibrated because its accuracy was still acceptable. The 2014 update found that the uncalibrated portion of the model (January 2009 – September 2013) tended to simulate higher groundwater levels than measured levels. Periodic recalibration of the model is necessary to ensure the model simulates groundwater levels within an acceptable industry standard accuracy. If simulated groundwater levels are not accurate this reduces the accuracy of all output from the model such as groundwater storage and water budget.

The scope of work provided below assumes the model will be used to develop estimates of groundwater storage, water budget, and safe yield; and to test impacts of potential management actions. The groundwater model was developed to assist in making basin management decisions, and for providing the simulated results that are required for analysis in the BMAP. As the model currently only includes input data through September 2013, groundwater storage, water budget, and safe yield estimates can only reliably be obtained from the model up through Water Year 2013. The model needs to be updated through Water Year 2016 to be used for current estimates. It is likely recalibration of the model will be required so that it more accurately simulates the historic low groundwater levels currently occurring in the basin.

The scope outlined below starts with an update and recalibration of the groundwater model, and then generally updates each of the main sections of the BMAP.

Task 1: Update Seaside Basin Groundwater Flow Model.

Subtask 1.1. Update Model Input Data.

Groundwater production, groundwater levels, injected water, and precipitation data will be sourced and compiled for input into the groundwater model. In addition to precipitation, estimates of storm water percolation, septic tank leakage, and system losses are also needed as they all contribute to the recharge of the basin. Most data are already available from MPWMD or Watermaster, but some other pumpers such as Cal Water Service and Marina Coast Water District, which do not fall under the Watermaster will be contacted for their data.

The updated model input data will be incorporated into the groundwater model. Once the model has been updated and is successfully running, hydrographs comparing measured and simulated groundwater levels will be prepared. The hydrographs produced will be the same ones used in the 2009 model report.

Subtask 1.3. Model Recalibration.
Model calibration is a process that involves varying relatively uncertain and sensitive parameters such as horizontal and vertical hydraulic conductivities, over a reasonable range of values. Calibration will be completed when simulated results match the measured data within an acceptable measure of accuracy, and when successive calibration attempts do not notably improve the calibration statistics. Estimating the effort involved in model calibration is difficult because there is no defined set of steps that can be followed. The costs provided with this scope reflect our best estimate, but additional costs may be necessary to complete calibration successfully.

Subtask 1.4. Model Update Technical Memorandum.
A Draft Technical Memorandum will be prepared documenting the model update and calibration results. After presenting the Tech Memo to the TAC and receiving comments, a Final Tech Memo will be prepared for submission to the Board. For purposes of the cost estimate, we have assumed HydroMetrics WRI will present the findings to the TAC and to the Board. One presentation will be in-person and one will be by telephone.

Task 2: Update BMAP Section 2 - State of the Seaside Groundwater Basin.
Subtask 2.1. Update Basin Conceptual Model. Since the 2009 BMAP was completed, a significant amount of modeling has been undertaken that has assisted in improving our hydrogeologic understanding of the basin. In particular, it has been found that the northern and eastern boundaries of the basin are dynamic and therefore change depending on pumping and recharge conditions. How this affects the movement of groundwater across the boundaries is important for managing the basin's groundwater resource.

Subtask 2.2. Analyze Groundwater Levels Trends. Since 2009, eight years of groundwater level data have been collected, some of it using data loggers that record groundwater levels multiple times a day. This has allowed us to vastly improve our understanding of both seasonal and long-term trends. The basin has also experienced a recent drought and Court-mandated pumping reductions. How groundwater levels have responded to these changes has also improved our understanding of the basin. Furthermore, protective groundwater elevations developed after the 2009 BMAP should be included and discussed in an updated BMAP.

Subtask 2.3. Update Estimates of Groundwater Storage. The updated BMAP will include updates of estimated total stored groundwater, usable storage space, and total useable storage space. The Watermaster is required under the Decision to recalculate Total Usable Storage Space and adjust the allocation as needed.

The groundwater model and protective groundwater elevations should be used to quantify these storage estimates for the Seaside Basin. The 2009 BMAP did not have the benefit of site specific protective elevations and thus used Ghyben-Herzberg generated elevations. This updated BMAP will instead use protective elevations developed using groundwater models that estimate onshore groundwater elevations that keeps the productive onshore aquifers fresh (HydroMetrics LLC, 2009b).

Subtask 2.4. Update Groundwater Budget. A current groundwater budget should be developed to enhance our understanding of the groundwater system. Similar to Subtask 2.3, the groundwater budget can be readily generated from groundwater model output. However, the groundwater model needs to be updated through September 2016 and recalibrated for it be used reliably to evaluate the current and historical water budget.

Subtask 2.5. Review Natural Safe Yield Estimates. The State of Califo_nia has experienced a recent drought which has impacted natural aquifer recharge more than was anticipated in the 2009 BMAP. Also, even though pumping in recent years has been below the amounts required under the Decision, groundwater levels have continued to fall. This suggests that the Natural Safe Yield of 3,000 AFY in the Decision may be too high.

The water budget for each subarea together with the Zero Net Draft method of estimating Safe Yield will be used to reevaluate the Natural Safe Yield. The Zero Net Draft method relies on selecting a historical period of time that has the same starting and end mean depth to groundwater and comparing it to groundwater production for the same period. The groundwater production during that period can be considered a measure of the safe yield.

The reevaluated Safe Yield will be compared against other Safe Yield estimates that were included in the 2009 BMAP. If appropriate, a revised Safe Yield to replace the Decision-established Natural Safe Yield of 3,000 AFY will be provided for basin management purposes.

Task 3: Update Section 3 – Supplemental Water Supplies.

This section will be updated with current information on projects being considered to meet the long-term water needs in the Seaside Basin. Included will be MRWPCA's Pure Water Monterey groundwater replenishment project and Cal Am's Monterey Peninsula Water Supply Project (MPWSP). Recent Environmental Impact Reports will be used to update the information. If any other projects are in early planning stage, they will also be included in the update.

Task 4: Update Section 4 – Groundwater Management Actions.
This section will be updated to reflect actions and interim water supplies that have already been implemented, eliminate actions that are no longer viable, and add potential future actions and interim water supplies that could be implemented to address basin imbalances in the short-term before the long-term supply projects in Section 3 of the BMAP can be permitted, built and operated.

An example of a local management action would be to identify optimal extraction well locations such that those wells can make more efficient use of useable stored groundwater. The groundwater model is the most appropriate tool for this as it is able to simulate cumulative impacts by taking into account long-term projects and any other short-term projects while optimizing well locations.

It is beyond the scope of the BMAP update to prepare preliminary costs for potential future actions and interim water supplies. However, as cost is an important factor in deciding which actions to pursue, the Watermaster may need to engage a financial expert to provide preliminary cost estimates for those actions that do not already have cost estimates associated with them.

Task 5: Update Section 5 – Recommended Management Strategies.
After developing the groundwater management actions, we will present the results to the TAC with the purpose of soliciting input that will allow each action to be ranked in order of preference. The top actions will become recommended management strategies that the Watermaster should consider going forward.

Task 6: Prepare Draft, Final Draft and Final Updated BMAP.
A Draft Updated BMAP will be prepared that follows the format of the 2009 BMAP. After the TAC has reviewed the Draft Updated BMAP, comments received will be incorporated into a Final Draft Updated BMAP that will be presented to the Board. If comments are received from the Board, these will be included in a Final Updated BMAP. Up to 15 bound hardcopies will be provided to the Watermaster. We assume that HydroMetrics WRI will attend one TAC and one Board meeting in person to present the Updated BMAP.

Estimated Budget
The total cost to update and recalibrate the groundwater model through September 2016, and to update the BMAP is provided in Table 1.

Schedule
We expect it will take six weeks to develop the automated model update system and to update and recalibrate the groundwater model.

The Updated BMAP draft can be completed in approximately six weeks after the model update.

References

HydroMetrics LLC. 2009a. Basin Management Action Plan. Seaside Groundwater Basin, Monterey County, California, prepared for Seaside Groundwater Basin Watermaster. February.

HydroMetrics LLC. 2009b. Seaside Groundwater Basin Modeling and Protective Groundwater Elevations, prepared for Seaside Groundwater Basin Watermaster. November.

HydroMetrics WRI. 2014. Technical Memorandum – 2014 Seaside Groundwater Model Update, prepared for Seaside Groundwater Basin Watermaster. July 31.

Please call if you have any questions.

Sincerely,

Georgina King
Principal Hydrogeologist
HydroMetrics Water Resources Inc.

Tasks	HydroMetrics WRI Labor			Labor Total		Other Direct Costs	TOTALS
	Derrik Williams	Georgina King	Hanieh Haeri				
	President	Principal Hydrogeologist	Hydrologist				
Rates	$220	$195	$130	Hours	($)	($)	($)
Task 1: Update Groundwater Model & Recalibrate							
Subtask 1.1. Update Model Input Data	8	24	40	72	$ 11,640	$ -	$ 11,640
Subtask 1.2. Model Recalibration	40	8	90	138	$ 22,060	$ -	$ 22,060
Subtask 1.3. Model Update and Recalibration Technical Memorandum	12	28	32	72	$ 12,260	$ 200	$ 12,460
Subtotal Task 1	60	60	162	282	$ 45,960	$ 200	$ 46,160
Task 2: Update BMAP Section 2 – Status of the Seaside Groundwater Basin							
Subtask 2.1. Update Basin Conceptual Model	1	8	2	11	$ 2,040	$ -	$ 2,040
Subtask 2.2. Analyze Groundwater Levels Trends	1	16	4	21	$ 3,860	$ -	$ 3,860
Subtask 2.3. Update Estimates of Groundwater Storage	4	4	16	24	$ 3,740	$ -	$ 3,740
Subtask 2.4. Update Groundwater Budget	4	4	16	24	$ 3,740	$ -	$ 3,740
Subtask 2.5. Review of Natural Safe Yield Estimates	4	10	16	30	$ 4,910	$ -	$ 4,910
Subtotal Task 2	14	42	54	110	$ 18,290	$ -	$ 18,290
Task 3: Update BMAP Section 3 – Supplemental Water Supplies	2	12	8	22	$ 3,220	$ -	$ 3,220
Task 4: Update BMAP Section 4 – Groundwater Management Actions	2	20	12	34	$ 7,220	$ -	$ 7,220
Task 5: Update BMAP Section 5 – Recommended Management Strategies	4	10	8	22	$ 2,850	$ -	$ 2,850
Task 6: Prepare Draft, Final Draft and Final BMAP	6	40	20	66	$ 11,720	$ 600	$ 12,320
TOTAL for GROUNDWATER MODEL UPDATE	60	60	132	282	$ 45,960	$ 200	$ 46,160
TOTAL for BMAP UPDATE	36	124	86	246	$ 43,280	$ 560	$ 43,840
TOTAL	96	184	349	529	$ 89,240	$ 800	$ 90,040

Notes

Other direct costs include travel expenses, office supplies, photocopies, postage, and equipment rental

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Central Region
1234 East Shaw Avenue
Fresno, CA 93710
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

July 19, 2017

Mr. Dave Stoldt
General Manager
Monterey Peninsula Water Management District
Post Office Box 85
Monterey, CA 93942-0085

Dear Mr. Stoldt:

Re: Carmel River Lagoon Striped Bass Collection Coordination and Participation

As you are aware the Department planned and partnered with your agency on the above referenced project. Unable to conduct seining in the closed lagoon on July 11, 2017, we were able to conduct one seine haul on July 12, 2017 under near perfect lagoon conditions. Throughout out the planning staff coordinated with Mr. Kevan Urquhart of your staff to determine the optimal conditions for this activity. In addition, at the Department's request your fisheries staff provided essential and invaluable labor and resources for this effort.

I would like to take this opportunity to thank you for allowing your staff (Kevan Urquhart, Cory Hamilton, Daniel Atkins, Matt Lyons, and Mark Bekker) to participate in this event. In addition I would like to thank you for providing District equipment (e.g. ATV, seine, boat, etc.) for this effort. Without the District's cooperation and coordination, the event would not have been executed as efficiently as it was. We were able to remove 62 striped bass from the lagoon and released 16 heathy steelhead smolts.

If you have any questions, you may reach me at (559) 243-4005, Ext. 154 or you may contact Margaret Paul, Senior Environmental Supervisor, by phone at (831) 649-2882, or by email at margaret.paul@wildlife.ca.gov.

Sincerely,

Julie Vance
Regional Manager

ec: Dean Marston
Margaret Paul
Dennis Michniuk

MARINA COAST WATER DISTRICT

11 RESERVATION ROAD, MARINA, CA 93933-2099
Home Page: www.mcwd.org
TEL: (831) 384-6131 FAX: (831) 883-5995

July 24, 2017

Dave Stoldt, General Manager
Monterey Regional Water Management District
5 Harris Court, Building G
Monterey, CA 93940

Subject: Results of Groundwater Data Collected by Helicopter

Dear Mr. Stoldt,

MCWD engaged Stanford University's Department of Geophysics to map the groundwater aquifers that supply 100% of our water to better understand the complicated geology in and around the District's service area and the extent to which seawater has or has not intruded into the aquifers. In May, you may recall helicopters flying over our region collecting data. Using airborne electromagnetic (AEM) survey equipment, researchers were able to send electrical impulses 1,000 feet into the ground to develop an extensive 3-D model of our groundwater basins. By collecting 375 miles of data, we will have a much more complete picture to guide future decisions.

I encourage you to attend the **August 7th joint MCWD/GSA Board meeting** where a presentation will be given on the initial results and analysis. The data generated from this important study will inform the development of our Groundwater Sustainability Plan and serve as a critical baseline to measure the progress of reaching sustainability goals and meeting the requirements of the Sustainable Groundwater Management Act. This study also provides additional information on the groundwater impacts from the proposed Monterey Peninsula Water Supply Project. Those impacts and the existing groundwater conditions south of the Salinas River were inadequately addressed in the CPUC's DEIR/EIS released earlier this year.

MCWD/GSA Joint Board Meeting
August 7, 2017
6:30 p.m.
Marina City Council Chambers
211 Hillcrest Avenue
Marina, California

I hope you will consider attending our meeting to learn more.

Regards,

Keith Van Der Maaten, General Manager