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October 21, 2020

UPS OVERNIGHT & EMAIL

Eileen Sobeck, Executive Director
State Water Resources Control Board
1001 I Street
PO Box 100
Sacramento, CA 95812

Re: **Carmel River Cease and Desist Order, WRO 2016-0016, Milestone 5**

Dear Ms. Sobeck:

This letter provides an update on California American Water Company's (Cal-Am) Annual Report regarding compliance with State Water Board WRO 2016-0016 (CDO) milestones. The Annual Report was submitted June 4, 2020 by letter from Chris Cook to Erik Ekdahl. As was predicted in June, CDO Milestone 5 was not met on September 30, 2020. Milestone 5 requires the following activities by September 30, 2020:

(1) Drilling activity for at least one MPWSP Desalination Plan source water production well complete; (2) foundation and structural framing complete for MPWSP Desalination Plant pretreatment seawater reverse osmosis, and administration buildings at desalination plant; (3) excavation complete for MPWSP Desalination Plant brine and backwater storage basins; and (4) 25% MPWSP Desalination Plant transmission pipelines installed based on total length, including 100% installation of the "Monterey Pipeline and other ASR related improvements". (CDO Sect. 3.b.v., p. 21).

As provided in section 3.b.vi of the CDO, the consequence of a missed milestone is a reduction of 1,000 acre-feet of the Effective Diversion Limit, thereby reducing Cal-Am's Carmel diversion limit to 7,310 acre-feet in Water Year 2020-2021.

Progress towards Milestone 5

As explained in the Annual Report (Attachment 1), numerous circumstances beyond Cal-Am's control resulted in delays to the construction activities required in Milestone 5. First, in June 2018, Cal-Am timely submitted a Coastal Development Permit application for the Monterey Peninsula Water Supply Project (MWPSP) supported by the extensive environmental and technical analyses developed before the California Public Utilities Commission. On October 28, 2019, the California Coastal Commission staff released a partial staff report recommending

denial of the Coastal Development Permit. On November 4, 2019, Coastal Commission staff released an addendum to the staff report, stating that, among other things, additional groundwater modeling was needed to determine whether the project would deplete groundwater supplies. The Coastal Commission therefore decided to open a hearing on Cal-Am's application on November 14, 2019, but continued the hearing to a later date.

On January 28, 2020 Coastal Commission staff requested that Cal-Am withdraw its Coastal Development Permit application to allow time for more studies. Cal-Am declined to withdraw the application, opposing any additional delay. Cal-Am and many other parties also questioned the need for the additional groundwater analyses requested by Coastal Commission staff in light of the extensive record that had been created before the CPUC on the same issues. The SWRCB submitted a letter dated May 8, 2020 that raised similar questions about the need for the additional studies. Nevertheless, Cal-Am agreed to a short extension of the application deadlines to allow time to complete additional independent analyses of the issues raised by Coastal Commission staff. Time was further extended in response to the COVID-19 pandemic.

The Annual Report also noted the October 2019 order issued by the Monterey County Superior Court staying construction activities contemplated in Milestone 5. The stay order was in response to a Marina Coast Water District challenge to Monterey County's issuance of a development permit needed to begin construction on the desalination plant. Both the Coastal Development Permit and County development permit are necessary to begin the construction activities required in CDO Milestone 5.

Circumstances Resulting in Missed Milestone 5

There have been several developments since Cal-Am submitted the Annual Report in June 2020. The Coastal Commission scheduled Cal-Am's continued hearing for a special meeting on September 17, 2020, but on August 25, 2020, released a staff report again recommending denial of the project. Unfortunately, the Coastal Commission staff report did not provide any means for the Commissioners to independently consider the factual record and take any action other than denial of the application. Facing a risk of possible Commission denial, Cal-Am elected to withdraw its application on September 17, 2020. Cal-Am intends to refile the Coastal Development Permit application in the coming weeks and will use the intervening period to explore opportunities to address certain environmental justice concerns raised by the City of Marina. Thus, on September 25, 2020, Cal-Am sent a letter to the City asking if the City would meet with Cal-Am to discuss the City's concerns with the project, and explore possible options that could be mutually beneficial to the City, Cal-Am, and the region as a whole. The City responded on October 6, 2020, that it was amenable to opening a dialogue to address concerns of the City and its stakeholders. Upon receiving the City's letter, Cal-Am reached out to arrange next steps, and is awaiting the City's response.

Cal-Am has done everything within its control to develop and permit the MPWSP as required in the CDO, with the goal of eliminating unauthorized diversions from the Carmel River and, ultimately, extinguishing the CDO. For example, Cal-Am worked with a broad coalition of stakeholders to integrate the Pure Water Monterey project into the MPWSP in 2016, which resulted in a downsized desalination plant and source water intake system. Cal-Am has also diligently pursued project approvals and construction of project components to meet the CDO Milestones:

- CDO Milestone 1: Cal-Am achieved Milestone 1 on September 22, 2016 when the CPUC issued Decision 16-09-021, providing its approval to (1) enter into a Water Purchase Agreement with Monterey One Water and (2) construct various facilities (pipelines and pump stations) necessary to allow the Pure Water Monterey to proceed.
- CDO Milestone 2: Cal-Am achieved Milestone 2 in 2016, commencing construction of the Monterey pipeline and pump station project as part of the Pure Water Monterey project in October 2016, and commencing installation of the 36-inch pipeline on January 3, 2017.
- CDO Milestone 3: Cal-Am achieved Milestone 3 on September 13, 2018, when the CPUC issued Decision 18-09-017 certifying the MPWSP Final Environmental Impact Report and issuing a Certificate of Public Convenience and Necessity to construct the MPWSP 6.4 mgd desalination project. In 2018 and 2019 Cal-Am and the CPUC successfully defended all legal challenges to the CPUC’s decision.
- CDO Milestone 4: Following issuance of regulatory permits and authorizations to begin work, Cal-Am achieved Milestone 4 on September 16, 2019 by commencing construction on the Desalination Transfer Pipeline project for installation of over 2,500 linear feet of pipeline.
- CDO Milestone 5: Cal Am was on track to achieve Milestone 5 when in October 2019 the superior court issued a stay on all physical activities at the desalination plant site pending the Coastal Commission’s determination about the project slant wells. Since October 2019 when Coastal Commission staff released its report recommending denial of the Coastal Development Permit, Cal-Am has repeatedly attempted to work with Coastal Commission staff to resolve its concerns with the project, including submission of a detailed Habitat Mitigation and Monitoring Plan for the Cemex site, an analysis of local vernal ponds and an Adaptive Management Program to address any potential impacts, a plan for lining of the Monterey One Water outfall, reports on the adequacy of water supplies to meet customer demand, and an analysis of project impacts on disadvantaged communities.

While Cal-Am firmly believes that the circumstances that resulted in missing Milestone 5 are beyond Cal-Am’s control, we understand that it is less clear whether the actions of other CDO “Applicants” contributed to the missed Milestone.¹ Specifically, the Monterey Peninsula Water Management District (MPWMD), one of the early proponents of the MPWSP and an Applicant when the SWRCB amended and extended the CDO in 2016, has now become a staunch opponent of the Project, reversing its position despite being a party to multiple settlement agreements concerning the Project, which agreements had been relied upon by multiple parties. MPWMD submitted correspondence to the Coastal Commission that has undermined and delayed the Coastal Commission’s review and consideration of the MPWSP Coastal Development Permit application, including continued advocacy of a misleading water supply and demand analysis that was specifically rejected by the CPUC, submitting a deliberately manipulated consultant’s memorandum to make it appear to support MPWMD’s analysis, and

¹ The CDO directs several actions at the “Applicants” that jointly petitioned the SWRCB in 2016 to modify the prior CDO. The Applicants include Cal-Am, the Monterey Peninsula Regional Water Authority, the Monterey Peninsula Water Management District, the City of Pacific Grove, and the Pebble Beach Company. Section 3.b.viii. of the CDO requires a SWRCB finding that the cause for a missed Milestone is beyond the control of the Applicants, collectively, before the SWRCB may grant relief from EDL reductions for a missed milestone.

arguing instead for its own alternative water supply project (Pure Water Monterey expansion). In a June 15, 2020 letter to Coastal Commission executive director Ainsworth, MPWMD expressly asked the Coastal Commission to reject Cal-Am's application for the MPWSP.² Coastal Commission staff relied heavily on MPWMD's actions and the misleading information provided by MPWMD staff in the Coastal Commission staff's analysis of the MPWSP and recommendation to deny the Coastal Development Permit application.

The problem with MPWMD's position is that it will not produce an adequate, reliable and permanent long-term water supply for the Monterey Peninsula, which is required to lift the CDO and pull the Monterey Peninsula out of its perpetual state of water poverty and temporary fixes. MPWMD's positions will force the Monterey Peninsula to continue to rely on the Carmel River and Seaside Groundwater Basin indefinitely as the backstop to water supply and demand variability.

Perhaps more importantly, MPWMD appears willing to risk the Carmel River's recovery and the Monterey Peninsula's last and most critical water supply resource, the Seaside Groundwater Basin. For example, earlier this year, given the likelihood that an alternate water supply would not be completed by the end of 2021, the MPWMD Board was presented with a plan for an additional pipeline to maximize use of Aquifer Storage and Recovery (ASR) and Pure Water Monterey water supplies and minimize Carmel River diversions. The new pipeline would allow simultaneous injection of ASR and extraction of Pure Water Monterey from the Seaside Groundwater Basin. But opponents of the desalination plant objected to the new pipeline, claiming it also could support the desalination project. And so far, the MPWMD Board has delayed consideration of the pipeline, instructing staff to explore an alternative that, as noted by MPWMD staff, would necessitate intensification of pumping on the Carmel River in the summer months when Cal-Am is trying to reduce pumping to benefit the fishery. MPWMD's preferred alternative also does not account for critical protections for the Seaside Groundwater Basin. As the Seaside Basin Watermaster recently explained to Coastal Commission staff, without the volume of water to be provided by the MPWSP, the Seaside Groundwater Basin is in serious jeopardy of overdraft and seawater intrusion, conditions that would be catastrophic to both the communities' ASR and the Pure Water Monterey project, not to mention native groundwater supplies in the Basin. (See Attachment 2). This is a very short-sighted and dangerous game that the MPWMD is playing with the Monterey Peninsula's water supplies and resources. Rather than protecting and enhancing the region's water supplies and resources, as it is charged to do, MPWMD's actions appear to be designed to defeat the MPWSP at all cost.

Cal-Am understands that the primary function of the CDO milestones is to ensure that the MPWSP is diligently pursued and that the community understands the importance of reducing Carmel River diversions to authorized limits without delay. Cal-Am has at all times diligently pursued the MPWSP, and aggressively opposed all attempts to delay the project. Cal-Am continues to believe that the MPWSP is the only permanent and sufficient solution to the water

² We should emphasize that the water supply and demand analysis advanced by the MPMWD was rejected by the California Public Utilities Commission (CPUC), and that the Pure Water Monterey Expansion Project was rejected by Monterey One Water Board in August 2020 and has been aggressively opposed by the County, Monterey County Water Resources Agency, City of Salinas, and agricultural water users in the Salinas Valley. Moreover, as you are well aware, the Pure Water Monterey project itself has encountered significant delays and technical issues that affect both the timing and overall viability of that project.

supply shortage on the Monterey Peninsula. But given MPWMD's complicity in the events resulting in missing Milestone 5, we understand that the State Water Board is not likely to find that delays were beyond the control of the "Applicants." Accordingly, Cal-Am is preparing its Water Year 2020-2021 operations plan with the expectation that the Effective Diversion Limit under the CDO is reduced from 8,310 acre-feet to 7,310 acre-feet. In order to comply with the CDO and meet customer water demands in WY 2020-21, Cal-Am intends to rely on continued water conservation, continuation of the existing moratorium, optimizing water supplies, and carry-over credits under the CDO. Cal-Am is optimistic that the Monterey Peninsula's water demands can be met without additional rationing in Water Year 2020-2021.

Cal-Am would like to set up a meeting with you and your staff in the next few weeks to discuss Cal-Am's Water Year 2020-2021 operations in light of missed Milestone 5. At the meeting we also should begin discussions about how Cal-Am will manage water supplies next year in light of the likelihood that remaining CDO milestones will be missed. I will follow up with you this week to set a meeting.

Sincerely,

A handwritten signature in blue ink, appearing to read "Richard Svindland". The signature is fluid and cursive, with a large initial "R" and "S".

Richard Svindland

cc: Erik Ekdahl (via email)
Steve Westhoff (via email)

ATTACHMENT 1



Chris Cook, PE
Director of Operations - Monterey
511 Forest Lodge Road, Suite 100
Pacific Grove, CA 93950
Christopher.Cook@amwater.com

June 4, 2020

UPS OVERNIGHT & EMAIL

Erik Ekdahl
Deputy Director, Division of Water Rights
State Water Resources Control Board
PO Box 2000
Sacramento, CA 95812

RE: Joint Annual Report – Satisfaction of Milestone 5

Dear Mr. Ekdahl,

California American Water Company ("Cal Am") is providing this joint annual report in accordance with SWRCB Order 2016-0016 Section 3.b.viii.

Joint Annual Report: Commencing in water year 2016-2017, at least 120 days prior to each milestone Deadline described in Condition 3.b.v, Cal Am, in accordance with Applicants, shall submit a joint report to the Deputy Director for Water Rights, describing progress toward that Milestone, whether Applicants expect the milestone to be achieved by the Deadline and, if not, whether the Milestone will be missed for reasons beyond Applicants control. Sufficient evidence supporting the reasons that missing a milestone is beyond the control of Applicants shall be included for any further action related to such a claim.

If requested, Cal Am, in coordination with Applicants, shall present written and/or oral comments on the progress towards Milestone at a regularly scheduled State Water Board Meeting that falls at least 60 days after submission of the report. If the report indicates that a Milestone is likely to be missed for reasons beyond Applicants control, the State Water Board may make a determination during that meeting or at a subsequent meeting whether the cause for delay is beyond the Applicants control. If the State Water Board determines that the cause is beyond Applicants control, it may suspend any corresponding reductions under Condition 3.b.vi until such time as the Applicant can reasonably control progress towards the Milestone.

In accordance with the Order, Milestone 5 must be satisfied by September 30, 2020.

(1) Drilling activity for at least one MPWSP Desalination Plant source water production well complete; (2) foundation and structural framing complete for MPWSP Desalination Plant pretreatment seawater reverse osmosis, and administration buildings at desalination plant; (3) excavation complete for MPWSP Desalination Plant brine and backwash storage basins; and (4) 25% of Desalination Plant transmission pipelines installed based on total length, including 100% installation of the "Monterey Pipeline and other ASR related improvements".

Drilling Activity for Source Water Production Wells

Cal-Am requires a coastal development permit from the Coastal Commission in order to commence construction of the MPWSP source water slant wells, without which, Cal-Am cannot begin the necessary activities in order to complete drilling activities for a slant well, as required under Milestone 5. On June 22, 2018, Cal-Am submitted a coastal development permit application to the City of Marina for those project components, including the slant wells, located within the City of Marina's Coastal Zone. On May 10, 2019, the City issued a notice of final local action based upon its Planning Commission decision denying Cal-Am's application. On May 22, 2019 CAW appealed the City's decision to the Coastal Commission. Additionally, on July 31, 2019, Cal-Am submitted an application to the Coastal Commission for those portions of the project within the Coastal Commission's original jurisdiction.

The Coastal Commission scheduled a public hearing on Cal-Am's application and appeal for November 14, 2019. On October 28, 2019, Coastal Commission staff issued a staff report recommending denial of the project. On November 4, 2019, Coastal Commission staff released an addendum to the staff report, concluding that additional groundwater modeling was needed before staff could find that the desalination project would not prevent depletion of groundwater supplies. Although the Coastal Commission opened its public hearing on November 14, 2019, Coastal Commission staff advised that no vote would be taken at the meeting due to questions raised by the California Public Utilities Commission (CPUC) concerning certain findings in the Coastal Commission staff report about water supplies and demand on the Monterey Peninsula, and the need for additional groundwater modeling, that appeared to conflict with findings made by the CPUC in approving the project and certifying the environmental impact report. Cal-Am also informed the Coastal Commission of its belief that the information sought by the additional groundwater modeling had been included in the CPUC's environmental review, and that the CPUC's determinations on supply and demand were correct and in accordance with California law.

On January 28, 2020, Coastal Commission staff sent a letter to Cal Am recommending that Cal Am withdraw its application due to staff's belief that the requested additional investigation could not be completed by the deadline under the Permit Streamlining Act for the Coastal Commission to vote on the application. Cal Am declined to withdraw its application, and instead, on February 12, 2020, Cal Am and the Coastal Commission entered into a stipulation extending by ninety days, to July 24, 2020, the deadline for the Coastal Commission to vote on Cal Am's original jurisdiction application. On April 16, 2020, due to the COVID-19 crisis, the state issued an order suspending for 60 days all timelines under the Permit Streamlining Act, effectively extending the Coastal Commission's deadline to vote on Cal Am's application to September 22, 2020. By letter dated May 8, 2020, the State Water Board executive director urged the Coastal Commission to act on Cal-Am's application at its August 2020 meeting, and stating that the technical groundwater questions raised by Coastal Commission staff had already been resolved by the CPUC, and that after review the State Water Board had no basis to conclude that the CPUC's prior analysis and determination regarding water demand, sizing, reliability, or diversity were unreasonable, invalid, or outdated.

The Coastal Commission has indicated that the continued hearing on Cal-Am's application will take place during the Coastal Commission's August meeting. The delay caused by the Coastal Commission's decision to undertake additional groundwater modeling and continue the hearing, based on a determination made just 10 days before the previously scheduled hearing, is beyond Cal-Am's control.

Construction of Desalination Plant.

The proposed desalination plant is located in an unincorporated portion of Monterey County, and requires a combined development permit from the County of Monterey prior to commencement of construction. On July 15, 2019, the County Board of Supervisors approved the permit. On August 21, 2019, Marina Coast Water District filed a petition for writ of mandate and a complaint for injunctive relief in Monterey County Superior Court, challenging the County's approval, and seeking injunctive relief to

enjoin the County and Cal Am from beginning construction of the desalination plant. On October 4, 2019, the court issued a stay precluding physical construction of the desalination plant, but allowing Cal-Am to continue to obtain permits needed for the plant's construction. Currently, the stay is in place until August 25, 2020. Cal-Am has continued to obtain the necessary permits, including an incidental take permit from California Department of Fish and Wildlife issued in December 2019, and had been on track to timely begin construction activities at the site, but the court's stay precludes Cal-Am from starting the necessary activities at the plant site in order to be able to complete construction of the various plant facilities required under Milestone 5 by September 30, 2020. It is therefore unlikely that Cal-Am will be able to complete all of the activities required under Milestone 5 by September 30, 2020. This setback resulting from the court's stay is beyond Cal-Am's control.

Other Activities

Cal-Am completed 100% of the Monterey Pipeline and Pump Station project in 2019 and a portion of the Desalination Plant transmission pipeline in 2020 with the completion of approximately 2,500 feet located in Seaside along General Jim Moore Boulevard and Lightfighter Drive. The remaining Desalination Transfer Pipeline installation work is currently on hold waiting for Coastal Commission approvals.

In light of the stay imposed by the Superior Court, and the delay in the Coastal Commission's hearing on Cal-Am's application for a coastal development permit, Cal-Am will not be able to meet Milestone 5. Cal-Am has vigorously opposed these delays in project construction that have jeopardized its ability to comply with CDO Milestones, but these delays are beyond Cal-Am's control. Cal-Am has and continues to meet with State Water Board staff to inform them of Cal-Am's progress. Cal-Am and State Water Board staff have also discussed the timing for presenting evidence to the State Water Board that Cal-Am's inability to timely meet Milestone 5 is beyond Cal-Am's control with a request to suspend any corresponding reductions under Condition 3.b.vi of the CDO.

Please let us know if you have any questions.

Sincerely,



Chris Cook, PE

Director of Operations, Coastal Division

CC: E. Joaquin Esquivel, State Water Resources Control Board
Dorene D'Adamo, State Water Resources Control Board
Tam Doduc, State Water Resources Control Board
Sean Maguire, State Water Resources Control Board
Laurel Firestone, State Water Resources Control Board
Eileen Sobeck, State Water Resources Control Board
Steve Westhoff, State Water Resources Control Board
David Stoldt, Monterey Peninsula water Management District
Clyde Roberson, Monterey Peninsula Regional Water Authority

ATTACHMENT 2

Seaside Groundwater Basin Watermaster
P.O. Box 51502, Pacific Grove, CA 93950
watermasterseaside@sbcglobal.net
(831) 641-0113

Paul Bruno, Coastal Subarea Landowners, Chairman

Dan Albert, City of Monterey, Vice Chairman

John Gaglioti, City of Del Rey Oaks, Treasurer

*Mary Adams, Monterey County/Monterey County
Water Resources Agency*

Mary Anne Carbone, City of Sand City

Christopher Cook, California American Water

Wesley Leith, Laguna Seca Subarea Landowners

Ian Oglesby, City of Seaside

*George Riley, Monterey Peninsula Water
Management District*

August 12, 2020

Mr. John Ainsworth, Executive Director
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105

Re: Monterey Peninsula Water Supply Project – Support

Dear Mr. Ainsworth:

The Seaside Groundwater Basin Watermaster is tasked by the Court to administer the Seaside Basin. Our board is comprised of elected officials and others who each have a role in the protection and management of the basin.

Today I once again write to urge your approval of Coastal Development Permit (CDP) for California American Water Company's (CAW) Monterey Peninsula Water Supply Project (MPWSP). In October of 2019, our board approved a resolution in support of the MPWSP. That resolution was presented to the Coastal Commission at its prior hearing on the project.

As the Coastal Commission is well aware, the MPWSP is necessary to meet the long-term water demands of the Monterey Peninsula. No other project has been identified to reliably meet the communities' water needs sufficiently to get the community out from under the State Water Board's Cease and Desist Order. The MPWSP also will provide much needed protections to one of the Peninsula's other critical water supply sources, the Seaside Groundwater Basin.

- Without the quantities of supplemental supplies from the MPWSP, CAW and other Seaside Basin pumpers may not be able to meet the pumping reductions called for in the Seaside Basin Decision.
- The MPWSP supply is necessary to meet the replenishment obligations required in the Seaside Basin Decision, and to avoid the undesirable consequences of overdraft, and seawater intrusion.
- Without the quantity of supplemental supplies provided by the MPWSP, the Seaside Basin Watermaster cannot achieve the protective water levels (PWL) for the Basin that have been identified as necessary to avoid seawater intrusion and irreversible loss of Basin storage.
- If Seaside Basin storage is lost or reduced as a result of seawater intrusion, other existing water supplies - such as native groundwater, Aquifer Storage and Recovery, and Pure Water Monterey – are in serious jeopardy, as seawater intruded aquifers cannot be used for groundwater storage.
- The MPWSP is necessary to provide the Seaside Basin with the replenishment needed for reliable protection against seawater intrusion.

It is imperative that the Coastal Commission and other stakeholders understand what is truly at stake for the Seaside Basin and the water supplies that are dependent on the health and security of the Basin. The Seaside Basin is perhaps the most critical water supply resource for the Monterey Peninsula. The Basin provides more than 3,000-acre feet of native groundwater annually for

municipal uses in CAW's Monterey and Laguna Seca Districts and to the Cities of Seaside and Sand City, and also is used for other beneficial uses in the Basin. The Basin also provides critical groundwater storage for CAW's Aquifer Storage and Recovery (ASR) diversions from the Carmel River, and provides storage and treatment of recycled water for Monterey One Water's Pure Water Monterey (PWM) Project. The loss of Seaside Basin storage as a result of overdraft and seawater intrusion would have a catastrophic impact on these crucial existing water supplies, not only for CAW's customers on the Monterey Peninsula, but for the other municipal and irrigation users in Monterey County.

The Seaside Basin Decision, as amended in February 2007, allocates the yield of the Seaside Basin to municipal and overlying groundwater users according a formula and schedule set forth in the Decision. The Decision requires gradual reduction in total Basin production in order to reduce Basin pumping to Natural Safe Yield, which was determined to be approximately 2,900 acre-feet in 2007. Municipal pumpers that exceed their Natural Safe Yield allocations are required to replenish the Basin for such overproduction, even if that overproduction is authorized under the Decision. The Decision also obligates Watermaster to study and manage conditions in the Basin and, to the extent Watermaster finds that pumping may result in Material Injury to the Basin, and to request relief from the Court to avoid or mitigate Material Injury to the Basin and its users. The Decision defines Material Injury to include impacts such as seawater intrusion, water quality degradation and subsidence.

Under the Decision, CAW currently is obligated to replenish approximately 700-acre feet per year (afy) over a 25-year period in order to offset its overproduction. This replenishment will be accomplished by "in lieu recharge" of the Basin, i.e., CAW reducing its authorized pumping by 700 afy and allowing that unpumped groundwater to remain in groundwater storage. For planning purposes, Watermaster has assumed that the MPWSP will deliver approximately 700 afy to satisfy CAW's replenishment obligation, in-lieu of exercising its pumping rights. The Commission's evaluation of water supply and demand cannot merely assume CAW's yield allocation under the Decision (approximately 1,800 afy, reduced to 1,500 afy in 2021), but must also consider an additional 700 afy necessary to satisfy replenishment obligations under the Decision. Water supply and demand analyses that do not consider this replenishment obligation as a water demand (or as a reduction in the available Seaside Basin native groundwater supply) are ignoring potential Material Injury to the Seaside Basin.

In addition to administering the Natural Safe Yield of the Seaside Basin Decision, Watermaster has been carefully studying and evaluating seawater intrusion risks and potential management actions to avoid the disastrous consequences of seawater intrusion into the Seaside Basin. As described in the attached memorandum from Watermaster's Technical Program Manager, Robert Jaques, increasing groundwater elevations in the Seaside Basin aquifers across the coastal front has been identified by Watermaster's technical experts as a prudent and necessary action to prevent seawater intrusion into the Basin's aquifers. Based on our analysis of water elevations in several key coastal wells, Watermaster has found that higher groundwater elevations are needed in both the Paso Robles (shallow) and Santa Margarita (deep) aquifers to reduce the risk of seawater intrusion. To achieve these protective water levels (PWL), Watermaster has found that approximately 1,000 afy of additional replenishment is required over a 25-year period. The MPWSP is the only possible supplemental water project before us that is capable of supplying the additional water needed to allow Watermaster to sustain PWL in the Basin.

Sincerely,



Paul B. Bruno, Chairman

**Seaside Basin Watermaster
P.O. Box 51502
Pacific Grove, CA 93950
(831) 641-0113**

MEMORANDUM

TO: Chairman of the Board of Directors of the Seaside Groundwater Basin Watermaster

FROM: Robert Jaques, Technical Program Manager

DATE: August 11 , 2020

SUBJECT: Recharge Water Is Needed to Protect the Seaside Groundwater Basin
Against Seawater Intrusion

To our Technical Advisory Committee, I recently presented an analysis of groundwater modeling work and other reports pertaining to proposed projects that would supply water to help stabilize groundwater levels in the Basin. The Committee unanimously approved the analysis and recommended that it be presented to the Board of Directors.

Background & Discussion

The Seaside Groundwater Basin Adjudication Decision, which established the Watermaster in 2006, had as its primary purpose reducing pumping from the Basin in order to stabilize groundwater levels to prevent seawater intrusion. The Seaside Basin is a critical source of water supply for the Monterey Peninsula. The management actions in the Decision reflect the fact that the Basin had been over-pumped for many years prior to the issuance of the Decision, but does not contain express requirements for water levels to be raised. It only required that pumping be reduced to keep groundwater levels from continuing to fall. We now know that groundwater levels in the Basin have continued to fall in some areas despite implementation of the Decision-required pumping reductions, and that even if they stabilized at current levels they would be well below sea level in some parts of the Basin.

Protective Water Levels (PWLs) were developed for four wells located near the coast in the Coastal Subarea of the Basin. If the groundwater level is at or above the PWL at a given location, it means that seawater cannot intrude into that area because the groundwater level is sufficiently above sea level to prevent that from happening. Currently, groundwater levels at all of the wells in the deep (Santa Margarita) aquifer are below their respective PWLs, and only one of the groundwater levels is above its PWL in the shallow (Paso Robles) aquifer. Our hydrogeologic consultants have told us with

certainty that persistence of groundwater levels below PWLs will lead to seawater intrusion into the Basin. Loss of groundwater storage to seawater intrusion will be very difficult, if not impossible, to reverse. While it is not possible at this time to accurately predict when that could occur, groundwater levels need to rise above PWLs to ensure protection of the aquifers.

The only way to achieve PWLs is to inject more water into the Basin than is taken out, so that the Basin is permanently recharged and not just used as a temporary storage vessel (which is the case with the existing Pure Water Monterey Project and the proposed Pure Water Monterey Expansion Project).

Principle Conclusions from the Analysis

If the Desalination Plant is Not Constructed and There is No Expansion of the Pure Water Monterey Project (Under this scenario the only project constructed is the original 3,500 AFY PWM Project)

- There is negligible net change in groundwater levels because on average the amount of water that is replenished is quickly extracted and not left in the Basin.
- PWLs will not be achieved.
- The Basin will not be protected against seawater intrusion.

If the Desalination Plant is Not Constructed and the Pure Water Monterey Expansion Project is Constructed (Under this scenario both the original PWM Project and the PWM Expansion Project would be in operation)

- The groundwater modeling for the original PWM Project used the same Cal Am water demand figures that were used in the EIR/EIS for the MPWSP. The groundwater modeling performed for the PWM Expansion Project used water demand figures developed by MPWMD that are several thousand AFY lower than the demand figures that were used when the modeling was done for the original PWM Project.
- Even using the lower water demand figures mentioned above, PWLs will not be achieved and the Basin will not be protected against seawater intrusion with the Expanded Pure Water Monterey Project because additional replenishment water will not be available for the Seaside Basin.
- If the higher and more conservative original water demand values were used in the PWM Expansion Project modeling, that modeling would show an even greater threat of seawater intrusion because additional replenishment water will not be available for the Seaside Basin and pumping from the Basin would need to be greater to meet the higher demands.

Additional Replenishment Water Will be Needed to Achieve Protective Elevations

- Previous modeling indicates injecting on the order of 1,000 AFY of additional water into the Seaside Basin for 25 years, along with the existing Cal Am replenishment obligations and the original PWM Project and either the desalination plant or the PWM Expansion Project, may be necessary to achieve protective elevations at all Basin locations within 25 years.

- Groundwater modeling that incorporates the actual projects that are to be constructed, i.e. either the desalination plant or the PWM Expansion Project, would need to be performed to refine the amount of additional injection water that would be needed.
- In its initial years of operation the desalination plant will have unused capacity that could potentially provide some of this replenishment water.
- If the desalination plant is constructed, a smaller PWM Expansion Project could likely provide the additional water needed to achieve protective elevations.