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

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

AGENDA
Regular Meeting
Board of Directors
Monterey Peninsula Water Management District
****
Monday, April 18, 2016
Closed Session – 5:30 pm
2999 Salinas Highway, Monterey, CA 93940
Regular Meeting - 7:00 PM
Conference Room, Monterey Peninsula Water Management District
5 Harris Court, Building G, Monterey, CA

Staff notes will be available on the District web site at
http://www.mpwmd.net/who-we-are/board-of-directors/bod-meeting-agendas-calendar/
by 5 PM on Friday, April 15, 2016.

The 7:00 PM Meeting will be televised on Comcast Channels 25 & 28. Refer to broadcast schedule on page 4.

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.

PUBLIC COMMENT – Members of the public may address the Board on the items listed on the Closed Session agenda.

ADJOURN TO CLOSED SESSION
Conference with Labor Negotiators (Gov. Code 54957.6)
Agency Designated Representative: Jeanne Byrne
Unrepresented Employee: David Stoldt

Conference with Legal Counsel-Existing Litigation (Gov. Code 54956.9 (a))
1. Application of California American Water to CPUC (No. 12-04-019) – Monterey Peninsula Water Supply Project
2. Application of California American Water to CPUC Case No. A1001012 – Monterey Peninsula Water Management District User Fee

ADJOURN TO 7 PM SESSION

This agenda was posted at the District office at 5 Harris Court, Bldg. G Monterey on Wednesday, April 13, 2016. Staff reports regarding these agenda items will be available for public review on 4/15/2016, 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 http://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 May 16, 2016 at 7 pm.

7 PM REGULAR MEETING

CALL TO ORDER/ROLL CALL

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 the March 21, 2016 Regular Board Meeting
2. Consider Authorization of Contract for Preparation of Los Padres Dam Fish Passage Study
3. Consider Approval of Funds to Replace HVAC Unit at the MPWMD Harris Court Administration Building
4. Authorize Expenditure for a Joint Project with Monterey Peninsula Regional Park District - Rainwater Harvesting and Drought Tolerant Demonstration Garden at Garland Regional Park
5. Authorize Expenditure to Complete Rainwater Harvesting Demonstration Project at District Offices
6. Adopt 2016-17 Legislative Advocacy Plan
7. Consider Adoption of Treasurer's Report for February 2016

GENERAL MANAGER'S REPORT

8. Status Report on California American Water Compliance with State Water Resources Control Board Order 2009-0060 and Seaside Groundwater Basin Adjudication Decision
9. Update on Development of Water Supply Projects
10. Report on Drought Response

ATTORNEY'S REPORT

11. Report from District Counsel on 5:30 pm Closed Session of the Board

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

12. 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.

13. Consider First Reading of Ordinance No. 170 – Amending Rules 11, 20, 21, 22, 23, 24, 25.5, 142 and 143

Action: *The Board will conduct a public hearing on the first reading of draft Ordinance No. 170 and consider approval and referral to a future meeting for second reading and adoption.*

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

14. Consider Approval of Items Related to Integrated Regional Water Management Program

A. Approve Revised MOU for Integrated Regional Water Management in the Monterey Peninsula, Carmel Bay and South Monterey Bay

B. Authorize Execution of MOA for Integrated Regional Water Management Planning and Funding in the Central Coast Region

C. Authorize Expenditure for Assistance with Proposition 1 Grant Program Coordination

Action: *The Board will consider actions to expand the local governance group for Integrated Regional Water Management Planning and to position the Monterey Peninsula planning region to cooperate with other Central Coast IRWM planning regions on grant applications for a share of $43 million allocated to the Central Coast from Proposition 1 bond funds.*

15. Consider Approval of Items Related to Bureau of Reclamation Watersmart Program

A. Consider Authorization of Contract for Assistance with Preparation of the Salinas and Carmel River Basins Study

B. Authorize the General Manager to Enter into a Grant Agreement with the United States Bureau of Reclamation

Action: *The Board will consider actions to expend District funds (local share) and to allow the District to receive grant funds (federal share) from the U.S. Bureau of Reclamation to develop a Carmel River Basin Study.*

16. Consider Adoption of a Finance Plan for Utilization of User Fee and Water Supply Charge Funds

Action*: The Board will consider adoption of a plan to collect and expend revenues from the User Fee on California-American Water bills and the Water Supply Charge over the next several years.*

DISCUSSION ITEMS – Public comments will be received. Please limit your comment to three (3) minutes per item.

17. Update on Sustainable Groundwater Management Act (SGMA): (a) Seaside Groundwater Basin, and (b) Carmel Valley Alluvial Aquifer

Description: *The Board will receive an update on recent activities related to the District's responsibilities under the SGMA.*

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 Supplemental Letter Packet
19. Committee Reports
20. Monthly Allocation Report
21. Water Conservation Program Report
22. Quarterly Water Use Credit Transfer Status Report
23. Carmel River Fishery Report
24. Quarterly Carmel River Riparian Corridor Management Report
25. 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, Sundays, 7 PM	Monterey
Ch. 25, Mondays, 7 PM	Monterey, Del Rey Oaks, Pacific Grove, 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, May 16, 2016	Regular Board Meeting	7:00 pm	District conference room
Monday, May 23, 2016	Special Board Meeting/Workshop	7:00 pm	District conference room
Monday, June 20, 2016	Regular Board Meeting	7:00 pm	District conference room

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. MPWMD will also make a reasonable effort to provide translation services upon request. 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 5:00 PM on Thursday, April 14, 2016. 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.

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ITEM: CONSENT CALENDAR

1. CONSIDER ADOPTION OF MINUTES OF THE MARCH 21, 2016 REGULAR MEETING OF THE BOARD OF DIRECTORS

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Arlene Tavani**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: N/A

SUMMARY: Attached as **Exhibit 1-A** are draft minutes of the March 21, 2016 Regular meeting of the Board of Directors.

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

EXHIBIT
1-A Draft Minutes of the March 21, 2016 Regular Meeting of the Board of Directors

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

EXHIBIT 1-A

DRAFT MINUTES
Regular Meeting
Board of Directors
Monterey Peninsula Water Management District
March 21, 2016

CALL TO ORDER/ROLL CALL

The meeting was called to order at 7:10 pm in the MPWMD conference room.

Directors Present:
Jeanne Byrne – Chair, Division 4
Molly Evans – Division 3
Andrew Clarke – Division 2
David Pendergrass – Mayoral Representative
David Potter – Monterey County Board of Supervisors

Directors Absent:
Brenda Lewis – Division 1
Robert S. Brower, Sr. – Vice Chair, Division 5

General Manager present: David J. Stoldt

District Counsel present: David Laredo

PLEDGE OF ALLEGIANCE

The assembly recited the Pledge of Allegiance.

ADDITIONS AND CORRECTIONS TO AGENDA

On a motion by Potter and second of Clarke, a report from District Counsel on the 5:45 PM Closed Session of the Board was added to the agenda. It will follow the General Manager's Report. The motion was approved on a unanimous vote of 5 – 0 by Directors Potter, Clarke, Byrne, Evans and Pendergrass. Directors Brower and Lewis were absent.

RECOGNITION OF FORMER DIRECTOR, DALE HEKHUIS

General Manager Stoldt stated that Dale Hekhuis served on the Board of Directors from 1989 through 1993 and was Board Chair in 1991 and 1992. He noted that after Dale left the Board, he continued to be active in water issues. Director Pendergrass described Dale as totally dedicated to working towards a water solution. Director Potter said that Dale was knowledgeable, vocal and opinionated on water issues and that his voice will be missed. Chair Byrne announced that the meeting would adjourn in memory of Dale Hekhuis.

ORAL COMMUNICATIONS

The following comments were directed to the Board during Oral Communications. **(1) George Riley** stated that the time-line for approval of the Monterey Peninsula Water Supply Project will be extended due to the delay in completion of the project EIR. He noted that the Water Management District has identified the Deep Water Desal project as an alternative and urged the District to advocate for the DeepWater Desal project as it may

offer a lower cost solution. **(2) Tom Rowley**, representing the Monterey Peninsula Taxpayers Association, urged the Water Management District to lobby elected officials in Sacramento to accelerate development of the suite of water projects that will provide a safe water supply for the community.

CONSENT CALENDAR

On a motion by Potter and second of Evans, the Consent Calendar was adopted on a vote of 5 – 0 by Potter, Evans, Byrne, Clarke and Pendergrass. Brower and Lewis were absent.

Adopted.	**1. Consider Adoption of Minutes of the February 17, 2016 Special Board Meeting**
Adopted.	**2. Consider Adoption of Resolution 2016-05 Reestablish User Fee and Suspend its Collection on California American Water Bills for Remainder of Fiscal Year 2015-16**
Adopted.	**3. Consider Adoption of Resolution 2016-06 - Amendments to Rule 24, Table 2: Non Residential Water Use Factors**
Adopted.	**4. Consider Adoption of Resolution 2016-07 - Recognize Jason Burnett for Outstanding Leadership on Monterey Peninsula Water Supply Solutions**
Approved.	**5. Authorize the Creation of an Assistant Water Resources Engineer Position and Recruitment for Candidates within the Engineering Career Ladder**
Approved increase of $32,500 for Normandeau Environmental Services existing contract, and approved expenditure of $37,500 to contract with Balance Hydrologics, Inc.	**6. Consider Expenditure for Assistance with Collection of Streamflow Measurements to Support Development of an Instream Flow Model for the Carmel River**
Approved expenditure of $225,000 over current and next two fiscal years for consulting team of Bryant & Associates, Brown & Caldwell, and Data Instincts in affiliation with Thomas Brand Consulting and Carollo Engineers.	**7. Consider Expenditure to Contract with Consulting Team for North Monterey County Drought Contingency Plan**
Approved.	**8. Declaration of Surplus Assets**
Adopted.	**9. Consider Adoption of Treasurer's Report for January 2016**

GENERAL MANAGER'S REPORT

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

Stoldt's presentation can be viewed on the Water Management District website or the agency's office. He explained that the chart titled Actual Versus Target Production for Cal-Am: Oct to Feb 2016 had been revised. The new chart, under Actual Year-to-Date Values/Carmel River Basin, includes all water produced for ASR injection and also Table 13 water. He noted that production from the Sand City desalination plant was low. Production was limited due to high salinity levels in the feed water caused by lack of rain. This resulted in discharge water that exceeded permitted salinity levels. Production should increase as additional rain recharges the aquifer. Within the Water Management District, rainfall through February was at 104% of long term average. Unimpaired Flow was estimated to be 43% of long-term average. Useable storage was estimated to be at 97% of long-term average.

11. Update on Development of Water Supply Projects

A summary of Mr. Stoldt's report can be viewed on the Water Management District's website or at the agency's office.

12. Report on Drought Response

A summary of Mr. Stoldt's report can be viewed on the Water Management District's website or at the agency's office. He reported that statewide, snowpack has been estimated at 88% of normal. Rainfall in March within the Water Management District was measured at 5.39 inches. Total rainfall received between October 1, 2015 and March 18, 2015, was measured at 21.3 inches which is higher than the long-term average of 21.1 inches. The Water Management District is officially out of drought, but water users should continue to conserve water. Community water production was 17.7% under 2014-15 use which exceeds the state mandated conservation goal of 8.8%.

ATTORNEY'S REPORT

Report from District Counsel on 5:45 PM Closed Session of the Board

Conference with Labor Negotiators
(Gov. Code 54957.6)
Agency Designated Representatives: David Stoldt, Suresh Prasad and Cynthia Schmidlin
Employee Organization: General Staff and Management Bargaining Units Represented by United Public Employees of California/LIUNA, Local 792
Unrepresented Employees: Confidential Unit

Counsel Laredo reported that the Board confirmed David Stoldt as its designated labor negotiator. General direction was provided but no reportable action was taken.

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

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

Evans reported that she attended a presentation on How to Become a More Effective Board Member and found it to be quite interesting and worthwhile.

PUBLIC HEARINGS

14. Consider First Reading of Ordinance No. 170 – Amending Rules 11, 20, 21, 22, 23, 24, 25.5 and 142

Potter offered a motion that was seconded by Pendergrass to bifurcate the ordinance and continue the discussion as follows. (a) Sections of Ordinance No. 170 related to the State of California Model Water Efficient Landscape Ordinance (MWELO) should be referred to the Legislative Advocacy Committee for discussion. The committee could determine if legislative efforts are needed in order to seek modification to sections of the MWELO. In addition, the Technical Advisory Committee should convene to discuss implementation of the MWELO on either a regional or individual level, and determine how to achieve consistency among the jurisdictions in compliance with the regulations. (b) The remaining components of Ordinance No. 170 that are not related to the MWELO should comprise a separate ordinance for consideration at a future meeting of the Board of Directors. The motion was approved on a unanimous vote of 5 – 0 by Potter, Pendergrass, Byrne, Clarke and Evans. Brower and Lewis were absent.

Tom Rowley, representing the Monterey Peninsula Taxpayers Association and the Realtors, urged the Board to be sure that the Water Management District's landscape regulations will be consistent with landscape regulations under consideration by the County of Monterey.

15. Consider Adoption of April through June 2016 Quarterly Water Supply Strategy and Budget

On a motion by Evans and second of Clarke, the April through June 2016 Quarterly Water Supply Strategy and Budget was approved unanimously on a vote of 5 – 0 by Evans, Clarke, Byrne, Pendergrass and Potter. Brower and Lewis were absent.

16. Consider Adoption of 2015 MPWMD Annual Report

On a motion by Pendergrass and second of Potter, the 2015 MPWMD Annual Report was approved unanimously on a vote of 5 – 0 by Pendergrass, Potter, Byrne, Clarke and Evans. Brower and Lewis were absent.

ACTION ITEMS

No Action Items were presented for consideration by the Board.

DISCUSSION ITEMS

17. Item pulled from the agenda prior to distribution of agenda.

No discussion.

INFORMATIONAL ITEMS/STAFF REPORTS

18. Letters Received
19. Committee Report
20. Monthly Allocation Report
21. Water Conservation Program Report
22. Carmel River Fishery Report for February 2016
23. Monthly Water Supply and California American Water Production Report

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

ADJOURNMENT

The meeting was adjourned at 8:25 pm in memory of Dale Hekhuis.

Arlene M. Tavani, Deputy District Secretary

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ITEM: CONSENT CALENDAR

2. CONSIDER AUTHORIZATION OF CONTRACT FOR PREPARATION OF LOS PADRES DAM FISH PASSAGE STUDY

Meeting Date:	**April 18, 2016**	**Budgeted:**	**Yes**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**1-1-2 Los Padres Dam Long Term Plan**
Prepared By:	**Larry Hampson**	**Cost Estimate:**	**$310,000**

General Counsel Review: N/A
Committee Recommendation: The Water Supply Planning Committee reviewed this item on April 8, 2016 and recommended approval. The Administrative Committee reviewed this item on April 11, 2016 and recommended approval.
CEQA Compliance: Exempt under CEQA Section 15262

SUMMARY: The District received proposals from MWH Americas, Inc. (MWH) and HDR Engineering, Inc. (HDR) to conduct a study of alternatives to provide volitional upstream passage for steelhead over Los Padres Dam and through the reservoir. Proposals were reviewed by staff at MPWMD, the California Department of Fish and Wildlife (CDFW), the National Marine Fisheries Service (NMFS), and California American Water, which will reimburse the District for expenses associated with the study.

Attached as **Exhibit 2-A** and **2-B** are portions of the proposals containing the work proposed and estimated cost. Based on a recommendation from the review committee and a revised scope of work, the HDR proposal cost of $280,597 was revised upwards to $282,034. The MWH proposal, which was priced at $346,500, was revised downward to $333,500. The review committee determined that both Consultant firms are qualified to complete the study; however, the HDR proposal was priced at $51,466 less than the MWH proposal. Therefore, Staff recommends retaining HDR to complete the study with an initial Not-to-Exceed amount of $282,034 and also authorize a contingency of 10% of the proposal cost, which would allow for additional unforeseen tasks that could arise during the study.

RECOMMENDATION: With this recommendation, the General Manager would be authorized to enter into an agreement for services with HDR Engineering, Inc. for a Not-to-Exceed amount of $310,000.

DISCUSSION: Cal-Am's General Rate Case (GRC) for 2015-2017 authorizes Cal-Am to co-fund up to $1 million in studies with the District to develop a long-term management plan for Los Padres Dam (LP Dam) and Reservoir. The District's share of costs for completing a plan are from ongoing efforts to develop a linked surface water-groundwater model (GSFLOW-MODFLOW) in the Carmel River Basin and from development of a steelhead habitat model (Instream Flow Incremental Method study).

These studies will evaluate upstream steelhead passage at LP Dam, whether the Carmel River is better or worse with surface storage at Los Padres Dam, and what options exist to maintain or expand physical existing surface storage in Los Padres Reservoir (i.e., manage annual sediment inflow to the reservoir and a potential expansion of reservoir capacity), and an analysis of the potential geomorphic effects of a resumption or increase of the natural flow of sediment.

The plan of study for the fish passage assessment will build on recent improvements to downstream passage and comprehensively evaluate potential viable alternatives to improve upstream passage at LP Dam and through the reservoir. At their January 20, 2016 meeting, the Water Supply Planning Committee reviewed the draft study plan and recommended representation from the Monterey Peninsula, the County of Monterey and environmental interests on the proposed Advisory Group. During the proposal review with CDFW and NMFS, the NMFS representative (Joyce Ambrosius) pointed out that the Advisory Group would be more effective at evaluating the larger question of whether the Carmel River and steelhead habitat in particular are better off with or without Los Padres Dam. Staff concurs with the recommendation not to include Advisory Group meetings in the passage study mainly because there is no real controversy about improving fish passage at the dam and through the reservoir. It is a well-recognized and long-standing issue that requires an alternative that is technically, economically, and biologically feasible. The scope of work was revised to delete meetings of an Advisory Group, but include an optional additional meeting of the Technical Review Committee formed to develop evaluation criteria and select from alternatives. In addition, the requirement to complete a bathymetric study using dual-beam equipment was revised to allow use of single beam equipment, which is less costly but provides an adequate resolution of data for this study.

Based on these changes, the HDR proposal cost of $280,597 was revised upwards to $282,034. The MWH proposal, which was priced at $346,500, was revised downward based on the revised scope of work. Cal-Am's Project Manager, Julio Gonzales, indicated that if proposal costs are within 15% of the lowest cost proposal, a higher cost proposal could be selected if there is a compelling reason. In this case, the MWH proposal is about 18% higher than the HDR proposal. Both firms proposed a highly qualified team to carry out the proposal and are acceptable to the Technical Review Committee comprise of Cal-Am, NMFS, CDFW, and the District.

IMPACT ON STAFF/RESOURCES: If the District enters in an agreement to complete this study, staff time will be required to participate in the study and administrate the project over approximately two years. The project agreement with Cal-Am includes reimbursement of 5% of the project costs for District staff.

EXHIBITS

2-A HDR proposal (selection)

2-B MWH proposal (selection)

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Proposal for

Los Padres Dam Fish Passage Feasibility Study

Monterey Peninsula Water Management District

March 25,
2016

06 Technical Aspects of Proposal

Through our previous experience developing and implementing this similar study plan with United Water, our team members are familiar with the challenges, advantages, and disadvantages of specific technical approaches contained therein. Nearly all of this prior work was completed by the key staff and/or organizations included on our team. Given our team's recent successful completion of the Santa Felicia study and our experience at Los Padres Dam (LPD), our team has a high level of insight to the applicability and associated level of effort required to complete the study plan tasks outlined in the RFP.

In addition to our experience with the Santa Felicia study, our team's specific approach to conducting this proposed study also recognizes the prior efforts examining fish passage at LPD. We recognize some of the limitations imposed on the previous LPD study and anticipate that this newest endeavor will foster a far more effective environment for success. The proposed effort will be benefited by the following factors offered by the HDR team:

- Key staff members on HDR's proposed team reflect decades of experience with numerous fish passage programs and facilities throughout the western U.S., Pacific Northwest, and Canada. As shown in Section 3 of this proposal, our resume of completed projects has given this team first-hand experience with the most relevant and applicable fish passage technologies throughout the nation, including those studies directly referenced in the RFP (Alameda Creek Diversion Dam, Santa Felicia, and the Susitna-Watana Hydroelectric Project). This experience is augmented significantly by our Carmel River experience gained over the past 16 years beginning with a year 2000 study developed by R2 reviewing "Carmel River Dam Fish Passage Facilities," continuing through HDR's successful design and construction support of the Los Padres Dam Downstream Fish Passage Project, and through AECOM's involvement in the recent removal of San Clemente Dam.
- Regular and direct communication with fisheries resource agencies and DSOD facilitated through the TRC process will improve collaboration and understanding of project expectations beyond what was achieved during previous feasibility studies at LPD. Our team has incorporated meeting facilitators that will focus on achieving meeting or workshop goals, clearly coordinate the transfer of information with all parties, and accurately document discussions, decisions, and action items. Through integration of our coordination and meeting facilitation team, we anticipate clearer focus on combined objectives and more effective communication and feedback from the District, Cal-Am, and additional partners that make up TRC and Advisory Group.
- HDR team members have had the opportunity to work with DSOD through design approval and construction of a fish passage project at LPD in addition to numerous other projects. We have navigated through their concerns for the existing facility and have developed defendable and implementable solutions when others could not. We recognize the importance and potential limitations that limit the type, size, and configuration of fish passage facilities at LPD and feel that our site-specific experience will improve communication and efficiency, while performing the proposed work tasks. To proactively augment this project need, our team includes a liaison to communicate with DSOD, define structural and geotechnical constraints, refine criteria, and inform the fish passage alternative development process.

The HDR team has a high regard for the scope of work and available budget. as the primary authors of both the Santa Felicia and Susitna-Watana scopes of work, these study plans were developed to do more than just develop the most promising alternatives. These study plans were very formal and structured to not only develop alternatives, but to thoroughly inform stakeholders of the available options, chances

of success, complexity, reliability, and costs. The Santa Felicia study was also part of a FERC relicensing effort. Our experience with similar studies, and level of effort can vary widely based on the specific owner needs. To fully inform the selection committee, the two studies used to formulate the Los Padres study plan in the RFP were based on cost well over $1 million each to fully implement. When preparing this proposal, the HDR team estimated a potential project cost to fully implement the study plan – as stated in the RFP – in excess of $400,000.

The HDR team proposes to be responsive to this opportunity and to carry out the work and provide the deliverables following the general outline and detailed scope of work presented in the RFP. However, we also desire to provide value, effectiveness, and cost awareness to the project partners using our knowledge of this process and the budget constraints potentially limiting this effort. Therefore, the following technical approach is modified from the original technical study plan presented in the RFP to accommodate the budgetary limitations known for this project, while still maintaining defensibility, transparency, and integrity of the intended study plan.

Given the experience and high capability of the HDR team we are confident we can complete the specific scope of work within the anticipated 18-month timeline of the study. As noted in a recent answer to a RFP question, it is desired to conclude the study sooner. Using the approach outlined here in this proposal, and if agreed to at the time of contracting, we can anticipate being able to complete the study within 15 months.

Consultant Team Specific Scope of Work

The feasibility evaluation includes six main tasks, as outlined below, with specific detail and deliverables. This specific scope of work will become the study work plan upon initiation of the project.

Task 1 Feasibility Study Preparation (Consultant)

The intent of this task is to compile, synthesize, and document pertinent key background information that characterizes the operational, physical, and biological basis of study for this project. The resulting information will be used to shape key decisions in the feasibility process, as well as inform the type, size, and configuration of technically, ecologically, and financially feasible alternatives to fish passage at LPD. This task will result in three key deliverables that will be used to communicate key baseline information, physical and operational constraints, target biological performance goals, and the initial framework upon which fish passage alternatives will be evaluated. Those basic deliverables include: 1) a compilation of background information summarizing the key operational, physical, and biological basis of study for this project; 2) project work maps illustrating the physical configuration of the exiting project area; 3) a list of criteria and their definitions that will be proposed to be used as the basis comparison and evaluation throughout the development and selection of potential fish passage alternatives; and 4) generation of an initial data gaps log with potential pathways for addressing them. The development of these basic building blocks is described in more detail in the following sections.

TASK 1-1 COMPILE BACKGROUND INFORMATION

The HDR team will begin the feasibility process by obtaining available background information and data that characterizes the operational, physical, and biological considerations influencing the development of potential fish passage options and subsequent alternatives. Given this team's experience on the Carmel River and at LPD, we anticipate the compilation of background information to be efficient and will build upon previous work performed by this team. The resulting information will be synthesized, documented, and distributed to the TRC members prior to TRC Meeting No. 1 to become more easily familiar with the key and essential conditions unique to this project location.

The background information for this project is intended to represent the primary foundation upon which each option or alternative is developed. Information obtained for this project will be lumped into three basic categories as follows:

- **Physical data** that describes physical layout of the facility stilling pool, dam, spillway, abutments, reservoir, and adjacent hill slopes, in addition to the flow frequency and

quantity that passes through the reservoir and down the Carmel River. This also includes any available stage vs. discharge data, temperature, or water quality data that has been recorded and can be made available. The HDR team is thoroughly familiar with the site and feels that much of the information already existing in the 2009 Administrative Draft Fish Passage Assessment can be amended, updated, and augmented with any new information available through the District or already collected as part of projects recently completed by HDR. Reservoir data from water years subsequent to 1999 can be added to the period of record and characterized into wet, normal, and dry operational conditions. Additional USGS and District records can be combined with the previous period of record to update the available hydrology data set. The updated hydrology and dam stage records can be used to select appropriate ranges of flows and reservoir elevations anticipated during the periods of fish migration established as part of this task.

- **Operational data** pertinent to the current purpose, function, and objectives of LPD are to include any rule curves, instream flow enhancement objectives, operational scenarios or characterizations, historic reservoir stage data, maintenance requirements, outlet works operations, safety requirements, or similar type information related to the reservoirs function and specific measures required to achieve facility objectives. It will be necessary as part of this process by which the Carmel River instream flow committee uses information to make reservoir releases during summer low-flow periods.
- **Biological data** and fisheries resources will be summarized, including a clear description of the species and life stages targeted for upstream and downstream passage (inclusive of other steelhead and resident life histories exhibited in the Carmel River), migration periodicity for each target species and life stage, known fish abundance and estimates of current and future peak rates of migration, and biological performance objectives for the Carmel River. The team recognizes that only limited data regarding upstream and downstream migration will be available for this study. The Consultant Team will collect additional data obtained at San Clemente dam prior to its decommissioning, trap and transport data available for the LPD adult fish collection facility operations, in addition to trapping and monitoring data of juveniles and adults available through efforts by the District. This newest information can be used to augment the baseline already established in the 2009 report. As required in other tasks, the information gaps present in the biological framework will be identified and discussed with the TRC.

Deliverables: a compilation of background information that characterizes the physical, operational, and biological basis for this project

TASK 1-2 OBTAIN BATHYMETRIC AND TOPOGRAPHIC DATA FOR LOS PADRES RESERVOIR

As part of previous projects, the HDR team has been involved in the use, evaluation, and collection of various forms of survey and bathymetric information for the project area. We recognize that the California State University of Monterey Bay conducted bathymetric data collection and calculation of a stage-volume relationship in 2008. We also recognize that substantial sedimentation was anticipated in the years following the 2008 survey, which has likely modified lake bed contours and the stage-volume relationship. As part of the 2010 fish passage facility design work performed by HDR, Cal-Am hired Bestor Engineering to perform detailed aerial mapping and surveys of the dam, spillway, dam face, stilling basin and outlet areas. Bestor was asked to augment bathymetric information present in the stilling basin and additional information was later added to the available survey files and stitched together with available reservoir bathymetry in February of 2011.

In addition to the quantitative information generated as part of previous work performed at LPD, both Jon Mann and Mike Garello were present at the site throughout various periods of design and construction during implementation of the downstream fish passage project. During those efforts, Mike and Jon had the opportunity to observe and photograph conditions representing extremely low reservoir elevations and an empty stilling basin. These

first-hand accounts bring additional insight and applicable experiences which are useful when characterizing reservoir, and stilling basin conditions with respect to their influence on fish collection, fish passage, and fish passage facility development.

While a combination of laser scanning and multi-beam bathymetry will result in a highly detailed and accurate surface model of the reservoir and surrounding upland areas, using these technologies can be costly and may provide a level of detail that exceeds the requirements for the deliverables outlined in the RFP. These technologies are traditionally used to characterize specific features on the landscape (submerged objects, dredging trenches, buildings, and other facilities), which are not included in the list of deliverables for this task.

HDR has provided the same types of required deliverables for other clients while utilizing less costly methods that still meet the RFP requirements. HDR recommends that an approach that utilizes single-beam bathymetric survey methods combined with aerial LiDAR for upland areas be considered. This approach would still provide accurate volumetric information at 5-foot vertical intervals or better within the reservoir area and the cross sections at 100 feet horizontally per the RFP.

Single-beam sonar data survey data will be collected in parallel and perpendicular transects at a variable spacing in order to best delineate the bathymetric elevations in an efficient manner given the special extents of reservoir features. A transect will also be run along the perimeter of the ponds so that the border of the ponds is captured for surface and contour generation (i.e., so interpolation is not required to fill in the perimeter).

Sonar will be mounted off the bow or side of a vessel on a pole. A standard bar-check (defined in USACE Hydrographic Surveying Manual EM 1110-2-1003) will be used to calibrate the echosounder. Calibration facilitates proper determination of measured water depths based on speed of sound in the water. GPS receiver will be mounted on top of the sonar pole mount if possible; or, the horizontal offsets will be measured and applied during post-processing to ensure proper positioning of measured soundings.

The sonar will comprise a 200 kHz frequency (Standard frequency for bathymetric surveying). A 3.5 degree transducer (i.e., small beam width) will be used to obtain the most accurate soundings. A differential kinematic GPS (RTK GPS) will be used to position the soundings centimeter accuracy.

HDR has also determined that aerial LiDAR was collected in 2010 for the region surrounding and including the Los Padres Dam and Reservoir. These data have 2-meter point spacing and are vertically accurate to approximately 10 centimeters (0.3 feet). A processed bare earth DEM is publically available to characterize upland areas in the vicinity of the reservoir and convert it to the project coordinate system and Datum. LiDAR scientists from the HDR team would then evaluate the data for any inconsistencies or errors. Assuming no errors are discovered or discovered errors can be easily reconciled, members of the HDR team would collect RTK field topographic positions to supplement and validate the aerial LiDAR data, focusing efforts on the upstream extent of the data to ensure any above Normal Maximum Water Surface Elevation (NMSWE) area calculations accurately represent the extent of upstream contours. If previous upland surveys are available from previous efforts.

While a multi-beam survey provides a census level representation of the inundated reservoir area, a single-beam survey is a sampling methodology intended to characterize trends. The area in between transects will be interpolated using industry standard methodologies, resulting in a volumetrically unbiased and accurate representation of the reservoir bottom.

The information collected will be synthesized into compiled GIS and AutoCAD compatible formats to develop representative 3D surface visualizations, create representative cross-sections, and to verify the reservoir inundation areas and hydraulic pathways suitable for fish passage at discrete intervals (5 feet or smaller) of elevation.

Deliverables: a report describing methods used; a digital elevation model of Los Padres Reservoir; reservoir cross-sections at 100-foot intervals; and inspection reports, including photos and descriptions of passage through reservoir sediments

TASK 1-3 PREPARE EVALUATION CRITERIA

In addition to compilation of background material, the Consultant team will begin tailoring project-specific definitions of the comparison and evaluation criteria. These specific criteria will be categorized as technical, biological, and economic feasibility criteria. Refinements to these definitions will be made initially based upon known challenges and experiences as part of the Santa Felicia project, as well as the team's knowledge of various LPD project constraints. A draft list of criteria and definitions will be prepared for distribution and consideration prior to the TRC Meeting No. 1.

Deliverables: draft feasibility criteria

TASK 1-4 IDENTIFY CRITICAL DATA GAPS

The Consultant Team will identify missing or additional key information and will provide recommended steps to acquire the necessary material. In some cases, data gaps and the need to collect additional information will require direct communication with the TRC. The process to address any information gaps will be identified based on the specifics of the necessary information, and a plan to address this information need will be formulated for TRC and Advisory Group review. In some cases, reasonable and defendable assumptions may be adopted by the TRC for the purposes of carrying out this study. In other cases, a clear path forward to obtain additional data may need to be formulated. It is assumed that any additional data collection not specifically stated in this technical scope of work will require additional contract modification with the Consultant Team. All data gaps, decisions, working assumptions, and corresponding methods for resolving data gaps will be recorded in a data gaps log that will be tracked as a living document throughout the course of this study. Critical data gap identification and resolution is intended to occur throughout various study plan work activities rather than at discrete points in the study plan.

Deliverables: data gaps tracking log which identifies missing data or information and a proposal for acquiring data or information

Task 2: Prepare Biological Performance Tool (Consultant and TRC)

"South-Central California Coast Steelhead are adapted to deal with highly variable rainfall and temperature conditions, but are otherwise similar to other steelhead." California Trout

Successfully restoring South-Central California Coast steelhead (SCCCS) access to and from spawning and rearing habitats upstream of Los Padres Dam (LPD) involves a range of biological, engineering, and environmental considerations. SCCCS exhibit variations in life history strategies, including age at migration, migration timing, and habitat use. These different life history strategies (for example, fluvial anadromous, freshwater resident, and lagoon anadromous) allow SCCCS to take advantage of changes in environmental conditions caused by drought, fire, or floods. Little is known about the proportion of juvenile steelhead exhibiting these variations in life history strategies, and life history expressions may change from year to year, and from upstream to downstream habitats. These variations in life history are particularly challenging when evaluating the influence of alternate fish passage facility designs. One tool to assist in fish passage feasibility evaluations is a BPT.

When faced with the need to integrate site-specific hydrology, dam, reservoir, and river features, localized steelhead life histories, and site-specific migration cues, R2 and HDR team members, in coordination with water district, state, and federal biologists, developed a quantitative tool to evaluate site-specific conditions for steelhead passage at Santa Felicia Dam, California. The BPT was successfully used to evaluate optimum hydraulic capacities of alternate downstream fish passage facilities and estimate steelhead migrant survival for alternate reservoir and dam passage scenarios.

The BPT can be adapted to calculate survival indices based on size, timing, and environmental conditions of migrating steelhead and evaluate fish passage facility performance under a range of life history expressions. This ability to evaluate

the influence of alternate facilities under a range of life history assumptions will be particularly useful for LPD where the proportion of SCCCS migrating as fry, yearling, multiple-year smolts, or adults may be poorly understood.

The Consultant Team will develop a BPT that will be used to estimate potential steelhead passage survival using the downstream fish passage concepts identified and refined in the feasibility study. In addition, compiling information on upstream steelhead migratory behavior based on collected data will help identify the type, location, size, and timing of potential upstream fish passage facility components and the necessary coordination with existing downstream passage facilities. Additional information needs may be defined during the compilation and studies may be outlined and planned for implementation to provide such information. The proportion of the migrant population using each alternative and the estimated survival associated with new upstream pathways will determine the biological performance and contribute to the feasibility evaluation of fish passage concepts identified and developed in the study. Where information on Carmel River SCCCS is lacking, the BPT will be used to evaluate facility performance under a range of life history strategies.

TASK 2-1 COMPILE BACKGROUND INFORMATION ON MIGRATORY PATHWAYS (CONSULTANT)

Information needed to develop and populate the fish passage model (that is, the BPT) includes physical, hydraulic, and biological information on conditions in the watershed and in particular at Los Padres Reservoir, flow releases, and operational characteristics of downstream fish passage facilities. Results of studies conducted at other water control projects, conceptual-level drawings of potential fish passage facilities, and, where appropriate, the professional opinions of the TRC may also be compiled.

Passage conditions will be evaluated using average daily flow data for representative average, wet, and dry years. Project operations data will include daily reservoir water surface elevations, average daily flow releases through the outlet pipes and spillway, and periodic water quality data. Recent data on releases from storage and reservoir pool levels will be reviewed. This is presumed to be representative of current and proposed future conditions. Representative years will be selected in coordination with members of the TRC to evaluate fish passage facilities. Information compiled as part of Task 2-1 will be used to populate the fish passage model and will be presented with a progress report at the end of this task.

Deliverables: technical memo characterizing available Los Padres Reservoir data and recommendation of target flows/reservoir elevations for passage, and a review of studies and concepts appropriate to LPD fish passage

TASK 2-2 REVIEW AND IDENTIFY CRITICAL BIOLOGICAL DATA GAPS (CONSULTANT AND TRC)

The TRC will discuss the information complied during planned meetings and determine its completeness for the fish passage biological evaluation needs. Evaluation of upstream and downstream migratory pathways requires structural and hydrologic information and assumptions regarding steelhead behavior. No site-specific data are available to make survival estimates, so these will depend on data collected at similar facilities, literature values, or professional opinions of the researchers.

As noted in the RFP, the focus of this study is on the engineering constraints, biological needs of steelhead (i.e., ability of different life stages to use a particular alternative), and the economic costs of volitional passage. Should definitive data on steelhead use and population in the upper watershed become available, it could be factored into the recommendations for this study.

If additional information is needed, the TRC will work with HDR to take appropriate steps to acquire the necessary material or develop reasonable assumptions. The process to address information gaps will be identified based on the specifics of the information. If data gaps are identified that prove critical to the feasibility evaluations and TRC recommendations, the TRC will identify the most appropriate means to fill those gaps, including influence on ability to complete a meaningful analysis, timing to acquire and evaluate the information, and potential outcomes, as they could affect the recommendations by the TRC. This task could be combined with the efforts under Task 1-4 for identifying the critical data gaps. The following

steps will be utilized in Task 2-2 as led by the HDR team:

- Perform a background review of biological information, and identify information needs
- Identify any biologically-related critical data gaps
- The TRC will review information from Task 1 (background) and Task 2 (BPT) with the Consultant to determine suitability for work to evaluate passage facilities. It is expected that review will be completed using web access

  Deliverables: incorporation of data needs into the data log developed as part of Task 1-4

TASK 2-3 DEVELOP AND POPULATE FISH PASSAGE MODEL WITH AVAILABLE INFORMATION

The Consultant Team will evaluate potential fish passage facilities at the Project using the BPT that tracks survival at LPD and reservoir. BPT will be used to conduct a relative comparison of the biological performance of downstream fish passage facilities. An evaluation of the uncertainty and sensitivity of the assumptions used to develop the mathematical functions will provide an indication of the robustness of modeling results. Evaluation of critical parameters, and background information available to define them, will be evaluated to determine the influence of the values in evaluating the potential feasibility of fish passage facilities.

The following steps will be utilized in Task 2-3:

- Finalize BPT, which will be a spreadsheet-based passage evaluation model.
- Populate the model with data and perform sensitivity runs to assess the model's output prior to use on the fish passage concepts and alternatives.

  Deliverables: a compilation of background information related to the project biology; a draft of the spreadsheet based model and data set; and a sample of a model run with output and a preliminary sensitivity analysis

Task 3: Identify Fish Passage Concepts (Consultant, TRC)

This task is a crucial first step to enlist the TRC in agreement on the fish passage concepts to be evaluated and builds upon the knowledge gained from compiling existing baseline data and establishing the site-specific operational, physical, and biological basis of design completed in previous tasks. Our approach includes the development and early distribution of a functional fish passage technology assessment and determination of applicability to the TRC for review and consideration prior to the TRC Meeting No. 1. The functional assessment is performed by starting with the basic building blocks of fish passage (e.g., attract fish, guide fish, collect fish, convey fish, transport fish, hold fish, etc.). All known technologies that accommodate each function will be identified and cross-referenced with applicable NOAA and CDFW design criteria, site-specific physical conditions, and biological objectives. Technologies with higher levels of applicability will be identified and recommended for use in development of alternative concepts. Technologies with limited applicability will be flagged for consideration. Technologies appearing to have fatal flaws or only limited levels of applicability to site specific conditions will be recommended for removal from consideration. Technologies and their applicability will be based upon their use at other existing facilities, known successes or failures, and their range of documented performance at other locations. Experimental technologies will be accommodated in the process as available information allows. For example, technologies such as WHOOOSH and passive multi-level fixed collectors with a helical bypass (the Helix) will be discussed. Consultant team will formulate and list conceptual-level alternatives based upon the results of the functional assessment that will be introduced to the TRC for discussion purposes. The results of the functional assessment and compilation of conceptual alternatives will be distributed to the TRC for review and consideration three to six weeks prior to the meeting, in addition to the operational, physical, and biological baseline data already prepared as part of Tasks 1 and 2.

This brainstorming tactic is a normal and very necessary part of concept development and has been successfully used in our other projects such as the fish passage feasibility studies performed by HDR and AECOM on Alameda Creek and by HDR on the Chehalis Basin Strategy Project. On these occasions, the preliminary functional assessment was prepared and submitted to the corresponding technical committee for review, consideration, and to initiate discussion. The resulting document provides a cross-section of potential building blocks (fish passage technologies or components), an initial discussion on their applicability relative to specific project goals and site-specific conditions, a list of potential alternative concepts compiled from the most applicable fish passage technologies, and discussion relative to the inclusion or removal from further evaluation and alternative formulation. TRC participants will have time to consider the listed technologies and come to TRC Meeting No. 1 prepared with additional information and feedback.

TASK 3-1 TRC MEETING #1 – CONCEPT WORKSHOP

Under the coordination and guidance of the meeting facilitators provided by the HDR team, the TRC and HDR team will meet to discuss the results of the fish passage functional assessment and will consider the selection of fish passage concepts for further evaluation in light of dam operations, physical, and biological information collected as part of Tasks 1. The meeting will include a presentation summarizing the primary operational, physical, and biological parameters that inform the type, size, configuration and effectiveness of fish passage technologies or concepts. Additional review of proposed comparison and evaluation criteria will be conducted to make sure that all attendees are approaching discussions and consideration of options off of the same basis of comparison. Potential for fatally flawed options and technologies that don't appear to meet performance expectations or specific constraints identified by DSOD or others will be discussed. Ultimately, the TRC will collaborate closely with the HDR team to create a list of technically feasible concepts that meet the basic criteria for further consideration and to define what constitutes fatal flaws for feasibility. Concepts selected for further consideration will be assembled into like categories and considerations for upstream, downstream, and combined passage facilities will be addressed. Documentation for concepts not selected for further evaluation will be developed for the project record.

An initial alternative evaluation matrix will be formulated based upon any refinements made to the evaluation criteria that occur during the TRC Meeting No. 1. It is assumed that the matrix will be based upon a grid analysis technique (Pugh Matrix) with weighted evaluation criteria and scoring of how well each alternative meets the evaluation criteria definition. Decisions regarding the weighting of each evaluation criteria, as well as the ranking or scoring of alternatives will be made at this meeting. For example, incorporation of criteria weighting techniques, such as the unranked paired comparison technique, can be employed here to manage the subjectivity introduced into the process and to maintain the integrity of the grid analysis approach. The HDR team will facilitate the discussion by providing numerous previous examples, from other successful projects completed by the HDR team, their advantages and disadvantages, and discussion of tradeoffs as part of this meeting. A refined draft of the grid analysis technique will be defined and agreed upon prior to the end of the meeting.

Prior to adjourning, a summary of decisions recorded, next steps, milestone dates, and priority information needs will be discussed and included for the meeting documentation.

It is assumed that a facilitator and project manager from the HDR team will attend the meeting in person while the remaining participants from the HDR team will attend via conference call, webinar, and/or video conference to control meeting costs in a manner that maintains meeting effectiveness and efficiency. The HDR team will provide the means for conference calling, webinars, and or video conferencing as long as phone lines and high speed internet connections are available.

Deliverables: electronic copies of a technical memo describing design parameters, functional fish assessment of fish passage technologies, initial summary of concepts, evaluation criteria and definitions, and initial analysis; base drawings; and a workshop agenda

TASK 3-2 MEETING #1 SUMMARY

The Consultant Team will prepare a document summarizing the primary discussion topics and results of TRC Meeting No. 1. The document will clearly note meeting discussion topics, accomplishments, major decisions, next steps, milestone dates, and priority information needs. This summary document will be distributed within two weeks of the meeting date to the TRC and to the Advisory Group. As part of the summary, updates and refinements to work products prepared in previous tasks will be incorporated as a result of the feedback obtained during the TRC Meeting No. 1.

Deliverables: meeting summary, including updated criteria document and a draft evaluation spreadsheet; list of fish passage concepts identified in the session; list of additional information necessary to reduce uncertainty or risks associated with each concept; a discussion of the fatal flaw analysis and documentation of concepts eliminated from further consideration at this time; status update on the biological performance tool and any further development recommended by the Panel; and a short list of fish passage concepts for further development

Task 4: Alternative Development and Refinement (Consultant and TRC)

The intent of the Task 4 activities is to use the concepts selected for further evaluation in Task 3, formulate a series of fish passage alternatives, and develop initial narrative and illustrative products to depict the type, size, configuration, functionality, and operation of each alternative. Site-specific constraints, as well as risk and uncertainties for each alternative, will be defined as part of this task. The alternative development process includes the following steps: 1) development of alternatives; 2) scoring of initial alternatives using the grid matrix with input from the TRC; 3) refinement of alternatives based upon the results and feedback obtained in TRC Meeting No. 2; 4) submittion of refined alternatives and scoring matrix to TRC for independent review and feedback, and 5) facilitation of teleconference webinar to discuss comments and feedback prior to preparation of the Draft Fish Passage Feasibility Report. These activities associated with Task 4 are described further in the following sections.

TASK 4-1 DEVELOP INITIAL CONCEPTS INTO ALTERNATIVES (CONSULTANT)

The Consultant Team will use the concepts selected for further evaluation as part of Task 3 and begin the process of formulating comprehensive fish passage alternatives that address the objectives and constraints for this project. In general, each alternative will be developed to clearly define the type, size, and configuration of the primary alternative components and also to describe its theory of operation, anticipated functionality and performance with respect to site constraints, and anticipated environmental operating conditions. The physical illustration and description of components will be developed to a level of detail sufficient to inform Class V Opinion of Probable Construction Cost (OPCC) development.

As the alternatives are developed, the HDR team will identify any concepts or alternatives that appear to be fatally flawed or infeasible. Those alternatives will be modified if possible or a recommendation for removal from evaluation will be made to the TRC. The HDR team will retain at least one upstream volitional alternative for further evaluation during this alternative development process.

For each alternative, the HDR team will generate both narrative and illustrative information as follows:

- A clear narrative description summarizing the primary alternative components and theory of operation
- Hydraulic operational parameters and characteristics created as figures in the text or HGLs on the drawings
- Plan and sectional drawings to scale on 11x17 drawing sheets
- Benefits, risks, and a comparison of advantages and disadvantages comparable to other alternatives being formulated based upon the evaluation criteria developed in Task 3
- Results from application of the BPT
- Initial OPCC values and summary of relative anticipated operating costs (high, medium, or low)

As part of this task, the Consultant will compile the grid form evaluation matrix based upon the evaluation criteria established in Meeting #1 and the alternatives developed as part of this task. Scores for this matrix will be left blank and the matrix will be prepared for use in TRC Meeting No. 2 described below.

All OPCC and operational costs will be developed to a Class V level of detail based upon the information available at the time. As requested in the RFP, cost data will be developed for comparative purposes. The Consultant Team recognizes the risk and uncertainty in developing costs for complex facilities such as the type of projects implemented for the purposes of fish passage. An article titled "Planning Pacific Salmon and Steelhead Reintroductions: Aimed at Long-Term Viability and Recovery," in the North American Journal of Fisheries Management (Anderson, Joseph et. al., 2014) discusses the disparity between costs incurred and populations recovered. To proactively inform our ability to accurately address project costs and to reduce the disparity between planning level costs and actual costs that are realized by so many project owners throughout the Pacific States, the HDR Team has compiled lists feasibility level, design level, and construction level cost data for numerous similar facilities throughout the Pacific implemented in the past decade. These activities were performed as part of the feasibility evaluations recently performed for many of the projects presented in our team qualifications. Given the availability of this information, The HDR Team will employ the use of parametric cost estimates, scaled and calibrated to this site for the purposes of cost development.

Deliverables: compilation of narratives and illustrations of alternatives; a compiled evaluation matrix; and supporting documentation

TASK 4-2 MEETING #2 – REVIEW AND REFINE ALTERNATIVES (CONSULTANT, TRC)

The facilitation experts provided by the Consultant Team will coordinate and facilitate a second meeting with the TRC. The overall intent of the second meeting will be to discuss and refine passage alternatives while focusing on the initial completion of the evaluation matrix. In a collaborative forum, rates will be selected to represent how well an alternative achieves a given evaluation criteria based upon the system generated in Task 3 and results will be computed representing the overall score given to an alternative. Higher scores will represent alternatives that reflect a great level of compatibility with the selected evaluation criteria. The results of the grid analysis will be used as a decision tool to further refine facility components, identify data gaps, and assess the potential influence of sensitivity and uncertainties. A progress summary on the use of the BPT as well as identification of additional fatal flaws or modifications required for alternatives will be discussed.

HDR team will incorporate the results and feedback obtained during Meeting No. 2 to update descriptions and drawings for the fish passage alternatives to more effectively meet project objectives. The results will be presented to the TRC at the meeting, with the goals of receiving input and the TRC reaching consensus on a list of alternatives for final refinement in Task 5.

It is assumed that a facilitator and project manager from the Consultant Team will attend the meeting in person while the remaining participants from the Consultant Team will attend via conference call, webinar, and/or video conference to control meeting costs in a manner than maintains meeting effectiveness and efficiency. The Consultant Team will provide the means for conference calling, webinars, and or video conferencing as long as phone lines and high speed internet connections are available.

Deliverable: meeting coordination, workshop agenda, and attendance

TASK 4-3 MEETING #2 SUMMARY

The Consultant Team will prepare a document summarizing the primary discussion topics and results of TRC Meeting No. 2. The document will clearly note meeting discussion topics, accomplishments, major decisions, next steps, milestone dates, and priority information needs. As part of the summary, updates and refinements to work products prepared in previous tasks will be incorporated as a result of the feedback obtained during the TRC Meeting No. 2. The HDR team will incorporate updated narratives, illustrations, and supporting documentation of draft fish passage alternatives This summary document will be distributed

within three weeks of the meeting date to the TRC and to the Advisory Group.

Deliverables: status update on the biological performance tool and any further development recommended by the TRC and/or Group; final evaluation spreadsheet; list of fish passage alternatives identified in the session; list of additional information necessary to reduce uncertainty or risks associated with each alternative; discussion of the fatal flaw analysis and documentation of alternatives eliminated from further consideration at this time; and a recommendation of alternatives for further development.

TASK 4-4 TELECONFERENCE MEETING #3

The facilitation experts provided by the HDR team will coordinate and facilitate a third meeting with the TRC for the purposes of reviewing the most up-to-date alternative descriptions, performance data, and to review feedback on the revised work products distributed in Task 4-3. The agenda will also include a discussion topic focused on the elimination of any alternatives that appear to be less favorable from a performance or feasibility level. During the meeting, the TRC and the HDR team will work collaboratively to perform a final determination of volitional passage, adjust prioritized or ranked alternatives based upon their scoring and relative level of performance with respect to project evaluation criteria, and to agree on recommendations for the final documentation.

If, at the conclusion of this meeting, the consensus is that upstream volitional passage is not feasible, the reasoning and justification for this conclusion will be documented for the project record.

The Consultant Team will record results and feedback obtained during Meeting No. 3 and will incorporate updated narratives, illustration, and supporting documentation of the final fish passage alternatives into the Draft Fish Passage Feasibility Report prepared as part of Task 6.

It is assumed that attendance will be via conference call, webinar, and/or video conference to control meeting costs in a manner than maintains meeting effectiveness and efficiency. The Consultant Team will provide the means for conference calling, webinars, and or video conferencing for participants that have access to high speed internet.

Deliverables: meeting coordination, agenda, and attendance, documentation of the meeting and revisions to alternatives will be incorporated into the Draft Fish Passage Feasibility Report.

Task 5: Present Final Set of Passage Alternatives (Consultant, TRC with Advisory Group input)

The objective of Task 5 will be to communicate with the Advisory Group the results of Tasks 1 through 4 and obtain feedback from the community prior to finalizing the fish passage alternatives.

TASK 5-1 PRESENT FINAL SET OF PASSAGE ALTERNATIVES (CONSULTANT, TRC, ADVISORY GROUP)

The Consultant Team will coordinate and facilitate a meeting with the TRC and Advisory Group to discuss the refined set of passage alternatives developed and updated as part of Task 5 activities.

Deliverable: meeting summary that includes comments from the Advisory Group; a copy of any written materials submitted by the Advisory Group; and any follow-up response from the Consultant or TRC

Task 6: Reporting and Fish Passage Recommendations (Consultant and TRC)

Task 6 is structured to organize and report on the full development of the final fish passage alternatives. A draft and final feasibility report will be developed that will document the process followed, development of fish passage alternatives, evaluation criteria, summary of alternatives eliminated with justification for the eliminations, a final feasibility evaluation and the final recommended alternative(s). Each alternative selected will be described with text and conceptual level design drawings, an OPCC, estimate of operating and maintenance costs, an implementation schedule and description of construction issues, listing of pros and cons, and a summary and details of the final evaluation.

At least one volitional alternative for upstream passage will be described, regardless of its feasibility; however, if all volitional alternatives are determined to have one or more fatal flaws,

the additional work described in this task may not be carried out.

The final feasibility report will include the TRC recommendation regarding the technical and biological feasibility of providing volitional steelhead passage at LPD and other recommended alternatives. If a volitional passage facility cannot be recommended due to site constraints, uncertainties, or other factors the final report will document the rationale. Recommendations for next steps will be developed, which might include: fish passage alternatives to be pursued; further studies, if needed to address uncertainties or risk; or additional analysis to determine economic feasibility. The draft report will be presented to the TRC and Advisory Group for input.

Depending on the nature of comments, the draft report may be finalized or, if additional issues are raised, the report may be amended and recirculated for final review.

TASK 6-1 PREPARE DRAFT FISH PASSAGE FEASIBILITY REPORT (CONSULTANT, TRC)

The Consultant and TRC will review the final set of alternatives and recommendations made by the Advisory Group and the TRC will make a final recommendation. A Draft Fish Passage Feasibility Report will be developed in this task to document the scope of the study, background information used, design criteria, the process utilized to conduct the feasibility analyses, the results of the analyses and the TRC recommendation. It is anticipated that the report will include the following contents but that the final outline will be based upon comments received from the TRC and Advisory Group as part of Task 5:

- Introduction
  - Problem statement
  - Purpose, objective
  - Fish passage goal statement
  - Relevance to Steelhead Recovery Plan
  - Overview of the study process
  - Summary of meetings, coordination, and progress reports
- Overview of the BPT
  - Overview of the spreadsheet based fish passage model
- Descriptions of alternatives
  - Short descriptions of all initial brainstorm concepts (functional assessment of fish passage technologies)
  - Documentation of concepts that were dropped for fatal flaws or low ranking
  - Preferred concepts
  - Detailed physical, functional, and operational descriptions
  - Summary of disadvantages and advantages
  - Implementation challenges and uncertainties
  - Constructability considerations
  - Expected performance for upstream and downstream fish passage (based on the biological performance tool)
  - Opinions of probable construction and operating costs
  - Two to five scale drawings will be provided for each alternative, with applicable site overviews, site plans, sections, elevations, and hydraulic design parameters clearly defined.
- Evaluation of Alternatives
  - Description of evaluation process
  - Description of evaluation matrix and criteria
  - Weighting and scoring
  - Criteria that could lead to fatal flaws
  - Graphics and summaries of evaluation
  - Ranking of alternatives based on evaluation matrix
  - Ranking of alternatives based just on fish passage criteria
  - Relative fish passage ranking compared to cost and operations criteria
- Conclusions and Recommendations
- References cited

The Consultant will provide a draft report to the TRC for review. After a 30-calendar day review period, the Consultant will proceed to incorporate comments provided by the TRC to date and finalize the document. If no substantive issues are raised during the review, the Consultant will move on to production of the Final Report; however, if substantive issues are raised, the Consultant, Cal-Am, and the District may elect to work directly with the commenter(s) to address any issues, or hold a meeting to address issues.

Task 7 Project Management

The Project Manager for the Consultant team will implement effective project management procedures and communication with the District throughout the duration of the project. Activities anticipated for this task include the following:

- Management and oversight of all "consultant in-house" project personnel and sub consultants. This shall include monitoring budgets, schedule, financial reporting timelines, personnel assignments, and ensuring that work not expressly contained within the scope of work is not performed without prior written authorization from the District.
- Preparation and update of a project schedule: A project schedule shall be prepared and regularly updated to reflect work progress, spending progress, changes in scope, or other activities that may impact the project schedule and costs.
- Monthly project progress status and expenditure reports shall be prepared and delivered to the District's project manager. The expenditure report shall include a summary of expenditures for the preceding month, monthly and project lifecycle spending projection tracking, project-to-date for each task and the total project, along with estimates on percentage completion of the scope of services and earned value analysis.
- Project progress meetings will be held to update all members of the team on the status of the project, to identify uncertainties or impacts to schedule, and to discuss course corrections when necessary to keep the project moving forward.
- Coordination and facilitation of other project related meetings such as: 1) kick-off meeting with MPWMD and Cal-Am; 2) review of existing and proposed operations in the field w/MPWMD and Cal-Am; 3) meetings with regulatory agencies as required to determine constraints.

Deliverables: Invoices; progress reports; copies of communications among agencies and consultants (if appropriate); and meeting minutes

Optional Tasks

The following optional tasks are offered for the consideration of the District and TRC.

OPTIONAL TASK 1 OBTAIN MULTI-BEAM SONAR BATHYMETRIC AND TOPOGRAPHIC DATA FOR LOS PADRES RESERVOIR

As a replacement for proposed Task 1-2, the Consultant Team will collect a full-bottom coverage, multi-beam sonar bathymetric survey of the reservoir to yield high-resolution, high-accuracy elevations of the present reservoir bottom and side slope surfaces. A Teledyne Odom MB2 multi-beam echo-sounder is recommended for this project. The MB2 is developed for rapid mobilization and is optimized for deployment on smaller vessels. It features a selectable swath width of up to 140 degrees, acoustic beam widths of 1.8º, user-selectable frequency range of 200 to 460 kHz, and an integrated real-time sound velocity profiler (SVP) sensor. Its ultimate range resolution is 2 cm. The MB2 will be combined with a Coda Octopus F-180 GPS-aided inertial motion unit to accurately and rapidly determine the three-dimensional position and orientation of the sonar.

Position and heading of the vessel-mounted system will be determined through transmission of real-time kinematic (RTK) GPS receiving corrections from a base station located at the previously described land-side established control point. The complete sonar system will yield precise positioning and sounding measurements. Hydrographic survey data will be collected and processed using XLEM HYPACK HYSWEEP software. The processed data result in a dense and highly detailed point cloud representation of the reservoir area of bathymetric coverage.

The information collected will be synthesized into compiled GIS and AutoCAD compatible formats to develop representative 3D surface visualizations, create representative cross-sections, and to verify the reservoir inundation areas and hydraulic pathways suitable for fish passage at discrete intervals (5 feet or smaller) of elevation.

Deliverables: a report describing methods used; a digital elevation model of Los Padres Reservoir; reservoir cross-sections at 100-foot

intervals; and inspection reports including photos and descriptions of passage through reservoir sediments

OPTIONAL TASK 2 - PRESENT INITIAL SET OF PASSAGE ALTERNATIVES (CONSULTANT, TRC, ADVISORY GROUP)

The Consultant Team will coordinate and facilitate a meeting with the TRC and Advisory Group to discuss the initial set of passage alternatives developed as part of early Task 4 activities. This meeting would occur earlier in the development of alternatives in addition to Advisory Group meeting already proposed. The purpose of this meeting would be to reach out and collaborate more closely with the Advisory Group prior to completion of the final alternatives.

Deliverable: meeting summary that includes comments from the Advisory Group; a copy of any written materials submitted by the Advisory Group; and any follow-up response from the Consultant or TRC

OPTIONAL TASK 3 - TRC MEETING NO. 3 AND MEETING SUMMARY REPORT– DETERMINATION OF FEASIBILITY AND SELECTION OF ALTERNATIVE(S) (CONSULTANT AND TRC)

As a replacement of the teleconference activity presented in Task 4-4, an additional face-to-face workshop could be added for the purposes of Alternative Refinement. For this task, the facilitation experts provided by the Consultant Team will coordinate and facilitate a third face-to-face workshop with the TRC for the purposes of reviewing the most up-to-date alternative descriptions and performance data and to eliminate any alternatives that appear to be less favorable from a performance or feasibility level. During the meeting, the TRC and the Consultant Team will work collaboratively to perform a final determination of volitional passage, prioritize or rank alternatives based upon their scoring and relative level of performance with respect to project evaluation criteria, and make selections for alternatives to recommend for the final documentation. If, at the conclusion of this meeting, the consensus is that upstream volitional passage is not feasible, the reasoning and justification for this conclusion will be documented for the project record.

In addition to meeting coordination and attendance, the Consultant Team will prepare a document summarizing the primary discussion topics and results of TRC Meeting No. 3. The document will clearly note meeting discussion topics, accomplishments, major decisions, next steps, milestone dates, and priority information needs. This summary document will be distributed within two weeks of the meeting date to the TRC and to the Advisory Group. As part of the summary, updates and refinements to work products prepared in previous tasks will be incorporated as a result of the feedback obtained during the TRC Meeting No. 3. Recommendations discussed pertinent to the selection of alternatives and feasiblity of the selected alternatives for the final report will be documented as well as any alternatives selected to not be carried forward.

Deliverables: final status of the biological performance tool and any further development recommended by the TRC; final evaluation spreadsheet; list of fish passage alternatives evaluated at the session; list of additional information necessary to reduce uncertainty or risks associated with each alternative; discussion of the fatal flaw analysis and documentation of alternatives eliminated from further consideration at this time; and a recommendation of alternatives for further development

7

Pricing

07 Pricing

Our project costs are summarized by task with a not-to-exceed amount for the proposed total costs. Tasks are presented with an estimated approximate level of effort in hours and the equivalent costs for that estimated level of effort for each task. Hours are provided for the prime and subconsultants combined. It is anticipated that the project budget will be managed to the total costs and not to the individual tasks budgets to provide flexibility and adaptability for subtle changes to the estimated level of efforts as tasks are completed.

Costs for optional tasks are available upon request.

Schedule

We are confident we can complete the scope of work within the anticipated 18-month timeline of the study. Using the approach outlined above, and if agreed to at the time of contracting, we anticipate being able to complete the study within 15 months.

Cost and Schedule Control

For all projects, HDR uses a proven schedule and cost control tracking system that includes a production schedule vs. actual progress tracking component and an earned value component comparing budget versus actual costs. This tracking capability is contained within an intranet-based company wide system. Projects are broken down into clearly trackable tasks, subtasks/work units that reflect a detailed view of the total array of activities required to accomplish the work consistent with the project scope of work and requirements. The project manager and discipline task leaders receive weekly updates on schedule and cost performance. The system also tracks and reports all subcontractor information within the same period.

Task	Description	Hours	Cost
1	**Feasibility Study Preparation (Consultant)**		
1-1	Compile Background Information	60	$9,751
1-2	Obtain Bathymetric and Topographic Data for Los Padres Reservoir	160	$27,562
1-3	Prepare Evaluation Criteria	18	$3,431
1-4	Identify Critical Data Gaps	38	$7,423
2	**Prepare Biological Performance Tool (Consultant and TRC)**		
2-1	Compile Background Information on Migratory Pathways (Consultant)	24	$4,893
2-2	Review and Identify Critical Biological Data Gaps (Consultant and TRC)		
2-3	Develop and Populate Fish Passage Model with Available Information	132	$21,682
3	**Identify Fish Passage Concepts (Consultant, TRC)**		
3-1	TRC Meeting #1 – Concept Workshop	78	$15,359
3-2	Meeting #1 Summary	86	$18,967
4	**Alternative Development and Refinement (Consultant, TRC with Advisory Group input)**		
4-1	Develop Initial Concepts into Alternatives (Consultant)	394	$48,656
4-2	Meeting #2 – Review and Refine Alternatives (Consultant, TRC)	60	$12,368
4-3	Meeting #2 Summary	58	$11,651
4-4	Teleconference Meeting #3 - Determination of Feasibility and Selection of Alternative(s) (Consultant and TRC)	32	$6,265
5	**Present Final Set of Passage Alternatives (Consultant, TRC with Advisory Group input)**		
5-1	Present Final Set of Passage Alternatives (Consultant, TRC, Advisory Group)	24	$4,828
6	**Reporting and Fish Passage Recommendations (Consultant and TRC)**		
6-1	Prepare Draft Fish Passage Feasibility Report (Consultant, TRC)	254	$41,526

7	**Project Management**		
7-1	General Project Management, Team and Client Coordination, Scheduling and Reporting	160	$24,602
7-2	Kickoff Meeting with MPWMD and Cal-Am including Site Visits	48	$6,705
7-3	QA/QC including Independent Technical Reviews Senior Technical Advisors Oversight	92	$14,837
	Total	**1,718**	**$280,597**

Prepared for

Monterey Peninsula Water Management District

March 25, 2016

LOS PADRES DAM
FISH PASSAGE FEASIBILITY STUDY

PROPOSAL

MWH®

BUILDING A BETTER WORLD

SECTION 6 – TECHNICAL ASPECTS

In accordance with the RFP instruction, this section will present MWH's technical project approach to the work. We have broken this section into the following areas to define our approach to completing this contract:

- Project Understanding and Approach. This is a high level description of MWH's understanding and general approach to successfully completing this project.
- Scope of Work. This section presents the detailed scope of work to be provided.
- Optional Tasks. Additional services that might be conserved by MPMWD to be added to the project at a later time.
- Confirmation Statement.

MWH APPROACH TO DELIVER THIS PROJECT

One of the reasons that we feel that our previous passage projects (and really all MWH projects) have been successful is that we maintain the focus of our team on the primary objective of the project. For this study, that will be to find if there exists a feasible method to provide 'unimpeded, safe and effective," upstream fish passage over Los Padres Dam for S-CCC steelhead, or not. We understand that MPWMD and Cal-Am have several choices to make regarding the future of LPD and the investments associated with continued ownership and operation of the dam. It will be our job to work with MPWMD, Cal-Am, the TRC and other stakeholders to provide a realistic assessment of passage over Los Padres dam.

MWH has assembled an outstanding team of experts with the specific skills and expertise required to work directly with MPWMD on this Study. The key professionals have extensive experience in all aspects of intake structure planning, design, and construction, and have worked together on other similar projects. Over the past 25 years, the MWH project team members alone have studied, designed, and constructed more than 50 fish passage projects. Including our partners Tetra Tech, Cramer Fish Sciences and BioAnalysts this number could easily be doubled. Adding fish passage to Los Padres is complicated. However, the number of viable concepts available is discrete and familiar to our team. We have reviewed these at many other similar sites. Our approach to MPWMD's project has been used many times and can be summarized as follow:

- Use industry experts to build and evaluating fish passage concepts.
- Establish clear and reasonable criteria with all parties at the onset of the project
- Quickly process and document the full list of possible passage concepts. Then, as quickly, utilize the collective expertise to eliminate the wild and unrealistic concepts and focus on real options.
- Look hard at the shortlist options and understand the real cost and benefits are for each concept
- Make a clear and concise conclusion that will stand up over time.

In the sections below we provide a narrative approach and thoughts behind how we will execute each of the six technical tasks.

TASK 1: FEASIBILITY STUDY PREPARATION

Detailed and accurate information is the cornerstone of the subsequent tasks. MWH, Cramer Fish Sciences, Tetra Tech and Whitson Engineering have all worked on the Carmel River or at Los Padres dam.

This knowledge gives us an advantage in understanding this history and knowing what information is available and relevant.

Hydrologic Evaluation

As part of this task, a review of the available hydrology and reservoir operations data will be carried out. This work will generally consist of a review and update, using more recent data, of the information contained in the 2009 Administrative Draft Los Padres Dam Fish Passage study. Data from the below Los Padres Reservoir gage provides the best data set to assess seasonal variability in outlet flows under existing (with-dam) conditions. Online mean-daily flow data are available for this gage from the MPWMD website from Water Year 2005 (WY2005) to the present, but records appear to be available back to WY2000. Although probably not necessary for this level of analysis, we assume the detailed 15-minute data from the stage recorder could be obtained from MPWMD if issues associated with intra-daily variability arise. Output from the Carmel Valley Simulation Model (CVSIM), which is used by MPWMD as a management tool to evaluate various water-supply alternatives for the Monterey Peninsula Water Supply Project EIR/EIS (MPWMD, 1994), will also be considered in the hydrologic assessment, as appropriate, particularly for evaluating any alternatives that involve operational changes.

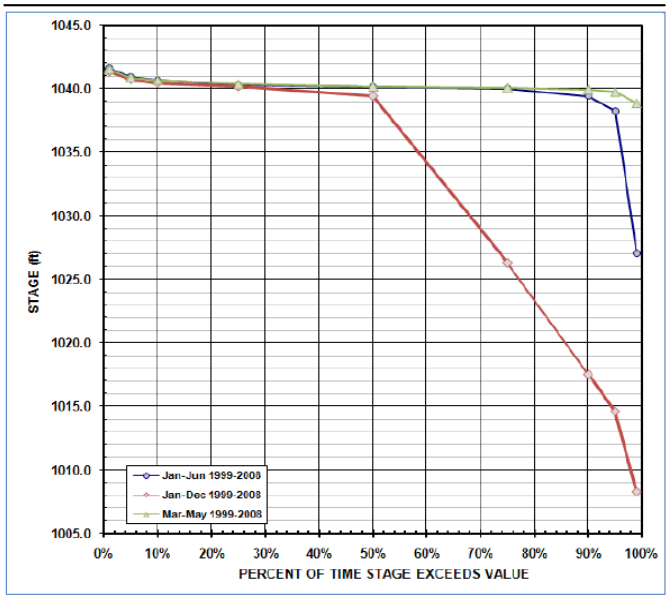


Figure 6-1. Los Padres Dam Stage Duration Curves for mean daily forebay elevations calculated over three specific time intervals for the period of record 1999 to 2008 (Figure 3 from 2009 Fish Passage Study)

We assume reservoir stage records are available from MPWMD for use in this assessment. Under current conditions, the reservoir normally fills in fall and winter, and releases from storage are made once the level drops below the spillway as outlined under a water budget process defined by a Memorandum of Agreement between CDFG, Cal-Am and MPWMD (CRAC, 2012). Using data from 1999 through 2008, the 2009 Fish Passage study concluded that the reservoir is essentially full (water-level about Elevation 1039 feet) more than half the year, but is above that level more than 90% of the time during the downstream fish passage period that extends from March through May (Figure 6-1). Results from the hydrologic and reservoir operations assessments will be used to quantify reservoir water levels and downstream flow rates over a range of water year scenarios, including an average water year, a wet water year, a single dry water year, and a multiple dry water year scenario.

Multibeam Bathymetry and Vessel-Mounted LiDAR Topography Surve

We propose to conduct a multibeam echosounder survey (MBES) of the Los Padres reservoir in support of the Los Padres Dam Fish Passage Feasibility Study. The survey will provide full (90+%) coverage surface data for use in characterizing the reservoir bottom and sides from full depth up to approximately elevation 1050-1060 feet (NGVD 1929)The survey will encompass the full storage capacity of the reservoir utilizing a combination of MBES and Vessel-Mounted LiDAR (VML) collected from our shallow draft hydrographic survey vessel. A California-based multibeam survey vessel (See Appendix) will be mobilized to the

reservoir and will outfit/calibrate the MBES/VML systems onsite. With suitable boat launch, high water levels, and absence of shallow water obstructions, the on-water portion of multibeam survey effort in the reservoir is expected to take one survey day.

Tetra Tech will utilize a single-head multibeam sonar, R2Sonic 2020 or Reson 7125 or equivalent, integrated with a high-accuracy POS MV/320 GNSS inertial navigation system (INS). An on-site Real-time kinematic GPS base station will be set up on survey control monuments provided by the local Whitson Engineering survey team. Daily quality control checks of the RTK system accuracies will be performed in accordance with Tetra Tech quality control procedures. The RTK GPS corrections, combined with the INS provide bathymetric survey sounding accuracies which meet or exceed Army Corps of Engineers and IHO Special Order survey requirements.

MBE Bathymetric and VML Topographic data will be processed using CARIS HIPS/SIPS 9.1 software. Data will be imported to Fledermaus and ESRI ArcGIS, bathymetric surfaces, contours and chart layouts will be created and electronic products delivered in PDF, SHP, and ASCII XYZ format files as required.

Reservoir Sedimentation Evaluation

Sedimentation has significantly affected reservoir storage capacity since construction of the dam in 1949. The initial storage capacity at the time of construction was about 3,130 ac-ft. Between that time and 1980, over 1,130 ac-ft of sediment had deposited in the reservoir, a significant portion of which occurred following the 1977 Marble-Cone fire that burned nearly all of the upstream watershed (Hecht, 1981). Sediment dredging in 1984 removed more than 180 ac-ft of material, increasing the reservoir capacity to about 2,179 ac-ft (Smith et al, 2009). Bathymetric data collected in 2008 indicates that sedimentation had resulted in nearly a 50 percent reduction in storage capacity, with about 1,350 ac-ft of sediment accumulation at that time (Smith et al, 2009). These data suggest an average annual sediment inflow of about 20 ac-ft/year. Sediment management is a primary concern for MPWMD, both in terms of reservoir storage capacity and the effects of sedimentation on the downstream river (MPWMD, 2014). Sedimentation at the head of the reservoir may also create fish passage issues during portions of the fish passage period when the reservoir is not full and the delta at the head of the reservoir is exposed (Figure 6-2). At the time of the 2008 bathymetry, the topset elevation of the main part of the sediment delta is at about between 1039 feet and 1040 feet (Figure 6-3). The extent to which this elevation has changed since 2008 is not known, but considering the typical full-pool elevation of 1,040 feet, it is probably very similar, although the distal end may have moved downstream farther into the reservoir. As a result, we tentatively assume that fish passage issues would begin to occur when the reservoir level drops below about 1,040 feet.

Figure 6-2. Headcutting into the silt and organic deposits in the delta at the head of Los Padres Reservoir.

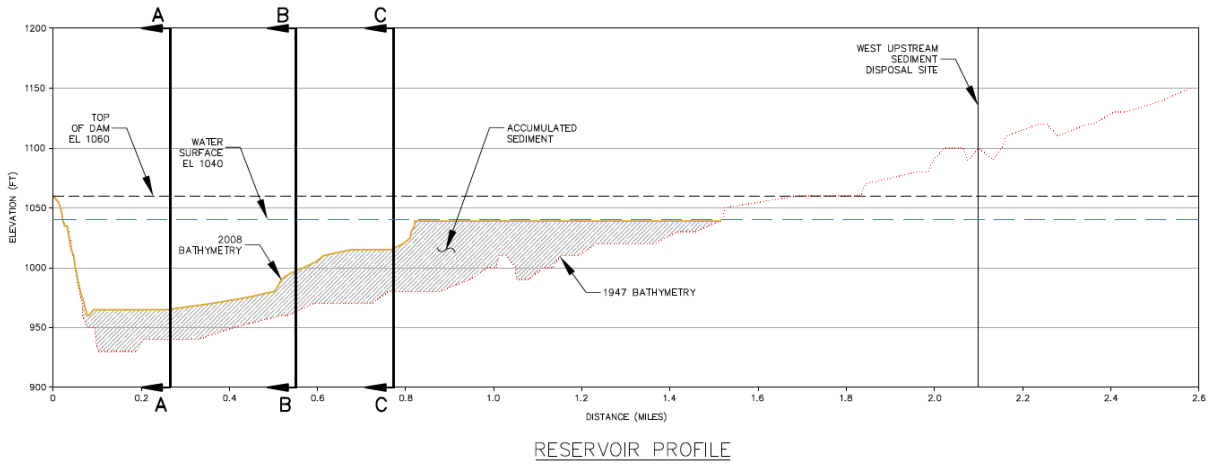


Figure 6-3. Reservoir profile based on 2008 survey.

The survey data collected for this study will be used to characterize the existing configuration of the reservoir sediment deposits, assess issues related to fish passage, and refine and update estimates of reservoir sedimentation volumes, based on a comparison with the pre-dam and 2008 bathymetry with the new bathymetry to be collected as part of this study. Photographic documentation and characterizations by field personnel will be used to qualitatively define the size range of surface materials in the reservoir deposits. All of this information will be used along with the results from the reservoir level assessment to identify periods when reservoir sedimentation becomes a barrier to fish passage, and to determine which locations are the most significant barriers, and to provide a framework for planning purposes. This information will allow an assessment of the potential impact the upper reservoir deposits may have on the success of fish passage, and, if there is any differentiation between alternatives.

This task also includes the initial development of the criteria to be used for the development and evaluation of fish passage. As mentioned earlier, we have found this to be a critical tool toward managing the subsequent stakeholder meetings with TRC and Advisory groups and keeping the project on track to a conclusion. It is important to be inclusive of stakeholders and experts but gaining agreement on basic criteria and constraints is crucial to keeping the process moving forward.

TASK 2: PREPARE BIOLOGICAL PERFORMANCE TOOL (CONSULTANT)

We have approached the selection and development of the biological model by teaming up with Cramer Fish Scientists and supporting them with Stephanie Theis a MWH fish biologist with Dr. Al Giorgi. Cramer Fish Scientists have applied similar tools on several projects and will be the lead to manage and demonstrate the model for Los Padres. Dr. Giorgi has been working in fish passage for many years and has a wealth of knowledge about past studies and data available for use in these models. More specifically he will help to ensure available data is applied to the model correctly. He recently was requested to provide input variable and resolve data conflicts in a biological passage model for the Susitna-Watana project.

Our approach to development of the Biological Performance Tool (BPT) will begin with review of comparable tools developed in other systems, review of Carmel River steelhead migration data, review of steelhead migration data from other comparable coastal California rivers, and consultation with the TRC. These activities will be completed as part of Task 2-1 and will provide the foundation and data inputs for

development of the BPT in Task 2-3.

Task 2-2 calls for review of information developed in Task 2-1 in order to make improvements and to identify "gaps" where further study will be required. We will facilitate this discussion with TRC and make appropriate revisions based upon comments received. We anticipate development of the BPT will lead to a better understanding of which factors contribute most to uncertainty in passage evaluation. As such, we would recommend that the final deliverable for Task 2-2, and recommendations for additional studies (if necessary) be finalized only after BPT sensitivity analysis is complete.

The primary activity of Task 2 will be the review and development of a Biological Performance Tool (BPT). We will begin the process by reviewing tools developed previously that could be modified or built-upon for application to the Project. In order to contribute to the objectives of the Los Padres Dam Fish Passage Feasibility Study, we anticipate the BPT will need to account for and integrate a variety of physical and biological factors which influence two interrelated processes. First, is the relative probability that migrating steelhead will arrive needing passage at Los Padres Dam. Second, is the conditional probability that migrating steelhead arriving at Los Padres Dam will successfully pass upstream or downstream. The following is a partial list of factors which will influence one or both of these processes and which may need to be incorporated in the BPT in order to a properly evaluate passage alternatives at Los Padres Dam.

1. Viable steelhead populations are characterized by a variety of life history types and migration strategies. As such, it will be critical for the BPT to represent key life-stages and migratory behaviors which may cause fish to encounter Los Padres Dam passage facilities.
2. The probability of steelhead (of each life-stage) encountering Los Padres Dam will vary by month, river flow and water year type. In some months and water year types, adult steelhead will not be entering the Carmel River or migrating to Los Padres Dam. In other months, and at certain flow conditions, the probability of steelhead reaching Los Padres Dam could be relatively high.
3. The probability of migrating steelhead (of each life-stage) arriving at and successfully passing Los Padres Dam will depend on:
    a. passage facility type and expected attraction effectiveness;
    b. whether the fish is moving upstream or downstream;
    c. flows upstream and downstream of Los Padres Dam;
    d. water temperatures upstream and downstream of Los Padres Dam;
    e. Los Padres Reservoir surface water elevation;
    f. Los Padres Reservoir water temperature profile, and;
    g. sediment deposits at head of Los Padres Reservoir.

We will utilize the information collected in Task 2-1 (and consultation with the TRC) to develop simple mathematical functions to describe how key factors will influence the probability of migrating steelhead reaching Los Padres dam and the probability of those fish successfully passing given alternative passage facilities. Figure 1 depicts a hypothetical example of adult steelhead migration probability (as a function of water year type), and adult passage probability for three passage alternatives.

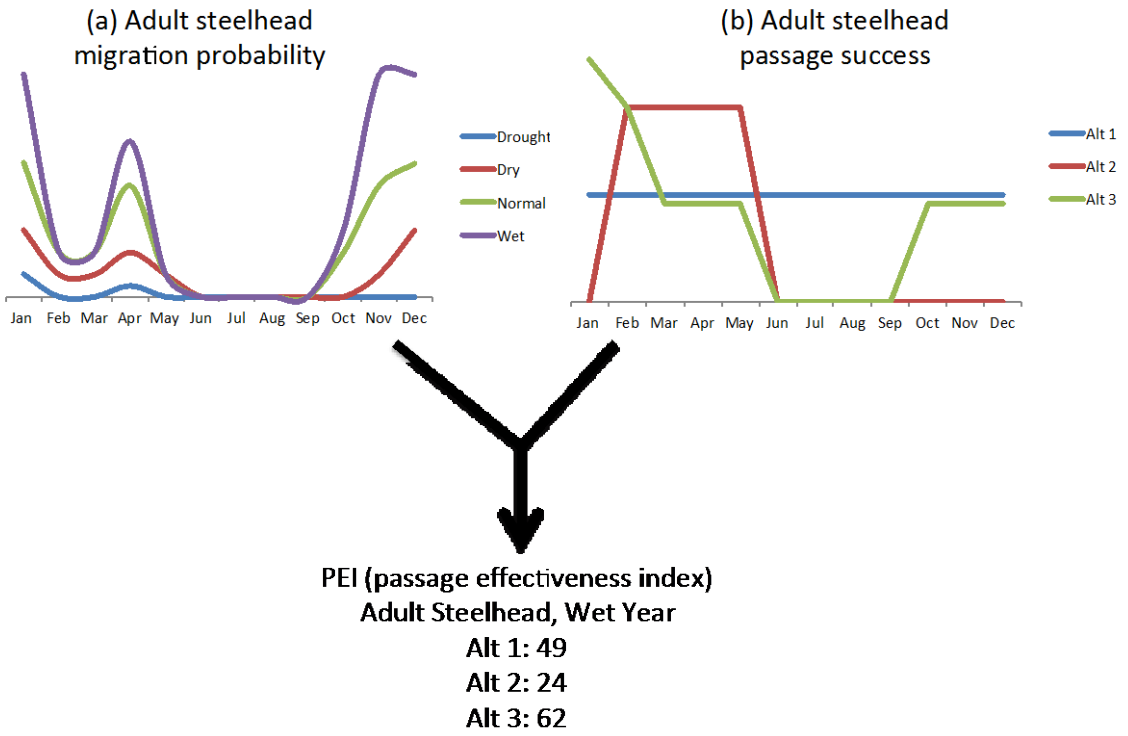


Figure 1. Example illustrating how hypothetical migration probability and passage success functions can be integrated into an index of passage effectiveness. Indices could be further integrated across water year types or steelhead life stages; potentially including weighting factors for water year types or life stages of particular importance

We will develop a model utilizing the information and functional relationships identified in Task 2-1 and 2-2. The model will be spreadsheet-based unless a similarly transparent but better performing alternative is available and approved by the client. We will fully document the model, describing and justifying all required assumptions. Where appropriate, model parameters and functions will include uncertainty and incorporate effects of uncertainty into estimates of overall passage effectiveness. We will run the model to evaluate three passage alternatives and also to assess the sensitivity of model outcomes to parameter uncertainty. Lastly, we will prepare a Technical Memorandum providing model documentation, describing data inputs, assumptions, results from sensitivity analysis, and results from evaluation of passage alternatives. The Technical Memorandum will include as appendices final deliverables from Task 2-1 and 2-2.

Assumptions:

- As stated in the RFP, the focus of this Project is not whether passage facilities would result in an increase in anadromous steelhead in the upper watershed. The model will be used to provide a relative comparison of likely steelhead passage effectiveness for the developed alternatives. The number of steelhead produced, captured or passed will not be estimated by the BPT. Such a model could be developed, but would require a separate scope of work.
- Downstream passage programs are already underway at LPD. Downstream passage alternatives are not being developed or analyzed under this Study. The potential effect of the upstream

passage alternatives on existing downstream passage routes (BGS, outlet, Spillway) will be evaluated and represented in the model where appropriate.

- The primary input of the TRC into the model will be during Task 2-1 and Task 2-2. Allowing for the TRC to review and request revisions to the BPT based on deliverables provided in Task 2-3, or any of the subsequent tasks is beyond the scope of work. We will provide updates on the BPT at all meetings as described in the scope of work and report BPT results as required for Tasks 3, 4, 5, and 6, but this work does not include revisions to the BPT itself.

TASK 3: IDENTIFY FISH PASSAGE CONCEPTS (CONSULTANT, TRC)

In Task 3 the concepts are fish developed. Our scope includes a significant amount of preparation for TRC Meeting #3. We will develop a preliminary list of concepts that will be presented along with the other brainstorming concepts. What this preparation does is it ensures a comprehensive list of concepts is considered by the group. It also allows the team to prepare for the initial screening of the concepts at the conclusion of the brainstorming and will expedite the 'fatal flaw' discussions with the group.

In our proposal we have included our fish passage engineers, biologists, and Dennis Dorratcague and Tom Bumstead. Dennis and Tom have worked with many of the expected TRC members on other steelhead projects and their presence allows the TRC, MPWMD and Cal-Am access to all of the experts to ask questions or otherwise gain the benefit of their experiences. Conversely it helps the team manage any technical discord that may arise in the meeting and reduce the chances of the meeting getting derailed.

At the conclusion of the meeting, the goal will be to have passage components assimilated into alternatives and the shortlist of alternatives narrowed down to no more than the 3 or 4 most likely projects. In a room full of engineers and scientists it is often difficult to keep the group from getting into the fine details. An important message that we will repeat is that for a feasibility assessment we need to focus on general design aspects and how they can be implemented (cost/risk) and how they can be compared (biological effectiveness). We found this was necessary in our work on the Yuba Salmon Forum considering passage and restoration on the Yuba River. In that project it was necessary to develop and screen seven different programs each with different combination of upstream and downstream passage at 5 – 10 dams or other channel features. This message was a standing reminder stated in each workshop so that the group could get through the information without taking offense if details were deferred and documented.

Information will be recorded during the meeting and summarized for the group. These notes will be circulated and tracked for documentation of both the process and decisions.

TASK 4: ALTERNATIVE DEVELOPMENT (CONSULTANT, TRC WITH ADVISORY GROUP INPUT)

The shortlist of alternatives will be developed further with the physical and hydraulic designs developed to understand the performance and limitations. Concept drawings will be developed and relative costing assessments completed. Updated information will be distributed with sufficient time to allow meeting attendees to review.

The evaluation matrix will be developed and presented at the Meeting #2 with preloaded criteria and information. This will be an introduction to the final selection process and the group will actively participate in updating the information and defining any sensitivity analyses that would be helpful at the following meeting with the final alternatives.

Summary notes will be reviewed with MPWMD and presentation materials will be prepared for the Advisory Group presentation. We would expect to provide a high level summary of the status of the work, tools that are being employed and interim results.

TASK 5: FISH PASSAGE ALTERNATIVES REFINEMENT (CONSULTANT, TRC WITH ADVISORY GROUP INPUT)

The final alternatives will be developed and concept cost estimates prepared. We have assumed based on our experience with these processes that we will carry two alternatives to this final assessment and presentation. One will be a volitional concept that meets an agreed upon definition of volitional and the other will be a hybrid. The process of developing cost estimates normally provides additional input to the project descriptions and pros and cons for the alternatives. This input will be documented as the drawings and meeting information are prepared and evaluation matrix updated. The final biological model results will be tabulated and presented.

Meeting #3 will be conducted similar to the previous two but the focus will be more on the comparison and perceived confidence of the biological effectiveness. The team and MPWMD will have reviewed the information prior to the meeting and will come prepared to present the teams conclusions as to feasibility. The input from the TRC will be and the conclusion either accepted or modified. Prior to dispersal of the TRC group we like to poll each member to offer a final opportunity to comment. We have found this effective in reducing the magnitude of major comments that must be resolved prior to the Advisory Group presentation.

TASK 6: REPORTING AND FISH PASSAGE RECOMMENDATIONS (CONSULTANT AND TRC)

The Feasibility Report will be prepared based on the information already developed and presented. The report will be organized as noted in the RFP unless otherwise changed in the TRC meetings. Although most of the information in the Draft report will have already been seen and discussed in the TRC meetings, questions or input is expected and we will maintain open communications with MPWMD and all the stakeholders. Once comments have been received and addressed the final documents will be submitted to MPWMD.

SCOPE OF WORK

MPWMD has developed a detailed scope of work for this project. MWH and our team have executed similar scopes of work at other locations many times. As requested the full detailed scope of work suitable for inclusion into the MPWMD Agreement is presented herein. As requested in the RFP we have included all of the RFP Scope. We have followed the task sequence and headings that were presented in the RFP except that we have subdivided Task 3 to better fit and define the work.

TASK 1 – Feasibility Study Preparation

The Consultant will compile and review relevant background information needed to prepare for a concept development of passage concepts, evaluation criteria and an evaluation process. The information will allow TRC members to become familiar with the operational, physical, hydrologic, and biological setting of the LPD, the range of alternatives that could be considered, and draft criteria to evaluate concepts. This information will be important for identifying concepts and alternatives that can reasonably and realistically fit within the construct of existing operations (including downstream passage), and that meet the stated objective of improving upstream passage for Carmel River steelhead. This background information will be utilized and updated throughout the Study, and will be documented in the Final Report.

Task 1.1 Compile Background Information

The Consultant will compile available information relevant to fish passage from MPWMD, Cal-Am and resource agencies. Data requests and interviews will be conducted to collect available information that will include:

- Project and related operations summary, including operation of existing trap and truck and downstream fish passage facilities, with a brief narrative on operations under different climatic conditions. These would include average water years, wet water years, a single-dry water year, and multiple or extended-dry water year scenarios.
- Biological design criteria and data summary that includes migration timing and appropriate calendar margins for exception years and antecedent conditions that may be documented in the literature.
- Key fish passage design flows
- Reservoir elevations during migration seasons
- Stage-discharge curves at existing entrance to ladder for trap and haul operation
- Project working drawings of the dam, reservoir and related properties suitable for initial analysis including:
    - a site plan with topography/channel bathymetry, and features in the vicinity of the ladder, plunge pool, dam, and spillway
    - sections through the dam at the west end of the dam, middle of the dam, spillway, and east of the spillway, with design water surface elevations
    - section of western slope immediately downstream of the dam from elevation 1060 to the plunge pool
    - enlarged plan at the plunge pool and existing ladder
    - Cal-Am to define protocol for sensitive information

Deliverables:

- TM 1.1 - Background Information

Task 1.2 Obtain Bathymetric and Topographic Data for Los Padres Reservoir

Using a combination of multi-bean sonar soundings, laser scanning or similar devices, the Consultant will obtain data to characterize the reservoir bottom and sides from the lowest reservoir elevation (the bottom) to approximately elevation 1050 (NGVD 1929) or 1053 (NAVD 1988).

- Obtain topographic/bathymetric data and provide cross-sections at 100-foot intervals from the dam spillway to the extent of backwater at the highest elevation (top of dam).
- Field verify reservoir inundation area for passage constraints at varying levels of the reservoir stage (minimum 5-foot stage intervals) from spillway elevation to elevation 1000 (NGVD 1929)
- Prepare a base map of the project area survey report
- Conduct an assessment of passage conditions through the reservoir based on current conditions.
- Prepare a technical memorandum summarizing existing conditions, survey, inspection reports including photos of reservoir conditions.

Deliverables:

- TM 1.2 – Existing Conditions

1.3 Prepare Evaluation Criteria

Following the compilation, preparation, and review of background information, the Consultant will prepare the draft evaluation criteria using technical, biological and economic feasibility criteria.

The deliverables for this task include:

- TM 1.3 - Draft Feasibility Criteria

Task 1-4 Identify Critical Data Gaps

The Consultant will identify missing or additional desired information and appropriate steps to acquire the necessary material. This process to address any information gaps will be identified based on the specifics of the necessary information, and a plan to address this information need will be formulated for TRC and Advisory Group review. Prepare a Technical Memorandum that outlines the data needed and its value to the Feasibility Study. The TM will also include estimates of cost and schedule to obtain and incorporate the data into the project schedule and potential ramifications to the Study conclusions, if any, if the data are not collected.

Deliverables:

- TM 1.4 – Data Gap Assessment

Task 1 Assumptions:

- MPMWD will provide all available as-built or construction records of the facility including drawings, surveys, construction photos, etc., 2 weeks prior to the field survey.
- Available cad files or pdf files of existing facilities will be made available prior to initiating field work.
- Survey
    - No new contour survey will be surveyed or mapped only validation as-built survey of critical facilities. Limited topographic mapping along the proposed fish structure alignment, topography will be obtained at the dam and abutments from the extents of the bathymetric mapping to the high water level. Whitson Engineers will provide limited mapping of the

dam including location of structures, abutments the spillway, existing fish trap and critical elevations of structures identified before the survey.

- Provide control in state plane, NAD83, and NGVD 1929

- Bathymetry and Shoreline Topography
  - No severe weather (e.g. electrical storms, high winds, rain) which could compromise equipment and personnel safety will occur during the survey period or vessel launch and retrieval.
  - The onsite boat launch is maintained, available and suitable for unaided trailer launch and recovery of a 24-foot shallow draft jet boat at the pool level on the planned survey day.
  - Cal-Am/MPWMD will provide an on-site representative with authority to make decisions at the work site and communicate with dam operations regarding access and any related operational issues. The representative will be available to communicate with TT personnel and work up to 12 hours on the day of the survey.
  - It is assumed that GPS coverage augmented with inertial data will be sufficient for continuous data collection. It is possible data gaps will exist where GPS technology is incapable of positioning the vessel leading to gaps in the data coverage.
  - Sufficient water depth (>5 feet) will exist in all survey areas for collection of bathymetric data and for safe operation of the Tetra Tech survey vessel. In areas of extreme shallow-water tree debris/ deadheads on shore, 100% bathymetric coverage may not be possible.
  - MBE and Vessel mounted LiDAR are "line-of-sound" technology, as such physical obstructions such as vegetation, debris, structures, water turbulence, rain, and range can obscure the desired target. Efforts will be made to maximize coverage for the desired survey areas but no guarantee can be given for complete coverage.
  - Vessel mounted LiDAR data delivery does not include removal of all vegetation to create a "bare earth" surface. VLM data will be clipped at the top of shoreline slope, bulkhead and/or top of pier.
  - MBE data can generally be collected to approximately 1' below the waterline. VML data can be generally collected down to the waterline. If reservoir elevations can be adjusted, collection will be timed to make use of higher and lower water levels to maximize overlap, but full coverage cannot be guaranteed due to geometry constraints induced by access restrictions, structures and other possible factors in the survey area.
- Data or information collected after submittal of the TM's in this Task will be incorporated during the preparation of the Final Report (Task 6)

Task 2 Prepare Biological Performance Tool (Consultant and TRC)

This task involves the selection and development of a biological performance tool that will be used to estimate and compare potential steelhead passage survival using fish passage concepts to be identified and refined in the feasibility study. In addition, compiling information on upstream steelhead migratory behavior based on LPD counts, San Clemente Dam counts (through 2015), and DIDSON data near the mouth of the river, will help identify the type, location, size, and timing of potential upstream fish passage facility components and the necessary coordination with existing downstream passage facilities. Additional information needs may be defined during the compilation and studies could be designed and implemented

to provide such information. The proportion of the migrant population using each alternative and the estimated survival associated with new upstream pathways will determine the biological performance and contribute to the feasibility evaluation of fish passage concepts identified and developed in the study.

Successful steelhead passage at the Project must consider both upstream and downstream migratory pathways and the potential for both upstream and downstream movement to occur at the same time. Upstream fish passage systems are typically designed around considerations of upstream collection and upstream passage. Upstream collection defines the ability to attract and collect fish from downstream of a barrier. This characteristic includes the ability to behaviorally or hydraulically attract or guide the fish from the river into a fish collection chamber. Typical features of an upstream collection feature include a collection facility entrance (weir, orifice, slot, etc.), attraction flow to draw fish into the entrance, and a collection pool that encourages fish to stay, or traps fish in the facility to prepare for transport past the dam. The existing ladder and trap may be sufficient to meet these requirements for adults, but do not meet these requirements for juveniles.

Upstream passage defines the means to move fish from the collection pool to a release site upstream of the dam. Typical features of an upstream passage component include various styles of fish ladders, fish lifts, and fish locks. The existing ladder, trap and transport program is to be evaluated for improvements separately from this study. Its relation to this study may be as an alternative to be considered as an Optional Task if volitional passage cannot be achieved. The study will consider volitional passage both in the ideal application where fish can enter and transit without outside assistance and in the managed form where fish that enter the ladder are transported to the reservoir with automated systems.

Upstream Collection and Passage –This component must accommodate the behavior of the target life stages and consider flow control operations, river hydrology, site hydraulics, and water quality. Attraction to the ladder requires sufficient flows to attract upstream migrants away from other competing flows from spill or other releases. Upstream passage must effectively collected in such a way that minimizes migratory delay and injury. Water temperatures may affect attraction, oxygen saturation in the ladder and exit conditions and should also be evaluated for upstream passage facility alternatives.

Downstream Passage – The existing downstream passage facility was intended to serve as an interim measure to improve passage until a permanent facility could be built. This may compete with the upstream passage facility for flow releases from the reservoir and there is a potential for exit flow from the upstream passage facility to attract downstream migrants. Depending on size of migrant, time of year, flow condition, and steelhead behavior, the proportion of the out-migrant population using the downstream passage facilities may change in response to project operations, flow conditions and seasonal timing. Once outmigrants successfully approach the dam spillway, they must successfully find and enter the floating collector Behavioral Guidance System installed to pass the dam. Fish that do not pass downstream through fish passage facilities may seek other pathways, including being attracted to the upstream passage facilities. Consideration should be given to the potential for downstream migrants to attempt to enter the upstream facilities at the point of exit to the reservoir. Understanding the migratory patterns of each life stage will be key to determining the operational protocols for both upstream and downstream migration facilities.

Biological Performance Tool – A biological performance tool will consist of a spreadsheet based fish passage model that tracks steelhead survival, or passage efficiency, through the various alternatives available. The values developed from the fish passage model will be used to compare and evaluate and

compare potential fish passage concepts. The model will not be used to represent estimates of the size of the steelhead population or impacts on steelhead populations within the watershed. Estimates of the proportion of the potential migrant population using each alternative will be integrated with estimates of survival associated with each alternative under representative average, wet and dry hydrologic conditions. An evaluation of the uncertainty associated with each assumption will provide an indication of the robustness of modeling results and the potential influence on recommendations of fish passage feasibility.

Task 2-1 Compile Background Information on Migratory Pathways (Consultant)

The Consultant will collect information needed to develop and populate the fish passage model including the existing system information collected in Task 1.1.

A literature review will be conducted to consider relevant studies conducted at other water control projects with the results and conceptual-level drawings of similar fish passage facilities documented for use. Where appropriate the professional opinions of the TRC may also be solicited and compiled.

Recent data on releases from storage and reservoir pool levels will be reviewed. This is presumed to be representative of current and proposed future conditions for this Study. Representative years will be selected in coordination with members of the TRC to evaluate fish passage facilities.

Information compiled as part of Task 2-1 will be used to populate the fish passage model and will be presented with a progress report at the end of this task.

Information collected in Task 1.1 relative to passage considerations within Los Padres Reservoir will be reviewed specially for applicability to the biological model. This will include water flows, migration timing, temperatures and predation data.

Biological data and information will be collected from the operations of the existing adult trap and newly construction downstream passage facility as they are available. This will be summarized for application to the new biological model.

The Consultant will prepare a technical memo characterizing available Los Padres Reservoir biological data and provide a summary of available input biological data that can be applied to the model. The TM will be submitted for review and comment to the TRC.

Deliverables:

- TM 2.1 - Biological Data Summary

Task 2-2 Review and Identify Critical Biological Data Gaps (Consultant and TRC)

The TRC will review and discuss the information developed in Task 2.1. The Consultant will facilitate a planned web call to review and discuss TRC comments on the biological data and completeness for the fish passage biological evaluation needs. The results of this conference will be summarized in a Technical Memorandum with a draft returned to the TRC for review and acceptance. Upon receipt of comments the Memorandum will be finalized and included in the Feasibility report under Task 6.

If additional information is needed, the TRC will work with Consultant to identify appropriate steps to acquire the necessary material or develop reasonable assumptions. The process to address information

gaps will be identified based on the specifics of the information. If data gaps are identified that prove critical to the feasibility evaluations and TRC recommendations, the TRC will identify the most appropriate means to fill those gaps, including influence on ability to complete an meaningful analysis, timing to acquire and evaluate the information and potential outcomes as they could affect the recommendations by the TRC.

Deliverables:

- TM 2.2 – Biological Data Gap Assessment

Task 2-3 Develop and Populate Fish Passage Model with Available Information

The Consultant will evaluate potential fish passage facilities at the Project using a biological performance tool that estimates passage efficiency and survival at LPD and reservoir. The biological performance tool will be used to conduct a relative comparison of the biological performance of fish passage alternatives. An evaluation of the uncertainty and sensitivity of the assumptions used to develop the mathematical functions will provide an indication of the robustness of modeling results.

Evaluation of critical parameters, and background information available to define them, will be evaluated to determine the influence of the values in evaluating the potential feasibility of fish passage facilities.

One goal of the fish passage model is to incorporate a mechanism to easily alter the percentage of fish that move through each potential alternative as a function of river flow and reservoir water surface elevation. A flow response factor will be developed for upstream steelhead migrants to identify how migrants respond to flow. An initial response factor may assume that the number of fish entering the project on a given day in the migration period is approximately proportional to the volume of the daily reservoir inflow in relation to the total inflow during the migration period. Using separate calculations for peak and off-peak migration periods, the total volume of inflow will be calculated and the proportion of fish migrating per day will be based on the percent of total flow for each day under average, wet and dry representative water years. An alternate response factor could assume that an equal number of fish passes each day in the migration period, or migration rates are correlated to water temperature. By incorporating an adjustable value, the sensitivity of the response factor to changing conditions will provide an indication of the influence of the response factor in evaluating total Project survival.

The mathematical functions used to calculate survival between alternatives will be developed in an Excel or other spreadsheet format to ensure transparency and ease of stakeholder review. The results of the biological performance tool will be an estimate of system survival or passage efficiency for each passage alternative. In addition, similar flow response functions and pathway apportionment will be used to estimate fish passage survival under existing conditions without volitional upstream fish passage facilities.

Attraction and ladder flow is an important design feature of facility components. Attraction flow volumes for both upstream and downstream are a balance between site conditions and competing flow releases. Alternate attraction flow volumes will be examined in terms of fish attraction to assess facility sizing options. The feedback mechanism provided by fish passage model results will assist engineering decisions and allow each concept to be refined so that the optimum design of each fish passage alternative can be used in the feasibility evaluation.

Parameter values will be estimated from site specific data, borrowed from other populations, or professional opinion based on steelhead passage behavior. Each assumption will be identified and documented and major parameters will be accompanied by an evaluation of uncertainty.

The Consultant will complete the following activates under this Task 2-3:

- Review available spreadsheet-based passage evaluation model (biological model) and select the best model that best fits the scope of this study.
- Customize the biological performance tool to include the biological data and factors developed in and approved by the TRC in Tasks 2.1 and 2.2.
- Populate the model with data and perform sensitivity runs to assess the model's output prior to use on the fish passage concepts and alternatives.
- Evaluate existing conditions to estimate fish passage survival under existing conditions
- Prepare a Technical Memorandum that documents the model, results of existing conditions, inputs, sensitivity results. The TM will include the final deliverables from Tasks 2.1 and 2.1 as appendices with a compilation of background information related to the project biology.

Deliverables:

- TM 2.3 – Biological Model. Draft and final with model

Assumptions:

- As stated in the RFP, the focus of this Project is not whether a volitional passage facility would result in an increase in anadromous steelhead in the upper watershed. The focus of this Project is on the engineering constraints, biological needs of steelhead (i.e., ability of different life stages to use a particular alternative), and the economic costs of volitional passage. The model will be used to provide a relative comparison of effectiveness of the developed alternatives.
- Downstream passage programs are underway at LPD. Downstream passage alternatives are not being developed or analyzed under this Study. Only the potential effect of the upstream passage alternatives on the existing downstream passage routes (BGS, outlet, Spillway) are included in the model.
- As stated in the RFP, the focus of this Project is not whether passage facilities would result in an increase in anadromous steelhead in the upper watershed. The model will be used to provide a relative comparison of likely steelhead passage effectiveness for the developed alternatives. The number of steelhead produced, captured or passed will not be estimated by the BPT. Such a model could be developed, but would require a separate scope of work.
- Downstream passage programs are already underway at LPD. Downstream passage alternatives are not being developed or analyzed under this Study. The potential effect of the upstream passage alternatives on existing downstream passage routes (BGS, outlet, Spillway) will be evaluated and represented in the model where appropriate.
- The primary input of the TRC into the model will be during Task 2-1 and Task 2-2. Allowing for the TRC to review and request revisions to the BPT based on deliverables provided in Task 2-3, or any of the subsequent tasks is beyond the scope of work. We will provide updates on the BPT at all meetings as described in the scope of work and report BPT results as required for Tasks 3, 4, 5, and 6, but this work does not include revisions to the BPT itself.

Task 3 Identify Fish Passage Concepts (Consultant, TRC)

This task will identify possible passage concepts and conduct the initial screening and then presentation of the concepts to the TRC. Task numbers have been changed from the RFP to include Task 3.1 that incorporates the development of the concepts.

Task 3-1 Workshop Preparation

The Consultant will develop upstream passage concepts based on studies, experience, and history of other fish passage facilities and specific criteria and guidelines published by NMFS and CDFW. Concepts might be based on components of fish passage facilities, operational procedures, locations of facilities at the LPD site, or may replicate an entire facility.

The concepts will be organized for an initial evaluation and a "fatal flaw analysis" will be performed to eliminate any concept that cannot meet the basic criteria. Fatal flaws might include dam or personnel safety issues, constructability concerns, or poor chance of satisfying fish passage or other objectives. For concepts that have fatal flaws, the Consultant will document contacts with appropriate review experts and agencies including, but not limited to DSOD, CDFW, and NMFS. Concepts at this early phase of development that are fatally flawed will be documented and presented to the TRC, but will not be further developed unless there is direction from the TRC to do so. Concepts without fatal flaws will be considered technically feasible for further analysis and development.

Using the information developed in Tasks 1, 2 and 4, the Consultant will identify design flow ranges, select hydrologic design years, and develop preliminary working base drawings. The Consultant will prepare a draft spreadsheet evaluation matrix (Pugh Matrix, or similar) and evaluation criteria descriptions for use at with the TRC.

Prepare a presenting and organizing initial passage concepts. The package should describe design parameters, concepts, evaluation criteria, and initial evaluation matrix, fatal flaw screening and include schematic diagrams to communicate the concepts presented.

Deliverables:

- TRC Meeting #1 - Informational Package and workshop agenda

Task 3-2 TRC Meeting #1 – Concept Workshop

The TRC and Consultant will meet to discuss passage concepts and criteria for evaluation. The Consultant will work with MPWMD to organize and conduct the Meeting in general accordance with the protocols below. The Consultant will provide staff to record and distribute meeting notes.

The information package containing a summary suitable for use at a workshop will be distributed to the TRC three weeks in advance of the meeting for attendees to review and discuss prior to the workshop.

Deliverables:

- Meeting presentation.

Assumptions:

- Meeting Protocols and Preparation and Agenda. The RFP included an example of meeting protocols for this type of project. We assume Meeting # 1 will follow these as appropriate for the

specifics of the Los Padres site. The concepts developed in Task 3.1 will be presented during brainstorming to facilitate ideas and discussions.

Task 3-3 Meeting #1 Summary

The Consultant will prepare draft meeting notes for review by MPWMD. Upon acceptance by MPWMD the draft notes will be distributed to the TRC for review and acceptance. The notes for Task 3-2 will include the following:

- Updated criteria document and a draft evaluation spreadsheet. List of fish passage concepts identified in the session.
- List of additional information necessary to reduce uncertainty or risks associated with each concept.
- A discussion of the fatal flaw analysis and documentation of concepts eliminated from further consideration at this time.
- Status update on the biological performance tool and any further development recommended by the Panel.
- A short list of fish passage concepts for further development.

It is intended that this summary document will be distributed within two weeks of the meeting date to the TRC and to the Advisory Group. Acknowledgement or acceptance of the notes will be requested for two weeks following submittal and final notes will be distributed one week following receipt of comments.

Deliverables:

- Meeting Summary Notes, Draft and Final.

Task 4 Alternative Development (Consultant, TRC, Advisory Group)

Task 4 is to review the list of concepts and develop the fish passage concepts identified in Task 3. The fish passage alternatives will address site-specific constraints, describe the full hydraulic functional design and general layout of each alternative, and will identify any uncertainties associated with each alternative prior to the evaluation process. With this task, the Advisory Group would be asked for feedback on the initial set of alternatives to be studied.

Potential volitional fish passage alternatives will be identified and evaluated concurrently with the existing trap and transport program. Volitional passage is the concept of giving fish the choice of moving upstream or downstream based on their own motivation. The following is the definition of volitional passage:

> *"Volitional fish passage is a means of fish passage with appropriate hydraulic conditions such that all individual migrating adult and juvenile fish of the species of interest have the opportunity to move freely and safely upstream and/or downstream past the Project according to their own motivation."*

Under volitional passage, a barrier is modified such that fish arrive at the site under their own power, swimming through or around and past the former blockage. A concrete fish ladder is an example of a volitional facility for adult steelhead. Volitional fish passage facilities are generally preferred because they operate constantly, require little human interference, and may be mechanically less likely to break. They may be less costly to maintain and operate but may represent a larger capital expenditure. However,

volitional facilities often provide little flexibility to accommodate uncertainties, or to adjust to changes in fish behavior, environmental or operating conditions. It should be noted that the dam owner will be responsible for ongoing maintenance and operation of passage facilities.

Space or engineering constraints may prevent the design of safe and effective, volitional fish passage facilities. Particularly for juveniles, impoundments may present challenges that cannot be overcome with volitional passage if currents confuse fish navigation or if physical constraints preclude construction of upstream passage facilities that can accommodate juvenile migration. In some situations, non-volitional facilities can be a preferred method of providing fish passage.

At least one pure volitional passage alternative for upstream passage will be included in the final set of alternatives throughout the study, regardless of its feasibility. There may also be alternatives that have volitional passage characteristics though are not entirely volitional throughout the hydrologic and reservoir storage and release cycle.

Once alternatives are defined, an initial opinion of probable construction and operating cost (OPCC) will be provided in this task for each alternative. Estimates may be based on comparative analysis to other systems or may be composed of unit estimates for items in an alternative. The level of accuracy of the estimate should be commensurate with a concept-level screening process and – depending on the complexity of an alternative – may have a large expected accuracy range. The estimated performance of the alternatives will be compared using the biological performance tool developed and updated in Tasks 2 and 3. The technical feasibility of constructing facilities will include site-specific constraints including geology and dam safety.

Alternatives that are not feasible will be dropped from consideration and reasons for them being dropped, will be described. It may be the case that an alternative scores low due to a specific uncertainty; in this case, the alternative will be retained and a plan to address this uncertainty developed. Based on the evaluation scores, the Consultant will update the remaining alternatives for additional evaluation by the TRC.

A meeting will be held with the Consultant, TRC, and Advisory Group to present the process alternatives and their relative scores after which the TRC will propose a final list of feasible alternatives for additional development.

Task 4-1 Develop Initial Concepts into Alternatives (Consultant)

Based on the concepts selected in Task 3, the Consultant will further develop alternatives. The primary goals of this task are:

- Define each concept with respect to its hydraulic and operational characteristics.
- Draw and define the concepts so that the design intent is clearly communicated. A common format for drawings will be developed by the Consultant in this task.

For each alternative, the Consultant will provide:

- Plan and sectional drawings to scale, to fully define the concept.
- Hydraulic characteristics and function design features, shown on the sketches, or on separate sheets.

- Brief write-up suitable for review to describe the concept's key characteristics and how the alternative operates.
- List of pros and cons for each alternative relative to operations, biological performance goals, reliability, etc. (Note: it is intended that the biological performance tool be applied to each alternative.)
- Probable opinion of construction and operating cost and complexity (high, medium, or low).
- An updated evaluation matrix containing selected alternatives and the evaluation criteria agree upon at TRC Meeting #1. The evaluation matrix should build on the criteria developed in Meeting #1 and should be presented in a grid form or Pugh Matrix, which breaks the alternatives down into discrete elements for comparison, evaluation, and optimization.

With the additional investigation, some concepts or alternatives may prove to be infeasible or may be modified. As noted above, at least one upstream volitional alternative will be retained for the duration of the study.

Deliverables for Task 4-1 include:

- compilation of alternatives
- an evaluation matrix
- supporting documentation

Assumptions:

- For budgeting purposes it is assume that up to 3 alternatives will be developed and modeled.

Task 4-2 Meeting #2 – Review and Refine Alternatives (Consultant, TRC)

The TRC and Consultant will meet to discuss and refine passage alternatives to fit LPD requirements. Protocols are to be similar to Meeting #1.

The evaluation matrix will be utilized during a meeting to prepare the first evaluation of the alternatives that will challenge the existing state of each alternatives conceptual design for better performance, and will allow a relative comparison of the alternatives. The matrix will result in consolidated scores, which reflect the relative success of achieving criteria, and will thus help rank or prioritize alternatives.

The results of the grid analysis can be used to further refine facility components, identify data gaps, and assess the potential influence of uncertainties. However, the grid analysis is only a decision tool; the results are used to influence but not dictate decisions. The characteristics and effectiveness of upstream fish passage facilities will be evaluated, and the results used to refine and optimize the location, size and timing of each type of passage facility.

Based on the results of this initial evaluation, the Consultant will work to update descriptions and drawings for the fish passage alternatives. The results will be presented to the TRC at Meeting #3, with the goals of receiving input and the TRC reaching consensus on a list of alternatives for final refinement in Task 5.

Deliverables for Task 4-2 include:

- workshop agenda

Assumptions:

- The meeting Agenda will be organized as follows:
  - The Consultant will present an overview of the work completed to date, and will address any questions from the previously distributed meeting notes.
  - Discuss and refine evaluation criteria based on the current state of the alternatives.
  - Identify any criteria that, if not satisfied to some degree, would constitute a fatal flaw.
  - Identify any uncertainties and/or risks associated with each alternative, and a means to address these issues.
  - Review results of the application of the biological performance tool to gain an understanding of the fish passage performance for each alternative.
  - Review the alternative evaluation matrix and update the matrix based on input at the meeting.
  - Perform a fatal flaw analysis on each alternative; eliminate alternatives with fatal flaws; and record eliminated alternatives for reporting in the meeting notes.
  - Combine and consolidate alternatives into distinct, stand-alone fish passage alternatives appropriate for the LPD site. This exercise will be the first iteration of defining passage alternatives for further development and additional review (if necessary).
- The meeting is assumed to be one full day.

Task 4-3 Meeting #2 Summary

The Consultant will prepare draft meeting notes for review by MPWMD. Upon acceptance by MPWMD the draft notes will be distributed to the TRC for review and acceptance. The notes for Task 4-3 will include the following:

- Status update on the biological performance tool and any further development recommended by the TRC and/or Group.
- Final evaluation spreadsheet.
- List of fish passage alternatives identified in the session.
- List of additional information necessary to reduce uncertainty or risks associated with each alternative.
- A discussion of the fatal flaw analysis and documentation of alternatives eliminated from further consideration at this time.
- A recommendation of alternatives for further development.

It is intended that this summary document will be distributed within two weeks of the meeting date to the TRC and to the Advisory Group. Acknowledgement or acceptance of the notes will be requested for two weeks following submittal and final notes will be distributed one week following receipt of comments.

Deliverables:

- Meeting Summary Notes, Draft and Final.

Task 4-4 Present Initial Set of Passage Alternatives (Consultant, TRC, Advisory Group)

The Consultant, TRC, and Advisory Group will meet (Advisory Group Meeting #1) to discuss the initial set of passage alternatives to fit LPD requirements. Protocols are to be similar to Meeting #1.

Deliverables:

- Meeting summary that includes comments from the Advisory Group, a copy of any written materials submitted by the Advisory Group, and any follow-up response from the Consultant or TRC.

Task 5 Fish Passage Alternatives Refinement and Determination of Feasibility

Task 5 will focus on the refinement of the remaining fish passage alternatives and a determination of whether upstream volitional passage is feasible at LPD. In addition to further development of the alternative design drawings, the Consultant will prepare an opinion of probable construction and operating cost for each alternative, describe operational protocols and issues, address comments and/or issues brought up at previous meetings, perform final runs of the biological performance tool, prepare a final quantitative evaluation of the alternatives using the final Pugh matrix and evaluation criteria, and address constructability issues and any remaining data needs or significant risks. At least one volitional fish passage alternative will be included in the final list of alternatives. A draft outline for the final report will be developed by the Consultant for review by the TRC.

The TRC will review the technical feasibility of the alternative(s), the expected biological performance, and the cost to construct and operate each alternative. Evaluation of alternatives will include strong consideration of the risk and uncertainties associated with the implementation and performance of the alternatives and whether alternatives would include continuation of the existing trap and transport facilities. The Consultant, TRC, and Advisory Group will meet to review the final set of alternatives before the TRC makes a final recommendation.

If there is a consensus on evaluation of alternatives by the TRC, the Study terminates, and Cal- Am and others may formulate an implementation plan to carry the recommendations forward. If there is no consensus, it is presumed that the status quo would not change (i.e., the trap and transport facilities and program would continue); however, if there is no consensus, Cal-Am, MPWMD and the TRC should consider what, if any, steps should be taken to address upstream passage. This is not included as a Task in this Project.

Task 5-1 Fish Passage Alternatives Refinement (Consultant)

The Consultant will prepare Engineer's Opinions of Probable Construction Costs (OPCC) for the remaining alternatives to a Class 5 level as defined by the American Association of Cost Engineers International (AACE). The cost estimates will be suitable for comparison of the alternatives, but may not reflect an accurate number for capital budgeting as they will be developed based on very limited information.

According to the AACE International Recommended Practices and Standards:

"AACE International Class 5 estimates are generally prepared based on very limited information, and subsequently have wide accuracy ranges. Typically, engineering is 0% to 10% complete. They are typically used for any number of business planning purposes, such as but not limited to market studies, assessment of initial viability, evaluation of alternate schemes, project screening, project location studies, evaluation of

resource needs and budgeting, or long-range capital planning. Virtually all Class 5 estimates use stochastic estimating methods such as cost curves, capacity factors, and other parametric and modeling techniques. Expected accuracy ranges are from -20% to -50% on the low side and +30% to +100% on the high side, depending on the technological complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination. Ranges could exceed those shown in unusual circumstances. As little as 1 hour or less to perhaps more than 200 hours may have been spent preparing the estimate depending on the project and estimating methodology."

Any data gaps or significant risks will be identified for discussion prior to the final Meeting.

Deliverables for Task 5-1 include:

- draft final evaluation matrix, including OPCC
- draft final report outline

Assumptions:

- For budgeting purposes it is assume that up to 2 alternatives will be refined and modeled.

Task 5-2 Meeting #3 – Determination of Feasibility and Selection of Alternative(s) (Consultant and TRC)

A meeting of the TRC and Consultant will be conducted to review and critique the alternatives, re-run the biological performance tool based on updated information (if necessary), do a final scoring of alternatives and determine: 1) if upstream volitional passage is feasible; 2) which alternative(s) should be pursued further; and 3) prioritize alternatives (if possible).

Up to this point, at least one upstream fish passage alternative should have been carried forward for inclusion in the final report. If, at the conclusion of the Final Meeting #3, the consensus is that upstream volitional passage is not feasible, document the reasoning for coming to this conclusion.

Deliverables for Task 5-2 include:

- workshop agenda

Assumptions:

- The meeting Agenda will be organized as follows:
    - Review and discuss the updated alternatives. Note any remaining information needs or significant risks associated with the alternative conceptual designs or recommended operation.
    - If necessary, re-run the biological performance tool based on the updated designs.
    - Review the OPCC, constructability issues, and the technical feasibility of each alternative.
    - Finalize the criteria, and perform a final evaluation of the alternatives relative to evaluation criteria, using the Pugh evaluation matrix.
    - Eliminate any alternatives that have fatal flaws based on their latest design, or that score low relative to others, and record eliminated concepts for reporting in the meeting notes.
    - Develop recommendations for future actions regarding each remaining alternative, including opportunities to improve performance or optimize alternatives based on the comparisons in the evaluation matrix.

  - List of final pros and cons for each alternative. If possible, prioritize alternatives.
  - Finalize the Fish Passage Feasibility Study report outline.
- The meeting is assumed to be one full day.

Task 5-3 Meeting Summary

The Consultant will prepare draft meeting notes for review by MPWMD. Upon acceptance by MPWMD the draft notes will be distributed to the TRC for review and acceptance. The notes for Task 5-3 will include the following:

- Final status of the biological performance tool and any further development recommended by the TRC.
- Final evaluation spreadsheet.
- List of fish passage alternatives evaluated at the session.
- List of additional information necessary to reduce uncertainty or risks associated with each alternative.
- A discussion of the fatal flaw analysis and documentation of alternatives eliminated from further consideration at this time.
- A recommendation of alternatives for further development.

It is intended that this summary document will be distributed within two weeks of the meeting date to the TRC and to the Advisory Group. Acknowledgement or acceptance of the notes will be requested for two weeks following submittal and final notes will be distributed one week following receipt of comments.

Deliverables:

- Meeting Summary Notes, Draft and Final.

Task 5-4 Present Final Set of Passage Alternatives (Consultant, TRC, Advisory Group)

The Consultant, TRC, and Advisory Group will meet (Advisory Group Meeting #2) to discuss the final set of passage alternatives to fit LPD requirements. Protocols are to be similar to Meeting #1.

Deliverables:

- Meeting summary that includes comments from the Advisory Group, a copy of any written materials submitted by the Advisory Group, and any follow-up response from the Consultant or TRC.

Task 6 Reporting and Fish Passage Recommendation

Task 6 is structured to organize and report on the full development of the final fish passage alternatives. A draft and final feasibility report will be developed that will document the process followed, development of fish passage alternatives, evaluation criteria, summary of alternatives eliminated with justification for the eliminations, a final evaluation and the final recommended alternative(s). Each alternative selected will be described with text and conceptual level design drawings, an OPCC, estimate of operating costs, an implementation schedule and description of construction issues, listing of pros and cons, and a summary and details of the final evaluation. At least one volitional alternative for upstream passage will be

described, regardless of its feasibility; however, if all volitional alternatives are determined to have one or more fatal flaws, the additional work described in this task may not be carried out.

The final feasibility report will include the TRC recommendation regarding the technical and biological feasibility of providing volitional steelhead passage at LPD. If a volitional passage facility cannot be recommended due to site constraints, uncertainties, or other factors the final report will document the rationale. Recommendations for next steps will be developed, which might include: fish passage alternatives to be pursued; further studies, if needed to address uncertainties or risk; or additional analysis to determine economic feasibility. The draft report will be presented to the TRC and Advisory Group for input. Depending on the nature of comments, the draft report may be finalized or, if additional issues are raised, the report may be amended and recirculated for final review.

Task 6-1 Prepare Draft Fish Passage Feasibility Report (Consultant, TRC)

The Consultant and TRC will review the final set of alternatives and recommendations made by the Advisory Group and the TRC will make a final recommendation. A Draft Fish Passage Feasibility Report will be developed in this task to document the scope of the study, background information used, design criteria, the process utilized to conduct the feasibility analyses, the results of the analyses and the TRC recommendation. A draft table of contents for the report is listed below as a guide.

The draft (and final) report will contain at least the following:

1 Introduction
- 1.1 Problem statement
- 1.2 Purpose, objective
  - 1.2.1 Fish passage goal statement
  - 1.2.2 Relevance to Steelhead Recovery Plan
- 1.3 Overview of Fish Passage Panel Process
  - 1.3.1 Summary of meetings, coordination, and progress reports
- 1.4 Overview of the biological performance tool
  - 1.4.1 Overview fish passage model

2 Descriptions of alternatives
- 2.1 Initial Brainstorm Concepts
  - 2.1.1 Brainstorming Workshop Summary
  - 2.1.2 Concept Analysis and Selection
- 2.2 Preferred Concepts
  - 2.2.1 Concept Descriptions
  - 2.2.2 Pros and cons
  - 2.2.3 Biological Performance for Upstream and Downstream Passage
  - 2.2.4 Implementation challenges and uncertainties
  - 2.2.5 Constructability considerations
  - 2.2.6 Opinions of probable construction and operating costs
  - 2.2.7 Concept Drawings

3 Evaluation of Alternatives
- 3.1 Description of evaluation process
  - 3.1.1 Description of evaluation matrix and criteria
  - 3.1.2 Weighting and scoring
  - 3.1.3 Criteria that could lead to fatal flaws
- 3.2 Evaluation Results

3.2.1 Ranking of alternatives based on evaluation matrix
3.2.2 Ranking of alternatives based just on fish passage criteria
3.2.3 Relative fish passage ranking compared to cost and operations criteria
4 Conclusions and Recommendations
5 References cited

The Consultant will provide a draft report to the TRC for review. At least thirty (30) calendar days should be provided to prepare written comments. If no substantive issues are raised during the review, the Consultant will move on to production of the Final Report; however, if substantive issues are raised, the Consultant, Cal-Am, and MPWMD may elect to work directly with the commenter(s) to address any issues, or hold a meeting to address issues.

Deliverables:

- Draft Feasibility Report, electronic copy pdf and/or MS Word
- Written documentation of final TRC comments
- Final Report, 5 printed and bound copies, one electronic copy in pdf format

Assumptions:

- The meeting Agenda will be organized as follows:

TASK 7 – Project Management

7.1 Project Management

Project management, general communications and associated quality management will be provided throughout the duration of the project. This task consists of standard project management tasks, including scheduling, budget tracking, invoicing, and general project communications. Monthly progress summary reports will include at a minimum: description of tasks performed and accomplishments; a comparison of budgeted vs. actual expenses; and a discussion of the progress of the schedule.

7.2 Meetings

The Consultant shall facilitate meetings with MPWMD, Cal-Am, and other interested parties including, but not limited to:

- Kick-off meeting with MPWMD and Cal-Am;
- Review of existing and proposed operations in the field w/MPWMD and Cal-Am;
- Review of preliminary and final alternatives with TRC and Advisory Group (under Tasks 3, 4 and 5)
- Miscellaneous meetings with regulatory agencies as required to determine constraints.

Meetings will generally be held at the MPWMD Ryan Ranch office or at the Cal-Am Pacific Grove office, unless other arrangements are made.

Assumptions:

- Invoices will be prepared and submitted to MPMWD monthly with the Progress reports.
- Cal-Am quarterly reports are assumed to be satisfied by the monthly invoicing and reports.

Task 7 Deliverables:

- Monthly Invoices and Progress reports;
- Copies of communications among agencies and consultants (if appropriate);
- Meeting minutes.

OPTIONAL TASKS

Optional Task 1-1a: Hydraulic Modeling to Determine Stage-discharge Curve at Existing Ladder Entrance If additional refinement of the stage-discharge rating curves in the vicinity of the fish ladder outlet are needed to support the analysis, cross-sectional survey data can be collected along the downstream river over an appropriate reach of the channel, and the data used to prepare a one dimensional (1-D) hydraulic model the surveyed reach. The model would be developed using the U.S. Army Corps of Engineers HEC-RAS software (Version 5.0; USACE 2016). Considering the relatively steep slope of the river below the dam, a relatively short (~ 0.5-mile long) model should be sufficient to ensure accurate estimates of the hydraulic characteristics in the vicinity of the spillway and existing fish ladder. Appropriate hydraulic roughness and boundary conditions will be incorporated into the model, and the model will be executed over a range of flows up to the maximum recorded mean daily flow measured at the below Los Padres Reservoir gage. Results from this model will be used to develop a stage-discharge rating curve at the existing fish ladder entrance. The approximate cost for this additional work would be $7,000.

Optional Task 1-2a: Aerial survey of the dam, abutment and spillway area may be advantageous to the development of more accurate cost estimates for the study and aid in the understanding of alternatives by stakeholders. Generation of 3D figures would be possible if current topography and contour information were developed. The approximate cost for this additional work would be $10,000 for the ground control and aerial photogrammetric Services.

Optional Task 1-2b: If the water levels are too low to adequately survey the sediment delta surface in the upper reservoir during the bathymetric and vessel-mounted LiDAR survey alternative methods are available to collect these data. Tetra Tech has experience with terrestrial, mobile-land, mobile-water and aerial-based LiDAR scanning and own specialized equipment for each of these applications. Additional topography for Los Padres upper reservoir would best be addressed with additional ground-based Terrestrial Laser Scanner (TLS) scanning or possibly airborne laser scanning (ALS). ALS can be used to extensively map riverine topography and when employing airborne blue/green LiDAR shallow-water bathymetry can also be mapped. The ground-based TLS provides a more detailed and accurate topographic surface than ALS and is less expensive for small areas, such as LPD. The bathymetric survey crew could deploy a TLS from the LPD reservoir shoreline to map upper-reservoir floodplain. Conducting several geo-referenced overlapping scans with the FARO Focus3D X330 scanner as part of the bathymetry survey effort would provide detailed topography of the upper reservoir floodplain with only 1-2 days additional effort. Tetra Tech have used TLS on several hydroelectric dam projects (See the additional examples provided in Section 9 - Appendix). No pricing is available at this time until the scope is defined.

SECTION 7 -- PRICING

SECTION 7 – PRICING AND SCHEDULE

PROJECT BUDGET

The basis for the fee estimate is defined in the Scope of Work for the design consulting services described in Section 6. The Scope of Work is taken from MPWMD's RFP amended as of March 15, 2016 with modifications and/or additional definition consistent with our approach as presented in our Proposal. Only tasks defined in Section 6 have been included on the fee estimate. MWH's suggestions for Optional Tasks presented in Section 6 have not been in our pricing but can be added pending a review of goals and scope by MPWMD.

Task	Budget ($US)
Task 1 - Feasibility Study Preparation	$77,770
Task 2 - Prepare Biological Performance Tool	$71,560
Task 3 - Identify Fish Passage Concepts	$36,500
Task 4 - Alternatives Development	$45,400
Task 5 - Fish Passage Alternatives Refinement and Determination of Feasibility	$30,890
Task 6 - Reporting and Fish Passage Recommendation	$52,700
Task 7 - Project Management and Meetings	$31,680
Total Not to Exceed Budget Estimate	$346,500

The above budget represents an estimate for an efficient execution of the scope requested in the RFP. We appreciate that MPWMD and its funding partners have constraints on budget amounts. We would be happy to discuss the scope and level of effort for the work to bring the budget into alignment if needed with available funds. A couple items that we noticed that stand out as costs that we would not normally see in our past passage studies. These could be modified at MPWMD's discretion if the end product still meets the requirements of the project:

- Bathymetry. The budget pricing for the resurvey of the entire reservoir is about $35,500. We believe the fish passage feasibility can be completed without this information. We do understand that this data may be valuable for other analyses being conducted by MPWMD but wanted to discuss the contribution to the Feasibility Study for Fish Passage.
- Biological Modeling. While input from biologists is critical to the siting and design of fish passage features the total biology budget primarily for modeling and presentation of the model at meeting is slightly over 28% of the budget. The value of this level of effort toward determining cost and feasibility might be worth further discussion.

MWH proposes to complete the work for the amount shown on the table above to be billed monthly based on progress at hourly rates that will remain fixed for the 18-month duration of the contract.

SCHEDULE

MWH design team have reviewed the work required to Los Padres Fish Passage Feasibility Study and have developed a preliminary schedule for the project that demonstrates sufficient time for efficient execution of the work within the 18-month period stated in the RFP. A copy of the schedule is included in Section 9 – Appendix but a few of the critical early milestones are as follows:

- Notice to Proceed 6/1/2016
- Kickoff Meeting 6/14/2016
- TRC Meeting #1 ..... 11/17/2016
- Final Submittal ..... October 2017

The preliminary schedule is based on the defined scope and sequence presented in the RFP with further definition of work activities and deliverables described in the detailed Scope of Services presented in Section 6. A few important items to be considered when reviewing the Preliminary Schedule:

- The schedule will need to be revised and validated prior to the execution of the Agreement to incorporate MPWMD input and changes to the scope of work.
- Based on the Calendar of Events presented in the RFP we would anticipate receiving Notice of Selection at or before the May Board meeting.
- The schedule is preliminary and subject to review and agreement by MPMWD. Several sequences require input from MPMWD, TRC or others that may affect the final completion. MWH will work with MPMWD to finalize a baseline schedule for the Agreement.
- Our opinion on the overall schedule and the level of effort required there are several areas where the schedule can be optimized to deliver the final Feasibility Report before the indicated date. These changes would best be reviewed and discussed with MPWMD in conjunction with the final scoping for the agreement.

SCHEDULE CONFIRMATION STATEMENT

MWH confirms that the scope of work defined in this section is inclusive of all elements necessary to complete the work within the 18 month schedule as defined in Section 7. MWH cannot be held responsible for schedule impacts caused by the actions of others outside of our control.

Based on our experience working in similar arrangements with collaborative TRC and other stakeholder involvement we have found that one of the biggest risks to the schedule is difficulty in gathering the outside stakeholders for the TRC and Advisory Group. Key to meeting and maintaining schedule is to fix the dates of all group meetings as early in the project as possible. For Los Padres we will establish the full meeting schedule internally with MPWMD at the inception of the project at the kickoff meeting. These dates will be presented as an agenda item in TRC Meeting #1 for concurrence. We have found this to be appreciated by the outside stakeholders that must plan their travel budgets well in advance with their respective agencies.

ITEM: CONSENT CALENDAR

3. CONSIDER APPROVAL OF FUNDS TO REPLACE HVAC UNIT AT THE MPWMD HARRIS COURT ADMINISTRATION BUILDING

Meeting Date:	**April 18, 2016**	**Budgeted:**	**Yes**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**Fixed Assets 918000 Building Improvements**
Prepared By:	**Suresh Prasad**	**Cost Estimate:**	**$12,000**

General Counsel Review: Yes
Committee Recommendation: The Administrative Committee reviewed this item on April 11, 2016 and recommended approval.
CEQA Compliance: N/A

SUMMARY: The District's FY 2015-2016 Budget includes a project for replacement of the Heating, Ventilation and Air Conditioning (HVAC) unit at the main MPWMD Harris Court Administration Building. The new unit will replace a non-functional HVAC unit that has been in service for over 15 years.

Originally we were told that replacement cost of the HVAC unit will be around $15,000 plus additional fees. Based on the preliminary verbal quote, staff included $20,000 in the FY 2015-2016 budget to replace the HVAC unit. Airtec Service, our HVAC service provider, has provided a quote of $9,222 including crane rental and labor for installation of the new HVAC unit. The new unit includes a modulating economizer which is an energy saver component and adjusts based on the temperature outside by not turning the cooling compressor which saves electricity. Staff recommends using Airtec Service since they are our HVAC service provider and is familiar with our facilities and equipment.

RECOMMENDATION: District staff recommends authorizing the General Manager to replace the HVAC unit at the MPWMD Harris Court Administration Building for an amount not to exceed $12,000, which includes crane and labor plus additional costs.

BACKGROUND: District acquired the MPWMD Harris Court Administration Building in 1999. The existing HVAC units have been in service for over 15 years. One of the HVAC units has failed and is need of replacement. Based on preliminary estimates, staff included replacement cost in the FY 2015-2016 budget. A formal quote to replace the failed unit was obtained from Airtec Service, District's HVAC service provider.

EXHIBIT
3-A Airtec Service Quote

Airtec SERVICE
Heating ▪ Air Conditioning ▪ Ventilation

REVISED 3/21/2016

February 6, 2015

MPWMD
5 Harris Court, Bldg G
Monterey, CA 93940

Attn: Paula Soto

Re: RTU 5

Paula,

As a follow-up to our recent site visit and conversation, we hereby propose the following scope of work for your consideration:

A.) Provide crane and rigging necessary to remove and dispose of existing 3-on gas electric package unit in accordance of EPA requirements.

B.) Provide and install one (1) new York 3-ton gas electric gas package unit in the same location complete with the following:

- 16 gauge welded curb adaptor
- New electrical disconnect
- All necessary modifications to line voltage electrical, gas, condensate and low voltage controls
- New outside air & filter
- Complete system start-up, test & adjust

Total Price: $8,379.00

Option: *For modulating economizer:* *Add: $843.00*

Exclusions: Permits, fees or bonds, line voltage electrical, plumbing, piping or drains, cutting, framing or patching, priming or painting, structural support for equipment or overtime labor.

Above-listed price effective 60-days.

Approved & Agreed By:

BY Mike Laine DATE 3/21/16 APPROVED BY _____ DATE: _____
AIRTEC SERVICE *CUSTOMER ACCEPTANCE*

ITEM: CONSENT CALENDAR

4. AUTHORIZE EXPENDITURE FOR A JOINT PROJECT WITH MONTEREY PENINSULA REGIONAL PARK DISTRICT – RAINWATER HARVESTING AND DROUGHT TOLERANT DEMONSTRATION GARDEN AT GARLAND REGIONAL PARK

Meeting Date:	**April 18, 2016**	**Budgeted:**	**Yes**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**Conservation Program 4-2-3-C**
Prepared By:	**Stephanie Locke**	**Cost Estimate:**	**$3,000**

General Counsel Review: N/A
Committee Recommendation: The Public Outreach Committee reviewed this item on April 6, 2016 and recommended approval. The Administrative Committee reviewed this item on April 11, 2016 and recommended approval.
CEQA Compliance: N/A

SUMMARY: Staff is requesting authorization to partner with the Monterey Peninsula Regional Park District (MPRPD) to install a demonstration rainwater harvesting system at the Garland Ranch Regional Park visitor center. The rainwater collected will be used to offset landscape irrigation currently supplied by Cal-Am for the drought tolerant garden. Approved funds will pay for the cisterns, the first flush diversion, all the PVC and connections. Monterey Peninsula Regional Park District will be responsible for the prepping of the site including the construction of a pad for the cisterns, the irrigation pump, and the fitting to connect the cistern to the existing irrigation system. The rainwater harvesting system will be installed during a demonstration class held on June 11, 2016, during the park's annual wildflower event which draws thousands of people each year. Interpretative signage for the rainwater harvesting system will be designed and installed jointly.

RECOMMENDATION: Staff recommends the Board approve the expenditure of up to $3,000. Funding is currently in the budget for this training under 4-2-3-C, Conservation Programs.

EXHIBIT
None

ITEM: CONSENT CALENDAR

5. AUTHORIZE EXPENDITURE TO COMPLETE RAINWATER HARVESTING DEMONSTRATION PROJECT AT DISTRICT OFFICES

Meeting Date:	**April 18, 2016**	**Budgeted:**	**Yes**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**Water Conservation 4-2-2-B**
Prepared By:	**Stephanie Kister**	**Cost Estimate:**	**$2,500**

General Counsel Review: N/A
Committee Recommendation: The Water Demand Committee considered this item on April 7, 2016 and recommended approval. The Administrative Committee considered this item on April 11, 2016, and recommended approval.
CEQA Compliance: N/A

SUMMARY: Staff is seeking authorization to expend up to $2,500 in budgeted funds to complete the rainwater harvesting demonstration installation located at the District office. In 2014, an 850 gallon cistern was installed at the front of the building as part of a Monterey Bay Friendly Landscaping training class. Currently the water collected goes unused. This project would complete the demonstration site by adding two redwood planter boxes across the walkway from the cistern. The planters would be used for the growth of a vegetable garden and irrigated by the rainwater supplied by the cistern. A proposal for the project from the professional gardening company that maintains the District's landscape is attached as **Exhibit 5-A**.

RECOMMENDATION: Staff recommends the Board approve the expenditures of up to $2,500 to pay for the installation of two redwood planter boxes.

EXHIBIT
5-A Proposal by Inca Landscape Management

EXHIBIT 56A

INCA Landscape Management
P.O. Box 3281, Carmel-by-the Sea, CA 93921

Carmel, Ca. Monday, April 4, 2016

From: Mario E. Callau dba INCA Landscape Management

To: MPWMD

Ref: Proposal for Redwood vegetable boxes

. Design 2 Redwood planter boxes 40" wide by 80" long by 22" high each by using surfaced grade Redwood lumber, see design.

. Clear and prepare the area where the two planter boxes will be installed.

. Build and install the two planters

. Line the bottom of the planters with heavy gauge ½" hardware cloth to keep gophers out.

. Fill with approximately 3 cu. yds. enriched organic top soil

Total labor and material is estimated to be $ 2,495

The project has received no objections from the property owners.

As a courtesy to MPWMD, I am not charging for my time designing and project management (approximately $ 500)

Thank you,

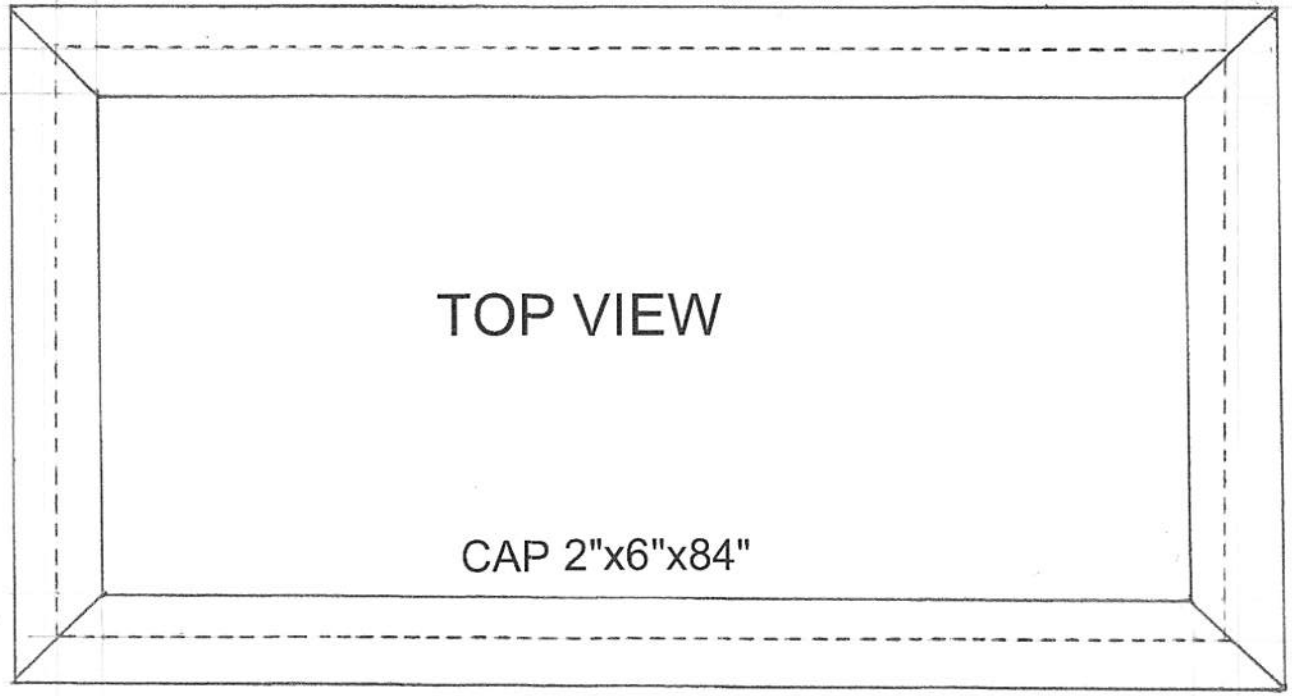
Mario E. Callau

Mario E. Callau
Ornamental Horticulturist, A.S.
Certified Landscape Designer
C-27 Landscape Contractor, Lic. # 875311
Office Voicemail (831) 625-0900
Office Fax (831) 649-1099
Cell (831) 320-4420
Landscaping Since 1978

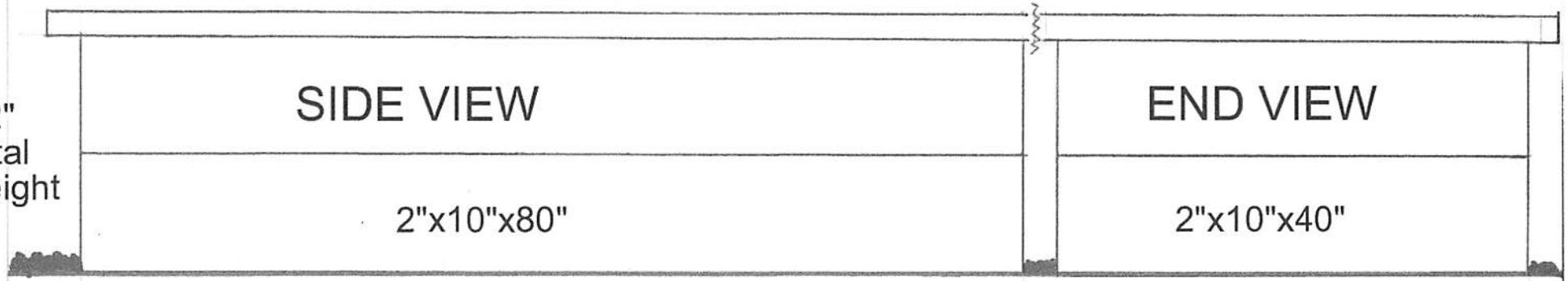
MPWMD Redwood planter boxes

Labor:	hours		
Prepare site	6		
Build planters	16		
Line and fill	6		
Total	28 hrs	$45/hr	$1,260
3 cu yds soil		$109	$327
delivery			$65
Hardware cloth			$64
Hardware			$25
4x4x10 post			$186
post cement			$110
2x6x8 S4S	6		$107
2x10x8'	16		$351
			$2,495

EXHIBIT 5-G



Two Redwood
vegetable planters
40" wide
80" long
22" high



Revision #:	Scale:	Landscape Plan:	Landscape Design by: Mario E. Callau
Date: 4/2/2016	1" = 1'	MPWMD rwd vegetable boxes	INCA Landscape Management

Request for Bid: Monterey Peninsula Water Management District Raised Garden Beds

Project Description:

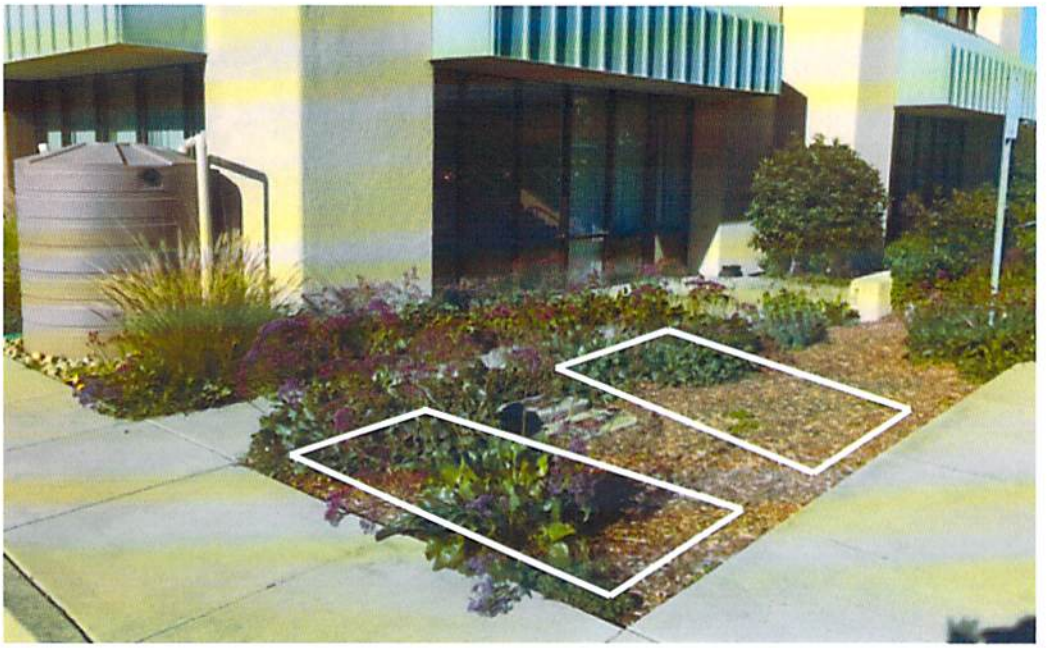
1) Construction and installation of 2 raised garden beds: 8 ft long by 4 ft wide
2) Design and install a drip irrigation system that would run off our on-site 800 gallon cistern. The planter area and the cistern are divided by a 2.5 ft concrete pathway that cannot be altered.

Design:

See photo below however we would want the posts to be on the inside of the frame rather than the outside.

See page two for image of the install Location:

EXHIBIT 57A



ITEM: CONSENT CALENDAR

6. ADOPT 2016-17 LEGISLATIVE ADVOCACY PLAN

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Arlene Tavani**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: Discussed by Legislative Advocacy Committee on March 18, 2016 – no action taken, discussion only.
CEQA Compliance: N/A

SUMMARY: Attached as **Exhibit 6-A** is a draft 2016-17 Legislative Advocacy Plan. The Legislative Advocacy Committee discussed the plan on March 18, 2016, but no action was taken.

RECOMMENDATION: Staff recommends that the Board of Directors review the Legislative Advocacy Plan and adopt it by motion.

EXHIBIT
6-A Draft 2016-17 Legislative Advocacy Plan

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

2016-17 Legislative Advocacy Plan

This plan establishes the Monterey Peninsula Water Management District legislative and government affairs priorities for FY 2016-17.

Federal Strategy

1) Evaluate hiring federal legislative consultant: Evaluate hiring a Washington DC consultant that offers a deep understanding of the federal budget, legislative process, funding opportunities, and regulatory setting. Both Congress and regulatory departments related to water, including but not limited to BLM, NOAA (NMFS), USBR, USDA, and EPA. Need to consider whether there is sufficient federal crossover with District activities (Pure Water Monterey, Los Padres Dam, other?) and what the "pay-off" might be.

   Consider development of a scope of work, including but not limited to:

   - Identifying legislation or proposed regulatory changes that may impact the District.
   - Consult with staff to develop positions on relevant legislation.
   - Advocate the District's position on bills and matters of interest.
   - Represent the District in meetings with staff, directors, or independently with congressional members and staff, administration officials, regulatory agencies.
   - Coordinate federal outreach with District's State governmental outreach
   - Identify funding opportunities and notify of timing, requirements, and advocate on behalf of District
   - Direct contact with associations including ACWA, WateReuse, etc.
   - Prepare materials for briefing – talking points, briefing books, letters, as necessary
   - Coordinate with other water district lobbyists and organizations
   - Maintain close relationships with Monterey legislative delegation

   Consider opportunities to cost share or issue share – County, MRWPCA, other?

   Potential firms:
   The Ferguson Group (Roger Gwinn)
   The Furman Group (Hal Furman)
   Nossaman (Brent Heberlee)

2) Maintain Washington DC profile:
   - Work with consultant hired above to organize timely trips as needed, but at least once a year separate from ACWA trip.
   - Attend ACWA trip each year
   - Consider ACWA Legislative Affairs Committee

3) Provide support for relevant legislation: Already provided letter of support for Feinstein drought relief bill. That bill is likely to be reworked into a joint bill. Need to track process and provide input and support where possible to ensure Pure Water Monterey's interests are protected. A "West-wide" bill is also expected. Need to position Pure Water Monterey to benefit.

4) Expedite Pure Water Monterey permitting process: Intervene where possible on water rights protests (NMFS), biological opinion (NMFS, USFS), EPA review for CEQA+, stream-bed alteration (Corps) to ensure timely response.

5) Monitor and pursue grant opportunities.

6) Perform on existing federal grants:
   - Drought Contingency Plan ($200,000 USBR 2-year project)
   - Salinas and Carmel Rivers Basin Study ($900,000 USBR 3-year project)

State of California Strategy

1) Pure Water Monterey: Effort already started to ensure approval at CPUC. Letters of support being secured and will be sent directly and filed with testimony. Intervene where possible on water rights protests (CDFW) to ensure timely response. Secretary Laird meeting has occurred and available to intervene if asked.

2) Prop 1 Funding:
   - IRWM: The Department of Water Resources is receptive to agreements among hydrologic regions about how Prop 1 funds for the Integrated Regional Water Management (IRWM) program are shared among individual planning regions. Recently, representatives of each Regional Water Management Group (RWMG) in the Central Coast hydrologic unit have discussed the potential for an agreement to allocate $43 million of Prop 1 funds for the Central Coast among the six planning regions. The IRWM grant program is competitive, and in the past (i.e., with Prop 50 and Prop 84 funds), agencies in the Central Coast region have expended significant resources to develop competitive proposals.

     A draft agreement has been circulated and is close to adoption. If an allocation agreement can be reached, it would give each region assurance of some funds from Prop 1 and would provide a definite schedule for when those funds might

become available. This would allow agencies in each region to focus resources on projects and plans. For the Monterey Peninsula region, proposed splits range from a low of about $2 million (based on acreage and population) to a high of about $6 million (equal split among regions). The Monterey Peninsula region has received just over 1% of the IRWM funds awarded to the Central Coast since 2006. Given the large differences in size and populations among the six Central Coast regions, it would appear unlikely that an agreement would be reached to split funds equally among regions. Larry Hampson is coordinating.

- Storm water: Funds are available for multi-benefit storm water management projects which may include, but shall not be limited to: green infrastructure, rainwater and storm water capture projects and storm water treatment facilities. Storm Water Resource Plans, or functionally equivalent plan(s), are required to obtain grant funds for storm water and dry weather capture projects. The State Water Resources Control Board (State Water Board) adopted the final Storm Water Resource Plan Guidelines and the Proposition 1 (Prop 1) SWGP Guidelines on December 15, 2015. Pure Water Monterey return pipeline for the Salinas Industrial Ponds will be a candidate.

  A Storm Water Resource Plan (SWRP) is required to be eligible for implementation or project-specific planning funding. The SWRP will be due within 90 days of award of an implementation grant. The District's Local Project Grant to the City of Monterey will lay groundwork for this plan which MRWPCA will prepare.

  The District will need a lobbying plan to ensure success. Round 1 of Implementation Grants is expected summer 2016.

- Pure Water Monterey: The project has already qualified for a 30-year State Revolving Fund Loan, but a potential $15 million grant hangs in the balance. District will work with MRWPCA to ensure eligibility and timeliness.

3) Maintain Sacramento profile:
   - Work with JEA Associates to organize timely trips as needed, but at least once a year separate from needs-based visits.
   - Attend CSDA, ACWA, and/or WateReuse legislative days

4) Provide support for relevant legislation.

5) Monitor and pursue grant opportunities.

6) Resolve Carmel Valley Alluvial Aquifer and SGMA issues with DWR and SWRCB

Local Strategy

1) Maintain District role in regional water issues related to:
    - Sustainable Groundwater Management Act
    - Pure Water Monterey – CSIP expansion and expansion for MCWD

2) Participate in County-wide OES infrastructure team

3) Maintain outreach to local associations government affairs committees (Chambers, MCAR, MCHA, Coalition of Peninsula Businesses, jurisdictions' mayors and councils)

ITEM: CONSENT CALENAR

7. CONSIDER ADOPTION OF TREASURER'S REPORT FOR FEBRUARY 2016

Meeting Date:	**April 18, 2016**	**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 considered this item on April 11, 2016 and recommended approval.
CEQA Compliance: N/A

SUMMARY: Exhibit 7-A comprises the Treasurer's Report for February 2016. **Exhibit 7-B**, **Exhibit 7-C** and **Exhibit 7-D** are listings of check disbursements for the period February 1-29, 2016. Check Nos. 24655 through 24986, the direct deposits of employee's paychecks, payroll tax deposits, and bank charges resulted in total disbursements for the period in the amount of $1,019,976.58. That amount included $55,074.68 for conservation rebates. **Exhibit 7-E** reflects the unaudited version of the financial statements for the month ending February 29, 2016.

RECOMMENDATION: District staff recommends adoption of the February 2016 Treasurer's Report and financial statements, and ratification of the disbursements made during the month. The Administrative Committee reviewed this item at its April 11, 2016 meeting and voted 3 to 0 to recommend approval.

EXHIBITS
7-A Treasurer's Report
7-B Listing of Cash Disbursements-Regular
7-C Listing of Cash Disbursements-Payroll
7-D Listing of Other Bank Items
7-E Financial Statements

MONTEREY PENINSULA WATER MANAGEMENT DISTRICT
TREASURER'S REPORT FOR FEBRUARY 2016

Description	Checking	MPWMD Money Market	L.A.I.F.	Wells Fargo Investments	MPWMD Total	PB Reclamation Money Market
Beginning Balance	$92,624.29	$585,406.44	$1,896,918.00	$2,004,378.18	4,579,326.91	$429,303.40
Transfer to/from LAIF		0.00			0.00	
Fee Deposits		922,626.44			922,626.44	164,811.62
Interest		8.78		1,283.46	1,292.24	4.64
Transfer-Money Market to Checking	$900,000.00	(900,000.00)			0.00	
Transfer-Money Market to W/Fargo					0.00	
Transfer-W/Fargo to Money Market					0.00	
W/Fargo-Investment Purchase					0.00	
Transfer Ckg to MPWMD M/Mrkt					0.00	
MoCo Tax & WS Chg Installment Pymt					0.00	
Transfer to CAWD					0.00	(400,000.00)
Voided Cks					0.00	
Bank Corrections/Reversals/Errors					0.00	
Bank Charges/Rtn'd Deposits/Other	($294.56)	(25.20)			(319.76)	(30.00)
Payroll Tax Deposits	(27,790.83)				(27,790.83)	
Payroll Checks/Direct Deposits	(126,954.70)				(126,954.70)	
General Checks	($864,635.45)				(864,635.45)	
Bank Draft Payments	($301.04)				(301.04)	
Ending Balance	**($27,352.29)**	**$608,016.46**	**$1,896,918.00**	**$2,005,661.64**	**$4,483,243.81**	**$194,089.66**

Check Report

Monterey Peninsula Water Management Dist

By Check Number

Date Range: 02/01/2016 - 02/29/2016

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: APBNK	**-Bank of America Checking**					
00258	Thomas Brand Consulting, LLC	02/05/2016	Regular	0.00	-13,692.50	24568
00254	MoCo Recorder	02/01/2016	Regular	0.00	29.00	24655
01002	Monterey County Clerk	02/01/2016	Regular	0.00	2,260.25	24656
01002	Monterey County Clerk	02/02/2016	Regular	0.00	50.00	24657
00254	MoCo Recorder	02/03/2016	Regular	0.00	61.00	24661
00254	MoCo Recorder	02/03/2016	Regular	0.00	29.00	24662
00254	MoCo Recorder	02/03/2016	Regular	0.00	61.00	24663
00254	MoCo Recorder	02/03/2016	Regular	0.00	32.00	24664
00254	MoCo Recorder	02/03/2016	Regular	0.00	61.00	24665
00254	MoCo Recorder	02/03/2016	Regular	0.00	61.00	24666
00254	MoCo Recorder	02/03/2016	Regular	0.00	29.00	24667
00254	MoCo Recorder	02/03/2016	Regular	0.00	29.00	24668
00254	MoCo Recorder	02/03/2016	Regular	0.00	14.00	24669
00254	MoCo Recorder	02/03/2016	Regular	0.00	29.00	24670
00254	MoCo Recorder	02/03/2016	Regular	0.00	61.00	24671
00254	MoCo Recorder	02/03/2016	Regular	0.00	29.00	24672
00254	MoCo Recorder	02/03/2016	Regular	0.00	29.00	24673
00254	MoCo Recorder	02/03/2016	Regular	0.00	64.00	24674
00249	A.G. Davi, LTD	02/05/2016	Regular	0.00	395.00	24675
00767	AFLAC	02/05/2016	Regular	0.00	1,289.16	24676
01188	Alhambra	02/05/2016	Regular	0.00	100.56	24677
00263	Arlene Tavani	02/05/2016	Regular	0.00	860.39	24678
00253	AT&T	02/05/2016	Regular	0.00	499.82	24679
00253	AT&T	02/05/2016	Regular	0.00	861.31	24680
08924	Bryant & Associates	02/05/2016	Regular	0.00	9,585.00	24681
00243	CalPers Long Term Care Program	02/05/2016	Regular	0.00	40.56	24682
00028	Colantuono, Highsmith, & Whatley, PC	02/05/2016	Regular	0.00	12,743.58	24683
01352	Dave Stoldt	02/05/2016	Regular	0.00	84.05	24684
07632	Debra Martin	02/05/2016	Regular	0.00	33.18	24685
03964	EWING	02/05/2016	Regular	0.00	50.00	24686
01018	Geoff Malloway	02/05/2016	Regular	0.00	51.62	24687
00993	Harris Court Business Park	02/05/2016	Regular	0.00	721.26	24688
08929	HDR Engineering, Inc.	02/05/2016	Regular	0.00	18,834.32	24689
04707	Latitude Geographics	02/05/2016	Regular	0.00	3,700.00	24690
05829	Mark Bekker	02/17/2016	Regular	0.00	-671.07	24691
05829	Mark Bekker	02/05/2016	Regular	0.00	671.07	24691
01012	Mark Dudley	02/05/2016	Regular	0.00	1,865.00	24692
04715	Matthew Lyons	02/05/2016	Regular	0.00	600.00	24693
00118	Monterey Bay Carpet & Janitorial Svc	02/05/2016	Regular	0.00	1,000.00	24694
00274	MRWPCA	02/05/2016	Regular	0.00	494,788.95	24695
00154	Peninsula Messenger Service	02/05/2016	Regular	0.00	560.00	24696
07627	Purchase Power	02/05/2016	Regular	0.00	50.34	24697
00262	Pure H2O	02/05/2016	Regular	0.00	64.49	24698
04709	Sherron Forsgren	02/05/2016	Regular	0.00	637.86	24699
03973	Stephanie Kister	02/05/2016	Regular	0.00	38.14	24700
00258	Thomas Brand Consulting, LLC	02/05/2016	Regular	0.00	13,692.50	24701
00203	ThyssenKrup Elevator	02/05/2016	Regular	0.00	563.91	24702
01008	U.S. Postal Service	02/05/2016	Regular	0.00	225.00	24703
00207	Universal Staffing Inc.	02/05/2016	Regular	0.00	648.96	24704
00271	UPEC, Local 792	02/05/2016	Regular	0.00	1,039.28	24705
00994	Whitson Engineers	02/05/2016	Regular	0.00	9,139.57	24706
00254	MoCo Recorder	02/08/2016	Regular	0.00	32.00	24707
00254	MoCo Recorder	02/11/2016	Regular	0.00	61.00	24715
00254	MoCo Recorder	02/11/2016	Regular	0.00	61.00	24716

Check Report **Date Range: 02/01/2016 - 02/29/2016**

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
00254	MoCo Recorder	02/11/2016	Regular	0.00	29.00	24717
00254	MoCo Recorder	02/11/2016	Regular	0.00	32.00	24718
00254	MoCo Recorder	02/11/2016	Regular	0.00	29.00	24719
00254	MoCo Recorder	02/11/2016	Regular	0.00	29.00	24720
00254	MoCo Recorder	02/11/2016	Regular	0.00	62.00	24721
00254	MoCo Recorder	02/11/2016	Regular	0.00	-62.00	24721
00254	MoCo Recorder	02/11/2016	Regular	0.00	61.00	24722
00254	MoCo Recorder	02/11/2016	Regular	0.00	61.00	24723
00254	MoCo Recorder	02/11/2016	Regular	0.00	14.00	24724
00254	MoCo Recorder	02/11/2016	Regular	0.00	32.00	24725
00254	MoCo Recorder	02/11/2016	Regular	0.00	44.00	24726
03966	ACWA (Memberships/Conferences/Publications	02/11/2016	Regular	0.00	445.00	24727
00253	AT&T	02/11/2016	Regular	0.00	109.15	24728
06828	Jobs Available	02/11/2016	Regular	0.00	429.00	24729
00094	John Arriaga	02/11/2016	Regular	0.00	2,500.00	24730
08828	Johnson Construction	02/11/2016	Regular	0.00	1,996.20	24731
00769	Laborers Trust Fund of Northern CA	02/11/2016	Regular	0.00	26,016.00	24732
00259	Marina Coast Water District	02/11/2016	Regular	0.00	281.30	24733
00259	Marina Coast Water District	02/11/2016	Regular	0.00	60.82	24734
00259	Marina Coast Water District	02/11/2016	Regular	0.00	811.20	24735
00242	MBAS	02/11/2016	Regular	0.00	1,200.00	24736
00278	Monterey Tire Service	02/11/2016	Regular	0.00	731.20	24737
00274	MRWPCA	02/11/2016	Regular	0.00	146.11	24738
05053	Pacific Smog	02/11/2016	Regular	0.00	39.75	24739
00225	Palace Office Supply	02/11/2016	Regular	0.00	480.25	24740
00282	PG&E	02/11/2016	Regular	0.00	551.45	24741
00282	PG&E	02/11/2016	Regular	0.00	345.42	24742
00159	Pueblo Water Resources, Inc.	02/11/2016	Regular	0.00	41,639.43	24743
00233	Rana Creek Habitat	02/11/2016	Regular	0.00	150.71	24744
00272	Red Shift Internet Services	02/11/2016	Regular	0.00	604.95	24745
00254	MoCo Recorder	02/12/2016	Regular	0.00	53.00	24746
00254	MoCo Recorder	02/18/2016	Regular	0.00	29.00	24891
00254	MoCo Recorder	02/18/2016	Regular	0.00	61.00	24892
00254	MoCo Recorder	02/18/2016	Regular	0.00	29.00	24893
00254	MoCo Recorder	02/18/2016	Regular	0.00	61.00	24894
00254	MoCo Recorder	02/18/2016	Regular	0.00	29.00	24895
00254	MoCo Recorder	02/18/2016	Regular	0.00	29.00	24896
00254	MoCo Recorder	02/18/2016	Regular	0.00	61.00	24897
00254	MoCo Recorder	02/18/2016	Regular	0.00	32.00	24898
00254	MoCo Recorder	02/18/2016	Regular	0.00	29.00	24899
00254	MoCo Recorder	02/18/2016	Regular	0.00	61.00	24900
00254	MoCo Recorder	02/18/2016	Regular	0.00	32.00	24901
00254	MoCo Recorder	02/18/2016	Regular	0.00	61.00	24902
00254	MoCo Recorder	02/18/2016	Regular	0.00	14.00	24903
00254	MoCo Recorder	02/18/2016	Regular	0.00	29.00	24904
00254	MoCo Recorder	02/18/2016	Regular	0.00	29.00	24905
00254	MoCo Recorder	02/18/2016	Regular	0.00	61.00	24906
00254	MoCo Recorder	02/18/2016	Regular	0.00	32.00	24907
00010	Access Monterey Peninsula	02/19/2016	Regular	0.00	280.00	24908
00253	AT&T	02/19/2016	Regular	0.00	330.19	24909
00983	Beverly Chaney	02/19/2016	Regular	0.00	97.00	24910
00036	Bill Parham	02/19/2016	Regular	0.00	650.00	24911
00022	Bioassessment Services	02/19/2016	Regular	0.00	1,895.00	24912
00252	Cal-Am Water	02/19/2016	Regular	0.00	86.66	24913
00252	Cal-Am Water	02/19/2016	Regular	0.00	90.17	24914
00243	CalPers Long Term Care Program	02/19/2016	Regular	0.00	40.56	24915
01001	CDW Government	02/19/2016	Regular	0.00	1,983.93	24916
00230	Cisco WebEx, LLC	02/19/2016	Regular	0.00	241.20	24917
00224	City of Monterey	02/19/2016	Regular	0.00	1,531.97	24918
00028	Colantuono, Highsmith, & Whatley, PC	02/19/2016	Regular	0.00	30,352.98	24919
06268	Comcast	02/19/2016	Regular	0.00	205.23	24920

Check Report **Date Range: 02/01/2016 - 02/29/2016**

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
07632	Debra Martin	02/19/2016	Regular	0.00	52.76	24921
00046	Delay & Laredo	02/19/2016	Regular	0.00	21,783.50	24922
00267	Employment Development Dept.	02/19/2016	Regular	0.00	4,293.43	24923
00192	Extra Space Storage	02/19/2016	Regular	0.00	716.00	24924
07624	Franchise Tax Board	02/19/2016	Regular	0.00	35.00	24925
07624	Franchise Tax Board	02/19/2016	Regular	0.00	85.98	24926
00277	Home Depot Credit Services	02/19/2016	Regular	0.00	78.74	24927
00768	ICMA	02/19/2016	Regular	0.00	5,380.41	24928
04717	Inder Osahan	02/19/2016	Regular	0.00	1,149.00	24929
04727	Liebert Cassidy Whitmore	02/19/2016	Regular	0.00	575.00	24930
05829	Mark Bekker	02/19/2016	Regular	0.00	600.00	24931
01012	Mark Dudley	02/19/2016	Regular	0.00	117.63	24932
04032	Normandeau Associates, Inc.	02/19/2016	Regular	0.00	175.50	24933
00256	PERS Retirement	02/19/2016	Regular	0.00	14,470.57	24934
00282	PG&E	02/19/2016	Regular	0.00	8,685.68	24935
00282	PG&E	02/19/2016	Regular	0.00	2,905.79	24936
06000	Potter's Electronics	02/19/2016	Regular	0.00	54.31	24937
00166	Rickly Hydrological Co.	02/19/2016	Regular	0.00	819.40	24938
00283	SHELL	02/19/2016	Regular	0.00	557.54	24939
00286	Stephanie L Locke	02/19/2016	Regular	0.00	712.55	24940
04720	Teletec Communications, Inc.	02/19/2016	Regular	0.00	1,502.00	24941
04719	Telit Wireless Solutions	02/19/2016	Regular	0.00	223.03	24942
00258	Thomas Brand Consulting, LLC	02/19/2016	Regular	0.00	15,476.91	24943
00269	U.S. Bank	02/19/2016	Regular	0.00	3,883.23	24944
06009	yourservicesolution.com	02/19/2016	Regular	0.00	2,797.00	24945
00254	MoCo Recorder	02/25/2016	Regular	0.00	29.00	24946
00254	MoCo Recorder	02/25/2016	Regular	0.00	29.00	24947
00254	MoCo Recorder	02/25/2016	Regular	0.00	32.00	24948
00254	MoCo Recorder	02/25/2016	Regular	0.00	29.00	24949
00254	MoCo Recorder	02/25/2016	Regular	0.00	32.00	24950
00254	MoCo Recorder	02/25/2016	Regular	0.00	14.00	24951
00254	MoCo Recorder	02/25/2016	Regular	0.00	29.00	24952
00254	MoCo Recorder	02/25/2016	Regular	0.00	14.00	24953
00254	MoCo Recorder	02/25/2016	Regular	0.00	32.00	24954
00763	ACWA-JPIA	02/25/2016	Regular	0.00	463.10	24955
00760	Andy Bell	02/25/2016	Regular	0.00	810.00	24956
00253	AT&T	02/25/2016	Regular	0.00	76.05	24957
00253	AT&T	02/25/2016	Regular	0.00	719.82	24958
00236	AT&T Long Distance	02/25/2016	Regular	0.00	9.82	24959
00983	Beverly Chaney	02/25/2016	Regular	0.00	121.10	24960
00252	Cal-Am Water	02/25/2016	Regular	0.00	176.78	24961
04721	Carlons Fire Extinguisher Svc., Inc.	02/25/2016	Regular	0.00	688.27	24962
01001	CDW Government	02/25/2016	Regular	0.00	219.93	24963
00024	Central Coast Exterminator	02/25/2016	Regular	0.00	104.00	24964
00224	City of Monterey	02/25/2016	Regular	0.00	249.57	24965
00761	Delores Cofer	02/25/2016	Regular	0.00	405.00	24966
00758	FedEx	02/25/2016	Regular	0.00	22.26	24967
00986	Henrietta Stern	02/25/2016	Regular	0.00	1,149.00	24968
06745	KBA Docusys - Lease Payments	02/25/2016	Regular	0.00	946.13	24969
00278	Monterey Tire Service	02/25/2016	Regular	0.00	20.72	24970
00225	Palace Office Supply	02/25/2016	Regular	0.00	341.02	24971
00256	PERS Retirement	02/25/2016	Regular	0.00	13,822.47	24972
00282	PG&E	02/25/2016	Regular	0.00	20.21	24973
00282	PG&E	02/25/2016	Regular	0.00	10.21	24974
00282	PG&E	02/25/2016	Regular	0.00	20.02	24975
00752	Professional Liability Insurance Service	02/25/2016	Regular	0.00	44.02	24976
00159	Pueblo Water Resources, Inc.	02/25/2016	Regular	0.00	12,909.66	24977
00233	Rana Creek Habitat	02/25/2016	Regular	0.00	105.47	24978
00251	Rick Dickhaut	02/25/2016	Regular	0.00	1,023.00	24979
00176	Sentry Alarm Systems	02/25/2016	Regular	0.00	125.50	24980
09989	Star Sanitation Services	02/25/2016	Regular	0.00	99.61	24981

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
00207	Universal Staffing Inc.	02/25/2016	Regular	0.00	1,622.40	24982
00271	UPEC, Local 792	02/25/2016	Regular	0.00	1,039.28	24983
09461	Water District jobs	02/25/2016	Regular	0.00	175.00	24984
08105	Yolanda Munoz	02/25/2016	Regular	0.00	540.00	24985
00754	Zone24x7	02/25/2016	Regular	0.00	2,571.00	24986

Bank Code APBNK Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	214	178	0.00	823,986.34
Manual Checks	0	0	0.00	0.00
Voided Checks	0	3	0.00	-14,425.57
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
	214	**181**	**0.00**	**809,560.77**

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
Bank Code: REBATES-02-Rebates: Use Only For Rebates						
10034	NINA KILLEN	02/24/2016	Regular	0.00	-200.00	23802
10092	RYAN HULL	02/05/2016	Regular	0.00	-500.00	23819
10623	KAREN SONNERGREN	02/11/2016	Regular	0.00	-200.00	24127
11075	ALBERTO GARCIA	02/16/2016	Regular	0.00	500.00	24747
11159	ALISON IMAMURA	02/16/2016	Regular	0.00	100.00	24748
11207	ANTHONY FERRANTE	02/16/2016	Regular	0.00	500.00	24749
11097	ANTHONY RAPPA	02/16/2016	Regular	0.00	200.00	24750
11121	BENJAMIN WHITTEN	02/16/2016	Regular	0.00	500.00	24751
11107	BOUTAINA ROUISSI	02/16/2016	Regular	0.00	100.00	24752
11113	BRENT GROSS	02/16/2016	Regular	0.00	500.00	24753
11114	BRIAN & CYNTHIA MC COY	02/16/2016	Regular	0.00	500.00	24754
11084	BRUCE DOUGLAS	02/16/2016	Regular	0.00	500.00	24755
11177	Bruce Mehringer	02/16/2016	Regular	0.00	500.00	24756
11210	CARL M MILLER	02/16/2016	Regular	0.00	170.10	24757
11178	CARMEL PRESBYTERIAN CHURCH	02/16/2016	Regular	0.00	500.00	24758
11182	CAROL MARSHALL	02/16/2016	Regular	0.00	500.00	24759
11127	CAROLE & EUGENE WAGNER	02/16/2016	Regular	0.00	831.25	24760
11186	CAROLE OLSEN	02/16/2016	Regular	0.00	100.00	24761
11056	CARY MROZOWSKI	02/16/2016	Regular	0.00	225.00	24762
11054	CHRISTY HILL	02/16/2016	Regular	0.00	75.00	24763
11057	COREY BRUNSON	02/16/2016	Regular	0.00	100.00	24764
11161	DANIEL LOVICK	02/16/2016	Regular	0.00	100.00	24765
11184	Danielle Preskitt	02/16/2016	Regular	0.00	500.00	24766
11201	DEBORAH JETT	02/16/2016	Regular	0.00	500.00	24767
11168	DENNIS FLANARY	02/16/2016	Regular	0.00	614.68	24768
11166	Donald Weber	02/16/2016	Regular	0.00	125.00	24769
11085	DONOVAN LEYDEN	02/16/2016	Regular	0.00	500.00	24770
11104	DOUGLAS HARRIS	02/16/2016	Regular	0.00	100.00	24771
11200	DUKHYUN CHO	02/16/2016	Regular	0.00	500.00	24772
11081	EDUARDO TAN	02/16/2016	Regular	0.00	476.28	24773
11080	ERIC STAUFFER	02/16/2016	Regular	0.00	500.00	24774
11074	FAMOUS O WADE	02/16/2016	Regular	0.00	500.00	24775
11198	GARY SIMON	02/16/2016	Regular	0.00	500.00	24776
11173	GERARD BERTHET	02/16/2016	Regular	0.00	500.00	24777
11078	GERVACIO GARCIA AQUINO	02/16/2016	Regular	0.00	500.00	24778
11076	GILBERTO SUAREZ	02/16/2016	Regular	0.00	479.99	24779
11072	GUY LASSABATERE	02/16/2016	Regular	0.00	500.00	24780
11126	HANS JANNASCH	02/16/2016	Regular	0.00	1,975.00	24781
11158	HEATHER HUBANKS	02/16/2016	Regular	0.00	200.00	24782
11122	HELEN SULLIVAN	02/16/2016	Regular	0.00	500.00	24783
11088	Helen Tamasauskas	02/16/2016	Regular	0.00	200.00	24784
11087	HENRY GAUTHIER	02/16/2016	Regular	0.00	140.00	24785
11217	HERBERT CONLEY	02/16/2016	Regular	0.00	100.00	24786
11208	HOPE ROGERS	02/16/2016	Regular	0.00	500.00	24787
11098	HORACE RAPPA	02/16/2016	Regular	0.00	100.00	24788
11100	INGRID RUTHERFORD	02/16/2016	Regular	0.00	100.00	24789
11171	JANET VAN BALEN	02/16/2016	Regular	0.00	500.00	24790
11189	Janis O'Rourke	02/16/2016	Regular	0.00	725.00	24791
11212	JAY EDELMAN	02/16/2016	Regular	0.00	200.00	24792
11115	JEFFREY BECOM & SALLY ABERG-BECOM	02/16/2016	Regular	0.00	500.00	24793
11092	JEFFREY PADUAN	02/16/2016	Regular	0.00	750.00	24794
11077	JENNIFER J MARIN	02/16/2016	Regular	0.00	500.00	24795
11203	Joanne L Perron	02/16/2016	Regular	0.00	500.00	24796
11083	JOHN AULENTA	02/16/2016	Regular	0.00	500.00	24797
11197	JOHN ENGSTROM	02/16/2016	Regular	0.00	125.00	24798
11205	John Flury	02/16/2016	Regular	0.00	500.00	24799
11174	John North	02/16/2016	Regular	0.00	500.00	24800
11170	JUDY ANDERSON	02/16/2016	Regular	0.00	125.00	24801
11093	JULIE CASON	02/16/2016	Regular	0.00	58.00	24802
11190	JULIET KWON	02/16/2016	Regular	0.00	300.00	24803

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
11125	Karen Flamme	02/16/2016	Regular	0.00	500.00	24804
10623	KAREN SONNERGREN	02/16/2016	Regular	0.00	200.00	24805
11162	KARIN E. RICHARDS	02/16/2016	Regular	0.00	100.00	24806
11185	KATHLEEN DOWNS	02/16/2016	Regular	0.00	100.00	24807
11071	KELLY SCHINDLER	02/16/2016	Regular	0.00	500.00	24808
11067	KENNETH LOMASNEY	02/16/2016	Regular	0.00	125.00	24809
11101	KIM K WILLIAMS	02/16/2016	Regular	0.00	200.00	24810
11120	KIRK STEWART	02/16/2016	Regular	0.00	500.00	24811
11196	Laura Medina	02/16/2016	Regular	0.00	625.00	24812
11112	Lenore Thornton	02/16/2016	Regular	0.00	500.00	24813
11194	LEROY E EDWARDS	02/16/2016	Regular	0.00	125.00	24814
11091	LESLIE K JOHNSON	02/16/2016	Regular	0.00	875.00	24815
11216	LIAM DOUST	02/16/2016	Regular	0.00	65.00	24816
11117	Linda Beidleman	02/16/2016	Regular	0.00	500.00	24817
11086	LISA SCHUMACHER	02/16/2016	Regular	0.00	500.00	24818
11095	LM Links, LLC	02/16/2016	Regular	0.00	350.00	24819
11195	LORETTA NIERAT	02/16/2016	Regular	0.00	125.00	24820
11116	LOUIS & MARIANNE MEDEIROS	02/16/2016	Regular	0.00	500.00	24821
11070	LUKE BALDWIN	02/16/2016	Regular	0.00	500.00	24822
11188	LYNN HERBERT	02/16/2016	Regular	0.00	99.88	24823
11218	Lynn Herbert/Optimum Balance	02/16/2016	Regular	0.00	100.00	24824
11219	MANUEL BETTENCOURT	02/16/2016	Regular	0.00	395.00	24825
11118	MARGERY R MCMENAMIN	02/16/2016	Regular	0.00	500.00	24826
11109	MARGIE DENNER	02/16/2016	Regular	0.00	100.00	24827
11060	MARIAN M KAGEYAMA	02/16/2016	Regular	0.00	100.00	24828
11096	MARIETTA S VON BERG	02/16/2016	Regular	0.00	198.00	24829
11103	MARK & JOAN AMBERS	02/16/2016	Regular	0.00	100.00	24830
11073	MARK WAITE	02/16/2016	Regular	0.00	500.00	24831
11058	MARY WESTERMAN	02/16/2016	Regular	0.00	149.00	24832
11063	MATTHEW MITCHELL	02/16/2016	Regular	0.00	125.00	24833
11068	MAURICE COURY	02/16/2016	Regular	0.00	125.00	24834
11064	MICHAEL & JENNIFER TAVARES	02/16/2016	Regular	0.00	125.00	24835
11079	MICHAEL ADAMS	02/16/2016	Regular	0.00	500.00	24836
11180	MICHAEL SHERMAN	02/16/2016	Regular	0.00	200.00	24837
11123	Michelle Wilsdon	02/16/2016	Regular	0.00	500.00	24838
11214	NAGI & TERESA HANNA	02/16/2016	Regular	0.00	3,295.00	24839
11191	NANCY LANDAZURI	02/16/2016	Regular	0.00	300.00	24840
11179	NATHAN COTA	02/16/2016	Regular	0.00	500.00	24841
11206	NEAL SMITH	02/16/2016	Regular	0.00	500.00	24842
11181	NOEL MILLS	02/16/2016	Regular	0.00	2,355.00	24843
11165	NOELLE J STEINBRONER	02/16/2016	Regular	0.00	125.00	24844
11061	NUHA HASSAN	02/16/2016	Regular	0.00	100.00	24845
11069	PATRICIA ROYSTER	02/16/2016	Regular	0.00	125.00	24846
11105	PATRICIA WOLFF	02/16/2016	Regular	0.00	100.00	24847
11187	PAULA CRIVELLO	02/16/2016	Regular	0.00	100.00	24848
11176	PAULA I O'CONNOR	02/16/2016	Regular	0.00	500.00	24849
11119	PEDRO ORTIZ	02/16/2016	Regular	0.00	500.00	24850
11108	PETER CHU	02/16/2016	Regular	0.00	100.00	24851
11128	RF WEICHERT V INC	02/16/2016	Regular	0.00	100.00	24852
11102	RICHARD A MILLER	02/16/2016	Regular	0.00	100.00	24853
11066	RICHARD WISE	02/16/2016	Regular	0.00	125.00	24854
11199	ROBERT CHELOTTI	02/16/2016	Regular	0.00	500.00	24855
11090	ROGER A & TERRILL B DAHL	02/16/2016	Regular	0.00	22.50	24856
11099	ROGER O'SULLIVAN	02/16/2016	Regular	0.00	100.00	24857
11213	Rogers & Merritt Hawley	02/16/2016	Regular	0.00	750.00	24858
11183	Rose Stetz	02/16/2016	Regular	0.00	500.00	24859
10092	RYAN HULL	02/16/2016	Regular	0.00	500.00	24860
11164	SAM TARANTINO	02/16/2016	Regular	0.00	125.00	24861
11082	SARAH KOUNS	02/16/2016	Regular	0.00	500.00	24862
11065	SCOTT & KATY GILES	02/16/2016	Regular	0.00	185.00	24863
11215	SHAHEEN SCHMIDT & MARK ANGEL	02/16/2016	Regular	0.00	375.00	24864

Vendor Number	Vendor Name	Payment Date	Payment Type	Discount Amount	Payment Amount	Number
11172	Shane H. Horton	02/16/2016	Regular	0.00	500.00	24865
11204	Sheila Armstrong	02/16/2016	Regular	0.00	500.00	24866
11209	Sheri Rosa	02/16/2016	Regular	0.00	500.00	24867
11193	SHINICHI YAMADA	02/16/2016	Regular	0.00	100.00	24868
11163	STEPHANIE TAYLOR	02/16/2016	Regular	0.00	100.00	24869
11169	STEPHEN & LISA BARKALOW	02/16/2016	Regular	0.00	125.00	24870
11111	Stevan Dority	02/16/2016	Regular	0.00	500.00	24871
11211	Steven Evanson	02/16/2016	Regular	0.00	700.00	24872
11175	STUART WELLS	02/16/2016	Regular	0.00	500.00	24873
11130	SUSAN A McCLOUD	02/16/2016	Regular	0.00	1,216.00	24874
11089	SUSAN SPIEGEL	02/16/2016	Regular	0.00	200.00	24875
11124	Susan Webb	02/16/2016	Regular	0.00	500.00	24876
11055	TERRY ACKERMAN	02/16/2016	Regular	0.00	100.00	24877
11129	Tex Otto	02/16/2016	Regular	0.00	2,500.00	24878
11192	TIMOTHY RICHMOND	02/16/2016	Regular	0.00	100.00	24879
11160	TONY WILLIAMS	02/16/2016	Regular	0.00	100.00	24880
11062	WARREN P KUJAWA	02/16/2016	Regular	0.00	125.00	24881
11167	WAYNE ROSS	02/16/2016	Regular	0.00	125.00	24882
11059	WILL & ANALIS BANS	02/16/2016	Regular	0.00	150.00	24883
11202	WILLIAM B FARR JR & JENNY FARR	02/16/2016	Regular	0.00	500.00	24884
11094	WILLIAM D. YOUNG	02/16/2016	Regular	0.00	424.00	24885
11106	WILLIAM R ANDERSON	02/16/2016	Regular	0.00	100.00	24886
11110	Zac Lazare	02/16/2016	Regular	0.00	225.00	24887

Bank Code REBATES-02 Summary

Payment Type	Payable Count	Payment Count	Discount	Payment
Regular Checks	141	141	0.00	55,974.68
Manual Checks	0	0	0.00	0.00
Voided Checks	0	3	0.00	-900.00
Bank Drafts	0	0	0.00	0.00
EFT's	0	0	0.00	0.00
	141	**144**	**0.00**	**55,074.68**

Fund Summary

Fund	Name	Period	Amount
99	POOL CASH FUND	2/2016	864,635.45
			864,635.45

EXHIBIT 7-C

Payroll Bank Transaction Report - MPWMD

Monterey Peninsula Water Management Dist

By Payment Number

Date: 2/1/2016 - 2/29/2016

Payroll Set: 01 - Monterey Peninsula Water Management District

Payment Number	Payment Date	Payment Type	Employee Number	Employee Name	Check Amount	Direct Deposit Amount	Total Payment
2031	02/05/2016	Regular	1024	Stoldt, David J	0.00	7,892.44	7,892.44
2032	02/05/2016	Regular	1025	Tavani, Arlene M	0.00	1,901.22	1,901.22
2033	02/05/2016	Regular	1006	Dudley, Mark A	0.00	2,878.44	2,878.44
2034	02/05/2016	Regular	1039	Flores, Elizabeth	0.00	1,729.70	1,729.70
2035	02/05/2016	Regular	1018	Prasad, Suresh	0.00	3,584.12	3,584.12
2036	02/05/2016	Regular	1019	Reyes, Sara C	0.00	1,856.56	1,856.56
2037	02/05/2016	Regular	1020	Sandoval, Eric J	0.00	1,933.84	1,933.84
2038	02/05/2016	Regular	1021	Schmidlin, Cynthia L	0.00	1,802.01	1,802.01
2039	02/05/2016	Regular	1022	Soto, Paula	0.00	1,420.54	1,420.54
2040	02/05/2016	Regular	1002	Bekker, Mark	0.00	1,627.69	1,627.69
2041	02/05/2016	Regular	1005	Christensen, Thomas T	0.00	2,548.85	2,548.85
2042	02/05/2016	Regular	1008	Hampson, Larry M	0.00	3,199.66	3,199.66
2043	02/05/2016	Regular	1013	Lyons, Matthew J	0.00	1,643.15	1,643.15
2044	02/05/2016	Regular	1023	Stern, Henrietta L	0.00	809.79	809.79
2045	02/05/2016	Regular	6028	Atkins, Daniel N	0.00	267.16	267.16
2046	02/05/2016	Regular	1004	Chaney, Beverly M	0.00	2,178.11	2,178.11
2047	02/05/2016	Regular	1007	Hamilton, Cory R	0.00	2,028.48	2,028.48
2048	02/05/2016	Regular	1009	James, Gregory W	0.00	2,933.30	2,933.30
2049	02/05/2016	Regular	1011	Lear, Jonathan P	0.00	2,731.78	2,731.78
2050	02/05/2016	Regular	1012	Lindberg, Thomas L	0.00	2,157.44	2,157.44
2051	02/05/2016	Regular	1016	Oliver, Joseph W	0.00	2,646.21	2,646.21
2052	02/05/2016	Regular	1026	Urquhart, Kevan A	0.00	1,868.76	1,868.76
2053	02/05/2016	Regular	1001	Ayala, Gabriela D	0.00	1,654.41	1,654.41
2054	02/05/2016	Regular	1041	Gonnerman, Maryan C	0.00	1,453.92	1,453.92
2055	02/05/2016	Regular	1010	Kister, Stephanie L	0.00	1,838.75	1,838.75
2056	02/05/2016	Regular	1017	Locke, Stephanie L	0.00	2,687.11	2,687.11
2057	02/05/2016	Regular	1014	Martin, Debra S	0.00	1,817.52	1,817.52
2058	02/19/2016	Regular	1024	Stoldt, David J	0.00	5,899.20	5,899.20
2059	02/19/2016	Regular	1025	Tavani, Arlene M	0.00	1,901.23	1,901.23
2060	02/19/2016	Regular	1006	Dudley, Mark A	0.00	2,878.44	2,878.44
2061	02/19/2016	Regular	1039	Flores, Elizabeth	0.00	1,570.36	1,570.36
2062	02/19/2016	Regular	1018	Prasad, Suresh	0.00	3,584.12	3,584.12
2063	02/19/2016	Regular	1019	Reyes, Sara C	0.00	1,856.57	1,856.57
2064	02/19/2016	Regular	1020	Sandoval, Eric J	0.00	1,933.85	1,933.85
2065	02/19/2016	Regular	1021	Schmidlin, Cynthia L	0.00	1,802.01	1,802.01
2066	02/19/2016	Regular	1022	Soto, Paula	0.00	1,420.53	1,420.53
2067	02/19/2016	Regular	1002	Bekker, Mark	0.00	1,627.68	1,627.68
2068	02/19/2016	Regular	1005	Christensen, Thomas T	0.00	2,548.85	2,548.85
2069	02/19/2016	Regular	1008	Hampson, Larry M	0.00	3,199.66	3,199.66
2070	02/19/2016	Regular	1013	Lyons, Matthew J	0.00	1,643.15	1,643.15
2071	02/19/2016	Regular	1023	Stern, Henrietta L	0.00	828.40	828.40
2072	02/19/2016	Regular	6028	Atkins, Daniel N	0.00	370.41	370.41
2073	02/19/2016	Regular	1004	Chaney, Beverly M	0.00	2,178.10	2,178.10
2074	02/19/2016	Regular	1007	Hamilton, Cory R	0.00	2,028.49	2,028.49
2075	02/19/2016	Regular	1009	James, Gregory W	0.00	2,933.31	2,933.31
2076	02/19/2016	Regular	1011	Lear, Jonathan P	0.00	2,731.78	2,731.78
2077	02/19/2016	Regular	1012	Lindberg, Thomas L	0.00	2,157.44	2,157.44
2078	02/19/2016	Regular	1016	Oliver, Joseph W	0.00	2,646.21	2,646.21
2079	02/19/2016	Regular	1026	Urquhart, Kevan A	0.00	1,868.76	1,868.76
2080	02/19/2016	Regular	1001	Ayala, Gabriela D	0.00	1,654.41	1,654.41
2081	02/19/2016	Regular	1041	Gonnerman, Maryan C	0.00	1,453.92	1,453.92
2082	02/19/2016	Regular	1010	Kister, Stephanie L	0.00	1,838.75	1,838.75
2083	02/19/2016	Regular	1017	Locke, Stephanie L	0.00	2,687.11	2,687.11
2084	02/19/2016	Regular	1014	Martin, Debra S	0.00	1,817.52	1,817.52
24658	02/05/2016	Regular	6007	Delay, Thomas E	496.65	0.00	496.65
24659	02/05/2016	Regular	6004	Malloway, Geoffrey J	416.50	0.00	416.50
24660	02/05/2016	Regular	1040	Smith, Kyle	1,418.46	0.00	1,418.46

EXHIBIT 7-C

Payment Number	Payment Date	Payment Type	Employee Number	Employee Name	Check Amount	Direct Deposit Amount	Total Payment
24708	02/08/2016	Regular	7006	Brower, Sr., Robert S	203.17	0.00	203.17
24709	02/08/2016	Regular	7007	Byrne, Jeannie	507.92	0.00	507.92
24710	02/08/2016	Regular	7013	Clarke, Andrew	345.22	0.00	345.22
24711	02/08/2016	Regular	7014	Evans, Molly F	203.17	0.00	203.17
24712	02/08/2016	Regular	7003	Lewis, Brenda	203.17	0.00	203.17
24713	02/08/2016	Regular	7001	Pendergrass, David K	406.34	0.00	406.34
24714	02/08/2016	Regular	7004	Potter, David L	101.58	0.00	101.58
24888	02/19/2016	Regular	6007	Delay, Thomas E	875.57	0.00	875.57
24889	02/19/2016	Regular	6034	Kleven, Alana K	207.27	0.00	207.27
24890	02/19/2016	Regular	1040	Smith, Kyle	1,418.46	0.00	1,418.46
				Totals:	**6,803.48**	**120,151.22**	**126,954.70**

EXHIBIT 7-D

Bank Transaction Report

Monterey Peninsula Water Management Dist

Transaction Detail

Issued Date Range: 02/01/2016 - 02/29/2016

Cleared Date Range: -

Issued Date	Cleared Date	Number	Description	Module	Status	Type	Amount
Bank Account: 111 - Bank of America Checking - 0000 8170 8210							
02/05/2016	02/29/2016	DFT0000686	I.R.S.	Accounts Payable	Cleared	Bank Draft	-11,760.85
02/05/2016	02/29/2016	DFT0000687	I.R.S.	Accounts Payable	Cleared	Bank Draft	-2,361.46
02/05/2016	02/29/2016	DFT0000688	I.R.S.	Accounts Payable	Cleared	Bank Draft	-163.84
02/08/2016	02/29/2016	DFT0000689	I.R.S.	Accounts Payable	Cleared	Bank Draft	-61.12
02/08/2016	02/29/2016	DFT0000690	I.R.S.	Accounts Payable	Cleared	Bank Draft	-63.82
02/08/2016	02/29/2016	DFT0000691	I.R.S.	Accounts Payable	Cleared	Bank Draft	-272.80
02/12/2016	02/29/2016	DFT0000709	Chevron	Accounts Payable	Cleared	Bank Draft	-301.04
02/16/2016	02/29/2016	SVC0000073	To post Feb/2016 bank service charge	General Ledger	Cleared	Service Charge	-294.56
02/19/2016	02/29/2016	DFT0000693	I.R.S.	Accounts Payable	Cleared	Bank Draft	-10,637.52
02/19/2016	02/29/2016	DFT0000694	I.R.S.	Accounts Payable	Cleared	Bank Draft	-2,255.02
02/19/2016	02/29/2016	DFT0000695	I.R.S.	Accounts Payable	Cleared	Bank Draft	-214.40
						Bank Account 111 Total: (11)	**-28,386.43**
						Report Total: (11)	**-28,386.43**

EXHIBIT 7-D

Bank Transaction Report **Issued Date Range: 02/01/2016 - 02/29/2016** **Cleared Date Range: -**

Summary

Bank Account		Count	Amount
111 Bank of America Checking - 0000 8170 8210		11	-28,386.43
	Report Total:	**11**	**-28,386.43**

Cash Account		Count	Amount
99 99-10-100100 Pool Cash Account		11	-28,386.43
	Report Total:	**11**	**-28,386.43**

Transaction Type	Count	Amount
Bank Draft	10	-28,091.87
Service Charge	1	-294.56
Report Total:	**11**	**-28,386.43**

Statement of Revenue Over Expense - No Decimals

Monterey Peninsula Water Management Dist

Group Summary

For Fiscal: 2015-2016 Period Ending: 02/29/2016

Level…	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
Revenue								
R100 - Water Supply Charge	0	283,220	-283,220	0.00 %	1,985,810	3,400,000	-1,414,190	-58.41 %
R110 - Mitigation Revenue	789,573	200,920	588,653	-392.98 %	1,184,110	2,412,000	-1,227,891	-49.09 %
R120 - Property Taxes Revenues	0	130,781	-130,781	0.00 %	942,259	1,570,000	-627,741	-60.02 %
R130 - User Fees	3,720	6,248	-2,527	-59.54 %	31,241	75,000	-43,759	-41.65 %
R140 - Connection Charges	50,705	14,578	36,127	-347.83 %	193,990	175,000	18,990	-110.85 %
R150 - Permit Processing Fee	14,537	14,578	-41	-99.72 %	99,060	175,000	-75,940	-56.61 %
R160 - Well Registration Fee	25	167	-142	-15.01 %	650	2,000	-1,350	-32.50 %
R180 - River Work Permit Applicatiction	0	0	0	0.00 %	75	0	75	0.00 %
R190 - WDS Permits Rule 21	1,308	4,665	-3,357	-28.04 %	39,929	56,000	-16,071	-71.30 %
R200 - Recording Fees	1,388	666	722	-208.28 %	7,617	8,000	-383	-95.21 %
R210 - Legal Fees	220	1,250	-1,030	-17.61 %	1,645	15,000	-13,355	-10.97 %
R220 - Copy Fee	4	0	4	0.00 %	68	0	68	0.00 %
R230 - Miscellaneous - Other	255	1,250	-995	-20.41 %	7,636	15,000	-7,364	-50.91 %
R240 - Insurance Refunds	0	0	0	0.00 %	1,352	0	1,352	0.00 %
R250 - Interest Income	1,292	1,250	43	-103.42 %	12,692	15,000	-2,308	-84.61 %
R260 - CAW - ASR	0	23,566	-23,566	0.00 %	0	282,900	-282,900	0.00 %
R265 - CAW - Los Padres Reimbursement	0	49,980	-49,980	0.00 %	0	600,000	-600,000	0.00 %
R270 - CAW - Rebates	60,587	58,310	2,277	-103.90 %	412,929	700,000	-287,071	-58.99 %
R280 - CAW - Conservation	0	19,326	-19,326	0.00 %	0	232,000	-232,000	0.00 %
R290 - CAW - Miscellaneous	0	583	-583	0.00 %	0	7,000	-7,000	0.00 %
R300 - Watermaster	0	5,848	-5,848	0.00 %	0	70,200	-70,200	0.00 %
R305 - City of Seaside - Rebates	0	1,666	-1,666	0.00 %	0	20,000	-20,000	0.00 %
R310 - Other Reimbursements	0	5,415	-5,415	0.00 %	0	65,000	-65,000	0.00 %
R320 - Grants	0	22,908	-22,908	0.00 %	148,788	275,000	-126,212	-54.10 %
R510 - Operating Reserve	0	270,009	-270,009	0.00 %	0	3,241,400	-3,241,400	0.00 %
Total Revenue:	**923,614**	**1,117,178**	**-193,564**	**-82.67 %**	**5,069,851**	**13,411,500**	**-8,341,649**	**-37.80 %**

EXHIBIT 7-E

Statement of Revenue Over Expense - No Decimals **For Fiscal: 2015-2016 Period Ending: 02/29/2016**

Level…	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
Expense								
Level1: 100 - Personnel Costs								
1100 - Salaries & Wages	180,188	197,838	17,650	91.08 %	1,526,047	2,375,000	848,953	64.25 %
1110 - Manager's Auto Allowance	462	500	38	92.34 %	3,923	6,000	2,077	65.38 %
1120 - Manager's Deferred Comp	600	650	50	92.34 %	5,100	7,800	2,700	65.38 %
1130 - Unemployment Compensation	0	250	250	0.00 %	670	3,000	2,330	22.34 %
1140 - Insurance Opt-Out Supplemental	1,396	1,583	186	88.22 %	11,559	19,000	7,441	60.84 %
1150 - Temporary Personnel	3,083	5,914	2,832	52.12 %	36,790	71,000	34,210	51.82 %
1160 - PERS Retirement	17,581	33,811	16,231	52.00 %	322,649	405,900	83,251	79.49 %
1170 - Medical Insurance	24,802	25,865	1,063	95.89 %	204,573	310,500	105,927	65.88 %
1180 - Medical Insurance - Retirees	5,714	4,798	-916	119.09 %	38,030	57,600	19,570	66.02 %
1190 - Workers Compensation	3,258	3,524	266	92.45 %	27,741	42,300	14,559	65.58 %
1200 - Life Insurance	411	458	47	89.71 %	3,541	5,500	1,959	64.39 %
1210 - Long Term Disability Insurance	1,115	1,166	52	95.57 %	8,681	14,000	5,319	62.01 %
1220 - Short Term Disability Insurance	221	250	29	88.55 %	1,713	3,000	1,287	57.09 %
1260 - Employee Assistance Program	66	100	34	65.82 %	540	1,200	660	45.02 %
1270 - FICA Tax Expense	326	400	74	81.41 %	2,454	4,800	2,346	51.13 %
1280 - Medicare Tax Expense	2,340	2,907	567	80.50 %	19,742	34,900	15,158	56.57 %
1290 - Staff Development & Training	1,690	2,716	1,026	62.23 %	6,726	32,600	25,874	20.63 %
1300 - Conference Registration	450	267	-183	168.82 %	2,545	3,200	655	79.53 %
1310 - Professional Dues	150	225	75	66.69 %	1,565	2,700	1,135	57.96 %
1320 - Personnel Recruitment	2,087	417	-1,671	501.15 %	5,666	5,000	-666	113.32 %
Total Level1: 100 - Personnel Costs:	**245,937**	**283,636**	**37,699**	**86.71 %**	**2,230,255**	**3,405,000**	**1,174,745**	**65.50 %**
Level1: 200 - Supplies and Services								
2000 - Board Member Compensation	2,200	3,082	882	71.38 %	13,310	37,000	23,690	35.97 %
2020 - Board Expenses	4,424	333	-4,091	1,327.66 %	6,056	4,000	-2,056	151.40 %
2040 - Rent	1,366	1,966	600	69.49 %	12,164	23,600	11,436	51.54 %
2060 - Utilities	2,803	3,199	396	87.62 %	22,628	38,400	15,772	58.93 %
2120 - Insurance Expense	3,517	3,749	231	93.83 %	28,825	45,000	16,175	64.06 %
2130 - Membership Dues	3,032	2,291	-741	132.36 %	22,564	27,500	4,936	82.05 %
2140 - Bank Charges	323	292	-31	110.69 %	3,313	3,500	187	94.66 %
2150 - Office Supplies	819	1,358	538	60.34 %	7,268	16,300	9,032	44.59 %
2160 - Courier Expense	120	666	546	18.01 %	4,533	8,000	3,467	56.66 %
2170 - Printing/Photocopy	0	750	750	0.00 %	182	9,000	8,818	2.02 %
2180 - Postage & Shipping	532	333	-199	159.81 %	4,679	4,000	-679	116.98 %
2190 - IT Supplies/Services	5,894	8,780	2,886	67.13 %	55,458	105,400	49,942	52.62 %
2200 - Professional Fees	22,400	11,246	-11,155	199.19 %	173,858	135,000	-38,858	128.78 %
2220 - Equipment Repairs & Maintenance	1,611	583	-1,028	276.24 %	5,589	7,000	1,411	79.85 %
2235 - Equipment Lease	946	1,250	303	75.72 %	8,863	15,000	6,137	59.09 %
2240 - Telephone	3,436	3,615	179	95.04 %	24,185	43,400	19,215	55.73 %
2260 - Facility Maintenance	3,644	2,899	-745	125.70 %	26,748	34,800	8,052	76.86 %
2270 - Travel Expenses	452	2,682	2,230	16.84 %	17,279	32,200	14,921	53.66 %

EXHIBIT 7-E

Statement of Revenue Over Expense - No Decimals

For Fiscal: 2015-2016 Period Ending: 02/29/2016

Level…	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
2280 - Transportation	1,478	1,883	404	78.52 %	22,241	22,600	359	98.41 %
2300 - Legal Services	31,494	33,320	1,826	94.52 %	315,985	400,000	84,015	79.00 %
2380 - Meeting Expenses	280	600	320	46.69 %	2,214	7,200	4,986	30.75 %
2420 - Legal Notices	834	358	-475	232.71 %	1,413	4,300	2,887	32.87 %
2460 - Public Outreach	702	417	-285	168.50 %	1,845	5,000	3,155	36.90 %
2480 - Miscellaneous	0	417	417	0.00 %	1,289	5,000	3,711	25.78 %
2500 - Tax Administration Fee	0	1,666	1,666	0.00 %	0	20,000	20,000	0.00 %
2900 - Operating Supplies	37	1,741	1,704	2.14 %	12,370	20,900	8,530	59.19 %
Total Level1: 200 - Supplies and Services:	**92,344**	**89,473**	**-2,871**	**103.21 %**	**794,859**	**1,074,100**	**279,241**	**74.00 %**
Level1: 300 - Other Expenses								
3000 - Project Expenses	472,148	658,095	185,947	71.74 %	2,698,021	7,900,300	5,202,280	34.15 %
4000 - Fixed Asset Purchases	0	12,037	12,037	0.00 %	30,886	144,500	113,614	21.37 %
5000 - Debt Service	0	19,159	19,159	0.00 %	70,070	230,000	159,930	30.47 %
5500 - Election Expenses	0	18,992	18,992	0.00 %	0	228,000	228,000	0.00 %
6000 - Contingencies	0	6,248	6,248	0.00 %	0	75,000	75,000	0.00 %
6500 - Reserves	0	29,538	29,538	0.00 %	0	354,600	354,600	0.00 %
Total Level1: 300 - Other Expenses:	**472,148**	**744,069**	**271,921**	**63.45 %**	**2,798,977**	**8,932,400**	**6,133,423**	**31.34 %**
Total Expense:	**810,430**	**1,117,178**	**306,748**	**72.54 %**	**5,824,091**	**13,411,500**	**7,587,409**	**43.43 %**
Report Total:	**113,184**	**0**	**113,184**		**-754,240**	**0**	**-754,240**	

Fund Summary

Fund	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
24 - MITIGATION FUND	641,402	0	641,402		-59,348	0	-59,348	
26 - CONSERVATION FUND	-61,966	0	-61,966		-37,079	0	-37,079	
35 - WATER SUPPLY FUND	-466,252	0	-466,252		-657,812	0	-657,812	
Report Total:	**113,184**	**0.08**	**113,184**		**-754,240**	**0**	**-754,240**	

Statement of Revenue Over Expense - No Decimals

Monterey Peninsula Water Management Dist

Group Summary

For Fiscal: 2015-2016 Period Ending: 02/29/2016

Level...		February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
Fund: 24 - MITIGATION FUND									
Revenue									
R110 - Mitigation Revenue		789,573	200,920	588,653	-392.98 %	1,184,110	2,412,000	-1,227,891	-49.09 %
R130 - User Fees		3,140	6,248	-3,107	-50.27 %	26,374	75,000	-48,626	-35.17 %
R160 - Well Registration Fee		25	167	-142	-15.01 %	650	2,000	-1,350	-32.50 %
R180 - River Work Permit Applicatiction		0	0	0	0.00 %	75	0	75	0.00 %
R190 - WDS Permits Rule 21		1,308	4,665	-3,357	-28.04 %	39,929	56,000	-16,071	-71.30 %
R230 - Miscellaneous - Other		0	1,250	-1,250	0.00 %	443	15,000	-14,557	-2.95 %
R250 - Interest Income		156	541	-386	-28.75 %	1,196	6,500	-5,304	-18.40 %
R290 - CAW - Miscellaneous		0	583	-583	0.00 %	0	7,000	-7,000	0.00 %
R310 - Other Reimbursements		0	4,582	-4,582	0.00 %	0	55,000	-55,000	0.00 %
R320 - Grants		0	22,908	-22,908	0.00 %	148,788	275,000	-126,212	-54.10 %
R510 - Operating Reserve		0	10,579	-10,579	0.00 %	0	127,000	-127,000	0.00 %
	Total Revenue:	**794,202**	**252,441**	**541,762**	**-314.61 %**	**1,401,564**	**3,030,500**	**-1,628,936**	**-46.25 %**

EXHIBIT 7-E

Statement of Revenue Over Expense - No Decimals

For Fiscal: 2015-2016 Period Ending: 02/29/2016

Level...	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
Expense								
Level1: 100 - Personnel Costs								
1100 - Salaries & Wages	73,014	83,308	10,294	87.64 %	638,915	1,000,100	361,185	63.89 %
1110 - Manager's Auto Allowance	92	100	8	92.34 %	785	1,200	415	65.38 %
1120 - Manager's Deferred Comp	120	133	13	90.04 %	1,020	1,600	580	63.75 %
1130 - Unemployment Compensation	0	108	108	0.00 %	288	1,300	1,012	22.16 %
1140 - Insurance Opt-Out Supplemental	368	421	53	87.50 %	3,027	5,050	2,023	59.93 %
1150 - Temporary Personnel	0	42	42	0.00 %	4,732	500	-4,232	946.35 %
1160 - PERS Retirement	7,186	14,461	7,275	49.69 %	137,854	173,600	35,746	79.41 %
1170 - Medical Insurance	10,320	11,262	942	91.63 %	86,853	135,200	48,347	64.24 %
1180 - Medical Insurance - Retirees	2,457	2,066	-391	118.93 %	16,353	24,800	8,447	65.94 %
1190 - Workers Compensation	1,983	2,107	124	94.09 %	16,896	25,300	8,404	66.78 %
1200 - Life Insurance	190	196	5	97.25 %	1,522	2,350	828	64.75 %
1210 - Long Term Disability Insurance	469	516	48	90.73 %	3,705	6,200	2,495	59.76 %
1220 - Short Term Disability Insurance	93	108	15	85.93 %	731	1,300	569	56.27 %
1260 - Employee Assistance Program	27	42	15	64.27 %	224	500	276	44.73 %
1270 - FICA Tax Expense	248	192	-56	129.33 %	1,984	2,300	316	86.26 %
1280 - Medicare Tax Expense	1,021	1,241	220	82.24 %	8,585	14,900	6,315	57.62 %
1290 - Staff Development & Training	428	841	413	50.85 %	1,825	10,100	8,275	18.07 %
1300 - Conference Registration	194	117	-77	165.92 %	884	1,400	516	63.16 %
1310 - Professional Dues	0	83	83	0.00 %	440	1,000	560	44.02 %
1320 - Personnel Recruitment	1,044	175	-869	596.61 %	2,172	2,100	-72	103.44 %
Total Level1: 100 - Personnel Costs:	**99,253**	**117,520**	**18,267**	**84.46 %**	**928,794**	**1,410,800**	**482,006**	**65.83 %**
Level1: 200 - Supplies and Services								
2000 - Board Member Compensation	946	1,324	378	71.42 %	5,723	15,900	10,177	36.00 %
2020 - Board Expenses	1,990	142	-1,849	1,405.52 %	2,692	1,700	-992	158.36 %
2040 - Rent	633	908	275	69.70 %	5,697	10,900	5,203	52.27 %
2060 - Utilities	1,220	1,383	163	88.20 %	9,847	16,600	6,753	59.32 %
2120 - Insurance Expense	1,512	1,608	95	94.07 %	12,395	19,300	6,905	64.22 %
2130 - Membership Dues	1,304	833	-471	156.51 %	9,494	10,000	506	94.94 %
2140 - Bank Charges	138	125	-13	110.04 %	1,085	1,500	415	72.34 %
2150 - Office Supplies	351	583	232	60.14 %	3,132	7,000	3,868	44.74 %
2160 - Courier Expense	52	283	232	18.22 %	1,944	3,400	1,456	57.16 %
2170 - Printing/Photocopy	0	233	233	0.00 %	78	2,800	2,722	2.80 %
2180 - Postage & Shipping	229	142	-87	161.69 %	1,965	1,700	-265	115.59 %
2190 - IT Supplies/Services	2,534	3,790	1,256	66.87 %	23,847	45,500	21,653	52.41 %
2200 - Professional Fees	9,632	4,831	-4,801	199.36 %	74,759	58,000	-16,759	128.89 %
2220 - Equipment Repairs & Maintenance	693	250	-443	277.16 %	2,403	3,000	597	80.11 %
2235 - Equipment Lease	407	533	126	76.31 %	3,811	6,400	2,589	59.55 %
2240 - Telephone	1,461	1,558	97	93.76 %	10,452	18,700	8,248	55.90 %
2260 - Facility Maintenance	1,592	1,258	-334	126.56 %	11,527	15,100	3,573	76.33 %
2270 - Travel Expenses	149	900	750	16.61 %	3,370	10,800	7,430	31.20 %

EXHIBIT 7-E

Statement of Revenue Over Expense - No Decimals

For Fiscal: 2015-2016 Period Ending: 02/29/2016

Level…	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
2280 - Transportation	1,287	733	-554	175.62 %	13,723	8,800	-4,923	155.95 %
2300 - Legal Services	1,318	7,497	6,179	17.58 %	89,010	90,000	990	98.90 %
2380 - Meeting Expenses	120	225	105	53.53 %	957	2,700	1,743	35.45 %
2420 - Legal Notices	137	150	13	91.19 %	137	1,800	1,663	7.60 %
2460 - Public Outreach	260	175	-85	148.42 %	728	2,100	1,372	34.66 %
2480 - Miscellaneous	0	183	183	0.00 %	554	2,200	1,646	25.20 %
2900 - Operating Supplies	0	283	283	0.00 %	481	3,400	2,919	14.16 %
Total Level1: 200 - Supplies and Services:	**27,964**	**29,930**	**1,966**	**93.43 %**	**289,812**	**359,300**	**69,488**	**80.66 %**
Level1: 300 - Other Expenses								
3000 - Project Expenses	25,584	59,043	33,459	43.33 %	227,372	708,800	481,428	32.08 %
4000 - Fixed Asset Purchases	0	5,581	5,581	0.00 %	14,934	67,000	52,066	22.29 %
5500 - Election Expenses	0	8,163	8,163	0.00 %	0	98,000	98,000	0.00 %
6000 - Contingencies	0	2,666	2,666	0.00 %	0	32,000	32,000	0.00 %
6500 - Reserves	0	29,538	29,538	0.00 %	0	354,600	354,600	0.00 %
Total Level1: 300 - Other Expenses:	**25,584**	**104,991**	**79,407**	**24.37 %**	**242,306**	**1,260,400**	**1,018,094**	**19.22 %**
Total Expense:	**152,800**	**252,441**	**99,641**	**60.53 %**	**1,460,912**	**3,030,500**	**1,569,588**	**48.21 %**
Total Revenues	**794,202**	**252,441**	**541,762**	**-314.61 %**	**1,401,564**	**3,030,500**	**-1,628,936**	**-46.25 %**
Total Fund: 24 - MITIGATION FUND:	**641,402**	**0**	**641,402**		**-59,348**	**0**	**-59,348**	

EXHIBIT 7-E

Statement of Revenue Over Expense - No Decimals

For Fiscal: 2015-2016 Period Ending: 02/29/2016

Level…	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
Fund: 26 - CONSERVATION FUND								
Revenue								
R120 - Property Taxes Revenues	0	90,131	-90,131	0.00 %	649,378	1,082,000	-432,622	-60.02 %
R130 - User Fees	580	0	580	0.00 %	4,867	0	4,867	0.00 %
R150 - Permit Processing Fee	14,537	14,578	-41	-99.72 %	99,060	175,000	-75,940	-56.61 %
R200 - Recording Fees	1,388	666	722	-208.28 %	7,617	8,000	-383	-95.21 %
R210 - Legal Fees	220	1,250	-1,030	-17.61 %	1,645	15,000	-13,355	-10.97 %
R230 - Miscellaneous - Other	255	0	255	0.00 %	1,082	0	1,082	0.00 %
R250 - Interest Income	1	333	-332	-0.41 %	1,675	4,000	-2,325	-41.88 %
R270 - CAW - Rebates	60,587	58,310	2,277	-103.90 %	412,929	700,000	-287,071	-58.99 %
R280 - CAW - Conservation	0	19,326	-19,326	0.00 %	0	232,000	-232,000	0.00 %
R305 - City of Seaside - Rebates	0	1,666	-1,666	0.00 %	0	20,000	-20,000	0.00 %
R310 - Other Reimbursements	0	833	-833	0.00 %	0	10,000	-10,000	0.00 %
R510 - Operating Reserve	0	2,666	-2,666	0.00 %	0	32,000	-32,000	0.00 %
Total Revenue:	**77,568**	**189,757**	**-112,190**	**-40.88 %**	**1,178,254**	**2,278,000**	**-1,099,746**	**-51.72 %**

EXHIBIT 7-E

Statement of Revenue Over Expense - No Decimals **For Fiscal: 2015-2016 Period Ending: 02/29/2016**

Level...	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
Expense								
Level1: 100 - Personnel Costs								
1100 - Salaries & Wages	44,132	44,749	617	98.62 %	382,879	537,200	154,321	71.27 %
1110 - Manager's Auto Allowance	92	100	8	92.34 %	785	1,200	415	65.38 %
1120 - Manager's Deferred Comp	120	133	13	90.04 %	1,020	1,600	580	63.75 %
1130 - Unemployment Compensation	0	58	58	0.00 %	161	700	539	22.97 %
1140 - Insurance Opt-Out Supplemental	368	421	53	87.50 %	3,027	5,050	2,023	59.93 %
1150 - Temporary Personnel	3,083	5,848	2,765	52.71 %	28,427	70,200	41,773	40.49 %
1160 - PERS Retirement	4,116	7,755	3,640	53.07 %	76,886	93,100	16,214	82.58 %
1170 - Medical Insurance	7,261	6,656	-606	109.10 %	58,781	79,900	21,119	73.57 %
1180 - Medical Insurance - Retirees	1,371	1,150	-222	119.29 %	9,127	13,800	4,673	66.14 %
1190 - Workers Compensation	168	175	7	96.06 %	1,477	2,100	623	70.31 %
1200 - Life Insurance	89	133	44	66.66 %	930	1,600	670	58.12 %
1210 - Long Term Disability Insurance	288	262	-25	109.60 %	2,225	3,150	925	70.63 %
1220 - Short Term Disability Insurance	57	58	1	97.94 %	441	700	259	62.97 %
1260 - Employee Assistance Program	19	25	6	76.79 %	155	300	145	51.67 %
1270 - FICA Tax Expense	33	42	9	78.58 %	198	500	302	39.61 %
1280 - Medicare Tax Expense	618	650	31	95.17 %	5,508	7,800	2,292	70.62 %
1290 - Staff Development & Training	934	1,200	266	77.85 %	3,526	14,400	10,874	24.49 %
1300 - Conference Registration	108	50	-58	216.09 %	999	600	-399	166.50 %
1310 - Professional Dues	0	50	50	0.00 %	718	600	-118	119.67 %
1320 - Personnel Recruitment	0	100	100	0.00 %	1,300	1,200	-100	108.33 %
Total Level1: 100 - Personnel Costs:	**62,857**	**69,614**	**6,757**	**90.29 %**	**578,568**	**835,700**	**257,132**	**69.23 %**
Level1: 200 - Supplies and Services								
2000 - Board Member Compensation	528	741	213	71.22 %	3,194	8,900	5,706	35.89 %
2020 - Board Expenses	1,111	83	-1,028	1,333.61 %	1,503	1,000	-503	150.26 %
2040 - Rent	172	258	86	66.55 %	1,320	3,100	1,780	42.57 %
2060 - Utilities	661	758	97	87.17 %	5,344	9,100	3,756	58.73 %
2120 - Insurance Expense	844	900	56	93.83 %	6,918	10,800	3,882	64.06 %
2130 - Membership Dues	728	808	80	90.06 %	5,685	9,700	4,015	58.61 %
2140 - Bank Charges	77	67	-10	115.17 %	615	800	185	76.85 %
2150 - Office Supplies	198	325	127	61.03 %	1,817	3,900	2,083	46.60 %
2160 - Courier Expense	68	167	98	41.06 %	1,307	2,000	693	65.33 %
2170 - Printing/Photocopy	0	342	342	0.00 %	44	4,100	4,056	1.07 %
2180 - Postage & Shipping	128	83	-44	153.41 %	1,181	1,000	-181	118.14 %
2190 - IT Supplies/Services	1,533	2,058	525	74.49 %	13,243	24,700	11,457	53.62 %
2200 - Professional Fees	5,376	2,699	-2,677	199.19 %	41,726	32,400	-9,326	128.78 %
2220 - Equipment Repairs & Maintenance	387	142	-245	272.99 %	1,341	1,700	359	78.91 %
2235 - Equipment Lease	227	300	73	75.72 %	2,162	3,600	1,438	60.06 %
2240 - Telephone	905	800	-105	113.12 %	5,717	9,600	3,883	59.55 %
2260 - Facility Maintenance	850	641	-208	132.46 %	6,406	7,700	1,294	83.19 %
2270 - Travel Expenses	127	1,033	906	12.30 %	9,915	12,400	2,485	79.96 %

EXHIBIT 7-E

Statement of Revenue Over Expense - No Decimals

For Fiscal: 2015-2016 Period Ending: 02/29/2016

Level…	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
2280 - Transportation	112	417	304	26.98 %	5,052	5,000	-52	101.04 %
2300 - Legal Services	0	4,998	4,998	0.00 %	29,768	60,000	30,232	49.61 %
2380 - Meeting Expenses	67	200	133	33.61 %	529	2,400	1,871	22.06 %
2420 - Legal Notices	76	92	15	83.28 %	76	1,100	1,024	6.94 %
2460 - Public Outreach	189	100	-89	189.18 %	458	1,200	742	38.15 %
2480 - Miscellaneous	0	100	100	0.00 %	309	1,200	891	25.78 %
2500 - Tax Administration Fee	0	658	658	0.00 %	0	7,900	7,900	0.00 %
2900 - Operating Supplies	0	1,216	1,216	0.00 %	11,653	14,600	2,947	79.82 %
Total Level1: 200 - Supplies and Services:	**14,363**	**19,984**	**5,621**	**71.87 %**	**157,284**	**239,900**	**82,616**	**65.56 %**
Level1: 300 - Other Expenses								
3000 - Project Expenses	62,314	92,588	30,274	67.30 %	477,588	1,111,500	633,912	42.97 %
4000 - Fixed Asset Purchases	0	1,491	1,491	0.00 %	1,893	17,900	16,007	10.57 %
5500 - Election Expenses	0	4,582	4,582	0.00 %	0	55,000	55,000	0.00 %
6000 - Contingencies	0	1,499	1,499	0.00 %	0	18,000	18,000	0.00 %
Total Level1: 300 - Other Expenses:	**62,314**	**100,160**	**37,846**	**62.21 %**	**479,481**	**1,202,400**	**722,919**	**39.88 %**
Total Expense:	**139,534**	**189,757**	**50,224**	**73.53 %**	**1,215,333**	**2,278,000**	**1,062,667**	**53.35 %**
Total Revenues	**77,568**	**189,757**	**-112,190**	**-40.88 %**	**1,178,254**	**2,278,000**	**-1,099,746**	**-51.72 %**
Total Fund: 26 - CONSERVATION FUND:	**-61,966**	**0**	**-61,966**		**-37,079**	**0**	**-37,079**	

EXHIBIT 7-E

Statement of Revenue Over Expense - No Decimals **For Fiscal: 2015-2016 Period Ending: 02/29/2016**

Level…	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
Fund: 35 - WATER SUPPLY FUND								
Revenue								
R100 - Water Supply Charge	0	283,220	-283,220	0.00 %	1,985,810	3,400,000	-1,414,190	-58.41 %
R120 - Property Taxes Revenues	0	40,650	-40,650	0.00 %	292,880	488,000	-195,120	-60.02 %
R140 - Connection Charges	50,705	14,578	36,127	-347.83 %	193,990	175,000	18,990	-110.85 %
R220 - Copy Fee	4	0	4	0.00 %	68	0	68	0.00 %
R230 - Miscellaneous - Other	0	0	0	0.00 %	6,111	0	6,111	0.00 %
R240 - Insurance Refunds	0	0	0	0.00 %	1,352	0	1,352	0.00 %
R250 - Interest Income	1,135	375	760	-302.84 %	9,821	4,500	5,321	-218.25 %
R260 - CAW - ASR	0	23,566	-23,566	0.00 %	0	282,900	-282,900	0.00 %
R265 - CAW - Los Padres Reimbursement	0	49,980	-49,980	0.00 %	0	600,000	-600,000	0.00 %
R300 - Watermaster	0	5,848	-5,848	0.00 %	0	70,200	-70,200	0.00 %
R510 - Operating Reserve	0	256,764	-256,764	0.00 %	0	3,082,400	-3,082,400	0.00 %
Total Revenue:	**51,844**	**674,980**	**-623,136**	**-7.68 %**	**2,490,033**	**8,103,000**	**-5,612,967**	**-30.73 %**

EXHIBIT 7-E

Statement of Revenue Over Expense - No Decimals **For Fiscal: 2015-2016 Period Ending: 02/29/2016**

Level...	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
Expense								
Level1: 100 - Personnel Costs								
1100 - Salaries & Wages	63,042	69,780	6,739	90.34 %	504,253	837,700	333,447	60.19 %
1110 - Manager's Auto Allowance	277	300	23	92.34 %	2,354	3,600	1,246	65.38 %
1120 - Manager's Deferred Comp	360	383	23	93.95 %	3,060	4,600	1,540	66.52 %
1130 - Unemployment Compensation	0	83	83	0.00 %	221	1,000	779	22.11 %
1140 - Insurance Opt-Out Supplemental	660	741	81	89.04 %	5,506	8,900	3,394	61.87 %
1150 - Temporary Personnel	0	25	25	0.00 %	3,631	300	-3,331	1,210.44 %
1160 - PERS Retirement	6,279	11,595	5,316	54.15 %	107,910	139,200	31,290	77.52 %
1170 - Medical Insurance	7,221	7,947	726	90.86 %	58,938	95,400	36,462	61.78 %
1180 - Medical Insurance - Retirees	1,886	1,583	-303	119.14 %	12,550	19,000	6,450	66.05 %
1190 - Workers Compensation	1,106	1,241	135	89.15 %	9,369	14,900	5,531	62.88 %
1200 - Life Insurance	132	129	-3	102.08 %	1,090	1,550	460	70.30 %
1210 - Long Term Disability Insurance	358	387	29	92.52 %	2,751	4,650	1,899	59.16 %
1220 - Short Term Disability Insurance	71	83	12	85.39 %	540	1,000	460	54.04 %
1260 - Employee Assistance Program	20	33	13	59.53 %	162	400	238	40.38 %
1270 - FICA Tax Expense	45	167	122	27.02 %	272	2,000	1,728	13.61 %
1280 - Medicare Tax Expense	701	1,016	315	68.99 %	5,648	12,200	6,552	46.30 %
1290 - Staff Development & Training	328	675	346	48.66 %	1,375	8,100	6,725	16.98 %
1300 - Conference Registration	149	100	-49	148.56 %	662	1,200	538	55.15 %
1310 - Professional Dues	150	92	-58	163.70 %	407	1,100	693	36.98 %
1320 - Personnel Recruitment	1,044	142	-902	736.97 %	2,194	1,700	-494	129.04 %
Total Level1: 100 - Personnel Costs:	**83,828**	**96,503**	**12,675**	**86.87 %**	**722,893**	**1,158,500**	**435,607**	**62.40 %**
Level1: 200 - Supplies and Services								
2000 - Board Member Compensation	726	1,016	290	71.44 %	4,392	12,200	7,808	36.00 %
2020 - Board Expenses	1,323	108	-1,214	1,221.26 %	1,861	1,300	-561	143.16 %
2040 - Rent	561	800	238	70.19 %	5,147	9,600	4,453	53.62 %
2060 - Utilities	922	1,058	136	87.17 %	7,436	12,700	5,264	58.55 %
2120 - Insurance Expense	1,161	1,241	81	93.51 %	9,512	14,900	5,388	63.84 %
2130 - Membership Dues	1,001	650	-351	153.99 %	7,386	7,800	414	94.69 %
2140 - Bank Charges	108	100	-9	108.52 %	1,613	1,200	-413	134.44 %
2150 - Office Supplies	270	450	179	60.12 %	2,319	5,400	3,081	42.95 %
2160 - Courier Expense	0	217	217	0.00 %	1,283	2,600	1,317	49.34 %
2170 - Printing/Photocopy	0	175	175	0.00 %	60	2,100	2,040	2.86 %
2180 - Postage & Shipping	176	108	-67	162.28 %	1,533	1,300	-233	117.90 %
2190 - IT Supplies/Services	1,827	2,932	1,105	62.31 %	18,368	35,200	16,832	52.18 %
2200 - Professional Fees	7,392	3,715	-3,677	198.97 %	57,373	44,600	-12,773	128.64 %
2220 - Equipment Repairs & Maintenance	532	192	-340	277.44 %	1,844	2,300	456	80.19 %
2235 - Equipment Lease	312	417	104	74.96 %	2,890	5,000	2,110	57.80 %
2240 - Telephone	1,071	1,258	187	85.13 %	8,016	15,100	7,084	53.09 %
2260 - Facility Maintenance	1,202	1,000	-203	120.30 %	8,816	12,000	3,184	73.46 %
2270 - Travel Expenses	175	750	574	23.39 %	3,994	9,000	5,006	44.37 %

Level…	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
2280 - Transportation	79	733	655	10.71 %	3,465	8,800	5,335	39.38 %
2300 - Legal Services	30,176	20,825	-9,351	144.91 %	197,207	250,000	52,793	78.88 %
2380 - Meeting Expenses	92	175	83	52.82 %	728	2,100	1,372	34.66 %
2420 - Legal Notices	621	117	-504	532.07 %	1,200	1,400	200	85.73 %
2460 - Public Outreach	253	142	-111	178.72 %	659	1,700	1,041	38.78 %
2480 - Miscellaneous	0	133	133	0.00 %	425	1,600	1,175	26.59 %
2500 - Tax Administration Fee	0	1,008	1,008	0.00 %	0	12,100	12,100	0.00 %
2900 - Operating Supplies	37	242	204	15.43 %	235	2,900	2,665	8.10 %
Total Level1: 200 - Supplies and Services:	**50,018**	**39,559**	**-10,458**	**126.44 %**	**347,763**	**474,900**	**127,137**	**73.23 %**
Level1: 300 - Other Expenses								
3000 - Project Expenses	384,250	506,464	122,214	75.87 %	1,993,060	6,080,000	4,086,940	32.78 %
4000 - Fixed Asset Purchases	0	4,965	4,965	0.00 %	14,060	59,600	45,540	23.59 %
5000 - Debt Service	0	19,159	19,159	0.00 %	70,070	230,000	159,930	30.47 %
5500 - Election Expenses	0	6,248	6,248	0.00 %	0	75,000	75,000	0.00 %
6000 - Contingencies	0	2,083	2,083	0.00 %	0	25,000	25,000	0.00 %
Total Level1: 300 - Other Expenses:	**384,250**	**538,918**	**154,667**	**71.30 %**	**2,077,189**	**6,469,600**	**4,392,411**	**32.11 %**
Total Expense:	**518,096**	**674,980**	**156,884**	**76.76 %**	**3,147,845**	**8,103,000**	**4,955,155**	**38.85 %**
Total Revenues	**51,844**	**674,980**	**-623,136**	**-7.68 %**	**2,490,033**	**8,103,000**	**-5,612,967**	**-30.73 %**
Total Fund: 35 - WATER SUPPLY FUND:	**-466,252**	**0**	**-466,252**		**-657,812**	**0**	**-657,812**	
Report Total:	**113,184**	**0**	**113,184**		**-754,240**	**0**	**-754,240**	

Fund Summary

Fund	February Activity	February Budget	Variance Favorable (Unfavorable)	Percent Used	YTD Activity	Total Budget	Variance Favorable (Unfavorable)	Percent Used
24 - MITIGATION FUND	641,402	0	641,402		-59,348	0	-59,348	
26 - CONSERVATION FUND	-61,966	0	-61,966		-37,079	0	-37,079	
35 - WATER SUPPLY FUND	-466,252	0	-466,252		-657,812	0	-657,812	
Report Total:	**113,184**	**0.08**	**113,184**		**-754,240**	**0**	**-754,240**	

ITEM: PUBLIC HEARING

13. CONSIDER FIRST READING OF ORDINANCE NO. 170 - AMENDING RULES 11, 20, 21, 22, 23, 24, 25.5, 142, AND 143

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Stephanie Locke**	**Cost Estimate:**	**N/A**

General Counsel Review: Yes.
Committee Recommendation: Recommended by Water Demand Committee April 6, 2016.
CEQA Compliance: Categorical Exemption.

SUMMARY: Attached as **Exhibit 13-A** is revised Ordinance No. 170, "2016 Rule Amendment Ordinance." The ordinance was considered by the Board at the March 21, 2015 Board meeting. The Board directed staff to bifurcate the ordinance to remove the Model Water Efficient Landscape Ordinance amendments. The ordinance before you includes the remaining rule amendments, with the addition of edits to Rule 23 found as Section 8 of the draft ordinance.

A proposed amendment to Rule 23 regarding sub-metering of Single-Family Dwellings (SFD) was considered by the Water Demand Committee in its preliminary review of the ordinance. The sub-metering provision of the Rules did not contemplate use of sub-meters for SFDs when it was developed. Prior to the March first reading of this ordinance, the Committee directed staff to remove restrictions on sub-metering SFDs. In light of recent situations where sub-metering may be used to create new SFDs that could be sold as separate Sites, the provisions have been included in this draft ordinance and returned to the Board for its consideration.

DISCUSSION: The ordinance has been written with an explanation of the proposed changes in each section. The ordinance amends the most critical topics identified and discussed with the Water Demand Committee, including the 2015 changes to the California Code of Regulations (Title 20, Sections 1601-1608) and the irrigation efficiency requirements of the State Model Water Efficient Landscape Ordinance that are specifically called out in MPWMD Rule 142.

RECOMMENDATION: The Board should review the ordinance and approve the first reading.

EXHIBIT
13-A Draft Ordinance No. 170

EXHIBIT 13-A

ORDINANCE NO. 170

AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE MONTEREY PENINSULA WATER MANAGEMENT DISTRICT AMENDING RULES 11, 20, 21, 22, 23, 24, 25.5, 142, AND 143

FINDINGS

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

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

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

4. Executive Order B-29-15 (April 1, 2015) called for the California Energy Commission to adopt emergency regulations establishing standards to improve the efficiency of water appliances, including toilets, urinals, and faucets available for sale and installation in new and existing buildings.

5. Rule 20-B, Permits to Connect to or Modify a Connection to a Water Distribution System is amended to exempt replacement of a documented Large Bathtub with a Standard Bathtub or Shower Stall from the Water Permit requirements. This rule was also

amended to require a Water Permit for rehabilitated landscapes over 2,500 square-feet that are associated with a Jurisdiction's building or landscape permit, plan check, or design review. These Landscapes must conform to the Model Water Efficient Landscape Ordinance.

6. Rule 20-C, Exemptions for Water Distribution System Permit, is amended to exempt rainwater catchment facilities (e.g. Cisterns) that are used for irrigation.

7. Rule 21-B-3, Application for Permit to Connect to or Modify a Connection to a Water Distribution System, is amended to update the existing rule and add language from the Model Water Efficient Landscape Ordinance.

8. Rule 22-D-1-h, Action on Application for Permit to Create/Establish a Water Distribution System, was amended to clarify the process for instances (e.g. the Malpaso Water Company Water Entitlement) where new Connections to the California American Water system may occur when the water use is not dependent on a California American Water water right.

9. Rule 23 is amended to correct the title of the Rule to match Rule 20-B.

10. Rule 23-A-1-(i)-(4) shall be amended to address potential transfers of sub-metered Single-Family Dwellings to non-identical ownership. Sub-metered Sites under separate ownership from the metered Site are problematic to enforce metering requirements (e.g. conditions of approval for sub-metering) and Water Rationing.

11. Rule 24-E, Calculation of Water Capacity and Capacity Fees, is amended to add language from Title 23 of the California Code of Regulations regarding submitting a Landscape Documentation Package during the Landscape review process. This Rule is also amended to delete reference to an administrative processing fee, as this fee is found in Rule 60.

12. Rule 25.5, Water Use Credits and On-Site Water Credits is amended to remove language referring to the definition of "Low Water Use Plumbing Fixtures." The Rule is also amended to delete reference to an outdated conservation goal and to correct the title of Table 4: High Efficiency Appliance Credits.

13. Rule 142, Water Efficiency Standards, is amended to reflect amendments to the California plumbing and energy standards/codes when they are more restrictive than the District's, and to reflect efficiency changes in the Model Water Efficient Landscape Ordinance.

14. Rule 143, Water Efficiency Standards for Existing Non-Residential Uses, is amended to

reflect 2015 changes to the California Code of Regulations (Title 20, Sections 1601-1608).

15. This Ordinance is exempt from review under the California Environmental Quality Act ("CEQA") (California Public Resources Code Section 21000 et seq.). Pursuant to State CEQA Guidelines section 15307 (14 Cal. Code Regs.,§ 15307), this Ordinance is covered by the CEQA Categorical Exemption for actions taken to assure the maintenance, restoration, enhancement, or protection of a natural resource where the regulatory process involves procedures for protection of the environment.

NOW THEREFORE be it ordained as follows:

ORDINANCE

Section One: Short Title

This ordinance shall be known as the **2016 Rule Amendment Ordinance** of the Monterey Peninsula Water Management District.

Section Two: Statement of Purpose

The Monterey Peninsula Water Management District enacts this ordinance to address certain actions necessary to process and issue Water Permits and Water Distribution System Permits, to add to the Rules and Regulations recent amendments to the California Code of Regulations (Title 20, Sections 1601-1608), and to clarify permitting and conservation requirements.

Section Three: Definitions

The following terms shown in ***bold italics*** (new text) and ~~strikeout~~ (deleted text) shall be given the definitions set forth below and shall be permanently added to Rule 11, Definitions, of the Rules and Regulations of the District. Numbering is provided for reference only.

1. ~~DUAL FLUSH ULTRA-LOW FLUSH TOILET – "Dual Flush Ultra-Low Flush Toilet" shall mean a toilet designed to allow the user to choose between a light flush (usually 0.8 gallon) and a longer 1.6-gallon flush.~~

2. HIGH EFFICIENCY TOILET (HET) – "High Efficiency Toilet" or "HET" shall mean a toilet that ***has an effective flush volume of*** ~~is designed to flush at~~ 20 percent below a 1.6-gallons-per-flush ***U.S. maximum or less, equating to a maximum of 1.28 gallons per flush. (Note: The HET category includes dual-flush fixtures, which have been determined to meet the volume requirement by defining the effective flush volume as the average volume achieved with one full flush and two reduced flushes.)*** ~~Ultra-Low Flush Toilet. A High Efficiency Toilet shall have a maximum average flush of 1.3 gallons.~~

3. INTENSIFIED WATER USE – "Intensified Water Use" shall mean any change in water use occurring on a Parcel which, in a Residential use, is evidenced by an increase in the number of fixture units serving that Parcel; or, in any ~~Commercial, industrial, Public Authority, or Other Use~~***Non-Residential use***, is evidenced by the incremental change in the Project's Capacity for annual water use based upon one or more of the factors set forth in Rule 24 of the existing Rules and Regulations. The term "Intensification of Use" shall also refer to an Intensified Water Use. ~~Use of any quantity of water reserved by an~~

~~unexpired Water Use Credit shall not cause an Intensified Water Use. The term "Capacity" refers to the maximum long term water use which theoretically may occur on that Site, based on average water use data for similar projects in the Monterey Peninsula region, as shown by the projected water use tables set forth in Rule 24.~~

~~A Change of Use from a commercial category in one group to another category in a higher water use group, or from any commercial category in Group III to another category in Group III, as shown on Table No. 2 of Rule 24, shall be deemed an Intensification of Use requiring an Expansion/Extension Permit, or an amended Permit pursuant to these Rules and Regulations. Where there is no increase in the size of a commercial structure, a Change of Use from one commercial category in Group I to another category within Group I, or a Change of Use from one commercial category in Group II to another in Group II, however, shall not cause an Intensification of water Use.~~

5. LANDSCAPE AREA -- "Landscape Area" means all the planting areas, turf areas, and water features in a Landscape plan subject to the Maximum Applied Water Allowance ***and the Estimated Applied Water Use*** calculation***s***. The Landscape Area does not include footprints of buildings or structures, sidewalks, driveways, parking lots, decks, patios, gravel or stone walks, other pervious or non-pervious hardscapes, and other non-irrigated areas designated for non-development (e.g. open spaces and existing Native Vegetation).

6. ~~MANDATED – "Mandated" shall mean a requirement of the District (e.g. Ultra-Low Flush Toilets are mandated for New Construction) adopted by ordinance.~~

7. ***PRODUCTION LIMIT -- "Production Limit" shall refer to the maximum production permitted for a Water Distribution System.***

8. RECLAIMED WATER – "Reclaimed Water" shall mean wastewater ~~effluent~~ that has been treated to the tertiary level, including disinfection. Reclaimed Water is a form of Recycled Water.

9. ~~REQUIRED CONSERVATION MEASURES~~

~~"Required Conservation Measures"~~

~~a. Flush sewers with Sub-potable or Reclaimed Water except in cases of emergency.~~

~~b. New Construction: Plumbing fixtures must be at least as efficient as the following water conservation requirements: toilets shall not use more than 1.6 gallons per flush maximum; Urinals shall use no more than 1.0 gallons per flush; Showerheads shall~~

~~use no more than 2.5 gallons per minute without a separate restriction device and faucets shall have aerators that use no more than 2.2 gallons per minute maximum irrespective of the pressure in the water supply line; hot water systems must be Instant-Access Hot Water Systems; Drip Irrigation must be installed for all shrub or tree areas rather than spray heads, unless plant material or site conditions preclude drip as the most appropriate choice. Handheld watering may also be used.~~

~~c. Projects that result in added water fixtures or expansion of more than 25 percent of the existing square footage, and all Non-Residential Changes of Use, shall meet the Required Conservation Measures for New Construction with the exception of retrofitting to Drip Irrigation and Instant-Access Hot Water Systems.~~

Section Four: Amendment of Rule 20, Permits Required

Rule 20-B shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~) to add a Water Permit exemption for replacement of a Large Bathtub with a Standard Bathtub or Shower Stall and to add the Model Water Efficient Landscape Ordinance requirement for large rehabilitated Landscape Areas.

B. PERMITS TO CONNECT TO OR MODIFY A CONNECTION TO A WATER DISTRIBUTION SYSTEM

Before any Person connects to or modifies a water use Connection to a Water Distribution System regulated by the District or to any Mobile Water Distribution System regulated by the District or to any Mobile Water Distribution System, such Person shall obtain a written Permit from the District or the District's delegated agent, as described in District Rules 21, 23 and 24. The addition of any Connection and/or modification of an existing water Connection to any Water Distribution System permitted and regulated by the District shall require a Water Permit.

The following actions require a Water Permit:

1. Any change in use, size, location, or relocation of a Connection or Water Measuring Device which may allow an Intensification of Use or increased water consumption.

2. Each use of an On-Site credit or Water Use Credit.

3. Any modification to the number or type of Residential water fixtures shown in Rule 24, Table 1, Residential Fixture Unit Count Values, with ~~two~~ ***three***

exceptions: (1) replacement of a Standard Bathtub with a Shower Stall and vice versa; ~~and~~ (2) removal of a lawful water fixture***, and (3) replacement of a Large Bathtub previously documented by the District with a Standard Bathtub or a Shower Stall***.

4. Any Landscaping changes resulting in an Intensification of Use when a Landscape plan has been reviewed and approved as a component of a Water Permit.

5. ***Rehabilitation of existing Landscape Area over 2,500 square-feet that is associated with a Jurisdiction's building or landscape permit, plan check, or design review.***

~~5~~***6***. Any Change of Use or any expansion of a Non-Residential use to a more intensive use as determined by Rule 24, with the exception of Temporary Structures and Temporary Exterior Restaurant Seats that are not occupied or in use for longer than thirty (30) consecutive days.

~~6~~***7***. Installation of new water fixtures (Rule 24, Table 1) in a Residential use, other than replacement of existing water fixtures.

~~7~~***8***. Use of water from a Mobile Water Distribution System.

Section Five: Amendment of Rule 20-C-7, Exemptions for Water Distribution System Permit

Rule 20-C-7, shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~) to exempt On-Site rainwater capture facilities from the Water Distribution System Permit requirement.

7. For On-Site rainwater capture facilities (e.g.~~,~~ Cisterns) that serve Single-Parcel Connection Systems for ~~Residential or Commercial Use situations for~~ On-Site Landscape irrigation ~~use~~. ***A Confirmation of Exemption is not required.***

Section Six: Amendment of Rule 21-B-3, Application for Permit to Connect to or Modify a Connection to a Water Distribution System

Rule 21-B-3, shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~) to incorporate requirements of the California Model Water Efficient Landscape Ordinance.

3. ***New development projects that include Landscape Areas of 500 sq. ft. or more and existing rehabilitated Landscape Areas over 2,500 square-feet that are associated with a Jurisdiction's building or landscape permit, plan check, or design review shall comply with the Model Water Efficient Landscape Ordinance. The Applicant shall submit a complete Landscape Documentation Package which shall include:*** ~~A Landscape Water Budget which includes the Maximum Applied Water Allowance (MAWA) calculation**s** and three copies of the Landscape**ing** plan for new exterior use when the Site exceeds 10,000 square feet in size, when the Project is a Non-Residential use, or when the Project involves Multi-Family Dwellings or mixed uses.~~

   a. Project information including the date, project Applicant, total Landscape Area, water supply, water purveyor;

   b. A Landscape Water Budget which includes the Maximum Applied Water Allowance (MAWA) and Estimated Applied Water Use (ETWU) calculations with three copies of the Landscape plan;

   c. Soil analysis and recommendations (from a soil laboratory);

   d. Landscape design/project notes; plant legend; plant count;

   e. Landscape design hydrozone water use;

   f. Irrigation design/irrigation project notes;

   g. Grading design plan from an Engineer;

Section Seven: Amendment of Rule 22-D-1-h, Action on Application for Permit to Create/Establish a Water Distribution System

Rule 22-D-1-h shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~) to address instances (e.g. the Malpaso Water Company Water Entitlement) where new Connections to the California American Water Company Water Distribution System may occur.

h. Permit shall identify whether interties to other systems are allowed and shall identify restrictions or prohibitions on such interties, including devices to prevent cross-contamination of systems. MPWMD shall not approve any ~~Water Permit for new Connections to~~ ***amendment to*** the California American Water system~~;~~ due to the inability of a permitted ***Non-California American Water Company*** Water Distribution System to

deliver adequate water quality or quantity to Parcels within its Service Area until there is full compliance by California American Water with State Water Resources Control Board Order No. WR 95-10 (as amended); California American Water compliance with the March 2006 Final Decision of the Seaside Groundwater Basin Adjudication (as amended); and water is available in the respective Jurisdiction's Allocation for release to the Parcels(s);

Section Eight: Amendment of Rule 23, Action on Application for a Water Permit to Connect to or Modify an Existing Water Distribution System

A. The title of Rule 23 shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~) to correct the title to match Rule 20-B:

Rule 23 - Amendment of Rule 23, Action on Application for a Water Permit to Connect to or Modify ***a Connection to*** an Existing Water Distribution System

B. Rule 23-A-1-(i)-(4) shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~) to address potential transfers of sub-metered Single-Family Dwellings to non-identical ownership.

(4) The General Manager shall allow sub-metering for each ***Multi-Family Dwelling, Mixed Use, or Non-Residential*** User when the installation of separate Water Meters is not feasible and the ~~Site~~ ***User*** is utilizing Water Credits on a Site that has a Connection. ***Applications for sub-metering of Single Family Dwellings will be considered by the General Manager when the Jurisdiction confirms there is no potential that the sub-metered User could be located on a separate Site through subdivision or transfer of ownership of a portion of the Site.*** Approval of a Water Permit allowing sub-metering under this provision shall require recordation of a deed restriction on the title of the property that shall encumber current and future Site owners to comply with the following conditions:

a. Site's owner shall have Water Meters installed for each sub-metered User by the Water Distribution System Operator within ninety (90) days of the conclusion of a Connection moratorium. Once Water Meters maintained by the Water Distribution System Operator have been installed, the deed restriction shall be removed;

b. Annually at the conclusion of the Water Year, and within 30 days of change in tenancy, the Site's owner shall provide the General Manager with individual monthly consumption for each User in a format

acceptable to the District. Information shall identify the User of the sub-meter (e.g. apartment number or lease space number) and the number of residents in each Residential Dwelling Unit or the type of use according to Rule 24, Table 2, for each Non-Residential User;

~~c. During Stages 4-7 of the Expanded Water Conservation and Standby Rationing Plan, the General Manager shall be provided with information about the number of occupants and types of uses within the sub-metered Dwelling Units and Uses;~~

~~d~~***e***. During Stage~~s~~ 4~~-7~~ of ~~t~~***T***he ***2016 Monterey Peninsula*** ~~Expanded~~ Water Conservation and ~~Standby~~ Rationing Plan (Regulation XV), sub-metered consumption ~~and occupant contact information~~ shall be provided to the District monthly or more frequently if requested by the General Manager;

(5) The Board shall consider variances to this Rule when the installation of separate Water Measuring Devices is not feasible due to Special Circumstances. In considering a variance, the Board shall determine if another type of Water Measuring Device is appropriate and shall make reporting of consumption a condition of approval.

Section Nine: Amendments to Rule 24, Calculation of Water Capacity and Capacity Fees

A. Rule 24-E-6-(g) shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~) to add the Landscape Documentation Package required by Title 23 of the California Code of Regulations. This provides information needed to calculate the exterior water demand for a Water Permit and to verify compliance with MPWMD Rule 142.

g. A ***Landscape Documentation Package*** ~~detailed landscape plan and Landscape Water Budget, including the MAWA calculation~~, shall be included with the Water Permit application.

B. Rule 24-E-7 shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~) to omit the administrative processing fee. Fees and Charges are found in Rule 60.

7. Refunds requested for Capacity Fees paid for a Conditional Water Permit shall be processed under the following time lines ~~and shall be subject to an administrative processing fee of one hundred dollars ($100)~~:

a. Refunds of less than fifty thousand dollars ($50,000) shall be

processed within thirty (30) days;

b. Refunds between fifty thousand dollars ($50,000) and one hundred thousand dollars ($100,000) shall be processed within forty-five (45) days;

c. Refunds over one hundred thousand dollars ($100,000) shall be processed within sixty (60) days.

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

A. Rule 25.5-B shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~) to remove the reference to the defined term "Low Water Use Plumbing Fixtures" and to replace that with reference to Regulation XIV, Water Conservation, to remove reference to an outdated conservation goal, and to correct the title of Table 4.

B. Water savings resulting from mandatory ~~District programs, including water savings resulting from the installation of Low Water Use Plumbing Fixtures mandated by the District~~***compliance with Regulation XIV, Water Conservation,*** shall not result in a Water Use Credit, with the exception of Table 4 retrofits. Such savings shall be set aside as permanent water conservation savings ~~essential to the District's 15 percent conservation goal approved by the Board in March 1984~~.

B. Rule 25.5-F-4.b shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~) to correct the table's name.

b. Residential Water Use Credits shall only be granted for installation of ***the*** ultra-low consumption appliances~~.~~ ***listed in*** Table 4: ~~Ultra-Low Consumption~~ ***High Efficiency*** Appliance Credits~~. shall list the ultra-low consumption appliances and the quantity of Water Use Credit available for the permanent installation of the appliance.~~ This table ~~shall~~ ***may*** be amended by Resolution of the Board of Directors.

Section Eleven: Amendment to Rule 142, Water Efficiency Standards

Rule 142 shall be amended as shown below, with added language as shown in ***bold italic*** type face, and deleted language shown in ~~strikeout~~ type face. Amendments codify language adopted in Urgency Ordinance No. 167 pertaining to recent changes to the State Water Code and to the Model Water Efficient Landscape Ordinance. Water Permits issued prior to adoption of this

ordinance list the water efficiency requirements in effect at the time the permit was issued.

RULE 142 - WATER EFFICIENCY STANDARDS

A. Water Efficiency Standards.

1. All New Construction of New Structures shall install and maintain plumbing fixtures and conservation standards as set forth in this Rule.

2. No plumbing fixture ~~or standard~~ shall be replaced with fixtures which allow greater water use.

3. All new and replacement water fixtures shall comply with then-current California plumbing and energy standards/codes when more restrictive than the District's.

B. Former Rules. ***Water Permit requirements change periodically to reflect current efficiencies. Sites with uncompleted Water Permits that have not a final inspection shall at a minimum comply with the requirements in place at the time the Water Permit was issued unless required to install more efficient fixtures as a result of a subsequent triggering event (e.g, new/amended Water Permit or Change of Ownership/Use).*** ~~Water Permits issued prior to January 1, 2010~~***2013,*** ~~shall be~~ ***were*** ~~subject to requirements of former Rule 142 summarized below:~~

~~1. Former Rule 142 ***prior to January 1, 2010,*** required all New Construction, Remodels and Additions to install maximum 2.5 gallons-per-minute Showerheads and 2.2 gallons-per-minute faucet aerators.~~

~~2. New Construction of New Structures ***prior to January 1, 2010,*** also required installation of Instant-Access Hot Water Systems and installation of Drip Irrigation where appropriate.~~

~~3. Water Permits issued between January 1, 2010 and December 31, 2012, shall be ***were*** subject to the rules in effect on the date of issuance as stated on the Water Permit and on any associated deed restriction(s).~~

C. Residential Water Efficiency Standards for New Structures.

All Residential New Structures receiving a Water Permit ~~on or after January 1, 2010,~~ shall meet or exceed the following standards:

1. High Efficiency or Ultra-High Efficiency Toilets shall be installed;

2. Urinals, when installed in a Residential use, shall be designed to flush with one (1) gallon of water***. After January 1, 2016, newly installed Urinals shall flush with no more than 0.125 gallon per flush***;

3. Showerheads, Rain Bars, or Body Spray Nozzles ~~shall be installed that were~~ ***must be*** designed and manufactured to emit a maximum of 2.0 gallons per minute of water;

4. All shower fixtures should be equipped with scald protection valves rated for 2.0 gallons per minute Showerheads;

5. High Efficiency Clothes Washer(s) and High Efficiency Dishwasher(s) shall be required when installed in a Residential use;

6. Lavatory Sink faucets shall emit a maximum of ~~2.2~~ ***1.2*** gallons of water per minute at 60 psi;

7. Kitchen Sink, Utility Sink, and Bar Sink faucets shall emit a maximum of ~~2.2~~ ***1.8*** gallons of water per minute at 60 psi***. Faucets may have the capability to temporarily increase flow to 2.2 gallons per minute for filling pots and pans,*** *but must default back to a maximum flow rate of 1.8 gallons per minute measured at 60 psi.**;***

8. Instant-Access Hot Water Systems shall be installed;

9. All hot water pipes shall be insulated;

10. Sodium chloride (salt) water softeners shall be discouraged in New Construction. Alternate technologies such as potassium chloride shall be recommended. When a sodium chloride water softener is to be installed within the MPWMD, the unit shall use demand-initiated regeneration which senses when the resin must be recharged, either electronically or with a meter that measures and calculates usage. This requirement shall be specified on the Construction Drawings.

11. Landscaping.

a. All New Construction shall install and maintain Landscaping that complies with the California Model Water Efficient Landscape Ordinance as revised (California Code of Regulations, Title 23, Water, Division 2, Department of Water Resources, Chapter 2.7, Model Water Efficient Landscape Ordinance) or with local or District Landscape requirements if more restrictive.

b. Plants shall be grouped in hydrozones.

12. Irrigation System Efficiency.

a. Weather-Based Irrigation System Controllers (e.g. Smart Controllers) shall be installed, used and maintained on Sites where there is an Irrigation System.

b. Weather-Based Irrigation System Controllers shall include functioning Soil Moisture Sensors and a Rain Sensor as components of the system.

c. Drip Irrigation shall be utilized for watering all non-turf irrigated plantings.

d. Rotating Sprinkler Nozzles shall be utilized for turf irrigation.

e. Overhead spray irrigation shall not be used to water non-turf Landscaping, including trees and shrubs.

f. Irrigation Systems shall operate with at least ~~70~~ ***75*** percent efficiency ***for overhead spray devices and at least 81 percent efficiency for drip systems***.

g. Rainwater collection/irrigation systems are encouraged to supplement irrigation for new Landscaping. New Structures shall be encouraged to include one or more rainwater Cisterns and a system to provide at least 75 percent of exterior irrigation during normal rainfall years. Systems must be compliant with local catchment system standards.

h. Graywater collection/irrigation systems are encouraged to supplement irrigation for new Landscaping. Systems must be

compliant with local catchment system standards, including Monterey County Department of Environmental Health.

i. All Sites utilizing a Graywater reuse system shall install and maintain a backflow prevention device as required by any Water Distribution System Operator that supplies water to the Site.

D. Non-Residential Water Efficiency Standards for New Structures.

All Non-Residential New Structures receiving a Water Permit ~~on or after January 1, 2010,~~ shall meet or exceed the following standards:

1. High Efficiency or Ultra High Efficiency Toilets shall be installed;

2. Urinals shall be Pint Urinals or Zero Water Consumption Urinals and shall be clearly specified on the final Construction Drawings. Zero Water Consumption Urinals shall be encouraged in settings where there is a regular maintenance staff;

3. Showerheads, Rain Bars, or Body Spray Nozzles ~~shall be installed that were~~ ***must be*** designed and manufactured to emit a maximum of 2.0 gallons per minute of water;

4. All shower fixtures should be equipped with scald protection valves rated for 2.0 gallons per minute Showerheads;

~~5. High Efficiency Clothes Washer(s) and High Efficiency Dishwasher(s) shall be required when installed in a Residential use;~~

6. Public Washbasins shall emit a maximum of 0.5 gallon of water per minute at 60 psi. Private Washbasins (e.g.~~,~~ hotel or motel guest rooms and hospital patient rooms) shall emit a maximum of ~~1.5~~ gallons of water per minute at 60 psi. All other sinks shall emit a maximum of 2.2 gallons of water per minute at 60 psi unless higher flow is required by Health and Safety Code;

7. Public Washbasins equipped with automatic shut off devices or sensor faucets shall operate with a maximum flow of 0.25 gallons per cycle;

8. High Efficiency Clothes Washers shall be installed when a Clothes Washer is installed in a New Structure permitted under this Regulation;

9. High Efficiency Dishwashers or High Efficiency Commercial Dishwashers shall be installed and maintained on the Site when a Dishwasher is installed in a New Structure permitted by a Water Permit;

10. Instant-Access Hot Water System(s) shall be installed for hot water access points to ensure that hot water is available within ten (10) seconds;

11. All hot water pipes shall be insulated;

12. Sodium chloride (salt) water softeners shall be discouraged in New Construction. Alternate technologies, such as potassium chloride shall be recommended. When a sodium chloride water softener is to be installed within the MPWMD, the unit shall use demand-initiated regeneration which senses when the resin must be recharged, either electronically or with a meter that measures and calculates usage. This requirement shall be specified on the Construction Drawings;

13. Water Efficient Pre-Rinse Spray Valves shall be utilized when a pre-rinse spray valve is installed;

14. There shall be no single-pass water use systems in ice machines, hydraulic equipment, refrigeration condensers, X-ray processing equipment, air compressors, vacuum pumps, etc. Air-cooled or better technology shall be installed when available;

15. Water cooled refrigeration equipment shall be prohibited when there is alternative cooling technology available at the time the Water Permit is issued;

16. Cooling Towers shall be equipped with conductivity controllers that are used to increase the number of cycles that can be achieved;

17. Boilerless steamers or connectionless steamers shall be installed in place of boiler-based steamers when a steamer is installed in New Construction;

18. Landscaping.

    a. All New Construction shall install and maintain Landscaping that complies with the California Model Water Efficient Landscape Ordinance as revised (California Code of Regulations, Title 23, Water, Division 2, Department of Water Resources, Chapter 2.7, Model Water Efficient Landscape Ordinance) or with local or District Landscape requirements if more restrictive.

    b. Plants shall be grouped in hydrozones.

19. Irrigation System Efficiency.

    a. Weather-Based Irrigation System Controllers shall be installed, used and maintained on Sites where there is an Irrigation System.

    b. Weather-Based Irrigation System Controllers shall include functioning Soil Moisture Sensors and a Rain Sensor as components of the system.

    c. Drip Irrigation shall be utilized for watering all non-turf irrigated plantings.

    d. Rotating Sprinkler Nozzles shall be utilized for turf irrigation.

    e. Overhead spray irrigation shall not be used to water non-turf Landscaping, including trees and shrubs.

    f. Irrigation Systems shall operate with at least ~~70~~ ***75*** percent efficiency ***for overhead spray devices and at least 81 percent for drip systems***.

    g. Rainwater collection/irrigation systems are encouraged to supplement irrigation for new Landscaping. New

Structures shall be encouraged to include one or more rainwater Cisterns and a system to provide at least 75 percent of exterior irrigation during normal rainfall years. Systems must be compliant with local catchment system standards.

h. Graywater collection/irrigation systems are encouraged to supplement irrigation for new Landscaping. Systems must be compliant with local catchment system standards, including Monterey County Department of Environmental Health.

i. All Sites utilizing a Graywater reuse system shall install and maintain a backflow prevention device as required by any Water Distribution System Operator that supplies water to the Site.

20. The implementation of water conservation Best Management Practices shall be integrated into construction and operation of the project to the extent possible.

21. The use of Alternative Water Sources for indoor toilet flushing and other uses allowed by the Jurisdiction shall be encouraged.

E. Residential and Non-Residential Change of Ownership, Change of Use, and Expansion of Use Water Efficiency Standards

Sites that have a Change of Ownership, ***or receive a Water Permit for a*** Change of Use or Expansion of Use ~~on or after January 1, 2010,~~ shall meet or exceed the following standards:

1. High Efficiency or Ultra High Efficiency Toilets shall be installed;

2. Urinals shall be ***at a minimum*** High Efficiency Urinals ***(when installed prior to January 1, 2016), Newly installed Urinals shall be*** Pint Urinals~~,~~ or Zero Water Consumption Urinals. Zero Water Consumption Urinals shall be encouraged in settings where there is a regular maintenance staff;

3. Showerhead flow rates shall meet or exceed ***water efficiency standards for New Structures*** ~~New Construction standards~~;

4. Bathroom faucet flow rates shall meet or exceed ***water efficiency standards for New Structures*** ~~New Construction standards~~;

5. Kitchen faucet flow rates shall meet or exceed ***water efficiency standards for New Structures*** ~~New Construction standards~~;

6. Remodels or relocations of water fixtures or appliances that involve hot water shall be encouraged to install an Instant-Access Hot Water System and insulate all new hot water pipes;

7. Pre-rinse spray valves shall meet or exceed the District's definition for Water Efficient Pre-Rinse Spray Valves;

8. Changes of Use and Expansions of Use that require a Water Permit shall not install any single-pass water use systems in ice machines, hydraulic equipment, refrigeration condensers, X-ray processing equipment, air compressors, vacuum pumps, etc. Air-cooled or better technology shall be installed when available;

9. Changes of Use and Expansions of Use that require a Water Permit shall not install any water cooled refrigeration equipment when there is alternative water efficient cooling technology available at the time the Water Permit is issued;

10. Automatic Irrigation Systems, with the exception of Weather-Based Irrigation Systems, shall be retrofit to include a Rain Sensor;

11. The implementation of Non-Residential Best Management Practices shall be integrated into construction and operation of Non-Residential uses to the extent possible.

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

Rule 143 shall be amended as shown in bold italics (***bold italics***) and strikethrough (~~strikethrough~~) to address 2015 changes in the California Code of Regulations (Title 20, Sections 1601-1608).

E. All Non-Residential structures shall be retrofitted exclusively with High Efficiency Toilets and High Efficiency Urinals by December 31, 2013, except as

provided by Rule 146 (Discretionary Exemptions).

1. All Visitor-Serving Facilities that retrofit to 1.6 gallons-per-flush toilets pursuant to Rule 143-B shall be exempt from this toilet retrofit requirement.

2. All Non-Residential uses with Ultra Low Flush Toilets installed prior to December 31, 2012, shall be exempt from this toilet retrofit requirement.

3. ***On and after January 1, 2016, newly installed Urinals shall be Pint Urinals or Zero Water Consumption Urinals.***

Section Thirteen: Publication and Application

The provisions of this ordinance shall cause the amendment and republication of Rules 11, 20, 21, 22, 23, 24, 25.5, 142, and 143 of the permanent Rules and Regulations of the Monterey Peninsula Water Management District.

Section Fourteen: Effective Date and Sunset

This ordinance shall take effect at 12:01 a.m. thirty (30) days after adoption.

This Ordinance shall not have a sunset date.

Section Fifteen: Severability

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

On motion of Director _____, and second by Director _____, the foregoing ordinance is adopted upon this ____ day of _____, 2016, by the following vote:

AYES:

NAYS:

ABSENT:

I, David J. Stoldt, Secretary to the Board of Directors of the Monterey Peninsula Water Management District, hereby certify the foregoing is a full, true, and correct copy of an ordinance duly adopted on the ____ day of _____, 2016.

Witness my hand and seal of the Board of Directors this _____ day of _____, 2016.

_____

David J. Stoldt, Secretary to the Board

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ITEM: ACTION ITEM

14. CONSIDER APPROVAL OF ITEMS RELATED TO INTEGRATED REGIONAL WATER MANAGEMENT PROGRAM

A. APPROVE REVISED MOU FOR INTEGRATED REGIONAL WATER MANAGEMENT IN THE MONTEREY PENINSULA, CARMEL BAY AND SOUTH MONTEREY BAY

B. AUTHORIZE EXECUTION OF MOA FOR INTEGRATED REGIONAL WATER MANAGEMENT PLANNING AND FUNDING IN THE CENTRAL COAST REGION

C. AUTHORIZE EXPENDITURE FOR ASSISTANCE WITH PROPOSITION 1 GRANT PROGRAM COORDINATION

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**2-6-1-B Prop. 1 Coordination**
Prepared By:	**Larry Hampson**	**Cost Estimate:**	**$25,000**

General Counsel Review: N/A
Committee Recommendation: The Water Supply Planning Committee reviewed this item on April 8, 2016 and recommended approval. The Administrative Committee reviewed this item on April 11, 2016 and recommended approval.
CEQA Compliance: Exempt under CEQA Section 15262

SUMMARY: In 2014, voters approved the $7 billion Proposition 1, a portion of which authorized $43 million in competitive grants for Integrated Regional Water Management (IRWM) projects in the six Central Coast IRWM regions. Funding is administered by the Department of Water Resources (DWR). The Central Coast IRWM regions have tentatively agreed to a funding area allocation that requires a local entity from each planning region to execute a Memorandum of Agreement (MOA) on behalf of each region (see attached **Exhibit 14-A**). The amount allocated to the Monterey Peninsula, Carmel Bay, and Southern Monterey Bay (Monterey Peninsula) region is proposed to be $4.3 million. The District has represented the Monterey Peninsula region in negotiating a funding area agreement.

Recently, the Regional Water Management Group (RWMG) formed to implement the Monterey Peninsula IRWM Plan requested that the City of Seaside consider becoming part of the group. A copy of the draft amended MOU to add the City of Seaside to the RWMG and authorize the General Manager to execute a MOA among the Central Coast IRWM regions is attached as **Exhibit 14-B**.

Due to staff workload, Gutierrez Consultants were contacted and have agreed to provide services to coordinate the Monterey Peninsula region efforts to secure funding from Proposition 1. Staff is requesting approval of $25,000 for these services. A rate sheet is provided in **Exhibit 14-C**.

RECOMMENDATION: With this recommendation, the General Manager would be authorized to:

A) Make minor or non-substantive modifications to the RWMG Memorandum of Understanding presented to the Board (**Exhibit 14-A**, attached), in order to accommodate requests made by the Regional Water Management Group entities prior to signing the MOU or to delete references to entities that may decline to participate in amending the MOU; and

B) Execute on behalf of the Monterey Peninsula region the Memorandum of Agreement for Central Coast IRWM planning and funding presented to the Board (**Exhibit 14-B**, attached);

C) Enter into a contract with Gutierrez Consultants, Inc. for assistance with Proposition 1 grant program coordination for an amount Not-to-Exceed $25,000.

District staff recommends approval of the above actions.

BACKGROUND: Proposition 50, the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002, was passed by California voters in November 2002. It amended the California Water Code (CWC) to add, among other articles, Section 79560 *et seq*., authorizing the Legislature to appropriate $500 million for Integrated Regional Water Management (IRWM) projects. Propositions 84 and 1E, which were passed in 2006, authorized more than $2 billion Statewide and provided grant funding through a performance-based competitive program for water resource related projects. Proposition 1, passed in 2014, is known as the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Water Code, Sections 79700 - 79798) (Act), and authorized the Legislature to appropriate funding for competitive grants for Integrated Regional Water Management (IRWM) projects. Funding of $43 million for grants will be administered by the Department of Water Resources (DWR).

The intent of the IRWM Grant Program is to encourage integrated regional strategies for management of water resources and to provide funding, through competitive grants, for projects that protect communities from drought, protect and improve water quality, and improve local water security by reducing dependence on imported water. The IRWM Grant Program is administered by DWR and is intended to promote a new model for water management. One of the goals of the IRWM Grant Program is to encourage communities to work on synergistic approaches to solving regional water supply and environmental quality problems.

In 2007, MPWMD helped form a Regional Water Management Group (RWMG) to implement the IRWM Plan with other local agencies that have regional responsibilities for water resources management. The group has been expanded to include the Big Sur Land Trust (BSLT), the City of Monterey, the Monterey Regional Water Pollution Control Agency (MRWPCA), the Monterey County Water Resources Agency (MCWRA), the Marina Coast Water District, the Resource Conservation District of Monterey County, and MPWMD. Recently, the RWMG asked the City of Seaside to join the RWMG.

The following milestones have been completed:

- 2005 – MPWMD defined a geographic planning area, or Region, and began developing an IRWMP that encompasses the groundwater basins and watersheds of the Monterey Peninsula, Carmel Bay and South Monterey Bay. The Region includes the six Monterey Peninsula Cities, portions of the unincorporated area of Monterey County in the Carmel Highlands, Pebble Beach, and the inland areas of Carmel Valley and the Laguna Seca area.
- 2006 – Department of Water Resources (DWR) awarded a grant of $497,000 to MPWMD to complete an IRWM Plan for the Region.
- November 2007 – MPWMD adopted an IRWM Plan for the region.
- August 2008 - the RWMG was formed to provide an institutional structure to guide the implementation of the IRWM Plan. The RWMG has been expanded to include the Big Sur Land Trust (BSLT), the City of Monterey, the Monterey Regional Water Pollution Control Agency (MRWPCA), the Monterey County Water Resources Agency (MCWRA), Marina Coast Water District (MCWD), the Resource Conservation District of Monterey County (RCDMC), and MPWMD
- 2009 – MPWMD coordinated the RWMG group's effort to successful complete the Regional Acceptance Process conducted by DWR to permanently establish the Monterey Peninsula planning region.
- 2011 – DWR awarded a $995,000 grant to MPWMD to update the IRWM Plan to Proposition 84 standards and to complete nine planning projects around the region.
- 2010 to 2012 – representatives from each of the seven agencies in the expanded RWMG developed and agreed to a set of principles to guide the update and implementation of the IRWM Plan.
- 2014 – the MPWMD formally adopted the updated IRWM Plan in June 2014.
- 2015 – the City of Seaside was contacted and requested to be on the RWMG
- 2015/16 – MPWMD worked with the Monterey Peninsula RWMG and other Central Coast RWMGs to negotiate a funding area allocation for Prop. 1 IRWM funds

A formally adopted IRWM Plan (IRWMP) is required by the State in order to be eligible to apply for funds to implement projects. An IRWMP must comply with Proposition 1 standards and must address, at a minimum, water supply, groundwater management, ecosystem restoration, and water quality. The State IRWM guidelines require efforts to maximize affected entities participation in drafting the plan. Soliciting and incorporating input from the community is also a significant part of the consideration process.

The IRWMP is not a detailed plan for solving water management issues and implementing projects. Rather, the IRWMP provides a framework for agencies, non-profit groups, for-profit corporations and other stakeholders with missions and responsibilities to work together on common water management strategies, objectives, goals and projects. As such, the IRWMP takes into consideration the many plans and policies currently being implemented for water resource management, analyzes how these are interrelated and shows how projects and programs can have multiple benefits when grouped together. However, the IRWMP does not bind any agency or group to carry out particular actions, policies, or projects.

MPWMD is the lead agency for IRWM planning for the Monterey Peninsula, Carmel Bay, and South Monterey Bay. The MOU formalized the collaborative planning effort that several local agencies had been involved in for several years, describes the process for completing and amending and also described the role of stakeholders in carrying out the Plan. The RWMG initially executed the MOU in June 2008 and has subsequently amended the MOU several times.

Additional work will be required to update the IRWM Plan to Proposition 1 standards. In addition, 20% of IRWM funds are required to be expended on Disadvantaged Communities (DACs)[1]. On the Monterey Peninsula, portions of the Cities of Monterey and Seaside are considered DACs. A map showing Monterey Peninsula DACs is attached as **Exhibit 14-D**. Staff is requesting up to $25,000 to retain Gutierrez Consultants, Inc. for assistance with coordination among the Central Coast IRWM regions, outreach to DACs, preparation of initial assessments, and preparation of grant application materials for DAC projects. A rate sheet is attached as **Exhibit 14-C**.

STAFF/RESOURCE IMPACTS: Section 6.16 of the MOU, **Personnel resources,** states "It is expected that the General Managers and/or other officials of each entity signatory to this MOU will periodically meet to insure that adequate staff resources are available to implement the IRWM Plan." Staff anticipates additional effort through at least the end of Fiscal Year 2017-18 to coordinate the completion and adoption of an updated IRWM Plan, work on a Stormwater Resource Management Plan, an application to the State in 2016 for Disadvantaged Community grant funds, and applications in 2017 or 2018 for IRWM Implementation Grant funds. The District's budget for FY 2015-16 included $25,000 for expenses for Proposition 1 coordination. This was reduced to $0 at the mid-year budget adjustment; however, due to unfilled positions in the Planning and Engineering Department that are unlikely to change in FY 2015-16, staff now requests funds for assistance to carry out IRWM-related tasks.

EXHIBIT

14-A Draft Amended Memorandum of Understanding for in the Monterey Peninsula, Carmel Bay, and South Monterey Bay Area

14-B Draft Memorandum of Agreement for Integrated Regional Water Management Planning and Funding in the Central Coast Funding Area

14-C 2016 Rate Sheet, Gutierrez Consultants, Inc.

14-D Disadvantaged Communities Map for the Monterey Peninsula, Carmel Bay, and South Monterey Bay Area

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1 **Disadvantaged Community** (DAC) – a community with an annual median household income that is less than 80 percent of the Statewide annual median household income (Water Code §79505.5).

EXHIBIT 14-A

AMENDED

Memorandum of Understanding for Integrated Regional Water Management in the Monterey Peninsula, Carmel Bay, and South Monterey Bay Region

1. PURPOSE

The purpose of this Memorandum of Understanding (MOU) is to recognize a mutual understanding among entities in the southern Monterey Bay area regarding their joint efforts toward Integrated Regional Water Management (IRWM) planning. That understanding will continue to increase coordination, collaboration and communication for comprehensive management of water resources in the cities and unincorporated portions of the Monterey Peninsula, Carmel Bay, and South Monterey Bay Region (Region).

A. **Background and Description of Amendments**. The initial MOU to form a Regional Water Management Group (RWMG) was fully executed on July 22, 2008 by the Big Sur Land Trust (BSLT), a 501 (c) 3 organization, the City of Monterey, the Monterey Regional Water Pollution Control Agency (MRWPCA), the Monterey County Water Resources Agency (MCWRA), and the Monterey Peninsula Water Management District (MPWMD). The MOU formed a Regional Water Management Group (RWMG) for the purposes of developing and implementing projects consistent with the guidelines set by the State of California for IRWM.

Subsequently, the Marina Coast Water District (MCWD) requested approval to become part of the RWMG and signed an amended MOU in June 2011 that includes MCWD as a member of the RWMG. In 2012, the MOU was amended to include the Resource Conservation District of Monterey County (RCD) as a member of the RWMG. In 2015, the City of Seaside was recommended for addition to the RWMG.

In 2014, voters passed Proposition 1, the Water Quality, Supply, and Infrastructure Improvement Act of 2014 the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Act (Public Resources Code, sections 79700 - 79798), which authorizes the Legislature to appropriate funding for competitive grants for Integrated Regional Water Management (IRWM) projects. Funding is administered by the Department of Water Resources (DWR).

In 2015, representatives from the RWMGs representing the Central Coast region entered into discussions about a funding area allocation agreement for Proposition 1 funds allocated to the Central Coast funding area. Negotiations have resulted in a draft agreement that is acceptable to all RWMGs.

This amended MOU reflects the addition of the City of Seaside as a member of the RWMG and amends the MOU to authorize MPWMD to execute a funding area agreement on behalf of the RWMG.

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2. RECITALS

A. The State of California desires to foster Integrated Regional Water Management (IRWM) planning and encourages local public, non-profit, and private (for profit) entities to define planning regions appropriate for managing water resources and to integrate strategies within these planning regions.

B. Water resources management authority in the Region is currently distributed among various public agencies with a range of legal powers and regulatory responsibilities. These public agencies have definite jurisdictional boundaries, whereas sensible water resources planning and management frequently requires actions in multiple jurisdictions. Non-public entities within the Region have considerable interests in cooperating with public entities to protect, manage, and enhance water resources within the Region.

C. Seven ~~Six~~ public entities and one non-profit entity in the Region with responsibility and interests in the management of water resources have agreed to form a Regional Water Management Group for the purposes of developing and implementing projects consistent with the guidelines set by the State of California for IRWM. These entities are:

- Big Sur Land Trust (BSLT), a 501 (c) 3 organization;
- City of Monterey;
- City of Seaside
- Monterey Regional Water Pollution Control Agency (MRWPCA);
- Monterey County Water Resources Agency (MCWRA);
- Marina Coast Water District (MCWD);
- Resource Conservation District of Monterey County; and
- Monterey Peninsula Water Management District (MPWMD).

D. The Regional Water Management Group has defined an appropriate planning Region that takes into consideration jurisdictional limits, powers and responsibilities, and watershed and groundwater basin boundaries. The Regional Water Management Group is taking the lead in overseeing and implementing a detailed IRWM Plan within the planning Region. The Region is generally described as encompassing approximately 347 square miles and consists of groundwater basins and coastal watershed areas contributing to the Carmel Bay and south Monterey Bay. The Region includes coastal watersheds from the southernmost portion of the San Jose Creek watershed north to the northern limit of the Seaside Groundwater Basin. The inland area is bounded by the Seaside Groundwater Basin to the north and by the Carmel River watershed to the south and east. The western limit of the planning Region generally coincides with the land and Pacific Ocean interface, but includes the Pt. Lobos, Carmel Bay, and Pacific Grove Areas of Special Biological Significance (ASBS) adjacent to the coastal portion of the Region.

The principal groundwater basins in the planning Region are the Seaside Groundwater Basin and the Carmel Valley Aquifer. The Region includes about 38 miles of the coast within the Monterey Bay National Marine Sanctuary, three ASBS, the Cities of Carmel-by-the Sea, Del Rey Oaks, Monterey, Pacific Grove, Sand City, Seaside, and unincorporated portions of Monterey County including the Carmel Valley watershed (255

square miles), Pebble Beach, the Carmel Highlands and portions of the Seaside Groundwater Basin adjacent to Highway 68 (also known as Canyon Del Rey). This description of the planning Region is not intended to be a limitation on projects and resource planning that may be shared between adjacent IRWM planning Regions (e.g., the Greater Monterey County IRWM planning Region to the north and east).

E. The entities signatory to this MOU desire to link and integrate efforts to jointly oversee the development and implementation of a comprehensive Integrated Regional Water Management Plan for the Region and to allocate Proposition 1 IRWM funding within the planning Region.

3. GOALS

The goals of the collaborative effort undertaken pursuant to this MOU are:

3.1 To implement a comprehensive IRWMP for the Region that will consider the strategies that are required by the State under CWC 79562.5 and 79564 and subsequent modifications required under Proposition 84 and Proposition 1. Eligible projects must yield multiple benefits and include one or more of the following elements (PRC § 75026.(a)):

- **Water supply reliability, water conservation and water use efficiency**
- **Stormwater capture, storage, clean-up, treatment, and management**
- **Removal of invasive non-native species, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands**
- **Non-point source pollution reduction, management and monitoring**
- **Groundwater recharge and management projects**
- **Contaminant and salt removal through reclamation, desalting, and other treatment technologies and conveyance of reclaimed water for distribution to users**
- **Water banking, exchange, reclamation and improvement of water quality**
- **Planning and implementation of multipurpose flood management programs**
- **Watershed protection and management**
- **Drinking water treatment and distribution**
- **Ecosystem and fisheries restoration and protection**

3.2 To implement a comprehensive IRWMP for the Region that incorporates water supply, water quality, flood and erosion protection, and environmental protection and enhancement objectives.

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3.3 To improve and maximize coordination of individual public, private, and non-profit agency plans, programs and projects for mutual benefit and optimal gain within the Region.

3.4 To help identify, develop, and implement collaborative plans, programs, and projects that may be beyond the scope or capability of individual entities, but which would be of mutual benefit if implemented in a cooperative manner.

3.5 To facilitate regional water management efforts that include multiple water supply, water quality, flood control, and environmental protection and enhancement objectives.

3.6 To foster coordination, collaboration and communication between stakeholders and other interested parties, to achieve greater efficiencies, enhance public services, and build public support for vital projects.

3.7. To realize regional water management objectives at the least cost possible through mutual cooperation, elimination of redundancy, and enhanced regional competitiveness for State and Federal grant funding.

4. DEFINITIONS

4.1 **Funding Area Agreement.** The agreement entered into between the six regions within the Central Coast funding area to allocate a portion of Proposition 1 IRWM funds to each planning region.

4.2 **Integrated Regional Water Management Plan (IRWMP or IRWM Plan).** The plan envisioned by state legislators and state resource agencies that integrates the strategies, objectives, and priorities for projects to manage water resources proposed by public entities, non-profit entities, and stakeholders within a defined Planning Region. The minimum plan standards are as shown in Appendix A of "Integrated Regional Water Management Grant Program Guidelines, November 2004, Department of Water Resources and State Water Resources Control Board, Proposition 50, Chapter 8," as revised. Minimum IRWM Plan standards may be revised from time to time by the State of California.

4.3 **Integration**. The combining of water management strategies and projects to be included in an IRWMP.

4.4.a **Lead Agency for IRWM Plan Development.** The Monterey Peninsula Water Management District is designated by the Regional Water Management Group to lead the development or implementation of an Integrated Regional Water Management Plan for the Region.

4.4.b **Lead Agency for IRWM Grant Applications.** The Regional Water Management Group may designate any entity in the Regional Water Management Group to be the Lead Agency in making application to the State for grant funds.

4.4.c **Lead Agency for Executing a Central Coast funding area agreement**. The entity the Regional Water Management Group designates to represent the Monterey Peninsula Region to execute a Funding Area Agreement.

4.5 **Non-profit Agency.** A 501 (c) (3) corporation, conservancy, group or other organization involved in water resources management in the Region.

4.6 **Private Agency.** A private or publicly held for-profit corporation or property owner involved in water resources management in the Region

4.7 **Project**. A specific project that addresses a service function.

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4.8 **Public Agency**. A state-authorized water district, water agency, water management agency or other public entity, be it a special district, city or other governmental entity, responsible for providing one or more services in the areas of water supply, water quality, wastewater, recycled water, water conservation, stormwater/flood control, watershed planning and aquatic habitat protection and restoration.

4.9 **Region.** The area defined by the Regional Water Management Group (RWMG) consisting of watersheds, sub-watersheds and groundwater basins under the jurisdiction of one or more entities within the RWMG.

4.10 **Service Function.** A water-related individual service function provided by a private, public, or non-profit entity, i.e. water supply, water quality, wastewater, recycled water, water conservation, stormwater/flood protection, watershed planning, recreational facilities, and habitat protection and restoration.

4.11 **Signatory Entity.** A public, private, or non-profit entity within the Region that is signatory to this MOU.

4.12 **Stakeholder.** A non-signatory public, private, or non-profit agency identified in the IRWM Plan with an interest in water resources management within the Region.

4.13 **Technical Advisory Committee.** The committee organized to advise the Regional Water Management Group and Stakeholders concerning the IRWM Plan. Normally, the group will be comprised of individuals with technical backgrounds in the fields of marine and freshwater biology, ecology, geology, engineering, hydrogeology, planning, resource conservation, riparian systems, water conservation, and water quality. However, stakeholders with interests in a particular aspect of resource or project management, but not necessarily a technical background, may also be considered for inclusion in the TAC.

4.14 **Regional Water Management Group.** The group of entities that takes the lead in overseeing the development and implementation of the Integrated Regional Water Management Plan within the Planning Region. The RWMG consists of the Monterey Regional Water Pollution Control Agency, the Monterey County Water Resources Agency, the Monterey Peninsula Water Management District, the City of Monterey, the City of Seaside, the Marina Coast Water District, the Resource Conservation District of Monterey County, and the Big Sur Land Trust.

4.15 **Water Management Strategies**. Plans for and activities to be considered in an IRWMP include, but are not limited to, ecosystem restoration, environmental and habitat protection and improvement, water-supply reliability, flood management, groundwater management, recreation and public access, storm water capture and management, water conservation, water quality improvement, water recycling, and wetlands enhancement and creation.

5. IRWMP PARTICIPANTS

5.1 **Adopting Entities.** The entities in the Region that participate in the development, adoption, and implementation of the Integrated Regional Water Management Plan for the Region. Each entity intending to carry out a project proposed in the IRWMP must formally adopt the IRWMP or provide written substantiation of acceptance by the governing authority of the entity. For a public agency, adoption of the IRWMP is by formal resolution of the governing body. For a non-profit or for-profit entity,

proof of acceptance of the IRWMP by the equivalent of a public agency governing body is required (e.g., by a board of directors or other management entity).

5.2. **Stakeholders**. Entities, such as other public, private, and non-profit entities, business and environmental groups, that are considered valuable contributors to the understanding and management of the Region's water resources.

5.3. **Regulatory Agencies**. These agencies, including, but not limited to, the Central Coast Regional Water Quality Control Board, California Coastal Commission, U.S. Army Corps of Engineers, California Public Utilities Commission, National Marine Fisheries Service (NOAA Fisheries), U.S. Fish and Wildlife Service, and the California Department of Fish and Game, will be invited to participate in the development and implementation of the IRWMP.

5.4 **Regional Water Management Group.** The group of entities that takes the lead in developing and implementing an Integrated Regional Water Management Plan within the Planning Region.

6. MUTUAL UNDERSTANDING

6.1. **Subject matter scope of the IRWMP**. The IRWMP for the Region will include, but is not limited to, water supply, water quality, wastewater, recycled water, water conservation, stormwater/flood control, watershed planning, erosion prevention, and habitat protection and restoration. It is acknowledged that the proposals contained in the IRWMP may be based, in part, on the land-use plans of the member entities local governments such as Cities, Monterey County, and special districts located within the Region. Therefore, the resultant IRWMP will by design have incorporated the land-use plans and assumptions intrinsic to the respective water-related service function.

6.2. **Geographical scope of the IRWMP.** The area for this Memorandum is generally defined as the watersheds and associated groundwater basins contributing to the south Monterey Bay and Carmel Bay as shown in Figure 3-1: Map of Monterey Peninsula Integrated Regional Water Management Planning Region in the IRWM Plan.

The Region includes coastal watersheds from the southernmost portion of the San Jose Creek watershed north to the northern limit of the Seaside Groundwater Basin. The inland area is bounded by the Seaside Groundwater Basin to the north and by the Carmel River watershed to the south and east. The western limit of the planning Region generally coincides with the land and Pacific Ocean interface, but includes the Pt. Lobos, Carmel Bay, and Pacific Grove Areas of Special Biological Significance (ASBS) adjacent to the coastal portion of the Region.

However, it is recognized that the geographic scope represented in the IRWM Plan may be amended to include projects that are implemented cooperatively between IRWM planning regions (e.g., with the Greater Monterey County IRWM planning region) and is not intended to be a rigid boundary.

6.3. **Approach to developing the IRWMP**. It will be the responsibility of each entity signatory to this Memorandum to provide the Lead Agency with information for the IRWMP concerning project proposals or to identify the need for a water management strategy for each service function provided by a signatory entity.

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In order to be included in the IRWMP, all proposals for development of water management plans and water development project proposals related to the IRWMP must meet the standards identified in the IRWM Plan for the Region.

A technical advisory committee consisting of staff representatives from the Regional Water Management Group, other Stakeholders and such other organizations as may become contributing entities, will review proposed management plans and project proposals for consistency with the IRWMP and recommend a prioritized list of projects to be carried out within the Region. The Regional Water Management Group and Stakeholders will meet to review the recommendation made by the TAC.

6.4. **Approval of prioritized project list.** Approval of the prioritized project list should occur by consensus of the Regional Water Management Group and Stakeholders and should be based on the prioritization process described in the IRWMP and the recommendations of the Technical Advisory Committee. However, if a consensus cannot be reached among the Stakeholders and Regional Water Management Group, the Regional Water Management Group may make a final determination of the prioritized project list.

6.5. **Adoption of the IRWMP**. Plan adoption will occur by approval of the governing board of each entity. Each member of the RWMG shall adopt the IRWM Plan or an amended IRWM Plan, when the Plan becomes available. Project proponents named in an IRWM grant application shall adopt the IRWM Plan or amended IRWM Plan prior to submittal of the grant application. It should be noted that the adopted Plan and project list may be amended from time to time as described below.

6.6 **Amendment of IRWMP or Prioritized Project list.** The IRWM Plan and prioritized project list may be amended from time to time. Any member of the Regional Water Management Group or Stakeholders may request that the Lead Agency convene a meeting of the Regional Water Management Group and Stakeholders for the purposes of amending the IRWM Plan or the prioritized project list. However, it is anticipated that the IRWMP or prioritized project list will be amended no more frequently than annually, unless more frequent amendments are required to meet State IRWM standards or grant application cycles. An amended IRWM Plan must be consistent with State IRWM standards as described in Definition 4.1 "Integrated Regional Water Management Plan" and any subsequent revisions by the State to IRWM guidelines.

6.7. **Project Implementation.** Project proponents will be responsible for completing proposed projects and providing project reports to the Lead Agency.

6.8 **Project Monitoring.** The Regional Water Management Group will be responsible for monitoring the implementation of the IRWMP. The technical advisory committee will regularly report to the General Managers and Governing Boards of the Regional Water Management Group regarding progress on the development and implementation of the IRWMP. The Lead Agency will be responsible for coordinating data collection and dissemination.

6.9 **Grant Applications.** The Regional Water Management Group will designate a Lead Agency to apply for grant funds. The Lead Agency for each grant application

should have a mission and expertise that is consistent with the purpose of the grant being applied for.

6.10 **Central Coast funding area agreement.** The RWMG designates MPWMD to execute an funding area agreement on behalf of the Monterye Peninsula Planning Region.

6.11 **Grant Awards and Agreement**. The Lead Agency will be the grantee and administer the grant on behalf of the Regional Water Management Group and Stakeholders.

6.12 **Participation in Regional Water Management Group (RWMG)**. Any qualified stakeholder may petition to become a member of the RWMG. A qualified stakeholder must demonstrate the following: a) an interest, responsibility or authority over multiple resources within the region; or b) a unique interest, responsibility, authority, or asset not shared by any other entity within the RWMG. The RWMG shall consider such a request for a change to the RWMG and shall vote by majority to accept or reject the request.

6.13 **Length of Term in Regional Water Management Group**. Members of the RWMG may change from time to time, depending on the level of resources available to each entity. However, there is no required minimum or maximum length of time required as a member of the RWMG. If an entity withdraws from the RWMG, the remaining entities should attempt to replace the interest, responsibility or authority lost by the withdrawal.

6.14 **Rights of the Parties and Constituencies**: This MOU does not provide any added legal rights or regulatory powers to any of the signatory parties, or to the RWMG as a whole. This MOU does not of itself give any party the power to adjudicate water rights, or to regulate or otherwise control the private property of other parties. This MOU does not contemplate the parties taking any action that would adversely affect the rights of any of the parties, or that would adversely affect the customers or constituencies of any of the parties.

6.15 **Termination**. An entity signatory to this MOU may withdraw from participation upon 30 days advance notice to the other signatory entities, provided it agrees to be financially responsible for any previously committed, but unmet resource commitment.

6.16. **Personnel resources**. It is expected that the General Managers and/or other officials of each entity signatory to this MOU will periodically meet to insure that adequate staff resources are available to implement the IRWM Plan.

6.17. **Other on-going regional efforts**. Development of the IRWMP is separate from efforts of other organizations to develop water-related plans on a regional basis around Monterey Bay and the Central Coast. As the IRWMP is developed and implemented, work products may be shared to provide other entities and groups with current information.

~~**7. INDEMNIFICATION**~~

~~7.1 Each Party shall indemnify, defend and hold harmless the other parties, to the extent allowed by law and in proportion to fault, against any and all third-party liability for claims, demands, costs or judgments (direct, indirect, incidental or consequential) involving bodily injury, personal injury, death, property damage or other costs and~~

EXHIBIT 14-A

~~expenses (including reasonable attorneys' fees, costs and expenses) arising or resulting from the acts or omissions of its own officers, agents, employees or representatives carried out pursuant to the obligations of this Agreement.~~

~~7.2 These indemnity provisions shall survive the termination or expiration of this Agreement. Further, each Party will be liable to the other Party for attorneys' fees, costs and expenses, and all other costs and expenses whatsoever, which are incurred by the other Party in enforcing these indemnity provisions.~~

7~~8~~. RECORD OF AMENDMENTS

7~~8~~.1 June 2010 – add Marina Coast Water District to RWMG. Revise Goals, Definitions and MOU terms to reflect Proposition 84 requirements.

7~~8~~.2 March 2012 – add process to change RWMG, define when plan is to be adopted, revise to Proposition 84 standards

7~~8~~.3 August 2012 – add Resource Conservation District of Monterey County to RWMG

7.4 March 2016 – add City of Seaside to RWMG; designate MWPMD to execute and implement a funding area allocation for Proposition 1 funds; remove indemnification clause.

EXHIBIT 14-A

8~~9~~. SIGNATORIES TO THE MEMORANDUM OF UNDERSTANDING

We, the duly authorized undersigned representatives of our respective entities, acknowledge the above as our understanding of the intent and expected outcome in overseeing the development and implementation of an Integrated Regional Water Management Plan for the Monterey Peninsula, Carmel Bay, and South Monterey Bay Region.

_____	_____
Signature	Signature
_____	_____
Printed Name **Monterey County Water Resources Agency**	Printed Name **Monterey Regional Water Pollution Control Agency**
_____	_____
Date	Date
**********	**********
_____	_____
Signature	Signature
_____	_____
Printed Name **Big Sur Land Trust**	Printed Name **City of Monterey**
_____	_____
Date	Date
**********	**********
_____	_____
Signature	Signature
_____	_____
Printed Name **Monterey Peninsula Water Management District**	Printed Name **Marina Coast Water District**
_____	_____
Date	Date

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Signature

_____

Printed Name
Board President, Resource Conservation District of Monterey County

_____

Date

****

Signature

_____

Printed Name
City of Seaside

_____

Date

****

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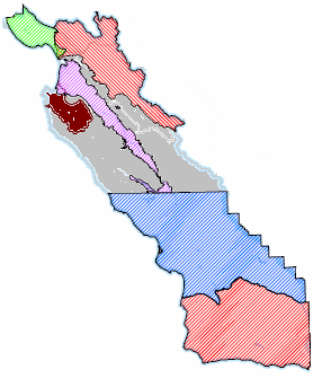
EXHIBIT 14-B



Central Coast Region IRWM

MEMORANDUM OF AGREEMENT FOR INTEGRATED REGIONAL WATER MANAGEMENT PLANNING AND FUNDING IN THE CENTRAL COAST FUNDING AREA

PARTIES:

This Memorandum of Agreement (MOA) is entered into and is effective as of the date it is executed by all of the Regional Water Management Groups listed below and referred to as "Parties" in this MOA:

1. Santa Cruz Regional Water Management Group comprised of:

- ☐ Central Water District
- ☐ City of Capitola
- ☐ City of Santa Cruz
- ☐ City of Scotts Valley
- ☐ City of Watsonville
- ☐ County of Santa Cruz
- ☐ Santa Cruz County Sanitation District
- ☐ Davenport County Sanitation District
- ☐ Resource Conservation District of Santa Cruz County
- ☐ Scotts Valley Water District
- ☐ Soquel Creek Water District

Hereinafter, the "Santa Cruz Region."

2. Pajaro River Watershed Regional Water Management Group, comprised of:

- ☐ Pajaro Valley Water Management Agency (PVWMA)
- ☐ San Benito County Water District (SBCWD)
- ☐ Santa Clara Valley Water District (SCVWD)

Hereinafter, the "Pajaro Region."

EXHIBIT 14-B

3. Greater Monterey County Regional Water Management Group, comprised of:

- ☐ Big Sur Land Trust
- ☐ California State University Monterey Bay
- ☐ California Water Service Company
- ☐ Castroville Community Services District
- ☐ City of Salinas
- ☐ City of Soledad
- ☐ Elkhorn Slough National Estuarine Research Reserve
- ☐ Environmental Justice Coalition for Water
- ☐ Garrapata Creek Watershed Council
- ☐ Marina Coast Water District
- ☐ Monterey Bay National Marine Sanctuary
- ☐ Monterey County Agricultural Commissioner's Office
- ☐ Monterey County Water Resources Agency
- ☐ Monterey Regional Water Pollution Control Agency
- ☐ Moss Landing Marine Laboratories
- ☐ Resource Conservation District of Monterey County
- ☐ Rural Community Assistance Corporation
- ☐ San Jerardo Cooperative, Inc.

Hereinafter, the "Greater Monterey County Region."

4. Monterey Peninsula, Carmel Bay, and South Monterey Bay Regional Water Management Group, comprised of:

- ☐ Big Sur Land Trust (BSLT)
- ☐ City of Monterey
- ☐ Monterey County Water Resources Agency (MCWRA)
- ☐ Monterey Regional Water Pollution Control Agency (MRWPCA)
- ☐ Monterey Peninsula Water Management District (MPWMD)
- ☐ Marina Coast Water District (MCWD)
- ☐ Resource Conservation District of Monterey County (RCDMC)
- ☐ City of Seaside[1]

Hereinafter, the "Monterey Peninsula Region."

[1] The City of Seaside is proposed to be added to the RWMG.

EXHIBIT 14-B

5. San Luis Obispo County Regional Water Management Group, comprised of:

- ☐ California Men's Colony
- ☐ Cambria Community Services District
- ☐ Central Coast Salmon Enhancement
- ☐ City of Arroyo Grande
- ☐ City of Grover Beach
- ☐ City of Morro Bay
- ☐ City of Paso Robles
- ☐ City of Pismo Beach
- ☐ City of San Luis Obispo
- ☐ Coastal San Luis Resource Conservation District
- ☐ Heritage Ranch Community Services District
- ☐ The Land Conservancy of San Luis Obispo County
- ☐ Los Osos Community Services District
- ☐ Morro Bay National Estuary Program
- ☐ Nipomo Community Services District
- ☐ Oceano Community Services District
- ☐ San Luis Obispo County
- ☐ San Luis Obispo County Flood Control and Water Conservation District
- ☐ San Miguel Community Services District
- ☐ San Simeon Community Services District
- ☐ S&T Mutual Water Company
- ☐ Templeton Community Services District
- ☐ Upper Salinas-Las Tablas Resource Conservation District

Hereinafter, the "San Luis Obispo County Region."

6. Santa Barbara County Regional Water Management Group, comprised of:

- ☐ City of Buellton
- ☐ City of Carpinteria
- ☐ City of Guadalupe
- ☐ City of Goleta
- ☐ City of Lompoc

EXHIBIT 14-B

- ☐ City Santa Barbara
- ☐ City of Santa Maria
- ☐ City of Solvang
- ☐ Cachuma Operation and Maintenance Board (COMB)
- ☐ Central Coast Water Authority (CCWA)
- ☐ Heal the Ocean
- ☐ Casmalia Community Services District (Cuyama CSD)
- ☐ Vandenberg Village Community Services District (VVCSD)
- ☐ Carpinteria Sanitary District (CSD)
- ☐ Goleta Sanitary District (GSD)
- ☐ Goleta West Sanitary District (GWSD)
- ☐ Cachuma Resource Conservation District (RCD) (Independent)
- ☐ Laguna County Sanitation District (Dependent)
- ☐ Santa Barbara County Water Agency (SBCWA) (Dependent)
- ☐ Santa Barbara County Flood Control District (SBCWA) (Dependent)
- ☐ Carpinteria Valley Water District (CVWD)
- ☐ Goleta Water District (GWD)
- ☐ Santa Maria Valley Water Conservation District (SMVWCD)
- ☐ Santa Ynez Community Services District
- ☐ Santa Ynez River Water Conservation District (SYRWCD)
- ☐ Santa Ynez River Water Conservation District, Improvement District 1 (ID #1)

Hereinafter, the “Santa Barbara Region.”

EXHIBIT 14-B

RECITALS:

A. The Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Water Code, Sections 79700 - 79798) (Act), approved by the voters as Proposition 1, authorizes the Legislature to appropriate funding for competitive grants for Integrated Regional Water Management (IRWM) projects. Funding is administered by the Department of Water Resources (DWR).

B. The intent of the Act is to provide funds for projects that are included in an adopted IRWM Plan consistent with Part 2.2 (commencing with Water Code Section 10530) of Division 6, and respond to climate change and contribute to regional water security. In order to improve regional water self-reliance security and adapt to the effects on water supply arising out of climate change, projects funded under the Act are to:

(a) Help water infrastructure systems adapt to climate change.

(b) Provide incentives for water agencies throughout each watershed to collaborate in managing the region's water resources and setting regional priorities for water infrastructure.

(c) Improve regional water self-reliance.

C. The Regional Water Management Groups in the Santa Cruz Region, the Pajaro Region, the Greater Monterey County Region, the Monterey Peninsula Region, the San Luis Obispo County Region, and the Santa Barbara Region comprise the six Parties. The boundaries of each Region are shown in **Attachment A.**

D. The primary intent of the six Parties to this MOA is to share future Proposition 1 funding for the IRWM grant program among the six Parties in a fair and equitable manner. Each Party will independently determine and prioritize projects to be funded within its Planning Region consistent with the legislative intent for a competitive grant program. This MOA is also intended to reduce the need for the Parties to compete against each other for grant funds, which creates unnecessary economic inefficiencies in implementing each Planning Region's IRWM Plan.

E. DWR may establish standards to guide the selection and funding of IRWM projects within the Funding Area. Project selection for funding will be consistent with Water Code section

79742.

F. Each Party has an accepted IRWM Plan and desires close coordination to enhance the quality of planning, identify opportunities for supporting common goals and projects, and improve water supply reliability, water quality, and environmental stewardship to meet current and future needs in each Planning Region. The Parties will coordinate and work with their advisory groups to identify projects of value across or within Planning Regions, identify funding for highly ranked projects, and support implementation.

G. The Parties each desire to retain autonomous control over how funds are allocated within their respective regions, but recognize the potential to improve inter-regional cooperation and efficiency. Since 2005, the Parties have worked to improve the IRWM planning process in the Funding Area, to coordinate planning across Planning Region lines, and to facilitate the distribution of funding for IRWM projects by DWR within the Funding Area.

H. The Parties will coordinate on grant funding requests by each of the Parties to ensure that the sum of the total grant requests from the Funding Area does not exceed the amount allocated to the Funding Area.

NOW, THEREFORE, the Parties acknowledge that the above recitals are true and correct and hereby incorporated herein by this reference and further agree as follows:

1. Definitions

The following terms and abbreviations, unless otherwise expressly defined in their context, shall mean:

A. Funding Area – The 11 regions and sub-regions referenced in Water Code section 79744 (a) and allocated a specific amount of funding to support IRWM activities. The Central Coast Funding Area incorporates lands in the Central Coast Regional Water Quality Control Board jurisdiction as of 2004, including portions of the counties of Santa Clara (south of Morgan Hill), San Mateo (southern portion), Santa Cruz, San Benito, Monterey, Kern (small portions), San Luis Obispo, Santa Barbara, Ventura (northern portion).

B. Regional Water Management Group (**RWMG) –** RWMG means a group in which three or more local agencies, at least two of which have a statutory authority over water supply or

water management, as well as those persons who may be necessary for the development and implementation of an IRWM Plan. An RWMG is the documented leader of IRWM planning and implementation efforts in a Planning Region.

C. Planning Region – The geographic area in which the IRWM regions will conduct their respective coordination and integration of stakeholders, agencies and projects. The boundaries of the six Planning Regions in the Funding Area are shown in Attachment A.

D. Overlap Areas – Identified areas within adjacent Planning Regions that may be part of a common watershed or jurisdictional area within an adjacent Planning Region. Overlap Areas are identified in each respective Planning Region IRWM Plan and should be subject to special coordination and collaboration between adjacent Planning Regions to ensure maximum benefits in each respective Planning Region.

E. **Overlap Projects** – Projects identified in an IRWM Plan as valuable and benefiting from cross boundary (interregional) coordination.

F. Responsible Agency – The Agency designated within each RWMG to represent each Party to this Agreement.

F. IRWM Plan – A comprehensive plan for a defined geographic area, the specific development, content, and adoption of which shall satisfy requirements developed pursuant to this part. At a minimum, an IRWM Plan describes the major water-related objectives and conflicts within a region, considers a broad variety of resource management strategies, identifies the appropriate mix of water demand and supply management alternatives, water quality protections, and environmental stewardship actions to provide long-term, reliable, and high-quality water supply and protect the environment, and identifies disadvantaged communities in the region and takes the water-related needs of those communities into consideration (Water Code §10530 et seq., in particular §10534).

G. Disadvantaged Community (DAC) – a community with an annual median household income that is less than 80 percent of the Statewide annual median household income (Water Code §79505.5).

EXHIBIT 14-B

2. Formula for Sharing Funds

A. The Funding Area has been allocated **$43 million** through Proposition 1 for the IRWM program administered by DWR. This allocation includes the following breakdown:

DWR Administration Fee - 7% of Funding Area Total	**$ 3,010,000**
DAC Funding - 20% of Funding Area Total	**$ 8,600,000**
DAC engagement (non-competitive)	**$ 4,300,000**
DAC project implementation (competitive)	**$ 4,300,000**
Implementation and Planning Grants	**$ 31,390,000**

B. For the purposes of this MOA, the formula for sharing funds among the Parties will be based on the following: one-half (1/2) of funds are equally split among the Parties; one-quarter (1/4) of funds are split based on population percentage of each Planning Region based on 2009-2013 American Census Data; and one-quarter (1/4) of funds are split based on the percentage of area in square miles of each Planning Region. The division of funding shall be consistent with **Attachment B**.

3. General Planning Cooperation

All Planning Regions will meet prior to providing feedback to DWR on Proposed Guidelines for the IRWM Program and before submitting applications for grant funding from DWR. The number of meetings will depend on the amount and intensity of planning and coordination efforts of the Planning Regions. The purpose of these meetings will be to enhance the quality of planning, identify opportunities for supporting common goals and projects, and to improve integrated water management efforts in the Funding Area. The planning efforts will support integration and coordination across Planning Regions.

4. Coordination of Submittals and Applications

Each Planning Region should contain a reference to this MOA in each grant application submittal to the IRWM grant program.

5. Common Programs

Common programs found to be of high value for some or all Planning Regions will be identified

and considered for high priority placement in the Planning Region's ranking of projects for funding. These may include programs to address Disadvantaged Community issues, Overlap Projects, and shared responsibilities for management of watersheds that cross Planning Region boundaries. While each Planning Region will select projects in accordance with its own process, the Planning Regions may cooperate on the implementation of common projects or programs if these efforts are selected for funding.

Each Planning Region is encouraged to invite representatives from the adjoining Planning Regions to participate as a non-voting member in its determinations of projects and programs affecting Overlap Areas. The intent of this section is to promote understanding, communication and coordination between and among Planning Regions.

6. Scope of the Agreement

Nothing contained within this MOA binds the Parties beyond the scope or term of this MOA unless specifically documented in subsequent agreements, amendments or contracts. Moreover, this MOA does not require any commitment of funding beyond that which is voluntarily committed.

7. Term of Agreement

The term of this MOA is from its Effective Date shown above until all funds allocated to the Funding Area as shown in Attachment B have been awarded by DWR to the Funding Area, unless extended by mutual agreement of the Parties.

8. Modification or Termination

This MOA may be modified or terminated with the written concurrence of all Parties.

9. Change of Responsible Agency

It is recognized that any Responsible Agency may wish to withdraw from the responsibilities described in the terms of this MOA. It is the intent of the Parties to each maintain a Responsible Agency to represent the interests of their respective Planning Region and Regional Water Management Group to implement the terms of this MOA. Any Responsible Agency that intends to withdraw from this MOA shall give a 30-day notice to the other Parties and should designate a successor agency as a Responsible Agency.

EXHIBIT 14-B

10. Withdrawal from MOA

Any Party that intends to withdraw from this MOA shall give a 30-day notice to the other Parties.

11. Notice

Any notices sent or required to be sent to any Party shall be mailed to the following addresses:

The Santa Cruz Region
Tim Carson, Program Director
Regional Water Management Foundation
7807 Soquel Drive, Aptos, CA 95003
tcarson@cfscc.org

The Pajaro Region
Tracy Hemmeter, Senior Project Manager
5750 Almaden Expressway
San Jose, California 95118
themmeter@valleywater.org

The Greater Monterey County Region
Susan Robinson, Coordinator for Greater Monterey County IRWM Region
P.O. Box 201
Cabot, VT 05647
srobinsongs@frontier.com

The Monterey Peninsula Region
Larry Hampson, District Engineer
Monterey Peninsula Water Management District
P.O. Box 85, Monterey CA 93942
larry@mpwmd.net

EXHIBIT 14-B

The San Luis Obispo County Region
Mladen Bandov, Water Resources Engineer
San Luis Obispo County Public Works Department
County Government Center, Room 206, San Luis Obispo CA 93408
mbandov@co.slo.ca.us

The Santa Barbara Region
Fray Crease, Water Agency Manager
Santa Barbara County Water Agency
130 E. Victoria St.
Suite 200
Santa Barbara, CA 93101
fcrease@cosbpw.net

12. Funding Uncertainties

The Parties cannot be assured of the results of these coordination efforts and applications for funding. Nothing within this MOA should be construed as creating a promise or guarantee of future funding. No liability or obligation shall accrue to the Parties if DWR does not provide the funding. The Parties are committed to planning and coordinating notwithstanding IRWM funding. The form of such coordination may change based on the sources of funding.

13. Other Provisions

The following provisions and terms shall apply to this MOA.

A. This MOA is to be construed in accordance with the laws of the State of California. Any action at law or in equity brought by any of the Parties shall be brought in a court of competent jurisdiction within the Party's County that files an action against another Party for a breach of this MOA, and the Parties hereto waive all provisions of law providing for change of venue in such proceedings to any other county.

B. If any provision of this MOA is held by a court to be invalid, void or unenforceable, the remaining provisions shall be declared severable and shall be given full force and effect to the extent possible.

EXHIBIT 14-B

C. This MOA is the result of negotiations between the Parties hereto and with the advice and assistance of their respective counsels. No provision contained herein shall be construed against any Party because of its participation in preparing this MOA.

D. Any waiver by a Party of any breach by the other of any one or more of the terms of this MOA shall not be construed to be a waiver of any subsequent or other breach of the same or of any other term hereof. Failure on the part of any of the respective Parties to require from the others exact, full and complete compliance with any terms of the MOA shall not be construed to change the terms hereof or to prohibit the Party from enforcement hereof.

E. This MOA may be executed and delivered in any number of counterparts or copies, hereinafter called "Counterpart," by the Parties hereto. When each Party has signed and delivered at least one Counterpart to the other parties hereto, each Counterpart shall be deemed an original and, taken together, shall constitute one and the same MOA, which shall be binding and effective as to the Parties hereto.

F. This MOA is intended by the Parties hereto as their final expression with respect to the matters herein, and is a complete and exclusive statement of the terms and conditions thereof.

EXHIBIT 14-B

IN WITNESS WHEREOF, the Parties hereto have executed this MOA on the dates shown on the attached counterpart signature pages:

The Santa Cruz Region

The Pajaro Region

The Greater Monterey County Region

The Monterey Peninsula Region

The San Luis Obispo County Region

The Santa Barbara Region

EXHIBIT 14-B

Attachment A – Central Coast Funding Area Map

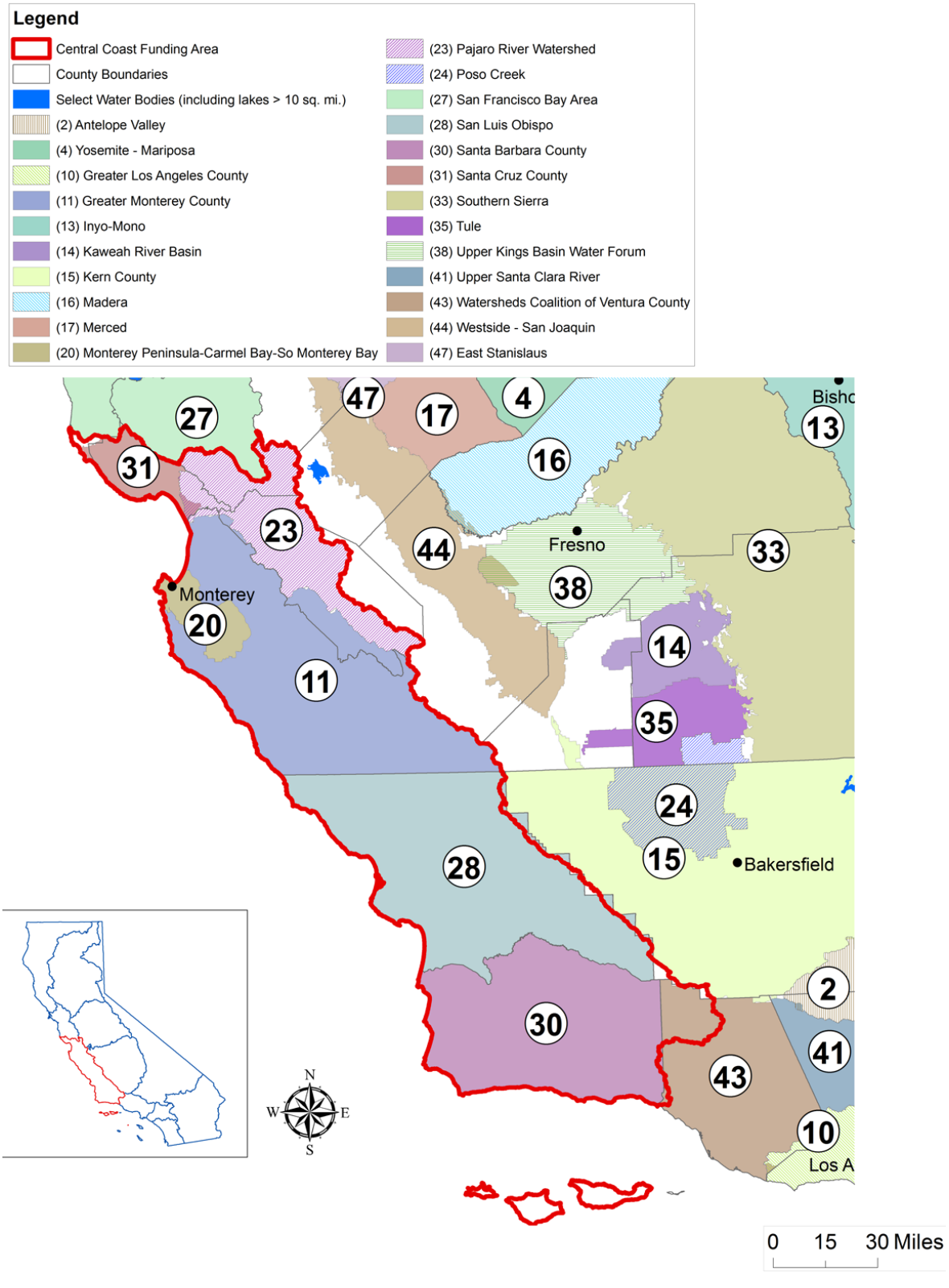


EXHIBIT 14-B

Attachment B
Allocation of Proposition 1 Funds

Each of the six Planning Regions has IRWM project and program needs that far exceed the funding allocated to the Funding Area. Significant local match funding for selected projects is available in each Planning Region. Funding for planning and timing of implementation may vary among the Planning Regions. Because of these factors and because not all of the Proposition 1 funding will be made available at the same time, the Parties will cooperate and coordinate on individual funding cycle applications to ensure that the sum of the total grant requests does not exceed the amount identified for the Funding Area in any given cycle. Total allocations to the Parties will be divided according to the schedule below. The allocations to the six Planning Regions are indicated in percentages of the total funds that will be available over the life of the program.

Table 1 –Funding Area Allocation

Total Proposition 1 IRWM Funding to Funding Area	**$ 43,000,000**
Breakdown of Prop 1 to Funding Area:	
DWR fees (5% program delivery, 2% bond administration)	**$ 3,010,000**
DAC Funding (20% of CCFA Total) - 2 Rounds	**$ 8,600,000**
Implementation and Planning Grants - 2 Rounds	**$ 31,390,000**

Table 2 – Basis of Funding Area Allocations

Funding Area Regions Allocation Option #1 (1/2 Equal Split Among Regions) + (1/4 % by population) + (1/4 % by acreage)	Baseline Factor (1/6 based on 6 Regions in Funding Area)	Population	Population Factor (% of Funding Area Total)	Area (sq. miles)	Area Factor (% of Funding Area Total)	Overall Factor (% of Funding Area funds)
Santa Cruz	**16.67%**	281,401	14.89%	376	3.39%	12.90%
Pajaro River Watershed	**16.67%**	327,183	17.32%	1,295	11.68%	15.58%
Greater Monterey	**16.67%**	384,947	20.38%	3,199	28.85%	20.64%
Monterey Peninsula	**16.67%**	131,088	6.94%	341	3.08%	10.84%
San Luis Obispo	**16.67%**	309,187	16.37%	3,322	29.96%	19.91%
Santa Barbara	**16.67%**	455,468	24.11%	2,555	23.04%	20.12%
Totals	**100.00%**	**1,889,274**	**100.00%**	**11,088**	**100.00%**	**100.00%**

EXHIBIT 14-B

Table 3 – Summary of Funds Available to Each Planning Region (less DWR fees)

	Santa Cruz	Pajaro Valley Watershed	Greater Monterey	Monterey Peninsula	San Luis Obispo	Santa Barbara	Total CCFA
ALLOCATION OPTION # 1							
Allocation Option #1 - DAC Funds ((1/2 Equal Split Among Regions) + (1/4 %by population) + (1/4 % by acreage))	$ 1,109,810	$ 1,340,107	$ 1,775,034	$ 931,966	$ 1,712,669	$ 1,730,414	**$ 8,600,000**
Allocation Option #1 - Impl'n Funds ((1/2 Equal Split Among Regions) + (1/4 %by population) + (1/4 % by acreage))	$ 4,050,805	$ 4,891,390	$ 6,478,875	$ 3,401,677	$ 6,251,243	$ 6,316,010	**$ 31,390,000**
Total Allocation Option #1	**$ 5,160,615**	**$ 6,231,497**	**$ 8,253,910**	**$ 4,333,643**	**$ 7,963,912**	**$ 8,046,424**	

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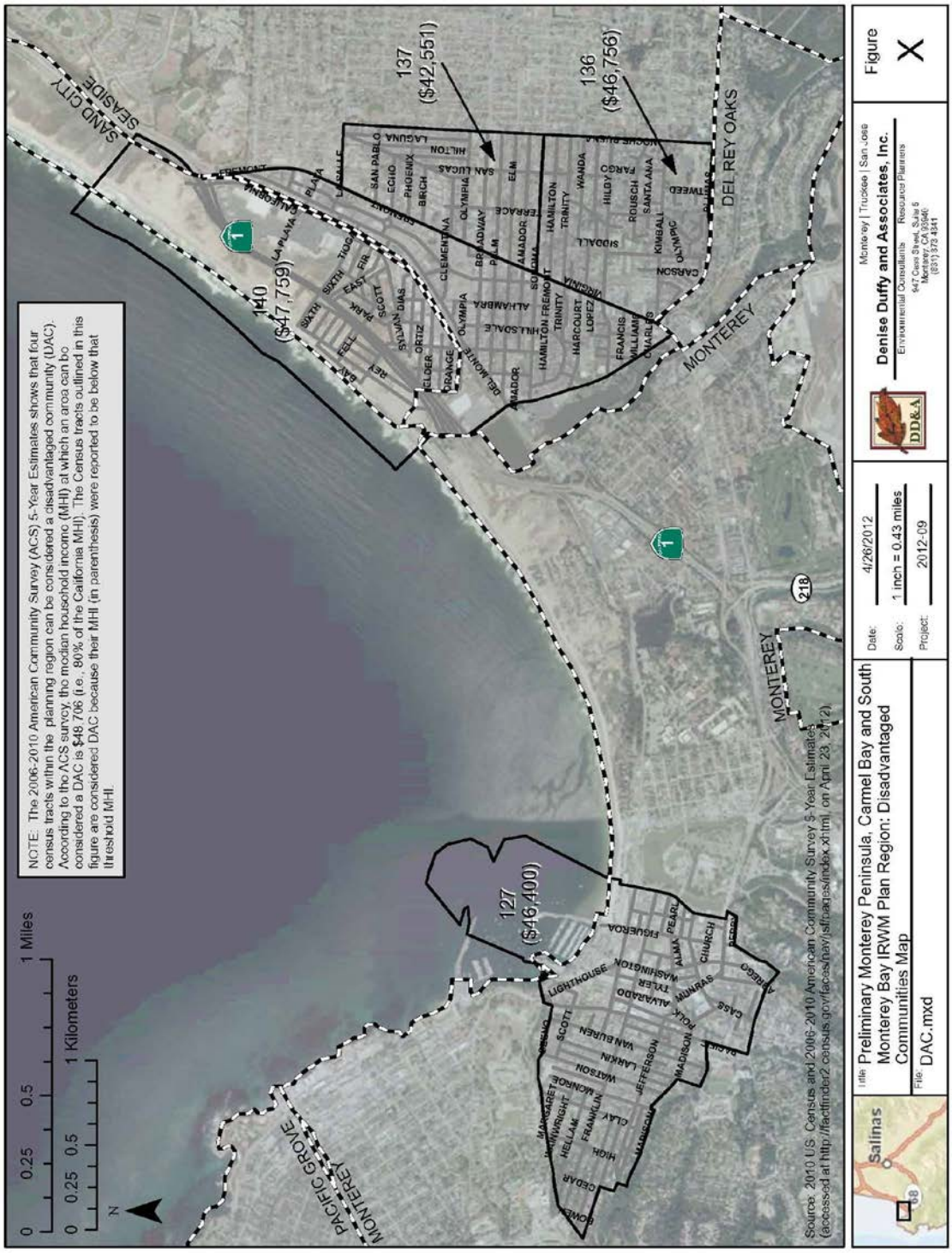
2016 Rate Sheet
Gutierrez Consultants, Inc.

Classification	Rate
Principal	$217
Engineer/Planner	$180
Project Assistant	$155

The individual hourly rate includes salary, overhead and profit. The hourly rate also includes ordinary expenses, including telecommunications, computer usage, and regular reproduction jobs. Other direct costs (ODCs) such as large reproduction jobs and travel expenses will be charged at actual cost plus 10%. Mileage will not be marked up. Subconsultants will be billed at actual cost plus 10%. Mileage rate will be that allowed by current IRS guidelines.

Figure 2-5: Disadvantaged Communities Map for South Monterey Bay, Monterey Peninsula, and Carmel Bay



ITEM: ACTION ITEM

15. CONSIDER APPROVAL OF ITEMS RELATED TO BUREAU OF RECLAMATION WATERSMART PROGRAM

A. CONSIDER AUTHORIZATION OF CONTRACT FOR ASSISTANCE WITH PREPARATION OF THE SALINAS AND CARMEL RIVER BASINS STUDY

B. AUTHORIZE THE GENERAL MANAGER TO MANAGER TO ENTER INTO A GRANT AGREEMENT WITH THE UNITED STATES BUREAU OF RECLAMATION

Meeting Date:	**April 18, 2016**	**Budgeted:**	**No**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No:**	**Water Supply Projects 1-5-1 Groundwater Replenishment Project**
Prepared By:	**Larry Hampson**	**Cost Estimate:**	**$45,000 (initial)**

General Counsel Review: N/A
Committee Recommendation: The Water Supply Planning Committee reviewed this item on April 8, 2016 and recommended approval. The Administrative Committee reviewed this item on April 11, 2016 and recommended approval.
CEQA Compliance: N/A

SUMMARY: The United State Bureau of Reclamation (Reclamation) is recommending funding in FY2015 of a grant of up to $950,000 through its WaterSMART program for the Salinas and Carmel River Basins Study (Study) (see **Exhibit 15-A**). The Study will be a collaborative effort to evaluate future water supply and demand imbalances in a changing climate and to develop potential adaptation strategies to meet future demands. Study partners include the Monterey Regional Water Pollution Control Agency (MRWPCA), the Monterey County Water Resources Agency (MCWRA), the San Luis Obispo County Public Works Department (SLO County) and MPWMD (Study Partners). The Study would cover an area of about 5,000 square miles that includes the Carmel River Basin, the Monterey Peninsula, and the Salinas River Basin in Monterey and San Luis Obispo Counties. It is intended that the Study be completed within three years and be complementary to the Drought Contingency Plan for North Monterey County that the District is administrative lead for.

The recipient cost share (non-federal or partner share) is a minimum of 50% of total project costs. The Study Partners have identified $1.155 million in non-federal share, which exceeds the minimum. The District has identified up to $1.126 million of potential cost-share that includes a combination of ongoing District expenses and reimbursements for activities related to the Study. District expenses specific to the Study are estimated at $45,000 (i.e., expenses that are not shared among other District programs and activities).

Reclamation goals for this Study include: (1) downsizing a global climate model (GCM) from a 100 kilometer grid to a 6 to 10 kilometer grid that is applied to the two basins; (2) developing a range of climate change scenarios extending to the year 2100; 3) working with the Study Partners to input data from the downsized GCM into water resource models developed for each basin; and 4) identifying potential adaptation strategies to meet future municipal, industrial, and environmental water demands.

RECOMMENDATION: If this item is approved, the Board will:

A) Authorize the General Manager to enter into an agreement for services with Brown and Caldwell to assist with tasks in the Study Plan for a cost not-to-exceed $45,000; and

B) Authorize the General Manager to enter into a grant agreement with Reclamation to receive funds and complete a Salinas and Carmel River Basins Study. District staff recommends approval of the above actions.

BACKGROUND: Development of a Study would build on several previous and concurrent planning efforts in the Monterey Peninsula, Greater Monterey County, and San Luis Obispo County Integrated Regional Water Management planning regions and the network of agencies and stakeholders that is advancing the Pure Water Monterey project, a Drought Contingency Plan for North Monterey County, and a Groundwater Sustainability Plan for the Salinas Valley Groundwater Basin. The Study would the following specific activities:

- Task 1 – Detailed Plan of Study
- Task 2 – Model Development/Integration/Calibration/Validation and GCM Modeling
- Task 3 – Current Water Supply/Demand Assessment
- Task 4 – Future Water Supply/Demand Assessment
- Task 5 – Identify Supply/Demand Imbalance
- Task 6 – Develop Adaptation Strategies
- Task 7 – Trade-off Analysis of Alternatives $150,000 $50,000 $200,000
- Task 8 – Draft Report, Findings and Recommendations $50,000 $25,000 $75,000
- Task 9 – Final Report
- Task 10 – Stakeholder Outreach/Project Team Meetings

Detailed descriptions of Tasks are contained in **Exhibit 15-B**.

Most of the non-federal share for development of the Study is anticipated to come from past expenditures (after July 1, 2014) and existing District efforts including: communication and public outreach plans to continue water conservation; feasibility and project studies for drought-resistant projects such as for the Pure Water Monterey project; a surface-groundwater model for the Carmel River Basin; a groundwater model for the Seaside Groundwater Basin; development of a long-term plan for Los Padres Dam; and development of a habitat simulation model for steelhead in the Carmel River. MPWMD and project partners would work with Reclamation to develop a detailed work plan. Reclamation would be involved in the management of the planning process and can provide technical assistance to develop elements of the Study.

IMPACT ON STAFF/RESOURCES: If the District enters in an agreement to receive grant funds, staff time will be required to administrate the grant over approximately two years. The non-federal share is anticipated to be a combination of in-kind services from Study Partners (including MPWMD, MRWPCA, MCWRA, SLO County), such as staff labor, and consultant expenses associated with existing programs.

EXHIBIT

15-A June 30, 2015 Letter re: Study Selection (Gonzales to Hampson)

15-B April 2015 Salinas and Carmel River Basins Study Proposal

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United States Department of the Interior

BUREAU OF RECLAMATION
P.O. Box 25007
Denver, CO 80225-0007

JUN 30 2015

IN REPLY REFER TO:
84-51000
WTR-1.10

VIA ELECTRONIC MAIL ONLY

Monterey Peninsula Water Management District
Attn: Mr. Larry Hampson
P.O. Box 85
Monterey, CA 93942

Subject: Fiscal Year (FY) 2015 Basin Study Selection – *Salinas and Carmel Rivers Basin Study*

Dear Mr. Hampson:

Thank you for your interest in the Bureau of Reclamation's Basin Study Program. I am pleased to inform you that your proposal is one of two studies selected for funding in FY 2015. Reclamation anticipates contributing Federal funds in the amount of $950,000 toward the completion of the proposed study.

Mr. Arlan Nickel, the Mid-Pacific Regional Basin Study Coordinator, will contact you shortly to begin the process of developing a Memorandum of Agreement and Plan of Study. We look forward to working with you to address the critical water needs of the Salinas and Carmel River Basins.

If you have any questions regarding the selection process, please contact Ms. Amanda Erath at (303) 445-2766 or aerath@usbr.gov.

Sincerely,

Roseann Gonzales
Director, Policy and Administration

Identical Letters Sent To:

Monterey County Water Resources Agency
Mr. Robert Johnson, Assistant General Manager
893 Blanco Circle
Salinas, CA 93901

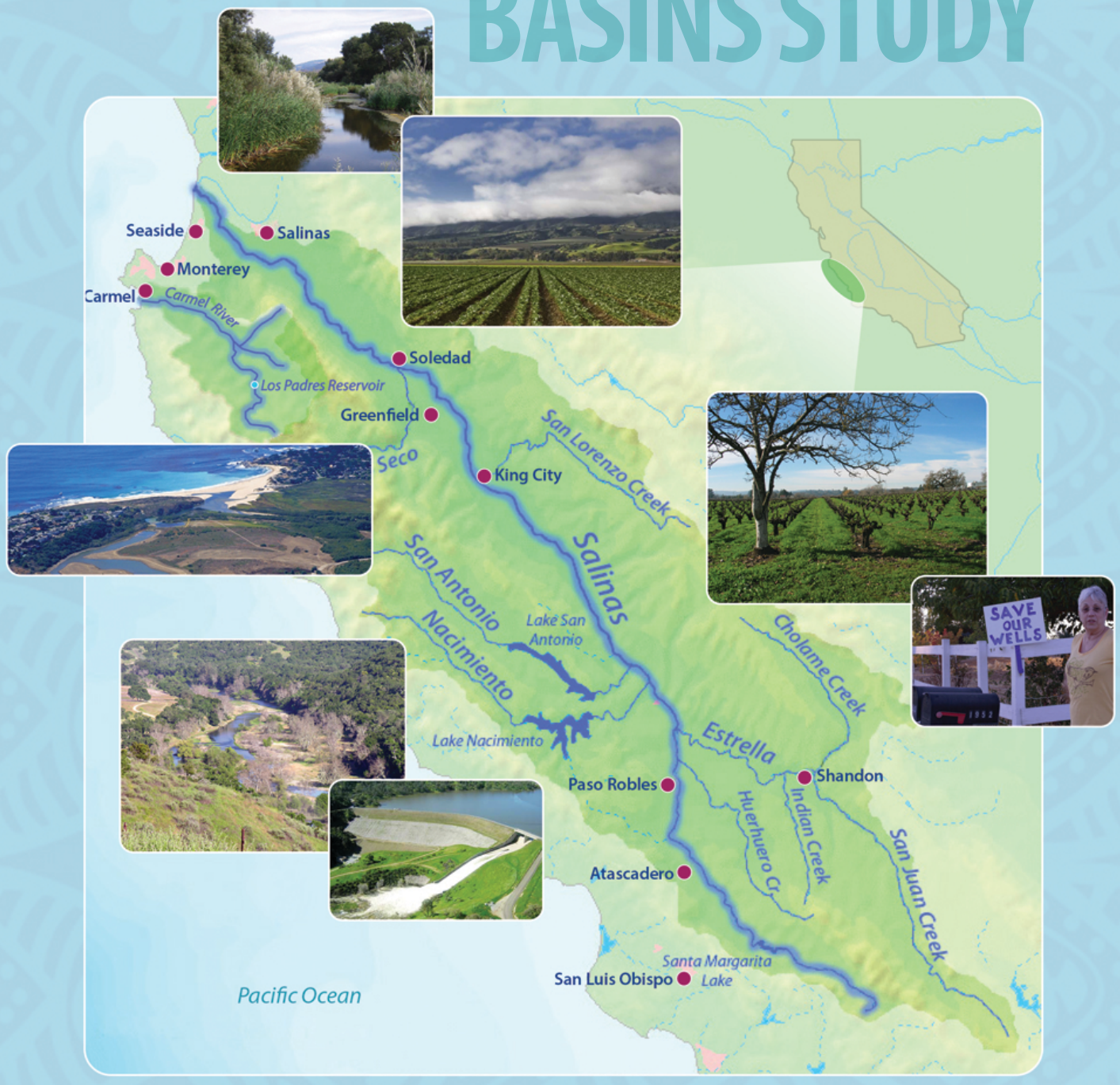
Monterey Regional Water Pollution Control Agency
Keith Israel, General Manager
5 Harris Court, Building D
Monterey, CA 93940

San Luis Obispo County
Wade Horton, Public Works Director
County Government Center, Room 206
San Luis Obispo, CA 93408

Proposal | April 2015

U.S. Department of the Interior | Bureau of Reclamation

SALINAS and CARMEL RIVER BASINS STUDY



Section A

PROJECT INFORMATION

1. TITLE: SALINAS AND CARMEL RIVER BASINS STUDY

A collaborative study to evaluate future water supply and demand imbalances in a changing climate and to develop potential adaptation strategies to meet future demands.

Within the Salinas and Carmel River basins an imbalance in the water supply and demand is being exacerbated by the extended drought, competing demands, and climate change. The goal of the study is to understand, anticipate, and adapt to these effects and to identify adaptive management strategies that will yield sustainable surface water and groundwater supplies capable of meeting the needs of agriculture, municipal users, the environment, an expanding population, and recreation.

Basin Statistics

- Area: 4,500 square miles
- Population: 370,000
- Annual tourist: 9,000,000
- Agricultural acres: 250,000
- Annual water use: 600,000 acre-feet
- Annual Economic Output: $11,000,000,000

2. LOCATION OF STUDY AREA AND BOUNDARIES OF THE BASIN

The study boundaries encompass the Salinas and Carmel River Basins, as shown on Figure 1, providing an opportunity to improve collaboration between partners, collectively plan for changing conditions, and cooperatively identify regional water supply opportunities in both basins.

The Salinas River is the largest river on California's Central Coast, originating in the center of San Luis Obispo County flowing 170 miles north and northwest to the Monterey Bay National Marine Sanctuary (MBNMS), about 80 miles south of San Francisco. The Carmel River lies adjacent to the Salinas River Basin and both are affected by the same weather patterns. The two rivers are separated by the Monterey Peninsula and the Sierra de Salinas, with the Salinas River out-letting to the MBNMS northerly of the Peninsula and the Carmel River out letting to the MBNMS southerly of the Peninsula at Carmel Bay, about 16 miles south of the Salinas River mouth.

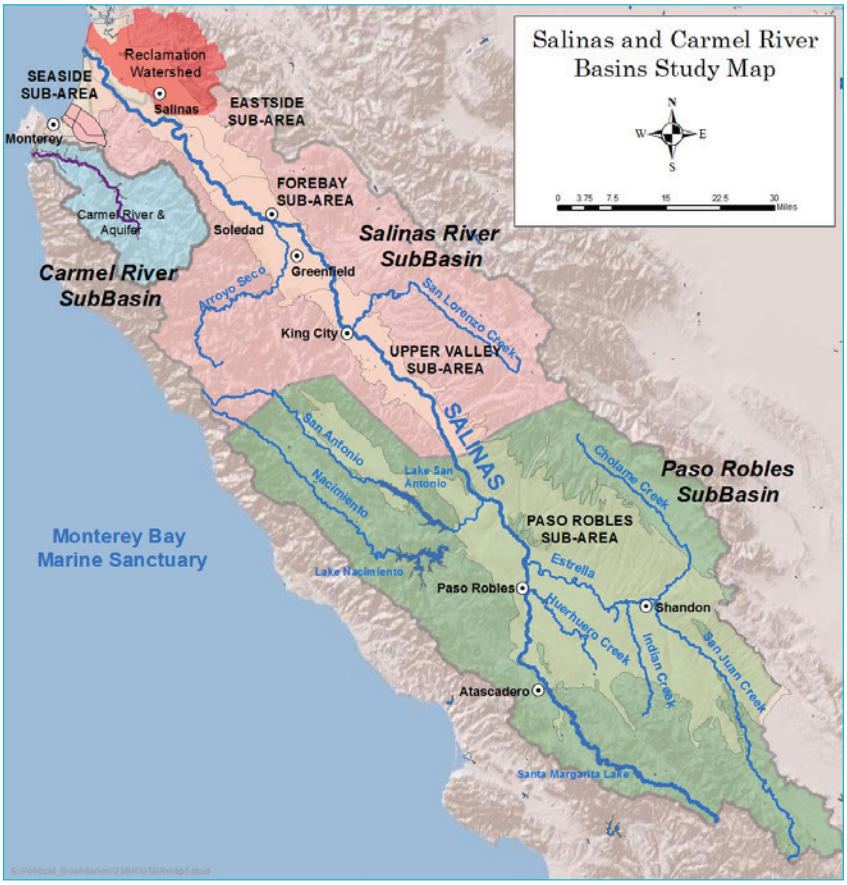


Figure 1. Map of Study Area.

The Salinas River originates in the La Panza Range and drains 4,160 square miles, from Santa Margarita Lake at 2,400 feet to the Ocean. It is fed by flows from Lake Nacimiento, Lake San Antonio, and the Arroyo Seco River. Dams at the three man-made reservoirs provide flood protection and are operated to provide approximately 288,000 acre feet per year (AFY) for municipal water supplies, agricultural irrigation, recreation, groundwater recharge, and drought protection. The capacity of the hydro plant at Nacimiento Dam is 4.3 Mw-hours per year. The Salinas River's groundwater resources are used extensively to meet the water supply needs throughout the Salinas Valley.

The 255 square-mile Carmel River Basin (CRB) watershed begins in the Santa Lucia Mountains at 5,000 feet and merges with seven major stream tributaries along a 36-mile course before discharging to the Ocean. The Monterey Peninsula watersheds, which total about 85

square miles and the adjacent Seaside Groundwater Sub-Basin (SGB), drain directly to the ocean. The CRB and SGB are operated conjunctively to provide water to the Monterey Peninsula for municipal, commercial, and industrial use.

The MBNMS was designated in 1992 as a federally protected marine area and is one of the nation's largest marine sanctuaries, larger than Yellowstone National Park and deeper than the Grand Canyon, and supports pristine beaches, jewel-like tide pools, lush kelp forests, steep canyons and an offshore sea- mount teeming with life.

One small valley [Salinas Valley] in California has become the center of vegetable production in the United States, with some remarkable production statistics:
artichokes - 99%
broccoli - 92%
processing tomatoes - 94%
celery - 94%
garlic - 86%
cauliflower - 83%
head lettuce - 76%,
carrots - 67%
asparagus - 58%
grown and distributed throughout North America and the world.

Together, these two river basins include some of the world's most fertile agricultural lands and are internationally known for their natural beauty; ecological diversity; multi-national cultural history; and recreation opportunities such as fishing, auto racing, and golfing. The area is oftentimes referred to as the "Salad Bowl of the World" or "America's Salad Bowl" because of the variety of crops grown. Approximately one-third of the state's annual strawberry yield is grown in the area. Wine grapes are so important and distinctive that there are three designated "American Viticultural Area" domains within the area. With a total value of over $1.9 billion, by itself Monterey County is the fourth highest agricultural producing county in California. Combined with the agricultural production of San Luis Obispo County, the area under this proposed basin study is one of the most important areas in California and the western United States.

In addition to the agricultural resources, these basins support important natural resources. National Forest lands occupy a large portion of the upper watersheds who's runoff flows into the MBNMS and support the largest sustainable west coast run south of San Francisco of Oncorhynchus mykiss, a salmonid species commonly referred to as South-Central California Coast (SCCC) steelhead trout, a federally and state listed threatened and endangered species. Numerous on-going activities are currently focused on providing for reliable water supplies, while improving the ability of SCCC steelhead trout to recover.

3. TOTAL STUDY COST

The Basin Study is estimated to cost $2.1 million and Basin Study non-federal partners are contributing over 50%.

A significant amount of recent and on-going work, funded by the non-federal partners, will contribute to the "in-kind services" cost share and is presented in Appendix A. The partners are committed to participate and collaborate with Reclamation on data and technical needs, stakeholder engagement, developing an integrated watershed model, and using the unified tool to determine the projected impacts of climate change to water supplies and demands in the Salinas and Carmel Basins, as well as assisting in evaluating how proposed adaptation strategies will perform across a range of future climate conditions. The estimated cost share is shown in Table 1, although not all local contributions are shown.

Table 1 – Basin Study Major Tasks And Cost-Share

Task	Partners Share[1]	Federal Share[2]	Estimated Cost
Task 1 – Pre-Study Efforts (Plan of Study/MOA)[3]	$100,000	$25,000	$125,000
Task 2 – Model Development/Integration/Calibration/ Validation and GCM Modeling	$250,000	$550,000	$800,000
Task 3 – Current Water Supply/Demand Assessment	$100,000	$50,000	$150,000
Task 4 – Future Water Supply/Demand Assessment	$150,000	$100,000	$250,000
Task 5 – Identify Supply/Demand Imbalance	$30,000	$30,000	$60,000
Task 6 – Develop Adaptation Strategies	$200,000	$70,000	$270,000
Task 7 – Trade-off Analysis of Alternatives	$150,000	$50,000	$200,000
Task 8 – Draft Report, Findings and Recommendations	$50,000	$25,000	$75,000
Task 9 – Final Report	$25,000	$15,000	$40,000
Task 10 – Stakeholder Outreach/Project Team Meetings	$100,000	$35,000	$135,000
Proposed Carmel and Salinas Basins Study TOTAL	**$1,155,000**	**$950,000**	**$2,105,000**

1. MCWRA, MRWPCA, MPWMD, SLOC; includes costs since May 2014
2. USBR, USGS
3. Specific modeling approach to be defined in Plan of Study

4. BASIN STUDY PARTNERS

The Basin Study partners, which include all four of the decision making agencies in both basins, are committed to working with Reclamation to define the current regional conditions, supporting the estimation of future conditions, and identifying and implementing strategies for adapting to and managing these changes.

- **Larry Hampson,** *District Engineer*
  Monterey Peninsula Water Management District
  P.O. Box 85, Monterey, CA 93942 Mobile: 831.238.2543
  Office: 831.658.5620
  Larry@mpwmd.net
- ***Robert Johnson,*** *Assistant General Manager*
  Monterey County Water Resources Agency
  893 Blanco Circle, Salinas, CA 93901
  Office: 831.755.4860
  johnsonr@co.monterey.ca.us

5. RECLAMATION REGIONAL CONTACT

- ***David Murillo,*** *Regional Director*
- ***Michelle Denning,*** *Regional Planning Officer*
- ***Arlan Nickel,*** *Mid-Pacific Region Basin Study Coordinator*
  US Department of Interior, Bureau of Reclamation, MidPacific Office
  Federal Office Building,
  2800 Cottage Way, Sacramento, CA 95825-1898
  Office: 916.978.5000
  Anickel@reclamation.gov

6. SUPPORTING STAKEHOLDERS

There is an existing network of stakeholders in both basins that are actively involved in regional water management planning. The Basin Study partners are committed to continued involvement of this wide range of stakeholders who represent diverse interests the study area.

There are three current IRWM plans that cover the study area: the San Luis Obispo County Plan, the Greater Monterey County Plan and the Monterey Peninsula, Carmel Bay and Southern Monterey Bay Plan. These IRWM Plan efforts include significant participation from virtually every level and aspect of water resource management. It is expected as the Plan of Study is developed, several more partners and stakeholders will participate in the Basin Study process. The cost- share partners will use and expand the existing stakeholder network and framework to solicit input during the Basin Plan Study. Section C5 presents in further detail many of the stakeholder groups supportive of this effort. Included in Appendix B are Letters of Support from some of these groups.

- ***Keith Israel,*** *General Manager*
  Monterey Regional Water Pollution Control Agency
  5 Harris Court, Building D, Monterey, CA 93940
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Section B

STUDY ABSTRACT

Performing a comprehensive study to evaluate regional supplies and demands within the context of the anticipated effects of global climate change is essential for this environmentally, economically, and culturally significant study area.

The Salinas and Carmel Rivers Basin Study provides opportunities to improve inter-agency collaboration and develop integrated strategies for securing regional sustainable water supplies that benefit agricultural, urban, and environmental water demands. Strategies for adapting to climate change, including changing precipitation patterns, runoff, and sea level rise must be developed and integrated into the watershed management of the Salinas and Carmel River Basins. The Basin Study will, therefore, provide a scientific and collaborative basis for the development and implementation of current and future planning decisions that will yield management and land use decisions for sustainable water supplies. This Study provides opportunities to develop solutions and strategies to fill gaps in supply and demand planning, reduce risks to property and infrastructure associated with climate change, and improve sustainability of aquifers and rivers in order to provide adequate water supplies for the benefit of all users well into the future.

Basin Study Objectives

1. Improved regional collaboration in the development of an integrated modeling tool.
2. Identify Risks and Potential Impacts of climate change on future water resources (supply & demand).
3. Develop solutions and adaptation strategies to fill the gaps in supply/ demand.

Water years 2012-14 stand as California's driest three consecutive years for precipitation. This occurred in a period of record warmth, with new climate records set in 2014 for statewide average temperatures. At the time this proposal was prepared, in April 2015, the drought continues. The local participating agencies of the Salinas and Carmel Rivers Basin Study proposal (MCWRA, MPWMD, MRWPCA, SLOCPWD), who are responsible for stewardship of local natural resources, have an urgency to collaborate with Reclamation. A Basin Study would augment ongoing efforts by the participating local agencies and provide unprecedented opportunities for Federal, State and local agencies to collaborate and advance models of the Salinas and Carmel Rivers Basin Study via inter-agency work. The basins and sub-basins included in this proposal are currently experiencing insufficient water supplies and are projected to have insufficient water supplies in the future, as well as are facing legal and regulatory restrictions on water use. Finding replacement water supplies is vital for this region to be in compliance with legal mandates, cope with climate change, and improve environmental conditions.

Substantial development within the 100-year floodplain of rivers in this Basin Study has placed billions of dollars of urban and agricultural property at risk during large flood events. In addition, climate change could impact fire risk in the National Forest lands that provide most of the runoff within the basins and are already subject to high fuel loads. Water resource management in the study area is divided among multiple layers of local, regional, State, and Federal agencies, as well as for-profit entities such as private utilities.

As further described in this joint effort proposal, the Basin Study partners are actively engaged in pursuing sustainable practices in accordance of with the requirements of the State's Groundwater Sustainability Act (SGMA). Together, the partners are developing plans for sustainable groundwater management in the basins. The partners have implemented changes in conjunctive use programs to improve steelhead recovery and we participate in one another's operating and public outreach committees. The partners are dedicated to pursuing and evaluating the challenges of water resource management so that together, along with decision makers, they will collectively ensure future generations are provided with the tools to adapt to available water supplies and demand in proactive and responsible measures.

Recent picture by stakeholder in Paso Robles Basin shows that the Salinas River is dry due to the current drought.

Section C

PROPOSAL CONTENT

C1. THE EXTENT AND CONSEQUENCES OF EXISTING OR ANTICIPATED IMBALANCES IN WATER SUPPLY AND DEMAND

Historical water supply and demand imbalances have resulted in sinking groundwater levels, seawater intrusion, impaired water supplies and regulatory actions. These imbalances will be further exacerbated by climate change.

Due to low annual rainfall along California's beautiful Central Coast, the Salinas and Carmel River Basins have faced water supply and management challenges for over half a century. Lacking imported water supplies and facilities, this region is limited to the use of in-basin supplies. Therefore, droughts like our current drought facing all of California are especially difficult for this area. The consequences of the historical imbalances between supply and demand have resulted in sinking groundwater levels, seawater intrusion, impaired water supplies, regulatory actions in the form of a Cease and Desist order (CDO) on pumping, adjudication, and requirements for minimum in-stream fish flows. These historical imbalances and consequences will only be further exacerbated by climate change effects, with a very real possibility of longer and more severe drought periods followed by periods of extreme precipitation events that could cause severe damage to property owners and critical habitats alike. Consequently, all groundwater basins within the study area are designated as high and medium priority by the State, and are subject to compliance with the Sustainable Groundwater Management Act (SGMA).

Although the three IRWM plans address water supplies and demand as well as climate change, and numerous individual studies on subareas of the basins have been conducted, a Basin-wide comprehensive study of the potential effects of climate change on water supplies, demands and imbalances within the Salinas and Carmel River Basins has not yet been performed. This study provides the opportunity and the means to develop comprehensive and coordinated adaptive strategies to address climate change risk to the basins' water supplies. Consistency in analysis and management of adjacent watersheds and groundwater basins is a requirement of SGMA.

Total Study Area Supplies and Demands

The Basin Study area is comprised of four sub-basins: Salinas Valley Basin (SVB), CRB, SGB, and the Paso Robles Groundwater Basin (PRGB). All four of these basins are in a current state of imbalance between supply and demand as demonstrated by seawater intrusion and groundwater level declines. While many studies and projects were conducted to find solutions to these issues, a projected imbalance remains that will be exacerbated by climate change. Table 3 summarizes the current and projected future supply and demand imbalances for each sub-basin. It is anticipated that imbalances in the demands will be re-evaluated as a part of the Basin Study, in light of climate, population and other changes.

Paso Robles Groundwater Basin

The current water demand for the PRGB is largely estimated, as the only metered water users are within water purveyor boundaries. In 2014, an integrated watershed/basin model was utilized to estimate historical demands within the PRGB on an average annual basis for the period of 1980 through 2011, as well as the perennial yield. Three water purveyors within the subbasin have contracts for 6,250 AFY of Lake Nacimiento water; however, only about 2,500 AFY has been put in place within the last few years, as the remaining treatment infrastructure is in the process of being constructed.

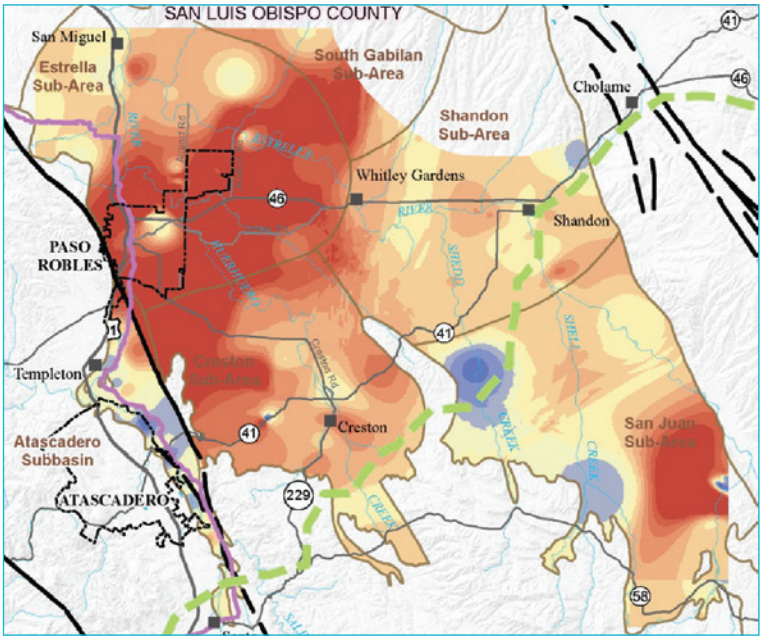


Figure 2 - Paso Robles groundwater basin change in water levels 1997 through 2013 (darkest red = >70 foot decline).

Table 3 – Summary of Basin Area Supply, Demand and Unmet Demands

Basin Area	User	Supply (acre-feet)	Demand (acre-feet)	Unmet Demands (acre-feet)
PRGB (Current)	Agriculture[1]	89,600[4]	76,000	3,600[5]
	M&I[1]		17,200	
	Environmental[2]	74,090	41,010	No unmet demands
	Recreation[3]	Min pool: 2000 AF	Reached 1 time in 30 yrs	est. 3% of the time
PRGB (2040)	Agriculture[1]	89,600[4]	91,072	17,344[5]
	M&I[1]	6,250[6]	22,122	
	Environmental[2]	74,090	41,010	No unmet demands are projected
	Recreation[3]	Min pool: 2000 AF	Reached 1 time in 30 yrs	est. 3% of the time
CRB and SGB (Future)	Agriculture[1]	Included in M&I	Included in M&I	
	M&I[1]	9,000[7]	20,000[8]	11,000
	Environmental[2]	Minimum instream flow and adjudication requirements are in effect.		
CRB and SGB (Current)	Agriculture[1]	Included in M&I	Included in M&I	unknown
	M&I[1]	10,000 (legal)[7]	15,500[9]	5,500
	Environmental[2]	Basins are overappropriated and subject to cutbacks.		
SVB Current	Agriculture	446,000[10]	418,000[11]	17,000[11]
	M&I		45,000[11]	
	Environmental	The need for allocations is mentioned but not quantified.		
SVB (Future)	Agriculture	429,000[10]	358,000[11]	14,000[11]
	M&I		85,000[11]	
	Environmental	The need for allocations is mentioned but not quantified		

1. 1980-2011 Average Annual Basis; Geoscience, 2014
2. Master Water Report, Carollo, 2009
3. Salinas Reservoir
4. Paso Robles Groundwater Basin estimated perennial yield; Geoscience, 2014
5. Unmet Demands for the purposes of the Paso Robles Sub Area means the extent to which demands exceed the perennial yield of the PRGB and Nacimiento water contract allocations on an average annual basis, which results in sustained basin drawdown.
6. Nacimiento Water Contracts = 6,250 AFY
7. Existing riparian, appropriative, and percolating rights determined by SWRCB, SGB Adjudication, and annual well reports
8. Cal-Am estimate, CPUC Application A12-04-019 plus 2014 Monterey Peninsula IRWM Plan Update
9. From Annual MPWMD well production reports
10. Demand - Unmet Demands
11. Greater Monterey IRWMP

Due to the imbalance in water demand and supply within the PRGB, groundwater levels have been declining over the past 30 years. Declining groundwater levels have led to the need for deeper wells across the basin. Some water users located along the edge of the basin have lost access to the groundwater and are now drilling into fractured rock formations. Figure 2 illustrates the results of the basins declining groundwater elevations.

The existing physical impacts have resulted in multiple conflicts and actions, and the formation of various stakeholder groups. Most recently, a two-year urgency ordinance was adopted by the San Luis Obispo County Board of Supervisors requiring new development and irrigated agriculture to offset new demands on the PRGB by a ratio of 1 to 1; formation of a Water District is being pursued; and several landowners within the PRGB have filed litigation for a quiet title action. Continuing declines in groundwater levels in the PRGB is anticipated to lead to the need for residential landowners to lower wells where possible, or vacate the area. Declining groundwater levels may also result in the loss of smaller agricultural operations unable to afford coping with recurring drought, or energy and treatment costs associated with pumping water from lower levels.

Carmel River and Seaside Groundwater

More than 105,000 people reside in the MPWMD service area, which is dependent for water supplies from two sources: runoff from the Carmel River Basin (CRB) and groundwater from the Seaside Groundwater Basin (SGB). The CRB currently supplies about 70% of domestic supply for the Monterey Peninsula; however, in 2009, the State Water Resources Control Board (SWRCB) issued a CDO to the local water provider. California American Water (Cal-Am). The CDO requires Cal-Am to find replacement supplies for two-thirds of the annual diversions from the CRB by January 1, 2017. The Monterey Peninsula will be unable to comply with the CDO by this date and a time extension from the

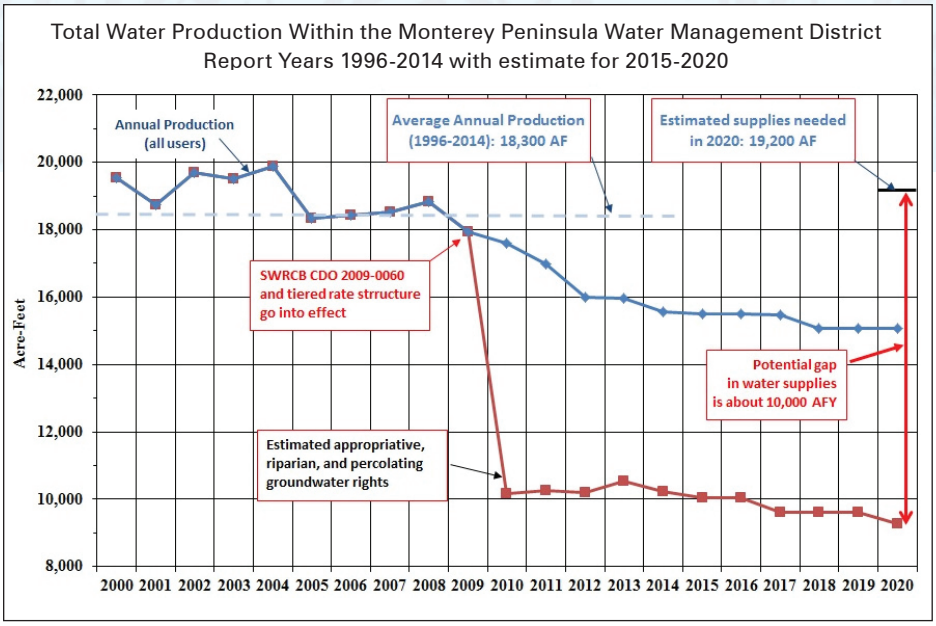


Figure 3. Current water demands shown exceed legal rights to supplies. Recently added new supply is subject to meeting in-stream flow requirements.

SWRCB is being sought. The SGB is at the northwest corner of the Salinas Valley, adjacent to Monterey Bay. Historical and persistent low groundwater elevations caused by pumping led to basin adjudication in 2006 and an amended court decision in 2007 that created the Seaside Basin Watermaster and ordered a ramp down in production from about 5,600 AFY to the Natural Safe Yield of 3,000 AFY by 2021. No seawater intrusion is occurring presently, but water levels are lower than those required to protect against seawater intrusion. Recharge into the basin aquifers will be beneficial for protection against seawater intrusion.

Both basins are being pumped in excess of legal rights to do so, which places the community at risk of heavy fines or severe rationing of up to 50%. Figure 3 shows that the estimated replacement need for the Monterey Peninsula is approximately 10,000 AFY. The MRWPCA's Pure Water Monterey Groundwater Replenishment (GWR) Project would provide 3,500 AFY of highly treated recycled wastewater to the SGB and Cal-Am's proposed desalination plant on the coast south of the Salinas River would provide the balance of the replacement supplies. Both projects are currently under environmental review, with completion anticipated by 2020.

Habitat for steelhead in the CRB has been degraded and annual returns of adult steelhead have fallen below 10% of the estimated potential for the run. WY 2014 and 2015 show the lowest fish densities ever recorded. Usable surface storage in the CRB is small (1,400 AF) and shrinking due to high sediment loads. Runoff from the basin averages about 75,000 AFY, but with wide swings in flow both annually and seasonally. During most years the lower 6 to 7 miles of the Carmel River are dewatered by July by diversion for domestic supply. With no flood control reservoirs in the CRB and more than 1,600 properties in the Carmel Valley are located in the 100-year floodplain, about 90% of the Federal Emergency Management Agency (FEMA) 10-year repeat claims in Monterey County come from Carmel River flooding. In addition, properties and infrastructure around the mouth of the river are clearly at risk from any rise in sea level.

Salinas Valley Sub-Basin

Groundwater is the source for almost all of the water demands in the Salinas Valley. In the northern coastal areas of the SVB, most groundwater extraction occurs from two ground- water sources which are the 180-foot, and 400-foot aquifers. An ongoing imbalance between the rate of groundwater withdrawal and recharge has resulted in overdraft conditions in this basin that have allowed seawater from Monterey Bay to intrude inland into both of these aquifers as shown in Figure 4. By 2011, seawater was estimated to affect as much as 28,142 acres overlying the 180-foot aquifer in the northern Salinas Valley and 12,575 acres overlying the 400-foot aquifer. As a result, urban and agricultural supply wells have been abandoned or destroyed in some locations. To halt further groundwater degradation and prevent seawater from moving further inland, aquifer pumping and recharge rates must be brought into balance.

In 1992, MRWPCA and the MCWRA formed a partnership to build two projects: a water recycling facility at the Regional Treatment Plant (Salinas Valley Reclamation Plant) and a distribution system consisting of 45 miles of pipeline and 22 supplemental wells called the Castroville Seawater Intrusion Project (CSIP). The objective of these projects focused on advancement of seawater intrusion prevention by supplying recycled water in lieu of groundwater for irrigation to nearly 12,000 acres of farmland in the northern Salinas Valley. The $75 million projects were completed in 1997 and highly treated wastewater is currently used for irrigation. Yet supply and demand imbalances remain an issue.

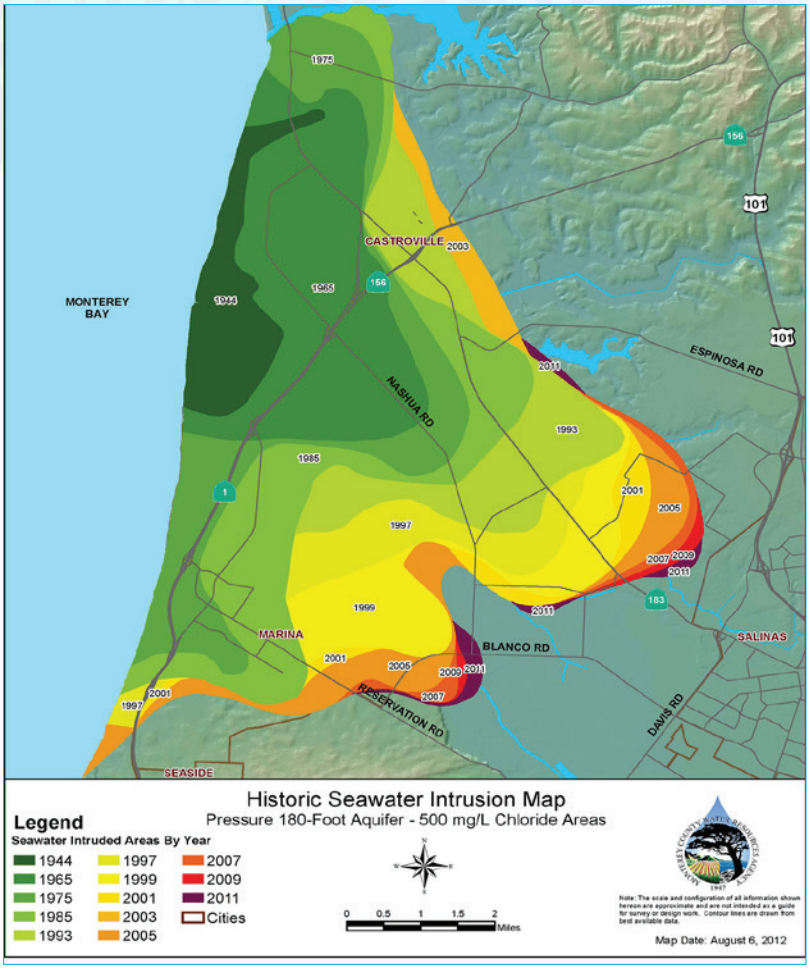


Figure 4. Historical Seawater Intrusion in Salinas Valley.

C2. DEMONSTRATE THE ABILITY TO ADDRESS THE ELEMENTS OF THE BASIN STUDY WITHIN THE STUDY TIMELINE

Based upon the extent of prior studies, the current resource commitments by Federal and non-Federal partners, and compliance timelines under the SGMA, we can conduct a basin study by June 2018.

a) Projections of water supply and demand, including risk related to water supply relating to climate change

The Basins' existing and projected water supplies and demands are well understood, and there exists multiple tools and models that can be used to evaluate the projections of water supply and demand under variable conditions, including water supply risks related to climate change.

During the course of the Salinas and Carmel Rivers Basin Study, it is anticipated that Reclamation will develop climate change scenarios representing potential variations seen for: 1) precipitation patterns that can result in a change in timing and quantity of runoff; 2) change in groundwater recharge and discharge; and 3) increased temperatures leading to increased evaporation/evapotranspiration and increased water demand (e.g., higher temperatures requiring increased agricultural irrigation). It is also anticipated that most of these climate change scenario conditions will be applicable over the entire study area; however, where local variations are required, additional evaluation will be conducted to determine local impacts. For example, sea level rise scenarios will be important to consider for the coastal portions of this study area, but not applicable to the upper Salinas River or Carmel River Basin areas.

While multiple tools exist to evaluate future supply and demand under climate change scenarios, the Salinas and Carmel Rivers Basins' region could benefit from Reclamation's technical support to better determine the interaction between basin subareas and to define how changes in one sub-basin can affect other sub-basins. With Reclamation's oversight and regional collaboration, the predictive tools and models can be integrated to evaluate each scenario on a basin wide basis. The tools and model will be also be modified during the Basin Study to update temperature and precipitation assumptions as identified by Reclamation's climate change scenarios. Additional details on some of the available models and tools that will be used during this study are discussed below for each sub-basin.

Paso Robles Sub-Basin

San Luis Obispo County's Resource Management System (RMS) provides a mechanism for ensuring a balance between land development and the water resources necessary to sustain such development. When a water resource deficiency becomes apparent, a Resource Capacity Study (RCS) is conducted to determine when water demands will equal the dependable supply of the resource, or whether they have already, and identify water and land use management strategies to address deficiencies. A RCS for the PRGB was completed in 2011. The RCS provides an analysis of future water demands utilizing eight scenarios for water use factor assumptions. In 2014, the integrated watershed/ groundwater basin computer model (Figure 5) was used to quantify future demands and simulate the PRGB response to those demands. The future demands include a "no growth" scenario and a "growth" scenario and repeated past hydrology (e.g. no climate change). The watershed and groundwater model incorporate precipitation estimates, surface runoff, infiltration, percolation, subsurface inflow and outflow, pumping estimates and change in groundwater storage.

A previous climate change vulnerability analysis suggest the PRGB may see more severe (but not more frequent) rainfall events, leading to quick pulses of runoff. Currently, there is insufficient infrastructure to harness that momentary surplus of water, and poor land use practices prevent much of the rain from infiltrating into the ground. Water supply shortages, which are already a serious problem, are expected to worsen. Climatic conditions are expected to be drier, with longer, hotter summers. Potential increases in the number of fires and severe storms could exacerbate already high rates of sediment runoff, which would affect the capacity of the Salinas Reservoir (impacting water supply) and Salinas River (exacerbating flooding, minimizing/altering ecosystem habitat, including but not limited to the steelhead trout). The findings of this past study will be updated based on the results of this Basin Study.

Carmel River and Seaside Groundwater Basin Models

In 2014 MPWMD worked with the USGS to develop the conceptual model for a linked surface-groundwater flow model for the Carmel Basin using the GSFLOW model, which will have a daily time step (PRMS and MODFLOW are components). The model accommodates changing climate parameters and is expected to be calibrated in 2015 using several long-term records. In 2016 MPWMD expects to complete an Instream Flow Incremental Method (IFIM) study for portions of the Carmel River. Both 1D and 2D hydraulic models will be used to evaluate the effects of stream diversions on steelhead habitat suitability and instream flow needs. Data collection for model development was halted in Spring 2015 due to low fish densities. In the SGB, a peer-reviewed numerical groundwater flow model based on MODFLOW was developed using extensive well-log and production data to model long-term changes to four water-bearing geologic layers. The model can predict potential impacts to the groundwater basin from management actions, such as new supplemental water supply projects that include injection and extraction of various source waters, including basin rainfall, desalinated water, excess flows diverted from the Carmel River Basin and injected into the SGB, and highly treated recycled water proposed for injection into the SGB (i.e., for indirect potable reuse). The two basin models are powerful tools for evaluating how changing climate affects future water supply and can reveal the efficacy of adaptation strategies and how demands could impact the supply availability and use.

MPWMD proposes to work with the USGS and the Desert Research Institute to model future CRB flows. Along with estimation of demands, adaptation strategies to adapt to climate change will be evaluated. MPWMD would guide model development with USGS performing peer review. For the SGB, climate change analysis results would be incorporated into the basin model to assess the effects on groundwater resources from future climate patterns, future demand, water supply alternatives, and proposed project operations. Results from the two models would be merged to describe what the effects would be to the water resources and people of the Monterey Peninsula.

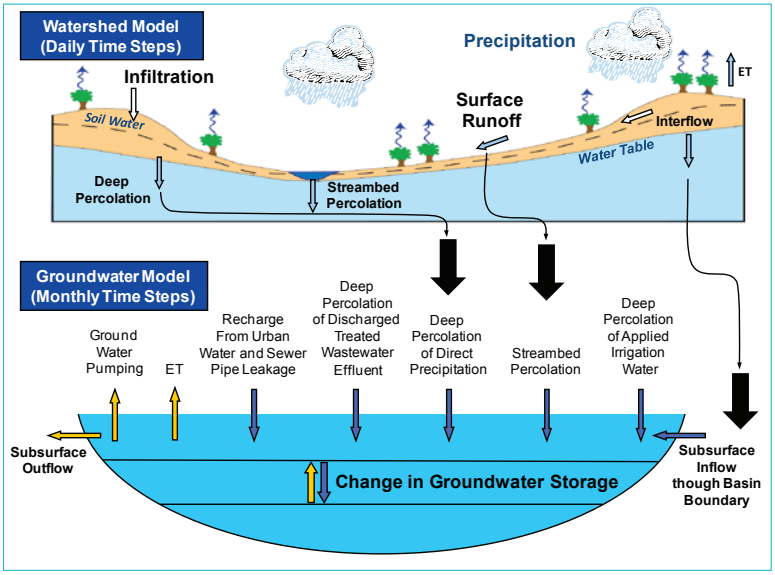


Figure 5. Conceptual Diagram of the Paso Robles Groundwater/ Watershed Model.

Salinas Valley Sub-Basin

The MCWRA has collected ground water extraction data from well operators in the Salinas Basin since the 1992-1993 reporting year. Information received from the 300-plus well operators is compiled by the Ground Water Extraction Management System (GEMS) portion of the Water Resources Agency Information Management System (WRAIMS), a relational database maintained by the MCWRA. The intent of the ground water reporting program is to provide documentation of the reported amount of ground water that is extracted each year.

MCWRA has measured groundwater levels within the Salinas Basin since the 1940s to monitor the health of the basin, as well as to evaluate the effectiveness of releases from Lake Nacimiento and Lake San Antonio reservoirs for groundwater recharge. Each year, weighed averages of groundwater level data from the fall data collection program are compiled by hydrologic subarea to track long-term trends. For reference, the graph in Figure 6 highlights the initiation of years of major water supply projects in the Salinas Valley and the impacts of these major water supply projects on groundwater level trends.

b) How water and power infrastructure/ operations will perform in the face of changing realities

The existing tools and models that are currently used to assess supply and demand imbalances will also be useful in evaluating how water infrastructure operations will perform in the future.

To meet the requirements of the SECURE Water Act, the Basin Study will consider the extent of changes in water supply that could impact the following activities: water deliveries, hydroelectric power generation, recreation, fish and wildlife habitat, endangered species, water quality, ecologic resiliency, and flood control. The hydraulic and watershed models will be useful in evaluating how changes in quantity and timing of precipitation events or reservoir releases may potentially cause impacts to habitat and protected species. It is anticipated that Reclamation and other Federal resource agencies, including NOAA, will participate to determine potential impacts to endangered species.

MCWRA operates two reservoirs (Lake Nacimiento and Lake San Antonio) which release water into tributaries of the Salinas River. Monterey County Parks Department operates year round recreation activities on both reservoirs and both have established minimum releases to maintain fisheries habitats downstream. As discussed in the previous section, MCWRA has tools to evaluate the effectiveness of reservoir releases based on past experience. This will be useful for evaluating how the reservoirs can be operated under future condition to address changing conditions for a wide variety of objectives due to climate change. It will also be beneficial to identify how potential structural changes or modifications in how and where water is stored will assist with development of adaptations to the anticipated effects of climate change. Both reservoirs currently play a crucial role in water supply and flood control in the Salinas River and that role will likely increase under climate change scenarios. Lake Nacimiento Dam has a hydropower generation facility that is operated with a license from the Federal Energy Regulatory Commission (FERC), and the impacts of power production will be considered for any changes anticipated in water releases.

c) Development of appropriate adaptation and mitigation strategies to meet future demands

The Basin Study will identify the extent to which existing water management systems in the region are adaptable to climate change impacts and the steps or new infrastructure are needed to make those systems more robust for a changing water reality.

Over the past several decades, numerous water management strategies have been proposed to strengthen current water supplies to meet future demands: water conservation, municipal wastewater recycling, storm water reclamation, indirect potable reuse of recycled water supplies, aquifer storage and recovery, and seawater desalination. Many of these types of projects have been implemented, such as the Monterey County Water Recycling Projects, which deliver recycled water from MRWPCA to agricultural users to address seawater intrusion, and the Salinas Valley Water Project, which diverts Salinas River water to agricultural users. An examination of the expansion potential of existing projects could bring new irrigation water supplies to additional farmland and further reduce groundwater pumping in the seawater intruded areas.

The past and ongoing studies of additional water supply and management strategies will be important to consider during the development of the Basin Study. For example, San Luis Obispo County has recently hired a consultant to prepare a Water Supply Options Study for the PRGB. The scope includes evaluating supplemental supplies brought to the PRGB, utilizing additional Lake Nacimiento water in this basin, and identifying opportunities for water exchanges. It also includes evaluating the potential to utilize water avail-

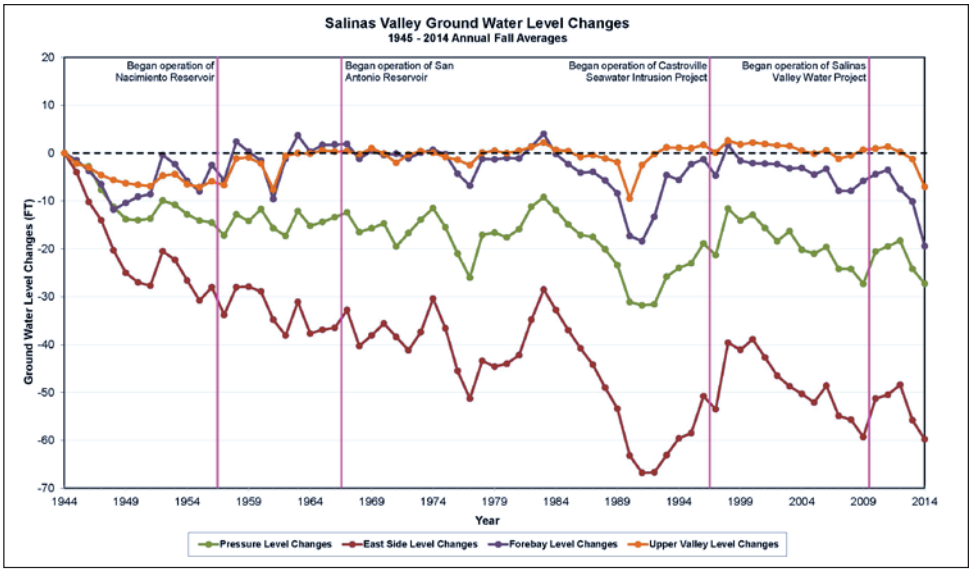


Figure 6. Historical Groundwater Levels in Salinas Valley.

able per the County's 25,000 AFY contract for State Water. However, given reliability concerns and future uncertainties due to climate change, the County and Basin stakeholders are looking to optimize the use of local water supplies to stabilize the Basin's groundwater levels. The results of this evaluation, and alternative strategies to address the needs of the PRGB is of interest to Reclamation because of the Cooperative Operation Agreement (COA) with the State related to shared facilities with the Central Valley Project.

The Salinas and Carmel Rivers Basin Study will complement the Water Supply Options Study by also evaluating storm water diversion opportunities, such as utilizing the Salinas River and its tributaries in the PRGB as additional sources of supply. Likely, this would require use of the groundwater and watershed model to evaluate runoff under different scenarios to determine if there are opportunities to capture flows during wet years or extreme events. San Luis Obispo County is also using the basin computer model to investigate the best location to put water in the PRGB, the impacts of agricultural pumping on the residential wells, as well as storm water capturing and storage opportunities.

Other potential strategies that would be considered as part of this Basin Study is reoperation or expansion of the existing reservoirs (Lake Nacimiento, Lake San Antonio and the Salinas Dams) to better meet the needs of the basins now and into the future, as well as identifying additional water storage facilities needs would reduce the effects of drought conditions. A recent study of the CRB in connection with evaluating the fate of an ageing main stem reservoir shows there is adequate runoff for an off-main stem reservoir with an option for pumped storage to generate peaking hydropower.

It is proposed that as part of the Basin Study, regular workshops will be held with stakeholders, the Basin Study partners and the Reclamation to collaborate and exchange ideas on new strategies that could have multiple benefits to the region.

Lake Nacimiento is the Only Reservior with a Hydropower Facility in the Study Area.

d) Trade-off analysis of strategies identified

This Basin Study will build upon the work already completed to screen, evaluate, and facilitate a trade-off analysis of identified strategies, including the synthesis of new actions based on better integration.

The regional IRWM Plans from both Counties provide a ready framework for the critical review and trade-off analysis of adaptation strategies. The vetting process in the IRWM Plans is designed to identify the programs and projects that best meet stakeholder needs while meeting numerous environmental and societal objectives. Working in a more comprehensive manner, the IRWM Plans and new Basin Study stakeholders will consolidate the identification of proposed and in-progress water resources management projects. In addition to the IRWM Plans, each cost-share partner has been or is currently involved in projects and studies that require evaluation of the trade-offs of various alternatives. For example, the Water Supply Options Study being conducted for the PRGB is designed to consider the trade-offs associated with alternative water supply options. The GWR project is evaluating numerous combinations of source waters (agricultural return flows, storm water, agricultural process wastewater, etc.) for recycling and indirect potable reuse.

Upon completion of the Basin Study climate change analysis, the Basin Study partners and Reclamation will identify adaptation strategies through multiple workshops. Drawing upon collective experiences, the group will facilitate a trade-off analysis of identified strategies, including the synthesis of new actions based on a better integration. Criteria for comparing alternatives will be jointly determined during the Pre-Study Efforts (Task 1). Criteria are likely to include cost, environmental impact, risk, and stakeholder acceptance. It is anticipated that Reclamation will solicit the help of NOAA and other federal agencies to determine the impacts and trade-offs related to aquatic resources in the study area, due to the presence of endangered and threatened species.

Stakeholder outreach will be conducted as part of this Basin Study within the context of existing stakeholder groups and the IRWM Plans. Vetting the potential adaptation strategies with stakeholders will be an important step in identifying the potential acceptance of a proposed action. This important feedback loop will inform both the Reclamation and the cost-share partners as to those strategies that appear to be the most robust, perform well across the longest timeframe, and are the most cost effective.

C3. THE EXTENT TO WHICH FEDERAL INVOLVEMENT IS NEEDED AND THE STRENGTH OF ANY NEXUS BETWEEN THE BASIN STUDY AND RECLAMATION PROJECT OR ACTIVITY

Reclamation and it's SecureWATER Basin Study Program provides a unique opportunity to assist the four water management agencies in the Salinas and Carmel Basins in the development of a comprehensive assessment of potential climate change impacts to water supplies and demands in these basins. There is currently no other local, state or federal agency which has the authority and capability to Partner with these four agencies in the development of strategies and actions which respond to projected imbalances between supplies and demands across both of these basins. An important nexus for Reclamation's involvement in the proposed Salinas and Carmel Basins Study is found under the State and Federal Coordinating Operating Agreement (COA). Since San Luis Obispo County has an annual allocation of 25,000 acre-feet of water from the State Water Project (SWP), the COA provides that delivered water may be supplied by either by the State Water Project or by Reclamation's Central Valley Project (CVP).

As evidenced in this proposal, extensive modeling and planning efforts have been undertaken independently in each of the three subbasins. The local agencies are now seeking Federal assistance in 1) integrating the individual system models into one linked model to provide a comprehensive system assessment tool with consistent data at the boundaries, and to consider impacts of climate change, and 2) leading and facilitating the evaluation of climate adaptation strategies that work best to meet all needs in the study area.

Federal expertise in hydrology, engineering, modeling, and climate analysis and the Basin Study results will provide the analysis and oversight needed to facilitate the identification of consistent, complimentary management activities in all three subbasins. Table 4 lists the Basin Plan elements and partner contributions. With Reclamation as the lead agency, it is anticipated that participation by other federal agencies result in a more complete and robust Basin Study.

FEDERAL NEXUS
The annual allocation of water from the State Water Project provides a nexus due to the COA stating that CVP water may be delivered.

The Salinas and Carmel River Basins generate over nine million visitors and $11 billion to the state and local economy, annually. The Salinas River Basin provides agricultural products that are distributed throughout the United States and as key exports to foreign trading partners. As agriculture is the backbone of the region's economy, water is its lifeblood. A federal interest therefore exists in ensuring that a major link in our nation's food supply and commerce remains viable and sustainable in the face of anticipated climate change impacts. However, this extremely productive area has also produced an imbalance of water supply for both the environmental and consumptive uses. Participation by federal partners will help the basins address complex issues by developing collaborative and comprehensive management approaches to water supply imbalances made worse by a changing climate. Federal resource agency participation will also be critical to address the habitat issues related to threatened and endangered species in the river basins.

There are numerous Federal facilities and agencies that provide important functions that are impacted by climate change within the study area that would benefit from participation as outlined in Table 5. The strongest nexus between Reclamation and the Basin Study is the fact that the Paso Robles Sub Basin is considering using water available under San Luis Obispo County's State Water Project (SWP) Contract to stabilize levels. The Central Valley Project (CVP) and SWP are jointly operated under a coordinated operating agreement (COA). The COA provides that either SWP or CVP water may be used for deliveries. Under the COA, any deliveries to the Paso Robles Sub Basin by the SWP is essentially the same as a delivery made by Reclamation's CVP (see Appendix D). This Basin Study is an opportunity to identify adaptation strategies to mitigate the impacts of climate change that also reduce the need for SWP and CVP water.

One such option involves optimizing and/or expanding the Salinas Reservoir Dam which is owned by the Army Corp of Engineers and is operated by San Luis Obispo County. The dam can currently store up to 23,843 acre-feet (AF). The original design of the dam included spillway gates that would have increased capacity to an estimated 45,000 AF, and an increase in safe annual yield of 1,650 AFY (see Appendix D). However, due to the expense of the modifications necessary and absence of a regional approach to consider this option, this adaptation strategy has not been pursued. Also, inflow may not be stored in the Salinas Reservoir unless there is a live stream in the Salinas River between the dam and the confluence on the Nacimiento River. Reclamation's overview capabilities and authorities, as well as its expertise in climate change analysis, will be important for helping to analyze the viability and benefit of this adaptation strategy and potentially move it forward.

Table 4. Basin Study Elements and Partner Contributions

Study Elements	Local Partners	Federal Partners
1. Modify projections of future supply and demand to include the impacts of climate change in a consistent manner across the study area and ensure consistent data is used at the boundaries of each sub basin.	Provide projections of future supply and demand Provide data and local studies regarding climate change risks and impacts on water supplies Provide data regarding sub basin boundary conditions Provide computer models	Use local data (e.g. Monterey County climate change impacts analysis methodology to be used for the Zone 2C model) and Federal data and techniques (e.g. West-Wide Climate Risk Assessments methods/process) to perform and/or enhance climate change risk assessments and studies across the study area Update supply and demand projections as needed to ensure consistency across the sub basins.
2. Analyze how the study area's existing water and power operations and infrastructure will perform in response to the projections of future water supplies and demands	Provide results of computer modeling and input data for runs that analyzed the impacts of changes of water supply on a variety of demands, along with demand change projections, if performed	Modify existing models and tools to integrate results from Objective #1 and to analyze or reanalyze the water and power operations and infrastructure performance projections as needed
3. Develop adaptation and mitigation strategies to improve operations and infrastructure to supply adequate water in the future	Provide information on the strategies under consideration in each area	Evaluate the effectiveness of the identified strategies using the results from Objective #2 and/or conducting additional modeling, and facilitate the development of any additional mitigation strategies
4. Perform trade-off analysis of the options identified and findings	Provide previous trade-off analyses and participate in trade-off analysis refinement	Perform/refine trade-off analyses to compare the potential costs and benefits of the adaptation strategies and develop findings

C4. EXISTING DATA AND MODELS, AND STUDY PARTNER FUTURE SUPPLY AND DEMAND ASSESSMENT ABILITIES

The Basin Study partners own and use extensive data sets, spreadsheet tools and models for water supply and demand projections that will also be used for this Basin Study.

Development of Integrated Hydrologic Models for the Salinas and Carmel River Basins

The Basin Study partners have collected data and studied the basins for many decades. The breadth and extent of the data available is too numerous to list here. Appendix F includes a summary of data and other relevant sources of information available to support the Basin Study. The SGMA requires consistent data (including groundwater elevation data, groundwater extraction date, surface water supply, total water use, change in groundwater storage, water budgets, sustainable yield) to be used in hydrogeologic analysis. The Basin Study partners are seeking Federal participation to ensure the models are consistently utilized, particularly at watershed and basin model boundaries, prior to using the models to analyze the effect of various water supply and demand projections and assessing the benefits and performance of various adaptation strategies. Table 6 summarizes the computer models and studies relevant to the proposed Basin Study and summarizes their relationship to the proposal. These are the models the Basin Study partners are seeking to leverage as part of this Basin Study.

The three major objectives of the model effort in support of the proposed Basin Study would be:

1. To evaluate and utilize existing hydrologic models developed for the Salinas and Carmel Basins and to leverage the investments made previously by the Partner agencies in these models.
2. To develop a comprehensive Salinas and Carmel basin hydrologic assessment tool (covering both the upper and lower Salinas basins) that uses data from the existing sub-basin models including the Paso Basin and the Carmel Valley models and others as appropriate.
3. To apply the most recent CMIP5 Global Climate Models (GCMs) which are appropriately downscaled to assess climate change impacts to supplies and demands across both of these basins.

The Salinas and Carmel River Basins are currently experiencing an imbalance in water supply and demand. These adjacent river basins have very different hydrologic systems as well as supply and demand issues. However, both the Salinas and Carmel basins have common issues relating to adequate supplies, resources and habitat management. Interbasin transfers of treated water is also occurring from the Carmel Basin to the Seaside groundwater basin. The overarching

Table 5 – Federal Partners and How They Benefit from the Basin Study

Federal Agency Active in Study Area	Relationship and Benefit to Study Area	Benefit of Performing Basin Study to the Federal Agency
US Bureau of Reclamation (Reclamation)	• Central Valley Project (CVP) – Paso Robles Sub Basin is considering using water available under San Luis Obispo County's State Water Project (SWP) Contract to stabilize levels – The CVP and SWP are jointly operated under a coordinated operating agreement (COA). The COA provides that either SWP or CVP water may be used for deliveries. Under the COA, any deliveries to San Luis Obispo County by the SWP is essentially the same as a delivery made by Reclamation's CVP. • Provided funding for the Castroville Seawater Intrusion Project	• Reclamation's SecureWATER basin study program is uniquely capable of bringing together San Luis Obispo and Monterey Counties - which encompass the Salinas River Basin and also incorporates the two special districts that provide water management and treatment in the Carmel River Basin on the Monterey Peninsula. The Reclamation's Basin Study program will provide the avenue to collaboratively involve the four non-Federal Partner agencies with Reclamation in order to investigate potential climate impacts to supplies and demands in these two river basins, which has never occurred before. • Identification of a range of adaptation strategies to mitigate the impacts of climate change, which may reduce the need for SWP and CVP water. • Identification of additional strategies to mitigate seawater intrusion in light of climate change impacts.
US Geological Survey (USGS)	• Groundwater Ambient Monitoring and Assessment (GAMA) Program Priority Basin water quality testing • Future project to complete California's 4th Climate Change Assessment • Monterey County MOU	• Opportunity to integrate water quality findings from the GAMA program into adaptation strategy analysis • Potential for CAWSC staff to develop a number of climate future scenarios for the Salinas and Carmel basins, and support CAWSC's efforts associated with California's 4th Climate Change Assessment.
US Army Corps of Engineers (COE)	• Owns Salinas Dam and inspects levees on the Salinas River • Issue 404 permits for projects	• Re-evaluation of hydrologic conditions and Dam operations in light of climate change impacts • Identification of optimization and/or modification opportunities to meet multiple needs for study area
NOAA -National Marine Fisheries Service -Monterey Bay	• Responsible for federally threatened South Central California Coast Steelhead trout designated critical habitat • Primary administrator of the MBNMS	• Opportunity to integrate species and MBNMS needs into supply and demand assessments and mitigation strategies
US Fish and Wildlife Service (USFWS)	• Salinas River National Wildlife Refuge • Resposible for numerous federally threatened species	• Opportunity to integrate species needs into supply and demand assessments and mitigation strategies.
Federal Military Installations	• Army Reserve Garrison Fort Hunter Liggett, largest installation in the Army Reserve with 165,000 acres • US Army Defense Language Institute & Navy Post Graduate School	• Opportunity to integrate military installation water supply and demand needs into assessments and mitigation strategies analysis.
Bureau of Land Management (BLM)	• Manages more than 15,000 acres of Fort Ord and National Monument • Will manage approximately 1,000 acres in the Carmel River	• Opportunity to integrate BLM water supply and demand needs, and resource protection into assessments and mitigation strategies analysis.
U.S. Forest Service (USFS)	• Maintains Los Padres National Forest (large portions of upper watersheds)	• July, 2013 MOU between Reclamation and NFS establishing collaborative framework for watershed management to enhance water supplies and adapt to climate change.
U.S. Coast Guard Station - Monterey Bay	• Maritime law enforcement and search/rescue along the California coast. • Work jointly with other agencies in governing the MBNMS	• Relationship to the proosed basin study includes climate change induced extreme weather events, flooding and search and rescue.

Table 6 – Sources of Existing Models and Studies To Be Used

Basins	Existing Models/Studies	How the model and studies can be/have been used
CRB/SGB	2006 Carmel River Flood Insurance Study and HEC-RAS	Predict flood elevations/areas of inundation along Carmel River
	2014 CRB GSFLOW (PRMS linked to MODLFOW) – to be developed in 2015/16	Simulate Carmel River flow, reservoir storage, aquifer storage, diversions, water system operations
	2014 Canyon Del Rey HEC-HMS & HEC-RAS	Predict flood magnitudes, elevations, and areas of inundation
	Seaside Groundwater Basin Model	Simulate groundwater flow and contours with variable inputs/outputs to basin
PRGB	1991 Salinas Reservoir Expansion Feasibility Study 2012 Groundwater Management Plan 2014 Integrated Watershed/Groundwater Basin Computer Model (HSPF/Modflow) and 2015 Supply Options Study http://www.slocountywater.org/site/Water%20Resources/Water%20Forum/	Established PRGB sustainability objectives Identified management strategies Used the model to assess impacts to groundwater supply by: • Repeating the 1980 – 2011 hydrology and reservoir operation information for the simulation period 2012 – 2040 • Applying "no-growth" and "growth" future demand pumping estimates to establish baselines for strategy comparison and compare to basin level stability objectives • Identified and tested management strategies with the model and compared the degree of benefit and trade offs
SVB	Integrated Groundwater Surface Water Model. Calibrated Baseline model (scheduled for completion early 2016) Groundwater elevation contours Pressure 180 ft and Eastside shallow aquifers 1994-2013 Groundwater elevation contours Pressure 400 ft and Eastside deep aquifers 1994-2013	Basin Sustainability: • Evaluate seawater intrusion on annual basis thru 2030/build-out • Evaluate groundwater level elevations on annual basis thru 2030/build-out • Evaluate total water demand on annual basis thru 2030/build-out • Assess climate change effects and combined effects of groundwater pumping and rising sea level on the location of the freshwater-seawater interface over time and develop projections of changes in seawater intrusion volume.

purpose of combining both of these river basins into a singular basins study is to identify promising adaptation strategies which may potentially benefit both river basins. To address both local surface and groundwater management issues, the Partner agencies have developed multiple separate models in the Salinas and Carmel Valleys.

The proposed model framework for the basin study would include enhancing these models by ensuring consistency, particularly at basin boundaries, and for purposes of climate change impact analyses. Incorporated in these simulations will be the magnitude and frequency of known or anticipated water shortages and all natural and anthropogenic supply components. The shortages will be quantitatively analyzed and evaluated based on the magnitude and timing of shortages. Since the Basin Study will address water supply and the related effects of potential climate change on future water supply, it is essential to have models that can simulate all the known and anticipated supply and demands for all types of water uses (agricultural, municipal and industrial, environmental needs, and recreation). In addition, the nature of imbalances will include an analysis of quantity and quality of water supplies. In particular, the effects from sea-water intrusion will be simulated and evaluated from growing demand and sea-level rise related to climate change. The potential consequences for not addressing imbalances in supply and demand will be shown through tables, graphs, and other figures. Also additional sources of water that are currently not captured or reused will be identified.

Specifically, for the upper/lower Salinas Valley, the simulations will include connections to San Antonio, Nacimiento and Salinas Reservoirs. A review of the existing models will include providing input on the code selection used to develop the models. For example, MF-OWHM rev 2 is ideally suited as it will include the new Reservoir linkage Process (SWOPS) that simulates the reservoir inflows, outflows, charges and credits and demand driven releases of agriculture. This approach has already been successfully used bythe USBR and USGS for the Lower Rio Grande project EIS that also included climate change analysis. Specifically incorporating these reservoirs will allow an analysis of how this existing infrastructure and operations will perform in the face of changing water drivers, such as population increases, more

water-intensive agriculture, and climate change. Another GSFLOW based model of the Carmel River Valley may be constructed as this is a separate watershed and better suited to simulation with a combined PRMS-MODFLOW model like GSFLOW where there is less agriculture and a more dynamic interplay between rainfall runoff, streamflow and natural vegetation. However, the combination and linkage of these models will allow the development of appropriate adaptation and mitigation strategies to meet future water demands to be applied and analyzed. Furthermore, using these models trade-off analysis of the strategies identified and proposed alternatives in terms of their relative cost, environmental impact, risk (probability of not accomplishing the desired/expected outcome), stakeholder response, or other attributes common to the alternatives can be done.

The four non-Federal partners and Reclamation, which comprise the Study Team for the Salinas and Carmel Basins Study, are proposing that Reclamation's Technical Services Center (TSC) be the lead agency for development of the Basin Study's assessment-level hydrologic model. Preliminary discussions with TSC staff have indicated that the USGS's Water Science Center, located in Sacramento, may be engaged by the TSC in integrating the existing hydrologic models in the Salinas and Carmel Basins and to provide the technical expertise and recommended approaches to climate change downscaling and analysis.

Several options for the modeling approach used are anticipated to be developed as part of the Plan of Study. This includes possibly having the TSC assist with further development of the SWOPS pack package which will be publicly released as a joint product by the USGS as part of the second release of MODFLOW-OWHM (One Water Hydrologic Model) in 2016. The SWOPS process is linked to the streamflow routing and Farm Process within MF-OWHM and allows the simulation of charges, credits, carry over, changes in reservoir storage, inflows and outflows, delivery efficiencies, and calls linked to agricultural and other demands on a monthly basis.

The potential collaboration of USGS and Reclamation's TSC would enhance the information developed and credibility in the Salinas and Carmel Basin Study relating to climate downscaling, bias corrections, and analysis in coastal regions which require new and more refined methods than are currently being used by USBR. A potential collaboration with USGS brings expertise in several numerical codes as well as climate simulations specifically downscaled at a detailed resolution for the California coast The USGS has completed other linked climate change studies for the Central Valley and has a concurrent study in the adjacent Pajaro Valley that will also involve this same analysis. Alignment with this work would allow integration and consistency throughout the study area.

C5. THE LEVEL OF STAKEHOLDER INTEREST IN AND SUPPORT FOR THE BASIN STUDY

Due to the significant existing impacts of water demands outpacing supply in this study area, there is widespread stakeholder support for finding solutions to this imbalance.

Stakeholder participation on water related projects and studies have been extensive in the Salinas and Carmel River Basins. Water issues in general can always generate significant discussion and diverse opinions on the best approach to be implemented. However, while a healthy discussion is expected among stakeholders, there are no known opponents to this Basin Study; and in fact, the Basin Study partners expect there to be wide spread support for further efforts to develop more sustainable water supplies for the region. Letters of Support for the Basin Study are included in Appendix A and summarized in Table 7. The stakeholder groups in these basins are well defined and will be engaged during this study using existing processes and groups.

Paso Robles Groundwater Sub-Basin

The SLOCPWD serves as staff to the San Luis Obispo County Flood Control and Water Conservation District (District), and is the cost share partner for the Salinas and Carmel Rivers Basin Study. The District funds work efforts for PRGB water resource planning efforts carried out by the SLOCPWD via its Flood Control budgets. The SLOCPWD has led or participated in the development of the County's IRWM Plan, the Nacimiento Water Project, the Paso Robles Groundwater Basin Model and Management Plan, and the County-wide Master Water Report. All these efforts included stakeholder participation. Most recently, the District is funding a Water Supply Options Feasibility Study for the PRGB, which will provide some of the mitigation strategies to be evaluated in the Basin Study and include stakeholder outreach.

The District has a Paso Robles Groundwater Basin Advisory Committee, and the Feasibility Study and Basin Study will be developed in coordination with this Committee. In May of 2013, the Committee identified water supply options to benefit the Basin, including the Salinas River watershed, as a top solution to investigate. The Committee meets monthly on the third Thursday and all members of the public are invited to attend. The SLOPWD will also host town hall meetings in the evenings approximately every three to four months. All materials will be posted on the SLOCPWD's website and many events will be recorded.

Table 7 – List of Stakeholders Providing Letters of Support

Federal Government	State Government	Local Government	Local Stakeholders
U.S. Senator Barbara Boxer[1]	California Congresswoman Lois Capps[1]	County of San Luis Obispo, Board of Supervisors Debbie Arnold (Chair)	Paso Robles Agricultural Alliance for Groundwater Solutions (PRAAGS) Jerry Reaugh, Chairman
U.S. Dept of Commerce NOAA - NBNMS Paul Michel (Superintendent)	CA State Senator 17th District William Monning		Paso Robles Groundwater Basin Overliers for Water Equity (Pro Water Equity-PWE) Sue Luft, President
U.S. Department of Interior, USGS Eric Reichard (Director)	California Assemblyman Katcho Achadjian		Carmel Valley Association Patricia Walton, President
			Legislative Analyst of the San Luis Obispo County Farm Bureau Joy Fitzhugh

1. Letter to be sent directly to Reclamation

Salinas Valley Sub-Basin

MRWPCA has multiregional responsibility for wastewater treatment throughout the Salinas Valley, Carmel River, and Seaside Basins. MRWPCA was established in 1979 under a Joint Powers Authority (JPA) agreement between the City of Monterey, the City of Pacific Grove and the Seaside County Sanitation District. MRWPCA operates the regional wastewater treatment plant, including the Salinas Valley Reclamation Plant water recycling facility (collectively known as the Regional Treatment Plant), a non-potable water distribution system known as the Castroville Seawater Intrusion Project, sewage collection pipelines, and 25 wastewater pump stations. The MRWPCA mission is to meet the wastewater and reclamation needs of its member agencies while protecting the environment.

MCWRA's mission is to manage, protect, and enhance the quantity and quality of water and provide specified flood control services for present and future generations of Monterey County. MCWRA's nine member board include representatives appointed by each Board of Supervisor member from the five districts within the County. The remaining members are appointed from the Monterey County Farm Bureau, the Mayor select committee, the Grower-Shipper Association of Central California and the Board of Supervisors' as Agricultural Advisory Committee.

The proposed Basin study will compliment current stakeholder efforts already scheduled to take place. Climate change is a large consideration for studies that are in process, and that will be in process in the near future. Currently Monterey County is working on a new Salinas Valley Basin model, of which effects of climate change will need to be evaluated and/or modeled. The Water Resources Agency is evaluating constructing a tunnel to connect two reservoirs to increase the effectiveness of these structures, and that process will involve modeling climate change effects.

Also, the state has recently passed legislation called SGMA. SGMA requires that all basins plan to achieve sustainability by 2042. These efforts are just beginning, and there are required milestones that will need to be met. Again, climate change will be a major factor in keeping the basins to be studied sustainable, and there will be a great deal of stakeholder input into this process.

Carmel River Basin and Seaside Groundwater Basin

The MPWMD is a special district created by the California State legislature in 1977 to promote or provide for long term sustainable water supply and to manage and protect the water resources of the Monterey Peninsula for the benefit of the community and the environment. MPWMD is currently working with other local special districts, water purveyors, City governments, and other groups to fund water supply solutions. The MPWMD Board is comprised of five elected officials, one member appointed by a Mayor's group and one member appointed by the Monterey County Board of Supervisors. There are numerous opportunities for the public within the MPWMD organization to take part in water management issues. The MPRWA portfolio includes desalination, groundwater replenishment, aquifer storage and recovery, and recycled water.

Other regional stakeholders include local water purveyors (Cal-Am, Marina Coast Water District, City of Seaside, City of Salinas, California Water Service Company), recycled water purveyors (Carmel Area Wastewater District/Pebble Beach Community Services District), as well as governmental agencies such as Fort Ord Reuse Authority.

C6. THE EXTENT TO WHICH THE PROPOSED STUDY WILL EMPLOY AN INTEGRATED WATERSHED PLANNING APPROACH.

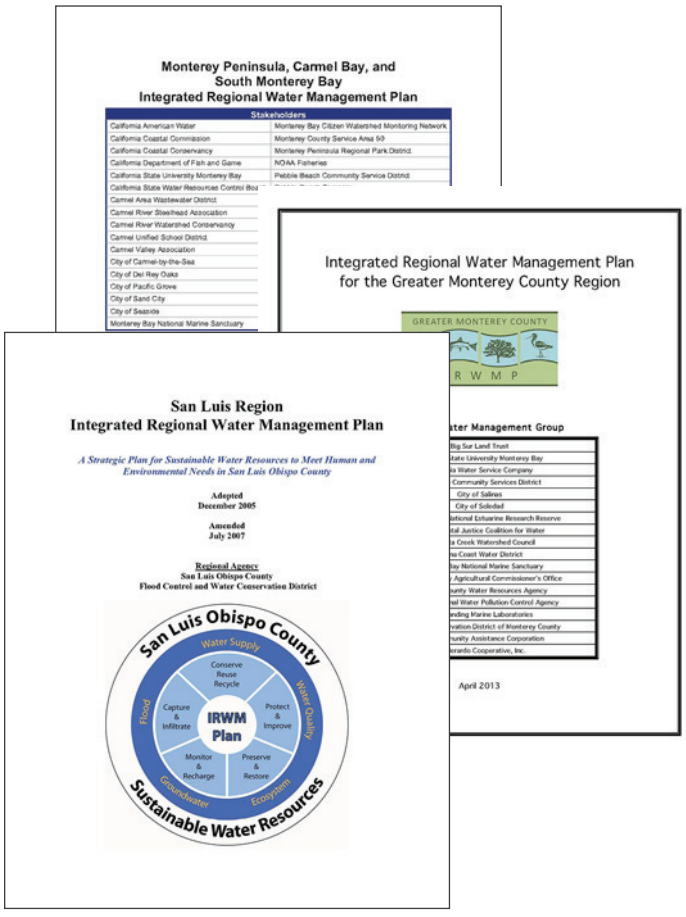
This Basin Study will identify relationships between sub-basins and identify climate adaptation strategies that result in water resources management strategies representing the most economically feasible, environmentally preferable and technically sustainable solutions to meet the future water resource management needs for the entire region, consistent with the integrated watershed approach already being implemented by the agencies in their IRWMPs.

The Basin Study partners are all key participants in California's IRWM Plan Program. Each is leading and/or participating in numerous water resources planning and implementation projects that have and will continue to shape water resource management through the use of an integrated watershed planning and management approach. Perhaps more importantly, their ongoing participation and familiarity with the IRWM Plan process means their regulating boards are accomplished with the use and procedures of the integrated planning process, their stakeholders are accustomed to participating in this process, and their service area residents are familiar with the process and its results. The Basin Study partners are also collaborating with each other by being stakeholders in each other's IRWM Plan efforts and participating in committees that have regional impacts. The associated IRWM Plans cover the following study areas: 1) the San Luis Obispo County Plan; 2) the Greater Monterey County Plan; 3) the Monterey Peninsula Carmel Bay, and Southern Monterey Bay Plan.

Pursuant to California's requirements, these IRWM Plans must address estimates of current and future water supply and demand, and the water management strategies of water supply reliability, water quality protection and improvement, groundwater management, ecosystem restoration, environmental and habitat protection and improvement, flood management, recreation and public access, storm water capture and management, water conservation, water recycling, and wetlands enhancement and creation on a regional basin. It is therefore the plan of the Basin Study partners to use these existing integrated watershed planning and management stakeholder network and framework to guide and develop the Salinas and Carmel Rivers Basin Plan Study.

The IRWM Plans establish "working groups". Members are expected to participate in all aspects of the IRWM Planning process. During Plan development, members attend monthly meetings, participate on subcommittees to develop various elements of the Plan, identify regional issues and conflicts, determine goals and objectives, and develop the process for ranking projects. As part of the Basin Plan Study, a Plan will be developed to identify how stakeholders will be engaged during the study, coordinated with the ongoing IRWM Plan outreach.

The goal of this Basin Study is to identify the most economically feasible, environmentally preferable and technically sustainable solutions to meet the future water resource management needs for all Salinas and Carmel River stakeholders. Building on the IRWM Plans' collaborative approaches will lead to identifying climate adaptation strategies that have the most benefits for the region and improved cooperative and integrated opportunities for more effective operation of existing systems and developing new projects. Water management strategies identified in the IRWM Plans will likely need to be refined given the results of the Basin Study's climate change-based analysis of supplies, demands, issues, and opportunities within the study area.



The three existing IRWMP efforts set the stage for successful outreach and integration.

Section D

STUDY OUTLINE AND SCHEDULE

Table 8 – Study Outline and Schedule

Schedule assumes a June 2015 Notice of Selection

Task	Partners Share[1]	Federal Share[2]	Estimated Cost	Proposed Schedule[4]
Task 1 – Pre-Study Efforts Summary: Scope out the study and agree to tasks, schedule, budget and roles/responsibilities for achieving study objectives in order to execute a Memorandum of Agreement (MOA) and develop a Plan of Study 1.a: Hold kick off meetings with study partners to establish: • Goals and objectives • Needs and challenges, and data gaps to be filled • Stakeholder outreach plan and regional coordination framework • Use of existing models • Climate change framework and scenarios to be applied • Decision criteria and basin balance objectives • Details of the technical sufficiency review 1.b: Prepare a detailed Plan of Study (POS) that outlines study goals objectives, management plan (including tasks, schedule and budget and study tasks for conducting the basin study and modeling approach). 1.c: Develop and execute MOA between project partners **Deliverable**: MOA and Plan of Study	$100,000	$25,000	$125,000	6/2015 to 9/2015
Task 2 – Model Development Integration/Calibration/Validation and GCM Modeling[3] Summary: Develop a comprehensive Salinas basin hydrologic model (covering both the upper and lower Salinas basins), integrate the model with the Paso Robles Groundwater Subbasin (Paso Basin) model, and assist with the completion of the Carmel Valley and Seaside Basin hydrologic model to ensure consistency as appropriate. Develop a detailed comprehensive downscaling of Global Climate Models (GCMs) in order to assess climate change impacts to supplies and demands across the basin, and apply and analyze selected GCMs to the Salinas, Paso Basin and Carmel Valley and Seaside Basin hydrologic models. 2.a: Data collection from various local sources 2.b: Determine model basis for model performance including common parameters, inputs for models and overall water balance 2.c: Federal technical sufficiency review models 2.d: Develop model integration approach for entire basin system 2.e: Refine and recalibrate model and conduct model simulations 2.f: Provide downscaled GCMs 2.g: Identify climate scenarios to evaluate (precipitation, sea level rise, temperature, others) and evaluate impacts through use of downscaled Global Climate Models. 2.h: Consider risk and reliability evaluation of dams and river channels, especially where requiring consultation with Federal agencies over impacts to T&E species or from increased flood risks. **Deliverable**: Technical Memorandum	$250,000	$550,000	$800,000	10/2015 to 2/2017
Task 3 – Current Water Supply and Demand Assessment Summary: Refine previous existing water supply and demand assessments to include considerations of variability due to climate change and to account for any demands not previously covered. Assessment to include quantification/identification of supply and demands. 3.a: Federal technical sufficiency review 3.b: Update water demand assessments as needed **Deliverable**: Technical Memorandum	$100,000	$50,000	$150,000	10/15 to 4/2016

Task	Partners Share[1]	Federal Share[2]	Estimated Cost	Proposed Schedule[4]
Task 4 – Future Water Supply and Demand Assessment Summary: Develop future water supply and demand assessments to include considerations of variability due to climate change and to account for any supplies not previously covered. Assessment to include change in timing and quantity of runoff, groundwater recharge/discharge and reservoir operations and potential for increased demands due to increases in temperature and evaporation. 4.a: Federal technical sufficiency review of previous existing and future water supply and demand assessments 4.b: Develop water supply and demand assessments as needed 4.c: Summarize in a Future Supply and Demand Assessment TM **Deliverable**: Technical Memorandum	$150,000	$100,000	$250,000	2/2017 to 5/2017
Task 5 – Identify Supply and Demand Imbalances Summary: Identify imbalances between existing and future water supply and demands under climate change scenarios on a regionwide basis. **Deliverable**: Technical Memorandum	$30,000	$30,000	$60,000	4/2017 to 6/2017
Task 6 – Develop Adaptation Strategies Summary: Identify Adaptation Strategies to address imbalances and risks. Alternatives will be developed to sufficient level of detail to be able to use the model to evaluate effectiveness of proposed strategies, assess rough cost and potential environmental impacts. 6.a: Review previously identified opportunities 6.b: Identify any additional opportunities to address 6.c: Summarize the opportunities to evaluate in the trade off analysis in a TM **Deliverable**: Technical Memorandum	$200,000	$70,000	$270,000	6/2017 to 9/2017
Task 7 – Trade-off Analysis of Strategies Summary: Compare alternatives identified for established metrics for each sub-basin and the system as a whole, including: • Environmental impacts • Risk/Reliability • Costs • Stakeholder support • Institutional/Regulatory • Performance • Recreational • Power Generation **Deliverable**: Technical Memorandum	$150,000	$50,000	$200,000	9/2017 to 12/2017
Task 8 – Findings and Recommendations Prepare a draft report summarizing and prioritizing the findings and recommendations of the alternatives analysis, including technical details, and a QA/QC review. Conduct a Technical Sufficiency review (by the Reclamation or TSR panel) of the modeling and draft report. **Deliverable**: Draft Basin Study Report and Response to Technical Sufficiency Review Comments	$50,000	$25,000	$75,000	1/2018 to 5/2018
Task 9 – Final Report A final report will be developed summarizing the findings of the Basin Study. **Deliverable**: Final Basin Study Report	$25,000	$15,000	$40,000	6/2018 to 9/2018
Task 10 – Stakeholder Outreach and Involvement/Project Team Meeting Identify and work with key stakeholders throughout the Basin Study to solicit input on the study findings and proposed alternatives through stakeholder meetings, small group meetings and a project website. **Deliverable**: Project Communications Plan, Stakeholder Workshops Meeting Minutes	$100,000	$35,000	$135,000	Ongoing
Proposed Carmel and Salinas Basins Study TOTAL	**$1,155,000**	**$950,000**	**$2,105,000**	

1. MCWRA, MRWPCA, MPWMD, SLOC; includes related costs since May 2014
2. USBR, USGS
3.Specific modeling approach to be defined in Plan of Study
4.Schedule to be confirmed as part of Pre-Study efforts.

Appendix A

SUMMARY OF REGIONAL STUDIES AND PARTNER COST SHARE

Table A1 – Summary of Basin Study Partners Cost Share

A. Agency	Relevant Past Studies and Costs Prior to April, 2014		Proposed In-Kind Services Match	
Monterey County Water Resources Agency (MCWRA)	• Protective Elevations to Control Sea Water Intrusion in the Salinas Valley, November 2013	$120,000	• 2013 Groundwater Extraction Summary, September 2014	$85,000
	• 2012 Groundwater Extraction Summary, September 2013	$84,000	• Seawater Intrusion Maps 2014	$90,000
	• State of the Salinas River Groundwater Basin Report, January 2015	$103,000	• Integrated Groundwater Surface Water Model (to be completed early 2016)	$671,000
	• Groundwater Level Contour Maps, 2013	$90,000	• Basin Study Plan Match (Staff resources)	$100,000
Monterey Peninsula Water Management District (MPWMD)	• SGB Salt and Nutrient Management Plan (2014)	$60,000	• 2014 Update to IRWM Plan (2014)	$156,000
	• Canyon Del Rey Drainage Plan Update (2014)	$250,000	• CRB Surface-Groundwater Model (GSFLOW) (2014)	$125,000
	• Los Padres Dam and Reservoir Acquisition: Long-Term Strategic and Short-Term Tactical Plan (2014)	$146,000	• Los Padros Dam Long-Term Plan Project (2015-16-17)	$500,000
			• Complete Instream Flow Incremental Method Study (IFIM) Study, 2017	up to $250,000
			• Carmel River Basin Surface-Groundwater Model (GSFLOW) (2015)	$50,000
			• Basin Study Plan Match (Staff resources)	$45,000
Monterey Regional Water Pollution Control Agency (MRWPCA)	• Pure Water Monterey Groundwater Replenishment Project (GWR) studies: - WaterSMART Feasibility Study - SGB Modeling - Indirect Potable Reuse - Agricultural Reuse - Seaside Basin Groundwater Flow Model	$1,960,000	• Basin Study Plan Match (Staff resources)	$120,000
San Luis Obispo County Public Works Department (SLOCPWD)	• Groundwater/Watershed Model Update and Mitigation Strategies Analysis, pre-April 2014	$357,000	• Groundwater/Watershed Model Update and Mitigation Strategies Analysis, post-April 30, 2014	$129,000
			• Water Supply Options Study	$657,000
			• Basin Study Plan Match (Staff resources)	$176,000
			- Model Runs	$30,000
Total	• **Past Studies (not included in cost share)**	**$3,070,000**	• **Applicable Studies/Staff Resources**	**$3,195,000**

Appendix B

LETTERS OF SUPPORT

United States Department of the Interior
U.S. GEOLOGICAL SURVEY
California Water Science Center
6000 J Street, Placer Hall
Sacramento, CA 95819

February 26, 2015

Mr. David Murillo, Regional Director
Bureau of Reclamation, DOI
Mid-Pacific Regional Office, Attn: MP-700
2800 Cottage Way
Sacramento, CA 95825

Dear Mr. Murillo,

This letter of interest is to express the USGS California Water Science Center's (CAWSC) desire to participate with the Bureau of Reclamation (Reclamation) and local partner agencies on the proposed Salinas and Carmel River Basins Study. As discussed at the February 20th meeting between our respective staff, CAWSC has a number of scientific projects and programs underway that could support the proposed basin study. The following paragraphs describe this ongoing work and possible future scientific study in the groundwater and climate change areas with potential benefit to the proposed basin study.

Groundwater Analyses:

In partnership with the California Water Resources Control Board, the USGS periodically assesses the groundwater quality in the Monterey Bay and Salinas Valley groundwater basins pursuant to the Groundwater Ambient Monitoring and Assessment (GAMA) Program's Priority Basin Project. This project focuses on drinking water quality. A number of reports have been published. The latest report, published in 2013 (web link: http://pubs.usgs.gov/fs/2011/3089/), concluded that nitrate is the constituent that most frequently exists at high concentrations in the primary aquifers.

It is our understanding from the Salinas-Carmel Basin Study Proposal submitted in 2014 that work is underway to develop a linked surface-groundwater model for the Carmel Basin using the USGS GSFLOW model. In addition, Brown and Caldwell consultants are working with the County of Monterey Resource Management Agency (with oversight by the Monterey County Water Resources Agency) on a comprehensive water resource assessment of Zone 2C of the Salinas River Groundwater Basin. Part of this assessment will be the development of an integrated hydrologic model. The CAWSC has developed and applied integrated surface-groundwater models for many coastal basins in California. Subject to funding availability, CAWSC staff are available to perform or assist with surface-groundwater modeling to assess impacts to groundwater supply under various land-use and climate change future scenarios and or code development or enhancement to better simulate the features of these systems (including reservoir operations). We could also assist with assessing potential seawater intrusion including computer simulations and geophysical mapping.

Climate Change Modeling:

The CAWSC has ongoing projects that assess the impact of climate change, population growth and land use change on future hydrology throughout the state. In order to evaluate the impact of climate change on hydrology, a number of future climate scenarios are developed from global climate models, such as CMIP5 (Coupled Model Intercomparison Project Phase 5), and then downscaled to 270-m resolution. This resolution allows for detailed modeling at the watershed level. An anticipated future product for California's 4th Climate Change Assessment is the spatial downscaling of daily projections that have been statistically downscaled to preserve extremes using the LOCA methodology. Subject to funding availability, CAWSC staff could develop hydrology associated with a number of climate future scenarios for the Salinas and Carmel basins.

The science support the CAWSC can provide to the Salinas and Carmel Basins Study could help Reclamation and its local partners quantitatively consider the impact of climate change and socio-economic factors on surface and groundwater resources and on water demands. We look forward to potentially working with Reclamation and the local partner agencies on this basin study to quantitatively assess the risks associated with climate change, population growth and land use changes on the eight Secure Water Act resource categories—water delivery, hydropower, recreation, flood control management, fish and wildlife habitat, endangered species, water quality and flow- and water-dependent ecological resiliency.

Sincerely,

Eric Reichard,
Director, USGS California Water Science Center

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0035
(916) 319-2035
FAX (916) 319-2135

DISTRICT OFFICE
1150 OSOS STREET SUITE 207
SAN LUIS OBISPO, CA 93401
(805) 549-3381
FAX (805) 549-3400

Assembly
California Legislature

KATCHO ACHADJIAN
ASSEMBLYMEMBER, THIRTY-FIFTH DISTRICT

COMMITTEES
VICE CHAIR: TRANSPORTATION
BANKING AND FINANCE
GOVERNMENTAL ORGANIZATION
UTILITIES AND COMMERCE

JOINT COMMITTEES
FAIRS, ALLOCATION AND CLASSIFICATION
FISHERIES AND AQUACULTURES
LEGISLATIVE AUDIT

April 27, 2015

Attn: David Murillo, Regional Director
U.S. Department of the Interior, Bureau of Reclamation
Mid-Pacific Regional Office, Federal Office Building
2800 Cottage Way
Sacramento, CA 95825-1898

Subject: **Monterey County Water Resources Agency & San Luis Obispo County Joint Proposal for USBR WaterSMART Salinas and Carmel River Basins Study**

Dear Sir:

Thank you for the opportunity to submit a letter of support on behalf of the joint proposal for a U.S. Department of the Interior Bureau of Reclamation (USBR) 2015 WaterSMART Basin Study for the Salinas and Carmel River Basins, with the Paso Robles Groundwater Basin as a sub-basin. This letter comes at a critical time when the "perfect storm" of drought, long-term groundwater level declines and water demand increases have elevated the need of rural residents and agricultural users who depend on these Basins.

Most areas within these basins have recently felt the direct and indirect impacts of changing environmental conditions on water supplies, hydropower, fish and wildlife habitats, water quality and implementing flood control policies. Your agency's assistance in understanding and quantifying the Salinas and Carmel River Basins over the long-term, including climate change considerations, would greatly contribute to and enhance our efforts of evaluating the feasibility of stabilizing the basins and mitigating flood hazards. The proposal is also submitted by the Monterey Peninsula Water Management District and the Monterey Regional Water Pollution Control Agency and will include areas within the service boundaries of each agency.

The Basin Study would assist the non-federal partners in collaborating with the Bureau to analyze the potential impacts of climate change to water supplies and demands; identify a broad spectrum of adaption strategies; identify funding opportunities for future projects; facilitate communication and collaboration between partner agencies and the Bureau of Reclamation, and utilize other basin study reports or documents to directly benefit the "in-kind" contributions of the partner agencies.

I am certain you will find the scope of work outlined in the WaterSMART Basin Study Proposal for the Salinas and Carmel River Basins are consistent with the USBR's goals associated with ensuring the people of California have access to clean, safe and reliable drinking water now and into the future. A Basin Study from the USBR will assist all who utilize the Salinas and Carmel River Basins in both Monterey and San Luis Obispo Counties.

Sincerely,

Khatchik H. "Katcho" Achadjian
35th Assembly District

April 28, 2015

Attn: David Murillo, Regional Director
U.S. Department of the Interior, Bureau of Reclamation
Mid-Pacific Regional Office, Federal Office Building
2800 Cottage Way
Sacramento, CA 95825-1898

Re: **Monterey County Water Resources Agency & San Luis Obispo County Joint Proposal for USBR WaterSMART Salinas and Carmel River Basins Study**

Dear Sir:

PRAAGS is a local organization of rural residents, farmers, ranchers and landowners pursuing the creation of a local water district covering the Paso Robles Groundwater Basin. We feel that local folks with interest in the health of a declining groundwater basin are in the best position to manage our water resource. The relationship between groundwater and surface water resources are closely tied together.

We encourage and support the joint proposal for a U.S. Department of the Interior Bureau of Reclamation (USBR) 2014 WaterSMART Basin Study for the Salinas and Carmel River Basins, with the Paso Robles Groundwater Basin as a sub-basin.

As with many areas in the State of California, the Paso Robles Groundwater Basin is in decline and our efforts to properly manage the basin can only be enhanced by your efforts to help analyze potential impacts of changing weather patterns, study of supply and demands on our water resources, and develop strategies for stabilizing our basin. Collaboration and funding are also key components for success.

Again, we encourage your efforts and look forward to your assistance in managing our important water resources.

Regards,

Jerry Reaugh
Viticulturist
Chairman PRAAGS
Paso Robles Agricultural Alliance for Groundwater Solutions

PO Box 1499 • Paso Robles, California 93447 • 805-465-6355

PRO Water Equity, Inc.
Paso Robles Groundwater Basin Overliers for Water Equity

www.prowaterequity.org
info.prowaterequity@gmail.com
www.facebook.com/ProWaterEquity
P.O. Box 255, Templeton, CA 93465

April 18, 2015

Attn: David Murillo, Regional Director
U.S. Department of the Interior, Bureau of Reclamation
Mid-Pacific Regional Office, Federal Office Building
2800 Cottage Way
Sacramento, CA 95825-1898

Subject: **Monterey County Water Resources Agency & San Luis Obispo County Joint Proposal for USBR WaterSMART Salinas and Carmel River Basins Study**

Dear Sir:

In a letter dated February 13, 2014, PRO Water Equity indicated our support of the joint proposal for a U.S. Department of the Interior Bureau of Reclamation (USBR) 2014 WaterSMART Basin Study for the Salinas and Carmel River Basins, with the Paso Robles Groundwater Basin as a sub-basin. We are hereby reiterating our support for this proposal.

We are continuing through a critical time when the "perfect storm" of drought, long-term groundwater level declines and water demand increases have elevated the needs of rural residents and agricultural users who depend on these basins.

Most areas within these basins have recently felt the direct and indirect impacts of changing environmental conditions on water supplies, hydropower, fish and wildlife habitats, water quality and implementing flood control policies. Your agency's assistance in understanding and quantifying the Salinas and Carmel River Basins over the long-term, including climate change considerations, would greatly contribute to and enhance our efforts to evaluate the feasibility of stabilizing the basins and mitigating flood hazards. The proposal is also submitted by the Monterey Peninsula Water Management District and the Monterey Regional Water Pollution Control Agency and will include areas within the service boundaries of each agency.

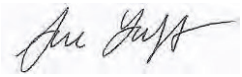
The Basin Study would assist the non-federal partners in collaborating with the Bureau to:

- Analyze the potential impacts of climate change to water supplies and demands
- Identify a broad spectrum of adaptation strategies
- Identify funding opportunities for future projects
- Facilitate communication and collaboration between partner agencies and the Bureau of Reclamation
- Utilize other basin study reports or documents to directly benefit the "in-kind" contributions of the partner agencies

Mission Statement: To promote the health, safety, common good and general welfare of the community by advocating for the stabilization and sustainability of the Paso Robles groundwater basin for the benefit of all overliers.

I am certain you will find the scope of work outlined in the WaterSMART Basin Study Proposal for the Salinas and Carmel River Basins is consistent with the USBR's goals associated with ensuring the people of California have access to clean, safe and reliable drinking water now and into the future. A Basin Study from the USBR will assist all who utilize the Salinas and Carmel River Basins in both Monterey and San Luis Obispo Counties.

Sincerely,



Sue Luft
President

STATE CAPITOL
SACRAMENTO, CA 95814
(916) 651-4017

California State Senate

SENATOR
BILL MONNING
SEVENTEENTH SENATE DISTRICT

SENATE CAPITOL OFFICE
STATE CAPITOL, ROOM 4066
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SAN LUIS OBISPO, CA 93401
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GILROY DISTRICT OFFICE
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GILROY, CA 95020
PHONE: (408) 847-6101

SANTA CRUZ DISTRICT OFFICE
701 OCEAN STREET, SUITE 318-A
SANTA CRUZ, CA 95060
PHONE: (831) 425-0401

WEB: http://sd17.senate.ca.gov/

April 27, 2015

David Murrillo, Regional Director
Mid-Pacific Regional Office
Bureau of Reclamation
United States Department of the Interior
Federal Office Building
2800 Cottage Way
Sacramento, CA 95825-1898

Dear Director Murillo:

This letter is to express my support for the San Luis Obispo County Public Works Department and Monterey County Resources Agency's joint application for a United States Department of the Interior Bureau of Reclamation 2015 WaterSMART Basin Study for the Salinas and Carmel River Basins, with the Paso Robles Groundwater Basin as a sub-basin.

The water demands on the Salinas and Carmel River Basins, along with the Paso Robles Basin, have rapidly increased due to the growth in the use of water by rural residents and the agricultural industry. These water demands have created long-term groundwater declines that are being exacerbated by the drought in California.

A 2015 WaterSMART Basin Study would provide a better understanding of the direct and indirect impact of groundwater decline on hydropower, fish and wildlife habitats. Additionally, the Study will allow stakeholders to identify future water management strategies, as well as future projects that may be needed, and I ask that you give all due consideration to the San Luis Obispo County Public Works Department and Monterey County Resources Agency's joint application for a 2015 WaterSMART Basin Study.

Thank you for your time.

Sincerely,

WILLIAM W. MONNING
Senator, 17th District

WWM:kb

Carmel Valley Association
P.O. Box 157, Carmel Valley, California 93924
www.carmelvalleyassociation.org

Since 1949

April 24, 2015

Michelle H. Denning, Regional Planning Officer
U.S. Dept. of the Interior
Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

Subject: Letter of Support for the Salinas and Carmel River Basins Study

Dear Ms. Denning,

The Carmel Valley Association (CVA) has a deep and abiding concern for the capacity and health of the Carmel River and the valley groundwater basin that collectively make up the hydrologic Carmel Valley basin. On behalf of the CVA, I would like to express our support for the Salinas and Carmel River Basins Study proposal. It is our understanding that the intent of this study is to evaluate the effects of global climate change and future changes in population and land use on sustainable water supplies. This would include such factors as changing precipitation patterns, surface water runoff and basin recharge and sea level rise. Further, the basin study would develop appropriate adaptation strategies to close the gap between water supply and demand under the effects of climate change.

It is paramount that the Basin Study program reviews all of the water resources in each basin to help determine the availability of water and to develop a better understanding of the potential solutions for the long term sustainability of these resources.

As the California drought has strengthened its grip on the State, we are encouraged by the collaborative effort of the partner entities for submitting this proposal. These partner entities include: Monterey County Water Resource Agency, San Luis Obispo County Public Works, Monterey Peninsula Water Management District and the Monterey Regional Water Pollution Control Agency.

The Basin study partner agencies and other stakeholders that represent various interests in the respective service areas are keenly aware of the need to balance water supplies and demands for the environment, municipal, industrial, and agriculture uses. The deliverables from the Basin Study would have contributions from these entities and would assist in developing robust strategies for future considerations.

We strongly encourage the Bureau of Reclamation to consider funding this important Basin Study project. Please contact our Water Committee Chair, Roger Dolan, at r2dolan@gmail.com and/or 831-622-9016 if you have any questions or comments about our support of this proposal.

Sincerely,

Priscilla Walton
President, Carmel Valley Association

cc: Larry Hampson
Monterey Peninsula Water Management District

SAN LUIS OBISPO COUNTY FARM BUREAU
4875 MORABITO PLACE ♦ SAN LUIS OBISPO, CA 93401
PHONE (805) 543-3654 ♦ FAX (805) 543-3697 ♦ www.slofarmbureau.org

April 28, 2015

David G. Murillo, Regional Director
U.S. Dept. of the Interior
Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

Re: Support for the Salinas/Carmel River Basins Study

Dear Director Murillo:

San Luis Obispo County Farm Bureau is pleased to be able to join the many supporters of the WaterSMART collaborative Salinas and Carmel River Basins Study, which includes the Paso Robles Groundwater Basin as a sub-basin and is being proposed by the U.S. Bureau of Reclamation.

This is a critical time for all stakeholders, especially agriculture in light of the continuing historic drought and water declines in the Salinas Groundwater Basin, the Salinas and Carmel River Basins Study area as well as the whole of California. We support the need to consider the effects of the possible impacts of climate change on our watersheds. We look for the Basin Study to create a fuller understanding of the Basins' resources, as well as the effects of climate change on water supplies, water quality and habitat. It is our hope that the study to fill vital data gaps and look for potential long term management strategies that will create sustainability for all entities dependent on the Basins.

San Luis Obispo County Farm Bureau looks forward to participating as a stakeholder in the program and believe that the Basin Study will help all stakeholders to develop long term solutions to the many basin issues in both Monterey and San Luis Obispo Counties.

Sincerely,

Legislative Analyst

Mission Statement:
"To lead San Luis Obispo County in the protection, promotion and advocacy of agriculture for the benefit of our members and community."

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
Monterey Bay National Marine Sanctuary
99 Pacific Street, Bldg 455a
Monterey, CA 93940

April 28, 2015

Michelle H. Denning, Regional Planning Officer
U.S. Dept. of the Interior
Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

Subject: Letter of Support for the Salinas and Carmel River Basins Study

Dear Ms. Denning,

On behalf of Monterey Bay National Marine Sanctuary, I would like to express our support for the Salinas and Carmel River Basins Study proposal. It is our understanding that the intent of this study is to evaluate the effects of global climate change and future changes in population and land use on sustainable water supplies. This would include such factors as changing precipitation patterns, surface water runoff and basin recharge and sea level rise. Further, the basin study would develop appropriate adaptation strategies to close the gap between water supply and demand under the effects of climate change.

It is paramount that the Basin Study program reviews all of the water resources in each basin to help determine the availability of water and to develop a better understanding of the potential solutions for the long term sustainability of these resources.

As the California drought has strengthened its grip on the State, we are encouraged by the collaborative effort of the partner entities for submitting this proposal. These partner entities include: Monterey County Water Resource Agency, San Luis Obispo County Public Works, Monterey Peninsula Water Management District and the Monterey Regional Water Pollution Control Agency.

The Basin study partner agencies and other stakeholders that represent various interests in the respective service areas are keenly aware of the need to balance water supplies and demands for the environment, municipal, industrial, and agriculture uses. The deliverables from the Basin Study would have contributions from these entities and would assist in developing robust strategies for future considerations.

We strongly encourage the Bureau of Reclamation to consider funding this important Basin Study project. Please contact Bridget Hoover at (831) 647-4217 you have any questions or comments regarding our support of this proposal.

Sincerely,

Paul Michel
Superintendent

Appendix C

SOURCES OF HISTORICAL DATA AND REPORTS

Sources of Historical Data and Reports

Basin Study Areas	Sources of Data/Reports
CRB/SGB	1983 Analysis of the Carmel Valley Alluvial Groundwater Basin 2002 Carmel River Basin Water Availability Analysis 2004 Physical and Hydrologic Assessment of the Carmel River Watershed 2005 Seaside Groundwater Basin Update 2006 Carmel River Flood Insurance Study Coastal Flooding Analysis 2008 Coastal Regional Sediment Management Plan in Southern Monterey Bay 2012 Evaluation of Erosion Mitigation Alternatives for Southern Monterey Bay 2013 Carmel River Lagoon and Scenic Road Protection Feasibility Report 2014 Los Padres Dam Long Term Plan 2014 Seaside Groundwater Basin Salt and Nutrient Management Plan 2014 Canyon Del Rey Drainage Plan Update
PRGB	2002 Basin Study 2005 Basin Model Report 2009 Master Water Report 2009 Projected Future Climatic and Ecological Conditions in San Luis Obispo County 2010 Integrated Climate Change Adaptation Planning in San Luis Obispo County 2011 Resource Capacity Study 2012 Groundwater Management Plan 2014 Computer Model Update Report 2014 Watershed Repository 2015 Supply Options Study Technical Memorandums
SVB	2001 Salinas Valley Water Project Draft/Final EIR/EIS 2007 Monterey County General Plan 2013 Greater Monterey County Integrated Regional Water Management Plan 2013 Protective Elevations to Control Sea Water Intrusion in the Salinas Valley 2015 Salinas River Groundwater Basin Investigation

Appendix D

STATE AND FEDERAL COORDINATED OPERATING AGREEMENT

SALINAS RESERVOIR EXPANSION PROJECT

State/Federal COA:

Coordinated Operations Agreement (COA)

Background

The Agreement between the United States of America and the State of California for Coordinated Operation of the Central Valley Project and the State Water Project was authorized by PL 99-546 in 1986. It superseded a 1960 agreement and annual coordination agreements that had been implemented since the SWP came on-line. The COA is both an operations agreement and a water rights settlement. Its history extends back to Reclamation protests of SWP water rights applications around 1960. The purpose of the COA is to ensure that the CVP and the SWP each obtains its share of water from the Delta and bears its share of obligations to protect the other beneficial uses of water in the Delta and Sacramento Valley. Coordinated operation by agreed-on criteria can increase the efficiency of both the CVP and the SWP.

The CVP and SWP (collectively, the projects) use a common water supply in California's Central Valley. The projects have built water conservation and water delivery facilities in the Central Valley to deliver water supplies to affected water rights holders as well as project contractors. The projects' water rights are conditioned by the SWRCB to protect the beneficial uses of water within each respective project and jointly for the protection of beneficial uses in the Sacramento Valley and Sacramento-San Joaquin Delta Estuary. The COA memorializes these facts and objectives into an agreement for which the projects can use the water resources for project purposes and meet the common beneficial uses in the Sacramento Valley and Sacramento-San Joaquin Delta Estuary.

In summary, the COA defines the project facilities and their water supplies, it sets forth procedures for coordination of operations, it identifies formulas for sharing joint responsibilities for meeting Delta standards and other legal uses of water, it identifies how unstored flow will be shared, it sets up a framework for exchange of water and services between the SWP and CVP, and, finally, it provides for periodic review every 5 years.

The CVP and SWP use the Sacramento River and the Delta as common conveyance facilities. Reservoir releases and Delta exports must be coordinated to ensure that each project achieves its share of benefit from shared water supplies and bears its share of joint obligations to protect beneficial uses.

alternative indicates that the available natural runoff into the reservoir is more than adequate to justify the full expansion project from a hydrologic standpoint. However, the intermediate expansion project may be more economical, depending on project costs.

The reason that the expansion project is so effective in providing additional water supply yield is indicated by the results in Table 6-2. Under existing conditions, the simulated operation of the CITY's two reservoirs in a coordinated fashion would result in average reservoir spill of about 12,430 AF/YR and net evaporation loss of about 2350 AF/YR. The other uses, including Whale Rock entitlements by State agencies and downstream release requirements for both reservoirs, are not altered by the expansion project. For the assumed proposed condition (maximum expansion), the average spill quantity is reduced to about 10,150 AF/YR while the net evaporation loss in increased to about 3110 AF/YR. The differences between the existing and proposed conditions reveal that reservoir spills are reduced by almost 2,300 AG/YR because of the additional storage capacity available to capture water during high flow periods. However, the net evaporation losses increase by about 760 AF/YR due to higher reservoir levels (i.e., greater surface area). Nevertheless, by capturing and later using a significant amount of water that would otherwise spill, the capability of the CITY's water supply system can be greatly enhanced by expansion of Salinas Reservoir.

newch6.rpt/ros

ITEM: ACTION ITEM

16. CONSIDER ADOPTION OF A FINANCE PLAN FOR UTILIZATION OF USER FEE AND WATER SUPPLY CHARGE FUNDS

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**David J. Stoldt**	**Cost Estimate:**	**N/A**

General Counsel Approval: N/A
Committee Recommendation: The Water Supply Planning Committee reviewed this item on April 8, 2016 and recommended approval on a vote of 3 – 0. The Administrative Committee reviewed this item on April 11, 2016 and recommended approval.
CEQA Compliance: N/A

SUMMARY: On January 25, 2016 the California Supreme Court filed its opinion in the suit the District brought against the California Public Utilities Commission (CPUC or PUC), determining "PUC Decision No. 11-03-035 (rejecting Cal-Am's application for authorization to collect the District's user fee, and also rejecting the settlement agreement entered into by Cal-Am, the District, and the Division of Ratepayer Advocates) and PUC Decision No. 13-01-040 (denying the District's application for rehearing) are set aside. The matter is remanded to the PUC for further proceedings consistent with the views expressed herein." A new Commissioner, Liane Randolph was assigned to the case on March 24, 2016. The Administrative Law Judge (ALJ) assigned by the CPUC remains Mary Beth Bushey. On March 30, 2016 the Commissioner and ALJ issued a ruling stating that the District's Water Supply Charge provides the relief sought by the 2010 application, hence rather than reinstating the User Fee we must now have to comment and demonstrate how that is not the case. The process could become protracted and last beyond the July 1 start of the fiscal year.

As discussed under "LEGAL AUTHORITY" below, On March 16, 2016 the law firm of Colantuono, Highsmith, Whatley PC issued the legal opinion (**Exhibit 16-A**, attached) answering four of the District's questions in the District's favor. Hence, the District will have great flexibility in assessing and using the User Fee going forward.

However, District Ordinance No. 152 which established the Water Supply Charge states in its Section 10.C(b) that the District shall not collect a Water Supply Charge "to the extent alternative funds are available via a charge collected on the California American Water Company bill." Therefore, it is incumbent upon the board to examine its needs and availability of its two primary funding sources and develop a plan for their use, including reductions or possible sunsets of either or both.

The General Manager and Chief Financial Officer have thoroughly examined the issue and makes the following recommended strategy:

- Collect both charges for at least 3 years. This would be done for 4 key reasons: (i) the User Fee would primarily fund programs already in Cal-Am surcharges (District conservation and river mitigation), so there is little "new" revenue; (ii) the Monterey Peninsula Taxpayers Association lawsuit over the Water Supply Charge remains unresolved, hence that revenue remains at risk; (iii) there are still large near-term expenditures required on water supply projects; and (iv) Cal-Am has a recent history of significant revenue undercollection, so the viability of the User Fee is at risk until the CPUC rules on a more stable rate design, and the predictability of the User Fee revenue is better known. After that time, begin to sunset or reduce collections of either or both, if possible.

- Have only a single MPWMD User Fee Surcharge on Cal-Am bill, instead of a mitigation surcharge, a conservation surcharge, and the User Fee.

- Remove the existing Conservation Surcharge and Mitigation Program expenses from the Cal-Am rates beginning July 1, 2016. Capture in MPWMD User Fee budget. Cal-Am to remain responsible for its rebate budget until the User Fee has capacity.

- Remove the same programs from the next GRC period (2018-2020).

- Calculate solely on "Total Water Service Related Charges" line on bill, ensuring that there is no "surcharge on a surcharge", rather the User Fee is based solely on Cal-Am water and meter revenues.

- Amount to be set after additional consultation with Cal-Am and at least 30 days prior to July 1, 2016, or as soon after as allowed by the CPUC;

- Cal-Am shall remit with regularity (monthly) and automatically.

- There should be a reporting requirement by Cal-Am in order for the District to audit its receipts.

- Undercollections should get added to the WRAM and remitted to the District when collected.

RECOMMENDATION: The Water Supply Planning Committee and the Administrative Committee recommend approval of the financial plan outlined in the nine bullet-points immediately above in the "SUMMARY" section.

BACKGROUND: The District is authorized, by law, to impose rates and charges for services, facilities, or water that it may furnish, as well costs of operations and activities related to the provision of water delivered by others. The District first implemented a User Fee in 1983 as a percentage of the California American Water (Cal-Am) bill to fund District activities and collected it continuously until temporarily suspended by the CPUC on May 24, 2011.

The District modified its User Fee by Ordinance sixteen times from 1983 through 2008. The proceeds of the User Fee have been used to support the District's environmental mitigation, conservation and rationing, water supply, and any other purposes throughout the history of its collection;

District Ordinance 61 adopted July 20, 1992 established a User Fee at 7.125 percent of the Cal-Am bill, an amount that was reinforced by Ordinance 67 in1992, Ordinance 78 in 1995, and Ordinance 82 in 1996 and all four ordinances preceded Proposition 218, the self-titled "Right to Vote on Taxes Act" approved by voters November 5, 1996 and which added Articles XIIIC and XIIID to the California Constitution, and made numerous changes to local government finance law, a defines a fee or charge subject to Proposition 218. District Ordinance 138 adopted December 8, 2008 reaffirmed the addition of a 1.20 percent to the User Fee after a Proposition 218 protest hearing, said amount to support the funding of the District's Aquifer Storage and Recovery (ASR) program, bringing the total amount of the User Fee to 8.325 percent of the Cal-Am bill.

The CPUC in Decision D.09-07-021 in July 2009 prohibited further regular collection and disbursement by Cal-Am to the District of its User Fee and directed such amounts to be recorded in a memorandum account until Cal-Am reapplies to the CPUC proposing a program to reinstate the User Fee. Such application was made January 5, 2010. A motion to approve an all-party settlement was made to the CPUC in May 2010 which would have allowed continued past practice of collection of the District User Fee on Cal-Am bills. CPUC decision D.11-03-035, issued March 24, 2011 rejected the joint settlement agreement. The CPUC halted collection of the User Fee and ordered the memorandum account closed May 24, 2011. On January 24, 2013 the CPUC issued decision D.13-01-040 modifying D.11-03-035 and denying any further rehearing of the matter.

The District on February 22, 2013 filed a Petition for Review of CPUC Decisions D.11-03-035 and D.13-01-040 with the California Supreme Court.

On January 25, 2016 the California Supreme Court filed its opinion in the matter, as described under "SUMMARY" above.

LEGAL AUTHORITY: On February 18, 2016 the general manager asked for outside counsel legal opinions on four matters:

1) The User Fee at an amount of 7.125% was in place prior to Proposition 218. Can we reinstate it on the Cal-Am bill without a Prop 218 protest hearing process? The theory being that the District never terminated the fee, rather was inappropriately barred from collecting it. Further, 7.125% was continuously collected from the Seaside municipal water distribution system and the Pebble Beach Reclamation project even during the time the CPUC barred its collection on the Cal-Am bills.

2) The 1.2% component was designated for Aquifer Storage and Recovery (ASR) by District Ordinances 123 and 138 and was established pursuant to Prop 218 with a protest hearing. Can we reinstate it without a Prop 218 protest hearing process for use on ASR?

3) The establishment of the District's User Fee dates back to 1983, but it has been changed by ordinance several times. The Ordinances have tended to describe the uses of the money, sometimes generally such as Section 5 of Ordinance 78, or sometimes more specifically, such as Section 6 of Ordinance 61. Then Section 3 of Ordinance 67 appears to give the Board broad authority to use the User Fee proceeds in any manner and was the last active ordinance which established the 7.125% level. Hence, if Question 1 is answered in the affirmative, does the District have the authority to allocate the revenues to any purpose of the District?

4) Can the District "establish" the User Fee at the total of 8.325% of the water bill, but then waive collection of all or a portion of it if not all the money is needed at that time? (e.g. use the grandfathered 7.125% amount but collect, for example, only 4.0% worth of it one year, 6.5% the next, and so on)

On March 16, 2016 the law firm of Colantuono, Highsmith, Whatley PC issued the legal opinion (**Exhibit 16-A**, attached) answering all four of the questions in the District's favor. Hence, the District will have great flexibility going forward.

AVAILABILITY AND USE: Potential collection from a User Fee on the Cal-Am bill will be dependent on the level of Cal-Am revenues. Using amounts approved for the current General Rate Case period, we estimate approximately $57 million in total Cal-Am revenue, as shown below:

2015 Revenue Requirement per CPUC General Rate Case A.13-07-002	$53,205,444
2016 allowed increase of 3.90%	$55,280,456
2017 allowed increase of 3.02%	$56,949,926

However, Cal-Am has experienced collection problems in its Monterey District, as shown here:

CALIFORNIA AMERICAN WATER COMPANY
MONTEREY RATE DESIGN AND RATIONING APPLICATION
FIVE YEAR COMPARISON OF AUTHORIZED/ACTUAL CONSUMPTION AND REVENUE

	Residential Consumption (AF)			Residential Quantity Revenue		
	Authorized	**Actual**	**Percent Dif.**	**Authorized**	**Actual**	**Percent Dif.**
2010[(1)]	7,755	7,140	-7.9%	$ 22,564,085	$ 14,764,965	-34.6%
2011	8,216	7,202	-12.3%	$ 24,165,312	$ 15,071,310	-37.6%
2012	7,315	7,392	1.0%	$ 27,672,417	$ 20,926,190	-24.4%
2013	8,433	6,865	-18.6%	$ 28,136,600	$ 18,954,319	-32.6%
2014	7,278	6,951	-4.5%	$ 28,846,295	$ 22,178,830	-23.1%
		Average	-8.5%		Average	-30.5%

Residential volumetric revenue is approximately 37% of the whole revenue requirement.

30.5% x 37% = 11.3% average undercollection of total revenues

Thus, 2017 assumed revenues of $56,949,926 minus 11.3% equals $50,523,127 of Cal-Am revenue. Assuming the approved levels of User Fee, this would result in the following amounts annually to the District.

1.2% ASR User Fee = $606,280 per year (2017 revenues)

7.125% User Fee = $3,599,770 per year (2017 revenues)

The 1.2% ASR amount would be assigned to ASR as shown in **Exhibit 16-B** and the 7.125% would be applied first to the District's mitigation and conservation programs. Doing so, leaves the District less than $700,000 dollars a year in revenues available for any other purpose as shown below:

Available from 7.125% User Fee	$3,599,770
Conservation Surcharge costs	-330,000
Mitigation Program Costs	-2,580,130
"Excess" Available for other uses	689,640

This assumes the undercollection rate calculated above. As demonstrated in Exhibit 4-B there are sufficient uses of the two fees for the near term without expanding the District's mission. The "excess" computed above would go towards water supply related activities.

EXHIBIT

16-A Colantuono, Highsmith, Whatley PC Legal Opinion

16-B Sources and Uses of User Fee and Water Supply Charge Revenue

EXHIBIT 16-A

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MEMORANDUM

TO:	Dave Stoldt, General Manager, Monterey Peninsula Water Management District	FILE NO:	43025.0005
FROM:	Michael G. Colantuono, Esq. Ryan Thomas Dunn, Esq.	DATE:	March 16, 2016
CC:	David C. Laredo, Esq. Heidi Quinn, Esq. David J. Ruderman, Esq.		
RE:	Legal Opinion — MPWMD User Fee		

SUMMARY

As you asked, we write to opine on four issues you identified in your February 18th email regarding the District's authority to assess an 8.325 percent user fee on retail water bills ("User Fee").

Issue 1: Because the 7.125 percent portion of the User Fee predates 1996's Proposition 218, and because the District has not increased it and instead has always expected Cal-Am to pay it, requiring Cal-Am to resume its collection would not require a Proposition 218 protest hearing because doing so is not "imposing" or "increasing" the fee. However, Cal-Am's ability to comply with the District's ordinance compelling it to raise the fee is impaired by the remaining litigation following the Supreme Court's remand in *Monterey Peninsula Water Management Dist. v. Public Utilities Com*. (2016) 62 Cal.4th 693.

Issue 2: When the District stopped receiving the User Fee from Cal-Am, it also stopped receiving the 1.2 percent component, but it did not repeal that portion. As such,

reinstituting it would not be increasing or imposing it. As is true of Issue 1 above, we conclude no new protest hearing is required.

Issue 3: The District has the authority to use the revenues from the 7.125 percent portion of the User Fee for any District purpose. The District is limited to using revenues from the 1.2 percent component for water supply projects, but it may also use these revenues for any project benefiting water users if its Board passes a resolution to do so.

Issue 4: The District can waive collection of a portion of the User Fee, in whole or part, without waiving its right to collect the entire User Fee at a later date, and it need not submit the User Fee to the voters before again beginning collection. We recommend it do so by a resolution suspending all or part of the fee that states a sunset date on the resolution. Thus, when the rate returns to its higher, previous level, no legislation action makes it so – the expiration of a temporary reduction does. Such temporary reductions can be renewed from year to year until the District requires additional revenue.

FACTS

Our opinions rest on the facts stated here. If these facts are incorrect or materially incomplete, please let us know as different facts may require us to alter our advice to you. We understand the list of ordinances in the "MPWMD User Fee History" chart provided for our review include every District Ordinance pertinent to the user fee. These are Ordinances 10, 12, 29, 32, 36, 37, 41, 51, 55, 58, 61, 67, 78, 82, 123, and 138.

We have also considered District Resolution No. 2011-09, dated May 27, 2011, which directed Cal-Am to continue to collect and remit the User Fee at a rate of 8.325 percent of charges to its customers, and we assume the facts stated in that Resolution are correct. We also understand Cal-Am last paid any portion of the user fee in June 2011, but that the District did not formally suspend Cal-Am's duty to collect the user fee or otherwise alter that duty since the District adopted Resolution 2011-09.

ANALYSIS

Issue 1. Voter approval is required to "impose or increase" property related fees, including fees for ongoing water service through an existing connection such as the user fees at issue here. (Cal. Const., art. XIII D, § 6, subd. (a); *Bighorn-Desert View Water Agency v. Verjil* (2006) 39 Cal.4th 205.) Neither Proposition 218 nor the Proposition 218

Omnibus Implementation Act of 1997 ("Omnibus Act") defines "impose," but the Court of Appeal has interpreted it to mean the initial enactment of a fee or charge. (*Citizens Ass'n of Sunset Beach v. Orange County LAFCO* (2012) 209 Cal.App.4th 1182, 1194 ["The word 'impose' usually refers to the first enactment of a tax[.]"].) Given that the District first enacted the 7.125 percent component in 1983 and gave it its current form in 1992, it has taken no action to "impose" the fee since the 1996 adoption of Proposition 218 and the fee does not yet trigger a duty to comply with that measure.

The Omnibus Act defines "increase" for purposes of Proposition 218 as a change in a fee that "[r]evises the methodology by which the tax, assessment, fee or charge is calculated, if that revision results in an increased amount being levied on any person or parcel." (Gov. Code, § 53750, subd. (h)(1)(B).) A levy is not increased for purposes of Proposition 218 if it "[i]mplements or collects a previously approved tax, or fee or charge so long as the rate is not increased beyond the level previously approved by the agency, and the methodology previously approved the agency is not revised so as to result in an increase[.]" (*Id*. at subd. (h)(2)(B).)

On the facts recited above, we conclude the District has not "increased" the fee since the July 1, 1997 effective date stated by Proposition 218's article XIII D, section 6, subdivision (d). In a Los Angeles case, the City imposed a utility users tax on both the call detail portion of cell phone bills and on minimum monthly charges. Carriers objected, claiming to lack technology to identify calls that originated or destinated in Los Angeles necessary to trigger its taxing authority under the Commerce Clause of the federal constitution as interpreted in *Goldberg v. Sweet* (1989) 488 U.S. 252. The City agreed by letter that carriers might tax only base monthly charges until technology to track the origin and destination of calls became available. Then Congress adopted the Mobile Telecommunications Sourcing Act of 2000 ("MTSA") to provide that a cellular call was presumed to originate or destinate in the city to which the carrier addressed bills for cellular service. The city then wrote carriers, directing them to commence collection of the tax on the entirety of cell phone bills. The carriers, refused and sued for declaratory relief that the City's new direction constituted a tax "increase" requiring voter approval under Proposition 218. The Court of Appeal agreed with the carriers, concluding the letters to carriers evidenced an "administrative methodology" to calculate the tax within the meaning of Government Code section 53750, subdivision (h)'s definition of "increase" and the City had changed that methodology by its post-MTSA letter. (*AB Cellular LA, LLC v. City of Los Angeles* (2007) 150 Cal.App.4th 747, 756–

757, 761–763.) Thus, even though Los Angeles never amended its utility users tax ordinance, it had established an administrative methodology that could not be changed without voter approval.

Here, we understand that there have been no changes relevant to the District's collection of, or methodology in calculating, the 7.125 percent component of the User Fee since Ordinance 67 in 1992. Cal-Am ceased complying with the District's ordinance under the force of an order of the California Public Utilities Commission, and the District promptly litigated the issue. The facts set out above identify no action of the District which can be characterized as acquiescing in the PUC's position or establishing a methodology to reduce or suspend the fee.

Moreover, *AB Cellular* recognized the District could choose to end or reduce collection for any reason without losing the right to begin collection of the full amount at a later date: "[A] local taxing entity can enforce less of a local tax than is due under a voter-approved methodology, or a grandfathered methodology, and later enforce the full amount of the local tax due under that methodology without transgressing Proposition 218." (*AB Cellular*, *supra*, 150 Cal.App.4th at p. 763.)

Accordingly, we conclude that Cal-Am's renewed collection of the User Fee does not "impose" or "increase" the User Fee so as to trigger Proposition 218 bur rather fits squarely within Government Code, section 53750, subdivision (h)(2)(B)'s exception to the definition of "increase" for collection of a "previously approved tax, fee, or charge" without change in its rate or the administrative methodology for calculating it. As such, no protest hearing is required.

Issue 2. The District adopted Ordinance 138 in 2008 to reaffirm the 1.2 percent component of the User Fee in compliance with Proposition 218. That ordinance explains that affected property owners were given opportunity to protest the 1.2 percent component pursuant to Proposition 218 and the Board found that majority protest occurred. (Ord. 138, p. 4 at ¶ 23.) Because we understand the District has not established an administrative methodology to reduce or eliminate the fee, it can collect it without new Proposition 218 compliance for the reasons stated under Issue 1 above.

Issue 3: 7.125 percent component. The proceeds of a property related fee may only be used for the purposes for which the fee was imposed. (Cal. Const., art. XIII D, § 6, subd. (b)(2).) However, the District has authority to interpret the ordinances which

establish its revenues and courts will give some deference to a reasonable construction. (E.g. *Sacks v. City of Oakland* (2010) 190 Cal.App.4th 1070, 1082 [review of city's expenditures of special parcel tax "limited to an inquiry into whether the action was arbitrary, capricious or entirely lacking in evidentiary support"].) A court would then apply standards of statutory interpretation to the ordinances, first looking at the language at issue, then the intent of the language. (*Ibid*.)

In addition, The District must construe the purpose of the fee in light of its statutory power and to defend the fee as a fee for services rendered by the District and not purely discretionary revenue, as taxes are. (Cf. Cal. Const., art. XIII C, § 1, subd. (e)(2) [exemption to Prop. 26's definition of "tax" for service fees]; *id*. at art. XIII A, § 4 [Prop. 13's two-thirds voter approval requirement for special taxes]; Gov. Code, § 50076 [defining "special tax" under Prop. 13 to exclude "any fee which does not exceed the reasonable cost of providing the service or regulatory activity for which the fee is charged and which is not levied for general revenue purposes"].)

Ordinance 55, enacted in May 1991, restructured the user fee. This ordinance authorized "immediate collection of a user fee in the aggregate amount of 6.824 percent of Cal-Am bills, replacing prior fees which amounted to 8.125 percent of that bill." (Ord. 55, § 2.) Thus, Ordinance 55 "replac[ed]" earlier user fee ordinances, making them irrelevant to analysis of allowable uses of the fee. Ordinance 55's recitals mention a need to "implement the mitigation measures under the five year plan to ease environmental impacts caused by water production" (*id*. at p. 3, ¶ 11) but do not otherwise limit the District's use of the fee. Similarly, Ordinance 55 refers to fees "to fund mandatory water rationing." That ordinance relabeled and decreased the "water rationing user fee" to "a water conservation user fee of 2.11 percent" of Cal-Am bills. (*Id*. at p. 2, ¶ 10.) Ordinance 55 does not otherwise explain the intended purposes of this "water conservation user fee" or identify specific limitations on its use.

In September 1991, the District enacted Ordinance 58, authorizing "a user fee in the aggregate amount of 8.125 percent" and "replacing prior fees authorized by Ordinance 55 which amounted to 6.824 percent" of customer bills. (Ord. 58, § 2.) Ordinance 58 states the fee's purpose "to fund mandated District water supply activities, including the five year mitigation program and the water conservation/rationing program caused by the water supply emergency" (*id*. at § 1) but does not more precisely limit use of the revenues. Thus, the District has the discretion to

use these funds as deems fit to accomplish the fee's purpose to fund water supply activities, including conservation, rationing and other similar efforts.

In July 1992, the District enacted Ordinance 61, to "amend the user fee established by Ordinance No. 58" to delete a surcharge to fund rationing. (Ord. 61, p. 1, ¶ 6.) Ordinance 61 refers to the "2.11 percent user fee established by Ordinance No. 55 to fund water conservation activities" and reduces it from 2.11 to 1.11 percent. (*Id*. at § 6.) The District adopted this 7.125 percent aggregate fee, "replacing prior fees," meaning the District could construe it as a completely new ordinance. (*Ibid*.) Again, there are no express limitations on the use of the revenues derived from the 7.125 percent fee in Ordinance 61, and thus the District has the power to use the revenues for the purpose for which the fee was imposed, again, water conservation.

Ordinance 67, enacted in December 1992, states an intent to "reallocate the existing user fee established by Ordinance No. 55 and modified by Ordinance No. 61, so as to increase user fee revenue available for the Five Year Mitigation Program." (Ord. 67, p. 1, ¶ 1.) A recital assumes the 1.11 percent fee discussed in Ordinance 61 was "exclusively dedicated to conservation activities." (*Id*. at p. 1, ¶ 2.) The same recital states the District could use the 1.11 percent fee "for District programs relating to conservation, rationing, irrigation, erosion control, mitigation, and/or water augmentation expenses, provided that all such expenses shall be required to confer benefit and or service to existing water users." (*Id*. at p. 1, ¶ 2.)

Ordinance 67's third section refers to the "aggregate user fee," understood to be "the present 7.125 percent user fee." (Ord. 67, § 2.) It reads in full:

> Section Three: User Fee Reallocation
>
> A. This ordinance shall modify the accounting and allocation of the aggregate user fee presently collected to fund water conservation programs of the District, and instead **allow the use, allocation and accounting of that same fee to District programs relating to conservation, rationing, irrigation, erosion control, mitigation, water planning, and/or water augmentation program expenses, provided that all such expenses must be [sic] confer benefit and/or service to existing water users**. This ordinance shall cause neither a reduction nor an increase in fees, but shall instead modify the means by which use of those fees are monitored and allocated.

> B. The amount of revenue reallocated shall be equal to 1.11 percent collected on the Cal-Am water bill as established by the District in Ordinance No. 55 and modified by Ordinance No. 61 in July 1992.
>
> C. This ordinance shall republish the authorization to collect user fees in the same manner and amounts as previously authorized by ordinance. This fee shall not be exclusively dedicated to a single activity or program, but instead **may be allocated at the discretion of the Board provided that all such expenses shall confer benefit and/or service to existing water users**. **These services may include, but shall not be limited to conservation, rationing, irrigation, erosion control, mitigation, water supply planning, and water augmentation program expenses**. **Unincumbered [sic] fee revenue in any single year may be placed in the capital project sinking fund and may later be used to fund expenses associated with planning for, acquiring and/or reserving augmented water supply capacity (including engineering, hydrologic, legal, geologic, fishery, appraisal, financial, and property acquisition endeavors)**.
>
> D. A similar reallocation shall be made to user fees collected from other district water distribution systems of fifty (50) connections or more.

Thus, Ordinance 67 assumes that the 1.11 percent portion of the user fee discussed in Ordinances 55 and 61 is limited to funding "water conservation programs." (Ord. 67, § 3, ¶ A.) It "reallocates" that 1.11 percent to be used as is the rest of the 7.125 percent fee. (*Id*. at § 3, ¶ C.) Ordinance 67 defines the purposes for which the fee may be used quite broadly and "allow[s]" the Board "discretion" to allocate the fee as it sees fit, as long as there is a "benefit and/or service to existing water users." (*Ibid*.) Finding 4 states Ordinance 67 was required "to permit continuation of mandated and essential District programs." (Id. at p. 1, ¶ 4.)

It bears noting that Ordinance 78, enacted in 1995 to finance the New Los Padres Dam, states the user fee was "established to fund costs of water conservation, and programs to ameliorate environmental impacts caused by water production." (Ord. 78, § 5). Ordinance 78 was repealed by 1996's Ordinance 82 when the voters rejected the dam proposal (Ord. 82, § 1), and Ordinance 82's findings state that the user fees in place on the date of Ordinance 78's approval "shall remain in force and be unaffected" because the measure failed. (*Id*. at p. 1, ¶ 5).

In sum, the District may use revenues from the 7.125 percent component of the fee to provide a benefit or service to water users due to the very broad language of Ordinance 78.

Issue 3: 1.2 percent component. The 1.2 percent component enacted by Ordinance 123 and affirmed in Ordinance 128 specifies what the proceeds of this component may fund. Ordinance 123's second section states the proceeds of the fee "shall fund District water supply activities, including Phase 1 of its Aquifer Storage & Recover (ASR) effort." Thus, the District must use these funds for water supply programs and services. (E.g., *Common Cause v. Board of Supervisors* (1989) 49 Cal.3d 432, 443 ["'shall' is ordinarily construed as mandatory"].)

Ordinance 123's Section Two also states the fee "may also be allocated, by resolution at the discretion of the District Board of Directors, provided that all such expenses shall confer benefit and/or service to existing Cal-Am … water users." (Ord. 123, § 2.) It provides an exemplary list of such services — "conservation, rationing, irrigation, erosion control, mitigation, water supply planning, and water augmentation program expenses" (*ibid*.) — but states services which may be funded "shall not be limited to" those specified. It also states unexpended fee revenue "may" be placed in a reserve for later use for water supply capacity projects. (*Ibid*.) Thus, the District has discretion to use the 1.2 percent revenues for any "water supply activity" activity but may also, by resolution, fund any lawful District program or service that benefits the water users who pay the fee.

Ordinance 138, enacted in 2008 (after the effective date of Proposition 218), states the District "shall use" the 1.2 percent fee "to fund ASR costs" (Ord. 138, p. 3, ¶ 15) and the fee "may not be used for any other purpose or to fund general governmental activities." (*Id*. at p. 3, ¶ 18.) It further states fee proceeds "shall fund District water supply activities, including capital acquisition and operational costs for present and future ASR purposes" including Phase 1 of the ASR and subsequent ASR activities. (*Id*. at § 2.) Ordinance 138 uses the same language as Ordinance 123 allowing the Board to approve, by resolution, the use of the fee for other purposes that benefit water users. (*Ibid*.)

Ordinance 138 does not state a sunset date, but does state that the District cannot collect the 1.2 percent fee if revenues "exceed funds required to maintain plant, equipment, facilities, supplies, personnel and reasonable reserves necessary to provide

water service." (Ord. 138, § 5.) This section also requires the Board to hold an annual hearing to review fee expenditures and requires the fee to sunset "unless the Board determines that the purpose of the fee is still required, and the amount of the fee is still appropriate." (*Ibid*.) The Board must also reduce the fee if "the amounts needed to fund that purpose are decreased." (*Ibid*.)

Thus, the District may use proceeds of the 1.2 percent component for "water supply activities" as it reasonably defines that term, including but not limited to ASR purposes. The District also has the power, by resolution, to use the proceeds of the 1.2 percent component for any other project benefiting water users.

Issue 4. *AB Cellular*, discussed above, expressly considered the authority of an agency to collect less than the approved amount of a tax, fee, or charge: "[A] local taxing entity can enforce less of a local tax than is due under a voter-approved methodology, or a grandfathered methodology, and later enforce the full amount of the local tax due under that methodology without transgressing Proposition 218." (*AB Cellular*, *supra*, 150 Cal.App.4th at p. 763.) Thus, because the District has established a total user fee in the amount of 8.325 percent consistently with Proposition 218, it may collect that entire amount, part of that amount, or none of that amount if the funds are not needed.

Notwithstanding the unqualified language of *AB Cellular*, we recommend the District reduce the fee by a resolution which includes a sunset date. In this way, the District can increase the fee without an action of its Board that can be characterized as an "increase" within the meaning of Government Code, section 53750, subdivision (h). The sunset date can be extended as necessary until the District determines more funds are needed, in which case the suspension or reduction resolution can be allowed to lapse, triggering Cal-Am's duty to collect the fee at the higher rate.

Conclusion

The District need not comply with Proposition 218 to resume collection of the user fee once the PUC litigation allows Cal-Am to do so. The ordinance history of the fee allows the District fairly wide discretion it the use of fee proceeds provided those uses provide benefit to the water users who pay the fee.

Thank you for the opportunity to assist. If we can provide further advice or assistance, contact Michael at (530) 432-7359 or MColantuono@chwlaw.us or Ryan at (213) 542-5717 or RDunn@chwlaw.us.

MPWMD
User Fee and Water Supply Charge
8 Year Forecast
Scenario: No attempt to reduce shortfalls

3/30/2016

	2017	2018	2019	2020	2021	2022	2023	2024
GENERAL USER FEE PROGRAMS								
Sources								
Estimated Cal-Am Revenue (Note 1)	57,000,000	58,710,000	60,471,300	103,285,439	106,384,002	109,575,522	112,862,788	116,248,672
Less Undercollection at 11%	50,730,000	52,251,900	53,819,457	91,924,041	94,681,762	97,522,215	100,447,881	103,461,318
Potential General (7.125%) User Fee	3,614,513	3,722,948	3,834,636	6,549,588	6,746,076	6,948,458	7,156,912	7,371,619
Uses								
Mitigation Program (Note 2)	2,580,129	2,631,732	2,684,366	2,738,054	2,792,815	2,848,671	2,905,644	2,963,757
Conservation Surcharge Program (Note 2)	300,000	306,000	312,120	318,362	324,730	331,224	337,849	344,606
Water Demand Database Replacement	600,000							
Drought Contingency Plan Grant	125,000	100,000						
Sleepy Hollow Intake Project	-	200,000	-	-	-	-	-	-
Total Uses	3,605,129	3,237,732	2,996,486	3,056,416	3,117,544	3,179,895	3,243,493	3,308,363
Excess/(Shortfall)	9,383	485,216	838,150	3,493,172	3,628,531	3,768,563	3,913,418	4,063,256
ASR USER FEE PROGRAMS								
Sources								
Potential ASR (1.20%) User Fee	608,760	627,023	645,833	1,103,088	1,136,181	1,170,267	1,205,375	1,241,536
Uses								
ASR - Phase 1 (Note 3)	505,000	22,000	11,680	11,914	12,152	12,395	12,643	12,896
ASR - Future Phases (Note 4)	50,000	50,000		260,000	260,000	520,000	520,000	520,000
Rabobank Loan Debt Service	230,000	230,000	230,000	230,000	230,000	230,000	230,000	
Rabobank Loan Sinking Fund (Note 5)			504,738	504,738	504,738	504,738	504,738	504,738
Total Uses	785,000	302,000	746,418	1,006,652	1,006,890	1,267,133	1,267,381	1,037,634
Excess/(Shortfall)	(176,240)	325,023	(100,585)	96,437	129,291	(96,866)	(62,006)	203,902
WATER SUPPLY PROGRAMS								
Sources								
Water Supply Charge	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000	3,400,000
Uses								
Repay Reserves used for GWR	335,000	335,000	335,000					
Groundwater Replenishment Project	1,200,000	400,000						
GWR Operating Reserve (Note 6)			894,000	223,500	223,500	223,500		
GWR Drought Reserve (Note 7)				217,242	217,242	217,242	217,242	217,242
Cal-Am Desalination	510,000	400,000						
Local Water Projects	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Carmel River/Los Padres (Note 8)	400,000	500,000	350,000	100,000	50,000	50,000	50,000	50,000
Water Allocation Process		900,000	400,000					
Water Supply Staff	1,152,000	1,175,040	1,198,541	1,222,512	1,246,962	1,271,901	1,297,339	1,323,286
Services and Supplies	477,600	487,152	496,895	506,833	516,970	527,309	537,855	548,612
Total Uses	4,274,600	4,397,192	3,874,436	2,470,087	2,454,673	2,489,952	2,302,436	2,339,140
Excess/(Shortfall)	(874,600)	(997,192)	(474,436)	929,913	945,327	910,048	1,097,564	1,060,860
SUMMARY								
Total Revenues Available	7,623,273	7,749,971	7,880,470	11,052,676	11,282,257	11,518,724	11,762,286	12,013,155
Total Uses	8,664,729	7,936,924	7,617,340	6,533,154	6,579,108	6,936,980	6,813,310	6,685,137
Excess/(Shortfall)	(1,041,457)	(186,953)	263,130	4,519,522	4,703,149	4,581,744	4,948,976	5,328,018

NOTES:

(1) Assumes 3.0% annual growth and $41 million addition in 2020
(2) Assumes 2.0% annual growth
(3) Current draft of Seaside lease agreement
(4) 2 well pairs; 1 in 2019, 1 in 2021; Does not include Carmel Valley well capacity
(5) $3,105,159 due in 2023
(6) $894 per AF @1000 AF in year 1; @250 AF per year three years after
(7) $894 per AF @243 AF/yr for 5 years
(8) IFIM and GSFlow; Insurance; No capital included

ITEM: DISCUSSION ITEM

17. UPDATE ON SUSTAINABLE GROUNDWATER MANAGEMENT ACT (SGMA): (a) SEASIDE GROUNDWATER BASIN, AND (B) CARMEL VALLEY ALLUVIAL AQUIFER

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**David J. Stoldt**	**Cost Estimate:**	**N/A**

General Counsel Approval: N/A
Committee Recommendation:
CEQA Compliance: N/A

SUMMARY – Seaside Groundwater Basin: The Sustainable Groundwater Management Act (SGMA) established a process for local agencies to request that the Department of Water Resources (DWR) revise the boundaries of existing groundwater basins or subbasins, including the establishment of a new subbasin. The Basin Boundary Emergency Regulation was developed through an extensive stakeholder outreach process and was adopted on October 21, 2015. The provisions of the emergency regulation go into effect on November 16, 2015.

On November 19, 2015 District staff met with representatives of the Seaside Basin Watermaster, California American Water Company, Marina Coast Water District, and Monterey County Water Resources Agency to discuss a proposal for boundary modification. Then on December 14, 2015 the District's Water Resources Division Manager sent out the proposal for comment from the same agencies.

The District submitted a formal Initial Notification to DWR on February 12, 2016 – notification intended to be preliminary to signal that a modification request ***may*** occur. It served to notify other local agencies, public, and the department.

The proposal can be summarized as follows: The Bulletin 118 boundary is shown in the first attachment (**Exhibit 17-A**) and is labeled "Salinas Valley Seaside Area". The modification that the group achieved consensus on is shown in the second attachment (**Exhibit 17-B**). This modification inserts the adjudicated Seaside Basin boundary and removes the remainder area in the southwest portion of the DWR boundary, as this area is not hydrogeologically linked to the aquifer system in the Seaside Basin. The remainder area to the north of the Seaside Basin has been renamed "Salinas Valley Marina Area", consistent with our discussion. The DWR's basin modification application requests that a map be provided to show the proposed basin boundary modification, which is depicted in Figure 1 (**Exhibit 17-B**). Note that the subbasin names are abbreviated on this map, but will be described with their full names per Bulletin 118 as part of the application. In addition, the DWR's application requests that a map showing all local agency boundaries in the affected area of the boundary modification also be provided. Accordingly, we

have prepared the map as depicted in Figure 2 (**Exhibit 17-C**). Figure 1 and Figure 2 were again distributed to the group of interested stakeholders for comment on March 15, 2016.

The District submitted the Basin Boundary Modification Request March 31, 2016. It will be deemed "**SUBMITTED"** signifying the submission is believed to be complete and the requesting agency is officially submitting the package to DWR for a completeness review. It will be deemed "**COMPLETE"** once DWR has reviewed the submission package for substantial compliance with the requirements and the 30-day Public Input Period begins. Public input must be made in compliance with the requirements of §343.12 of the regulation and submitted to the Basin Boundary Modification System as a "Comment" to the "Complete" modification request submission. All submitted information will be public accessible through DWR web site.

The District was notified on April 5th that there are two issues DWR wants corrected in order to deem the application "complete":

1. Support letters from ¾ of the affected local agencies and water systems, and
2. Discussion regarding removal of the southwest area of the Bulletin 118 Seaside boundary.

The second item will be satisfied because the discussion is included in the application materials and staff just needs to point out to the reviewer where that is located. The first item, however, is more problematic in that it could be a challenge to get support letters drafted through the various local entities. Staff has contacted the DWR reviewer to see if it might be possible to just get support letters from the MPWMD and Watermaster boards as a means to satisfy this requirement.

SUMMARY – Carmel Valley Alluvial Aquifer: On February 29th, the General Manager sent an inquiry jointly to California Department of Water Resources (DWR) and State Water Resources Control Board (SWRCB) staff, describing an inherent conflict in how DWR and SWRCB view the Carmel River Alluvial Aquifer and how it will be affected by the Sustainable Groundwater Management Act (SGMA). We had mentioned it briefly to DWR staff on a few occasions, but at this time summarized the issue in a single page, attached as **Exhibit 17-D**.

The Water Management District's conclusion is that what DWR refers to as the Carmel Valley Groundwater Basin in Bulletin 118 has been determined to be surface water by the SWRCB. This led to several questions:

- Should the Carmel River aquifer be exempt from SGMA?
- What is the best way to exempt it – by letter from DWR or by removal from Bulletin 118?
- If by removal from Bulletin 118, should it be done through the DWR Basin Boundary Modification Request System by formal request by March 31st, or some other method?
- Would a meeting between DWR, SWRCB, and the District (the GSA) be necessary to discuss this matter?

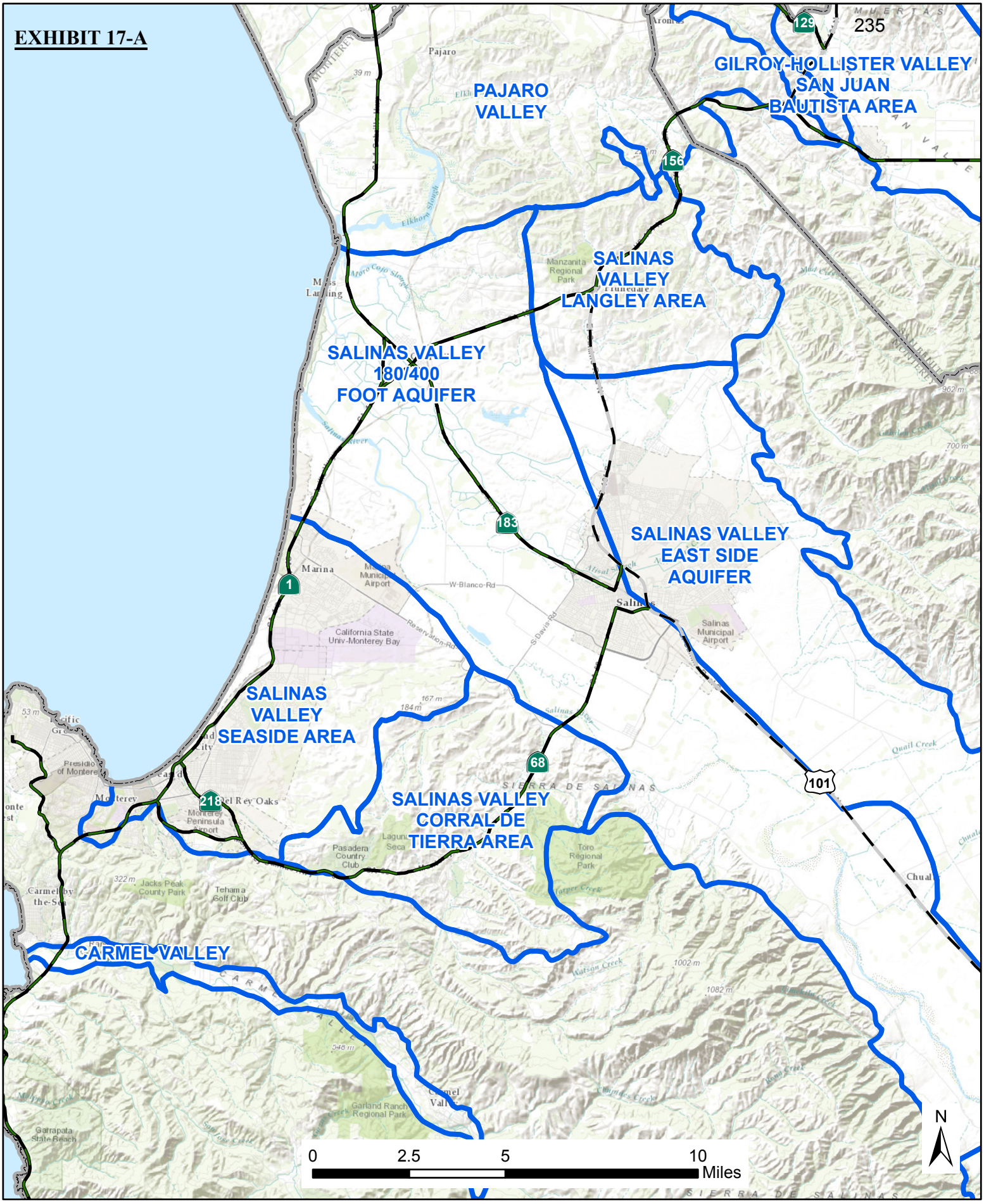
On March 16, 2016 DWR staff stated “I don't think Monterey would have to take any action. Although I doubt we will deal with this through a basin adjustment, DWR would have the ability to make any adjustments without having Monterey submit since this is a special technical issue.” We also learned that there was one other basin in the State with a similar issue, and 4-5 others with similar problems for a portion of the basin.

We also informed DWR that their Bulletin 118 boundary for the Carmel River Basin were outdated and inconsistent with current knowledge. DWR indicated that it is currently updating the Department defined modifications to basin boundaries (Administrative Adjustments) and will include the District’s changes as part of that set. On March 29th, the District forwarded GIS shapefiles and SWRCB Order 95-10 describing the geologic setting as surface water flowing in a known and definite channel underground.

We have been told to expect a letter or notification from DWR that the Carmel River Basin is exempt from SGMA and will not require a Groundwater Sustainability Plan.

EXHIBIT

17-A Bulletin 118 Seaside Groundwater Basin Boundary
17-B Consensus Proposed Seaside Groundwater Basin Modification
17-C Local Agency Seaside Basin Boundaries
17-D Summary of The Carmel Valley Alluvial Aquifer issues with SGMA



Seaside Area Sub Basin
and Adjacent Salinas Valley Groundwater Basins

Source: DWR Bullietin 118, 2004

Date: 10/27/2015

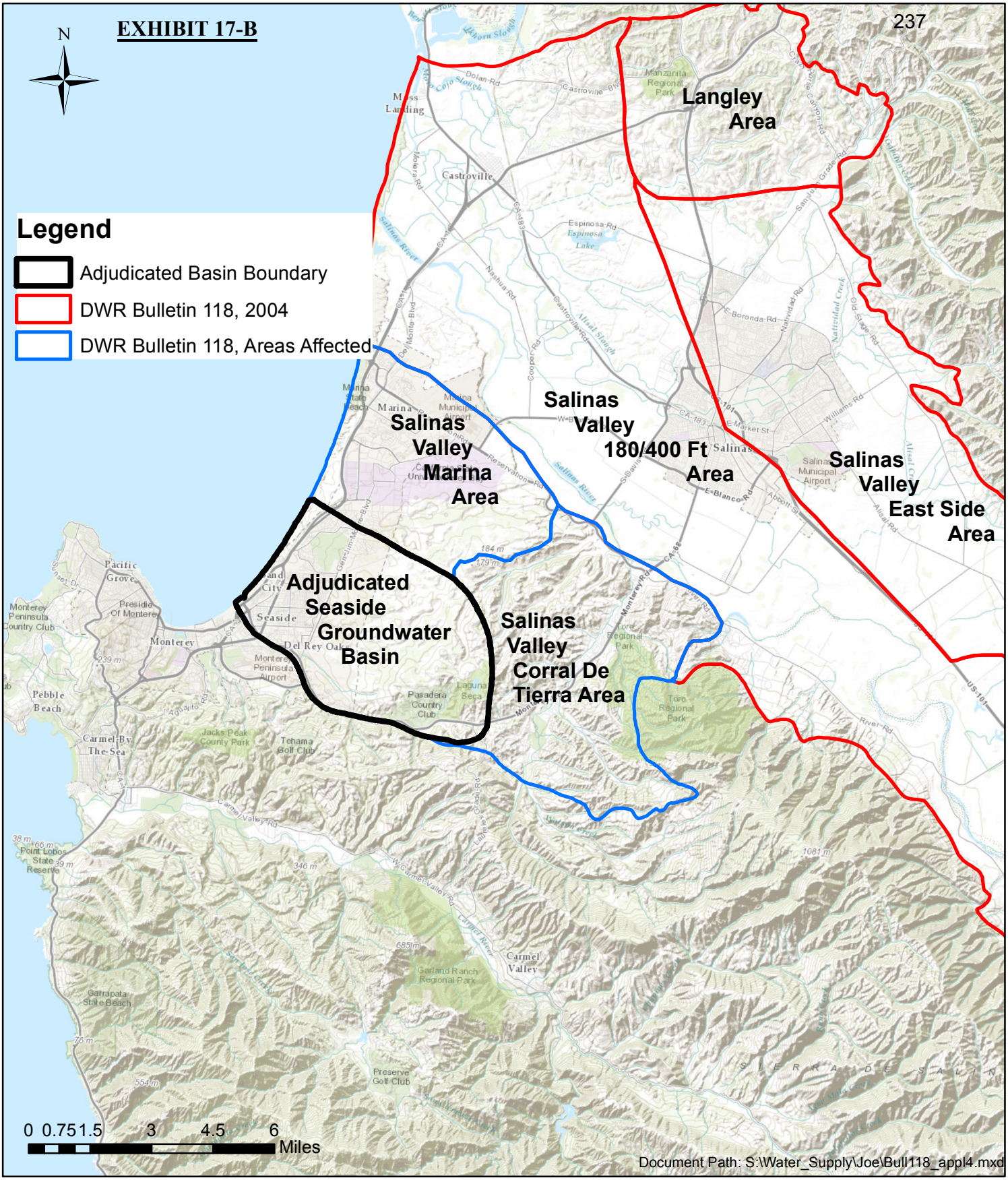
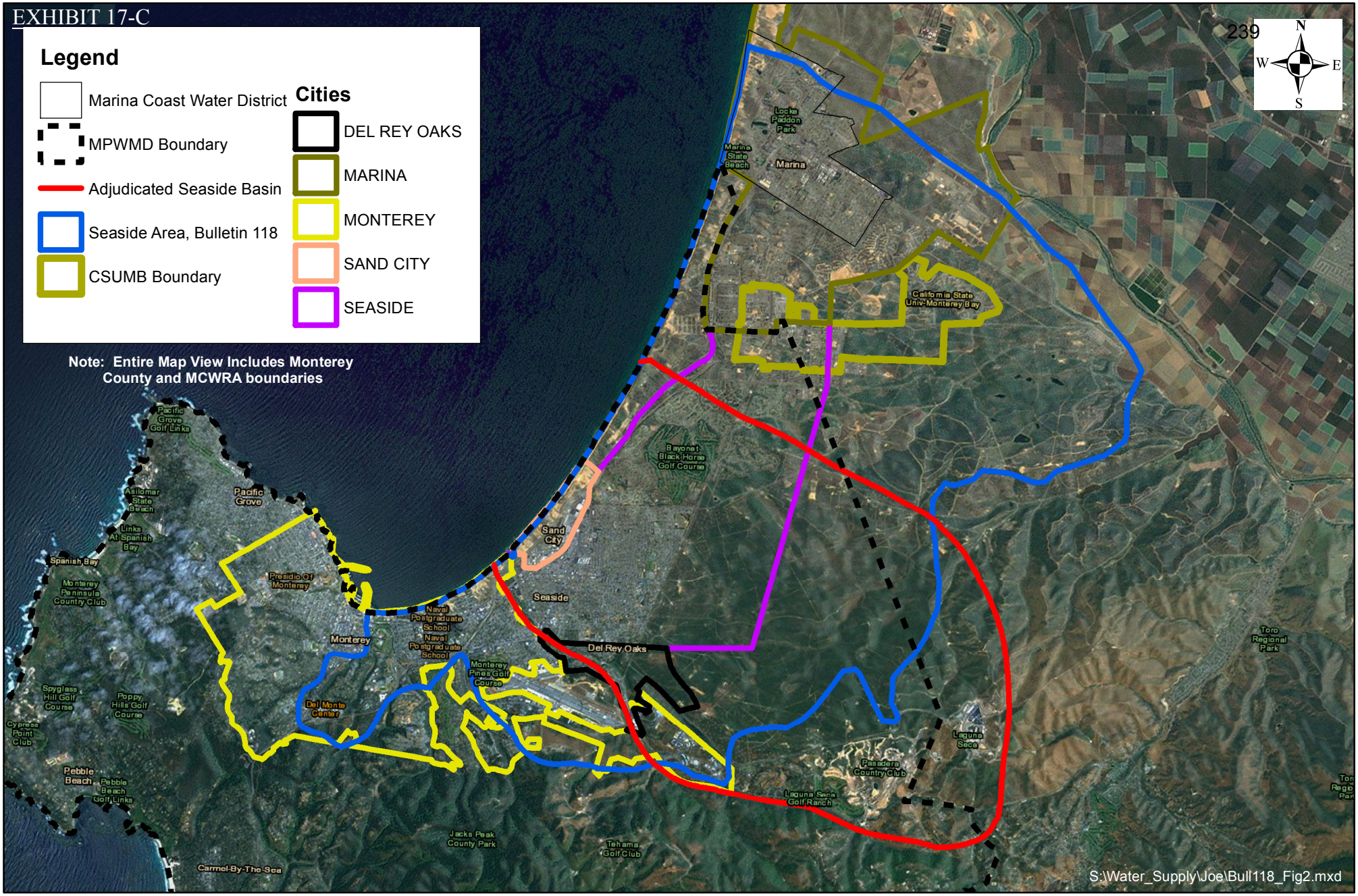


Figure 1: Regional Map showing location of Adjudicated Seaside Groundwater Basin & Affected DWR Bulletin 118 Basin Boundaries

Monterey Peninsula Water Management District

EXHIBIT 17-C



1.5 0.75 0 1.5 Miles

Figure 2: Proposed Modified Basin Boundary with Local Agencies

Monterey Peninsula Water Management District

EXHIBIT 17-D

The Carmel Valley Alluvial Aquifer and the Sustainable Groundwater Management Act (SGMA)

There appears to be an inherent conflict between how the Department of Water Resources (DWR) and the State Water Resources Control Board (SWRCB) view the Carmel Valley Alluvial Aquifer, which affects how the aquifer must be viewed relative to SGMA.

> *Water Code Section 10722 states that a basin's boundaries shall be as identified in Bulletin 118 and Section 10722.4 sets that the Department of Water Resources (DWR) shall categorize the basins by priority, including medium- or high-priority.*

The Carmel Valley Groundwater Basin is an identified groundwater basin in Bulletin 118. DWR has ranked it a "high-priority" basin (Basin 3-7) under its CASGEM Basin Prioritization program. Hence, according to DWR the Carmel Valley Groundwater Basin is subject to SGMA.

> *Water Code Section 10727 states that a groundwater sustainability plan shall be developed for each medium- or high-priority basin.*

Therefore, the Carmel Valley Groundwater Basin would appear to need a groundwater sustainability plan (GSP) developed by a declared groundwater sustainability agency (GSA). The Monterey Peninsula Water Management District has already become the GSA for the Carmel Valley.

> *However, Water Code Section 10721 states "Groundwater" means water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated, but does not include water that flows in known and definite channels.*
>
> *State Water Resources Control Board (SWRCB) in Section 3.2 of its Order WR 95-10 (July 6, 1995) determined (a) "surface flow recharges river underflow and, consequently, causes a rise in Carmel Valley aquifer levels"; (b) "The subsurface flow has a pattern which demonstrates that it is within a known and definite channel rather than that of a diffused body of percolating groundwater."; and (c) the SWRCB found that "downstream of RM 15 the aquifer underlying and closely paralleling the surface water course of the Carmel River is water flowing in a subterranean stream and subject to the jurisdiction of the SWRCB."*

Since then, the aquifer has been subject to surface water rights and the jurisdiction of the SWRCB. Because of the determination of the SWRCB and SGMA's definition of "groundwater" excluding water that flows in known and definite channels, then the Carmel River Groundwater Basin identified in Bulletin 118 is not groundwater at all and should therefore be removed from the Bulletin and the requirements of SGMA.

ITEM: INFORMATIONAL ITEMS/STAFF REPORTS

18. LETTERS RECEIVED

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Arlene Tavani**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: N/A

A list of letters that were submitted to the Board of Directors or General Manager and received between March 8, 2016 through April 8, 2016 is shown below. The purpose of including a list of these letters in the Board packet is to inform the Board and interested citizens. Copies of the letters are available for public review at the District office. If a member of the public would like to receive a copy of any letter listed, please contact the District office. Reproduction costs will be charged. The letters can also be downloaded from the District's web site at www.mpwmd.net.

Author	Addressee	Date	Topic
Mark Stone	Catherine J. K. Sandoval	3/22/2016	Pure Water Monterey Project
Sam Farr	Catherine J. K. Sandoval	3/14/2016	Pure Water Monterey Water Recycling and Purification Project
Brent Constantz	MPWMD Board	3/8/2016	DeepWater Desal LLC Status Report

ITEM: INFORMATIONAL ITEMS/STAFF REPORTS

19. COMMITTEE REPORTS

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Arlene Tavani**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: N/A

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

EXHIBIT

19-A Final Minutes of March 14, 2016 Administrative Committee Meeting
19-B Final Minutes of December 14, 2015 Legislative Advocacy Committee Meeting
19-C Final Minutes of September 22, 2015 Technical Advisory Committee Meeting

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MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

EXHIBIT 19-A

FINAL MINUTES
Monterey Peninsula Water Management District
Administrative Committee
March 14, 2016

Call to Order
The meeting was called to order at 3:31 PM in the District Conference Room.

Committee members present: Andrew Clarke
Brenda Lewis (arrived at 3:33 PM)
David Pendergrass

Staff present: Suresh Prasad, Administrative Services Manager/Chief Financial Officer
Cory Hamilton
Cynthia Schmidlin, Human Resources Analyst
Sara Reyes, Office Services Supervisor

Oral Communications
None

1. Approve Minutes of February 10, 2016 Committee Meeting
On a motion by Clarke and second by Pendergrass, the minutes of the January 19, 2016 meeting were approved on a vote of 2 to 0.

Items on Board Agenda for March 21, 2016

2. Consider Adoption of Resolution 2016-05 – Reestablish User Fee and Suspend its Collection on California American Water Bills for Remainder of Fiscal-Year 2015-16
On a motion by Clarke and second by Pendergrass, the committee voted 2 to 0 to recommend the Board approve the revised resolution as amended by staff.

3. Authorize the Creation of an Assistant Water Resources Engineer Position and Recruitment for Candidates within the Engineering Career Ladder
On a motion by Clarke and second by Lewis, the committee voted 3 to 0 to recommend the Board authorize the creation of an Assistant Water Resources Engineer position and recruitment for candidates within the Engineering Career Ladder.

4. Consider Expenditure for Assistance with Collection of Streamflow Measurements to Support Development of an Instream Flow Model for the Carmel River
On a motion by Lewis and second by Clarke, the committee voted 3 to 0 to recommend the Board

approve the expenditure of up to $70,000 for additional assistance with developing an IFIM to revise instream flow requirements for the Carmel River.

5. Consider Expenditure to Contract with Consulting Team for North Monterey County Drought Contingency Plan

On a motion by Clarke and second by Lewis, the committee voted 3 to 0 to recommend the Board authorize the hire of the consulting team of Bryant & Associates, Brown & Caldwell and Data Instincts in affiliation with Thomas Brand Consulting and Carollo Engineers to work on the North Monterey County Drought Contingency Plan, subject to Us. Bureau of Reclamation authorization.

6. Declaration of Surplus Assets

On a motion by Lewis and second by Clarke, the committee voted 3 to 0 to recommend the Board declare the items presented by staff as surplus assets to be donated to the Monterey Regional Waste Management District's Last Chance Mercantile for either resale or disposal.

7. Discuss Finance Plan for Utilization of User Fee and Water Supply Charge Funds

Presented as information only. No action taken by the committee.

8. Consider Adoption of Treasurer's Report for January 2016

On a motion by Lewis and second by Clarke, the committee voted 3 to 0 to recommend the Board adop the January 2016 Treasurer's Report and financial statements, and ratification of the disbursements made during the month.

Other Business

9. Review Draft March 21, 2016 Board Meeting Agenda

The committee made no changes to the agenda. Prasad reported closed session agenda will likely be added.

Adjournment

The meeting was adjourned at 4:11 PM.

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MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

EXHIBIT 19-B

FINAL MINUTES
Legislative Advocacy Committee of the
Monterey Peninsula Water Management District
December 14, 2015

Call to Order
The meeting was called to order at 8:30 am in the MPWMD conference room.

Committee members present:	David Potter, Chair Robert S. Brower, Sr. Andrew Clarke
Staff members present:	David J. Stoldt, General Manager Arlene Tavani, Executive Assistant
District Counsel present:	David C. Laredo
Consultant present:	John Arriaga, JEA and Associates
Comments from the Public:	No comments.

Presentations

1. Overall Legislative Status Report from John Arriaga

Arriaga reported that in 2014 and 2015 Assembly and Senate legislation was focused on water and obtaining approval for a water bond. In 2015, drought response legislation was considered early in the year. Legislation that would fund development of potable water supplies for financially depressed rural areas, and fund food assistance for workers affected by drought related job losses was also approved. The state is expected to receive $11 billion in unbudgeted revenues through 2019 and 2020. For 2016, there will be some activity towards development of an initiative on Proposition 218 funding for stormwater reuse projects.

Stoldt reported that at the federal level, discussions will begin in January 2016 on legislation that would de-authorize projects that had been approved for funding, but had not been constructed. This would make funds available for new projects, such as Pure Water Monterey (PWM).

It was suggested that the Legislative Committee members should meet with Congressional and Assembly candidates in January or February 2016 to brief them on the Water Management District's proposals. In February 2016, Water Management District representatives will attend the ACWA conference in Washington D.C. Members of the Fort Ord Reuse Authority (FORA) will also be in Washington D.C. over the same time period for a different conference. This could offer a good opportunity for Water Management District and Monterey County representatives to meet with federal legislators on regional priorities.

Action Items

2. Adopt Minutes of April 8, 2016 Committee Meeting

On a motion by Brower and second of Clarke, the minutes were approved on a vote of 3 – 0 by Brower, Clarke and Potter.

Discussion Items

3. Report on Legislative Status and Tracking from John Arriaga

Arriaga reported that there is legislation underway that would require a public vote on any project that would propose to utilize bond funding in excess of $2 billion. This is intended to impede progress on the Interlake Tunnel and High Speed Rail projects.

4. Regional Approach to State Water Bond (Prop. 1)

Stoldt stated that he would like to meet with local water agency managers to identify regional priorities. This would assist in his efforts to inform local legislators about those priorities. Stoldt noted that this is a difficult subject because agencies are competing against each other for state and federal funds. The Water Management District and Monterey Regional Water Pollution Control Agency submitted an application for use of State Revolving Funds for PWM. After the application is accepted, the agencies could apply for Proposition 1 funds.

Arriaga stated there is support for the PWM project among California legislators. It was agreed that staff should make contact with John Laird and Governor Brown's office about the need to support PWM. They must be made aware of the project benefits, so that funding for the project will not be delayed. The concern is that there is not much cost differential between Cal-Am's desalination project and PWM. If the desalination project moved forward first, it could delay funding of PWM; a project that if approved would provide water to the community prior to completion of a desalination facility. Assembly member Monning was scheduled to tour the Pure Water Monterey demonstration facility on December 15, 2016.

5. Plan of Action for Meetings with State on the Cease and Desist Order (CDO)

An application to extend the CDO has been submitted. Due to exparte rules there can be no discussions with the State Water Resources Control Board (SWRCB) on the extension. Stoldt distributed a handout that outlined conditions the SWRCB placed on the loan issued to the City of Pacific Grove for development of its Local Water Project. The conditions specify that the SWRCB must consent to the use of any recycled water from the project for new service connections. Stoldt explained that draft MPWMD Ordinance No. 168 proposes to establish entitlements from the project for the City of Pacific Grove and the Water Management District. The entitlements could be utilized whenever the City is authorized to access the water, and there is no plan to circumvent the CDO. It was suggested that Water Management District representatives might meet with the SWRCB to explain the purpose of the ordinance. Stoldt stated that he would contact Commissioner D'Adamo's office to determine if a meeting would be appropriate.

6. Development of Annual State and Federal Priorities for District

Stoldt distributed a draft 2016 Legislative Agenda for review by the committee. Additional discussion and refinement of this document would occur at the next committee meeting. Stoldt stated that the Water Management District has received a Drought Contingency Planning Grant and a Basin Study Grant. The County of Monterey has cooperated with the Water Management District on the Basin Study, but has not provided the same level of cooperation on Drought Contingency Planning. Potter stated that he would convene a joint meeting of the Legislative Advocacy Committee, his ad-hoc committee of the Board of Supervisors, and ad-hoc water resources committee of the Monterey County Water Resources Agency to facilitate coordination on water issues.

Other Items: No other items were discussed.

Set Next Meeting Date
No follow-up meeting was scheduled.

Adjournment
The meeting was adjourned at 9:40 am.

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MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

EXHIBIT 19-C

FINAL MINUTES
Technical Advisory Committee of the
Monterey Peninsula Water Management District
September 22, 2015

Call to Order
The meeting was called to order at 2:36 pm in the Conference room at the offices of the Monterey Peninsula Water Management District.

Committee members present:	City of Carmel-by-Sea	Marc Wiener (arrived at 2:45 pm)
	City of Del Rey Oaks	Daniel Dawson
	City of Monterey	Todd Bennett, Chair
	City of Pacific Grove	Anastazia Aziz
	City of Seaside	Tim O'Halloran
	Monterey Peninsula Airport District	Shelley Glennon
Committee members absent:	County of Monterey	Rob Johnson
	City of Sand City	Todd Bodem, Vice Chair

Staff members present: David J. Stoldt, General Manager
Stephanie Locke, Water Demand Division Manager
Arlene Tavani, Executive Assistant

Comments from the Public: No comments.

Action Items

1. Consider Adoption of February 18, 2015 Committee Meeting Minutes
On a motion by Aziz and second of Bennett, the minutes were approved on a vote of 3 – 2. Glennon, Aziz and Bennett voted in favor of the motion. Dawson and O'Halloran abstained from voting as they were not present at the February 18, 2015 meeting. Johnson, Bodem and Wiener were absent for the vote.

2. Discuss Implementation of 2015 Department of Water Resources Update to Model Water Efficient Landscape Ordinance (MWELO)
Dawson offered a motion that was seconded by O'Halloran to approve adoption of the Model Water Efficient Landscape Ordinance; that it be adopted by all jurisdictions within the Water Management District; and that the District be responsible to implement the ordinance as a regional measure. The motion was approved on a vote of 6 – 0 by Dawson, O'Halloran, Wiener, Bennett, Aziz and Glennon. Johnson and Bodem were absent. There was also consensus that the Water Management District should send a letter to each jurisdiction regarding regional implementation of the State landscape ordinance. No public comment was directed to the committee on this item.

Mark Wiener joined the meeting at 2:45 pm during the committee discussion of this item.

Locke introduced the item to the committee and responded to questions. Comments from the committee members: (A) Will the Water Management District assess a fee for processing the landscape permits? *Response: Yes, a permit processing fee. The fee must be developed, based on the extra time needed to process the application including field inspections.* (B) The City of Monterey has adopted the State ordinance, but does not fine persons who are out of compliance. Monterey would willingly pass the responsibility for implementation and enforcement to the Water Management District. (C) Suggest that a conceptual landscape plan could be submitted to the planning departments and the final would be submitted with their building permit, and at that point the Water Management District would review the plan for the water permit and conduct the landscape plan inspections. (D) The jurisdictions should encourage applicants to contact the Water Management District at the beginning of the planning process. (E) A bill has been adopted by the State Assembly that requires the jurisdictions to approve installation of artificial turf. (F) It is not a surety that the City of Del Rey Oaks will support the Water Management District taking responsibility to enforce the State ordinance for the jurisdictions. (G) Could the State issue fines to the Water Management District if it did not enforce the ordinance? *Response: Yes. The State regulation includes reporting requirements that the Water Management District must adhere to.* (H) Would each jurisdiction need to adopt the State ordinance and file the reports? *Response: The jurisdictions could adopt the ordinance. However if this is a regional program, the Water Management District must notify the Department of Water Resources and begin implementation in February 2015.*

3. Consider Proposed Rebate Program Changes

On a motion by O'Halloran and second of Bennett, the committee recommended that the Board of Directors approve the proposed changes to the rebate program. The motion was adopted on a vote of 6 – 0 by Dawson, O'Halloran, Wiener, Bennett, Aziz and Glennon. Johnson and Bodem were absent.

During the discussion of this item, Stoldt stated that a revised water rationing plan will be presented to public groups soon. Locke reported that surveys were sent to restaurant owners asking them to report the number of outdoor seats in their establishments. Aziz announced that on October 7 – 9, 2015 the California Stormwater Quality Association would meet in Monterey. Some sections on greywater recharge are scheduled.

Adjournment

The meeting was adjourned at 3:30 pm.

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ITEM: INFORMATIONAL ITEM/STAFF REPORTS

20. MONTHLY ALLOCATION REPORT

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program:** **Line Item No.:**	**N/A**
Prepared By:	**Gabriela Ayala**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: N/A

SUMMARY: As of March 31, 2016, a total of **25.830** acre-feet **(7.5%)** of the Paralta Well Allocation remained available for use by the Jurisdictions. Pre-Paralta water in the amount of **35.861** acre-feet is available to the Jurisdictions, and **30.479** acre-feet is available as public water credits.

Exhibit 20-A shows the amount of water allocated to each Jurisdiction from the Paralta Well Allocation, the quantities permitted in March 2016 ("changes"), and the quantities remaining. The Paralta Allocation had no debits in March 2016.

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

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

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

EXHIBIT 20-A

MONTHLY ALLOCATION REPORT
Reported in Acre-Feet for the month of March 2016

Jurisdiction	Paralta Allocation*	Changes	Remaining	PRE-Paralta Credits	Changes	Remaining	Public Credits	Changes	Remaining	Total Available
Airport District	8.100	0.000	5.197	0.000	0.000	0.000	0.000	0.000	0.000	5.197
Carmel-by-the-Sea	19.410	0.000	1.397	1.081	0.000	1.081	0.910	0.000	0.182	2.660
Del Rey Oaks	8.100	0.000	0.000	0.440	0.000	0.000	0.000	0.000	0.000	0.000
Monterey	76.320	0.000	0.203	50.659	0.000	0.030	38.121	0.000	3.661	3.894
Monterey County	87.710	0.000	10.284	13.080	0.000	0.000	7.827	0.000	1.891	12.175
Pacific Grove	25.770	0.000	0.000	1.410	0.000	0.312	15.874	0.000	0.228	0.540
Sand City	51.860	0.000	0.000	0.838	0.000	0.000	24.717	0.000	23.373	23.373
Seaside	65.450	0.000	8.749	34.438	0.000	34.438	2.693	0.000	1.144	44.331
TOTALS	342.720	0.000	25.830	101.946	0.000	35.861	90.142	0.000	30.479	92.170

Allocation Holder	Water Available	Changes this Month	Total Demand from Water Permits Issued	Remaining Water Available
Quail Meadows	33.000	0.000	32.237	0.763
Water West	12.760	0.000	8.743	4.017

Entitlement Holder	Water Available	Changes this Month	Total Demand from Water Permits Issued	Remaining Entitlement/and Water Use Permits Available
Malpaso Water Company	80.000	0.088	0.088	79.912

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

EXHIBIT 20-B

MONTHLY ALLOCATION REPORT
ENTITLEMENTS
Reported in Acre-Feet
For the month of March 2016

Recycled Water Project Entitlements

Entitlement Holder	Entitlement	Changes this Month	Total Demand from Water Permits Issued	Remaining Entitlement/and Water Use Permits Available
Pebble Beach Co. [1]	239.010	0.300	11.736	227.274
Del Monte Forest Benefited Properties [2] **(Pursuant to Ord No. 109)**	125.990	0.173	42.746	83.244
Macomber Estates	10.000	0.000	9.595	0.405
Griffin Trust	5.000	0.000	4.809	0.191
CAWD/PBCSD Project Totals	**380.000**	**0.473**	**68.886**	**311.114**

Entitlement Holder	Entitlement	Changes this Month	Total Demand from Water Permits Issued	Remaining Entitlement/and Water Use Permits Available
City of Sand City	165.00	0.044	3.616	161.384

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

EXHIBIT 20-C

District's Water Allocation Program Ordinances

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

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

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

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

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

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

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

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

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

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

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

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

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

ITEM: INFORMATIONAL ITEM/STAFF REPORTS

21. WATER CONSERVATION PROGRAM REPORT

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Kyle Smith**	**Cost Estimate:**	**N/A**

Committee Recommendation: N/A
CEQA Compliance: N/A

I. MANDATORY WATER CONSERVATION RETROFIT PROGRAM

District Regulation XIV requires the retrofit of water fixtures upon Change of Ownership or Use with High Efficiency Toilets (HET) (1.28 gallons-per-flush), 2.0 gallons-per-minute (gpm) Showerheads, 2.2 gpm faucet aerators, and Rain Sensors on all automatic Irrigation Systems. Property owners must certify the Site meets the District's water efficiency standards by submitting a Water Conservation Certification Form (WCC), and a Site inspection is often conducted to verify compliance.

A. Changes of Ownership

Information is obtained monthly from *Realquest.com* on properties transferring ownership within the District. The information is entered into the database and compared against the properties that have submitted WCCs. Details on **99** property transfers that occurred in March 2016 were entered into the database.

B. Certification

The District received **48** WCCs between March 1, 2016, and March 31, 2016. Data on ownership, transfer date, and status of water efficiency standard compliance were entered into the database.

C. Verification

In March, **75** properties were certified to verify compliance with Rule 144 (Retrofit Upon Change of Ownership or Use). Of the **75** inspections certified, **57 (76%)** were in compliance. **None** of the properties that passed inspection involved more than one visit to verify compliance with all water efficiency standards.

District inspectors are tracking toilet replacement with High Efficiency Toilets (HET) in place of ULF toilets. These retrofits are occurring in remodels and new construction, and are the toilet of choice for Rule 144 compliance. State law mandated the sale and installation of HET by January 1, 2014, with a phase-in period that began in 2010. The majority of toilets sold in California are HET.

Savings Estimate

Water savings from HET retrofits triggered by Rule 144 verified in March 2016 are estimated at **0.140** acre-feet annually **(**AFA). Water savings from retrofits that exceeded requirements (i.e., HETs to Ultra High Efficiency Toilets) is estimated at **0.320** AFA (30 toilets). Year-to-date estimated savings occurring as a result of toilet retrofits is **4.800** AFA.

D. CII Compliance with Water Efficiency Standards

Effective January 1, 2014, all Non-Residential properties were required to meet Rule 143, Water Efficiency Standards for Existing Non-Residential Uses. To verify compliance with these requirements, property owners and businesses are being sent notification of the requirements and a date that inspectors will be on site to check the property. This month, District inspectors performed **109** inspections. Of the **109** inspections certified, **69 (63%)** were in compliance. **Twelve** of the properties that passed inspection involved more than one visit to verify compliance with all water efficiency standards; the remainder complied without a reinspection.

MPWMD is forwarding its CII inspection findings to California American Water (Cal-Am) for their verification with the Rate Best Management Practices (Rate BMPs) that are used to determine the appropriate non-residential rate division. Compliance with MPWMD's Rule 143 achieves Rate BMPs for indoor water uses, however, properties with landscaping must also comply with Cal-Am's outdoor Rate BMPs to avoid Division 4 (Non-Rate BMP Compliant) rates. In addition to sharing information about indoor Rate BMP compliance, MPWMD notifies Cal-Am of properties with landscaping. Cal-Am then conducts an outdoor audit to verify compliance with the Rate BMPs. During March 2016, MPWMD referred 15 properties to Cal-Am for verification of outdoor Rate BMPs.

E. Water Waste Enforcement

In response to the State's drought emergency conservation regulation effective October 1, 2014, the District has increased its Water Waste enforcement. The District has a Water Waste Hotline 831-658-5653 or an online form to report Water Waster occurrences at www.mpwmd.net or www.montereywaterinfo.org. There were **three** Water Waste responses during the past month. There were **no** repeated incidents that resulted in a fine.

II. WATER DEMAND MANAGEMENT

A. Permit Processing

District Rule 23 requires a Water Permit application for all properties that propose to expand or modify water use on a Site, including New Construction and Remodels. District staff processed and issued **99** Water Permits in March 2016. **Six** Water Permits were issued using water entitlements (Macomber, Pebble Beach Company, Griffin Estates, etc). No Water Permit involved a debit to a Public Water Credit Account.

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

District Rule 24-3-A allows the addition of a second Bathroom in an existing Single-Family Dwelling on a Single-Family Residential Site. Of the **99** Water Permits issued in March, **eight** were issued under this provision.

B. Permit Compliance

District staff completed **69** Water Permit final inspections during March 2016. **Fifteen** of the final inspections failed due to unpermitted fixtures. Of the **45** properties that were in compliance, **26** passed on the first visit. In addition, **two** pre-inspection were conducted in response to Water Permit applications received by the District.

C. Deed Restrictions

District staff prepares deed restrictions that are recorded on the property title to provide notice of District Rules and Regulations, enforce Water Permit conditions, and provide notice of public access to water records. In April 2001, the District Board of Directors adopted a policy regarding the processing of deed restrictions. In the month of March, the District prepared **81** deed restrictions. Of the **99** Water Permits issued in March, **51 (51%)** required deed restrictions. District staff provided Notary services for **70** Water Permits with deed restrictions.

III. JOINT MPWMD/CAW REBATE PROGRAM

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

	REBATE PROGRAM SUMMARY	March-2016	2016 YTD	1997 - Present
I.	Application Summary			
A.	Applications Received	146	525	21360
B.	Applications Approved	119	427	16782
C.	Single Family Applications	133	493	19230
D.	Multi-Family Applications	10	22	1069
E.	Non-Residential Applications	3	10	262

	II. Type of Devices Rebated	Number of devices	Rebate Paid	Estimated AF	Gallons Saved	YTD Quantity	YTD Paid	YTD Est AF
A.	High Efficiency Toilet (HET)	13	1298.00	0.542724	176,847	44	4398.00	1.836912
B.	Ultra Low Flush to HET	22	2179.69	0.220000	71,687	91	8899.57	0.91
C.	Ultra HET	3	449.00	0.030000	9,776	3	449.00	0.03
D.	Toilet Flapper	0	0.00	0.000000	0	0	0.00	0
E.	High Efficiency Dishwasher	22	2750.00	0.066000	21,506	70	8750.00	0.21
F.	High Efficiency Clothes Washer	48	23999.99	0.772800	251,818	176	87965.66	2.8336
G.	Instant-Access Hot Water System	4	789.00	0.000000	0	16	2912.00	0
H.	On Demand Systems	2	200.00	0.000000	0	4	400.00	0
I.	Zero Use Urinals	0	0.00	0.000000	0	0	0.00	0
J.	High Efficiency Urinals	0	0.00	0.000000	0	0	0.00	0
K.	Pint Urinals	0	0.00	0.000000	0	0	0.00	0
L.	Cisterns	6	10868.75	0.000000	0	29	38575.00	0
M.	Smart Controllers	0	0.00	0.000000	0	1	140.00	0
N.	Rotating Sprinkler Nozzles	0	0.00	0.000000	0	0	0.00	0
O.	Moisture Sensors	0	0.00	0.000000	0	0	0.00	0
P.	Lawn Removal & Replacement	0	0.00	0.000000	0	11	13551.00	1.124302
Q.	Graywater	0	0.00	0.000000	0	0	0.00	0
R.	Ice Machines	0	0.00	0.000000	0	0	0.00	0
III.	Totals: Month; AF; Gallons; YTD	120	42534.43	1.631524	531,634	445	166,040.23	6.944814

		2016 YTD	1997 - Present
IV.	Total Rebated: YTD; Program	166,040.23	5,060,333.29
V.	Estimated Water Savings in Acre-Feet Annually*	6.944814	491.681779

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

ITEM: INFORMATIONAL ITESM/STAFF REPORTS

22. QUARTERLY WATER USE CREDIT TRANSFER STATUS REPORT

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Gabriela Ayala**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: N/A

Information about Water Use Credit transfer applications will be reported as applications are received. There are no pending Water Use Credit transfer applications.

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ITEM: INFORMATIONAL ITEMS/STAFF REPORTS

23. CARMEL RIVER FISHERY REPORT

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Beverly Chaney**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: N/A

AQUATIC HABITAT AND FLOW CONDITIONS: Wet weather returned in March after a very dry February. Flow conditions in the lower Carmel River improved becoming excellent for migration and rearing of all steelhead life stages. In addition, all the tributaries were rewetted and reconnected to the river.

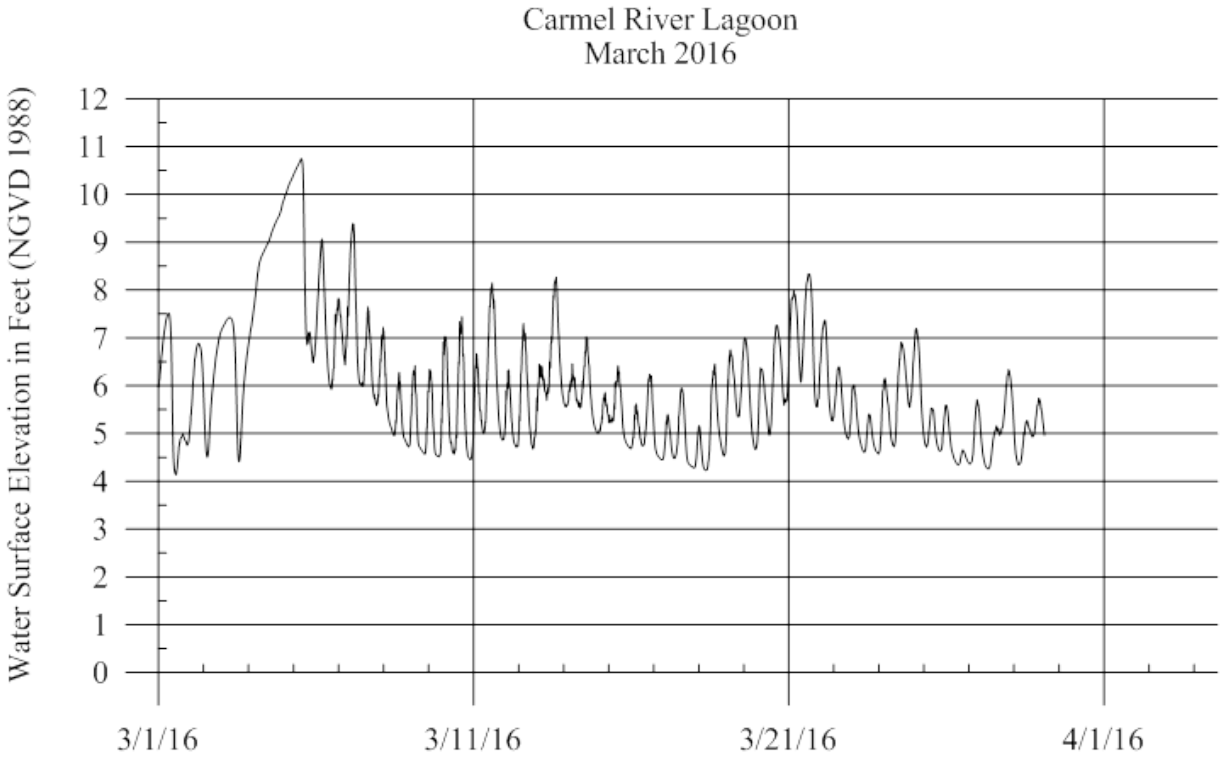
Mean daily streamflow at the Sleepy Hollow Weir ranged from 46 to 1,070 cubic feet-per-second (cfs) (monthly mean 352 cfs) resulting in 21,670 acre-feet (AF) of runoff, while flows at the Highway 1 gage ranged from 51 to 1,090 cubic feet-per-second (cfs) (monthly mean 399 cfs), resulting in 24,520 acre-feet (AF) of runoff. This increase in runoff ends the four-year hydrological drought by about 10,000 AF and makes it likely that we will have a "Normal" water year.

Seven days of wet weather in early March brought a welcomed 5.47 inches of rainfall as recorded at Cal-Am's San Clemente gauge (167% of the long-term March average). The rainfall total to date for WY 2016 (which started on October 1, 2015) is 21.47 inches, or 115% of the long-term year-to-date average of 18.68 inches.

CARMEL RIVER LAGOON: The lagoon connected to the ocean on January 11, 2016. During March, the water surface elevation (WSE) ranged from approximately 4.2 to 10.8 feet above mean-sea-level as it oscillated with the tides and brief closures (see graph below).

Water-quality profiles were conducted in mid-March at five lagoon sites. Overall, water conditions were "good to excellent" for steelhead rearing and migration with water temperatures between 56 and 62 degrees Fahrenheit, dissolved oxygen (DO) ranging from 1 - 12 mg/L, and low salinity levels from 1 to 5 parts per thousand (ppt).

ADULT STEELHEAD COUNTS: The DIDSON camera was installed in the lower valley on January 12, 2016. The data are currently being reviewed and preliminary results will be reported once available. No adult fish have been observed at the Los Padres Dam fish ladder through March.


Carmel River Lagoon
March 2016
Water Surface Elevation in Feet (NGVD 1988)
12
11
10
9
8
7
6
5
4
3
2
1
0
3/1/16
3/11/16
3/21/16
4/1/16

ITEM: INFORMATIONAL ITEMS/STAFF REPORTS

24. QUARTERLY CARMEL RIVER RIPARIAN CORRIDOR MANAGEMENT PROGRAM REPORT

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**Dave Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Thomas Christensen and Larry Hampson**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: N/A

IRRIGATION OF RIPARIAN VEGETATION: Supplemental watering of riparian restoration plantings at nine sites has been on hold since last November because of sufficient rainfall.

Water Use in Acre-Feet (AF)	
January - March 2016	0.0 AF
Year-to-date	0.0 AF

MONITORING OF RIPARIAN VEGETATION: During the winter season, the District suspended the riparian vegetation monitoring program. The monitoring of soil moisture, groundwater levels, and canopy defoliation (a measure of vegetation moisture stress) will resume in May 2016. During the months of May through October, staff will take bi-monthly measurements of depth to groundwater and canopy vigor in areas where willow and cottonwood trees may be impacted by lowered water levels caused by groundwater extraction. The areas monitored are in the vicinity of California American Water's (Cal-Am) Cañada and San Carlos wells, and the District's Valley Hills (next to Cal-Am's Cypress Well) and Schulte (next to Cal-Am's Schulte Well) Restoration Projects. The District's monitoring provides insight into the status of soil moisture through the riparian corridor by collecting and analyzing bi-monthly readings from the District's array of monitoring wells and pumping records for large-capacity Carmel Valley wells in the Cal-Am system.

OTHER TASKS PERFORMED SINCE THE JANUARY 2015 QUARTERLY REPORT:

1. **Carmel River Clean Up:** District staff removed plastic bags, metal, tires, and trash from long reaches of the Carmel River starting at Esquiline Bridge and extending downstream to the Highway One Bridge.

2. **French Broom (Genista) Eradication in District Restoration Projects:** District staff (Mark Bekker and Matt Lyons) have been removing French broom from the riparian

corridor along the Carmel River in the mid-valley area. French broom, which is a rapidly growing invasive weed that often reaches 10 feet tall and occasionally higher, competes with native plants and can become problematic if left unchecked.

3. **Public Outreach and Education:** On February 16, 2016, District staff gave a presentation on the Monterey Peninsula Water Resource System and Carmel River Lagoon Dynamics to seniors of Environmental Science classes from Robert Louis Stevenson School. Then on March 18, 2016, District staff presented information on the Monterey Peninsula Water Resource System and Mitigation Program to fifth graders of the International School of Monterey. On April 2, 2016, District staff gave a presentation to the Pacific Grove Museum of Natural History California Naturalist program about the District, which also included a site visit to the Los Padres Dam.

4. **State Proposition 1 Integrated Regional Water Management (IRWM) Grant Program**: Staff is proposing several actions to continue implementation of IRWM planning in the region (see related Action Item in this Board packet).

5. **Sleepy Hollow Steelhead Rearing Facility Intake Upgrade:** Tetra Tech, Inc. completed a Basis of Design and a draft Initial Study for the project.

6. **Instream Flow Incremental Method Study:** The District extended the agreement with Normandeau Environmental Consultants to update instream flow requirements for the Carmel River. In addition to a project description, basic Normandeau will conduct a test in the Carmel River to determine if habitat suitability criteria from the Big Sur River can be used for the Carmel River and conduct streamflow measurements for input to a hydraulic model for the river.

7. **Los Padres Dam Long-Term Plan**: The District received proposals for completion of a volitional upstream passage study at the dam (see related Consent Calendar item in this packet).

ITEM: INFORMATIONAL ITEMS/STAFF REPORT

25. MONTHLY WATER SUPPLY AND CALIFORNIA AMERICAN WATER PRODUCTION REPORT

Meeting Date:	**April 18, 2016**	**Budgeted:**	**N/A**
From:	**David J. Stoldt, General Manager**	**Program/ Line Item No.:**	**N/A**
Prepared By:	**Jonathan Lear**	**Cost Estimate:**	**N/A**

General Counsel Review: N/A
Committee Recommendation: N/A
CEQA Compliance: N/A

Information on the water supply status and monthly production from California American Water (Cal-Am), was not available at the time of Board packet production. Information will be distributed at the April 18, 2016 Board meeting.

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MONTEREY PENINSULA WATER MANAGEMENT DISTRICT

Supplement to 4/18/16 MPWMD Board Packet

Attached are copies of letters received between March 8, 2016 and April 8, 2016. These letters are listed in the April 18, 2016 Board packet under Letters Received.

Author	Addressee	Date	Topic
Mark Stone	Catherine J. K. Sandoval	3/22/2016	Pure Water Monterey Project
Sam Farr	Catherine J. K. Sandoval	3/14/2016	Pure Water Monterey Water Recycling and Purification Project
Brent Constantz	MPWMD Board	3/8/2016	DeepWater Desal LLC Status Report

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DeepWater DESAL

RECEIVED
MAR 08 2016
MPWMD

Date: March 8, 2016
Memo from: Brent Constantz, Ph.D.
Subject: DeepWater Desal LLC Status Report

DeepWater Desal LLC (DWD) is pleased provide the following update on our progress towards developing the Monterey Bay Regional Water Project, a desalination plant and datacenter complex in Moss Landing, California.

The Drought has made the public aware of how overdrafted the groundwater basins around Monterey Bay have caused lasting environmental harm to the species that rely on the springs and rivers that feed into the bay. This was, of course, the motivation that led the State Water Board to order CalAm to stop overdrafting the Carmel River in the first place. Reducing surface water withdrawls doesn't avoid the harm to fish if it is replaced with groundwater pumping. Groundwater provides the critical base flows needed during times of low flow so overdrafted groundwater basins contribute to damaging fish habitat. The State of California has now imposed regulations affecting groundwater sustainability which will have further restrictive impacts on the groundwater basins of our region. Conservation and new sustainable sources are being studied including desalination which is known and proven as a method around the world in providing a sustainable potable water supply.

DWD has invested approximately $8.0 million in the project to date including approximately $7 million from founders and our investors, as well as in-kind grant funding from the Monterey Peninsula Water Management District and in-kind funding from Dynegy's Moss Landing Power Plant. DWD has filed applications for permits from the California State Lands Commission (CSLC) and Monterey Bay National Marine Sanctuary. Those agencies will act as the lead agencies to prepare and certify a combined Environmental Impact Report and Environmental Impact Statement (EIR/EIS) to satisfy the requirements of the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). We have also met with Lieutenant Governor Gavin Newsom who chaired the California State Lands Commission and briefed him on the project and our application. The Chief of the California State Lands Commission announced at a scoping session that both the Governor and Lieutenant Governor are following the project. At a California State Water Board Hearing the project received written and verbal support from Senator Bill Monning, Assemblyman Luis Alejo and Salinas Mayor Joe Gunter.

Since the CSLC issued a Notice of Preparation to begin the EIR/EIS process in June 2015 we have been making great progress on studies and design of the project. In October 2015, it was announced that the lead agencies selected Dudek, a leading environmental consulting firm, to conduct the EIR/EIS process. Dudek is a California-focused environmental consulting firm with more than 300 planners, scientists, engineers, contractors, and technicians based in San Diego. Dudek has ten regional offices located throughout California and recently Dudek completed the EIR for the Carlsbad desalination project that started producing water December 14, 2015 in San Diego County. Following certification of the EIR/EIS, our timeline will be primary dependent

upon the granting of a Coastal Development Permit from the California Coastal Commission. The company has kept the Coastal Commission proactively informed about the project and key Coastal Commission representatives and both lead agencies have met together with us about the project to reduce the chances of delays related to the Coastal Commissions subsequent review process.

Recently we hired Kim Adamson, former General Manager of Soquel Creek Water District in June. Kim is our General Manager with direct responsibility to oversee all project activities as well as performing administrative duties for our growing company. Kim has added Melanie Schumacher, also previously of Soquel Creek Water District, as full time project engineer. Kim and Melanie are currently working on preliminary design work and permitting. They are currently managing consultants performing nearly twenty-five separate design and study efforts that are required for EIR/EIS completion, with more to come in the second quarter of this year. In addition to Melanie, we have also welcomed Martha Karr in a full time administrative role.

Power costs are a major component of desalination and data center operating expenses. While our design incorporates the latest in technology and the synergy from co-locating a desalination plant with a data center, we will be using over 175 megawatts (MW) of power. That allows us to use that bulk purchasing power to initiate and negotiate long-term contracts for electrical power. The reduction in costs per MW over currently available commercial rates from published PG&E rate tables will result in many millions in annual savings to our regional water project. We have received some very attractive offers for pricing on power, which allows us to advance our discussions with anchor data center clients.

On a broader basis, beyond Moss Landing, it is apparent that the synergy between desalination and data center cooling is broadly applicable around the world, were both data storage and potable water are needed, and a lower cost and environmental impact are benefits resulting from the co-location. Recent press covering attempts by the largest tech companies to locate data centers on barges and in submarines for access to large volumes of cold water for cooling, demonstrate the common realization that the ocean represents the best renewable source of cooling. Further, the location of data centers in respect to population centers to reduce data transmission latency overlaps with the needs of population centers for potable water located in close proximity.

Our project is generating international interest. DWD was invited to submit a two-page article by Climate Change - The New Economy, the principal publication of the COP-21 Paris conference in November featuring DWD's innovative project. DWD is also invited to present our project as a case study at back to back global conferences of the Association for Data Center Management Professionals, where the leading global data center and technology groups gather including Google, Facebook, etc. National Geographic magazine has also contacted DWD regarding a summer issue article focused on the unique innovation of combining desalination and data center facilities. DWD is truly appreciative of the global interest and recognition of our teams' efforts in earning the interest in our vision and leadership.

SAM FARR
20TH DISTRICT, CALIFORNIA

COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEES
AGRICULTURE, RURAL DEVELOPMENT, FOOD AND DRUG ADMINISTRATION, AND RELATED AGENCIES
MILITARY CONSTRUCTION, VETERANS AFFAIRS AND RELATED AGENCIES

CO-CHAIR CONGRESSIONAL ORGANIC CAUCUS
CO-CHAIR CONGRESSIONAL TRAVEL AND TOURISM CAUCUS
CO-CHAIR HOUSE OCEANS CAUCUS

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House of Representatives
Washington, DC 20515–0520

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(831) 424-2229

701 OCEAN STREET
ROOM 318
SANTA CRUZ, CA 95060
(831) 429-1976

www.farr.house.gov

3

March 14, 2016

RECEIVED

MAR 14 2016

MPWMD

Catherine J. K. Sandoval
Commissioner
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3298

Re: Pure Water Monterey water recycling and purification project

Dear Commissioner Sandoval:

I have been proud to serve the vibrant municipalities, fertile agricultural community, and outstanding natural resources of the Central Coast's 20th Congressional District since 1993. As a coastal region not connected to the State Water Project or reliant on Sierra snowmelt, our communities have to depend on development of local water supplies to meet their needs. I am writing to call your attention to one such project – Pure Water Monterey.

Pure Water Monterey is an advanced water recycling and purification project which brings multiple benefits to more than one region. The project will bring a new source of agricultural irrigation water to the growers in the northern Salinas Valley, one of the State's largest and most diverse agricultural regions. Highly purified drinking water will be made available to the cities of the Monterey Peninsula, which have faced chronic water shortages since the 1990s, and have become leaders in water conservation.

Furthermore, the environmental benefits of the project are many: Pure Water Monterey will allow the desalination plant being proposed for the region to be downsized, reducing its carbon footprint and decreasing brine discharged to the National Marine Sanctuary. The project will also divert and clean wastewater, stormwater, and high-nitrate spent agricultural irrigation water removing them from our river, estuary, and National Marine Sanctuary.

I strongly support this project and encourage the California Public Utilities Commission to consider the facility's multi-region benefits in evaluating and approving the project.

Thank you very much for your attention to this innovative approach to water independence.

Sincerely,

Sam Farr

SAM FARR
Member of Congress

COMMITTEES
BANKING AND FINANCE
HUMAN SERVICES
NATURAL RESOURCES

SELECT COMMITTEES
CHAIR: COASTAL PROTECTION
CHAIR: EXPANDING ACCESS TO CALIFORNIA'S NATURAL RESOURCES

Assembly
California Legislature

MARK STONE
CHAIR, JUDICIARY
ASSEMBLYMEMBER, TWENTY-NINTH DISTRICT

STATE CAPITOL
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FAX (831) 425-2580

99 PACIFIC STREET, SUITE 575G
MONTEREY, CA 93940
(831) 649-2832
FAX (831) 649-2935

Santa Clara County (408) 782-0647

March 22, 2016

RECEIVED

MAR 17 2016

MPWMD

Commissioner Catherine J.K. Sandoval
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102-3298

Dear Commissioner Sandoval:

I am writing in support of Pure Water Monterey, a project developed jointly by the Monterey Peninsula Water Management District and the Monterey Regional Water Pollution Control Agency.

This multi-region, multi-benefit project seeks to augment the highly limited potable water supply for Monterey County. With the December 2016 deadline from the State Water Board's Cease and Desist Order fast approaching, California-American Water must cease unlawful diversions from the Carmel River, dramatically reducing the available water supply for the area. The loss of this water combined with the ongoing drought in California poses a substantial threat to the tourism and agriculture sectors which drive economic health in the County.

Pure Water Monterey is a key element in the portfolio of proposed water supply solutions Monterey County is considering to address this shortage. This system of advanced water recycling and purification presents an innovative approach which will take wastewater as well as agricultural produce wash water, storm water, and used irrigation water and purify it through a process which complies with or exceeds strict state and federal standards. The purified potable water will then be delivered to the Monterey Peninsula and irrigation water delivered to agricultural operations in North Monterey County.

With Pure Water Monterey in operation, the region will be able to pursue a smaller desalination plant, reduce potentially polluted discharge into the National Marine Sanctuary, and clean up discharge to the Salinas River. The project presents a legal, environmentally preferable regional replacement water supply solution on a timeline anticipated to be faster than the proposed desalination plant.

Thank you for your consideration of this worthy project. If you have any questions, please feel free to contact me at (831) 649-2832.

Sincerely,

Mark Stone
Assemblymember
Twenty-Ninth District