This meeting has been noticed according to the Brown Act rules. This agenda was posted on Wednesday, August 9, 2017.

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Administrative Committee Members:
Andrew Clarke
Brenda Lewis, Chair
Open

Alternate:
Molly Evans

Staff Contact:
Suresh Prasad

After staff reports have been distributed, if additional documents are produced by the District and provided to the Committee regarding any item on the agenda, they will be made available at 5 Harris Court, Building G, Monterey, CA during normal business hours. In addition, such documents may be posted on the District website at www.mpwmd.net. Documents distributed at the meeting will be made available in the same manner.

AGENDA
Administrative Committee
of the Monterey Peninsula Water Management District
****
Monday, August 14, 2017, 3:30 pm
MPWMD Conference Room, 5 Harris Court, Building G, Monterey, CA

Call to Order

Comments from Public – *The public may comment on any item within the District's jurisdiction. Please limit your comments to three minutes in length.*

Items on Board Agenda for August 21, 2017

1. Consider Adoption of Minutes of July 10, 2017 Committee Meeting
2. Authorize Expenditure to Contract with JEA & Associates for Governmental Relations 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. Authorize Pueblo Water Resources to Proceed with the Supplemental Sample Analysis Plan Water Quality Investigation
7. Consider Funding for Community Water Conservation Demonstration Project at Martin Luther King Jr. Elementary School, 1713 Broadway Ave., Seaside
8. Consider Lawn Removal Rebate Request from Monterey Peninsula Unified School District for Martin Luther King Jr. School
9. Consider Expenditure to Contract with the California Conservation Corps for Fall 2017 Vegetation Management Activities
10. Authorize Funds for Repair of Injection Valve at Aquifer Storage and Recovery Well Number 1
11. Semi-Annual Financial Report on the CAWD/PBCSD Wastewater Reclamation Project

Other Business

12. Receive Fourth Quarter Legal Services Activity Report for Fiscal Year 2016-17

13. Review Draft August 21, 2017 Board Meeting Agenda

Adjournment

Upon request, MPWMD will make a reasonable effort to provide written agenda materials in appropriate alternative formats, or disability-related modification or accommodation, including auxiliary aids or services, to enable individuals with disabilities to participate in public meetings. Please submit a written request, including your name, mailing address, phone number and brief description of the requested materials and preferred alternative format or auxiliary aid or service by 5 PM on August 11, 2017. Requests should be sent to the Board Secretary, MPWMD, P.O. Box 85, Monterey, CA, 93942. You may also fax your request to the Administrative Services Division at 831-644-9560, or call 831-658-5600.

2017 Administrative Committee Meeting Schedule	
Monday, September 11	3:30 PM
Monday, October 9	3:30 PM
Monday, November 6	3:30 PM
Monday, December 11	3:30 PM
Wednesday, January 17, 2018	*3:30 PM*
Wednesday, February 21, 2018	*3:30 PM*

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ADMINISTRATIVE COMMITTEE

1. ADOPT MINUTES OF JULY 10, 2017 COMMITTEE MEETING

Meeting Date: August 14, 2017

From: David J. Stoldt,
General Manager

Prepared By: Sara Reyes

SUMMARY: Draft minutes of the July 10, 2017 Administrative Committee meeting are attached as **Exhibit 1-A**.

RECOMMENDATION: The Committee should review the minutes and adopt them by motion.

EXHIBIT
1-A Draft Minutes of July 10, 2017 Committee Meeting

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

EXHIBIT 1-A

DRAFT 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.

ADMINISTRATIVE COMMITTEE

2. AUTHORIZE EXPENDITURE TO CONTRACT WITH JEA & ASSOCIATES FOR GOVERNMENTAL RELATIONS SERVICES

Meeting Date:	**August 14, 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 _____.
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

ADMINISTRATIVE COMMITTEE

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

Meeting Date: **August 14, 2017**

From: **Dave Stoldt,**
General Manager

Prepared By: **Dave Stoldt**

General Counsel Review: N/A
Committee Recommendation: The Administrative Committee reviewed this item on August 14, 2017 and recommended _____.
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

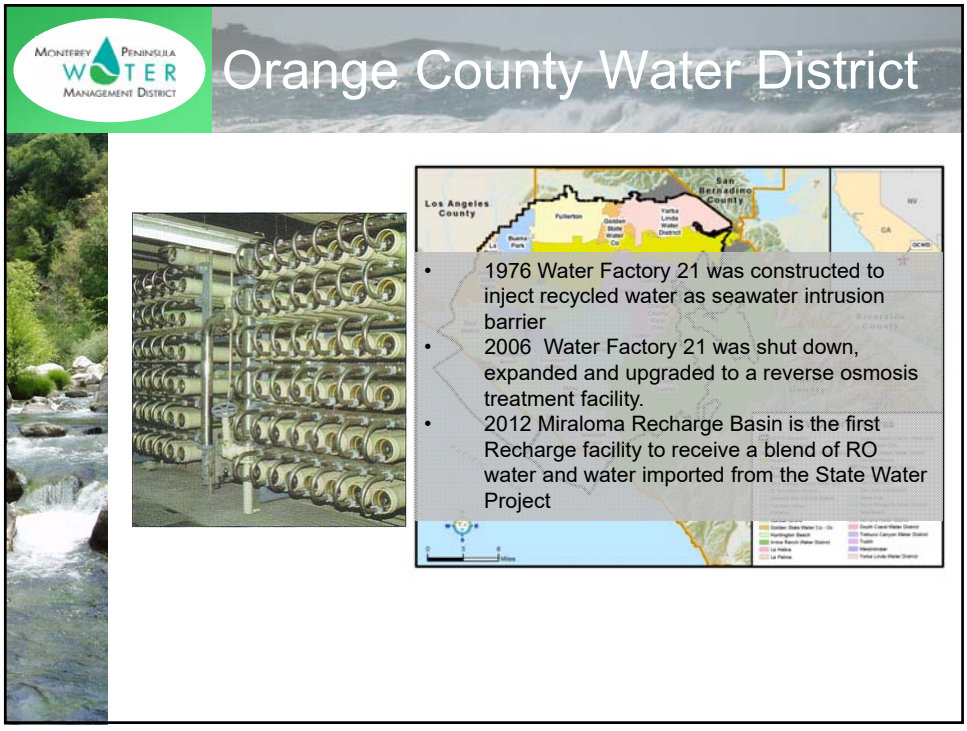
Senior Hydrogeologist

Potential Geochemical Reactions

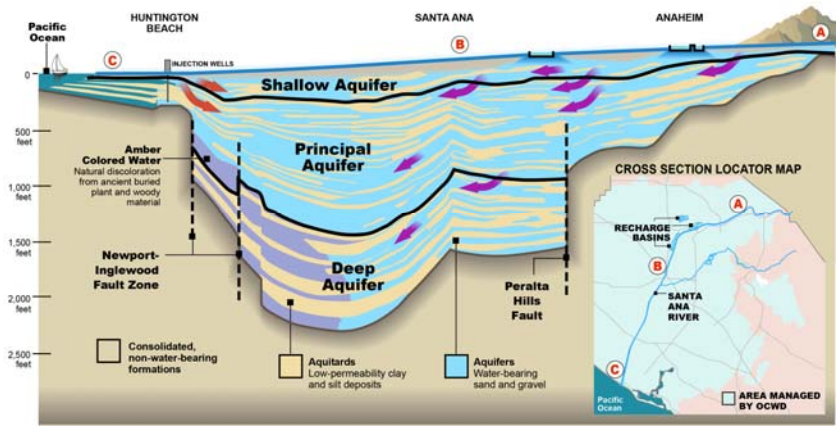
Presentation Overview

- **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

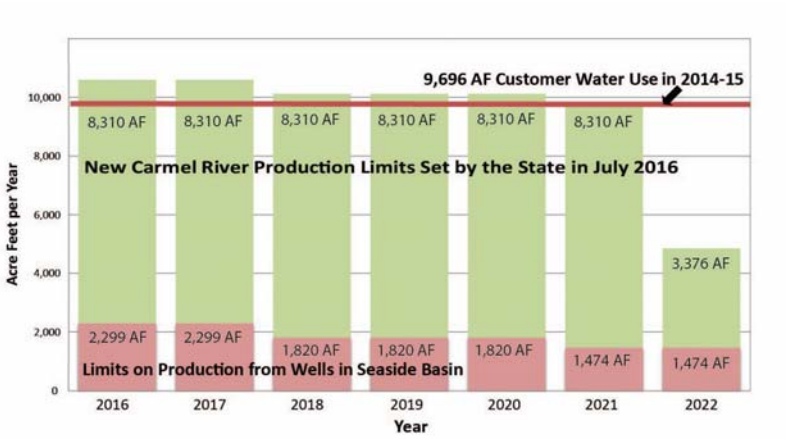
Take Home Message:

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

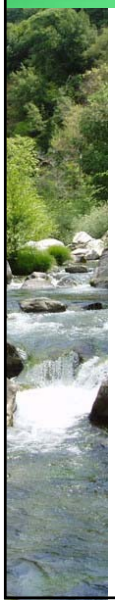


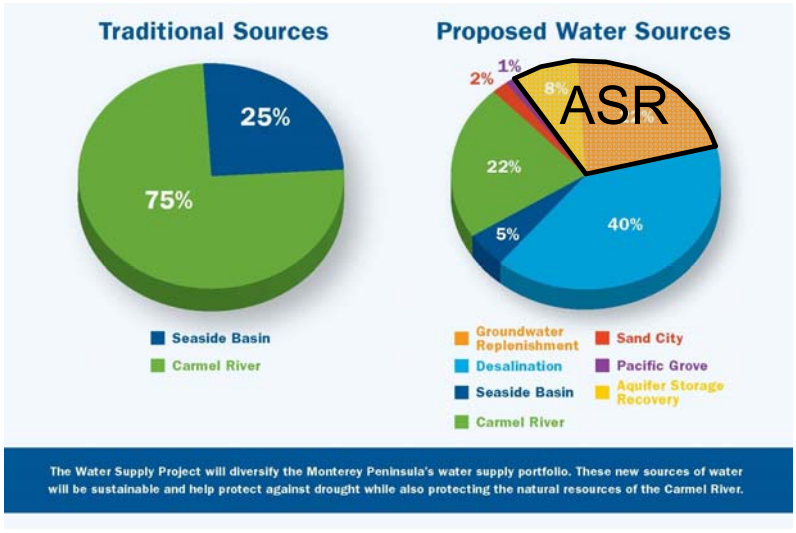
The Actual Water Supply Portfolio

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

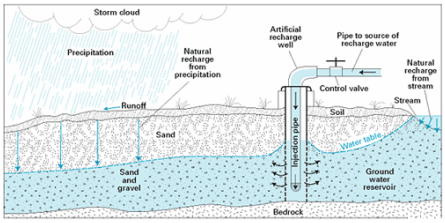
Traditional vs Proposed





The Water Supply Project will diversify the Monterey Peninsula's water supply portfolio. These new sources of water will be sustainable and help protect against drought while also protecting the natural resources of the Carmel River.

Seaside Groundwater Basin

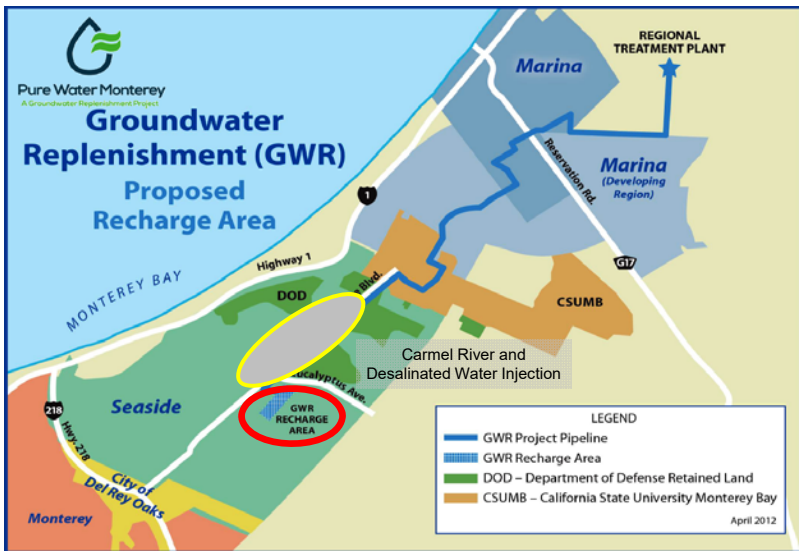


- As water supply projects are developed and begin to produce water to fill the supply gap, the Seaside Groundwater Basin is proposed to be utilized at the storage location for multiple sources of water.

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



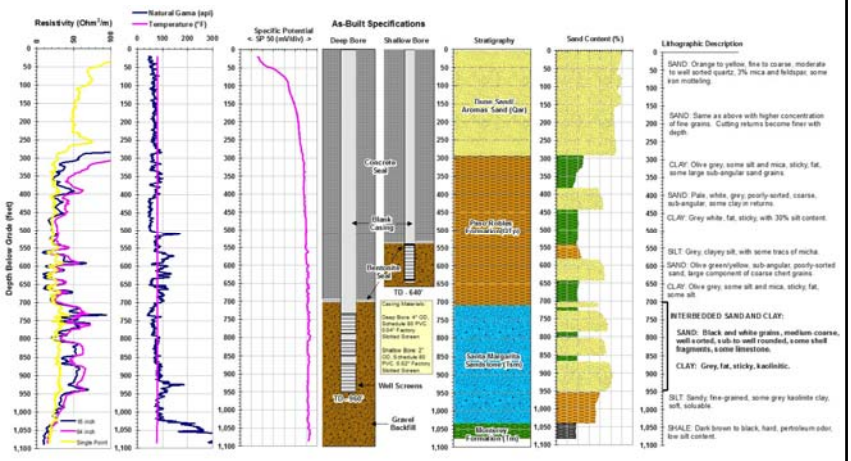
Project Operations

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.

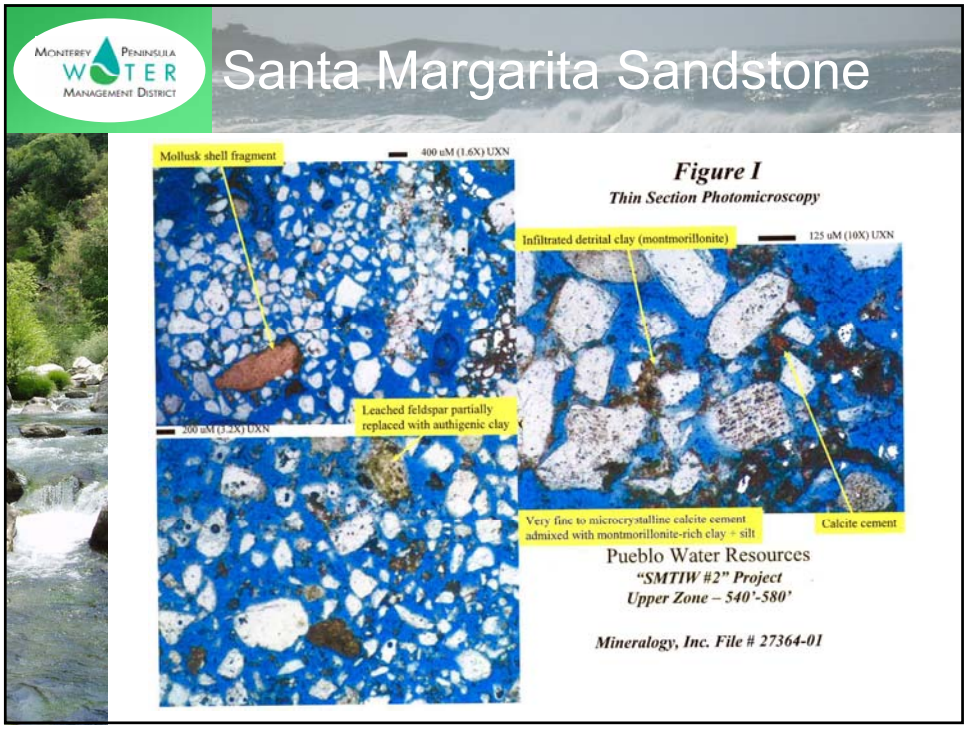
Changes in Composition of Water

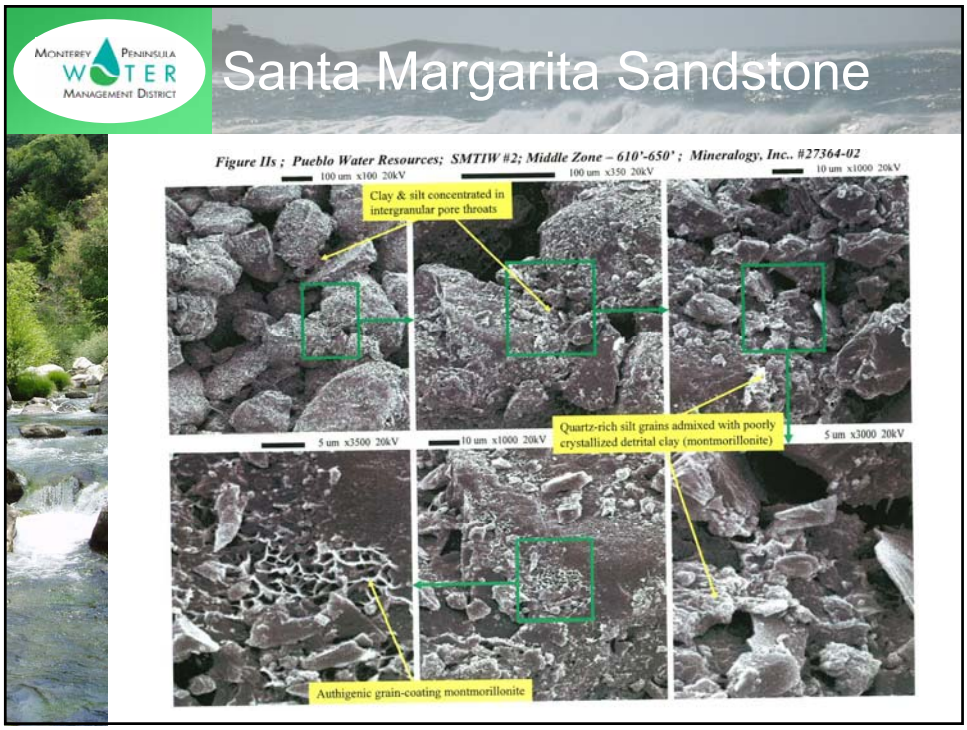
- **Wet Cycles** –System demand is low and Carmel River Water is available for injection which will result is a blend of PWM, Carmel River, and to a lesser extent, Desalinated water.
- **Drought** - Carmel River Water is unavailable so the blend of stored water will be more PWM and desalinated water 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

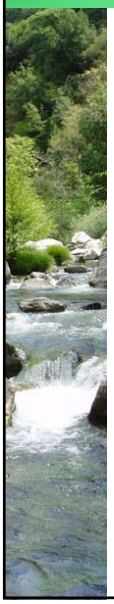


Santa Margarita Sandstone


Monterey Peninsula Water Management District
Santa Margarita Sandstone
Mollusk shell fragment
400 uM (1.6X) UXN
Leached feldspar partially replaced with authigenic clay
200 uM (3.2X) UXN
Figure I
Thin Section Photomicroscopy
Infiltrated detrital clay (montmorillonite)
125 uM (10X) UXN
Very fine to microcrystalline calcite cement admixed with montmorillonite-rich clay + silt
Calcite cement
Pueblo Water Resources
"SMTIW #2" Project
Upper Zone – 540'-580'
Mineralogy, Inc. File # 27364-01


Monterey Peninsula Water Management District
Santa Margarita Sandstone
Figure IIs ; Pueblo Water Resources; SMTIW #2; Middle Zone – 610'-650' ; Mineralogy, Inc.. #27364-02
100 um x100 20kV
100 um x350 20kV
10 um x1000 20kV
Clay & silt concentrated in intergranular pore throats
5 um x3500 20kV
10 um x1000 20kV
Quartz-rich silt grains admixed with poorly crystallized detrital clay (montmorillonite)
5 um x3000 20kV
Authigenic grain-coating montmorillonite

Geochemical Modeling



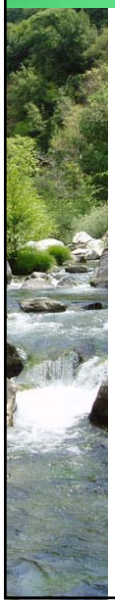
Defining Some Terms that Drive Geochemical Reactions

- **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

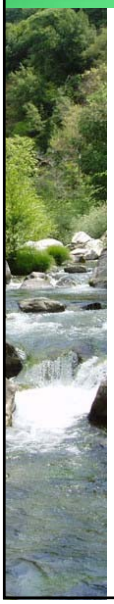


- Input Data – Good quality required!
- Water Chemistry - Use proper methods of filtration, preservation, and dilution
  - Measure field parameters (pH, Eh, D.O., temperature, alkalinity, specific conductance) at time of sample collection
  - Charge balance must be within acceptable limits
- Aquifer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

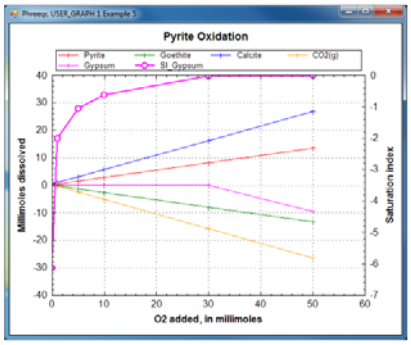
- Identify the different water qualities, quantities, flow paths, and residence times
- Characterize minerology of Santa Margarita Sandstone
- Collect water quality data to populate geochemical model
- Construct geochemical model and evaluate the effects of mixing differing water types in the Seaside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



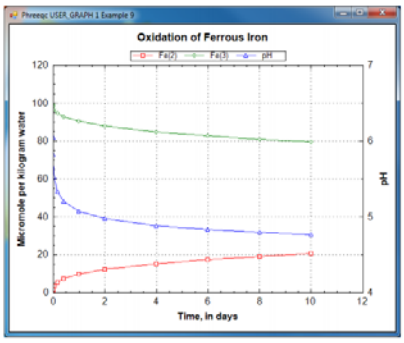


EXHIBIT 3-B

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

ADMINISTRATIVE COMMITTEE

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

Meeting Date:	**August 14, 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 _____.
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 February 20, 2008 meeting and voted _ – _ to _____ 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

ADMINISTRATIVE COMMITTEE

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

Meeting Date:	**August 15, 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 15, 2017 and recommended _____.
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 February 20, 2008 meeting and voted _ – _ to _____ 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

Products

HDX Long Range Readers
FDX/HDX Long Range Reader
FDX/HDX Proximity Readers
HDX PIT Tags
FDX PIT Tags
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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 • Portable options - External stick antenna	$1,065.00	$1,065.00
2	Update	Single Antenna HDX Reader	$1,855.00	$3,710.00
150	Update	Twinax Cable Min: 10	$7.50	$1,125.00
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

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Building a LF PIT Tag System
HF RFID with Anti-Collision
Antenna Types
Power
Services
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Software

EXHIBIT 5-A

ADMINISTRATIVE COMMITTEE

6. AUTHORIZING PUEBLO WATER RESOURCES TO PROCEED WITH THE SUPPLEMENTAL SAMPLE ANALYSSIS PLAN WATER QUALITY INVESTIGATION

Meeting Date:	**August 14, 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 _____.
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

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

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

PUEBLO water resources

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

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

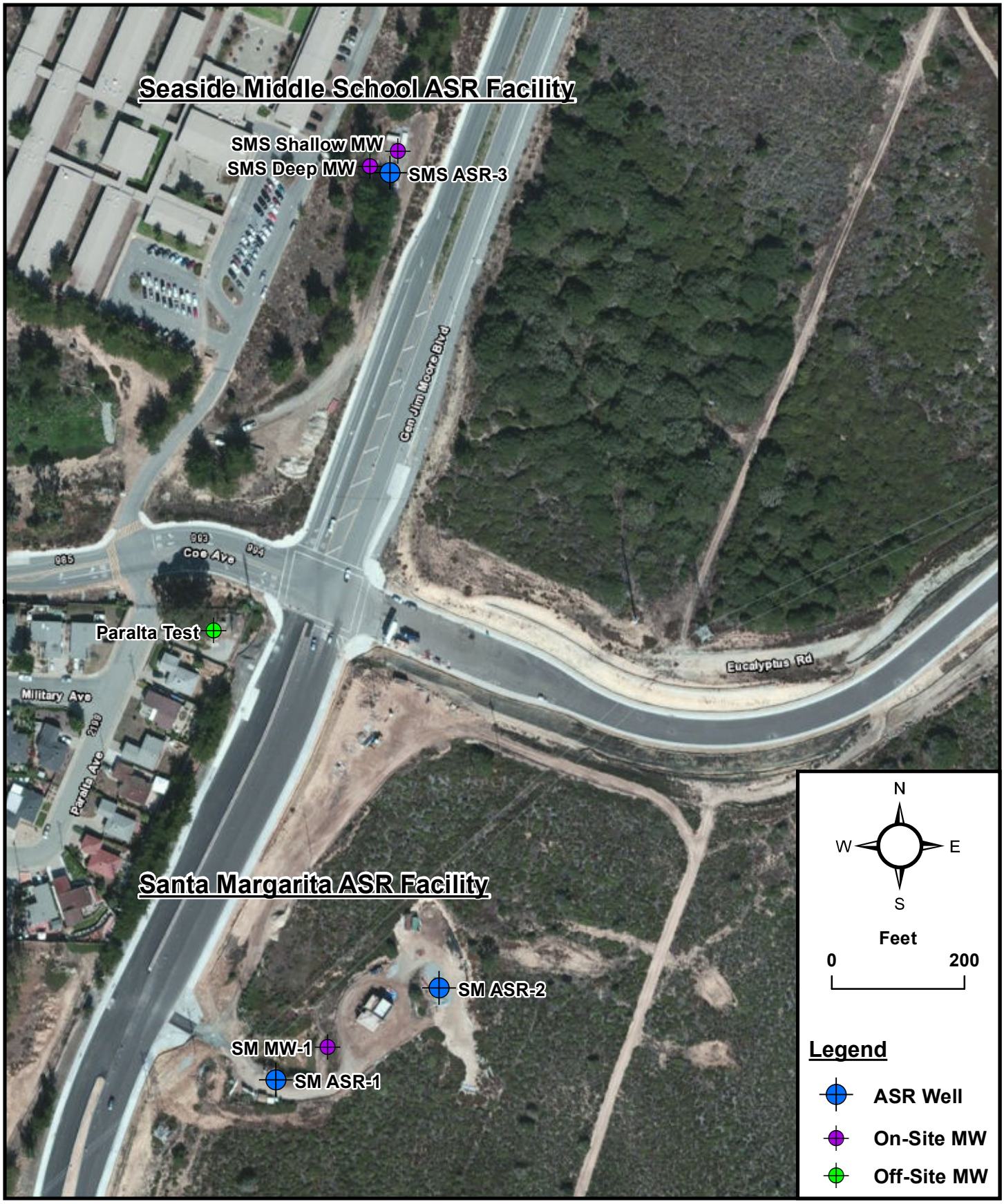
INJECTION PERIOD (active injection)							
Analyte Group	**Injectate**			**SM MW-1**	**SMS Deep MW**	**PCA East (deep)**	
F-1	Bi-Weekly			Bi-Weekly	Bi-Weekly	Semiannually	
DBP	Monthly			Quarterly	Quarterly	Semiannually	
G-1	Quarterly			Quarterly	Quarterly	Semiannually	
S-1	Quarterly			Quarterly	Quarterly	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

ADMINISTRATIVE COMMITTEE

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

Meeting Date:	**August 14, 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.
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 7-A and 7-C**). The garden will consist of drought tolerant plantings, storm water infiltration features, a rain watering system, drip irrigation and interpretive educational signage (**Exhibit 7-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

7-A Community Demonstration Garden Proposal

7-B Proposed CDG Plan

7-C Site Photos

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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

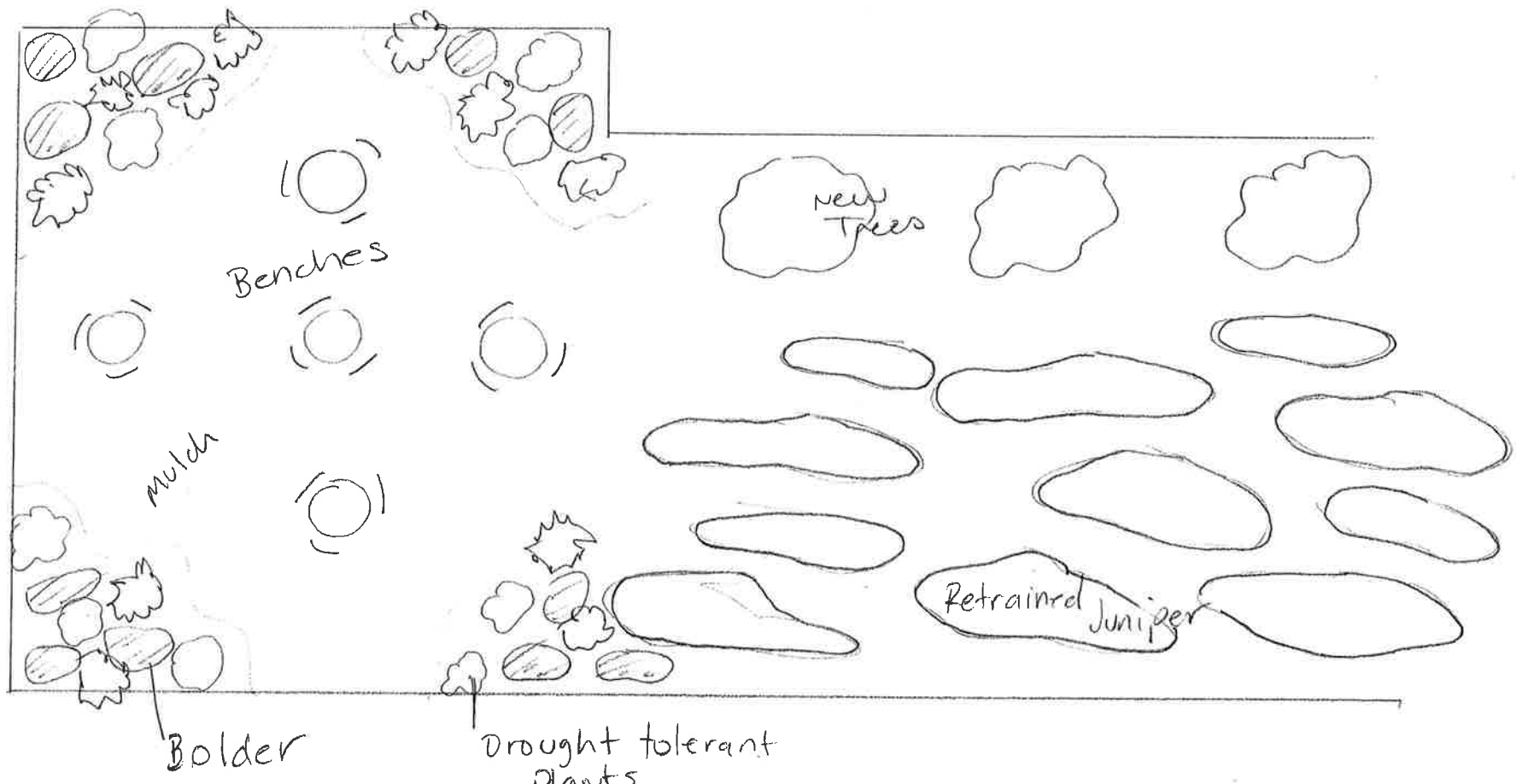
WATER SAVINGS

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.

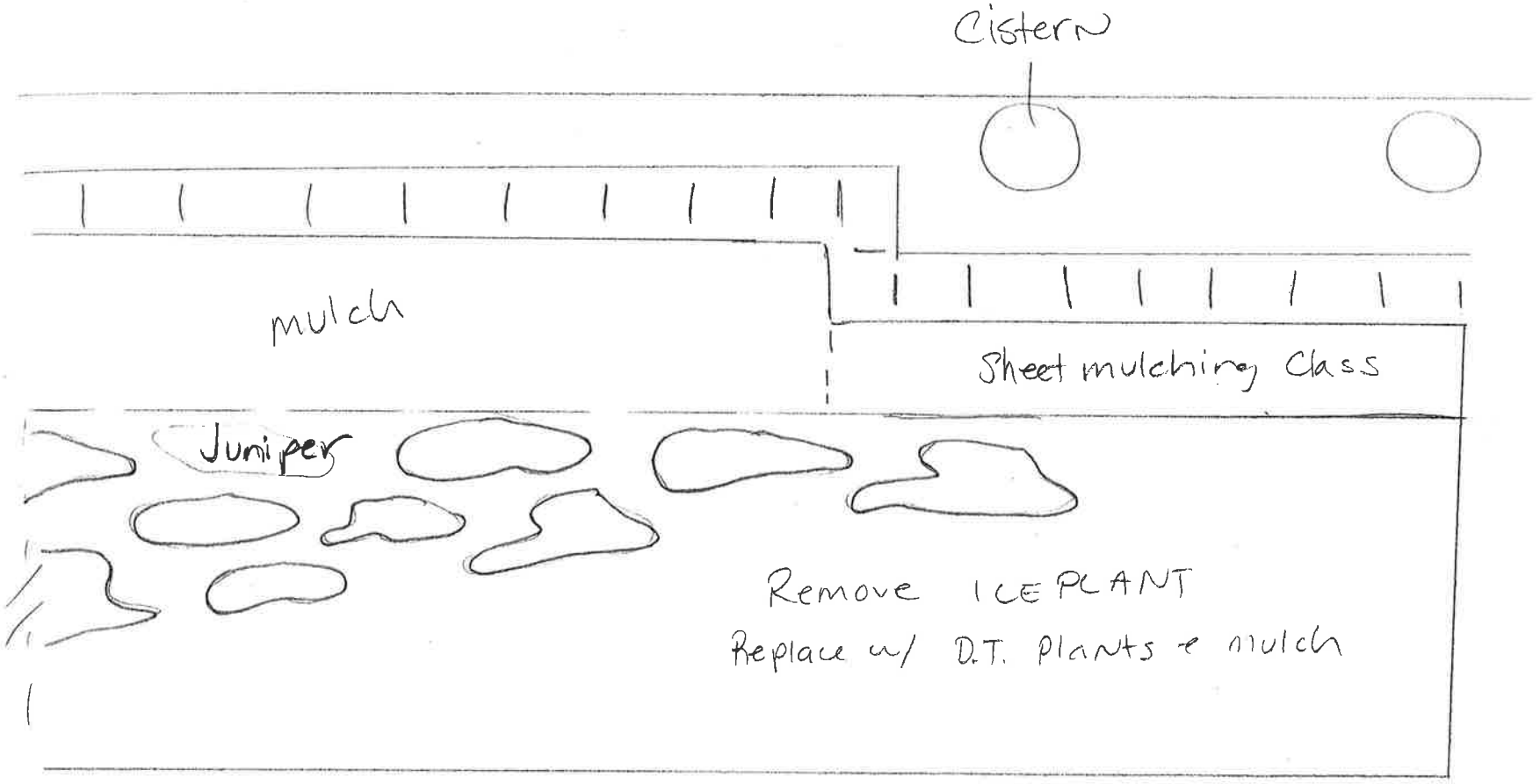
ATTACHMENT 7

CURRENT LANDSCAPING INFORMATION

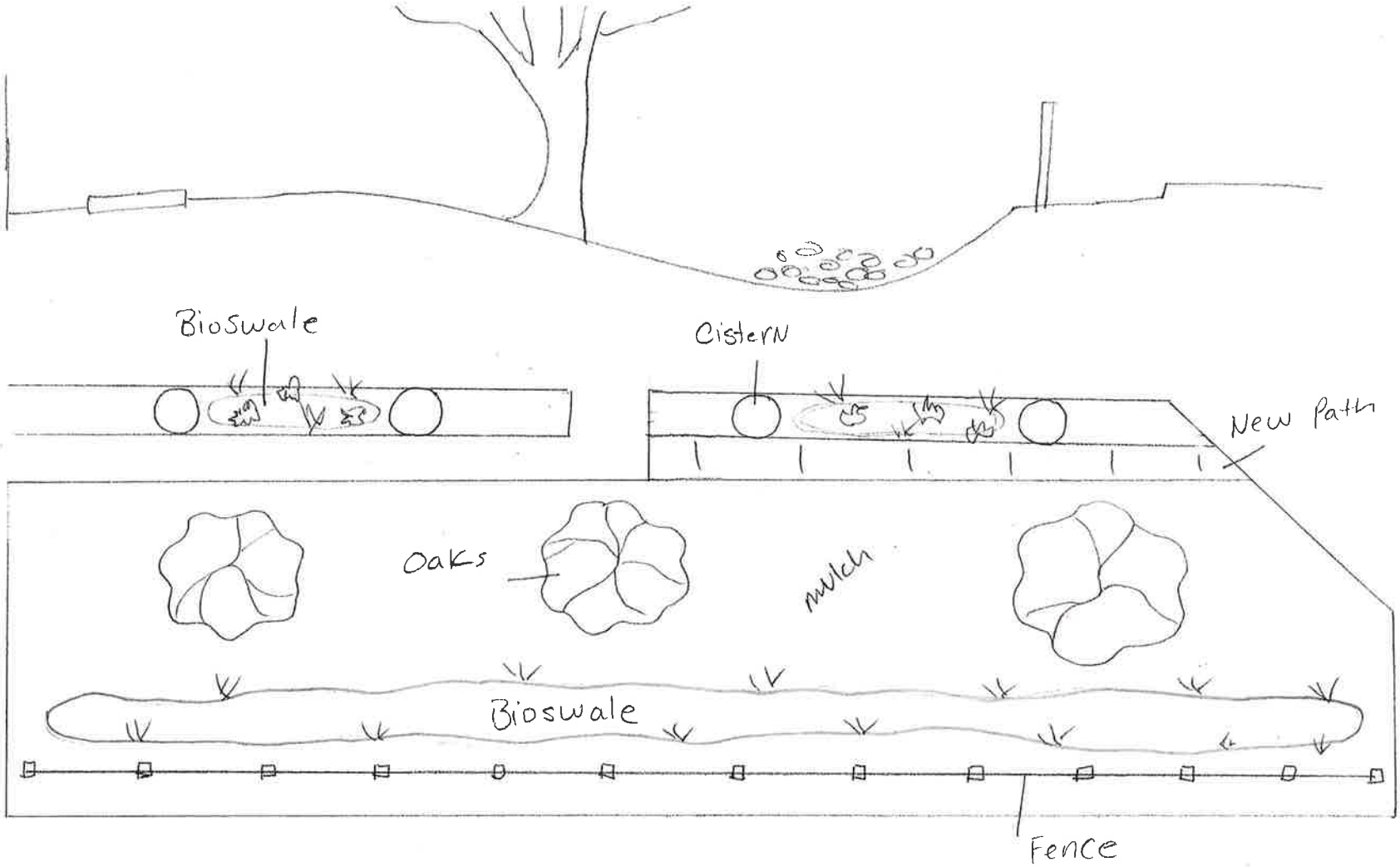
	H20 Requirement	Current Irrigation
Field	Turf (High) 13,424 sq. ft.	MP rotors



LOWER SECTION



MIDDLE SECTION



UPPER SECTION

Lower Section

Middle Section

Upper Section

ADMINISTRATIVE COMMITTEE

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

Meeting Date:	**August 14, 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.
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 8-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. On

EXHIBIT
8-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

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

ADMINISTRATIVE COMMITTEE

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

Meeting Date:	**August 14, 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 _____.
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

ADMINISTRATIVE COMMITTEE

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

Meeting Date:	**August 14, 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 _____.
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 Aug 14.

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
10-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.

ADMINISTRATIVE COMMITTEE

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

Meeting Date:	**August 14, 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 _____.
CEQA Compliance: N/A

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.

ADMINISTRATIVE COMMITTEE

12. REVIEW FOURTH QUARTER LEGAL SERVICES ACTIVITY REPORT FOR FISCAL YEAR 2016-2017

Meeting Date:	**August 14, 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: This is an informational item only.
CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines Section 15378.

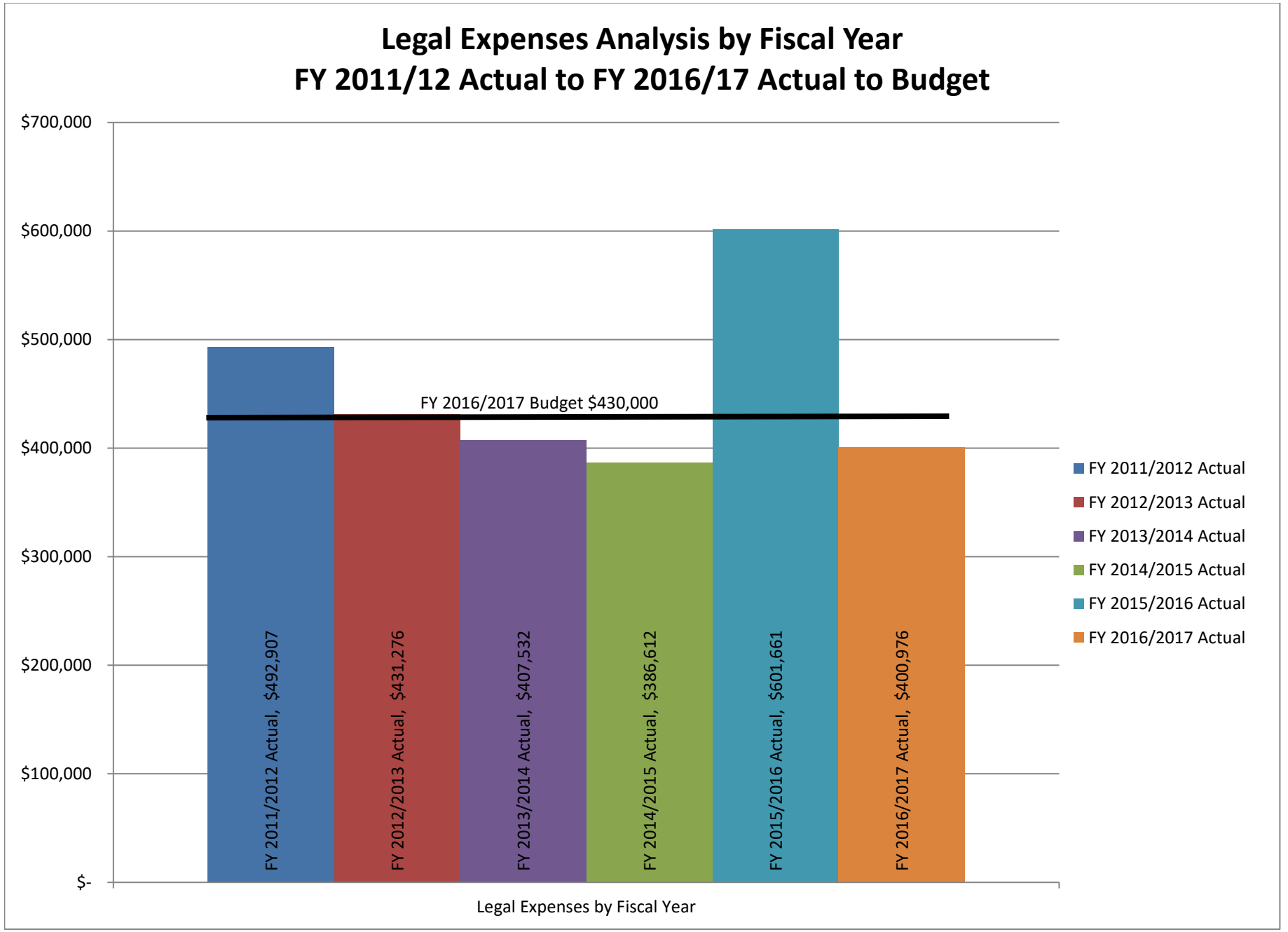
SUMMARY: The fourth quarter Legal Services Activity Report for Fiscal Year 2016-2017 is attached as **Exhibits 12-A** and **12-B**. The information presented are in a table and graph format and compares the actual third quarter activity and the year-to-date amount to the overall budget for legal & professional services. The actual costs for the current reporting period were 93% of the total legal & professional budget.

EXHIBITS
12-A Legal Services Costs Update Table
12-B Legal Expenses Analysis by Fiscal Year

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT
LEGAL SERVICES COSTS UPDATE
REPORT FOR QUARTER ENDED JUNE 30, 2017

File No.	Description	Previous Balance	Quarterly Activity April 2017	May 2017	June 2017	Total	FY 2016/2017 Budget
Delay & Laredo							
WMD-001	Retained General Counsel Service	49,082.50	5,450.00	5,450.00	5,450.00	65,432.50	
WMD-003	Special Legal Services	1,762.50	-	-	-	1,762.50	
WMD-003-01	Desal A.12-04-019	23,027.50	893.00	282.00	6,533.00	30,735.50	
WMD-003-02	CPUC A.04-09-019 (CWP/Regional Water Project)	70.50	-	-	-	70.50	
WMD-003-03	SCD - A.10-09-019	70.50	-	-	-	70.50	
WMD-003-05	218 Fee A.10-01-012	38,587.05	-	305.50	846.00	39,738.55	
WMD-003-06	SWRCB Proceedings	188.00	-	-	70.50	258.50	
WMD-003-07	CPUC Proceedings (General)	1,081.00	164.50	47.00	188.00	1,480.50	
WMD-003-09	Seaside Basin Watermaster	3,854.00	-	70.50	70.50	3,995.00	
WMD-003-10	Special Counsel Oversight	752.00	47.00	-	-	799.00	
WMD-003-11	MPWMD vs. SWRCB (CDO)	19,199.50	-	352.50	70.50	19,622.50	
WMD-003-13	Groundwater Replenishment (GWR) Project	3,266.50	235.00	-	799.00	4,300.50	
WMD-003-14	MPTA vs. MPWMD Case No. M123512	1,856.50	-	-	540.50	2,397.00	
WMD-003-18	CPUC A.15 - Modification of Rate Design and Water Ration	29,259.48	10,921.89	399.50	1,128.00	41,708.87	
WMD-003-20	2016 GRC - A. 16-07-XXX	37,480.64	7,854.25	17,416.85	7,355.50	70,107.24	
WMD-003-21	Cost of Capital Application A.17-04-003	-	112.50	450.00	-	562.50	
WMD-004	Bond, Audit or Financial Matters - Special Legal Services	352.50	-	-	-	352.50	
WMD-005	3rd Party Reimbursement - Special Legal Services	255.50	-	-	-	255.50	
WMD-005-01	Water Demand Permits/Deed Review	13,653.50	517.00	235.00	493.50	14,899.00	
WMD-005-02	Reclamation Matters	540.50	-	-	-	540.50	
WMD-005-03	WDS Permits and Water Rights Review	9,188.50	1,339.50	752.00	-	11,280.00	
WMD-005-04	ASR	963.50	-	-	-	963.50	
WMD-005-05	Public Records Request	2,843.50	117.50	-	-	2,961.00	
WMD-005-06	Successor Agency v. Cohen Case No. 34-2016-80002403	337.50	135.00	45.00	45.00	562.50	
	Sub-total (Delay & Laredo)	**237,673.17**	**27,787.14**	**25,805.85**	**23,590.00**	**314,856.16**	
Goodin, MacBride, Squeri, Day & Lamprey, LLP							
3465-001	PUC Proceeding	49,812.11	-	-	-	49,812.11	
Colantuono, Highsmith & Whatley, PC							
	Prop 218 Advice	6,146.80	-	-	161.00	6,307.80	
JEA & Associates							
	Consultant	22,500.00	2,500.00	2,500.00	2,500.00	30,000.00	
	Total	**$ 316,132.08**	**$ 30,287.14**	**$ 28,305.85**	**$ 26,251.00**	**$ 400,976.07**	**$430,000.00 [1]**
							93%

[1] Budget column includes legal budget of $400,000 plus $30,000 for professional services.


Legal Expenses Analysis by Fiscal Year
FY 2011/12 Actual to FY 2016/17 Actual to Budget
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$-
FY 2016/2017 Budget $430,000
FY 2011/2012 Actual, $492,907
FY 2012/2013 Actual, $431,276
FY 2013/2014 Actual, $407,532
FY 2014/2015 Actual, $386,612
FY 2015/2016 Actual, $601,661
FY 2016/2017 Actual, $400,976
FY 2011/2012 Actual
FY 2012/2013 Actual
FY 2013/2014 Actual
FY 2014/2015 Actual
FY 2015/2016 Actual
FY 2016/2017 Actual
Legal Expenses by Fiscal Year

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

DRAFT AGENDA (Current 8/9/17)
Regular Meeting
Board of Directors
Monterey Peninsula Water Management District
****
Monday, August 21, 2017
Closed Session – 5:30 pm
Location to be announced
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

This agenda was posted at the District office at 5 Harris Court, Bldg. G Monterey on _____, 2017. Staff reports regarding these agenda items will be available for public review on 1/20/2017, 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. Confirm Appointment to Carmel River Advisory Committee
3. Consider Renewal of Contract with JEA & Associates for Legislative and Administrative Services
4. Consider Approval of Budget for Groundwater Models for Seaside Groundwater Basin
5. Authorize Expenditure to Replace the Vertical Water Quality Profiling Device's Drive System in the Carmel River Lagoon
6. Authorize Expenditure for Passive Integrated Transponder (PIT) Tag Reading Equipment to Monitor Juvenile Steelhead Emigration and Eventual Adult Returns
7. Consider Funding for Community Water Conservation Demonstration Project at Martin Luther King Jr. Elementary School, 1713 Broadway Ave., Seaside
8. Consider Lawn Removal Rebate Request from Monterey Peninsula Unified School District for Martin Luther King Jr. School
9. 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
10. Authorize Pueblo Water Resources to Proceed with the Supplemental Sample Analysis Plan Water Quality Investigation
11. Consider Expenditure to Contract with the California Conservation Corps for Fall 2017 Vegetation Management Activities
12. Authorize Funds for Repair of Injection Valve at Aquifer Storage and Recovery Well Number 1

GENERAL MANAGER'S REPORT

13. 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

14. 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)

15. 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.

16. Consider First Reading of Draft Ordinance No. 177 - Amendments to Rules and Regulations (Add CEQA Notation)
Action:

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

17. 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.

18. Letters Received
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