

Committee Members

City of Seaside
Victor Damiani - Chair

California American Water
Chris Cook

City of Sand City
Mary Ann Carbone

Coastal Subarea Landowners
Paul Bruno

**SEASIDE GROUNDWATER BASIN WATERMASTER
NOTICE
BUDGET AND FINANCE COMMITTEE
MEETING, JANUARY 30, 2023
1:00 P.M. – City of Seaside Conference Room**

AGENDA

The public may comment 3 minutes on any item within the committee's jurisdiction.

Review/Discussion Item:

1. Review/discuss the method of calculation of the Replenishment Assessment Unit Costs charged to producers if their respective production allocations are exceeded. (Meeting scheduled at the request of Watermaster Board Director, George Riley)

Other Items: None

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

TO: Watermaster Budget and Finance Committee
 FROM: Laura Paxton, Administrative Officer
 DATE: January 30, 2023
 SUBJECT: Review/discuss the method of calculation of the Replenishment Assessment Unit Costs charged to producers if their respective production allocations are exceeded

RECOMMENDATION:

No recommendation – this item presented for review and discussion.

BACKGROUND:

See Attachment 1 of this transmittal, “Replenishment Assessments,” for Amended Decision definitions, statements and/or requirements pertaining to the assessments, prepared by Watermaster Technical Program Manager Bob Jaques as presented at the October 1, 2008 Watermaster Board meeting.

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 \$1,132 per acre-foot (/AF) for Standard Producer Overproduction.

Table 1
 Anticipated Costs of Artificial Replacement of Seaside Basin

Updated: 10/19/05

Table 1	Annualized Cost (\$/AFY)	Effective Yield (AF)	Weighted Avg %	Replenishment Share	Comments
CWP Desalination Plant ^[i] [ii] [iii] [iv] [v]	\$2,075	0	0.00%	\$0	Plant not scheduled to go on line in the next three years.
CWP ASR ^[vi] [vii] [viii] [ix]	\$1,245	0	0.00%	\$0	
MPWMD Sand City Desalination Project ^[x] [xi] [xii]	\$2,939	0	0.00%	\$0	MPWMD board placed project on hold in 2004, in favor of studying regional alternatives.
In-Lieu recharge to Leguna 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 ^[xiii] [xiv] [xv] [xvi] [xvii]	\$765	920	54.37%	\$416	
MRWPCA ^[xviii] [xix] [xx]	\$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.
RUIWA ^[xxi] [xxii]	\$1,100	300	17.73%	\$195	Based on assumption xxiii
PSM/ Poseidon Desalination Project ^[xxiv] [xxv] [xxvi] [xxvii]	\$1,352	0	0.00%	\$0	
Sand City Desalination Project	\$2,500	300	17.73%	\$443	
		1892			
				Total Replenishment	\$1,132

Assumptions

- [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, 10,450 AFY production
- [iv] Calculated using 10,450 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 \$910/ AF for 920 AFY. Per CAW PNI, ASR Pipeline cost is \$1,055 Million (July 2006), Phase 1 Temporary ASR Pipeline estimated at \$ 750 Million. Both pipelines amortized over 20 years at 5% yields about \$115\$/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

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

Filename = Pwfiles\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 MPWMD/CAW Phase 1 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:

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 ⁽¹⁾ (a) (b) (c) (d) (e)	\$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 final 10% reduction in allowable production could occur, per Footnote No. 2 on page 18 of the Amended Decision filed February 9, 2007.
CWP ASP ⁽²⁾ (a) (b) (c) (d) (e)	\$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-Lines recharge to Laguna Seta Sub-area ⁽³⁾ (a) (b) (c) (d) (e)	\$610	2008	\$628	172	36.44%	\$229	Based on winter-time demand for Ryan Ranch, Hidden Hills, and Bishop.
MEWP/CA ⁽⁴⁾ (a) (b) (c) (d) (e)	\$2,000	2010 to 2012	\$2,000	0	0.00%	\$0	Direct injection or percolation using highly treated recycled water. Based on assumption xii. Project not scheduled to go on line prior to the January 2009 target date.
RURWAP ⁽⁵⁾ (a) (b) (c) (d) (e)	\$2,068	Late 2009 to early 2010	\$2,068	0	0.00%	\$0	Based on assumption xiii. This 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.
Fajaro-Sunny Mesa/Poseidon Desalination Project ⁽⁶⁾ (a) (b) (c) (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z)	\$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 ⁽⁷⁾ (a) (b) (c) (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z)	\$3,550	Early 2009	\$3,550	300	63.56%	\$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) ⁽¹⁰⁾	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 ⁽¹²⁾ (%)	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 Manna Desalination Plant - Local Alternative (brine disposal at MLFP) ⁽¹³⁾	2015	10,430	Conceptual	10%	\$1,980	2005	40%	\$2,772	\$3,725	10.87%	\$405.02
North Manna 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 Deral Plant	2015	8,400	Conceptual	25%	\$2,920	2007	25%	\$3,650	\$4,624	8.76%	\$404.85
Sand City Water Supply Project ⁽²⁾	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 ⁽⁷⁾	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
MEWP/CA 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 12,450 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 assume 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 on capacity of all of the Potential Sources of Replacement Water that were evaluated, 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.

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 can be viewed at <https://www.seasidebasinwatermaster.org/Other/Final%20Annual%20Report%202009.pdf> beginning on page 27:

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) ⁽⁴⁾	LEVEL OF PROJECT DEVELOPMENT	CONTINGENCY INCLUDED IN BASE UNIT COST ⁽⁵⁾ (%)	BASE UNIT COST (\$/AF)	BASE UNIT COST YEAR	ADDITIONAL CONTINGENCY ADDED TO REFLECT LEVEL OF PROJECT DEVELOPMENT ⁽⁶⁾ (%)	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 ⁽⁸⁾	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 "Value-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 FUC by EMC 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) ⁽⁴⁾	LEVEL OF PROJECT DEVELOPMENT	CONTINGENCY INCLUDED IN BASE UNIT COST ⁽⁵⁾ (%)	BASE UNIT COST (\$/AF)	BASE UNIT COST YEAR	ADDITIONAL CONTINGENCY ADDED TO REFLECT LEVEL OF PROJECT DEVELOPMENT ⁽⁶⁾ (%)	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) ⁽⁹⁾	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⁽⁶⁾ = 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):

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: $(6,250 \times \$6,147 + 3,500 \times \$1,811) / 9,750 = \mathbf{\$4,591}$				
(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:
 $(6,250 \times \$6,147 + 5,750 \times \$3,486) / 12,000 = \$4,872$

(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) in order to establish a process for implementing Section III.M.1.d of the Amended Decision which reads:

M. Additional Provisions of Physical Solution.

In order to provide flexibility to the injunctive provisions set forth in Section III.D of this Decision, and to assist in a Physical Solution to meet Water requirements in the Basin, the determination of rights and responsibilities, and the injunctive provisions so set forth are subject to the following provisions:

1. California American Obligation to Augment Water Supply

d. Credit Toward Replenishment Assessment. California American's expenditures for water supply augmentation may also provide replenishment water for the Basin. Accordingly, on an annual basis, California American will provide the Watermaster with an accounting of all expenditures it has made for water supply augmentation that it contends has or will result in replenishment of the Basin. The Watermaster shall review these expenditures and if it concurs reduce California American's Replenishment Assessment obligation, for that year, by an amount equal to the amount claimed by California American. To the extent that the Watermaster rejects any of the claimed amounts, it shall provide California American with an explanation for the rejection and allow California American an opportunity to meet and confer on the disputed amount. In the event that the Watermaster and California American cannot agree, the matter may be referred to the Court through a request filed by California American.

In summary, the MOU provides that a claim for Replenishment Credits provided by CAW shall be 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 California American Water'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 California American Water's obligation to provide future Artificial Replenishment in an amount equal to the number of acre feet of Over-production for which California American Water receives Replenishment Credits. Attachment 3 is a copy of the MOU.

California American Water applied for and was granted by the PUC and subsequently the Watermaster Board credits against Replenishment Assessment for expenses incurred for water supply augmentation in 2006, each year 2008-2012, and in 2017 for total credits amounting to \$81,527,907. The current credit balance for CAW is \$46,855,121.

Under the same provision of the Decision, City of Seaside applied for and was granted by the Watermaster Board credits against Replenishment Assessment for in-lieu replenishment of the Basin during Water Years 2010 through 2016. The current credit balance for the City of Seaside is \$6,103,451.

See Attachment 2 for an accounting of replenishment assessments and credits applied since Watermaster inception in 2006 through Water Year 2022.

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: Watermaster Replenishment Assessment Fund through 10/31/22
- Attachment 3: Memorandum of Understanding Between Seaside Basin Watermaster and CAW

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 Base 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

Watermaster Replenishment Fund Through October 31, 2022

	Seaside Groundwater Basin Watermaster Replenishment Fund											VID
	Water Year 2022 (October 1 - September 30) / Fiscal Year (January 1 - December 31, 2022)											
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
	WX 05/06	WX 06/07	WX 07/08	WX 08/09	WX 09/10	WX 10/11	WX 11/12	WX 12/13	WX 13/14	WX 14/15	WX 15/16	
Replenishment Fund												
Assessment Water Year	\$ 1,132,326	\$ 1,132,326	\$ 485,821,25	\$ 3,040,176	\$ 2,760,369	\$ 2,760,369	\$ 2,760,369	\$ 2,760,369	\$ 2,760,369	\$ 2,760,369	\$ 2,760,369	
Unit Cost:												
Cal-Am Water Balance Forward		\$ 1,641,004	\$ 4,226,710	\$ (2,839,939)	\$ (6,060,164)	\$ (3,822,219)	\$ (8,735,671)	\$ (3,232,10)	\$ (6,173,771)	\$ (3,102,221)	\$ (676,704)	
Cal-Am Water Production (AF)	3,716,000	4,059,900	3,692,900	2,966,020	3,716,520	3,416,040	3,070,900	3,076,610	3,232,100	2,784,730	1,879,210	
Cal-Am Water NSY Over-Production (AF)	1,662,690	2,266,320	2,092,160	1,241,270	1,479,470	1,146,710	820,480	856,420	1,032,770	782,170	-	
Exceeding Natural Safe Yield Considering Alternative Producers	\$ 2,106,652	\$ 2,585,471	\$ 5,198,014	\$ 3,773,464	\$ 4,112,933	\$ 3,187,654	\$ 2,280,943	\$ 2,390,642	\$ 2,790,539	\$ 2,113,414	\$ -	
Operating Yield Overproduction Replenishment		\$ 20,235	\$ 8,511	\$ -	\$ -	\$ -	\$ 154,963	\$ 181,057	\$ 281,012	\$ 312,103	\$ -	
Total California American	\$ 2,106,652	\$ 2,585,706	\$ 5,207,525	\$ 3,773,464	\$ 4,112,933	\$ 3,187,654	\$ 2,435,907	\$ 2,561,899	\$ 3,071,550	\$ 2,425,516	\$ -	
CAW Credit Against Assessment	\$ (465,640)		\$ (12,305,924)	\$ (3,741,714)	\$ (5,995,213)	\$ (5,425,799)	\$ (5,111,413)					
CAW Unpaid Balance	\$ 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)	\$ -	
City of Seaside Balance Forward	\$ -	\$ 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)	332,000	287,700	294,200	283,440	282,870	240,660	233,720	257,730	223,640	195,010	195,160	
City of Seaside NSY Over-Production (AF)	194,070	153,780	161,990	153,060	113,210	50,840	58,820	65,170	52,710	25,770	37,870	
Exceeding Natural Safe Yield Considering Alternative Producers	\$ 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	\$ 12,622	\$ 85	\$ 4,225	\$ 16,522	\$ 20,690	\$ -	\$ 1,669	\$ 27,007	\$ 3,222	\$ 38	\$ 11,959	
Total Municipal	\$ 232,310	\$ 174,167	\$ 406,765	\$ 481,822	\$ 335,412	\$ 141,335	\$ 165,168	\$ 263,789	\$ 145,631	\$ 69,667	\$ 114,290	
City of Seaside - Golf Courses (APA - 540 AF)												
Exceeding Natural Safe Yield - Alternative Producer	\$ -	\$ -	\$ 131,705	\$ 69,701	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Operating Yield Overproduction Replenishment	\$ -	\$ -	\$ 32,926	\$ 17,427	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Golf Courses	\$ -	\$ -	\$ 164,631	\$ 87,128	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total City of Seaside*	\$ 232,310	\$ 174,167	\$ 571,395	\$ 568,951	\$ 335,412	\$ 141,335	\$ 165,198	\$ 263,789	\$ 145,631	\$ 69,667	\$ 114,290	
City of Seaside Late Payment 5%	\$ 10,994	\$ 8,704	\$ 26,712	\$ 26,750	\$ 15,737	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
City of Seaside Unpaid Balance	\$ 243,294	\$ 426,165	\$ 1,024,272	\$ 1,619,973	\$ 1,619,973	\$ (1,142,858)	\$ (828,995)	\$ (1,065,852)	\$ (1,459,880)	\$ (626,890)	\$ (162)	
Julius Credit Against Assessment												
Mission Memorial Park												
Mission Memorial Park Production (AF)			20,800	26,400	12,800	22,400	27,000	24,950	24,890	17,970	13,670	
Mission Memorial Park NSY Over-Production (AF)												
Exceeding Natural Safe Yield - Alternative Producer	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Operating Yield Overproduction Replenishment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Mission Memorial Park	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Replenishment Fund Balance	\$ 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	\$ 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)	
Total Replenishment Assessments	\$ 2,549,940	\$ 2,765,576	\$ 3,655,632	\$ 4,361,163	\$ 4,464,826	\$ 3,323,163	\$ 2,601,104	\$ 2,825,663	\$ 3,217,162	\$ 2,491,163	\$ 114,290	
Total Paid and/or Credited	\$ (465,640)	\$ -	\$ (12,305,924)	\$ (3,741,714)	\$ (6,174,826)	\$ (6,360,657)	\$ (5,940,492)	\$ (1,065,852)	\$ (1,459,880)	\$ (626,890)	\$ (162)	
Grand Total Fund Balance	\$ 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-parity sign in-lieu replenishment												
2011 = 416 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 = 559.4 AF golf course in-lieu capped at 540 AF												
2015 = 195.0 AF golf course in-lieu												
2016 = 00.05 AF golf course in-lieu												
2017 = 00.00 AF golf course in-lieu												

Replenishment Fund	Seaside Groundwater Basin Watermaster Replenishment Fund										Projected Totals Through WY 2023
	2017	2018	2019	2020	WY 2021	WY 2022	Totals WY 2006 Through 2022	Budget WY 2023	WY 2023		
Assessment Water Year	WY 17/18	WY 18/19	WY 19/20	WY 20/21	WY 21/22	WY 22/23			WY 23/24	WY 24/25	
a	\$2,672,871.8	\$2,672,871.8	\$2,672,871.8	\$2,672,871.8	\$2,672,871.8	\$2,672,871.8			\$3,461,658.6		
b	\$ (67,634.0)	\$ (67,634.0)	\$ (67,634.0)	\$ (67,634.0)	\$ (67,634.0)	\$ (67,634.0)			\$ (46,955,121)		
c	2,090,551	2,090,551	2,090,551	2,090,551	2,090,551	2,090,551			47,680.74		
d	64.40	374.65	284.85	334.21	-	1,640.71			14,638.57		
e	184,957	1,075,995	818,097	959,859	-	-			33,650,034		
f	184,957	1,075,995	818,097	164,872	-	-			1,122,753		
g	184,957	1,075,995	818,097	1,124,731	-	-			34,672,786		
h		\$ (49,382,198)								\$ (81,527,907)	
i	\$ (491,747)	\$ (48,797,949)	\$ (47,979,832)	\$ (46,855,121)	\$ (46,855,121)	\$ (46,855,121)			\$ (46,735,121)	\$ (46,735,121)	
j	\$ (3,232,420)	\$ (3,142,500)	\$ (3,022,249)	\$ (2,919,800)	\$ (2,802,831)	\$ (2,708,829)			\$ (2,661,184)		
k	188.31	184.63	178.40	181.65	174.69	155.12			3,888.95		
l	30.47	32.46	27.82	32.06	25.52	11.69			1,247.31		
m	87,612	93,225	79,893	92,089	75,197	36,116			2,898,358		
n	2,409	27,026	22,550	24,886	18,806	9,528			203,263		
o	89,920	120,251	102,443	116,975	94,002	47,645			3,101,621		
p											
q											
r											
s	89,920	120,251	102,443	116,975	94,002	47,645			3,363,380		
t									88,887		
u									(6,103,451)		
v	\$ (3,142,500)	\$ (3,022,249)	\$ (2,919,809)	\$ (2,802,837)	\$ (2,708,829)	\$ (2,661,184)			\$ (2,551,184)	\$ (2,551,184)	
w	13.74	14.43	16.07	20.00	46.77	33.96			335.84		
x					15.77	2.95			18.72		
y						9,608			56,096		
z						2,402			14,028		
aa						(33,114)			(33,114)		
ab						25,000.00			37,010		
ac	\$ (3,634,247)	\$ (51,820,198)	\$ (50,899,658)	\$ (49,657,952)	\$ (49,563,950)	\$ (49,516,305)			\$ (49,479,295)	\$ (49,286,305)	
ad	\$ (3,909,125)	\$ (3,634,247)	\$ (51,820,198)	\$ (50,899,658)	\$ (49,657,952)	\$ (49,563,950)			\$ (49,504,295)	\$ (49,504,295)	
ae	\$ 274,877	\$ (49,382,198)	\$ (92,566)	\$ 1,241,700	\$ (25,000)	\$ (59,655)			\$ 38,152,083	\$ 38,882,083	
af	\$ (3,634,247)	\$ (51,820,198)	\$ (50,899,658)	\$ (49,657,952)	\$ (49,563,950)	\$ (49,516,305)			\$ (49,286,285)	\$ (49,286,285)	

ATTACHMENT 3

MEMORANDUM OF UNDERSTANDING BETWEEN SEASIDE BASIN WATERMASTER AND CALIFORNIA AMERICAN WATER

This Memorandum of Understanding between the Seaside Basin Watermaster (Watermaster) and California American Water (CAW) is entered into pursuant to a motion passed by Watermaster on December 3, 2008 with respect to the following:

RECITALS

A. The Amended Decision in Case No. M66343 filed February 9, 2007 (Decision) provides that Standard Producers that exceed their allocation of Natural Safe Yield are subject to a Replenishment Assessment for each acre foot of Over-Production for each Water Year. Under Section III.M1.d of the Decision, CAW has the right to claim a credit against its Replenishment Assessment (Replenishment Credit) for costs incurred for water supply augmentation that has or will result in replenishment of the Basin.

B. Watermaster has calculated the Replenishment Assessments for CAW for Fiscal Year 2006 (Water Year 05/06), Fiscal Year 2007 (Water Year 06/07) and Fiscal Year 2008 (Water Year 07/08) in the total amount of \$10,166,640. Pursuant to Section III.M.1.d of the Decision, CAW applied for a Replenishment Credit for expenditures totaling \$12,305,924.00 that CAW has made through calendar year 2006 for water supply augmentation associated with pre-construction expenses for the Coastal Water Project. The request was made on March 5, 2008 and supplemented with further information on May 2, 2008.

C. Watermaster approved CAW's request for a Replenishment Credit in the amount of \$12,305,924.00, subject to conditions set forth in the motion which provide that CAW will ensure replenishment of the Basin with water from the Coastal Water Project, or a comparable alternative project, at no cost to Watermaster, in an amount equivalent to the quantity of water that CAW has overproduced, and thus incurred a Replenishment Assessment obligation for Fiscal Years 2006, 2007 and 2008.

D. Watermaster and CAW desire to enter into this Memorandum of Understanding regarding future CAW requests pursuant to Section III.M.1.d of the Decision for Replenishment Credits against future Replenishment Assessment obligations.

A G R E E M E N T

Watermaster and CAW agree as follows:

1. At the end of each Water Year, Watermaster shall determine the Replenishment Assessments in accord with Section III.L.3.j.iii of the Decision. Within 40 days of CAW's receipt of Watermaster's notice of Replenishment Assessment against CAW for the preceding Water Year, CAW shall provide Watermaster any claim for a Replenishment Credit pursuant to Section III.M.1.d of the Decision. Such claim shall be based upon expenditures for a water supply augmentation project (such as the Coastal Water Project and/or other projects that produce water that can be used to replenish the Seaside Basin (hereinafter "Project(s)")) that CAW contends has or will result in replenishment of the Basin.

2. Watermaster agrees that the Project will result in replenishment of the Basin, and therefore:

(a) Watermaster hereby grants CAW's current request for a Replenishment Credit in the amount of \$12,305,924.00. Such Credit shall be immediately applied to CAW's Replenishment Assessments for Fiscal 2006 (Water Year 05/06), Fiscal Year 2007 (Water Year 06/07) and Fiscal Year 2008 (Water Year 07/08), which total \$10,166,640, subject to the condition that, upon completion and implementation of a water supply augmentation Project, CAW shall provide Watermaster, at no cost to Watermaster, and on a schedule that is Feasible either (1) water for Artificial Replenishment through direct replenishment and/or (2) cause in-lieu replenishment of the Basin by forbearing to produce water to which CAW is entitled as CAW's share of the Native Safe Yield, in an amount equal to CAW's total acre feet of Over-Production for the Water Years 05-06, 06-07, and 07-08, which total is 6,390.1 acre feet. Future CAW requests for Replenishment Credit shall be granted subject to the same conditions set forth in this Section 2 (a).

(b) In future Water years Watermaster shall address future requests by CAW for a Replenishment Credit as follows:

- i. For years in which Watermaster declares that water for Artificial Replenishment is not available, Watermaster shall grant CAW's request for a Replenishment Credit for that Water year, subject to CAW's obligation to provide future Artificial Replenishment as set forth in Section 2(a) herein.
- ii. For years in which Watermaster declares that water for Artificial Replenishment is available from sources other than a CAW water supply augmentation Project, Watermaster shall have the option of either: (i) requiring CAW to pay all or part of CAW's Replenishment Assessment for that Water Year for the purpose of providing Watermaster with funds to obtain Artificial Replenishment in sufficient quantities to replenish that quantity of Over-Production for which CAW pays a Replenishment Assessment; or (ii) granting CAW's request for a Replenishment Credit subject to CAW's obligation to provide future Artificial Replenishment as provided for in section 2(a) herein. . If Watermaster is unable to purchase Replenishment Water equal to CAW's total Over-Production for that Water Year,

the Watermaster shall grant CAW a Replenishment Credit for the balance of CAW's Over-Production for that Water year, subject to CAW's obligation to provide future Artificial Replenishment as set forth in Section 2(a) herein.

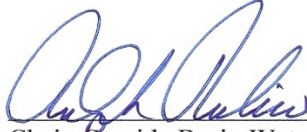
3. The sum of the acre feet of water to be provided to Watermaster for replenishment either by direct replenishment and/or in-lieu replenishment for each Water Year shall equal the number of acre feet for which CAW is assessed a Replenishment Assessment for the Water Year at issue. In no event shall the total amount of direct replenishment and/or forbearance by CAW be greater than the cumulative total of acre feet of CAW's Over-Production for all Water Years for which CAW is granted Replenishment Credits.

4. Upon completion and implementation of the Project(s), at any stage in CAW's direct replenishment and/or in-lieu replenishment pursuant to conditions set by Watermaster upon granting of Replenishment Credits, CAW shall have the right to request that the Court determine that, based upon principles of the physical solution set forth in the Decision, the Basin has been replenished in an amount sufficient to prevent seawater intrusion or the Basin has been protected by alternative seawater intrusion preventive measures. Upon such determination by the Court, CAW's obligations under conditions set by Watermaster upon granting of Replenishment Credits and any obligation under this Memorandum of Understanding to provide direct replenishment water and/or in-lieu replenishment at no cost to Watermaster shall be deemed fully satisfied.

5. All terms used in this Memorandum of Understanding that are defined terms in the Decision shall be defined herein as set forth in Section III.A of the Decision.

IN WITNESS WHEREOF the Parties hereby agree to the full performance of the terms set forth herein.

SEASIDE BASIN WATERMASTER



Chair, Seaside Basin Watermaster

Date: January 21, 2009

CALIFORNIA AMERICAN WATER



President, California American Water

Date: 1-29-2009