SEASIDE GROUNDWATER BASIN WATERMASTER

TO: Watermaster Board of Directors
FROM: Laura Paxton, Administrative Officer
DATE: October 5, 2022
SUBJECT: Consider Approval of Unit Costs for Water Year 2022/23 Over Production Replenishment Assessment

---

RECOMMENDATION:
Recommend to the Watermaster board at its October 5, 2022 board meeting to adopt a Replenishment Assessment Unit Cost of $3,461/AF and $865/AF for Natural Safe Yield and Operating Yield Overproduction, respectively, for Water Year 2023.

BACKGROUND:
Per page 33 of the Decision, "The per acre-foot (AF) 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 on or before October of 2022 will be used to calculate Replenishment Assessments for pumping that occurs during Water Year 2023 (October 1, 2022 through September 30, 2023).

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. 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). 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 Monterey Peninsula Water Supply Project basedon a reduced size desalinationplant offset by water to be provided by the Pure Water Monterey Project. 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 RUWAP cost/AF. Monterey Peninsula Water Management District had not yet provided updated costs for Aquifer Storage and Recovery expansion.

DISCUSSION:
The attached Table includes updated cost data for the Pure Water Monterey Project (PWM) and its expansion (PWMX) as the expected delivery from both projects is 5,750AFY, up from 3,500AFY. In the attached Table, a blended unit cost value is provided for theMPWSP based on the updated PWM/PWMX unit cost. The blended unit cost for that combined project 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 updated Unit Cost would therefore be $3,461/AF, calculated as: ($4,872+$2,025+$3,486)/3. These are the three **bold-faced** unit costs in the attached Table. The Operating Yield Over Production Replenishment Assessment Unit Cost is 25% of that amount, or $865.

ATTACHMENTS: Updated Unit Cost Data Table 2023 and 2022 Unit Cost Data Table

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.*