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AGENDA Water Supply Planning Committee of the Monterey Peninsula Water Management District *****

Monday, May 1, 2023 at 3:00 p.m. [PST] | Virtual Meeting

Join the meeting at:

https://mpwmd-net.zoom.us/j/85485160922?pwd=YmkrWW53SVFBUUxYQWk4NjZCNEYrdz09

Or access the meeting at: <u>www.zoom.us</u> Webinar ID Number: 854 8516 0922 Meeting password: 05012023 Participate by phone: (669) 900 – 9128

For detailed instructions on connecting to the Zoom meeting see page 3 of this agenda.

Water Supply Planning Committee Members:	Call to Order / Roll Call		
<i>George T. Riley</i> <i>Karen Paull</i>	Comments from Public - The public may comment on any item within the District's jurisdiction. Please limit your comments to three minutes in length.		
Alternate: Ian Oglesby	Action Item - Public comment will be received. Please limit your comments to three (3) minutes per item.		
Staff Contact David J. Stoldt, General Manager	1. Consider Adoption of the March 6, 2023 Committee Meeting Minutes		
Jon Lear, Water Resources Manager	Discussion Items – <i>Public comment will be received. Please limit your comments to three (3) minutes per item.</i>		
Maureen Hamilton, District Engineer	2. Discuss New District Reporting Requirements as a Supplier (Wholesaler)		
David C. Laredo, District Counsel	3. Update on Pure Water Monterey (PWM) Expansion		
Mission Statement Sustainably manage and augment the water resources of the Monterey Peninsula to meet the needs of its residents and businesses while protecting, restoring, and enhancing its natural and human environments.	4. Review Supply Availability Before PWM Expansion and After; Discuss Proposed Allocation Program		
	5. Review and Discuss Executive Summary to the Final Draft Los Padres Alternatives Study		
	6. Aquifer Storage and Recovery Update for 2023		
<u>Vision Statement</u> Model ethical, responsible,	Suggest Items to be Placed on Future Agendas		
and responsive governance in pursuit of our mission.	Adjournment		
Board's Goals and Objectives (Online) https://www.mpwmd.net/wh o-we-are/mission-vision- goals/bod-goals/			
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Accessibility

In accordance with Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), 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 send a description of the requested materials and preferred alternative format or auxiliary aid or service at least 48 hours prior to the scheduled meeting date. Requests should be forwarded to: (1) Joel G. Pablo by e-mail at joel@mpwmd.net, or at (831) 658-5652; and (2) Sara Reyes by e-mail at <u>sara@mpwmd.net</u> or at (831) 658-5610.

Provide Public Comment at the Meeting

Attend via Zoom (For detailed instructions, please see "Instructions for Connecting to the Zoom Meeting" below.)

- (a) Computer Audio Connection: Select the "raised hand" icon. When you are called on to speak, you may identify yourself for the record.
- (b) Phone audio connection with computer to view meeting: Select the "raised hand" icon. When you are called on to speak, dial *6 to unmute and you may identify yourself for the record.
- (c) Phone audio connection only: Press *9. Wait for the clerk to unmute your phone and you may identify yourself for the record and provide your comment. Press *9 to end the call.

Submission of Public Comment via E-mail

Send comments to <u>comments@mpwmd.net</u> with one of the following subject lines "PUBLIC COMMENT ITEM #" (insert the item number relevant to your comment) or "PUBLIC COMMENT – ORAL COMMUNICATIONS." Staff will forward correspondence received to the Board. <u>Correspondence is not read</u> <u>during public comment portion of the meeting.</u> However, all written public comment received becomes part of the official record of the meeting and placed on the District's website as part of the agenda packet for the meeting.

Submission of Written Public Comment

All documents submitted by the public must have no less than thirteen (10) copies to be received and distributed by the <u>Clerk</u> prior to the Meeting. [*Applies to only In-Person or Hybrid Committee Meetings*]

Document Distribution

In accordance with Government Code §54957.5, any materials of public record relating to an agenda item for a meeting of the Board of Directors that are provided to a majority of the members less than 72 hours before the meeting will be made available at the District Office, 5 Harris Court, Building G., Monterey, CA, during normal business hours. Materials of public record that are distributed during the meeting shall be made available for public inspection at the meeting if prepared by the Board or a member of its legislative/advisory body, or the next business day after the meeting if prepared by some other person.



Instructions for Connecting to the Zoom Meeting

Note: If you have not used Zoom previously, when you begin connecting to the meeting you may be asked to download the app. If you do not have a computer, you can participate by phone.

Begin: Within 10 minutes of the meeting start time from your computer click on this link: <u>https://mpwmd-net.zoom.us/j/85485160922?pwd=YmkrWW53SVFBUUxYQWk4NjZCNEYrdz09</u> or paste the link into your browser.

DETERMINE WHICH DEVICE YOU WILL BE USING (PROCEED WITH ONE OF THE FOLLOWING INSTRUCTIONS)

USING A DESKTOP COMPUTER OR LAPTOP

1. In a web browser, type: <u>https://www.zoom.us</u>

2. Hit the enter key

3. At the top right-hand corner, click on "Join a Meeting"

4. Where it says "Meeting ID", type in the Meeting ID# above and click "Join Meeting"

5. Your computer will begin downloading the Zoom application. Once downloaded, click "Run" and the application should automatically pop up on your computer. (If you are having trouble downloading, alternatively you can connect through a web browser – the same steps below will apply).

6. You will then be asked to input your name. It is imperative that you put in your first and last name, as participants and attendees should be able to easily identify who is communicating during the meeting.

7. From there, you will be asked to choose either ONE of two audio options: Phone Call or Computer Audio:

COMPUTER AUDIO

1. If you have built in computer audio settings or external video settings – please click "Test Speaker and Microphone".

2. The client will first ask "Do you hear a ringtone?" •If no, please select "Join Audio by Phone".

•If yes, proceed with the next question:

3. The client will then ask "Speak and pause, do you hear a replay?" •If no, please select "Join Audio by Phone" •If yes, please proceed by clicking "Join with Computer Audio"

PHONE CALL

If you do not have built in computer audio settings or external video settings – please click "Phone Call"
Dial one of the numbers listed below using a phone. Select a phone number based on your current location for better overall call quality.

+1 669-900-9128 (San Jose, CA)	+1 253-215-8782 (Houston, TX)
+1 346-248-7799 (Chicago, IL)	+1 301-715-8592 (New York, NY)
+1 312-626-6799 (Seattle, WA)	+1 646-558-8656 (Maryland)

3. Once connected, it will ask you to enter the Webinar ID No. and press the pound key

4. It will then ask you to enter your participant ID number and press the pound key.

5. You are now connected to the meeting.

USING AN APPLE/ANDROID MOBILE DEVICE OR SMART PHONE

1. Download the Zoom application through the Apple Store or Google Play Store (the application is free).

- 2. Once download is complete, open the Zoom app.
- 3. Tap "Join a Meeting"
- 4. Enter the Meeting ID number

5. Enter your name. It is imperative that you put in your first and last name, as participants and attendees should be able to easily identify who is communicating during the meeting.



6. Tap "Join Meeting"

- 7. Tap "Join Audio" on the bottom left hand corner of your device
- 8. You may select either ONE of two options: "Call via Device Audio" or "Dial in"

DIAL IN

- 1. If you select "Dial in", you will be prompted to select a toll-free number to call into.
- 2. You may select any of the numbers listed below:

+1 669-900-9128 (San Jose, CA)	+1 253-215-8782 (Houston, TX)
+1 346-248-7799 (Chicago, IL)	+1 301-715-8592 (New York, NY)
+1 312-626-6799 (Seattle, WA	+1 646-558-8656 (Maryland)

3. The phone will automatically dial the number, and input the Webinar Meeting ID No. and your Password.

4. Do not hang up the call, and return to the Zoom app

5. You are now connected to the meeting.

Refer to the Meeting Rules of the Monterey Peninsula Water Management District (Revised August 2022) at <u>https://www.mpwmd.net/who-we-are/board-of-directors/meeting-rules-of-the-mpwmd/</u>

This agenda was posted at the District office at 5 Harris Court, Bldg. G, Monterey, CA and on the District Site at: <u>https://www.mpwmd.net/who-we-are/committees/board-committees/water-supply-planning-committee/</u> on Tuesday, April 25, 2023



WATER SUPPLY PLANNING COMMITTEE

ITEM: ACTION ITEM

1. CONSIDER ADOPTION OF THE MARCH 6, 2023 COMMITTEE MEETING MINUTES

Meeting Date: May 1, 2023

From: David J. Stoldt, General Manager

Prepared By: Joel G. Pablo

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

SUMMARY: The Committee meeting minutes for March 6, 2023 (Exhibit 1-A) have been drafted and are attached for your review and approval.

RECOMMENDATION: The Committee will review, provided suggested edits and consider adopting the meeting minutes for March 6, 2023 by motion.

EXHIBIT

1-A Draft Minutes of the March 6, 2023 Committee Meeting

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EXHIBIT 1-A

Draft Minutes Water Supply Planning Committee of the Monterey Peninsula Water Management District *Monday, March 6, 2023*

Call to Order: Chair Edwards called the meeting to order at 3:00 p.m.		
Committee Memb	ers Present:	Alvin Edwards, Chair Karen Paull George Riley (<i>Joined at 3:03 p.m.</i>)
Committee Memb	ers Absent:	None
Staff Members Pr	esent:	David J. Stoldt, General Manager Jonathan Lear, Water Resources Division Manager Maureen Hamilton, District Engineer Simona Mossbacher, Human Resources Coordinator/Contract Specialist Joel G. Pablo, Board Clerk
District Counsel P	resent:	Fran Farina with De Lay & Laredo
Comments from t	he Public:	Chair Edwards opened public comment; <i>No comments were directed to the Committee.</i>

Action Items

1. Consider Adoption of the December 14, 2022, Committee Meeting Minutes

David J. Stoldt, General Manager introduced Item No. 1 and noted a revised set of meeting minutes were sent by e-mail prior to the start of the meeting. Committee Member Paull thanked staff for revising the meeting minutes and mentioned that she plans to send over additional non-substantive edits to staff.

Chair Edwards opened public comment; no comments were directed to the Committee.

A motion was offered by Paull with a second by Riley to approve the December 14, 2022, Committee Meeting Minutes (revised) with additional non-substantive edits to be made. The motion passed on a roll-call vote of 3-Ayes (Riley, Paull and Edwards), 0-Noes and 0-Abstain.

2. Adopt CY 2023 Water Supply Planning Committee Meeting Schedule

David J. Stoldt, General Manager introduced Item No. 2 and recommended approval.

Chair Edwards opened public comment; no comments were directed to the Committee.

<u>A motion was offered by Paull with a second by Edwards to approve the 2023 Water</u> <u>Supply Planning Committee Meeting Schedule. The motion passed on a roll-call vote of</u> <u>3-Ayes (Riley, Paull and Edwards), 0-Noes and 0-Abstain.</u>

3. Consider Authorizing the General Manager to Enter into a Contract with Montgomery and Associates to Provide a Tularcitos ASR Feasibility Study

David J. Stoldt, General Manager stated the proposed agreement between the District and Montgomery and Associates will be presented at the March 2023 Board meeting for consideration and adoption following committee approval.

Maureen Hamilton, District Engineer, provided a brief overview of her staff note and requested the committee to approve the matter. Hamilton indicated staff has identified a project, the Tularcitos ASR project to pursue the feasibility of diverting water from the Carmel River and injecting it into the ASR wells located in the Tularcitos Creek subwatershed for subsequent recovery during the dry season. She described the steps to conduct an ASR feasibility in the area and as covered in further detail in the staff note. Lastly, she clarified the recommendation found in the staff report is for an amount not-to-exceed \$119,200, *not* \$119.

Chair Edwards opened public comment; no comments were directed to the Committee.

<u>A motion was offered by Riley with a second by Paull to recommend to the Board to</u> <u>authorize the General Manager to enter into a contract with Montgomery and Associates</u> <u>to provide a Tularcitos ASR Feasibility Study in an amount not-to-exceed \$119,200. The</u> <u>motion passed on a roll-call vote of 3-Ayes (Riley, Paull and Edwards), 0-Noes and 0-Abstain.</u>

4. Consider Recommending the Board Approve a Memorandum of Agreement to Share in the Cost of Installing a Groundwater Monitoring Well (Fort Ord 09 – Shallow)

David J. Stoldt, General Manager provided a brief overview of the staff note and recommended approval of the cost sharing Memorandum of Agreement with the Seaside Basin Watermaster and Marina Coast Water District.

Chair Edwards opened public comment; no comments were directed to the Committee.

Committee members agreed with staff's recommendation to recommend to the Full Board to approve a Memorandum of Agreement with the Seaside Basin Watermaster and Marina



Coast Water District and to authorize an amount not-to-exceed \$46,500 inclusive of a 10% contingency.

Discussion Items

[The Committee heard Item No. 7 ahead of all other Discussion Items]

5. Seaside Basin Water Quality and Operations Meeting Transition from M1W to MPWMD

David J. Stoldt, General Manager provided introductory remarks.

Maureen Hamilton, District Engineer, summarized her staff note and answered committee questions. She mentioned that Division of Drinking Water (DDW) staff requested increased communication between water projects and stakeholders. Staff proposes that the Seaside Basin Water Quality and Operations (WQO) meeting responsibilities transition from Monterey One Water (M1W) to the District. She noted the move to have the District host and coordinate the WQO meeting will bring together all other water facility operators to effectively communicate on current, planned, and future water facility operations in the Seaside Basin.

In response to Paull, Stoldt communicated that the meetings serve as a platform to allow water stakeholders to discuss operations and their respective interests.

Chair Edwards opened public comment; no comments were directed to the Committee.

[Following Discussion of Item No. 5; the committee moved to Item No. 8]

6. Overview of the FEMA / CAL Office of Emergency Services Reimbursement Process

Simona Mossbacher, Human Resources Coordinator/Contract Specialist presented via slide-deck entitled, "FEMA/OES Process" and answered committee questions. *A copy of the presentation is on file with the District and can be found on the District website.* She provided background information and mentioned the District is applying for both Federal Emergency Management Agency (FEMA) and California Office of Emergency Services (OES) grants. Mossbacher provided an overview of the FEMA Program Delivery Process steps and shared the District has applied for reimbursement: **Category A**: Debris removal; and **Category E**: Public Buildings and Equipment. She commented the District would not qualify for grants under **Category C**: Roads and Bridges due to preexisting road conditions that were exacerbated, but not caused by the rains. She discussed FEMA 404 and 406 Mitigation grant funding, cost share basics, FEMA Cost Adjustments, and projected schedule/timeframe.

Chair Edwards opened public comment; no comments were directed to the Committee.



7. Discuss Alternative Methods to Finance and Utilize Pure Water Monterey Expansion

David J. Stoldt, General Manager provided an overview of his staff report that included, but are not limited to:

- a. Finance and Construction of the Expansion without Cal-Am's participation in the WPA
- b. Original Intent of the Expansion
- c. Cal-Am facilities (at least two wells) that may be built
- d. Lifting of the Cease-and-Desist Order
- e. Federal and State Grant Opportunities
- f. Monterey One Water Participation
- g. Overview of the 2012 Proposition 218 Protest Hearing
- h. Issue Debt in the Public Markets, if the WIFIA loan becomes unavailable

[Specific details on each can be found in the Staff Report]

In response to Director Edwards, District Counsel Farina indicated the District had evaluated and sent a complaint letter in response to Cal-Am's refusal to sign the Water Purchasing Agreement following the CPUC's December 1, 2022 decision. Furthermore, she informed Edwards of the CPUC complaint process and she has no intention of sending a complaint letter to the Commission on their delayed inaction on the District's petition.

Chair Edwards opened public comment; *The following comments were directed to the committee:*

1. Susan Schiavone: Concurred with Riley's comments. She stated she had sent a letter to the Commissioners of the California Public Utilities Commission requesting that they compel Cal-Am to sign the Water Purchasing Agreement. She believes it is imperative for more public officials to be aware of the Cal-Am's refusal to sign off on the WPA in an effort to place pressure on the company.

No further comments were directed to the Committee.

[Following discussion on Item No. 7; Discussion Item No. 5 was heard]

8. Discuss Pure Water Monterey Legal Expenses

David J. Stoldt, General Manager provided a brief overview of budgeted amounts for the Pure Water Monterey- Expansion, as of March 2022 and pointed direction to the table on legal expenses on PWM- Expansion demonstrating the budgeted, the expended, and remaining funds available. Edwards suggested at the next Mid-Year Budget Review that the Board should be presented with the information presented in the staff note. Paull and Edwards shared their concern over the District's 75% cost share with Perkins Coie, LLP



and requested that the District review incoming invoices in relation to work produced.

Chair Edwards opened public comment; no comments were directed to the Committee.

Informational Item

9. Receive and Discuss Information on State and Federal Priorities for 2023

The committee received the report on State and Federal Priorities for 2023.

Suggest Items to be Placed on Future Agendas

None.

Adjournment

There being no further business, Chair Edwards adjourned the meeting at 4:39 p.m.

/ s/ Joel G. Pablo

Joel G. Pablo, Board Clerk to the MPWMD Water Supply Planning Committee

Approved by the MPWMD Water Supply Planning Committee on May XX, 2023 Received by the MPWMD Board of Director's on May XX, 2023

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WATER SUPPLY PLANNING COMMITTEE

ITEM: DISCUSSION ITEM

2. DISCUSS NEW DISTRICT REPORTING REQUIREMENTS AS A SUPPLIER (WHOLESALER)

Meeting Date:	May 1, 2023	Budgeted:	No
From:	David J. Stoldt General Manager	Program/ Line Item No •	N/A
Prepared By:	David J. Stoldt	Cost Estimate:	N/A
General Counse	el Approval: N/A		
Committee Rec	ommendation: N/A		

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

SUMMARY: Urban water suppliers have several reporting requirements under state law. The term "urban water supplier" refers largely to local urban water retailers required to report data to the state. In some cases, this term includes urban water wholesalers. For example, the electronic annual report (eAR) requires all public water systems with varying requirements based on number of connections (including urban water wholesalers) to report to the state. Accordingly, urban water wholesalers supply more than 3,000 acre-feet annually and retailers supply water to more than 3,000 end users or more than 3,000 acre-feet annually. In 2022, the District delivered more than 3,500 acre-feet (AF) of potable supply to Cal-Am, qualifying the District as an urban water wholesaler.

The discussion should center around four existing urban water reporting programs—including the Electronic Annual Report (eAR), Urban Water Management Plans (UWMP), the Monthly Urban Water Conservation Report (CR), and the Water Loss Audit (WLA) to identify existing challenges



and potential solutions to align urban water use and supply data. There are also two new reports authorized by SB 606 and AB1668 which require urban water suppliers to submit an Annual Water Supply and Demand Assessment (AWSDA) beginning in July 2022 and the pending Water Use Objective (WUO) compliance beginning in January 2024. See below:

Urban water suppliers, not including wholesalers, are required to submit a CR monthly to the SWRCB (California Code of Regulations (CCR) Title 23, Div. 3, Chap. 3.5 Sec. 990). Data included in the CR are used to encourage greater water conservation and ensure adequate supplies of potable water. The CR increases water system transparency, provides monthly access to data on local potable water production, The CR is filed by 413 urban water suppliers monthly. Cal-Am presently complies with this filing requirement. There is specific language exempting suppliers functioning only as wholesalers from filing, so the District will not have to also comply.

The District is still determining what its filing requirements will be, but it appears that beginning in 2022, urban water suppliers are required to submit an AWSDA to DWR by July 1 every year. The purpose of the AWSDA is to evaluate water supply reliability for the current year and one dry year. This assessment is based on quantitative data of unconstrained demand and available supply. Qualitative descriptions of the assessment methodology and each water supply source is also included. The AWSDA is interconnected with the Water Shortage Contingency Plan (WSCP) and UWMP. The California Water Code requires that each urban water supplier describe the assessment methodology used to evaluate water supply reliability in the Water Shortage Contingency Plan (which is included in the UWMP); however, it is recommended that this methodology also be included in the Annual Shortage Report

Each urban water supplier shall update its UWMP plan at least once every five years on or before July 1, in years ending in six and one, incorporating updated and new information from the five years preceding each update. Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days before a public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision.

Under Section 10620(b) of Division 6 Part 2.6, Chapter 3, Article 1 of the State Water Code: "Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier." The Distrct has not yet done so. There are several reasons why this requirement has not yet been met, including fundamental disagreement with Cal-Am over supply and demand issues, as well as missed opportunities to collaborate on a regional basis. The Urban Water Management Plan Guidebook 2020 suggests efforts to foster cooperation between water agencies and providers in a region: "Regional planning can deliver mutually beneficial solutions to all agencies involved by reducing costs for the individual agency, assessing water resources at the appropriate geographic scale, and allowing for solutions that cross jurisdictional boundaries. In support of regional UWMPs and regional water conservation targets, the UWMP portion of the Water Code provides mechanisms for participating in area-wide, regional, watershed, or basin-wide urban water management planning."¹ However, the District believes that Cal-Am has no interest in a regional UWMP and will therefore have to

¹ See Urban Water Management Plan Guidebook 2020, pp. 2-5, 2-6.

determine its own specifications for an UWMP as a wholesaler.

EXHIBIT

None

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WATER SUPPLY PLANNING COMMITTEE

ITEM: DISCUSSION ITEM

3. UPDATE ON PURE WATER MONTEREY (PWM) EXPANSION

Meeting Date:	May 1, 2023	Budgeted:	No
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: N/A CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines section 15378.

SUMMARY:

Schedule

On December 5, 2022, the California Public Utilities Commission (CPUC) issued their Final Decision for the Amended and Restated Water Purchase Agreement (ARWPA). CPUC authorized CalAm to execute the ARWPA with MPWMD & M1W for Pure Water Monterey Expansion (PWM X).

• On April 4, 2023, the ARWPA was executed by all parties; PWM X can move forward.

• Two PWM X construction bid packages were advertised April 17, 2023, with the scheduled goal of M1W Board approval of the construction contracts award at the regular July 31, 2023, M1W Board meeting. Other consultant contracts for support will also be brought for Board approval at the July Board meeting.

• The M1W General Manager and Staff are expediting execution of the EPA Water Infrastructure and Innovation Act (WIFIA) loan agreement for PWM X.

• Depending on construction Contractor's availability, specialized equipment lead times, and supply chain issues, it is anticipated the PWM X facilities to be operational by the end of 2025. As Staff confirm additional PWM X implementation information, a more detailed Gantt chart schedule will be shared at regular M1W Board and Committee meetings.

Grants

M1W and MPWMD Staff are finalizing paperwork for the awarded PWM X grants which total approximately \$42 million from these state and federal sources:

- ✓ \$10.32 million from US Bureau of Reclamation Title XVI
- \checkmark \$15.00 million from California State Revolving Fund
- ✓ \$11.94 million from California DWR Urban Community Drought Relief
- ✓ \$4.80 million from California Budget Act of 2022 (Governor's earmark)

Each will be discussed verbally at the Committee meeting

Source Water

On September 26, 2022, Monterey One Water (M1W) conducted an initial Board Workshop regarding Source Waters for Recycling. Due to time constraints, it was agreed to continue the discussion and complete the presentation at another time. Unfortunately, M1W was not able to schedule a Special Board meeting until November 14, 2022.

At the regularly scheduled Board meeting on October 28, 2020, Monterey County Water Resources Agency (MCWRA) staff, Brent Buche, General Manager, and Shaunna Murray, Senior Water Resource Engineer, at the request of John Phillips, provided a briefing of their letter submitted to the California Public Utility Commission (CPUC) regarding M1W's source water for expansion. Subsequently, the M1W General Manager provided clarification and an overview of the Source Waters at the September 26th Workshop.

The November 24th Workshop included additional information to respond to questions on the following topics:

- Water Rights
- Higher than Usual Well Water Usage in 2022
- Lower than Expected "New Source Water" in 2022
- Clarification of the Water Purchase Agreement associated with Pure Water Monterey
- Pure Water Monterey Demand Scenarios and Use of M1W Water Rights

M1W will demonstrate how there is enough water available for PWM Expansion in all scenarios with M1W using New Source Water for Base Project yields, and operational flexibility and, if needed, reserves in peak irrigation months (approximately May through September) of Dry and/or Drought years. M1W will optimize water supply and are committed to continuous improvement while they transition to additional stakeholders exercising their Water Rights.

Exhibit 3-A shows the November 24th M1W Workshop slides.

Status of Cal Am CPUC-approved infrastructure for PWM Expansion

On December 5, 2022, the Public Utilities Commission issued D.22-12-001 which authorized, among other items, the construction of four Company related facilities under cost caps for certain facilities necessary for the PWM Expansion Project. The facilities included (1) extraction wells EW-1 and EW-2, and the chemical treatment facility; (2) extraction wells EW-3 and EW-4, and the associated piping; (3) the Carmel Valley Pump Station; and (4) the General Jim Moore Parallel Pipeline. Based on its findings, the Commission ordered California American

Water to file a Tier 1 advice letter as follows: California-American Water Company is authorized to track direct costs for the four Company-related facilities, including the allowance for funds used during construction, in a subaccount of the Monterey Peninsula Water Supply Project Phase 1 Costs Memorandum Account called the "PWM Expansion Project Costs Memorandum Account." Cal-Am filed the advice letter 1401 December 23, 2022.

On April 3, 2023 Cal-Am filed another advice letter, AL 1406, the purpose of which was to request the recovery of costs associated with the General Jim Moore Parallel Pipeline ("Parallel Pipeline"). Total capital cost for the project, excluding AFUDC, is \$7,420,371. The total cost for the project that will be included in rate base, including AFUDC through April 2023, is \$8,132,157.

District staff have not been able to confirm any additional Cal-Am progress on easements EW-1 and EW-2 at Monterey Peninsula Unified School District sites, nor any advice letter filing for the pump stations which were tested in early February 2023.

EXHIBITS

3-A November 24th M1W Source Water Workshop slides

EXHIBIT 3-A



Source Water for Recycling

Continued from 9/26/22

November 14, 2022

Pure Water Monterey is One of Six Sources

- 1. Carmel River (3,376 AFY)
- 2. Carmel River Table 13 Rights (189 AFY)
- 3. Native Seaside Basin Groundwater (774 AFY)
- 4. Sand City Desalination (94 AFY)
- 5. Aquifer Storage and Recovery (1,210 AFY)
- 6. Pure Water Monterey after Expansion (5,750 AFY)

Total: 11,393 AFY

Source: Public Advocates Office, California Public Utilities Commission, Report August 19, 2022

5-year average demand (2017-2021): 9,725 AFY

M1W Rights to Use Wastewater and Other Flows

Municipal Wastewater - Inside 2001 Boundary

- MCWD wastewater (limited in summer)
- Operational Flow
- Amounts not used by MCWRA "as available"
- M1W's Table 2 Summer Water (650 AFY)

Municipal Wastewater - Outside 2001 Boundary (1/2)

New Source Waters

as of 6/9/2022 MCWRA can use Ag Wash Water







Source Waters for Recycling - Clarification

Currently (since June 9, 2022)

Source Water Types	ARWRA section	Names in Charts	
Municipal Wastewater from within M1W's 2001 Boundary	4.01(1)	Various names. Allocated to WRA, <i>except the following:</i> MCWD Wastewater Rights (1a) Local and On-site Return Flows(see ** below) (1b) Ocean Outfall (Excess Secondary or Tertiary Effluent, "As Available") (1c) RTP Influent M1W "Summer Water" (1d)	
Reclamation Ditch & Blanco Drain	4.02	New Source Water: Reclamation Ditch & Blanco Drain	
Salinas Industrial Wastewater / "Ag Wash Water"	4.02, 15.01, 16.16	New Source Water: Ag Wash Water at TP1 (only excess available)	
Operational Flows	4.01(1)	Local and On-site Return Flows**	
Boronda & Farmworker Housing	4.01(1)	RTP Influent from Boronda & Farmworker (½ available)	
Salinas Pond #3 Water	4.02	New Source Water: Salinas Storm Water	
Saimas Fond #5 Waler	16.15	Pond 3 water = treated effluent (shared per negotiations)	
Other areas outside M1W's 2001 Boundary	4.01(2)	New Influent from Outside 2001 Boundary (½ available)	

Pure Water Monterey Demand Scenarios

M1W professional engineering and operations staff:

- Analyzed historic data
- Applied agreements
- Considered capacity design and physical constraints
- Modeled/investigated future conditions

Variables

- Year Types (Normal/Wet and Dry/Drought)
- Reserve "Banks" available in Agreements for Flexibility

Pure Water Monterey Influent – Normal/Wet Year

How much water is needed for groundwater replenishment and urban irrigation?



Pure Water Monterey Purchase Agreement Clarification

- Production and injection can vary seasonally and year-to year
- Typical annual production: 4,600 to 5,950 AFY (min. 2,960 AFY)
- Operating Reserve may be used if production is less than 5,750 AFY
- PWM anticipated to operate at lower capacity May Sept.; higher in Oct. April
- PWMx would use excess wastewater & operational flows

Pure Water Monterey Influent – Dry/Drought Year

How much water is needed for groundwater replenishment and urban irrigation?



Availability of Excess Secondary Effluent for PWM

- In 2020 2022, M1W met PWM Demands:
 - Excess secondary effluent, "Summer Water" & operational flows
 - New Source Water optimization required
- Historically, CSIP demand has been consistent
- Only with significant capital projects or changes in agricultural irrigation would CSIP seasonal curve change.
- Ocean discharge data: 8-Year Average (2012-2019)

2020	4,196 AFY
2021 DM/M Expansion Needs	3,601 AFY
P vvivi Expansion Neeus	Z, //OAFT

"New Source Water" for the PWM Project

- 1. Ag Wash Water*
- 2. Blanco Drain Diversion
- **3.** Reclamation Ditch Diversion
- 4. Salinas Storm Water Diversion
- 5. Monterey Storm Water Diversion

6. Tembladero Slough

Agreement states: 360 AF/month of New Source Waters prioritized for PWM

* = June 2022 MCWRA letter provided MCWRA use of Ag Wash Water.

In addition, New Source Water Facilities include: SVRP Winter Modifications Salinas Pond Return Facilities (aka Pond 3 Pump Station).

Available Source Water for PWM: Wet/Normal Year

M1W Contractual Rights for PWM (5,950 AFY "expanded" production)



Available Source Water: Dry/Drought Year Example 1

M1W Contractual Rights for PWM (5,750 AFY delivery for CalAm)



Available Source Water: Dry/Drought Year Example 2

M1W Contractual Rights for PWM (4,750 AFY delivery for CalAm)



Available Source Water: Summary of M1W Rights

	Drought or Dry Years	Normal or Wet Years	Using 10-Year Average
Ocean Outfall (Secondary Effluent)	7,040	6,394	6,642
New Source Water: Blanco Drain	2,161	2,658	2,658
New Source Water: Reclamation Ditch	138	808	607
New Source Water: Pond 3	839	669	720
Local and On-Site Return Flows (not incl. backwash)	283	283	283
RTP Influent M1W Summer Water less MCWD	308	308	308
RTP Influent from Boronda - M1W's 50%	95	95	95
RTP Influent from Farmworker - M1W's 50%	35	35	35
Future Out of 2001 Boundary 50% (midpoint-project life)	659	659	659
Total Available for PWM (with excess secondary effluent)	11,558	11,910	12,007
PWM Influent Needs with Expansion	5,865 to 7,098	7,347	7,272

Water Used for SVRP 2020 to 2022

NOTE: Production matched²⁷ available wastewater for WRA



2022 CSIP Distribution vs Average



CSIP Distribution: Drought Years



Higher Than Usual Well Water Usage this Year?

- Demand Begins @ 6:00 a.m.
- By 9:00 a.m. demand outpaces production = Must Use Well Water
 - Growers have control of when they take water
 - No grower has been turned down Water Order; no crop loss
 - WRA / M1W requested demands spread daily to reduce peak
- Demand reduces mid-afternoon

Higher Than Usual Well Water Usage this Year?

- CSIP peak daily demands were extraordinarily high
 - Instantaneous flow rates: > 60 million gallons per day
 - Summer municipal wastewater influent daily: 46 AF (15-16 million gallons), and
 - Peak daily volumes demanded by CSIP: 150 AF (48 million gallons)

.... Over 3 times the wastewater influent to the RTP

Lower than Expected "New Source Water" in 2022?

New Source Water assumptions in the ARWRA *are* outdated

- 1. ARWRA was prepared and approved in 2015
- 2. 2019 SEIR estimated CSIP water possible w/ New Source Waters:
 - 3,600 AFY in a Normal/Wet Year & 2,585 AFY in a Dry/Drought Year
- 3. Assumptions for above "yields" have **not occurred**:
 - SVRP Winter Modifications funded and constructed
 - M1W would operate Salinas facilities
 - WRA pays for new source water facilities; Drought Reserve available
 - WRA would maintain ditches for flood control

"New Source Water" Challenges in 2022

- Lack of Drain and Ditch maintenance
- WRA requested Pond 3 usage vs Direct Diversion
- City and WRA dictated Pond usage
- Algae bloom at the end of July in Pond 3 prevented pumping to RTP
- Direct Diversion is lower priority (Average in past dry years: 1,984 AF)
- Monterey Stormwater not implemented to date
- Tembladero Slough no longer pursued
- SVRP Winter Modifications not implemented to date

What affect will PWM Expansion have on SVRP?

- Enough Source Water (Drought Years = Operating Reserves) not to impact SVRP <u>Rights</u>
- MCWRA chose to invoke ARWRA section 16.16
 - -No cost sharing for the New Source Water Facilities
 - -Base Project Drought Reserve not available to MCWRA
- SVRP Source Water rights include:
 - 1. Municipal WW within M1W 2001 Boundary (less M1W & MCWD Contractual Rights)
 - 2. Ag Wash Water diverted to Salinas Pump Station
- Any remainder of M1W Contractual Rights are available for SVRP's use
- New division of water allocation and use for M1W
- Additional flexibility for meeting all demands

Continuous Improvement

Optimize water supply for CSIP and PWM, M1W staff is committed to:

- Improve maintenance of Blanco Drain and Reclamation Ditch
- Assist Salinas infrastructure improvements at industrial treatment facility
- Develop Blue Plan-it Model for daily operational decision-making
- Optimize Water Order System using Remote Monitoring Units
- Partner with Salinas Valley GSA and MCWRA to optimize/maximize CSIP
- Support connecting small communities to collection system
- Pursue additional storm water storage and diversions









- M1W used municipal and operational flow rights for PWM, using New Source Waters only as needed
- Well usage higher than average due to warmer weather and demand peaks
- There is enough water to meet all demands if water sources are optimized
- EIR and SEIR used data to develop Dry/Drought and Normal/Wet Year
- M1W will use Operating Reserves to ensure the 2,500 AF WPA in Drought Years
- M1W dedicated to Continuous Improvement and Collaboration



QUESTIONS?



WATER SUPPLY PLANNING COMMITTEE

ITEM: DISCUSSION ITEM

4. REVIEW SUPPLY AVAILABILITY BEFORE PWM EXPANSION AND AFTER; DISCUSS PROPOSED ALLOCATION PROGRAM

Meeting Date:	May 1, 2023	Budgeted:	No
From:	David J. Stoldt General Manager	Program/ Line Item No.:	N/A
Prepared By:	David J. Stoldt	Cost Estimate:	N/A
General Counse Committee Rec	el Approval: N/A ommendation: N/A		

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

SUMMARY: Until Pure Water Monterey (PWM) Expansion is completed and online in late 2025, the Monterey Peninsula will experience water supply shortfalls and have to rely on winter rainfall, stored water, Sand City desalination, and other small "pockets" of supply to make ends meet. Following completion of PWM Expansion, it is the District's view that there will be a sufficient supply to meet the Peninsula's needs for 30 years.

Supply Availability Before PWM Expansion

The Cal-Am available "firm" supply currently is as follows:

Pure Water Monterey (Base Project)	3,500 AFY
Carmel River (Legal Limit)	3,376 AFY
Seaside Basin (Adjudicated Limit)	<u>1,474 AFY</u>
Total Firm Supply	8,350 AFY
5-Year Average Demand ¹	<u>9,702 AFY</u>
Additional Supply Required	1,352 AFY

Hence, every year until PWM Expansion comes online, the water system needs an additional 1,352 AF to meet average demand. Possible sources include the following:

Table 13 Water Rights (only during rainy season) Image: Constraint of the season o	133 AF so far this year
ASR Annual Yield & Stored Water	2,548 AF as of 4-23-23
Sand City Desalination	154 AF last 3-year average
Malpaso Entitlements	58 AF available
Additional Supply Available	2,893 AF

¹ Production for Customer Service

Also: Pure Water Monterey Operating Reserve 1,750 AF on July 1, 2023

There may also exist some carry-over credits from Seaside Basin Alternate Producers that can be used by Cal-Am on a year-to-year basis, but they are difficult to predict and small in nature.

Supply Availability After PWM Expansion

The Cal-Am available "firm" supply currently is as follows:

Pure Water Monterey (Base + Expansion)	5,750 AFY
Carmel River (Legal Limit)	3,376 AFY
Seaside Basin (Adjudicated Limit)	<u>1,474 AFY</u>
Total Firm Supply	10,600 AFY
5-Year Average Demand	<u>9,702 AFY</u>
Annual Surplus	898 AFY
Other:	
Table 13 Water Rights (only during rainy season)	0 AFY
ASR Average Annual Yield	1,300 AFY
Sand City Desalination	154 AFY 3-year average
Malpaso Entitlements	58 AFY available
Additional Supply Available	1,512 AFY

It will be recommended that during the first five (or more) years of PWM Expansion operations that the excess water (898 AFY to 2,410 AFY) be banked to build up a drought reserve and to allow ASR to build storage for annual use in dry years. Then, attention can be turned to operating the Seaside Basin at 700 AFY less for in-lieu recharge for the subsequent 25 years.

EXHIBIT

None

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WATER SUPPLY PLANNING COMMITTEE

ITEM: DISCUSSION ITEM

5. REVIEW AND DISCUSS EXECUTIVE SUMMARY TO THE FINAL DRAFT LOS PADRES ALTERNATIVES STUDY

Meeting Date:	May 1, 2023	Budgeted:	No
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: N/A CEQA Compliance: This action does not constitute a project as defined by the California Environmental Quality Act Guidelines section 15378.

SUMMARY: On April 17, 2023 AECOM released its "Final Report – Los Padres Dam and Reservoir Alternatives and Sediment Management Study." The executive summary is attached hereto as **Exhibit 5-A**.

The full report can be found on the District's website at the link below:

https://www.mpwmd.net/wp-content/uploads/Los-Padres-Dam-Alternatives-Study.pdf

EXHIBIT

5-A Executive Summary – Los Padres Dam and Reservoir Alternatives and Sediment Management Study

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EXHIBIT 5-A



Final Report - Executive Summary (Only)

Los Padres Dam and Reservoir Alternatives and Sediment Management Study

Prepared by:



300 Lakeside Drive, Suite 400 Oakland, CA 94612 aecom.com Prepared for Monterey Peninsula Water Management District in cooperation with California American Water

Prepared with contributions from Balance Hydrologics, Stillwater Sciences, and HDR Engineering

April 17, 2023

Executive Summary

This report presents the results of the Los Padres Dam and Reservoir Alternatives and Sediment Management Study (LP Alternatives Study). The study, managed by the Monterey Peninsula Water Management District (MPWMD), was initiated to investigate the technical, biological, and economic feasibility of a broad suite of alternatives for Los Padres Dam (LPD) and Los Padres Reservoir (LPR). The alternatives were developed to address a reservoir gradually filling with sediment and the dam and reservoir's effects on an important population of threatened steelhead. The study was carried out by a team of engineering and science consultants led by AECOM, with support from Balance Hydrologics, Stillwater Sciences, and HDR Engineering. The alternatives evaluated in the study included dam removal, improvements to fish passage facilities, the addition of sediment management facilities, and reservoir expansion. The study was partially funded by California American Water (Cal-Am) and was conducted in close coordination with a Technical Review Committee (TRC) that includes technical experts and representatives from the MPWMD, Cal-Am, the National Marine Fisheries Service (NMFS), the California Department of Fish and Wildlife (CDFW), and the United States Fish and Wildlife Service. The LP Alternatives Study incorporates the results of related studies, including analysis of water availability (led by MPWMD), analysis of steelhead habitat availability in relation to instream flow (led by MPWMD's consultant, Normandeau), alternatives analysis of fish passage improvements at LPD (conducted by a consultant team led by HDR Engineering), and studies of Carmel River steelhead at Los Padres Dam and in relation to streamflow (led by NMFS' Southwest Fisheries Science Center).

The LP Alternatives Study was developed using an iterative process during which the TRC and stakeholders were engaged through a series of document review and workshop-style meetings, with input incorporated at multiple points as the work progressed. Prior to developing detailed analysis, the AECOM Team compiled background information on existing conditions and identified preliminary alternatives for TRC and stakeholder review. AECOM and study participants then documented the character of sediment accumulated in LPR, updated and further developed the alternative descriptions, and evaluated how changes in sediment transport or management could affect the Carmel River. Once the alternatives and sediment effects were described, the effects of the alternatives on steelhead were evaluated. Through review of technical memoranda and discussion at meetings, the TRC, stakeholders, and the AECOM Team evaluated, reconfigured, and refined the alternatives to further define five dam, reservoir, and sediment management alternatives for further study. One of the five alternatives, Alternative 4, Recover Storage Capacity with Excavation, was eliminated because it had limited advantages and the highest cost relative to other alternatives.

At completion of the study, two alternatives (Alternative 2 – Dam and Sediment Removal; and Alternative 3 – Storage Expansion and Dredging) are proposed for further consideration for the long-term future of LPD and LPR. CDFW was unique among stakeholders in suggesting that Alternative 2 would have greater benefits for steelhead and other native aquatic species, in part due to a conviction that warming due to climate change will reduce the value of warmer, downstream habitats relative to the cooler stream habitats upstream of LPR. Of the four alternatives carried into the LP Alternatives Study Draft Final Report, two (Alternative 1 – Fish Passage, No Sediment Action; and Alternative 5 – Recover Storage Capacity with Sluice Tunnel) were eliminated from further consideration before publication of this final report, based on evaluations provided in earlier drafts, feedback from the TRC, and decisions formalized at TRC Meeting No. 4. Alternatives 1, 2, 3, and 5, including reasons why Alternatives 1 and 5 were eliminated, are summarized below.

Alternative 1 – Fish Passage, No Sediment Action (Eliminated): This alternative retains LPD in place; includes no action to manage the existing sediment accumulation in the reservoir or future sediment inputs; includes improved or replaced fish passage facilities; and modifies the dam and spillway to accommodate the updated probable maximum flood (PMF). Two upstream and two downstream fish passage options were identified in the Los Padres Fish Passage Study as warranting additional consideration. Upstream fish passage improvements would include either a new fish ladder or replacement of the existing trap-and-transport facility with an upgraded facility designed to current

standards. Downstream fish passage would include a new, full-scale floating surface collector with pumped attraction flow or a combination of improved passage through the spillway and modification of the existing floating weir collector to improve attraction to its entrance. The LP Alternatives Study assumes that one of these upstream and downstream fish passage options would be adapted to any alternative that retains LPD.

The current concrete spillway at LPD does not accommodate the PMF, based on current standards. Improvements to the spillway and possibly the dam embankment would be necessary to convey the updated PMF. The current concept, applied to all dam-in alternatives, includes an increase in the dam embankment height to create the head necessary to convey the updated PMF through the existing spillway cross section. The existing spillway walls would also be raised to accommodate the increased flow. The fish passage improvements summarized above may need to be refined to accommodate the embankment raise.

Alternative 1 would result in the continuation of dynamics similar to those now existing for roughly 100 years, until the reservoir is filled with sediment. Although sediment deposition is expected to increase the bed elevation of the lower 35,000 feet of the Carmel River over the next 60 years regardless of any action taken at LPD, Alternative 1 would continue to block coarse sediment transport, resulting in incrementally less deposition in the lower river than other alternatives. This would cause further channel bed degradation downstream of LPD to roughly the old San Clemente Dam location, which would decrease habitat suitability for steelhead, especially between the former San Clemente Dam and LPD, and would have diminishing effects on habitat quality downstream to the ocean. Along with other alternatives that keep the dam in place, Alternative 1 would allow for flow augmentation during the dry season to support rearing habitat for steelhead downstream of LPD. Alternative 1 would continue to block upstream movement of juveniles, thus continuing to prevent access to perennial flow and thermal refugia upstream of LPR. Managed fish passage would continue to cause stress and migration delay for migrating adult steelhead and would force downstream-migrating juveniles to transit through LPR, where a substantial portion are lost to predation or assume a resident or adfluvial life history. A significant uncertainty associated with Alternative 1 is how quickly the remaining reservoir will fill with sediment, thereby impacting existing infrastructure, fish passage, storage capacity, and potential summer releases. A substantial geotechnical investigation and coordination with the California Division of Safety of Dams would be needed to confirm the extent of dam improvements included with this alternative.

Alternative 1 was intended to serve as a no-action alternative for use in relative comparison with other action alternatives; however, no stakeholder wanted to see this alternative considered for implementation due to its high cost and lack of benefits compared to other alternatives. Both NMFS and CDFW explicitly stated in written comment that they do not consider it a feasible alternative. Alternative 1 is presented in this final report at the full level of detail to which it was developed during the study, so that the information is available should it be needed as the basis of comparison in a future environmental document; however, Alternative 1 was eliminated from further consideration for the long-term future of LPD.

Alternative 2 – Dam and Sediment Removal: Under this alternative, most accumulated reservoir sediment would be removed from LPR prior to dam removal using dry excavation techniques. An upstream diversion structure and pipeline would be installed to allow for dewatering of the reservoir during the permitted in-water work window. Approximately 1,680,000 cubic yards (CY) of sediment would be excavated and placed permanently in onsite disposal sites. Approximately 350,000 CY of coarser sediment in the upper reservoir would be left in place for future natural transport downstream. After sediment removal, the full dam would be removed and the associated dam debris would be placed in the permanent disposal sites.

Alternative 2 would significantly increase bedload sediment supply to downstream reaches. It is predicted to cause roughly 20 feet of aggradation just downstream of LPD. Relative to alternatives that do not increase bedload transport, incrementally more aggradation is predicted in the lowest 35,000 feet of the Carmel River, which could result in a similar, incremental, increase in flood risk. Deposition would increase steelhead spawning gravel availability downstream of LPD. Although flood modeling was not conducted as part of the LP Alternatives Study, substantial channel aggradation near the confluence with Cachagua Creek, relative to other alternatives, could also increase flood risk in the community of

Cachagua if not evaluated further and addressed prior to dam removal. Instream habitat complexity would increase, but the loss of summer flow releases from LPR is predicted to result in a substantial decrease in dry season flows, which currently provide rearing habitat for steelhead downstream of LPD. Benefits of dam removal would be maximized with reduced groundwater extraction along the Carmel River during the dry season, in which case flow-dependent steelhead production was predicted to surpass existing. Alternative 2 provides the safest and most efficient steelhead passage, providing fully volitional upstream and downstream passage for all life stages. Downstream migrants would not have to transit LPR, likely increasing smolt production and anadromous life history expression. *O. mykiss* would be provided year-round access to roughly 10,000 feet of restored habitat through the dam and reservoir footprint and to the upper watershed, which currently provides suitable habitat and optimal temperatures for rearing steelhead throughout the year. Dam removal would likely require a change in the legal method and location of diversion to protect the existing water right associated with LPD, but this would require future negotiations with the State Water Resources Control Board. Additional evaluation of flood risk downstream of LPD would also be needed. Alternative 2 is one of two alternatives retained for further consideration at the end of the LP Alternatives Study, along with Alternative 3.

Alternative 3 – Storage Expansion and Dredging: This alternative includes both dredging accumulated sediments to recover lost reservoir storage and increasing the maximum storage at LPR by installing operable gates in the existing spillway. An associated embankment dam raise would be needed to accommodate the updated probable maximum flood. Installing pneumatically actuated gates on the existing spillway crest would add approximately 625 acre-feet (AF) in reservoir storage. Spillway gates could be raised toward the end of the precipitation season, when the risk of large storms has passed but there is sufficient flow to capture water for release later in the year. Wet dredging with barge-mounted equipment would also be dredged, some of which could be reintroduced to the river via floodplain disposal sites directly downstream of LPD. Dredging would add approximately 1,168 AF in reservoir storage. With new gates in the spillway and reservoir dredging, Alternative 3 could increase storage at LPR by about 1,173 AF. Although MPWMD and NMFS prefer that any alternative that retains LPD maximize the benefits associated with storage and release, Cal-Am may prefer not to include the spillway gates due to structural and operational issues their inclusion could cause. Fish passage improvements described above for Alternative 1 would be adapted to Alternative 3.

Because of the increased reservoir storage, Alternative 3 could potentially provide the highest dry season flows for maintaining steelhead rearing habitat downstream of LPD. Less frequent dry back in the lower 9 miles of the Carmel River is predicted under Alternative 3; especially in normal water years. This is expected to increase flow-dependent steelhead production, relative to existing, although the value of this habitat over time in the face of climate change has been questioned by CDFW. Up to 3,600 feet of stream channel upstream of the reservoir (including 100 feet of Danish Creek) could be affected by dredging or inundation during gate operation. One-time introduction of coarse sediment to floodplain disposal sites downstream of LPD would partially mitigate the disruption in sediment supply caused by LPD; however, over the long term, sediment effects for Alternative 3 are likely to be similar to those described for Alternative 1, with continued incision of the channel downstream of LPD, and corresponding effects on flood risk and steelhead habitat. Fish passage under Alternative 3 would be similar to Alternative 1, with potential to increase stress and migration delay; block access to perennial, cold water refugia; and subject downstream migrants to transit through LPR, likely favoring resident and adfluvial over anadromous life histories. Additional design coordination would be needed between passage improvement designs and the spillway gates and embankment raise. A substantial geotechnical investigation and coordination with the California Division of Safety of Dams would be needed to confirm the extent of dam improvements included with this alternative. Alternative 3 is the second alternative, and only dam-in alternative, retained for further consideration at the end of the LP Alternatives Study.

Alternative 5 – Recover Storage Capacity with Sluice Tunnel (Eliminated): This alternative aimed to restore sediment continuity and recover reservoir storage, while retaining LPD. Because the dam would remain in place, Alternative 5 would include fish passage improvements and dam and spillway improvements to accommodate the updated PMF, as described for Alternative 1. An approximately 14-foot-wide by 900-foot-long sluice tunnel would be installed through the eastern abutment, most likely using drill-and-blast excavation methods. In operation, the tunnel would be used to sluice sediment from

the reservoir during wet water years. Limited sediment would be excavated to construct the upstream end of the tunnel in the reservoir. The tunnel excavation spoils would be placed in an onsite disposal site. Sluicing would involve opening a large gate within the sluice tunnel, lowering the reservoir, and allowing storm flows to pass through the reservoir area as run-of-the-river flows that would erode and flush a significant amount of the accumulated sediment downstream. The sluice tunnel could be used as long as LPD is in place to maintain sediment transport and reservoir storage capacity.

Depending on how the sluicing operation is managed, the amount of coarse sediment moving downstream would vary. For the purposes of this report, the sluice tunnel is assumed to transport fine and coarse accumulated sediment as well as annual sediment loads. Fine sediment is expected to have significant short-term effects on aquatic organisms, including steelhead. Although further analysis is needed, initial estimates indicate that peak suspended sediment concentrations of 5,800 mg/L to greater than 49,000 mg/L could occur during initial use of the sluice tunnel. Depending on duration, all life stages of steelhead could experience paralethal and lethal effects at these sediment concentrations. If the sluice tunnel is used aggressively to transport coarse accumulated sediment and annual bedload, Alternative 5 could result in geomorphic changes that would benefit steelhead, over the long term, like the benefits described for dam removal under Alternative 2. The timing and duration of sluicing would be controlled by operation of the sluice gate and could be managed to minimize short-term adverse effects of fine and coarse sediment transport (such as paralethal and lethal effects, and deposition in rearing habitat areas, respectively). Like Alternative 2, the downstream flood risk may also increase at some locations relative to Alternatives 1 and 3.

Water availability under Alternative 5 for dry season flow augmentation would be intermediate to Alternative 1 and Alternative 3, assuming that recovery of a substantial portion of former reservoir storage would be achieved. The suboptimal water temperature regime that occurs seasonally when the reservoir water surface is at or below the spillway associated with other alternatives that retain LPD would persist, as would managed fish passage and effects on migration, effects due to reservoir transit, and lack of access to upstream refugia habitat. Sluicing could result in reversion of a portion of the former reservoir pool that has been filled with sediment and is developing as stream habitat back to reservoir pool. Sluicing would not likely be required every year. When the sluice tunnel is operated, though, it would interfere with fish passage and would entrain fish in LPR, transporting them abruptly to downstream of LPD in turbid storm flow. Substantial uncertainty exists regarding the effectiveness of the sluice tunnel and the resulting effects on geomorphology, steelhead, flood risk, and reservoir storage capacity. Therefore, the outcomes with Alternative 5 are less certain than other alternatives. Design coordination with fish passage options, as described for Alternative 3, would be needed for Alternative 5. In addition, a substantial geotechnical investigation and coordination with the California Division of Safety of Dams would be needed to confirm the extent of dam improvements included with this alternative.

Alternative 5 was eliminated from further consideration for the long-term future of LPD. Due to uncertainty regarding its effectiveness in managing sediment and the frequency and severity of its potential effects on steelhead, it was initially considered lower priority than other alternatives. However, after review of the draft final report, NMFS commented that it would be difficult to mitigate the adverse effects to steelhead anticipated due to sluicing. By the conclusion of the LP Alternatives Study, both NMFS and CDFW clearly stated in their written comments that they do not consider Alternative 5 to be feasible; and all stakeholders agreed that it is not favored and does not warrant the additional analysis that would be required to resolve outstanding uncertainty.

Cost Estimates: Preliminary estimates (including an Opinion of Probable Construction Cost [OPCC] and future operations and maintenance [O&M] costs) were prepared for each alternative included in the draft final report, including Alternatives 1 and 5, which have been eliminated from further consideration for the long-term future of LPD. For all alternatives that retain the dam, including Alternative 1, the LP Alternatives Study used an OPCC for fish passage improvements of \$82.1 million. OPCCs for the alternatives are \$104.0 million for Alternative 1, \$94.7 million for Alternative 2, \$183.4 million for Alternative 3, and \$163.7 million for Alternative 5. Future annual O&M costs do not differentiate among the dam-in alternatives, with all estimates ranging between \$1.1 million and \$1.2 million annually. Alternative 2 stands out from all other alternatives as having no O&M costs, because once the dam has

been removed and regulatory monitoring requirements met, the site would not require operations or maintenance.

Alternatives Comparison: Key attributes of the two alternatives retained for further consideration (Alternatives 2 and 3) are compared. Alternative 2 was judged to be the most sustainable. It has the lowest construction cost, lowest sediment management cost, and no O&M cost; and its benefits would be maintained by natural processes in perpetuity without the need for ongoing political will, capital, or labor. Alternative 3 is fossil-fuel-intensive and would eventually require another major sediment management action. Geomorphic benefits and increased flood risk are correlated; Alternative 2 would increase bedload transport and would benefit steelhead spawning habitat over the long term but would also have localized increases in flood risk, relative to Alternative 3. Alternative 3 stands out as offering the largest increase in reservoir storage capacity and greatest potential for dry-season releases at LPR, thereby maintaining the greatest amount of dry season rearing habitat downstream of LPD (assuming that climate change does not result in temperatures too warm for steelhead) and providing an opportunity to increase water rights. Conversely, Alternative 2 would eliminate dry season flow augmentation downstream of LPD and would potentially lead to renegotiation of the existing water right associated with LPR.

Benefits for Steelhead: Although Alternative 2 would have multiple benefits for steelhead, the benefits come with the predicted loss of substantial dry season rearing habitat downstream of LPD. It is difficult to predict how the steelhead population would respond to a loss of wetted channel in the lower river, where production is currently highest, combined with the ecosystem restoration that comes with dam removal. Such restoration would include improved spawning habitat downstream of LPD; volitional passage for all life stages without the temperature, predation, and residualization effects of LPR; restoration of roughly 10,000 feet of stream channel through the footprint of LPD, LPR, and accumulated sediment; and access for juveniles to perennial, cold-water refugia in the upper watershed. Alternative 3, by increasing storage and dry-season release, also has strong benefit for steelhead but maintains many of the habitat and passage impacts associated with the existing LPD and LPR. Both Alternative 2, if dry-season infiltration in the lower river is low, and Alternative 3, regardless of the dry-season infiltration rate in the lower river, are predicted to increase steelhead production relative to existing conditions when streamflow is considered as the primary variable representing steelhead habitat. Climate change could affect the guality of summer rearing habitat over time, potentially shifting productivity in response to changing stream temperatures, which could affect the modeled gains in production for Alternatives 2 and 3. Additional study would be needed to quantify the tradeoffs among non-flow habitat parameters that also would be affected by Alternatives 2 and 3.

Uncertainties: Conceptual or planning-level alternatives are uncertain by nature. As LPR continues to fill with sediment, its benefits are diminished but its impacts on the ecosystem and fish passage remain. This report identifies uncertainties that could be resolved through further investigation or analysis with focus on uncertainties considered more likely to influence the selection of a preferred alternative.

Conclusion: Looking toward next steps, if dam removal (Alternative 2) is preferred, the following additional studies and actions are recommended to focus on specific design and permitting questions and to help address areas of uncertainty:

- Engage the State Water Resources Control Board and initiate water rights negotiations
- Investigate geotechnical conditions and cultural resources around sediment disposal sites
- Proceed with flood modeling

If a solution that retains the dam is preferred (Alternative 3), or if stakeholders continue considering both Alternatives 2 and 3, the following investigations should be considered high priority:

- · Investigate geotechnical conditions and cultural resources around sediment disposal sites
- Conduct additional design coordination with fish passage improvements
- Confirm dam safety analysis and design requirements with the Division of Safety of Dams
- Further evaluate stream temperatures, considering climate change and effects of the alternatives

Acknowledgements

The LP Alternatives Study was managed by the MPWMD and partially funded by Cal-Am. The consultant team selected to complete the study, led by AECOM, included Balance Hydrologics, Stillwater Sciences, and HDR Engineering. The following individuals provided significant contributions toward the completion of this study:

Jonathan Stead: LP Alternatives Study Lead	AECOM
John Roadifer: Engineering Lead, Alternatives Descriptions	AECOM
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WATER SUPPLY PLANNING COMMITTEE

ITEM: DISCUSSION ITEM

6. AQUIFER STORAGE AND RECOVERY UPDATE FOR 2023

Meeting Date:	May 1, 2023	Budgeted:	No
From:	David J. Stoldt General Manager	Program/ Line Item No.:	N/A
Prepared By:	David J. Stoldt	Cost Estimate:	N/A
General Counse	el Approval: N/A		

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

SUMMARY: To date, through April 23, 2023 the Aquifer Storage and Recovery (ASR) program has injected 1,156 AF into storage in the Seaside Groundwater Basin. Total stored ASR water at that date was 2,548 AF. Injection continues to this day, so the following is not not a complete full-year report.

The program began injection December 12, 2022 when Los Padres Dam filled and spilled, but ceased following December 16, 2022 as in-stream flow requirements were not met. Injection began anew on December 31, 2022 and has occurred continuously for the current water year.

There have been barriers to success of the ASR program. Assuming ASR could have approached and maintained its maximum injection rates beginning January 5, 2023 then the following additional amounts to storage could have occurred:

- 1. With access to the Monterey Pipeline for injection the maximum rate could have been 26 AF/day or an additional 1,678 AF to date.
- 2. With access to ASR Wells # 3 and #4 for injection the maximum rate could have been 18 AF/day or an additional 806 AF to date.
- 3. Without Carmel River well outages and slow pump station start-up the maximum rate could have been 13 AF/day or an additional 261 AF to date.

ASR was limited to the third maximum shown above, but was unable to achieve it due to insufficient redundancy of wells and pump station operations in Cal-Am's system. As such, almost 300 AF of additional storage was foregone.