SEASIDE GROUNDWATER BASIN WATERMASTER
REGULAR MEETING OF THE BOARD OF DIRECTORS

AGENDA

Wednesday, November 1, 2023 – 2:00pm
IN-PERSON
Monterey One Water Board Room
5 Harris Court, Building "D", Ryan Ranch, Monterey, California

Watermaster Board
Coastal Subarea Landowner – Director Paul Bruno
City of Seaside – Mayor Ian Oglesby, Chair
California American Water – Director Christopher Cook
City of Sand City – Mayor Mary Ann Carbone, Vice Chair
Monterey Peninsula Water Management District – Director George Riley
Laguna Seca Subarea Landowner – Director John Gaglioti, Treasurer
City of Monterey – Councilmember Kim Barber
City of Del Rey Oaks – Councilmember Kim Shirley
Monterey County/Monterey County Water Resources Agency – Supervisor Wendy Root Askew, District 4

I. CALL TO ORDER

II. ROLL CALL

III. PUBLIC COMMUNICATIONS
Oral communications are on each meeting agenda in order to provide members of the public an opportunity to address the Watermaster on matters within its jurisdiction. Matters not appearing on the agenda will not receive action at this meeting but may be referred to the Watermaster Administrator or may be set for a future meeting. Presentations will be limited to three minutes or as otherwise established by the Watermaster. In order that the speaker may be identified in the minutes of the meeting, it is helpful if speakers use the microphone and state their names.

IV. REVIEW OF AGENDA
A vote may be taken to add to the agenda an item that arose after the 72-hour posting deadline pursuant to the requirements of Government Code Section 54954.2(b). (A 2/3-majority vote is required).

V. CONSENT CALENDAR

VI. ORAL PRESENTATION – None

VII. OLD BUSINESS

VIII. NEW BUSINESS

IX. INFORMATIONAL REPORTS (No Action Required)

X. DIRECTOR'S REPORTS

XI. STAFF COMMENTS

XII. CLOSED SESSION

A. A closed session of Board is not planned but may be held if necessary for certain limited purposes authorized pursuant to California Government Code.

XIII. Consider motion to adjourn to next regular Watermaster Board meeting to be held on Wednesday, December 6, 2023 - 2:00 P.M.

This agenda was forwarded via e-mail to the City Clerks of Seaside, Monterey, Sand City and Del Rey Oaks; the Clerk of the Monterey Board of Supervisors, the Clerk to the Monterey Peninsula Water Management District; the Clerk at the Monterey County Water Resources Agency, Monterey One Water and the California American Water Company for posting on or before October 25, 2023 per the Ralph M. Brown Act, Government Code Section 54954.2(a).

If requested, the agenda and documents in the agenda packet shall be made available in appropriate alternative formats to persons with a disability, as required by Section 202 of the Americans with Disabilities Act of 1990 (42 U.S.C. Sec. 12132), and the federal rules and regulations adopted in implementation thereof.

SEASIDE GROUNDWATER BASIN WATERMASTER
REGULAR MEETING MINUTES
Wednesday, September 6, 2023 In-Person
Monterey One Water Board Room
5 Harris Court, Building "D", Ryan Ranch, Monterey, California

I. CALL TO ORDER – Mayor Oglesby called the meeting to order at 2:00p.m.

II. ROLL CALL

Laguna Seca Subarea Landowner – Director John Gaglioti
City of Seaside – Mayor Ian Oglesby
City of Sand City – Mayor Mary Ann Carbone
California American Water (CAW) – Director Chris Cook
Monterey Peninsula Water Management District (MPWMD) – Director George Riley
City of Monterey – Council Member Kim Barber
City of Del Rey Oaks – Council Member Kim Shirley
Monterey County/Monterey County Water Resources Agency – Supervisor Wendy Root Askew
Coastal Subarea Landowner – Director Paul Bruno

Absent: None

Others Present:
Laura Paxton, Watermaster Administrative Officer (AO)
Robert Jaques, Watermaster Technical Program Manager (TPM)
Joseph Hughes, Watermaster Legal Counsel
Jonathan Lear, MPWMD
Sheri Damon, City Attorney, City of Seaside

III. PUBLIC COMMUNICATIONS – There were no public communications.

IV. REVIEW OF AGENDA – There were no requested changes to the agenda.

V. CONSENT CALENDAR

A. Minutes of Regular Board meeting held July 5, 2023
B. Summary of Payments made June and July 2023 totaling **$23,891.40**
C. Fiscal Year 2023 Financial Reports through July 31, 2023
D. Summary of Flow Director Flow Velocity Analyses

Director Riley requested Item D be pulled for discussion.

It was moved by Mayor Carbone, seconded by Director Gaglioti, and unanimously carried 9-0 to approve consent agenda Items A through C.

Mr. Jaques responded to Director Riley's questions regarding seawater intrusion rate of flow and the reduction in plan of action 10-year lead time if drought conditions occur (worst case scenario) more than historically in the next 25 years as expected.

It was moved by Director Riley, seconded by Director Gaglioti, and unanimously carried 9-0 to approve consent agenda Items D.

VI. ORAL PRESENTATION – None

VII. OLD BUSINESS

A. Consider Approving Supplemental Cost-Sharing Agreement for Monitoring Well FO-09 Shallow Replacement Well Installation

Mr. Jaques highlighted his transmittal on the item. Sheri Damon, City of Seaside Legal Counsel, addressed the board, requesting that language be added to the cost share agreement stating Marina Coast Water District testing of the well located on City property with a Watermaster easement be subject to the same Watermaster quiet testing methodology sensitive to the surrounds. Mr. Jaques pointed out that if the agreement was revised to include the requested language, it would need to be sent back to the Marina Coast Water District board for approval. Counsel Hughes stated the agreement could be approved subject to his review. If necessary, he could consult City of Seaside Counsel Damon and notify Watermaster Board Chair Oglesby of an impasse is reached.

It was moved by Director Riley, seconded by Director Gaglioti, and unanimously carried 9-0 to approve the Supplemental Cost-Sharing Agreement for Monitoring Well FO-09 Shallow replacement well installation subject to legal review of the document and City of Seaside concerns being addressed.

B. Consider Approving Technical Advisory Committee holding meetings via Zoom

TPM Jaques highlighted his transmittal on the item. Counsel Hughes noted that, per Brown Act teleconferencing requirements, the majority of committee members (5 of 9) in virtual attendance at meetings need to be within Watermaster jurisdiction vis a vis within the bounds of areas represented by the board members. Moreover, remote locations need to be noticed on the agenda, the agenda posted outside the remote locations 72 hours in advance, and the locations accessible for the public to attend in person. A concurrent centralized in-person meeting location is not required.

It was moved by Mayor Carbone, seconded by Director Gaglioti, and unanimously carried 9-0 to approve having the Watermaster's Technical Advisory Committee hold its meetings using Zoom while complying with traditional Brown Act teleconferencing requirements and defining Watermaster jurisdiction as within the bounds of areas represented by its board members.

VIII. NEW BUSINESS

A. Consider Approving Fiscal Year (January–December) 2024 Annual Budgets:

1. Administrative Fund Budget

   AO Paxton highlighted her transmittal on the proposed 2024 Administrative Fund Budget.

   It was moved by Director Gaglioti, seconded by Director Cook, and unanimously carried 7-0, to approve Fiscal Year 2024 Administrative Fund Budget.

   (Per the Decision, landowner representatives do not participate in budget approval voting.)

2. Monitoring and Management Program (M&MP) and M&MP Operations and Capital Budgets

   It was moved by Director Bruno, seconded by Director Gaglioti, and unanimously carried 7-0 to approve Fiscal Year 2024 Monitoring and Management Program and Operations and Capital Budgets.

The 2025 M&MP Operations Budget and Capital Budget are informational no action is required.

3. Replenishment Fund Budget

The 2024 Replenishment Fund Budget is informational and no action is required.

B. Consider Approving Proposed 2024 Replenishment Assessment Unit Costs for Natural Safe Yield and Operating Yield Overproduction

AO Paxton highlighted her transmittal on the item. Director Riley submitted a document he developed entitled "Watermaster Replenishment Fund Fee Calculation Options" (attached to these minutes) and gave comments against the unit cost calculation method used by staff since 2017. He recommended using Item C in his document for 2024 and future calculations – flow weight every category of water. Director Bruno noted that there is nothing precise about the project costs used for the calculations, and the number calculated is used in the Replenishment Assessment Fund that contains substantial credits for bother CAW and City of Seaside and so has no practical value. Director Riley stated his aim was not to rescind the CAW Replenishment Assessment credit but to change the Unit Cost calculation method going forward. Director Askew felt the board had an obligation to set a rate based on a better overview of the State Settlement Agreement and historical Watermaster calculation methods. Director Askew felt unprepared in light of staff presentation and Director Riley's submission to take informed action.

It was moved by Supervisor Askew, seconded by Council Member Barber, and unanimously carried to defer the item to the next board meeting and direct staff to present the importance, purpose and history of Unit Cost Calculations and alternative calculation options compared to Director Riley's submission.

IX. INFORMATIONAL REPORTS (No Action Required)

A. Correspondence from Watermaster to Salinas Valley Basin Groundwater Sustainability Agency requesting the Seaside Subbasin be included as one of the end users of any water that would be generated by the desalination component of the Seawater Intrusion Extraction Barrier and Desalination Project

TPM Jaques informed the board verbally of Sarah Hardgrave, Deputy General Manager/Planning at Salinas Valley Basin Groundwater Sustainability Agency's response to the letter. She provided a survey to requesting end users that CAW will complete and submit back to the Salinas Valley Basin Groundwater Sustainability Agency. Supervisor Askew cautioned to not put the water supply of a community in an adjacent basin, such as Marina, at risk in order to replenish the Seaside Groundwater Basin by obtaining water produced from certain potential future water sources; and that Watermaster should stay informed to consider other replenishment supply possibilities. Director Gaglioti stated the feasibility study and proposed project mitigates the Marina-Ord basin overdraft/intrusion, and that a large amount of replenishment to the Seaside Basin would flow into the Marina-Ord Basin to its benefit.

B. Watermaster Report of Production of the Seaside Basin through 3rd Quarter Water Year 2023 (January 1, 2023 – June 30, 2023)

C. Technical Advisory Committee (TAC) draft meeting minutes August 9, 2023

D. Sustainable Groundwater Management Act Monthly Updates April – July 2023

X. DIRECTOR'S REPORTS – Director Cook requested high level (i.e., project engineer) status presentations on the Pure Water Monterey Expansion Project and the Desalination Project by CAW, Monterey One Water and other interested agencies at Watermaster's December board meeting.

Director Bruno reported that an MPE crew had accidentally damaged FO-09 well when working in the area on a project unrelated to the well. The damage was repaired by Maggiora Brothers and MPE will video inspect the well.

The Board directed staff to present options for in-person vs. virtual vs. hybrid board meetings in light of pending legislation that may loosen restrictions on teleconferencing/virtual meetings.

XI. STAFF COMMENTS – Staff had requested the October board meeting be cancelled however the Board felt the meeting should be held to determine the Replenishment Assessment Unit Costs.

XII. NEXT REGULAR MEETING DATE – Next meeting Wednesday, October 4, 2023 – 2:00 p.m.

XIII. The Board adjourned to closed session at 3:33pm to evaluate Technical Program Manager and Administrative Officer performance. The Board reconvened open session at 3:42pm.

It was moved, seconded, and unanimously carried in closed session to approve one-time rate increases for the Watermaster Technical Program Manager to $175/hour and for the Administrative Officer to $125/hour effective January 1, 2024.

XIV. ADJOURNMENT – There being no further business, the meeting was adjourned at 3:46 p.m.

Respectfully submitted by Laura Paxton, Board Secretary

SEASIDE GROUNDWATER BASIN WATERMASTER								ITEM V.B. 11/1/23
TO:	Board of Directors							
FROM:	Laura Paxton, AO							
DATE:	November 1, 2023							
SUBJECT:	Summary of Payments made August through September 2023							
RECOMMENDATIONS:								
Consider approving bill payments submitted and authorized to be paid August through September 2023								
Summary of Payments Made August 2023								
Klein DeNatale Goldner (Counsel Hughes)						2	@375	$ 750.00
July 5, 2023								
Attended Board and Ad Hoc Committee meetings								
Klein DeNatale Goldner (Counsel Hughes)						8.4	@375	$ 3,150.00
July 24 through August 16, 2023								
Reviewed amended judgement; Drafted memo re: production-based assessments; Reviewed email from Paxton re: stored water losses; Telecon w/Paxton re: replenishment assessment credits.								
								$ 3,900.00
Paxton Associates (Administrative Officer (AO))						51	@110	**$ 5,610.00**
July 26 through August 25, 2023								

Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin; Prepare minutes of 7/5 board meeting & 7/5 Replenishment Ad Hoc Committee meeting; Post production, follow up with non-reporters, correct LSRA reporting; correspond w/Patrick Grogan City of Seaside on in-lieu program reporting/review contract; review BMJ legal conract for discharge of atty verbiage; Notice of sub of atty to BMJ via email; Respond to Grogan re: Seaside in-lieu extraction; LSRA call to Rick Garcia; Sheller emails response re: West End water meters/supply; Display in a pdf production sheet formula errors submitted by Rick at LSRA for him to correct at his end; Review Jaques invoice; Develop 2024 Admin budget w/AO pay increase trx; Grogan Seaside storage agmt clarification; Sheller telecon DBO rptg requirements; draft agenda B&F & RAHC mtgs; Sand City contract followup; Basin leakage concept to Hughes; PWMX Salinas/MCWRA letter; 8/9 Jaques TAC Zoom meet issue; Review Monterey subbasin docs from Jaques to Sarah; cost share add to B&F mtg agenda; Collection services invoice to Leon Gomez City of Sand City; Send out B&F/RAdHoc meeting agendas 8/15 Hughes document/review/respond; Develop 8/21 B&F mtg pkt; mail; Hughes teleconfer re: RA Fund & provide numerous documents on basis for RA Fund credits; Telecon w/Dominique City of Seaside Zoom setup for B&F mtg; Prep for/attend B&F Com mtg; emails; Coordinate 9/6 RAHC mtg w/Hughes; Prepare board meeting transmittals based on B&F direction; Draft 9/6 board mtg agendas; SVBGSA letter review/get Oglesby signature/print/mail; Damiani re:RA calcs schedule mtg; Meet w/Victor re: Seaside RA fund/credits; Confer w/Cook re: PWMX & Desal presentations at WM board mtgs; Follow up on signed Feeney contracts; Routinely picked up mail from PO Box; reconciled accounts to the City of Seaside Watermaster accounts; prepared financial reports; processed invoices; reviewed and posted items to web site.

Robert Jaques (Technical Program Manager)									
August 1 through August 31, 2023						37.5	@150	**$**	**5,625.00**
Responded to emails, telephone inquiries, and other correspondence on a variety of Watermaster issues; Review/approve L. Paxton invoice; Review and sign Dept. of Parks Right of Entry permit for Sentinel Wells induction logging; Post TAC meeting discussions with TAC members; research and send info she requested to S. Hardgrave @ SVBGSA re: LSSA groundwater losses to Corral de Tierra subarea; Prepare agenda transmittals for B&F Committee meeting and email to L. Paxton; Post B&F Committee meeting discussions w/ B&F Committee members; start drafting letter to SVBGSA re: having WM be a potential end-user of desal water from SWI Extraction Barrier project in 180/400-foot aquifer subbasin; Go to Sentinel Well #4 to observe Maggiora Bros. well contractor remove plug from well; continue work on letter to SVBGSA; Prepare and send email response to D. Williams email re: Seaside Basin water losses to Monterey Subbasin and 180/400-foot Aquifer Subbasin; Teleconference with Stanford University personnel who are doing research on Monterey County groundwater issues; Review/approve L. Paxton invoice; finalize M. Feeney 2023 RFSs with his signed cover pages; Prep for/attend 8/21 B&F Com meeting; Prep for/attend 8/9 TAC mtg and prepare minutes; Prep for/attend 8/3, 8/17, 8/23 GSP-related meetings									
					Total for August 2023			**$**	**15,135.00**
Summary of Payments Made September 2023									
Klein DeNatale Goldner (Counsel Hughes - Admin Services)						1.5	@375	**$**	**562.50**
August 29, 2023 - September 14, 2023									
Reviewed and replied to email from L. Paxton re: Brown Act issue; Reviewed email and material re: moitoring well agmt; Telephone confer w/Paxton re: well and items for board meeting.									
Klein DeNatale Goldner (Counsel Hughes - Replenishment Services)						7.7	@375	$	2,887.50
August 29, 2023 - September 14, 2023							Late charges		11.25
									2,898.75
Reviewed CAW replenishment credit memo, meeting mintes, and agmts; Drafted/revised replenishment assessment and credit memorandum; Phone/email confers w/Paxton; Attend 9/6 board and ad hoc committee meetings									
					Total Klein DeNatale Goldner			**$**	**3,461.25**
Paxton Associates (Administrative Officer (AO))						52.5	@110	**$**	**5,775.00**
August 26 through September 25, 2023									
Responded to telephone inquiries, e-mail, and other correspondence as needed regarding the Seaside Basin; Finalize transmittals for 9/6 board mtg, complete financials thru July 31st, compile board meeting packet, send to Jaques for review, add Zoom meeting item of Bob's; emails; Confer w/Hughes re: RA agenda item; Scan monitoring well easement/send to Jaques; Confer w/Hughes TAC meet by Zoom; Confer w/Gaglioti re:RAHC meeting; Follow up w/Seaside to make JEs for 2023 assessment payments & status of WM July check pymts; Finalize RAHC 9/6 meeting packet and distribute; Riley comments to board/Jaques/Hughes; Prep for/attend 9/6 board meeting/follow up confers/prep minutes; Confer with Oglesby/Hughes/Jaques to reschedule 10/4 board mtg to 10/25/try to reschedule/reschedule to 11/1 instead; Create basin boundary map with street detail; Cancel 10/4 board meeting; Phone confer w/Hughes re: Zoom meetings/AO & TPM contracts/moving forward w/funding mechs; Prepare minutes of 9/6 RAHC meeting & send to Hughes; Oglesby cost share agmt signature; Sentinel well upgrade contracting issue.									

Robert Jaques (Technical Program Manager)								
September 1 through September 30, 2023						24	@150	**$ 3,600.00**
Responded to emails, telephone inquiries, and other correspondence on a variety of Watermaster issues; Attend 9/6 Board & RAHC meetings; Review FO-9 well easement document and email S. Damon at City of Seaside re: her concerns about the Supplemental Agreement between WM and MCWD; Send out Notice cancelling the September and October TAC meetings; Make clarifying edits to Flow Direction/Flow Velocity Summary Memo; Prepare and send response to Allison Immamura's (of M1W) questions re: SGWB groundwater losses to Monterey Subbasin; Review/approve M&A invoice; Draft letter for MCWD to send to S. Damon at City of Seaside re: collecting water quality data from FO-9 and send to P. Breen for his review; Review/sign Encroachment Permit application for FO-9; Meet with State Parks reps at Sentinel Well #4 site re: putting in protective monument for this well and preserving vehicle access to it for induction logging; Telecon w/ M. Feeney re: Sentinel Well #4 issues; Finalize Supplemental Agreement between WM and MCWD re: FO-9 by consolidating all signature pages; Attend 9/19 GSP-related meeting/summarize.								
Montgomery & Associates (General Consulting Operations)						1.0	$205/hr	$ 205.00
August 1 through August 31, 2023								
RFS 2023-01								
P. Benito attend TAC meeting and review Salinas SWI model								
Montgomery & Associates (FO-09 Well Installation Capital Project)						5.0	$228/hr	$ 1,140.00
August 1 through August 31, 2023						1.5	182	273.00
RFS 2022-05 F-09 Well Installation								
Expenses: Subtronic Corp Professional Services					Mileage 134 @ $0.655/mile			87.77
								$ 1,705.77
					Total for September 2023			**$ 14,542.02**

Seaside Groundwater Basin Watermaster

Budget vs. Actual Administrative Fund

Fiscal Year (January 1 - December 31, 2023)
Balance through September 30, 2023

	2023 Adopted Budget October 5, 2022	Contract Amount		Year to Date Revenue / Expenses
Available Balances & Assessments				
Other Assessments	-			
FY (Rollover)	39,500.00			55,111.67
Admin Assessments	60,500.00			60,500.00
Available	**100,000.00**			**115,611.67**
Expenses				
Contract Staff	60,000.00	60,000.00		40,815.00
PAC / 3D Basin Modeling	3,000.00	3,000.00		2,610.00
Legal Counsel	12,000.00	20,000.00	*	1,312.50
Filing fees and postage				-
Total Expenses	**75,000.00**	**83,000.00**		**44,737.50**
Total Available	25,000.00			
Dedicated Reserve	25,000.00			-
Net Available	**-**			**70,874.17**

** $8,000 of the contracted amount is an approximation of expenditures related to the Replenishment Fund*

Seaside Groundwater Basin Watermaster

Budget vs. Actual Monitoring & Management - Operations Fund

Fiscal Year (January 1 - December 31, 2023)
Balance through September 30, 2023

	2023 Adopted Budget	Contract Encumbrance	Year to Date Revenue/Expenses
Available Balances & Assessments			
Operations Fund Assessment	$ 274,930.00	$ -	$ 274,930.00
Pass Through		-	3,678.00
FY 2022 Rollover (estimated)	50,000.00	-	50,000.00
Total Available	**$ 324,930.00**	**$ -**	**$ 328,608.00**
Appropriations & Expenses			
GENERAL			
Technical Project Manager*	$ 75,000.00	$ 75,000.00	$ 41,700.00
Contingency @ 10% (not including TPM)	32,600.00	-	
Total General	**$ 107,600.00**	**$ 75,000.00**	**$ 41,700.00**
CONSULTANTS (Montgomery; Web Site Database)			
Program Administration	$ 22,744.00	$ 25,144.00	$ 5,922.83
Production/Lvl/Qlty Monitoring	8,600.00		
Basin Management	70,000.00		
Seawater Intrusion Analysis Report	27,176.00	27,176.00	-
Total Consultants	**$ 128,520.00**	**$ 52,320.00**	**$ 5,922.83**
MPWMD			
Production/Lvl/Qlty Monitoring	$ 49,754.00	64,297.00	-
Pass Through 2023	20,042.00	-	-
Basin Management	-		-
Seawater Intrusion	-	-	-
Direct Costs	-	-	-
Total MPWMD	**$ 69,796.00**	**$ 64,297.00**	**$ -**
CONTRACTOR (Martin Feeney)			
Hydrogeologic Consulting Services	$ 4,000.00	4,000.00	600.00
Production/Lvl/Qlty Monitoring	11,014.00	11,013.30	-
	$ 15,014.00	**$ 15,013.30**	**$ 600.00**
CONTRACTOR (Todd Groundwater)			
Hydrogeologic Consulting Services	**$ 4,000.00**	**$ 4,000.00**	-
Total Appropriations & Expenses	**$ 324,930.00**	**$ 210,630.30**	**$ 48,222.83**
Total Available	**-**		**280,385.17**

Seaside Groundwater Basin Watermaster
Budget vs. Actual Monitoring and Management - Capital Fund
Fiscal Year (January 1 - December 31, 2023)
Balance through September 30, 2023

	2023 Adopted Budget December 7, 2022		Contract Encumbrance		Year to Date Revenue / Expense
Available Balances and Assessments:					
Monitoring & Management Fund - Capital	$ 240,000.00				$ -
FY 2022 carryover	66,666.99				66,666.99
Transfer out to Operations Fund	-				-
Subtotal	306,666.99				66,666.99
Appropriations & Expenses:					
Professional Services					
Project Management	-		$ 23,600.00	*	14,612.27
Subtotal	-		23,600.00		14,612.27
Direct Costs					
Well Drilling -	240,000.00	**	258,197.00		1,800.00
Subtotal	240,000.00		258,197.00		1,800.00
Total Appropriations and Expenses	240,000.00		$281,797.00		16,412.27
Total Available	**$ 66,666.99**				**$ 50,254.72**

*** RFS 2022-05 for $23,600 covers design and planning for the new well and is funded by the 2022 $66,667 carryover amount**

****RFS 2023-03 for $258,197 is for actual construction of the well. Costs increased between adoption of the budget and letting of the RFS with Montgomery and Associates. Watermaster will share the $258,197 well construction expenses with MCWD & MPWMD - agreement** executed September 2023. **Capital Fund Assessments will be levied on Watermaster Standard Producers in the near future.**

Seaside Groundwater Basin Watermaster — **VI.C**

Replenishment Fund — 11/1/23

Water Year 2023 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2023) — Page 1

Balance through September 30, 2023

Replenishment Fund		**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Assessment Water Year		WY 05/06	WY 06/07	WY 07/08	WY 08/09	WY 09/10	WY 10/11	WY 11/12	WY 12/13	WY 13/14	WY 14/15	WY 15/16
Unit Cost:	a	$1,132 / $283	$1,132 / $283	$2,485 / 621.25	$3,040 / $760	$2,780 / $695	$2,780 / $695	$2,780 / $695	$2,780 / $695	$2,702/$675.50	$2,702/$675.50	$2,702/$675.50
Cal-Am Water Balance Forward	b	**$ -**	**$ 1,641,004**	**$ 4,226,710**	**$ (2,871,690)**	**$ (2,839,939)**	**$ (3,822,219)**	**$ (6,060,164)**	**$ (8,735,671)**	**$ (6,173,771)**	**$ (3,102,221)**	**$ (676,704)**
Cal-Am Water Production (AF)	c	*3,710.00*	*4,059.90*	*3,862.90*	*2,966.02*	*3,713.52*	*3,416.04*	*3,070.90*	*3,076.61*	*3,232.10*	*2,764.73*	*1,879.21*
Cal-Am Water NSY Over-Production (AF)	d	*1,862.69*	*2,266.32*	*2,092.16*	*1,241.27*	*1,479.47*	*1,146.71*	*820.48*	*856.42*	*1,032.77*	*782.17*	-
Exceeding Natural Safe Yield Considering Alternative Producers	e	$ 2,106,652	$ 2,565,471	$ 5,199,014	$ 3,773,464	$ 4,112,933	$ 3,187,854	$ 2,280,943	$ 2,380,842	$ 2,790,539	$ 2,113,414	-
Operating Yield Overproduction Replenishment	f	$ -	$ 20,235	$ 8,511	$ -	$ -	$ -	$ 154,963	$ 181,057	$ 281,012	$ 312,103	-
Total California American	g	***$ 2,106,652***	***$ 2,585,706***	***$ 5,207,525***	***$ 3,773,464***	***$ 4,112,933***	***$ 3,187,854***	***$ 2,435,907***	***$ 2,561,899***	***$ 3,071,550***	***$ 2,425,516***	***$ -***
CAW Credit Against Assessment	h	$ (465,648)		$ (12,305,924)	$ (3,741,714)	$ (5,095,213)	$ (5,425,799)	$ (5,111,413)				
CAW Unpaid Balance	i	***$ 1,641,004***	***$ 4,226,710***	***(2,871,690)***	***$ (2,839,939)***	***$ (3,822,219)***	***$ (6,060,164)***	***$ (8,735,671)***	***$ (6,173,771)***	***$ (3,102,221)***	***$ (676,704)***	***$ (676,704)***
City of Seaside Balance Forward	j	**$ -**	**$ 243,294**	**$ 426,165**	**$ 1,024,272**	**$ 1,619,973**	**$ 891,509**	**$ (110,014)**	**$ (773,813)**	**$ (1,575,876)**	**$ (2,889,325)**	**$ (3,346,548)**
City of Seaside Municipal Production (AF)	k	*332.00*	*287.70*	*294.20*	*293.44*	*282.87*	*240.68*	*233.72*	*257.73*	*223.64*	*185.01*	*195.16*
City of Seaside NSY Over-Production (AF)	l	*194.07*	*153.78*	*161.99*	*153.06*	*113.21*	*50.84*	*58.82*	*85.17*	*52.71*	*25.77*	*37.87*
Exceeding Natural Safe Yield Considering Alternative Producers	m	$ 219,689	$ 174,082	$ 402,540	$ 465,300	$ 314,721	$ 141,335	$ 163,509	$ 236,782	$ 142,410	$ 69,630	$ 102,330
Operating Yield Overproduction Replenishment	n	$ 12,622	$ 85	$ 4,225	$ 16,522	$ 20,690	$ -	$ 1,689	$ 27,007	$ 3,222	$ 38	$ 11,959
Total Municipal	o	***$ 232,310***	***$ 174,167***	***$ 406,764***	***$ 481,823***	***$ 335,412***	***$ 141,335***	***$ 165,198***	***$ 263,788***	***$ 145,631***	***$ 69,667***	***$ 114,290***
City of Seaside - Golf Courses (APA - 540 AFY)												
Exceeding Natural Safe Yield - Alternative Producer	p	-	-	$ 131,705	$ 69,701	-	-	-	-	-	-	-
Operating Yield Overproduction Replenishment	q	-	-	$ 32,926	$ 17,427	-	-	-	-	-	-	-
Total Golf Courses	r	$ -	$ -	$ 164,631	$ 87,128	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total City of Seaside*	s	**$ 232,310**	**$ 174,167**	**$ 571,395**	**$ 568,951**	**$ 335,412**	**$ 141,335**	**$ 165,198**	**$ 263,788**	**$ 145,631**	**$ 69,667**	**$ 114,290**
City of Seaside Late Payment 5%	t	$ 10,984	$ 8,704	$ 26,712	$ 26,750	$ 15,737						
In-lieu Credit Against Assessment	u					$ (1,079,613)	$ (1,142,858)	$ (828,996)	$ (1,065,852)	$ (1,459,080)	$ (526,890)	$ (162)
City of Seaside Unpaid Balance	v	***$ 243,294***	***$ 426,165***	***$ 1,024,272***	***$ 1,619,973***	***$ 891,509***	***$ (110,014)***	***$ (773,813)***	***$ (1,575,876)***	***$ (2,889,325)***	***$ (3,346,548)***	***$ (3,232,420)***
Mission Memorial Park												
Mission Memorial Park Production (AF)	w			*20.80*	*26.40*	*12.80*	*22.40*	*27.00*	*24.95*	*24.89*	*17.97*	*13.67*
Mission Memorial Park NSY Over-Production (AF)	x	-	-	-	-	-	-	-	-	-	-	-
Exceeding Natural Safe Yield - Alternative Producer	y	-	-	-	-	-	-	-	-	-	-	-
Operating Yield Overproduction Replenishment	z	-	-	-	-	-	-	-	-	-	-	-
Total Mission Memorial Park	aa	***$ -***	***$ -***	***$ -***	***$ -***	***$ -***	***$ -***	***$ -***	***$ -***	***$ -***	***$ -***	***$ -***
Total Replenishment Fund Balance	bb	**$ 1,884,298**	**$ 4,652,874**	**$ (1,847,417)**	**$ (1,219,966)**	**$ (2,930,710)**	**$ (6,170,178)**	**$ (9,509,483)**	**$ (7,749,648)**	**$ (5,991,546)**	**$ (4,023,252)**	**$ (3,909,125)**
Replenishment Fund Balance Forward	cc	$ -	**$ 1,884,298**	**$ 4,652,874**	**$ (1,847,417)**	**$ (1,219,966)**	**$ (2,930,710)**	**$ (6,170,178)**	**$ (9,509,483)**	**$ (7,749,648)**	**$ (5,991,546)**	**$ (4,023,252)**
Total Replenishment Assessments	dd	$ 2,349,946	$ 2,768,576	$ 5,805,632	$ 4,369,165	$ 4,464,082	$ 3,329,189	$ 2,601,104	$ 2,825,688	$ 3,217,182	$ 2,495,183	$ 114,290
Total Paid and/or Credited	ee	$ (465,648)	$ -	$ (12,305,924)	$ (3,741,714)	$ (6,174,826)	$ (6,568,657)	$ (5,940,409)	$ (1,065,852)	$ (1,459,080)	$ (526,890)	$ (162)
Grand Total Fund Balance	ff	**$ 1,884,298**	**$ 4,652,874**	**$ (1,847,417)**	**$ (1,219,966)**	**$ (2,930,710)**	**$ (6,170,178)**	**$ (9,509,483)**	**$ (7,749,648)**	**$ (5,991,546)**	**$ (4,023,252)**	**$ (3,909,125)**

** 2010 = 319.55 AF golf course in-lieu replenishment and 68.8 AF 4-party agmt in-lieu replenishment*

2011 = 411.1 AF golf course in-lieu replenishment

2012 = 298.2 AF golf course in-lieu replenishment

2013 = 383.4 AF golf course in-lieu replenishment

2014 = 552.4 AF golf course in-lieu capped at 540 AF

2015 = 195.0 AF golf course in-lieu

2016 = 00.06 AF golf course in-lieu

2017 = 00.00 AF golf course in-lieu

Seaside Groundwater Basin Watermaster

Replenishment Fund

Water Year 2023 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2023)

Balance through September 30, 2023

Replenishment Fund		2017	2018	2019	2020	WY 2021	WY 2022	WY 2023	Totals WY 2006 Through 2023	Budget WY 2024	Projected Totals Through WY 2024
Assessment Water Year		WY 16/17	WY 17/18	WY 18/19	WY 19/20	WY 20/21	WY 21/22	WY 22/23		WY 23/24	
Unit Cost:	a	$2,872 / $718	$2,872 / $718	$2,872 / $718	$2,872 / $718	$2,947 / $737	$3,260/ $815	$3,461/ $865			
Cal-Am Water Balance Forward	b	**$ (676,704)**	**$ (491,747)**	**$ (48,797,949)**	**$ (47,979,852)**	**$ (46,855,121)**	**$ (46,855,121)**	**$ (46,855,121)**		**$ (46,855,121)**	
Cal-Am Water Production (AF)	c	*2,029.51*	*2,229.45*	*2,120.22*	*2,245.88*	*1,664.04*	*1,648.71*	*1,569.60*	*49,259.34*		
Cal-Am Water NSY Over-Production (AF)	d	*64.40*	*374.65*	*284.85*	*334.21*	-	-	-	*14,638.57*		
Exceeding Natural Safe Yield Considering Alternative Producers	e	$ 184,957	$ 1,075,995	$ 818,097	$ 959,859	-	-	-	$ 33,550,034	-	$ 33,550,034
Operating Yield Overproduction Replenishment	f				164,872	-	-	-	$ 1,122,753	-	$ 1,122,753
Total California American	g	**$ 184,957**	**$ 1,075,995**	**$ 818,097**	**$ 1,124,731**	**$ -**	**$ -**	**$ -**	**$ 34,672,786**	**-**	**$ 34,672,786**
CAW Credit Against Assessment	h		$ (49,382,196)	-	-	-	-	-	$ (81,527,907)	-	$ (81,527,907)
CAW Unpaid Balance	i	***$ (491,747)***	***$ (48,797,949)***	***$ (47,979,852)***	***$ (46,855,121)***	***$ (46,855,121)***	***$ (46,855,121)***	***$ (46,855,121)***	***$ (46,855,121)***	***$ (46,855,121)***	***$ (46,855,121)***
City of Seaside Balance Forward (120.28 AF)	j	**$ (3,232,420)**	**$ (3,142,500)**	**$ (3,022,249)**	**$ (2,919,806)**	**$ (2,802,831)**	**$ (2,708,829)**	**$ (2,661,184)**		**$ (2,661,184)**	
City of Seaside Municipal Production (AF)	k	*188.31*	*184.63*	*178.40*	*181.65*	*174.69*	*155.12*	*120.28*	*4,009.23*		
City of Seaside NSY Over-Production (AF)	l	*30.47*	*32.46*	*27.82*	*32.06*	*25.52*	*11.69*		*1,247.31*		
Exceeding Natural Safe Yield Considering Alternative Producers	m	$ 87,512	$ 93,225	$ 79,893	$ 92,089	$ 75,197	$ 38,116	-	$ 2,898,358	0.00	$ 2,898,358
Operating Yield Overproduction Replenishment	n	2,409	27,026	22,550	24,886	18,806	9,529	-	$ 203,263	0.00	$ 203,263
Total Municipal	o	$ 89,920	$ 120,251	$ 102,443	$ 116,975	$ 94,002	$ 47,645	$ -	$ 3,101,621	0.00	$ 3,101,621
City of Seaside - Golf Courses (APA - 540 AFY)											
Exceeding Natural Safe Yield - Alternative Producer	p	-	-	-	-	-	-		$ 201,406		$ 201,406
Operating Yield Overproduction Replenishment	q	-	-	-	-	-	-		$ 50,353		$ 50,353
Total Golf Courses	r	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 251,759		$ 251,759
Total City of Seaside*	s	**$ 89,920**	**$ 120,251**	**$ 102,443**	**$ 116,975**	**$ 94,002**	**$ 47,645**	**-**	**$ 3,353,380**	**0.00**	**$ 3,353,380**
City of Seaside Late Payment 5%	t								$ 88,887		$ 88,887
In-lieu Credit Against Assessment	u					-	-	-	$ (6,103,451)	-	$ (6,103,451)
City of Seaside Unpaid Balance	v	***$ (3,142,500)***	***$ (3,022,249)***	***$ (2,919,806)***	***$ (2,802,831)***	***$ (2,708,829)***	***$ (2,661,184)***	***$ (2,661,184)***	***$ (2,661,184)***	***$ (2,661,184)***	***$ (2,661,184)***
Mission Memorial Park (APA - 31 AFY)											
Mission Memorial Park Production (AF)	w	*13.74*	*14.43*	*16.07*	*20.00*	*46.77*	*33.95*		*335.84*		
Mission Memorial Park NSY Over-Production (AF)	x	-	-	-	-	*15.77*	*2.95*		*18.72*		
Exceeding Natural Safe Yield - Alternative Producer	y	-	-	-	-	$ 46,488	$ 9,608		$ 56,096		$ 56,096
Operating Yield Overproduction Replenishment	z	-	-	-	-	11,626.00	2,401.97		$ 14,028		$ 14,028
Board Approved (5/4/22) Credit Against Assessment						(33,114.00)	-		$ (33,114)		$ (33,114)
$8,500 Applied to Admin Fund to cover expenses						(8,500.00)					
Mission Memorial Park Unpaid Balance	aa	-	-	-	-	-	-	-	$ -	-	$ -
Total	o	***$ -***	***$ -***	***$ -***	***$ -***	***$ 16,500***	***$ 12,010***	***$ -***	***$ 28,510***	***$ -***	***$ 28,510***
Balance of Available Funds								***$ 22,461***			
Total Replenishment Fund Balance	bb	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,658)**	**$ (49,657,952)**	**$ (49,563,950)**	**$ (49,516,305)**	**$ (49,522,353)**	**$ (49,487,795)**	**$ (49,516,305)**	**$ (49,516,305)**
Replenishment Fund Balance Forward	cc	**$ (3,909,125)**	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,658)**	**$ (49,657,952)**	**$ (49,563,950)**	**$ (49,516,305)**		**$ (49,522,353)**	
Total Replenishment Assessments	dd	$ 274,877	$ 1,196,246	$ 920,540	$ 1,241,706	$ 110,502	$ 59,655	$ -	$ 38,143,563	$ -	**$ 38,143,563**
Total Paid and/or Credited	ee		$ (49,382,196)			$ (16,500)	$ (12,010)		(87,659,868)		**(87,659,868)**
Total Paid for Replenishment Legal Services	ff							$ (6,049)	(6,049)		**(6,049)**
Grand Total Fund Balance	gg	***$ (3,634,247)***	***$ (51,820,198)***	***$ (50,899,658)***	***$ (49,657,952)***	***$ (49,563,950)***	***$ (49,516,305)***	***$ (49,522,353)***	***$ (49,522,353)***	***$ (49,522,353)***	***$ (49,522,353)***

SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Watermaster Board of Directors

FROM: Laura Paxton, Administrative Officer

DATE: November 1, 2023

SUBJECT: Unit Cost Calculations importance, purpose, history, and alternative calculation options

RECOMMENDATION: It is recommended the board authorize use of individual flow-weighted averages for each project when calculating Replenishment Assessment Unit Costs for Water Year 2024 and future years, and adopt a 2024 Replenishment Assessment Unit Cost for Natural Safe Yield Overproduction of $4,528.63 and for Operating Yield Overproduction of $1,132.16.

IMPORTANCE AND PURPOSE: Per page 33 of the Decision, "The per acre-foot (AF) amount of the Replenishment Assessments shall be determined and declared by Watermaster each Water Year in order to provide Parties with advance knowledge of the cost of Over-Production in that Water Year." The "per AF amount of the Replenishment Assessments," one for Natural Safe Yield Overproduction and one for Operating Yield Overproduction, have come to be known as the "Unit Costs" determined by calculations presented to the Watermaster Board by staff for approval each fall for the ensuring water year. The approved Unit Costs are used to assess parties a fee for any overproduction that may occur in the upcoming water the year.

The Replenishment Assessment Fund keeps an accounting of the assessments, payments against assessments, and credits against assessments for costs incurred for water supply augmentation that has or will result in replenishment of the Basin. Attachment 1 of this transmittal titled, "Replenishment Assessments" prepared by Watermaster Technical Program Manager Bob Jaques as presented at the October 1, 2008 Watermaster Board meeting, details the purpose of the Replenishment Assessment Fund and the manner of calculating the Unit Costs. The Fund and the Unit Costs, though theoretically of high importance with respect to obtaining basin recharge water, have in a practical sense been of little importance through the years of Watermaster as no water supply projects capable of providing the estimated 3,600 to 4,600 acre-feet per year (AFY) replenishment water needed have been identified, and the estimation of potential water supply project costs is imprecise at best.

The fund *is* important in tracking California American Water (CAW) overproduction to determine the amount of water CAW will pay back to the Seaside Groundwater Basin (Basin) for its accumulated overproduction, and the number of years required at a payback rate of 700AFY in accordance with the December 3, 2008 Agreement between the Watermaster and CAW pertaining to Replenishment Assessments, as amended in 2024. The amount of credit against Replenishment Assessment for expenses incurred for water supply augmentation granted to CAW and the City of Seaside is also tracked in the Fund.

The Watermaster, as the board is aware, has established a Replenishment Ad Hoc Committee that is strategically planning to build up revenues in the fund for purchase of replenishment water once supply projects come on line in future years. The Unit Costs may be important in determining and negotiating the purchase price of replenishment water once it is available.

HISTORY: Per the minutes of the Watermaster Board meeting on October 27, 2006, Charlie Kemp, California American Water (CAW), presented slides on the data used to calculate the first-time Over-production Replenishment Assessment Unit Cost. The assessment was applied to Water Years 2006-2007. Accuracy of the determination was approximated to be +/-10%. (See Table 1 below). The Board voted unanimously to approve the calculation method and the Replenishment Assessment Unit Cost of $1,132 per acre-foot (/AF).

Table 1
Anticipated Costs of Artificial Replacement of Seaside Basin

Updated: 10/19/06

Table 1	Annualized Cost ($/AFY)	Effective Yield (AF)	Weighted Avg %	Replenishment Share	Comments
CWP Desalination Plant[i] [ii] [iii] [iv] [v] [vi]	$2,075	0	0.00%	$0	Plant not scheduled to go on line in the next three years
CWP ASR[vii][viii] [ix] [x] [xi]	$1,245	0	0.00%	$0	
MPWMD Sand City Desalination Project[xii] [xiii] [xiv]	$2,939	0	0.00%	$0	MPWMD board placed project on hold in 2004, in favor of studying regional alternatives.
In-Lieu recharge to Laguna Seca Sub-area	$765	172	10.17%	$78	Based on winter-time demand for Ryan Ranch, Hidden Hills, and Bishop.
MPWMD Phase 1 ASR Project in Conjunction with CAW SACP[xv] [xvi] [xvii] [xviii] [xix]	$765	920	54.37%	$416	
MRWPCA[xx] [xxi] [xxii]	$1,200	0	0.00%	$0	Direct injection from wastewater sources. Based on assumption xxi. Project not scheduled to go on line in the next three years.
RUWAP[xxiii] [xxiv]	$1,100	300	17.73%	$195	Based on assumption xxiii
PSM/ Poseidon Desalination Project[xxv] [xxvi] [xxvii] [xxviii]	$1,352	0	0.00%	$0	
Sand City Desalination Project	$2,500	300	17.73%	$443	
		1692			
		Total Replenishment		$1,132	

Assumptions

This weighted calculation is based on next three years operating conditions.

[i] California American Water's Coastal Water Project- Desalination Component
[ii] Source: Capital and O&M Cost Estimates prepared by RBF Consulting, revised June 2006
[iii] 10 mgd desalination plant, 10,430 AFY production
[iv] Calculated using 10,430 AFY production
[v] ASR cost component identified as "stand alone project" for Comparative Purposes
[vi] 2005 capital cost amortized over 30 years at 7%
[vii]California American Water's Coastal Water Project- ASR Component
[viii] Source: Capital and O&M Cost Estimates prepared by RBF Consulting, revised June 2006
[ix] CWP ASR would integrate and upgrade existing Santa Margarita Test Injection Well, construct two (2) additional wells, Segunda and ASR pipelines, ASR Pump Station, and upgrade Segunda Pump Station
[x] Calculated using 1,300 AFY production
[xi] 2005 Capital cost amortized over 30 years at 7%
[xii] Monterey Peninsula Water Management District's Sand City Desalination Project: 7.5 mgd desalination plant, 8,409 AFY production
[xiii] Source: Exhibit 12-A MPWMD Comparative Matrix, September 18, 2006
[xiv] Cost estimates range from $2,737 - $2,939/ AFY, which does not include CAW system integration costs
[xv] MPWMD Phase 1 Aquifer Storage and Recovery (Seaside Basin) Project and CAW Seaside Adjudication Compliance Project
[xvi] Source: Exhibit 12-B MPWMD Comparative Matrix, September 18, 2006 and CAW Project Need Identification for Seaside Adjudication Compliance Project, October 2006
[xvii] Carmel River Diversions and injection to ASR is 2,420 AFY, maximum extraction is 1,500 AFY and annual average is 920 AFY
[xviii] Does not include improvements to Russel Wells, Carmel Valley Filter Plant, or Segunda Pump Station Upgrade, which are all included in the SACP. These facility upgrades are required in order to meet Carmel River diversion goals. (Segunda PS Upgrade included with CWP ASR Cost)
[xix] MPWMD Phase 1 ASR estimated at $610/ AF for 920 AFY. Per CAW PNI, ASR Pipeline cost is $1.055 Million (July 2006). Phase 1 Temporary ASR Pipeline estimated at $.750Million. Both pipelines amortized over 20 years at 5% yields about $155/AF.
[xx] Groundwater Replenishment Project, Monterey Regional Pollution Control Agency
[xxi] 2,400 AFY yield
[xxii] Preliminary estimate provided by MRWPCA
[xxiii] Regional Urban Water Augmentation Project, Marina Coast Water District and MRWPCA, 300 AFY (of 1,500 AFY total) of reclaimed water earmarked to Monterey Peninsula in Phase 1.
[xxiv] Cost does not include connection fees
[xxv] Monterey Bay Regional Seawater Desalination Project, Pajaro/Sunny Mesa and Poseidon Resources
[xxvi] Source: Exhibit 12-A MPWMD Comparative Matrix, September 18, 2006
[xxvii] 20 mgd desalination plant, 20,930 AFY demand identified
[xxviii] Does not include costs for CAW system integration

Filename = Pw\files\Seaside Basin Technical Committee\Replenishment Calculation_3

The Water Year 2008 approved Unit Cost increased to $2,485. See the table below for updated projects and costs included in the calculation. The Monterey Peninsula Water Management District (MPWMD)/CAW Phase 1 Aquifer Storage and Recovery (ASR) Project was removed as a potential source since all of the water production of the project will be used by CAW to reduce the amount of water CAW takes from the Carmel River Basin and thus it will not benefit the Seaside Basin:

Updated: 10/19/07

ANTICIPATED COSTS OF REPLENISHMENT WATER FOR THE SEASIDE BASIN

POTENTIAL SOURCE OF REPLACEMENT WATER	ANNUALIZED COST ($/AFY)	EXPECTED DATE REPLACEMENT WATER COULD BECOME AVAILABLE	COLA ADJUSTED 3%	EFFECTIVE YIELD (AF)	WEIGHTED AVG %	REPLENISHMENT SHARE	COMMENTS
CWP Desalination Plant[i] [ii] [iii] [iv] [v] [vi]	$2,075	2012	$2,137	0	0.00%	$0	Plant not scheduled to go on line until around 2012, and is thus not prior to January 2009, when the tribal 10% reduction in allowable production could occur, per Footnote No.2 on page 19 of the Amended Decision filed February 9, 2007.
CWP ASR[vii][viii] [ix] [x] [xi]	$1,245	2012	$1,282	0	0.00%	$0	Project is not scheduled to go on line until around 2012, since it depends in part on receiving water from the CWP Desalination Plant. Thus, it is not prior to the January 2009 target date.
In-Lieu recharge to Laguna Seca Sub-area[xxvi]	$610	2003	$628	172	36.44%	$229	Based on winter-time demand for Ryan Ranch, Hidden Hills, and Bishop.
MPWMD ASR[xv] [xvi] [xvii]	$2,000	2010 to 2012	$2,060	0	0.00%	$0	Direct injection or percolation using highly treated recycled water. Based on assumption xxi. Project not scheduled to go on line prior to the January 2009 target date.
RUWAP[xxiii] [xxiv]	$2,068	Late 2009 to early 2010	$2,068	0	0.00%	$0	Based on assumption xxiii, the project is not expected to go on line until 2010 or 2011 at the earliest, which is not prior to the January 2009 target date.
Phase-Sunny Mesa/ Poseidon Desalination Project[xxvii] [xxviii] [xxix] [xxx]	$1,352	Assume same timeline as CWP above (2012)	$1,393	0	0.00%	$0	Project parallels the CWP as a regional desalination project, and is assumed to be progressing on the same timeline as the CWP.
Sand City Desalination Project[xxxi] [xxxii] [xxxiii]	$3,550	Early 2009	$3,550	300	82.56%	$2,256	Project has completed final design and is out for construction bids. Completion by early 2009 is anticipated.

Total Quantity of Replacement Water (AFY) Expected to be Available to the Seaside Basin by January 2009 = 472

Flow-Weighted Replacement Water Cost Per Acre-Foot = $2,485

The Water Year 2009 approved Unit Cost increased to $3,040. See the table below for updated projects and costs included in the calculation. Several projects were added:

WATER YEAR 2008-2009

ANTICIPATED UNIT COSTS OF REPLENISHMENT WATER FOR THE SEASIDE BASIN [9]

POTENTIAL SOURCE OF REPLACEMENT WATER	POTENTIAL DATE REPLACEMENT WATER COULD BECOME AVAILABLE	POTENTIAL VOLUME OF WATER THAT COULD BE SUPPLIED BY THE PROJECT (AFY) [12]	LEVEL OF PROJECT DEVELOPMENT	CONTINGENCY INCLUDED IN BASE UNIT COST [11] (%)	BASE UNIT COST ($/AF)	BASE UNIT COST YEAR	ADDITIONAL CONTINGENCY ADDED TO REFLECT LEVEL OF PROJECT DEVELOPMENT [10] (%)	UNIT COST INCLUDING ADDITIONAL CONTINGENCY ($/AF)	UNIT COST INFLATED @ 3% FROM COST BASIS YEAR TO YEAR REPLACEMENT WATER COULD BECOME AVAILABLE	VOLUME-WEIGHTED AVG %	REPLENISHMENT UNIT COST SHARE
Moss Landing Desalination Plant – Local Alternative	2015	10,430	Conceptual	25%	$2,230	2007	25%	$2,788	$3,531	10.87%	$383.91
Moss Landing Desalination Plant – Regional Alternative	2015	18,972	Conceptual	25%	$1,690	2007	25%	$2,113	$2,676	19.78%	$529.22
North Marina Desalination Plant – Local Alternative (brine disposal at MLFP) [13]	2015	10,430	Conceptual	10%	$1,980	2005	40%	$2,772	$3,725	10.87%	$405.09
North Marina Desalination Plant – Regional Alternative (brine disposal at MLFP) [13]	2015	18,972	Conceptual	10%	$1,660	2005	40%	$2,324	$3,123	19.78%	$617.66
MPWMD's 95-10 Desal Plant	2015	8,400	Conceptual	25%	$2,920	2007	25%	$3,650	$4,624	8.76%	$404.85
Sand City Water Supply Project [14]	2009	300	Design	0%	$3,600	2007	15%	$4,140	$4,392	0.31%	$13.73
Salinas River Surface Water Treatment Plant [6]	2012	7,500	Conceptual	30%	$1,500	2008	20%	$1,800	$2,026	7.82%	$158.38
Regional Desalination [15]	2015	9,930	Conceptual	30%	$1,791	2008	20%	$2,149	$2,643	10.35%	$273.60
Regional Urban Water Augmentation Project	2011	3,000	Conceptual	5%	$1,200	2006	45%	$1,740	$2,017	3.13%	$63.08
Seaside Aquifer Storage and Recovery Project	2008	1,300	Design	25%	$260	2005	10%	$234	$256	1.36%	$3.46
MRWPCA Groundwater Replenishment Project for the Seaside Basin	2012	6,700	Conceptual	30%	$1,865	2006	20%	$2,238	$2,672	6.98%	$186.63
Seawater Conversion Vessel [5]	2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pacific Grove Stormwater Project [3]	2010	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conservation [4]	2009	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Total Quantity of Replacement Water (AFY) Expected to Potentially be Available Within the Next 10 Years [13] = 95,934

Volume-Weighted Replacement Water Cost Per Acre-Foot = $3,040

FOOTNOTES:

(1) Contingency percentage included in Base Unit Cost was not stated. Assume 10%.

(2) Contingency percentage included in Base Unit Cost was not stated. Assume 0%. Although the level of Project Development for this water source is shown as "Design," the project is well into construction with start-up expected in early 2009.

(3) This Project was not included because the costs were not known. A feasibility study for the Pacific Grove Stormwater Project was just recently completed, and it is unknown whether preliminary costs were developed.

(4) This Project was not included because the costs were not known. The cost for conservation will be realized through rebates and are unknown at this time.

(5) This Project was not included because there is no apparent project sponsor for it.

(6) Project has a proposed range of supply of 5,000 to 10,000 AFY. For this analysis assume 7,500 AFY.

(7) Project has a proposed range of supply of 7,430 to 12,430 AFY. For this analysis assume 9,930 AFY.

(8) Project has a proposed range of supply of 5,000 to 10,000 AFY. For this analysis assumed 7,500 AFY.

(9) The data used in this table was taken from the Basin Management Action Plan, Section 3, titled "Supplemental Water Supplies."

(10) The following Contingency percentages were considered reasonable for the indicated levels of project development: Conceptual Level - 50%, Project Report Level - 30%, and Design Level - 15%. The sum of the values in the columns titled "Contingency Included in Base Unit Cost" and "Additional Contingency Added to Reflect Level of Project Development" equals the Contingency appropriate for the project's level of development.

(11) This percentage of Contingency was included in the Base Unit Cost.

(12) This is the total production for this water source, not just the amount of production committed to the Seaside Basin.

(13) This value is the cumulative production capacity of all of the Potential Sources of Replacement Water that were evaluated, and is used only to determine the "Valued-Weighted Average." It is not the amount of water that is expected to be available to the Seaside Basin.

The Water Year 2010 approved Unit Cost increased to $2,780; detailed comments on why Water Year 2009 projects were not included in the 2010 calculations are provided in Attachment 2.

WATER YEAR 2009-2010

ANTICIPATED UNIT COSTS OF REPLENISHMENT WATER FOR THE SEASIDE BASIN

POTENTIAL SOURCE OF REPLACEMENT WATER	POTENTIAL DATE REPLACEMENT WATER COULD BECOME AVAILABLE	POTENTIAL VOLUME OF WATER THAT COULD BE SUPPLIED BY THE PROJECT (AFY) [10]	LEVEL OF PROJECT DEVELOPMENT	CONTINGENCY INCLUDED IN BASE UNIT COST [9] (%)	BASE UNIT COST ($/AF)	BASE UNIT COST YEAR	ADDITIONAL CONTINGENCY ADDED TO REFLECT LEVEL OF PROJECT DEVELOPMENT [8] (%)	UNIT COST INCLUDING ADDITIONAL CONTINGENCY ($/AF)	UNIT COST INFLATED @ 3% FROM COST BASIS YEAR TO YEAR REPLACEMENT WATER COULD BECOME AVAILABLE	VOLUME-WEIGHTED AVG %	REPLENISHMENT UNIT COST SHARE
Salinas River Surface Water Treatment Plant [5]	2014	7,500	Conceptual	30%	$1,500	2008	20%	$1,800	$2,149	38.86%	$835.22
Regional Desalination [7]	2012	8,800	Project Report	25%	$3,250	2009	5%	$3,413	$3,729	45.60%	$1,700.24
Regional Urban Water Augmentation Project [4]	2012	3,000	Design	5%	$1,200	2006	10%	$1,320	$1,576	15.54%	$245.00

Total Quantity of Replacement Water (AFY) the Listed Projects Could Cumulatively be Expected to Produce Within the Next 10 Years [6] = 19,300

Volume-Weighted Replacement Water Cost Per Acre-Foot = $2,780

FOOTNOTES:

(1) Not used.

(2) Not used.

(3) Not used.

(4) Data provided by MCWD.

(5) Data provided by MCWRA in 2008. No updated data was provided for 2009. Project has a proposed range of supply of 5,000 to 10,000 AFY. For this analysis assume 7,500 AFY.

(6) This value is the cumulative production capacity of all of the Potential Sources of Replacement Water that were evaluated, and is used only to determine the "Valued-Weighted Average." It is not the amount of water that is expected to be available to the Seaside Basin.

(7) Information and parameters for the project were taken from the CWP DEIR and supporting project cost documents prepared for the PUC by RMC Engineers.

(8) The following Contingency percentages were considered reasonable for the indicated levels of project development: Conceptual Level - 50%, Project Report Level - 30%, and Design Level - 15%. The sum of the values in the columns titled "Contingency Included in Base Unit Cost" and "Additional Contingency Added to Reflect Level of Project Development" equals the Contingency appropriate for the project's level of development.

(9) This percentage of Contingency was included in the Base Unit Cost.

(10) This is the total amount of water from each production source which could potentially come to the CAW distribution system, not just the amount of production committed to the Seaside Basin.

The Water Year 2011, 2012, and 2013 approved Unit Cost remained $2,780.

For Water Years 2014, 2015, and 2016 the Board adopted a Replenishment Assessment Unit Cost of $2,702/AF for Natural Safe Yield Overproduction. This unit cost was developed starting with Water Year 2014 by taking the average of the Base Unit Cost ($/AF) of the four potential water supply projects that the Board felt were the most likely to be implemented:

the Replenishment Assessment Unit Costs for Water Year 2014 (October 1, 2013-September 30, 2014)

WATER YEAR 2014 (October 1, 2013-September 30, 2014)

ANTICIPATED UNIT COSTS OF REPLENISHMENT WATER FOR THE SEASIDE BASIN

POTENTIAL SOURCE OF REPLENISHMENT WATER	POTENTIAL DATE REPLENISHMENT WATER COULD BECOME AVAILABLE	POTENTIAL VOLUME OF WATER THAT COULD BE SUPPLIED BY THE PROJECT (AFY) (1)	LEVEL OF PROJECT DEVELOPMENT	CONTINGENCY INCLUDED IN BASE UNIT COST (2) (%)	BASE UNIT COST ($/AF)	BASE UNIT COST YEAR	ADDITIONAL CONTINGENCY ADDED TO REFLECT LEVEL OF PROJECT DEVELOPMENT (3) (%)	UNIT COST INCLUDING ADDITIONAL CONTINGENCY ($/AF)	UNIT COST INFLATED @ 3% FROM COST BASIS YEAR TO YEAR REPLENISHMENT WATER COULD BECOME AVAILABLE ($/AF)	VOLUME-WEIGHTED AVG %
Monterey Peninsula Water Supply Project (Regional Desalination) (4)	2018	9,752	Project Report	30%	$3,507	2012	0%	$3,507	$4,188	56.53%
Seaside Basin ASR Expansion (5)	2015	1,000	Conceptual	11%	$1,800	2012	39%	$2,502	$2,734	5.80%
Regional Urban Water Augmentation Project (6)	2017	3,000	Design	5%	$2,000	2013	10%	$2,200	$2,476	17.39%
Groundwater Replenishment Project (GWRP) (7)	2017	3,500	Conceptual	50%	$3,500	2017	0%	$3,500	$3,500	20.29%

Total Quantity of Replenishment Water (AFY) the Listed Projects Could Cumulatively Potentially be Able to Produce Within the Next 10 Years (8) = 17,252

FOOTNOTES:

(1) For the Monterey Peninsula Water Supply Project this is the total amount of water from this source which could potentially come to the CAW distribution system. Only a portion of this amount might be available as initially unused capacity that could be used to help replenish the Seaside Basin. For the RUWAP this is the total amount of water from this source. Only a portion of this amount might be used for in-lieu replenishment of the Seaside Basin. For the ASR Expansion Project this is the additional amount of water that could potentially be provided by this project (see footnote 5). For the RUWAP this is the total amount of water that this project is expected to produce. Only a portion of this amount might be used as in-lieu replenishment of the Seaside Basin. For the GWRP this is the quantity of water that is being considered at this time by CAW for inclusion in its Monterey Peninsula Water Supply Project.

(2)(3) The following Contingency percentages were considered reasonable for the indicated levels of project development: Conceptual Level - 50%, Project Report Level - 30%, and Design Level - 15%. The sum of the values in the columns titled "Contingency Included in Base Unit Cost" and "Additional Contingency Added to Reflect Level of Project Development" equals the Contingency appropriate for the project's level of development.

(4) Project data based on documents provided by Cal Am and MPWMD.

(5) Project data provided by MPWMD. The 1,000 AFY of potential water that this project could supply would be in addition to the 1,300 AFY included as part of the Monterey Peninsula Water Supply Project, and would be an annual average taking into account river flow and hydrologic conditions that change from year to year.

(6) Project data provided by MCWD.

(7) Project data provided by MRWPCA. MRWPCA reported that the GWRP quantity being used in the current CEQA documentation is 3,500 AFY, but that the project could potentially supply 6,500 AFY or more. The unit cost would be lower if a quantity larger than 3,500 AFY were produced.

(8) This value is the cumulative production capacity of all of the Potential Sources of Replenishment Water that listed in this table, and is used only to determine the "Volume-Weighted Average." It is not the amount of water that is expected to be available to the Seaside Basin.

For Water Year 2017 the Board adopted a revised Replenishment Assessment Unit Cost of $2,872. This revised Unit Cost was calculated using updated unit cost data for the three projects which the Board at that time felt were the most likely to be implemented. The number of projects was reduced from four to three, because when the WY 2017 Unit Cost was being calculated, it was determined that two of the previous four projects (Regional Desalination and the Pure Water Monterey Groundwater Replenishment Projects) would be part of a combined project referred to as the Monterey Peninsula Water Supply Project (MPWSP). A flow-weighted average unit cost of the combined desalination and groundwater replenishment projects was first used (footnote 3):

WATER YEAR 2017 (October 1, 2016-September 30, 2017)

ANTICIPATED UNIT COSTS OF WATER COULD POTENTIALLY BE USED FOR REPLENISHMENT OF THE SEASIDE BASIN

POTENTIAL SOURCE OF REPLENISHMENT WATER	POTENTIAL DATE REPLENISH-MENT WATER COULD BECOME AVAILABLE	POTENTIAL VOLUME OF WATER THAT COULD BE SUPPLIED BY THE PROJECT (AFY) [1]	BASE UNIT COST ($/AF)	BASE UNIT COST YEAR
Regional Desalination[2]	2020	6,250	$6,147	2019
Groundwater Replenishment Project (Pure Water Monterey)[2]	2018	3,500	$1,811	2018
Monterey Peninsula Water Supply Project (Combined Regional Desalination with Groundwater Replenishment Project)	GWRP in 2018 Regional Desalination in 2020	9,750	**$4,591**[3]	2018-2019
Seaside Basin ASR Expansion[4]	2020	1,000	**$2,025**	2016
Regional Urban Water Augmentation Project [5]	2018	1,400-1,700	**$2,000**	2018

FOOTNOTES:

(1) For the Regional Desalination Project this is the total amount of water from this source which could potentially come to the CAW distribution system, based on the desalination plant having a 6.4 MGD capacity which is equivalent to 7,169 AFY. Only a portion of this amount might be available as initially unused capacity that could be used to help replenish the Seaside Basin. For the RUWAP this is the total amount of non-potable water from this source. Only a portion of this amount might be used for in-lieu replenishment of the Seaside Basin. For the ASR Expansion Project this is the additional amount of water that could potentially be provided by this project (see footnote 4). For the GWRP this is the quantity of water that is being planned at this time by CAW for inclusion in its Monterey Peninsula Water Supply Project.

(2) Base unit cost data based on PUC filing documents and provided by Dave Stoldt of MPWMD .

(3) Flow-weighted average unit cost of the combined desalination and groundwater replenishment projects, calculated as:
(6,250x$6,147 + 3,500x$1,811)/9,750 = **$4,591**.

(4) Base unit cost data provided by MPWMD. The 1,000 AFY of potential water that this project could supply would be in addition to the 1,300 AFY included as part of the Monterey Peninsula Water Supply Project, and would be an annual average taking into account river flow and hydrologic conditions that change from year to year.

(5) Project data provided by MCWD.

The unit cost for Water Year 2017 was carried over to the three subsequent Water Years because no updated cost data was available for those projects, and no other viable projects could be identified.

In 2020, a blended unit cost value was provided for the MPWSP based on a reduced size desalination plant offset by water to be provided by the Pure Water Monterey Project (PWM). Based on the updated Pure Water Monterey Project's unit cost, the blended unit cost for that combined project was updated from $4,591/AF to $4,817/AF, resulting in a Water Year 2021 Replenishment Assessment Unit Cost of $2,947/AF. In 2022, a blended unit cost value was calculated for the MPWSP based on an updated PWM unit cost. The blended unit cost for that combined project was updated from $4,817/AF to $4,948/AF. For purposes of the 2022 Replenishment Assess Unit Cost calculation, $2,808 was used as the Regional Urban Water Augmentation Project (RUWAP) cost/AF. Monterey Peninsula Water Management District had not yet provided updated costs for Aquifer Storage and Recovery expansion.

The table below includes updated cost data for the PWM Project and its expansion (PWMX) that were used to determine the Water Year 2023 approved Unit Cost. The blended unit cost for the MPWSP based on the updated PWM/PWMX unit cost was updated from $4,948/AF to $4,872/AF. For purposes of the 2023 Replenishment Assess Unit Cost calculation, $3,486 was used as the RUWAP cost/AF. The $3,461 Unit Cost was calculated as: ($4,872+$2,025+$3,486)/3.

WATER YEAR 2023 (October 1, 2022-September 30, 2023)

ANTICIPATED UNIT COSTS OF WATER THAT COULD POTENTIALLY BE USED FOR REPLENISHMENT OF THE SEASIDE BASIN

POTENTIAL SOURCE OF REPLENISHMENT WATER	POTENTIAL DATE REPLENISHMENT WATER COULD BECOME AVAILABLE	POTENTIAL VOLUME OF WATER THAT COULD BE SUPPLIED BY THE PROJECT (AFY) [1]	BASE UNIT COST ($/AF)	BASE UNIT COST YEAR
Regional Desalination [2]	2024	6,250	$6,147	2021
Pure Water Monterey & PWMX [6]	2020	5,750	3,486	2021
Monterey Peninsula Water Supply Project (Combined Regional Desalination with Groundwater Replenishment Project)	PWM in 2020; Regional Desalination in 2024	12,000	**$4,872 [3]**	2022
Seaside Basin ASR Expansion [4]	2021	1,000	**$2,025**	2016
Regional Urban Water Augmentation Project [5]	2021	1,400-1,700	**$3,486**	2021

($4,872 + $2,025 + $3,486) / 3 =

$3,461 = 2023 Replenishment Assessment Unit Cost for NSY Overproduction

$3,461/4 = $865 Replenishment Assessment Unit Cost for OY Overproduction

FOOTNOTES:

(1) For the Regional Desalination Project this is the total amount of water from this source which could potentially come to the Cal Am distribution system, based on the desalination plant having a 6.4 MGD capacity equivalent to 7,169 AFY. Only a portion of this amount might be available as initially unused capacity that could be used to help replenish the Seaside Basin For the RUWAP this is the total amount of non-potable water from this source. Only a portion of this amount might be used for in-lieu replenishment of the Seaside Basin. For the ASR Expansion Project this is the additional amount of water that could potentially be provided by this project (see footnote 4). For the PWM & PWMX this is the quantity of water that is being planned at this time by CAW for inclusion in its Monterey Peninsula Water Supply Project. *Note that if the desalination plant is not built, PWM and PWMX will have to bear conveyance, pumping, and delivery.*

(2) Base unit cost data based on PUC filing documents and provided by Dave Stoldt of MPWMD. This unit cost was confirmed in August 2021 by Ian Crooks of Cal Am as being the latest unit cost available for this project. *Note that if the desalination plant is not built, PWM and PWMX will have to bear conveyance, pumping, and delivery.*

(3) Flow-weighted average unit cost of the combined desalination and groundwater replenishment projects, calculated as: (6,250x$6,147 + 5,750x$3,486)/12,000 = $4,872

(4) Base unit cost data provided by MPWMD in 2016. No updated unit cost was provided for this project. The 1,000 AFY of potential water that this project could supply would be in addition to the 1,300 AFY included as part of the Monterey Peninsula Water Supply Project, and would be an annual average taking into account river flow and hydrologic conditions that change from year to year.

(5) Project data updated in 2022. Patrick Breen of MCWD noted that to determine total cost per acre-foot, use the $3,486-acre foot cost from Pure Water Monterey (which would be RUWAP cost as well) and add MCWD O&M and Financing costs to be determined.

(6) Base unit cost effective September 19, 2022 based on information provided by Ian Crook of Cal Am. *Note that if the desalination plant is not built, PWM and PWMX will have to bear conveyance, pumping, and delivery.*

In January of 2009, California American Water and the Seaside Basin Watermaster (Watermaster) entered into a Memorandum of Understanding (MOU), providing CAW Replenishment Credits based upon expenditures for a water supply augmentation project that CAW contends has or will result in Basin replenishment. The MOU further provides that the Watermaster shall grant CAW's requests for Replenishment Credits for years in which the Watermaster declares that water for Artificial Replenishment is not available. The granting of the request is subject to CAW's obligation to provide future CAW receives Replenishment Credits.

See Attachment 3 for an accounting of replenishment assessments and credits applied since Watermaster inception in 2006 through Water Year 2023.

ALTERNATIVE CALCULATION METHODS: At the September 9, 2023 Watermaster Board meeting, Director Riley submitted a document he developed entitled "Watermaster Replenishment Fund Fee Calculation Options" (Attachment 4) and gave comments against the unit cost calculation method used by staff since 2017. He recommended using Item C in his document for 2024 and future calculations – flow weight every category of water instead of the current calculation method established in 2017 that blends the Base Unit Cost ($/AF) value for the MPWSP with the Base Unit Cost for the Pure Water Monterey Project (PWM) based on a reduced size desalination plant offset by water to be provided by PWM.

Flow-weighted and non-flow-weighted averages used in the Water Year 2023 Unit Cost Calculation –

- Regional/PWM combined projects: Potential volume of water that could be supplied by each project multiplied by the Base Unit Cost ($/AF) of each project, then divided by the total volume of water supplied by both projects.
- The other two projects: Potential volume of water multiplied by the Base Unit Cost
- The results of the three project calculations were then added and the total divided by 3

Director Riley favored the use of averages per Item C in his Attachment 4 document –

- All four projects each have the potential volume of water that could be supplied by each project multiplied by the Base Unit Cost ($/AF) of each project
- The results of the four project calculations be added and the total divided by the total potential volume supplied by all four projects

The 2024 Proposed Updated Unit Cost Data Table based on Director Riley's favored method can be found in Attachment 5 to this transmittal.

It is recommended that the Board authorize Director Riley's suggested calculation method from 2024 forward, with 2024 Replenishment Assessment Unit Costs of $4,528.63 for Natural Safe Yield Overproduction and $1,132.16 for Operating Yield Overproduction.

FISCAL IMPACT: Unknown

ATTACHMENTS

Attachment 1: Amended Decision definitions, statements and/or requirements pertaining to Replenishment Assessments, prepared by Watermaster Technical Program Manager Bob Jaques as presented at the October 1, 2008 Watermaster Board meeting
Attachment 2: Status of and Comments Regarding the Projects Considered in the Water Year 2009-2010 Replenishment Assessment Unit Cost Calculations
Attachment 3: Watermaster Replenishment Assessment Fund through 9/30/23
Attachment 4: Director Riley's "Watermaster Replenishment Fund Fee Calculation Options"
Attachment 5: Water Year 2024 Proposed Updated Unit Cost Data Table

ATTACHMENT 1
Replenishment Assessments

What is the Replenishment Assessment?

The Amended Decision filed with the Court February 9, 2007 contains the following statements and/or requirements pertaining to the Replenishment Assessment on pages 32 and 33:

> *Each Water Year, the Watermaster will determine a Replenishment Assessment for Artificial Replenishment of the Seaside Basin necessary to offset the cumulative Basin Over-Production (as defined in Section III.A. 21), and levy a Replenishment Assessment. Replenishment Assessments based on Over-Production and on Operating Yield Over-Production shall be assessed within 60 days of the end of each Water Year on a per acre-foot basis on each acre-foot, or portion of an acre-foot, of Over-Production, and payment shall be due no later than January 15th of the following year. The per acre-foot amount of the Replenishment Assessments shall be determined and declared by Watermaster in October of each Water Year in order to provide Parties with advance knowledge of the cost of Over-Production in that Water Year.*

Section III.A.21 of the Order defines Over-Production to mean, with regard to all Production from the Seaside Basin, *"... that quantity of Production which exceeds an initially assumed Natural Safe Yield of 3,000 AFY."* With regard to each Producer, Over-Production means *"... that quantity of Water Produced in any Water Year in excess of that Producer's Baser Water Right, as applied to an assumed Natural Safe Yield of 3,000 AFY."*

There are **two** components to the Replenishment Assessment:

1. The **Artificial Replenishment Assessment** is a fee that is charged proportionately against the cumulative amount that all Producers pump over the (assumed) 3,000 AFY Natural Safe Yield of the basin. However, the Order provides that for Alternative Producers there is no fee charged if the Alternative Producer does not pump any water in excess of the fixed amount allocated to it in Table 2 of the Order, and
2. The **Operating Yield Over-Production Assessment** is a fee that is charged against each Standard Producer for the amount of water the Standard Producer pumps in excess of its Base Water Right, as determined using the Allocation percentages in Table 1 of the Order, and against each Alternative Producer that pumps in excess of its allocation in Table 2 of the Order.

The actual calculation of each of these Assessment components gets complex and will therefore not be discussed or explained in this paper. The purpose of this paper is to describe the Replenishment Assessments and what the monies collected through these Assessments is intended to be used for.

The first component of the Replenishment Assessment collects monies from all of the Standard Producers (and Alternative Producers if they exceed their allocations) in proportion to the amount that they have cumulatively pumped in excess of the Natural Safe Yield of 3,000 AFY. So even if a Standard Producer pumps no water in excess of its Allocation, if cumulative pumping has exceeded the Natural Safe Yield, this Standard Producer will still have to pay a fee under this first component in proportion to its contributing toward the over-pumping of the Basin in excess of the Natural Safe Yield.

The second component of the Replenishment Assessment collects monies only from those Standard Producers who pumped amounts of Native Water in excess of their Standard Production Allocations, again as calculated using the percentages in Table 1 of the Order. Alternative Producers are only subject to the second component of the Replenishment Assessment if they pump amounts in excess of

their fixed allocations in Table 2 of the Order. So if a Standard Producer does not pump amount of water in excess of its Allocation, it will not have to pay a fee under the second component.

What Are the Monies Collected Through the Replenishment Assessments to be Used for?
Per page 33 of the Order, funds generated through the Artificial Replenishment Assessments *"... are to be used solely for replenishment of the Basin Groundwater supply with Non-Native water."* Non-native water is defined in the Order to mean *"... all water that would not otherwise add to the Groundwater supply through natural means or from return flows from surface applications other than intentional Spreading."*

Also per page 33 of the Order, funds generated through the Operating Yield Over-Production Assessments *"... shall be utilized by the Watermaster to engage in or contract for Replenishment of the Operating Yield Over-Production occurring in the Preceding Water Year as expeditiously as possible."*

On Page 34 of the Order it states that *"... All proceeds of Replenishment Assessments shall be used to procure Non-Native water, including, if appropriate, substitute reclaimed water."*

Although there is some variation in language between these sections of the Order, it is clear that the monies collected through the Replenishment Assessments are intended to be used to obtain water to recharge the Basin to the extent necessary to reduce the net water production taken from the Basin to a level at or below the Natural Safe Yield of 3,000 AFY. The recharge water could be such things as water imported from another water supply outside the Basin, recycled water used to reduce pumping for landscape irrigation, or recycled water used for recharge through direct injection or spreading.

How is the Per Acre-Foot Cost of the Replenishment Assessments to be Determined?
Per page 33 of the Order, *"The per acre-foot amount of the Replenishment Assessments shall be determined and declared by Watermaster in October of each Water Year in order to provide Parties with advance knowledge of the cost of Over-Production in that Water Year."* Thus, the per acre-foot amount determined by the Board in October of 2007 will be used to calculate Replenishment Assessments for pumping that occurs during the Water Year which begins on October 1, 2007 and ends on September 30, 2008.

On pages 9 and 10 (Section 6.5) of the Watermaster Rules and Regulations, there is a discussion of how the Replenishment Assessment per acre-foot costs are to be calculated. It states that *"The per acre- foot cost of Replenishment Assessments for Production in excess of Natural Safe Yield shall be based on the anticipated cost of Artificial Replenishment, including the cost to construct, operate, and maintain facilities necessary for replenishment of the Basin. Replenishment Assessment may only be used for Artificial Replenishment."* The Order defines Artificial Replenishment to mean the act of engaging in or contracting for Non-Native Water to be added to the Groundwater Basin through spreading or direct injection to offset the cumulative Over-Production from the Basin in any particular Water Year. It can also include programs in which Producers agree to refrain from exercising their rights to pump their full Production Allocations where the intent is to cause the replenishment of the Basin through forbearance in lieu of the injection or spreading of Non-Native Water.

So the per acre-foot cost used to determine the Replenishment Assessments should be the cost that would have to be paid, per acre-foot, to obtain water to recharge the Basin to the extent necessary to offset the cumulative over-production above the Natural Safe Yield, during a given Water Year.

From work done to date in calculating the per acre-foot cost, it is apparent that there are ongoing changes in projected costs of recharge water and in the timing of the projects which will provide that

water. Hence, the per acre-foot cost needs to be recalculated each year using updated cost projections and implementation schedules for these recharge projects.

If recharge water is not available to be purchased in a given Water Year to offset the cumulative over-production that occurred in that year, then the monies collected through the Replenishment Assessments in that Water Year may be accumulated for multiple Water Years until they can be used to purchase recharge water.

It is to be expected that the costs of the recharge projects will increase with inflation, among other things. Therefore, the unspent Replenishment Assessment monies should be invested in interest-earning accounts that will offset these inflation increases, until such time as the recharge projects come on-line and the needed water can then be purchased.

As long as the unit costs of water from the various potential recharge projects is forecast by the agencies sponsoring the recharge projects to the dates at which the projects will come on-line, there should be no need to inflate those unit costs when the per acre-foot cost used to determine the Replenishment Assessments is calculated.

ATTACHMENT 2

Status of and Comments Regarding the Projects Considered in the Water Year 2009-20010 Replenishment Assessment Unit Cost Calculations

1. Moss Landing Desalination Plant – Local Alternative: This is the only Moss Landing Desalination Plant alternative being considered in the CWP DEIR. It would produce 8,800 AFY, and all of this would be supplied to the CAW distribution system. It should not be included in the Replenishment Assessment Unit Cost calculations because the Regional Desalination project is considered to be the most viable of the desalination projects.
2. Moss Landing Desalination Plant – Regional Alternative: This alternative is not being considered in the CWP DEIR, and should therefore not be included in the Replenishment Assessment Unit Cost calculations.
3. North Marina Desalination Plant – Local Alternative: This is one of the alternative projects to the CAW Moss Landing Desalination Plant. It would be similar to the Moss Landing Desalination Plant alternative, but the desalination plant would be located in north Marina. It would produce 9,600 AFY, with 8,800 AFY going to the CAW distribution system and 800 AFY going to the Castroville Seawater Intrusion Project (CSIP) to offset groundwater taken from the Salinas Basin by the desalination plant. It should not be included in the Replenishment Assessment Unit Cost calculations because the Regional Desalination project is considered to be the most viable of the desalination projects
4. North Marina Desalination Plant – Regional Alternative: This alternative is not being considered in the CWP DEIR, and should therefore not be included in the Replenishment Assessment Unit Cost calculations.
5. MPWMD's 95-10 Desal Plant: This alternative is not being considered in the CWP DEIR, but it is still considered an active project by the MPWMD. It should not be included in the Replenishment Assessment Unit Cost calculations because the Regional Desalination project is considered to be the most viable of the desalination projects.
6. Sand City Water Supply Project: This project has been completed and is currently going through its testing phase. However, all of the water that is not needed for new connections within Sand City will be used by CAW to reduce the amount of water CAW takes from the Carmel River Basin, and thus it will not benefit the Seaside Basin. Therefore, this project should not be included in the Replenishment Assessment Unit Cost calculations.
7. Salinas River Surface Water Treatment Plant: This project is considered to be a Phase 1 component of what is now referred to simply as the "Regional Project" in the CWP DEIR. Unless it is learned that this is no longer a viable component of the Regional Project, it should continue to be included in the Replenishment Assessment Unit Cost calculations.
8. Regional Desalination: This project is the key Phase 1 component of what is now referred to simply as the "Regional Project" in the CWP DEIR. It would produce 10,500 AFY, with 8,800 AFY going to the CAW distribution system and 1,700 AFY to MCWD to offset groundwater taken from the Salinas Basin by the

9. Regional Urban Water Augmentation Project: This project is considered to be a Phase 1 component of what is now referred to simply as the "Regional Project" in the CWP DEIR. The RUWAP is being pursued by MCWD and MRWPCA. Since it is an element of the Regional Project, it should continue to be included in the Replenishment Assessment Unit Cost calculations.
10. Seaside Aquifer Storage and Recovery Project: This project is considered to be a Phase 1 component of what is now referred to simply as the "Regional Project" in the CWP DEIR. The Seaside ASR Project is being pursued by MPWMD. When the October 2007 Replenishment Assessment Unit Cost was calculated the TAC concluded that, since all of the water production of this project will be used by CAW to reduce the amount of water CAW takes from the Carmel River Basin and thus it will not benefit the Seaside Basin, it should not be included in the calculation of the Seaside Basin Replenishment Assessment Unit Cost, and it was not included in the 2007 calculation. When the October 2008 Unit Cost calculation was prepared, this project was included in the calculation. There was no record in the TAC meeting minutes to explain why this project was included in 2008 when it had not been included in 2007. It was therefore concluded that including it in the 2008 calculation was an oversight, and that it should not be included in the Replenishment Assessment Unit Cost calculations, even though it is an element of the Regional Project.
11. MRWPCA Groundwater Replenishment Project for the Seaside Basin: Based on information provided by MRWPCA during the development of the Seaside Basin Groundwater Model in the Spring of 2009, the GWRP would be initially sized to provide 2,800 AFY to the Seaside Basin, and could potentially start-up in 2015. This estimated start-up date was based in part on the expectation that the GWRP would eventually be included as a Phase 1 component of the Regional Project. However, the CWP DEIR currently lists the GWRP as a Phase 2 component of the Regional Project, and no time schedule for implementation of Phase 2 project components was presented in the CWP DEIR. Since it is a Phase 2 component, it should not be included in the Replenishment Assessment Unit Cost calculations.
12. Seawater Conversion Vessel: This project was listed, but not included, in the Replenishment Assessment Unit Cost Calculation for Water Year 2008-2009, because there did not appear to be any sponsor for it. This appears to still be the case, so this project should not be included in the Replenishment Assessment Unit Cost calculations.
13. Pacific Grove Stormwater Project: This Project is listed in the CWP DEIR as a Phase 2 component of the Regional Project. No time schedule for implementation of Phase 2 project components was presented in the CWP DEIR. A feasibility study has reportedly been completed indicating that the City of Pacific Grove should pursue this project, which could produce an estimated 200 AFY of water. The estimated capital cost of the project, including engineering and construction, is reportedly $13.2 million in 2008 dollars. No O&M cost estimate and no contingency percentage was provided. Using the same financing assumptions as were used for the Regional Project in Table 2, the Annualized Capital Cost of such a project, with no additional contingencies or other implementation costs added, would be approximately $868,500. With0 AFY production capacity, this results in a unit cost of approximately $4,340. Since it is a Phase 2 component, it should not be included in the Replenishment Assessment Unit Cost calculations.
14. Conservation: Conservation was listed, but not included in the Replenishment Assessment Unit Cost Calculation for Water Year 2008-2009, because there was no cost data for it. This appears to still be the case, so this project should not be included in the Replenishment Assessment Unit Cost calculations.

Summary of Costs of the Principal Supplemental Water Supply Projects

Project Cost Comparison

	Regional Project (RP)	CAW- North Marina Alternative (NMA)	CAW-Moss Landing (ML)	CAW Facilities (Seaside Pipeline, Terminal Res, 2 ASR Wells, 9 mgd ASR pump station, Monterey Pipeline, Valley Greens PS)	MRWPCA GWRP [10]
Capital Costs					
Base Construction Cost	**$ 108,700,000**	**$ 118,380,000**	**$ 138,100,000**	**$ 42,500,000**	**$ 44,700,000**
Most Probable Capital Cost with Contingency and other Implementation Costs	**$ 177,400,000**	**$ 200,000,000**	**$ 211,550,000**	**$ 73,200,000**	**$ 77,550,000**
Annual Costs					
Total Annual O&M Including Repair, Replacement, Power, Chemicals, and Other O&M Cost Components	**$ 12,080,000**	**$ 11,380,000**	**$ 10,950,000**	**$ 560,000**	**$ 4,450,000**
Annualized Costs					
Total Annualized Cost	**$ 24,080,000**	**$ 30,080,000**	**$ 30,750,000**	**$ 5,350,000**	**$ 9,650,000**
Production Quantities & Unit Costs of Water					
Annual Production to Customers, AFY	10,500	8,800	8,800	8,800	2,400
Production Breakdown	8,800 to CAW 1,700 to MCWD	8,800 to CAW 800 to CSIP	8,800 to CAW	8,800 to CAW	2,400 to Seaside Basin
Cost of Water ($/AF)	$ 2,290	$ 3,420	$ 3,490	$ 610	$ 4,020
Cost of Water ($/AF)					
Total Cost of Water Adjustments	$ 350	$ (30)	$ -	$ -	$ -
Cost of Water to the Seaside Basin (includes CAW's costs for CAW facilities which are needed to deliver water from the alternative projects to the CAW distribution system, and which are common to all of the Alternatives, except the GWRP which does not require the CAW facilities)	**$ 3,250**	**$ 4,000**	**$ 4,100**	**$ 610**	**$ 4,020**

Notes:

1. Cost estimates are in current, 2009 dollars.
2. Contingency not applied to O&M estimates.
3. Power costs at time of startup dependent on long-term contract rate with MRWMD or potential contract rate with PGE or current PGE rates that time.
4. Regional, NM and ML desal plants assumed to operate at same efficiency and pressures.
5. O&M costs are based on the RP producing 10,500 AFY, NMA producing 9,600 AFY, and ML producing 8,800 AFY.
6. Ground water unit cost for the MCWD ($500/AF) is based on their current groundwater supplies.
7. $300/AF for CSIP supplies is based on approximate cost for MRWPCA to produce recycled water to CSIP.
8. Membrane replacement is based on a 15-year cycled (replacing approximately 15% a year).
9. $500,000 groundwater monitoring program is a conservative placeholder until the details of the program are identified.
10. MRWPCA's Groundwater Replenishment Project (GWRP) costs taken from Project Cost Comparison prepared by RMC dated August 11, 2009 as part of RMC's work in preparing their "Draft Technical Memorandum Capital and O&M Cost Estimated Update for the Coastal Water project, August 10, 2009" which was presented to the PUC in conjunction with cost workshops.

ATTACHMENT 3
Watermaster Replenishment Fund Through September 30, 2023

																		VI.C
								Seaside Groundwater Basin Watermaster										11/1/23
								Replenishment Fund										Page 1
								Water Year 2023 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2023)										
								Balance through September 30, 2023										
Replenishment Fund		**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**						
Assessment Water Year		WY 05/06	WY 06/07	WY 07/08	WY 08/09	WY 09/10	WY 10/11	WY 11/12	WY 12/13	WY 13/14	WY 14/15	WY 15/16						
Unit Cost:	a	$1,132 / $283	$1,132 / $283	$2,495 / 621.25	$3,040 / $760	$2,780 / $695	$2,780 / $695	$2,780 / $695	$2,780 / $695	$2,702/$675.50	$2,702/$675.50	$2,702/$675.50						
Cal-Am Water Balance Forward	b	$ -	$ 1,641,004	$ 4,226,710	$ (2,871,890)	$ (2,839,939)	$ (3,822,219)	$ (6,060,164)	$ (6,735,671)	$ (6,173,771)	$ (3,102,221)	$ (676,704)						
Cal-Am Water Production (AF)	c	*3,710.00*	*4,059.90*	*3,862.90*	*2,966.02*	*3,713.52*	*3,416.04*	*3,070.90*	*3,076.61*	*3,232.10*	*2,764.73*	*1,879.21*						
Cal-Am Water NSY Over-Production (AF)	d	*1,962.69*	*2,266.32*	*2,092.16*	*1,241.27*	*1,479.47*	*1,146.71*	*820.48*	*856.42*	*1,032.77*	*782.17*	-						
Exceeding Natural Safe Yield Considering Alternative Producers	e	$ 2,106,652	$ 2,565,471	$ 5,199,014	$ 3,773,464	$ 4,112,933	$ 3,187,854	$ 2,280,943	$ 2,380,842	$ 2,790,539	$ 2,113,414	-						
Operating Yield Overproduction Replenishment	f	$ -	$ 20,235	$ 8,511	$ -	$ -	$ -	$ 154,963	$ 181,057	$ 281,012	$ 312,103	-						
Total California American	g	$ 2,106,652	$ 2,585,706	$ 5,207,525	$ 3,773,464	$ 4,112,933	$ 3,187,854	$ 2,435,907	$ 2,561,899	$ 3,071,550	$ 2,425,516	$ -						
CAW Credit Against Assessment	h	$ (465,648)		$ (12,305,924)	$ (3,741,714)	$ (5,095,213)	$ (5,425,799)	$ (5,111,413)										
CAW Unpaid Balance	i	$ *1,641,004*	$ *4,226,710*	$ *(7,871,690)*	$ *(2,839,939)*	$ *(3,822,219)*	$ *(6,060,164)*	$ *(8,735,671)*	$ *(6,173,771)*	$ *(3,102,221)*	$ *(676,704)*	$ *(676,704)*						
City of Seaside Balance Forward	j	$ -	$ 243,294	$ 428,165	$ 1,024,272	$ 1,619,973	$ 891,509	$ (110,014)	$ (773,813)	$ (1,575,876)	$ (2,889,325)	$ (3,346,548)						
City of Seaside Municipal Production (AF)	k	*332.00*	*287.70*	*294.20*	*293.44*	*282.87*	*240.68*	*233.72*	*257.73*	*223.64*	*185.01*	*195.16*						
City of Seaside NSY Over-Production (AF)	l	*194.07*	*153.78*	*161.99*	*153.06*	*113.21*	*50.84*	*58.82*	*85.17*	*52.71*	*25.77*	*37.87*						
Exceeding Natural Safe Yield Considering Alternative Producers	m	$ 219,699	$ 174,082	$ 402,540	$ 465,300	$ 314,721	$ 141,335	$ 163,509	$ 236,782	$ 142,410	$ 69,630	$ 102,330						
Operating Yield Overproduction Replenishment	n	$ 12,622	$ 85	$ 4,225	$ 16,522	$ 20,690	$ -	$ 1,689	$ 27,007	$ 3,222	$ 38	$ 11,959						
Total Municipal	o	$ *232,310*	$ *174,167*	$ *406,764*	$ *481,823*	$ *335,412*	$ *141,335*	$ *165,198*	$ *263,788*	$ *145,631*	$ *69,667*	$ *114,290*						
City of Seaside - Golf Courses (APA - 540 AFY)																		
Exceeding Natural Safe Yield - Alternative Producer	p	-	-	$ 131,705	$ 69,701	-	-	-	-	-	-	-						
Operating Yield Overproduction Replenishment	q	-	-	$ 32,926	$ 17,427	-	-	-	-	-	-	-						
Total Golf Courses	r	$ -	$ -	$ 164,631	$ 87,128	$ -	$ -	$ -	$ -	$ -	$ -	$ -						
Total City of Seaside*	s	$ *232,310*	$ *174,167*	$ *571,395*	$ *568,951*	$ *335,412*	$ *141,335*	$ *165,198*	$ *263,788*	$ *145,631*	$ *69,667*	$ *114,290*						
City of Seaside Late Payment 5%	t	$ 10,984	$ 8,704	$ 26,712	$ 26,750	$ 15,737												
In-lieu Credit Against Assessment	u					$ (1,079,613)	$ (1,142,859)	$ (928,996)	$ (1,065,852)	$ (1,459,080)	$ (526,890)	$ (162)						
City of Seaside Unpaid Balance	v	$ *243,294*	$ *426,165*	$ *1,024,272*	$ *1,619,973*	$ *891,509*	$ *(110,014)*	$ *(773,813)*	$ *(1,575,876)*	$ *(2,889,325)*	$ *(3,346,548)*	$ *(3,232,420)*						
Mission Memorial Park																		
Mission Memorial Park Production (AF)	w			*20.80*	*26.40*	*12.80*	*22.40*	*27.00*	*24.95*	*24.89*	*17.97*	*13.67*						
Mission Memorial Park NSY Over-Production (AF)	x	-	-	-	-	-	-	-	-	-	-	-						
Exceeding Natural Safe Yield - Alternative Producer	y	-	-	-	-	-	-	-	-	-	-	-						
Operating Yield Overproduction Replenishment	z	-	-	-	-	-	-	-	-	-	-	-						
Total Mission Memorial Park	aa	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -						
Total Replenishment Fund Balance	bb	$ 1,884,298	$ 4,652,874	$ (1,847,417)	$ (1,219,966)	$ (2,930,710)	$ (6,170,178)	$ (9,509,483)	$ (7,749,649)	$ (5,991,546)	$ (4,023,252)	$ (3,909,125)						
Replenishment Fund Balance Forward	cc	$ -	$ 1,884,298	$ 4,652,874	$ (1,847,417)	$ (1,219,966)	$ (2,930,710)	$ (6,170,178)	$ (9,509,483)	$ (7,749,649)	$ (5,991,546)	$ (4,023,252)						
Total Replenishment Assessments	dd	$ 2,349,946	$ 2,768,576	$ 5,805,632	$ 4,369,165	$ 4,464,082	$ 3,329,189	$ 2,601,104	$ 2,825,688	$ 3,217,182	$ 2,495,183	$ 114,290						
Total Paid and/or Credited	ee	$ (465,648)	$ -	$ (12,305,924)	$ (3,741,714)	$ (6,174,826)	$ (6,568,657)	$ (5,940,409)	$ (1,065,852)	$ (1,459,080)	$ (526,890)	$ (162)						
Grand Total Fund Balance	ff	$ 1,884,298	$ 4,652,874	$ (1,847,417)	$ (1,219,966)	$ (2,930,710)	$ (6,170,178)	$ (9,509,483)	$ (7,749,649)	$ (5,991,546)	$ (4,023,252)	$ (3,909,125)						
* *2010 = 319.55 AF golf course in-lieu replenishment and 68.8 AF 4-party agmt in-lieu replenishment*																		
2011 = 411.1 AF golf course in-lieu replenishment																		
2012 = 298.2 AF golf course in-lieu replenishment																		
2013 = 383.4 AF golf course in-lieu replenishment																		
2014 = 552.4 AF golf course in-lieu capped at 540 AF																		
2015 = 195.0 AF golf course in-lieu																		
2016 = 00.06 AF golf course in-lieu																		
2017 = 00.00 AF golf course in-lieu																		

Seaside Groundwater Basin Watermaster
Replenishment Fund
Water Year 2023 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2023)
Balance through September 30, 2023

Replenishment Fund		2017	2018	2019	2020	WY 2021	WY 2022	WY 2023	Totals WY 2006 Through 2023	Budget WY 2024	Projected Totals Through WY 2024
Assessment Water Year		WY 16/17	WY 17/18	WY 18/19	WY 19/20	WY 20/21	WY 21/22	WY 22/23		WY 23/24	
Unit Cost:	a	$2,872 / $718	$2,872 / $718	$2,872 / $718	$2,872 / $718	$2,947 / $737	$3,260/ $815	$3,461/ $865			
Cal-Am Water Balance Forward	b	**$ (676,704)**	**$ (491,747)**	**$ (48,797,949)**	**$ (47,979,852)**	**$ (46,855,121)**	**$ (46,855,121)**	**$ (46,855,121)**		**$ (46,855,121)**	
Cal-Am Water Production (AF)	c	*2,029.51*	*2,229.45*	*2,120.22*	*2,245.88*	*1,664.04*	*1,648.71*	*1,569.60*	*49,259.34*		
Cal-Am Water NSY Over-Production (AF)	d	*64.40*	*374.65*	*284.85*	*334.21*	-	-	-	*14,638.57*		
Exceeding Natural Safe Yield Considering Alternative Producers	e	$ 184,957	$ 1,075,995	$ 818,097	$ 959,859	-	-	-	$ 33,550,034	-	$ 33,550,034
Operating Yield Overproduction Replenishment	f				164,872	-	-	-	$ 1,122,753	-	$ 1,122,753
Total California American	g	**$ 184,957**	**$ 1,075,995**	**$ 818,097**	**$ 1,124,731**	**$ -**	**$ -**	**$ -**	**$ 34,672,786**	**-**	**$ 34,672,786**
CAW Credit Against Assessment	h		$ (49,382,196)	-	-	-	-	-	$ (81,527,907)	-	$ (81,527,907)
CAW Unpaid Balance	i	*$ (491,747)*	*$ (48,797,949)*	*$ (47,979,852)*	*$ (46,855,121)*	*$ (46,855,121)*	*$ (46,855,121)*	*$ (46,855,121)*	*$ (46,855,121)*	*$ (46,855,121)*	*$ (46,855,121)*
City of Seaside Balance Forward (120.28 AF)	j	**$ (3,232,420)**	**$ (3,142,500)**	**$ (3,022,249)**	**$ (2,919,806)**	**$ (2,802,831)**	**$ (2,708,829)**	**$ (2,661,184)**		**$ (2,661,184)**	
City of Seaside Municipal Production (AF)	k	*188.31*	*184.63*	*178.40*	*181.65*	*174.69*	*155.12*	*120.28*	*4,009.23*		
City of Seaside NSY Over-Production (AF)	l	*30.47*	*32.46*	*27.82*	*32.06*	*25.52*	*11.69*		*1,247.31*		
Exceeding Natural Safe Yield Considering Alternative Producers	m	$ 87,512	$ 93,225	$ 79,893	$ 92,089	$ 75,197	$ 38,116	-	$ 2,898,358	0.00	$ 2,898,358
Operating Yield Overproduction Replenishment	n	2,409	27,026	22,550	24,886	18,806	9,529	-	$ 203,263	0.00	$ 203,263
Total Municipal	o	$ 89,920	$ 120,251	$ 102,443	$ 116,975	$ 94,002	$ 47,645	$ -	$ 3,101,621	0.00	$ 3,101,621
City of Seaside - Golf Courses (APA - 540 AFY)											
Exceeding Natural Safe Yield - Alternative Producer	p	-	-	-	-	-	-		$ 201,406		$ 201,406
Operating Yield Overproduction Replenishment	q	-	-	-	-	-	-		$ 50,353		$ 50,353
Total Golf Courses	r	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 251,759		$ 251,759
Total City of Seaside*	s	**$ 89,920**	**$ 120,251**	**$ 102,443**	**$ 116,975**	**$ 94,002**	**$ 47,645**	**-**	**$ 3,353,380**	**0.00**	**$ 3,353,380**
City of Seaside Late Payment 5%	t								$ 88,887		$ 88,887
In-lieu Credit Against Assessment	u					-	-	-	$ (6,103,451)	-	$ (6,103,451)
City of Seaside Unpaid Balance	v	*$ (3,142,500)*	*$ (3,022,249)*	*$ (2,919,806)*	*$ (2,802,831)*	*$ (2,708,829)*	*$ (2,661,184)*	*$ (2,661,184)*	*$ (2,661,184)*	*$ (2,661,184)*	*$ (2,661,184)*
Mission Memorial Park (APA - 31 AFY)											
Mission Memorial Park Production (AF)	w	*13.74*	*14.43*	*16.07*	*20.00*	*46.77*	*33.95*		*335.84*		
Mission Memorial Park NSY Over-Production (AF)	x	-	-	-	-	*15.77*	*2.95*		*18.72*		
Exceeding Natural Safe Yield - Alternative Producer	y	-	-	-	-	$ 46,488	$ 9,608		$ 56,096		$ 56,096
Operating Yield Overproduction Replenishment	z	-	-	-	-	11,626.00	2,401.97		$ 14,028		$ 14,028
Board Approved (5/4/22) Credit Against Assessment						(33,114.00)	-		$ (33,114)		$ (33,114)
$8,500 Applied to Admin Fund to cover expenses						(8,500.00)					
Mission Memorial Park Unpaid Balance	aa	-	-	-	-	-	-	-	$ -	-	$ -
Total	o	*$ -*	*$ -*	*$ -*	*$ -*	*$ 16,500*	*$ 12,010*	*$ -*	*$ 28,510*	*$ -*	*$ 28,510*
Balance of Available Funds								*$ 22,461*			
Total Replenishment Fund Balance	bb	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,658)**	**$ (49,657,952)**	**$ (49,563,950)**	**$ (49,516,305)**	**$ (49,522,353)**	**$ (49,487,795)**	**$ (49,516,305)**	**$ (49,516,305)**
Replenishment Fund Balance Forward	cc	**$ (3,909,125)**	**$ (3,634,247)**	**$ (51,820,198)**	**$ (50,899,658)**	**$ (49,657,952)**	**$ (49,563,950)**	**$ (49,516,305)**		**$ (49,522,353)**	
Total Replenishment Assessments	dd	$ 274,877	$ 1,196,246	$ 920,540	$ 1,241,706	$ 110,502	$ 59,655	$ -	$ 38,143,563	$ -	**$ 38,143,563**
Total Paid and/or Credited	ee		$ (49,382,196)			$ (16,500)	$ (12,010)		(87,659,868)		**(87,659,868)**
Total Paid for Replenishment Legal Services	ff							$ (6,049)	(6,049)		**(6,049)**
Grand Total Fund Balance	gg	*$ (3,634,247)*	*$ (51,820,198)*	*$ (50,899,658)*	*$ (49,657,952)*	*$ (49,563,950)*	*$ (49,516,305)*	*$ (49,522,353)*	*$ (49,522,353)*	*$ (49,522,353)*	*$ (49,522,353)*

ATTACHMENT 3

ATTACHMENT 4

To: Seaside Basin WaterMaster Board
From: George Riley
Date: Sept 5, 2023

WM REPLENISHMENT FUND FEE
CALCULATION OPTIONS

Setting the fee for over production is required. I believe the Basin is being shortchanged! I oppose the current way the fee is calculated. It reflects faulty math. I propose any of the methods shown in C, D, E below.

A. **Current method** (flow weight 2 sources, do not flow weight 2 others)
Desal and PWM/PWMX are flow weighted and averaged into one value.
This value is averaged with 2 other sources not flow weighted.
Here is the faulty math. No formula is valid when three different methods are used to generate the base numbers (flow weight some, not flow weight others, combine 2 separate sources into one entry)
Fee: $3461/af

B. **B&F Cmte recommendation**
Use $/af for each separate source w/o regard to volumes, but still compress 2 sources into one entry:
Fee: $3442/af

C. **Return to method used in 2007-2012**. All sources were flow weighted. Therefore reinstate the method to use flow weighting for all sources: Desal, PWM/PWMX, ASR and RUWAP:
Fee: $4528/af

D. Simply average the 4 separate costs w/o regard to volume (a mathametically consistent version of B):
Fee: $3786/af

E. Use current method, only count the Desal & PWM tally twice. But this continues use of faulty math:
Fee: $3833/af

ATTACHMENT 5

WATER YEAR 2024 (October 1, 2023-September 30, 2024)

ANTICIPATED UNIT COSTS OF WATER COULD POTENTIALLY BE USED FOR REPLENISHMENT OF THE SEASIDE BASIN

POTENTIAL SOURCE OF REPLENISHMENT WATER	POTENTIAL DATE REPLENISHMENT WATER COULD BECOME AVAILABLE	POTENTIAL VOLUME OF WATER THAT COULD BE SUPPLIED BY THE PROJECT (AFY) [1]	BASE UNIT COST ($/AF)	BASE UNIT COST YEAR
Regional Desalination[2]	2024	6,250	$6,147	2021
Pure Water Monterey and PWMX	2020	5,750	$3,486	2021
Seaside Basin ASR Expansion[3]	2021	1,000	$2,025	2016
Regional Urban Water Augmentation Project[4]	2021	1,400-1,700	$3,486	2021

(6,250X$6,147) + (5,750X$3,486) + (1,000X$2,025) + (1,550X$3,486) / 14,550 = $4,528.63 2024 Natural Safe Yield Overproduction Unit Cost/AF

$4,528.63 / 4 = $1,132.16 Operating Yield Overproduction Unit Cost/AF

FOOTNOTES:

(1) For the Regional Desalination Project this is the total amount of water from this source which could potentially come to the CAW distribution system, based on the desalination plant having a 6.4 MGD capacity which is equivalent to 7,169 AFY. Only a portion of this amount might be available as initially unused capacity that could be used to help replenish the Seaside Basin. For the RUWAP this is the total amount of non-potable water from this source. Only a portion of this amount might be used for in-lieu replenishment of the Seaside Basin. For the ASR Expansion Project this is the additional amount of water that could potentially be provided by this project (see footnote 4). For the PWM and PWMX this is the quantity of water that is being planned at this time by CAW for inclusion in its Monterey Peninsula Water Supply Project.

(2) Base unit cost data based on PUC filing documents and provided by Dave Stoldt of MPWMD. The unit cost was confirmed in August 2021 by Ian Crooks of Cal Am as being the latest unit cost available for this project.

(3) Base unit cost data provided by MPWMD in 2016. No updated unit cost was provided for this project. The 1,000 AFY of potential water that this project could supply would be in addition to the 1,300 AFY included as part of the Monterey Peninsula Water Supply Project, and would be an annual average taking into account river flow and hydrologic conditions that change from year to year.

(4) Project data updated in 2022. Patrick Breen of MCWD noted that to determine total cost per acre-foot, use the $3,486/acre-foot cost from Pure Water Monterey (which would be RUWAP as well) and add MCWD O&M and Financing costs which are yet to be determined.

SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Watermaster Board of Directors

FROM: Laura Paxton, Administrative Officer

DATE: November 1, 2023

SUBJECT: Options for in-person vs. virtual vs. hybrid board meetings in light of pending legislation that may loosen restrictions on teleconferencing/virtual meetings

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RECOMMENDATIONS:
It is recommended that the Board consider board meeting format options.

BACKGROUND:
During the coronavirus pandemic (COVID), the Watermaster Board of Directors used a virtual meeting tool to continue holding meetings and provide a way for the public to participate in those meetings. Post-COVID, the Board has been meeting in person in the Monterey One Water board room as it had done so for many years prior to COVID. The Board recognizes that directors of government boards are increasingly more involved with many other boards, committees and active careers, and that public participation is a critical component of the civic process. The virtual meetings made it easier for board members and the public to participate.

At its September 6, 2023 regular meeting, the Board approved having the Watermaster's Technical Advisory Committee hold its meetings virtually while complying with traditional Brown Act teleconferencing requirements, and defining Watermaster jurisdiction as within the bounds of areas represented by its board members. Aware of pending legislation that may loosen restrictions on teleconferencing / virtual meetings, the Watermaster Board at that meeting also directed staff to present options for conducting future board meetings in-person versus virtually.

DISCUSSION:
In-person board meetings allow for better connections to be formed. The public can get to know board members more easily when meetings are face-to-face. Meetings are easier to organize, communication is smoother, there are limited distractions and better concentration, agendas are clear, and meetings can continue even if there's a technical difficulty encountered. Moreover, staff has immediate access after in-person meetings to board executives for endorsement of documents approved at the meetings.

Virtual, or remote events are those in which everyone attends online. Hybrid meetings are those in which there is a centralized in-person meeting held that has virtual attendance capabilities.

Per Counsel Hughes, pending legislation that may loosen restrictions on teleconferencing / virtual meetings for government bodies is most likely years away from being formalized.

Original Brown Act teleconferencing rules remain available to board members. Local agencies may conduct meetings per Brown Act teleconferencing rules that applied pre-COVID:

1. All votes must be by rollcall
2. The meeting must be conducted so as to protect the rights of the public appearing before the body or wishing to comment
3. All members of the public must be able to access the meeting and provide public comment

4. Teleconference locations must be identified in the agenda
5. Copies of the agenda must be posted at all teleconference locations and teleconference locations must be open to the public
6. At least a quorum of the members of the legislative body who are participating remotely must do so from locations within the agency's jurisdiction.

Counsel Hughes has noted that, per Brown Act teleconferencing requirements, the majority of committee members (5 of 9) in virtual attendance at meetings need to be within Watermaster jurisdiction. Moreover, remote locations need to be noticed on the agenda, the agenda posted outside the remote locations 72 hours in advance, and the locations accessible for the public to attend in person. A concurrent centralized in-person meeting location is not required.

There have been many instances locally and throughout the state of a public member attending a government meeting virtually to voice offensive remarks. It appears the person's freedom of speech is protected and they have to be heard, sometimes for over an hour. Webinar-based software (as opposed to open meeting software that Watermaster uses) is used by some agencies to control these instances by denying virtual audio/visual connection by attendees however this defeats the purpose of conducting virtual meetings for public participation. Agencies are expediting policy that allows up to the limits of the law an offensive speaker to be muted or removed from the meeting. It seems in Watermaster's best interest to adopt such a policy prior to conducting any virtual meetings.

The Watermaster does not have offices to keep a centralized computer to conduct virtual meetings, or a meeting room to equip with virtual meeting capability. The Monterey One Water board room has the means of conducting virtual meetings however Watermaster would be charged for a technician to operate the equipment during its meetings. (Awaiting Monterey One Water to respond with the amount of the charge.) If meetings are held completely virtually, it would need to be determined who the host would be and on what computer.

It is recommended that the Board consider what format it would like to proceed with when conducting future board meetings.

FISCAL IMPACT:
Approximately $1,000/year Zoom Webinar software subscription
Approximately $1,100 cost of stand-alone virtual tower if necessary
Possible attorney fees for litigation brought on claiming violation of free speech

ATTACHMENTS: None

MONITORING WELL FO-9 AT THE CITY OF SEASIDE GOLF COURSE

Drilling of the new monitoring well FO-9 Shallow at the Seaside Golf Courses began Monday October 16. Shown are some photos of the drill rig and the shaker box that is used to separate the cuttings from the drilling mud.

As of Tuesday October 24 they were down to the bottom of the bore and installation of the casing was expected to occur later in the week. Completion depth is around 700 feet, and completion of the well was expected by October 27 if progress continues at the current rate.

MARINA COAST WATER DISTRICT

11 RESERVATION ROAD, MARINA, CA 93933-2099
Home Page: www.mcwd.org
TEL: (831) 384-6131 FAX: (831) 883-5995

October 19, 2023

Ms. Sheri Damon

City Attorney

City of Seaside

440 Harcourt Avenue

Seaside, CA 93955

Subject: Water Quality Monitoring at Monitoring Well FO-9

Dear Ms. Damon,

It is my understanding that the City of Seaside seeks assurance from the Marina Coast Water District that any monitoring work this District performs at Monitoring Well FO-9, which is to be constructed on the City's Golf Course, shall be done in a manner that will avoid noise impacts in the area.

The District hereby commits to performing any such monitoring work in the same, or a similar, manner to that which the Monterey Peninsula Water Management District uses when it performs monitoring for the Watermaster at the Watermaster's other monitoring wells, and which has negligible noise impacts in the surrounding area. That method uses only a small electric sampling pump placed inside the casing of the monitoring well and a depth-sounding device to gather groundwater level and groundwater quality data from the monitoring well.

Sincerely,

Patrick Breen
Water Resources Manager
Marina Coast Water District

Cc Robert Jaques, Technical Program Manager, Seaside Groundwater Basin Watermaster

SEASIDE GROUNDWATER BASIN WATERMASTER

Reported Quarterly and Annual Water Production From the Seaside Groundwater Basin
For All Producers Included in the Seaside Basin Adjudication -- Water Year 2023
(All Values in Acre-Feet [AF])

	Type	Oct	Nov	Dec	Oct-Dec	Jan	Feb	Mar	Jan-Mar	Apr	May	Jun	Apr-Jun	Jul	Aug	Sep	Jul-Sep	Reported Total	Yield Allocation	from WY 2022	for WY 2023
Coastal Subareas																					
CAW - Coastal Subareas	SPA	497.16	410.19	389.22	**1,296.57**	370.86	475.09	659.11	**1,505.05**	585.36	606.31	99.22	**1,290.89**	328.60	328.42	247.05	**904.07**	**1,538.81**	1,466.03	110.45	1,576.48
Luzern		49.71	0.00	0.00	**49.71**	0.08	21.35	52.18	**73.61**	49.92	52.09	8.35	**110.36**	0.47	53.61	29.76	**83.84**	**317.51**			
Ord Grove		107.26	101.65	107.01	**315.92**	107.13	103.08	125.80	**336.00**	123.14	125.76	25.68	**274.58**	112.53	133.33	129.04	**374.90**	**1,301.40**			
Paralta		128.77	119.63	95.62	**344.02**	93.48	130.05	183.04	**406.57**	168.46	186.59	106.98	**462.03**	164.02	182.61	172.94	**519.57**	**1,732.19**			
Playa		32.86	32.92	33.50	**99.28**	33.69	30.01	31.91	**95.60**	31.54	32.73	1.04	**65.31**	1.07	30.85	32.92	**64.85**	**325.04**			
Plumas		27.64	26.92	27.46	**82.03**	27.60	24.67	26.76	**79.04**	23.50	26.82	0.85	**51.17**	1.06	26.76	25.15	**52.97**	**265.20**			
Santa Margarita		150.92	129.07	125.62	**405.62**	108.88	165.93	239.42	**514.23**	188.79	182.32	162.21	**533.32**	128.52	125.35	153.81	**407.68**	**1,860.85**			
ASR Recovery		0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	(205.88)	**(205.88)**	(79.08)	(224.09)	(296.56)	**(599.73)**	**(805.62)**			
PWM Recovery		(404.79)	(333.96)	(359.30)	**(1098.05)**	(339.81)	(436.43)	(498.90)	**(1,275.15)**	(301.76)	0.00	0.00	**(301.76)**	(237.24)	(327.02)	(218.55)	**(782.81)**	**(3,457.77)**			
Seaside Municipal	SPA	15.26	11.75	10.85	**37.86**	11.05	13.22	10.07	**34.34**	12.54	14.66	14.00	**41.20**	16.25	15.92	(25.28)	**6.88**	**120.28**	120.28		120.28
Well #4		15.26	11.75	10.85	**37.86**	11.05	13.22	10.07	**34.34**	12.54	14.66	14.00	**41.20**	16.25	15.92	12.90	**45.06**	**158.46**			
Inlieu Extraction					**0.00**				**0.00**				**0.00**			(38.18)	**(38.18)**	**(38.18)**			
Granite Rock Company	SPA	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**	**0.00**	11.35	249.6	260.95
DBO Development No. 30	SPA	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**	**0.00**	20.59	447.12	467.71
Calabrese (Cypress Pacific Inv.)	SPA	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**	- -	- -	- -	**0.00**	**0.00**	2.76	13.69	16.45
City of Seaside (Golf Courses)	APA	41.260	0.00	0.00	**41.26**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	**41.26**	540.00		540.00
Sand City	APA	0.16	0.14	0.06	**0.36**	0.07	0.18	0.00	**0.25**	0.06	0.14	0.08	**0.28**	0.10	0.16	0.05	**0.31**	**1.20**	9.00		9.00
SNG (Security National Guaranty) / MLDC (Mountain Lake Dev. Corp.)	APA	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00		**0.00**				**0.00**	**0.00**	90.00		90.00
	APA	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00		**0.00**				**0.00**	**0.00**	59.00		59.00
Calabrese (Cypress Pacific Inv.)	APA	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	**0.00**	6.00		6.00
Mission Memorial (Alderwoods)	APA	3.72	1.21	0.45	**5.38**	0.78	0.36	0.25	**1.40**	0.82	1.71	1.85	**4.39**	3.04	4.83	3.28	**11.16**	**22.32**	31.00		31.00
Coastal Subareas Totals					**283.38**				**265.89**				**1,035.00**				**139.60**	**1,723.87**	**2,356.01**	**820.86**	**3,176.87**
Laguna Seca Subarea																					
CAW - Laguna Seca Subarea	SPA	12.42	10.03	8.35	**30.79**				**0.00**				**0.00**				**0.00**	**30.79**	0.00		0.00
Ryan Ranch Unit	06/21/21: Ryan Ranch Wells #7, #8, and #11 physically disconnected from the distribution system.								0.00	0.00	0.00	0.00	**0.00**				0.00	0.00			
Hidden Hills Unit		12.42	10.03	8.35	30.79	7.82	6.93	7.47	22.22	8.66	11.26	13.96	**33.88**	14.65	13.83	13.29	41.77	128.67			
Bishop Unit 3	05/27/21: Bishop Wells #1 and #3 physically disconnected from the distribution system.								0.00	0.00	0.00	0.00	**0.00**				0.00	0.00			
Bishop Unit 1	The Monterey Main to Ryan Ranch & Bishop Intertie was opened on 12/08/20								0.00	0.00	0.00	0.00	**0.00**				0.00	0.00			
The Club at Pasadera	APA	19.00	0.00	0.00	**19.00**	0.00	0.00	0.00	**0.00**	0.00	31.00	20.00	**51.00**	20.00	39.00	41.00	**100.00**	**170.00**	251.00		251.00
Laguna Seca Golf Resort (Bishop)	APA	20.00	5.17	0.00	**25.17**	0.00	0.00	0.00	**0.00**	6.12	15.96	29.18	**51.26**	36.19	39.65	20.78	**96.63**	**173.06**	320.00		320.00
York School	APA	1.40	0.12	0.02	**1.54**	0.01	0.00	0.00	**0.01**	1.25	1.33	2.48	**5.07**	2.12	1.64	2.10	**5.87**	**12.49**	32.00		32.00
Laguna Seca County Park	APA	1.17	1.14	0.15	**2.46**	0.47	0.25	0.84	**1.56**	2.85	3.63	1.98	**8.46**	5.16	4.72	1.94	**11.82**	**24.30**	41.00		41.00
Laguna Seca Subarea Totals					**78.96**				**1.58**				**115.79**				**214.31**	**410.64**	**644.00**	**0.00**	**644.00**
Total Production by WM Producers					**362.34**				**267.46**				**1,150.79**				**353.92**	**2,134.51**	**3,000.01**	**820.86**	**3,820.87**
									Annual Production from APA Producers									444.62			1,379.00
									Annual Production from SPA Producers									1,728.07			2,321.59

CAW / MPWMD ASR (Carmel River Basin source water)																			***Previous Balance***	***Total***
Injection		0.00	0.00	37.49	**37.49**	244.16	323.50	299.63	**867.29**	344.76	406.89	0.00	**751.64**	0.00	0.00	0.00	0.00	**1,656.42**		
(Recovery)		0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	(205.88)	**(205.88)**	0.00	0.00	0.00	**0.00**	**(205.88)**		
Net ASR		0.00	0.00	37.49	**37.49**	244.16	323.50	299.63	**867.29**	344.76	406.89	(205.88)	**545.76**	0.00	0.00	0.00	**0.00**	**1,450.53**	**801.55**	**2,252.08**
Pure Water Monterey (PWM) Injection and Cal-Am Recovery																				
	Balance Forward																			
Injection Operating Reserve	1,164.52	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	**1,164.52**		
Injection Drought Reserve		0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	**0.00**		
Delivery to Basin		349.81	333.96	397.41	**1081.18**	423.25	379.74	434.04	**1237.03**	0.00	303.12	350.42	**653.53**	237.24	327.02	218.55	**782.81**	**3,754.56**		
CAW		(404.79)	(333.96)	(359.30)	**(1,098.05)**	(339.81)	(436.43)	(498.90)	**(1,275.14)**	(301.76)	0.00	0.00	**(301.76)**	(237.24)	(327.02)	(218.55)	**(782.81)**	**(3,457.76)**		
																		296.80		
	Balance Forward																			
City of Seaside Golf Course Recycled Water Use/Municipal Potable Water Recovery *2,361AF Max*																			***Previous Balance***	***Total***
In-lieu Storage/Recycled Water Use	0.00	0.00	0.00	0.00	**0.00**	0.00	10.54	0.66	**11.20**	34.22	83.29	66.54	**184.05**	68.47	64.02	37.28	**169.77**	**365.03**	**0.0**	**365.03**
City of Seaside Municipal Extraction		0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	**0.00**	0.00	0.00	-38.18	**(38.18)**	**(38.18)**	**0.0**	**(38.18)**
Net In-lieu					**0.00**				**11.20**	34.22	83.29	66.54	**184.05**	68.47	64.02	-0.90	**131.59**	**326.85**	**0.0**	**326.85**

Notes:
1. The Water Year (WY) begins October 1 and ends September 30 of the following calendar year. For example, WY 2023 begins on October 1, 2022, and ends on September 30, 2023.
2. "Type" refers to water right as described in Seaside Basin Adjudication decision as amended, signed February 9, 2007 (Monterey County Superior Court Case No. M66343).
3. Values shown in the table are based on reports to the Watermaster received by October 15, 2023.
4. All values are rounded to the nearest hundredth of an acre-foot. Where required, reported data were converted to acre-feet utilizing the relationships: 325,851 gallons = 43,560 cubic feet = 1 acre-foot.
5. "Base Operating Yield Allocation" values are based on Seaside Basin Adjudication decision. These values are consistent with the *Watermaster Producer Allocations Water Year 2023* (see Item IX.B. in 12/7/2022 Board packet).
6. Any minor discrepancies in totals are attributable to rounding.
7. APA = Alternative Producer Allocation; SPA = Standard Producer Allocation; CAW = California American Water.
8. It should be noted that CAW/MPWMD ASR "Injection" and "Recovery" amounts are not expected to "balance" within each Water Year. This is due to the injection recovery "rules" that are part of SWRCB water rights permits and/or separate agreements with state and federal resources agencies that are associated with the water rights permits.
9. Cal-Am Toro Well #3 Destroyed 09/30/21

SUMMARY OF
PURE WATER MONTEREY, AND
SALINAS VALLEY AND
MARINA COAST WATER DISTRICT GROUNDWATER
SUSTAINABILITY AGENCY ZOOM MEETINGS
IN AUGUST 2023

Note: This is a synopsis of information from these meetings that may be of interest to the Seaside Basin Watermaster

SVBGSA Advisory Committee Meeting August 17, 2023:

Due to a mix-up resulting in a failure to properly notice this meeting, the Advisory Committee could not hold its meeting. However the PowerPoint presentations on two of the items on today's agenda were made. The next regularly scheduled meeting date would be October 19, but the Chair of the Committee suggested having a Special Meeting sooner to enable today's agenda items to be discussed and potentially acted upon.

A presentation on Agenda item 2.a, pertaining to Extraction Barrier Planning in the United Water Conservation District in Ventura County, was made. Mr. John Lindquist from that organization made the presentation with the aid of PowerPoint slides. They are doing planning work to develop a seawater extraction barrier since they are experiencing some seawater intrusion in their basin. The concept they are using is similar to the one being proposed as a project in the 180/400-Foot Aquifer Subbasin in the Salinas Valley Basin.

Mr. Lindquist reported that their aquifers daylight on the ocean floor, some as close as about ¼ mile offshore. They are getting some grant funds to help with the planning, and hopefully also with the design and construction, of the first phase of this project.

They estimate the construction cost of the first phase facilities to be in the $30 million-$50 million range. This would be for a 3,500 acre-foot-per-year sized project.

The United Water Conservation District collects extraction fees from all water users who pump out of the basin, and these fees fund the activities of the District. Mr. Lindquist commented in response to a question that this fee could potentially be increased to pay the cost of building the seawater extraction barrier.

They are currently getting about 50% of their costs for their work on their projects funded through grants. They have applied for grants to hopefully cover the design and construction phase of this project.

A presentation on Agenda item 4.a, pertaining to the Seawater Extraction Barrier Feasibility Study for the 180/400-Foot Aquifer Subbasin, was made. Some of the presentation was made by Ms. Hardgrave and some by representatives of Carollo Engineers who are conducting the study. The goals and objectives are to (1) Evaluate whether the extraction barrier project could effectively achieve Groundwater Sustainability Plan goals to halt seawater intrusion in the

180/400-Foot Aquifer Subbasin, (2) to estimate costs and benefits of potential projects to be able to compare them to other options, and (3) to lay out a roadmap of next steps for the technical, permitting, CEQA, and funding potential for implementation.

There is a 16-month long schedule to complete the study, with the final report expected to be received in September 2024. Defining end users of desalinated water that could come for this project is a task that is currently in progress. I intend to send a letter to formally state the Watermaster's request that some of the water produced from the extraction barrier's desalination plant be provided to the Seaside Groundwater Basin to help replenishment and protect the Seaside Basin against seawater intrusion.

Monterey Subbasin Implementation Committee Meeting August 23, 2023:
Activities at this meeting included a review of the various feasibility studies that are in progress. These are:

- Seawater Intrusion Extraction Barrier Feasibility Study. (See my notes from the August 17 Advisory Committee meeting about this Study). I commented requesting that the Seaside Groundwater Basin be included as a potential end-user of water that could be produced by the desalination plant component of this project. Sarah Hardgrave reported that they are starting a survey of urban water suppliers to determine their interest in getting desalinated water. Some questions were raised by committee members about whether the water could be provided to California American Water since California American Water delivers water outside of the Salinas Valley Groundwater Basin. Ms. Hardgrave pointed out that the Seaside Groundwater Basin is one of the subbasins included within the greater Salinas Valley Groundwater Basin even though it did not have to prepare a Groundwater Sustainability Plan (GSP) because it is adjudicated.
- Demand Management Feasibility Study. This is being developed initially just for the 180/400-Foot Aquifer Subbasin. Demand management in the Monterey Subbasin may be a different approach. Most subbasins' GSPs include demand management as a potential action. It was mentioned that there are numerous means of accomplishing demand management.
- ASR Feasibility Study. This would involve diverting water at the Salinas River Diversion Facility and storing some of it in the 180/400-Foot Aquifer Subbasin to maintain groundwater levels, address seawater intrusion, and provide source water to the CSIP.
- There will be a feasibility study summary report prepared that will cover all three of these studies.

There was also discussion of the Corral de Tierra Management Area's Annual Work Plan. The components of that Plan include:

- Data Expansion & SGMA Compliance
    - Develop Well Registration Program
    - Expand Groundwater Extraction Monitoring
    - Modeling Preparation: Refine Hydraulic Conceptual Model
    - Verify Groundwater Dependent Ecosystems (GDEs)
    - Manage Data/Annual Reports
    - Maintain Groundwater Models

- Interested Parties Coordination and Outreach
    - Meetings
    - Coordination with partner agencies and implementation actions
    - Groundwater Technical Advisory Committee and technical support
- Projects and Management Actions
    - Central Coast Ag Irrigation Efficiency Website
    - Assess Demand Management
    - Assess Groundwater Benefits of Salinas River Stream Maintenance Programs
    - Conduct Deep Aquifer Study

SUMMARY OF
PURE WATER MONTEREY, AND
SALINAS VALLEY AND
MARINA COAST WATER DISTRICT GROUNDWATER
SUSTAINABILITY AGENCY ZOOM MEETINGS
IN SEPTEMBER 2023

Note: This is a synopsis of information from these meetings that may be of interest to the Seaside Basin Watermaster

SVBGSA Advisory Committee Special Meeting September 19, 2023:

Due to a mix-up resulting in a failure to properly notice this meeting, the Advisory Committee could not hold its meeting in August, but the PowerPoint presentations on two of the items on that meeting's agenda were made. The Chair of the Committee suggested having a Special Meeting to enable the August meeting's agenda items to be discussed and potentially acted upon.

At the September 19th Special Meeting:

- Mr. Lindquist of the United Water Conservation District in Ventura County recapped his August presentation on his District's planning work to construct a seawater intrusion extraction barrier and responded to questions from the Advisory Committee members.

- The Carollo Engineers consultant recapped her August presentation on the Seawater Extraction Barrier Feasibility Study for the 180/400-Foot Aquifer Subbasin, and responded to questions from the Advisory Committee members. In this discussion Ms. Hardgrave said that other projects such as the Cal Am Desalination Plant, the Pure Water Monterey Project, a possible desalination plant being considered by the Marina Coast water District, and other such projects would be included in the scope of the study. Also, other water-involved entities in and adjacent to the area of the study would also be considered in the scope of the study. Several persons expressed concerns about how the cost of such a project would be paid for and the impacts on pumpers.

- There was discussion of the Demand Management Study which has recently been started. The SVBGSA has hired a mediator/facilitator consultant to guide them in developing a Demand Management policy. He introduced himself to the Committee and provided background on his work experience. He has worked with numerous water agencies on a variety of issues including demand management issues. He pointed out that this is likely to be a contentious topic. Some members expressed opposition to having a single demand management policy for all subbasins. They felt it would be better to have demand management addressed on an individual subbasin basis. It sounds like this will be a lengthy process for the SVBGSA Board to work its way through. The facilitator said he plans to have the Advisory Committee heavily involved in the process.

Monterey Peninsula Water Operations Meeting September 27 23, 2023:

This meeting takes the place of the previous Pure Water Monterey Water Quality and Operations meetings and is hosted by MPWMD. Topics discussed included:

- ASR annual injection during Water Year 2023 was 1,656 acre-feet. This is the second highest injection rate in the history of the ASR program.
- 2,250 acre-feet of ASR stored water is now in the Seaside Groundwater Basin.
- Groundwater mounding at the ASR injection Wells #1 and #2 to slows movement of the Pure Water Monterey injected water toward the Cal Am and City of Seaside production wells that are located to the west. This increases the travel time from the Pure Water Monterey injection wells to the production wells.
- The regulatory-required 4 month minimum travel time between Pure Water Monterey injection and the Paralta well is being exceeded, i.e. the tracer-measured travel times are well over four months.
- Though advanced water purification facility water quality problems were reported.
- The pure water Monterey expansion Project initial construction contracts have been awarded and notice to proceed has been given.
- The division of drinking water permit has been received for ASR number four.
- Regarding new Extraction Wells #1 and #2, a test well is going to be drilled in October. Regarding new Extraction Wells #3 and #4, Cal Am is working with the Army on this, but expects that it will take quite a while to complete the discussions with them.
- The next meeting of this committee is now scheduled for January 2024.