MARINA COAST WATER DISTRICT

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Agenda
Regular Board Meeting/Board Workshop, Board of Directors
Marina Coast Water District
and
Regular Board Meeting, Board of Directors
Marina Coast Water District Groundwater Sustainability Agency

Monday, May 18, 2020, 6:30 p.m. PST

Due to Governor Newsom's Executive Order N-29-20 and recommendations on protocols to contain the spread of COVID-19, staff and Board members will be attending the May 18, 2020 meeting remotely from various locations and the meeting will be held via Zoom conference. There will be NO physical location of the meeting. The public is strongly encouraged to use the Zoom app for best reception.
There may be limited opportunity to provide verbal comments during the meeting. Persons who are participating via telephone will only be allowed to listen to the proceedings as there is no opportunity for them to be acknowledged for comments. If they wish to address the Board for public comment or on an item on the agenda, they are encouraged to submit comments in writing to Paula Riso at priso@mcwd.org by 9:00 am on Monday, May 18, 2020; such comments will be distributed to the MCWD Board before the meeting.
Members of the public participating by Zoom will be placed on mute during the proceedings and will be acknowledged only when public comment is allowed, after requesting and receiving recognition from the Board President.

This meeting may be accessed remotely using the following Zoom link:
https://us02web.zoom.us/j/89701728703?pwd=dHpwNXFKaThlMzFpUXVZdHhqLzRtQT09
Password: 05182020

To participate via phone, please call: 1-669-900-9128; Meeting ID: 897 0172 8703 Password: 05182020

Our Mission: *We provide our customers with high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner.*

1. Call to Order

2. Roll Call

3. Public Comment on Closed Session Items
Anyone wishing to address the Board on matters appearing on Closed Session may do so at this time. Please limit your comment to four minutes. The public may comment on any other items listed on the agenda at the time they are considered by the Board.

This agenda is subject to revision and may be amended prior to the scheduled meeting. Pursuant to Government Code section 54954.2(a)(1), the agenda for each meeting of the Board shall be posted at the District offices at 11 Reservation Road and 2840 4th Avenue, Marina. The agenda shall also be posted at the following locations but those locations are not official agenda posting locations for purposes of section 54954.2(a)(1): City of Marina Council Chambers. A complete Board packet containing all enclosures and staff materials will be available for public review on the District website, Wednesday, May 13, 2020. Information about items on this agenda or persons requesting disability related modifications and/or accommodations should contact the Board Clerk 48 hours prior to the meeting at: 831-883-5910.

4. Closed Session

A. Pursuant to Government Code 54956.9
Conference with Legal Counsel – Existing Litigation

1) Bay View Community DE, LLC; Bryan Taylor; Greg Carter; and Brooke Bilyeu vs Marina Coast Water District; Board of Directors of Marina Coast Water District; County of Monterey and Does 1-25, inclusive, Monterey County Superior Court Case No. 18CV000765 (Petition for Writ of Mandate or Administrative Mandate, and Complaint for Declaratory and Injunctive Relief and Breach of Contract)

2) Marina Coast Water District, and Does 1-100 v, County of Monterey, Monterey County Board of Supervisors, and Does 101-110 (California-American Water Company, Real Party in Interest), Monterey County Superior Court Case No. 19CV003305 (Petition for Writ of Mandate and Complaint for Injunctive Relief)

B. Pursuant to Government Code 54956.9(d)(4)
Conference with Legal Counsel – Anticipated Litigation
Initiation of Litigation – Three Potential Cases

7:00 p.m. Reconvene Open Session

5. Reportable Actions Taken During Closed Session *The Board will announce any reportable action taken during closed session and the vote or abstention on that action of every director present, and may take additional action in open session as appropriate. Any closed session items not completed may be continued to after the end of all open session items.*

6. Pledge of Allegiance

7. Oral Communications *Anyone wishing to address the Board on matters not appearing on the Agenda may do so at this time. Please limit your comment to four minutes. The public may comment on any other items listed on the agenda at the time they are considered by the Board.*

8. Action Item *The Board will review and discuss agenda items and take action or direct staff to return to the Board for action at a following meeting. The public may address the Board on these Items as each item is reviewed by the Board. Please limit your comment to four minutes.*

A. Consider Adoption of Resolution No. 2020-27 to Receive the WaterDM Report and to Approve Submitting a Letter to the State Water Resources Control Board Regarding the Report's Conclusions and Supporting the Expansion of the Pure Water Monterey Project as an Alternative to the Monterey Peninsula Water Supply Project Desalination Proposal
Action: The Board of Directors will receive a WaterDM report and consider sending a letter to the State Water Resources Control Board in support of the expansion of Pure Water Monterey.
(Page 1)

* * * * *

9. Marina Coast Water District Groundwater Sustainability Agency Matters

A. Action Item

1. Consider Adoption of Resolution No. 2020-02 to Approve Amendment 2 to the Professional Services Agreement with EKI Environment & Water, Inc. for Groundwater Sustainability Planning
   Action: The Board of Directors will close the public hearing and consider approving the 180/400 Foot Aquifer Groundwater Sustainability Plan for the Marina Coast Water District Groundwater Sustainability Agency.
   (Page 81)

* * * * *

10. Return to Marina Coast Water District Matters

11. Consent Calendar

A. Receive and File the Check Register for the Month of April 2020
(Page 125)

B. Receive the Quarterly Financial Statements for January 1, 2020 to March 31, 2020
(Page 131)

C. Approve the Draft Minutes of the Regular Joint Board/GSA Meeting of April 20, 2020
(Page 144)

D. Approve the Draft Minutes of the Regular Board Meeting/Budget Workshop of April 28, 2020
(Page 154)

E. Consider Adoption of Resolution No. 2020-28 Proclaiming the Week of May 17-23, 2020 National Public Works Week
(Page 159)

12. Action Items *The Board will review and discuss agenda items and take action or direct staff to return to the Board for action at a following meeting. The public may address the Board on these Items as each item is reviewed by the Board. Please limit your comment to four minutes.*

A. Consider Adoption of Resolution No. 2020-29 to Accept the Water, Sewer, and Recycled Water Master Plans
   Action: The Board of Directors will consider accepting the Water, Sewer, and Recycled Water Master Plans.
   (Page 163)

B. Consider Adoption of Resolution No. 2020-30 to Approve Amendment No. 8 with Denise Duffy & Associates under their RUWAP On-Call Professional Services Agreement to provide Environmental Services for the Regional Urban Water Augmentation Project Distribution Mains Project

Action: The Board of Directors will consider approving Amendment No. 8 with Denise Duffy & Associates under their RUWAP On-Call Professional Services Agreement to provide environmental services for the Regional Urban Water Augmentation Project Distribution Mains Project.

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C. Consider Adoption of Resolution No. 2020-31 to Approve Task Order 18 with Harris & Associates under their On-Call Professional Services Agreement to Provide Construction Support Services for the Lower Stilwell Neighborhood Improvements Project, Phase 1

Action: The Board of Directors will consider authorizing Task Order 18 with Harris & Associates under their On-Call Professional Services Agreement to provide construction support services for the Lower Stilwell Neighborhood Development, Phase 1 Improvements Project.

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D. Receive the Revised Draft FY 2020-2021 District Budget and Update on the Budget Process

Action: The Board of Directors will receive the revised draft budget for FY 2020-2021 and an update on the budget process.

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E. Consider Establishment of a Marina Coast Water District Customer Assistance Program

Action: The Board of Directors will consider establishing a customer assistance program.

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13. Staff Reports

A. Receive a Report on the Fiscal Impacts to the District due to Covid-19
(Page 211)

B. Receive a Report on Current Capital Improvement Projects
(Page 213)

C. Receive the 1st Quarter 2020 MCWD Water Consumption Report
(Page 217)

D. Receive the 2020 Sewer Flow Report through March 31, 2020
(Page 222)

14. Informational Items *Informational items are normally provided in the form of a written report or verbal update and may not require Board action. The public may address the Board on Informational Items as they are considered by the Board. Please limit your comments to four minutes.*

A. General Manager's Report

B. Counsel's Report

C. Committee and Board Liaison Reports

1. Water Conservation Commission
2. Joint City-District Committee
3. Executive Committee
4. Community Outreach Committee
5. Budget and Personnel Committee
6. M1W Board Member Liaison
7. LAFCO Liaison
8. FORA
9. WWOC Report
10. JPIA Liaison
11. Special Districts Association

15. Board Member Requests for Future Agenda Items

16. Director's Comments *Director reports on meetings with other agencies, organizations and individuals on behalf of the District and on official District matters.*

17. Adjournment *Set or Announce Next Meeting(s), date(s), time(s), and location(s):*

Regular Meeting: *Monday, June 15, 2020, 6:30 p.m.,*
Via Videoconference Meeting

Return to Agenda

Marina Coast Water District
Agenda Transmittal

Agenda Item: 8-A Meeting Date: May 18, 2020

Prepared By: Keith Van Der Maaten Approved By: Keith Van Der Maaten

Agenda Title: Consider Adoption of Resolution No. 2020-27 to Receive the WaterDM Report and to Approve Submitting a Letter to the State Water Resources Control Board Regarding the Report's Conclusions and Supporting the Expansion of the Pure Water Monterey Project as an Alternative to the Monterey Peninsula Water Supply Project Desalination Proposal

Staff Recommendation: The Board of Directors approve Resolution No. 2020-27 to receive the WaterDM Report and authorize staff to prepare and submit a letter to the SWRCB, approved and signed by the Board President, regarding the Report's conclusions and supporting the expansion of the Pure Water Monterey Project as an alternative to the Monterey Peninsula Water Supply Project desalination proposal.

Background: *Strategic Plan Mission Statement – To provide our customers with high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner.*

California-American Water Company (Cal-Am) proposes to construct and operate the Monterey Peninsula Water Supply Project (MPWSP) to provide potable water from desalinated water for customers in its service area in the Monterey Peninsula region. One of the main project purposes is to provide an alternative water supply for Cal-Am that will allow it to reduce its water withdrawals from the Carmel River system in accordance with provisions of a cease-and-desist order from the State Water Resources Control Board (SWRCB).

The California Public Utilities Commission (CPUC) has regulatory authority over Cal-Am and its infrastructure. In 2018 the CPUC approved Cal-Am's application to construct and operate the desalination project. The CPUC approved a smaller 6.4 MGD project than Cal-Am had initially proposed, because of the availability of water from another project, the Pure Water Monterey recycling and aquifer storage and recovery project. The CPUC found the two projects together could produce more than enough water to meet Cal-Am's expected water demands.

Independently from the CPUC, the California Coastal Commission (CCC) must review and approve the proposed desalination project under the California Coastal Act because portions of the project are within the coastal zone with the potential to impact environmentally sensitive habitat and other resources. The desalination plant itself would be located outside the coastal zone at a site about two miles inland within the jurisdiction of Monterey County, but components extend through the coastal zone to the Pacific Ocean and the project cannot be constructed without CCC approval.

The November 2019 CCC staff review considered new information about water supplies and demands that were not available at the time of the 2018 CPUC decision. The CCC staff found that there is less need for water from new sources than previously determined. Significantly, another project alternative, the expansion of the Pure Water Monterey project, has progressed from being too "speculative" for the CPUC to consider as a viable alternative, to now being a feasible, well-

developed alternative. This Pure Water Monterey Expansion would occur entirely outside of the coastal zone and would cause far fewer environmental impacts than Cal-Am's proposed project.

The recently developed Pure Water Monterey Expansion along with updated water supply and demand information were considered and included in the CCC staff report of October 28, 2019. The staff report recommended denying Cal-Am's permit request to construct elements of the desalination project in the coastal zone due to its inconsistency with the Local Coastal Program's habitat protection and hazards policies, its failure of the three tests of Coastal Act Section 30260, and its failure of the alternatives consideration of Section 30233 (e.g. the Expansion of Pure Water Monterey). The CCC has yet to approve or deny Cal-Am's proposal which is scheduled to heard in August 2020.

Following the November 2019 CCC Hearing, Cal-Am hired a consultant, Hazen and Sawyer, to critique the Monterey Peninsula Water Management District's (MPWMD) Report that was used and relied upon for the supply and demand numbers in the October 28, 2019 CCC staff report. Additionally, on May 8, 2020, the SWRCB sent a letter to the CCC questioning the supply/demand numbers that the CCC staff is using in their analysis. Specifically, while the SWRCB staff admits in the letter that actual water use within Cal-Am's Monterey District service area in recent years has been lower than the CPUC's estimated current demand, they do not believe there is a basis "to conclude that the Public Utilities Commission's prior analysis and determinations regarding the water demand, sizing, reliability, or diversity of supply were unreasonable, invalid, or outdated".

Marina Coast Water District asked Peter Mayer of WaterDM to analyze the water supply and demand conclusions set forth in the October 28, 2019 CCC staff report. He was also asked to evaluate whether the proposed expansion of the Pure Water Monterey project would provide Cal-Am with a sufficient and reliable supply of water as an alternative to the MPWSP desalination proposal.

Peter Mayer is a recognized urban water management expert. He has worked with and advised hundreds of water providers and organizations such as the U.S. EPA; the U.S. Department of Justice; California Department of Water Resources; Metropolitan Water District of Southern California; and many others. He recently testified as an expert witness on municipal and industrial water use at the U.S. Supreme Court on behalf of the State of Georgia.

Discussion/Analysis: The focus of the CCC staff analysis and recommendations was on the availability of sufficient water supply to meet the community needs twenty years from now in 2040, and less on how Cal-Am will manage the transition from its reliance on the Carmel River in 2022. The water supply analysis summarized in Figure 7 from the WaterDM Report (shown below) indicates that with the addition of the full Pure Water Monterey project Cal-Am does have available water supply both in the near term (2020 – 2025) and twenty years from now in 2040. In keeping with the CCC staff report, the primary focus of the WaterDM analysis was on determining the volume of reliable supply available in 2040.

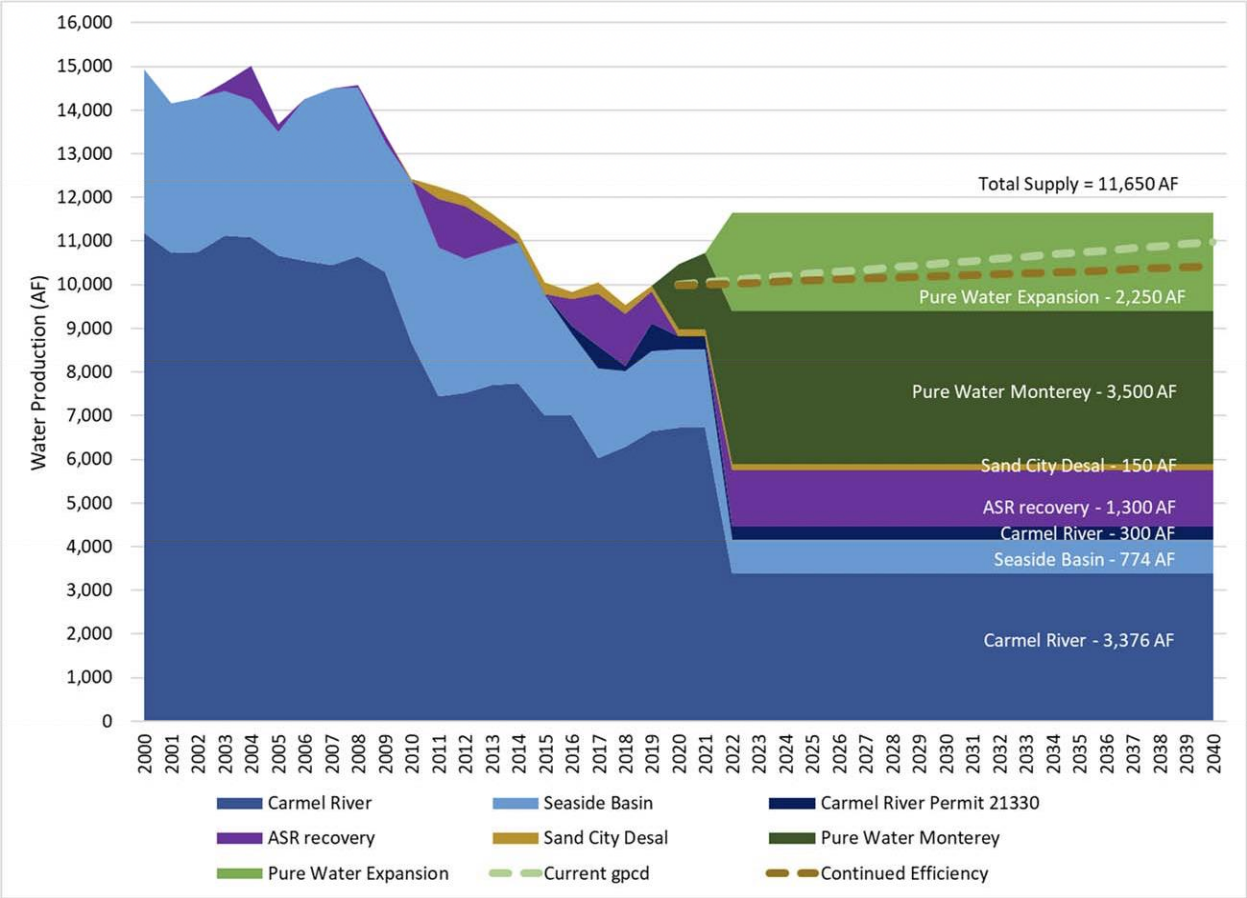

Figure 7: Cal-Am historic water production (2000 – 2019) and future water supply and demand (2020 – 2040)

The Pure Water Monterey project with the expansion would provide enough available supply to meet the likely 20-year requirements, but it is still reasonable to expect Cal-Am may need to seek to secure additional supplies in the future for beyond 2040. Much will depend upon what happens to the local economy and climate over the coming decade. Over-building infrastructure such as desalination (at its current size) would be an expensive error. The future is uncertain and the impact of COVID 19 and other economic unknowns could well be to reduce future demand in the Monterey Main System from current levels, lessening or eliminating the need for securing additional supply.

The WaterDM report demonstrates that the Pure Water Monterey Expansion, together with Cal-Am's existing lawful sources, would provide an ample supply to meet anticipated water demand in Cal-Am's Monterey District by more than 1,200 acre-feet annually through at least 2040. The report concludes that, with implementation of Pure Water Monterey Expansion, Cal Am's reliable supply sources will be capable of providing at least 11,650 acre-feet per year beginning in 2022. This level of supply security would permit compliance with the SWRCB's cease-and-desist order, and it would also allow an to end the moratorium on new water connections in Cal Am's Monterey main system.

Mr. Mayer's analysis and conclusions are based on widely-accepted water management methodologies and conservative assumptions. To avoid any dispute regarding data sources, Mr. Mayer based his projections upon production data set forth in Cal-Am's own reports to the SWRCB for the years 2017-2019, as well as data Cal-Am provided to the CPUC in its latest general

rate case (filed in 2019) and his review of decades of historic data from the MPWMD. Use of Cal-Am's actual production numbers results in a higher, and therefore more conservative, measurement of current demand than either the MPWMD's analysis, upon which CCC staff relied, or Cal-Am's own monthly and annual "system delivery" data. For example, Cal-Am's General Rate Case Application forecast estimates demand for 2021 and 2022 at 9,789 acre-feet per year, whereas Mr. Mayer's report estimates 2020 customer demand based upon total production of 9,985 acre-feet.

WaterDM prepared two demand forecasts for the Cal-Am Monterey Main service area, using population growth rates based on AMBAG's anticipated increase through 2040 and the water usage of all sectors – residential, commercial, public and re-sale and non-revenue water. For each forecast, demand in all sectors was increased each year proportionally based on AMBAG's projected increase in population. The first, "Current gpcd," forecast assumes the current rate of gallons used per person per day will continue into the future without any increase in efficiency or additional conservation reductions. The second, "Continued efficiency," forecast accounts for the likely impacts of ongoing efficiency improvements, consistent with California laws and directives to ensure future water efficiency across the state, as well as Cal-Am's own existing and planned future programs to further reduce per capita use. Under either forecast approach, Mr. Mayer's report concludes that CCC staff correctly determined Pure Water Monterey Expansion would provide a feasible, reasonable, and reliable supply to meet future demand.

WaterDM determined that per capita use in Cal-Am's Monterey district is likely to further decrease between now and 2040 due to ongoing conservation program implementation, continued conservation pricing, and statewide policy directives to reduce indoor and outdoor use and improve utility water loss control measures. The report concluded that Cal-Am's existing peak supply capacity is sufficient to meet anticipated future maximum daily and peak hourly demands. It also concluded that, even without any further decrease in per capita water consumption, Cal-Am's portfolio of available, reliable supplies with Pure Water Monterey but without MPWSP desalination, will exceed average annual demand through at least 2040.

Mr. Mayer's analysis assumed that Cal-Am would reduce its withdrawals of Seaside Groundwater Basin native groundwater by 700 acre-feet per year for at least 25 years beginning in 2022, as payback for prior over-pumping. Mr. Mayer concluded that concurrent implementation of the Pure Water Monterey Expansion could enable Cal-Am to take advantage of additional storage capacity in the Seaside Groundwater Basin as a buffer against future drought years. Furthermore, with the capability of storing excess supply in the Seaside Groundwater Basin for future use through Aquifer Storage and Recovery (ASR) and Pure Water Monterey operations as well as Pure Water Monterey Expansion, Cal-Am will be able to significantly improve the drought-resilience of its system. ASR, recycled water, and native groundwater systems, when managed properly and conjunctively, turns the Seaside Basin into an underground reservoir system where water can be stored during periods of excess supply and withdrawn during periods of short supply.

The WaterDM report also explains that the Hazen Report (prepared for Cal-Am) reaches erroneous conclusions regarding the reliability of future water supplies, is based on inflated hypothetical demands, makes misleading statements about planning requirements, and makes inaccurate characterizations of future water supply reliability. The WaterDM report discusses the following errors in the Hazen Report:

- The Hazen Report repeatedly confuses and conflates peak demand and annual demand planning requirements, and it offers numerous misleading statements about California codes and standards and AWWA water planning guidance.

- The Hazen Report makes incorrect statements about water conservation programs and planning without offering supporting data or analysis, and it states that per capita water use will increase substantially despite Cal-Am's ongoing demand management efforts and prevailing state policy and regulations.
- The Hazen Report asserts that "current" demand in the Cal-Am Main System must be assumed to be 12,350 acre-feet per year, which is far higher than actual current demand as reported by Cal-Am and which contradicts Cal-Am's most recent general rate case filing that forecasts 2022 demand will be 9,789 acre-feet per year.
- The Hazen Report mischaracterizes the likely future reliability of water supplies available to Cal-Am, including the future benefits of the ASR system.

Staff recommends that the MCWD Board of Directors receive the WaterDM report and authorize staff to prepare and submit a letter to the SWRCB approved and signed by the Board President to respond to the letter SWRCB staff sent on May 8, 2020 to the CCC. The MCWD letter and supporting report from WaterDM would convey MCWD's request that the SWRCB withdraw or modify the May 8, 2020 letter on the basis that the CPUC's prior analysis and determinations regarding the water demand, sizing, reliability, and diversity of supply are now outdated and invalid and, that, therefore, the proposed expansion of the Pure Water Monterey project would provide Cal-Am with a sufficient and reliable supply of water as an alternative to the MPWSP desalination proposal.

Environmental Review Compliance: None required.

Financial Impact: _____Yes _X____No Funding Source/Recap: None.

Other Considerations: None.

Material Included for Information/Consideration: Resolution No. 2020-27; WaterDM report (Attachment 1); and, SWRCB May 8, 2020 Letter (Attachment 2).

Action Required: ___X___Resolution _____Motion _____Review
(Roll call vote is required.)

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

May 18, 2020

Resolution No. 2020-27
Resolution of the Board of Directors
Marina Coast Water District
Receiving the WaterDM Report and to Approve Submitting a Letter to the State Water Resources Control Board Regarding the Report's Conclusions and Supporting the Expansion of the Pure Water Monterey Project as an Alternative to the Monterey Peninsula Water Supply Project Desalination Proposal

RESOLVED by the Board of Directors ("Directors") of the Marina Coast Water District ("District"), at a meeting duly called and held on May 18, 2020, via a videoconference pursuant to Gov. Newsom's Executive Order N-29-20, as follows:

WHEREAS, the recently developed Pure Water Monterey Expansion along with revised water supply and demand information were considered and included in the California Coastal Commission (CCC) staff report of October 28, 2019; and,

WHEREAS, the District asked Peter Mayer, a recognized urban water management expert, of WaterDM to analyze the water supply and demand conclusions set forth in the October 28, 2019 CCC staff report. He was also asked to evaluate whether the proposed expansion of the Pure Water Monterey project would provide Cal-Am with a sufficient and reliable supply of water as an alternative to the MPWSP desalination proposal; and,

WHEREAS, the WaterDM report demonstrates that the Pure Water Monterey Expansion, together with Cal-Am's existing lawful sources, would provide an ample supply to meet anticipated water demand in Cal-Am's Monterey District by more than 1,200 acre-feet annually through at least 2040; and,

WHEREAS, the report concludes that, with implementation of Pure Water Monterey Expansion, Cal Am's reliable supply sources will be capable of providing at least 11,650 acre-feet per year beginning in 2022. This level of supply security would permit compliance with the SWRCB's cease-and-desist order, and it would also allow an to end the moratorium on new water connections; and,

WHEREAS, Mr. Mayer's analysis and conclusions are based on widely-accepted water management methodologies and conservative assumptions. To avoid any dispute regarding data sources, Mr. Mayer based his projections upon production data set forth in Cal-Am's own reports to the SWRCB for the years 2017-2019, as well as data Cal-Am provided to the CPUC in its latest general rate case (filed in 2019) and his review of decades of historic data from the MPWMD. Use of Cal-Am's actual production numbers results in a higher, and therefore more conservative, measurement of current demand than either the MPWMD's analysis, upon which CCC staff relied, or Cal-Am's own monthly and annual "system delivery" data; and,

WHEREAS, Mr. Mayer's report concludes that CCC staff correctly determined Pure Water Monterey Expansion would provide a feasible, reasonable, and reliable supply to meet future demand.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the Marina Coast Water District as follows:

1. The Board of Directors receive the WaterDM report and authorize staff to prepare and submit a letter to the SWRCB approved and signed by the Board President to respond to the letter SWRCB staff sent on May 8, 2020 to the CCC. The letter will highlight the WaterDM Report's conclusions and support for the expansion of the Pure Water Monterey Project as an alternative to the Monterey Peninsula Water Supply Project desalination proposal.

PASSED AND ADOPTED on May 18, 2020, by the Board of Directors of the Marina Coast Water District by the following roll call vote:

Ayes: Directors_____

Noes: Directors_____

Absent: Directors_____

Abstained: Directors_____

_____
Thomas P. Moore, President

ATTEST:

_____
Keith Van Der Maaten, Secretary

CERTIFICATE OF SECRETARY

The undersigned Secretary of the Board of the Marina Coast Water District hereby certifies that the foregoing is a full, true and correct copy of Resolution No. 2020-27 adopted May 18, 2020.

_____
Keith Van Der Maaten, Secretary

Expert Report and Recommendations of

Peter Mayer, P.E.

Regarding Water Supply and Demand in the California American Water Company's Monterey Main System

Prepared for:

The Marina Coast Water District

April 21, 2020

WATER DEMAND MANAGEMENT
1339 Hawthorn Ave.
Boulder, CO 80304
waterdm.com

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INTRODUCTION

My name is Peter Mayer. I am the Principal of Water Demand Management, LLC (WaterDM) based in Boulder, Colorado.

WaterDM is a water consulting firm providing expertise and services in the following areas:

- Municipal and industrial water use, research, and analysis
- Water conservation and demand management planning and implementation
- Integrated water resources planning
- Water loss control
- Analysis of municipal water rates and rate structures
- Drought preparedness and response
- Demand forecasting
- Evaluation of changes in demand
- Statistical analysis of water demand and modeling
- Meter technology implementation
- Meter and service line sizing

I have a Master of Science in Engineering (1995) from the University of Colorado, Boulder and a Bachelor of Arts (1986) from Oberlin College. I am a registered and licensed Professional Engineer in Colorado.

I am a civil engineer and the focus of my career for over 25 years has been on urban water systems and demand management including conservation planning and implementation, rate analysis, water demand research, demand forecasting, drought preparation, utility metering, and water loss control.

Since 1995, I have served as a consultant and researcher to urban water providers, US EPA, the Water Research Foundation, the Alliance for Water Efficiency, state governments, and municipal and industrial water users in the US and Canada.

Over my 25 -year engineering and consulting career, I have worked with and advised hundreds of water providers and organizations such as the California Department of Water Resources; Tucson Water; New York City Water Board; the Colorado Water Conservation Board; Hilton Head, SC; Denver, CO; Scottsdale, AZ; San Antonio, TX; Metropolitan Water District of Southern California; US EPA; the US Department of Justice; the Alliance for Water Efficiency and many others. I have served as the principal investigator and lead or co-author of numerous national and state-level water demand research studies including: Residential End Uses of Water (2016, 1999); Assessing Water Demand Patterns to Improve Sizing of Water Meters and Service Lines (2020); Peak Demand Management (2018); Colorado Water Plan and Update (2010, 2018); National Submetering and Allocation Billing Program Study (2004); Water Budgets and Rate Structures (2008); Commercial and Institutional End Uses of Water (2000); and many others.

I was Chair of the subcommittee and lead author of the American Water Works Association (AWWA) M22 Sizing Water Service Lines and Meters 3rd. ed. (2014). I am co-author of the AWWA G480 Water Conservation Standard and co-author of the Colorado Best Practices Guidebook for Municipal Water Conservation (2010). I served as Trustee of the AWWA Water Conservation Division from 2001-2007 during which time I worked with EPA to create the WaterSense™ program and helped establish the Alliance for Water Efficiency. I have been a Senior Technical Advisor to the Alliance for Water Efficiency since 2007. I am a member of the American Water Works Association, the Alliance for Water Efficiency, the American Water Resources Association, the American Society of Civil Engineers (ASCE) and the Colorado River Water Users Association.

In 2016, I testified as an expert witness on municipal and industrial water use at the US Supreme Court (FL v. GA, 142 Original) on behalf of the State of Georgia.

A copy of my curriculum vitae is attached to this report.

SCOPE OF INVESTIGATION

I was retained by the Marina Coast Water District to review and respond to the recommendations in the staff report of the California Coastal Commission related to Application 9-19-0918 / Appeal A-3-MRA-19-0034 (California American Water Co.). Specifically, I was asked to investigate if the California-American Water Company ("Cal-Am") has a feasible, reasonable, and reliable alternative to its proposed Monterey Peninsula Water Supply Project ("MPWSP") desalination project that will allow it to reduce its water withdrawals from the Carmel River in accordance with provisions of a cease-and-desist order from the State Water Resources Control Board. I was also asked to respond to the analyses and opinions contained in reports prepared by the Monterey Peninsula Water Management District (MPWMD) and a peer review report prepared by Hazen and Sawyer as they relate to future water supply and water demand of the Cal-Am Monterey Main system.

My opinions are based on my understanding of the information available as of the date of this report and my experience evaluating municipal and industrial water supplies and demands and conservation measures. In forming my opinions, I also considered the documents, testimony, and other materials listed in Appendix A. Should additional information become available to me, I reserve the right to supplement this report based on any additional work that I may conduct based on my review of such materials.

SUMMARY OF OPINIONS AND CONCLUSIONS

I have reviewed the following reports and documents:

- *Staff Report: Recommendation on Appeal Substantial Issue & De Novo Hearing and Consolidated Coastal Development Permit, California Coastal Commission, Application 9-19-0918 / Appeal A-3-MRA-19-0034 (California American Water Co.).* (Staff Report) (10-28-2020)

- *Supply and Demand for Water on the Monterey Peninsula prepared by David Stoldt, General Manager, MPWMD.* (MPWMD Report) (3-13-2020, 12-3-2019, and 9-16-2019)

- *California American Water Peer Review of Supply and Demand for Water on the Monterey Peninsula prepared by Kevin Alexander and Cindy Miller, Hazen and Sawyer* (Hazen Report) (1-22-2020)

- *MPWMD's March 6 response to the Hazen Report including supporting exhibits prepared by David Stoldt (*MPWMD Response) (3-6-2020)

As result of my review of these and other related and relevant documents and reports, my own independent analysis, and my expertise in municipal and industrial water use, water management, and engineering, I offer the following opinions and conclusions:

a) California Coastal Commission staff have correctly concluded that the Pure Water Monterey Expansion project provides an available, feasible[1] water supply alternative for Cal-Am.

The Staff Report concludes, *"the Commission finds that there is a feasible and less environmentally damaging alternative that would meet all or most of the proposed project's objectives in a timely manner*." I concur with this finding as it relates to the feasibility of the Pure Water Monterey Expansion project and the forecast adequacy of the future water supply provided by the combination of sources available to Cal-Am. I offer no opinion on the environmental components of the Staff Report.

I conducted an analysis of the historic demand trends in the Cal-Am service area and forecast growth in the service area. I developed an independent demand forecast based on the Associated Monterey Bay Area Governments (AMBAG) 2018 forecast of future population growth for the Cal-Am service area. My analysis supports the conclusions in the Staff Report projecting 2040 demands in the Cal-Am service area to be much lower than the California Public Utility Commissions (CPUC) certificating decision.

[1] Coastal Act Section 30108 states "'Feasible' means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.".

With the addition of the Pure Water Monterey Expansion project providing an additional 2,250 acre-feet per year of supply to Cal-Am, the combination of Cal-Am's available and reliable water resources provides sufficient supply potential to meet annual future demand in 2040 by more than 1,200 acre-feet (an 11.9% surplus).

The CPUC, in its September 2018 Decision accepted that Cal-Am's "current" demand was 12,350 acre-feet per year and the future demand in 2040 will be approximately 14,000 acre-feet per year.[2] This appears outdated and therefore unreasonably high based on my analysis, the MPWMD Report, and Cal Am's own most recent forecasts. Over the most recent five-year period, 2015 – 2019, water demand in the Monterey Main service area averaged 9,885 AF per year. Cal-Am, in its most recent General Rate Case Application, forecast demand for 2021 and 2022 at 9,789 acre-feet per year.[3] Thus Cal Am's own most recent forecast estimates 2022 demand to be 20% lower than "current" demand in the CPUC decision. Independent estimates of demand developed for the MPWMD Report and developed separately for this report, align closely with Cal Am's recent rate case forecast.

My analyses show that the staff of the California Coastal Commission correctly utilized more recent information on available future water supplies and likely future demands in its analysis. I agree with the staff findings that concluded there exists an available, feasible water supply alternative to Cal-Am's proposed desalination project.

b) Cal-Am's per capita use is likely to decrease between now and 2040 due to ongoing conservation program implementation, conservation pricing, and statewide policy directives to reduce indoor and outdoor use and improve utility water loss control measures.

The Monterey region has been regarded as a model for water conservation programs for many years. The Monterey Peninsula Water Management District implements an array of effective demand management policies and programs that are likely to extend water efficiency gains.[4] Cal-Am implements an active water conservation program including a steeply inclining block rate pricing structure and customer incentives for installing drought tolerant landscapes and high-efficiency fixtures and appliances. Cal-Am also implements a rigorous utility-scale water loss control program aimed at reducing real losses in its distribution system. Regional development regulations ensure that all new and remodeled buildings are equipped with high-efficiency fixtures.

Cal-Am acknowledged the level of effort, significance, and impact of this conservation program in recent testimony. "California American Water has expended significant effort and resources

[2] CPUC Decision 18-09-017, September 13, 2018

[3] California-American Water Company. 2019. (U-210-W) Update to General Rate Case Application, A.19-07-004.

[4] California-American Water Company. 2019. (U-210-W) Update to General Rate Case Application, A.19-07-004. Direct Testimony of Stephanie Locke. (pp.7-8)

to encourage conservation in the Monterey County District through a variety of methods. Most important has been the tiered rate design, which features steeply inclining block rates to encourage efficient water use." – Direct Testimony of Christopher Cook, July 1, 2019.[5]

Mr. Cook's testimony is backed up by testimony from Stephanie Locke, Water Demand Manager for the Monterey Peninsula Water Management District, and the significant financial resources Cal-Am continues to apply toward water conservation in the region. In its most recent General Rate Case, Cal-Am proposed a $1.845 million three-year budget ($615,132 per year) to fund water conservation programs in the Monterey service area.[6] Locke's testimony notes that many of the conservation programs budgeted in the General Rate Case and in the prior Cal-Am rate filings focus on reductions in outdoor water use, on reductions in demand areas that have not previously been extensively targeted, and on maintaining the current low water use fixtures that have been installed to date.[7]

Cal-Am's local efforts are in parallel to broader policy measures at the state level, designed to further increase efficiency. The State of California has implemented a series of laws and directives to ensure future water efficiency across the state including Assembly Bill 1668 and Senate Bill 60 which effectively mandate an ongoing reduction in per capita use. Cal-Am's continued compliance with these regulations and its active efforts to reduce customer water demand in the future are likely to gradually further decrease per capita water use across the service area.

I have prepared two demand forecasts for the Cal-Am Monterey Main service area with growth rates based on AMBAG's anticipated population increase in 2040 and the water usage of each sector – residential, commercial, public and re-sale and non-revenue water. In each forecast, demand in each of Cal-Am's sectors is increased each year proportionally to the increase in population. The "Current gpcd" forecast assumes the current rate of daily per person water usage (based on annual production which includes residential, commercial, water loss, irrigation, etc.) continues into the future, without any increases in efficiency or conservation reductions. The "Continued efficiency" forecast includes the impacts of ongoing efficiency improvements by applying an indoor reduction factor.

Under both forecasts, the "Current gpcd" and "Continued efficiency", Cal-Am will have sufficient and reliable water supplies to meet 2040 demand with the Pure Water Monterey Expansion. Even in the highly unlikely event that Cal-Am achieves no additional water efficiency reductions over the next 20 years, my analysis shows the portfolio of available reliable supplies will exceed demand.

[5] California-American Water Company. 2019. (U-210-W) Update to General Rate Case Application, A.19-07-004. Direct Testimony of Christopher Cook. (p.10)

[6] California-American Water Company. 2019. (U-210-W) Update to General Rate Case Application, A.19-07-004. Direct Testimony of Stephanie Locke. (p.9)

[7] California-American Water Company. 2019. (U-210-W) Update to General Rate Case Application, A.19-07-004. Direct Testimony of Stephanie Locke. (p.10)

c) Cal-Am's existing peak capacity is sufficient to meet anticipated future maximum daily demand (MDD) and peak hour demand (PHD) and Cal-Am has yet to avail itself of low/no-cost peak demand management measures that could reduce future peaks, if necessary.

Peak capacity planning is typically based on metered measurements of peak day and peak hour production maintained by the water provider. To my knowledge, Cal-Am does not publicly report its actual peak day or peak hour demands for the Monterey system. Rather than producing actual measurements, Cal-Am relies on a calculated approach to estimate future peak day usage. This approach was described and carried out in both the MPWMD Report and the MPWMD response, using slightly different assumptions.

Analyses in the MPWMD Report and MPWMD Response show that Cal-Am has the ability to produce 19.41 million gallons per day and 0.81 million gallons per hour. Calculations of future Maximum Daily Demand (MDD) and Peak Hour Demand (PHD) show that Cal-Am must support an MDD of 19.01 MG/day and a PHD of 0.792 MG/hour (based on a July 2012 maximum month demand). Revised analysis in the MPWMD Response using slightly different demand data showed that Cal-Am must support an MDD of 16.13 MG/day and a PHD of 0.672 MG/hour (based on an August 2014 maximum month demand). Under either demand assumption, from an infrastructure standpoint alone, Cal-Am has sufficient capacity to meet future peak day and peak hour demands even under the highly conservative assumptions embedded in the calculated approach.

If managing the peak day or peak hour becomes an issue in the future, Cal-Am has several options it has yet to implement. From an infrastructure standpoint, Cal-Cam could increase pumping capacity and add finished water storage. Cal-Am could also choose to implement low-cost peak day and peak hour demand management measures such as prohibiting automatic irrigation at certain times or on certain days or by re-assigning irrigation days of the week to distribute the summertime peak. Sophisticated approaches using smart irrigation controllers could also be employed to ensure optimal irrigation scheduling (Mayer et. al. 2018).

d) The Hazen Report contains numerous errors, mischaracterizations, and incorrect conclusions regarding Cal-Am's likely demand in 2040 and the availability and reliability of future water supply sources.

The Hazen & Sawyer peer review report is rife with misleading statements leading to incorrect conclusions regarding California codes, Cal-Am's likely water demand in 2040, and the availability and reliability of future water supply sources. MPWMD's March 6 response to the Hazen Report identifies line by line these errors and misleading statements. In this report I focus on the following problems:

- The Hazen Report repeatedly confuses and conflates peak demand and annual demand planning requirements and offers numerous misleading statements about California codes and standards and AWWA water planning guidance.

- The Hazen Report makes incorrect statements about water conservation programs and planning without offering data or analysis and states that per capita water use will increase substantially, despite Cal-Am's demand management efforts and prevailing state policy and regulations.

- The Hazen Report asserts that "current" demand in the Cal-Am Main System must be assumed to be 12,350 acre-feet per year. This is far higher than actual current demand and contradicts Cal-Am's own most recent General Rate Case filing which forecasts 2022 demand to be 9,789 acre-feet per year.

- The Hazen Report mischaracterizes the likely future reliability of water supplies available to Cal-Am and in particular the beneficial impacts of the ASR system over time.

- The Hazen Report reaches erroneous conclusions regarding the reliability of future water supplies based on inflated hypothetical demands, misleading statements about planning requirements, and inaccurate characterization of future water supply reliability.

Analysis and Recommendations

Overview

California-American Water Company proposes to construct and operate the Monterey Peninsula Water Supply Project to provide potable water from desalinated water for customers in its service area in the Monterey Peninsula region. One of the main project purposes is to provide an alternative water supply for Cal-Am that will allow it to reduce its water withdrawals from the Carmel River system in accordance with provisions of a cease-and-desist order from the State Water Resources Control Board.[8]

The California Public Utilities Commission has regulatory authority over Cal-Am and its infrastructure. In 2018 the CPUC approved Cal-Am's application to construct and operate the desalination project. The CPUC approved a smaller overall project than Cal-Am had initially proposed, because of the availability of water from another project – the Pure Water Monterey recycling and aquifer storage and recovery project. The CPUC found the two projects together could produce more than enough water to meet Cal-Am's expected water demands.

The California Coastal Commission also must review and approve the proposed desalination project under the California Coastal Act because portions of the project are within the coastal zone with the potential to impact environmentally sensitive habitat and other resources. The desalination plant itself would be located outside the coastal zone at a site about two miles inland within the jurisdiction of Monterey County, but components extend through the coastal zone to the Pacific Ocean and the project cannot be constructed without a Coastal Commission approved coastal development permit.[9]

The November 2019 California Coastal Commission staff review considered new information about water supplies and demands that were not available at the time of the 2018 CPUC decision. The Coastal Commission staff found that there is less need for water from new sources than previously determined. Significantly, another project alternative – the expansion of the above-referenced Pure Water Monterey project – has progressed from being too "speculative" for the CPUC to consider as a viable alternative, to now being a feasible, well-developed alternative. This Pure Water Monterey Expansion would occur entirely outside of the coastal zone and would cause far fewer environmental impacts than Cal-Am's proposed project.

[8] The original order, issued in 1995, determined that Cal-Am was extracting over 14,000 acre-feet per year from the river when it had a legal right to 3,376 acre-feet. The Board determined that these excess withdrawals were adversely affecting the river's population of federally-threatened Central Coast steelhead. The Board ordered Cal-Am to develop or purchase alternative water supplies so it could end its excess withdrawals. Subsequent orders issued by the Board have included additional requirements, with Cal-Am currently required to end its excess withdrawals and be able to rely on a new source of water by December 2021.

[9] California Coastal Act, Sections 30108, 30260

The recently developed Pure Water Monterey Expansion along with revised water supply and demand information were considered and included in the Staff Report[10] of October 28, 2019. The Staff report recommended denying Cal-Am's permit request to construct elements of the desalination project in the coastal zone due to its inconsistency with the Local Coastal Program's habitat protection and hazards policies, its failure of the three tests of Coastal Act Section 30260, and its failure of the alternatives consideration of Section 30233.

The California Coastal Commission has yet to approve or deny Cal-Am's proposal.

Coastal Commission 2019 Staff Report

Cal-Am's proposed desalination project is subject to the Coastal Act and the City of Marina Local Coastal Plan that require the California Coastal Commission to determine among other things, "whether there is a feasible and less environmentally damaging alternative to the proposed project".

The Staff Report provides the Coastal Commission staff's assessment of the proposed project's conformity to the City of Marina Local Coastal Plan (LCP) and Coastal Act's public access and recreation policies for purposes of the Commission's *de novo* review. The report also provides staff's assessment of the project's conformity to relevant Coastal Act provisions for those project components proposed within the Commission's consolidated permit jurisdiction.

Inconsistent Project

The Staff Report recommended that the California Coastal Commission deny both the *de novo* and consolidated permit aspects of the proposed project because the proposed desalination project is inconsistent with the Coastal Act and/or Local Coastal Plan including the following.[11]

1. **Environmentally Sensitive Habitat Areas** (ESHA) - The proposed project could adversely affect up to about 35 acres of ESHA. The project is inconsistent with requirements of both the City LCP and the Coastal Act that allow uses in ESHA only if they are dependent on those habitat resources.
2. **Coastal hazards** - The proposed project's well field would be sited at a location where it could be adversely affected by coastal erosion and the associated inland movement of foredunes that could bury the well heads.
3. **Protection of coastal water quality** - The proposed project would involve placement of fill in coastal waters in the form of new or modified outfall diffusers and monitoring buoys. In this case there is a feasible and less damaging alternative to the proposed fill, so the project would not conform to the alternatives requirement of Section 30233.

[10] Staff Report: Recommendation on Appeal Substantial Issue & De Novo Hearing and Consolidated Coastal Development Permit, California Coastal Commission, Application 9-19-0918 / Appeal A-3-MRA-19-0034 (California American Water Co.). (p 7)

[11] Staff Report (pp. 4-5)

Three-Part Test for an Inconsistent Project

Coastal Act Section 30260, which is incorporated into the Local Coastal Plan, provides that the Coastal Commission may approve a permit for a coastal-dependent facility that is otherwise inconsistent with other Coastal Act Chapter 3 policies if it meets a three-part test. The three test components that must be met are:

1) Alternative locations are infeasible or more environmentally damaging
2) Denial of the permit would not adversely affect the public welfare
3) The project's adverse effects are mitigated to the maximum extent feasible

The Staff Report addresses each of these three tests as outlined below.[12] The Staff Report concluded that the Cal-Am's proposed desalination project failed each test.

Test 1: Are alternative locations infeasible or more environmentally damaging?

The Staff Report states that, "another project, known as the Pure Water Monterey Expansion, would provide enough water to meet Cal-Am's needs for the next twenty years or more and would cause fewer adverse environmental impacts, including few, if any, on coastal resources, since it would be located outside the coastal zone."[13]

The Staff Report recommends the Commission find that Cal-Am's proposed project does not meet this first test of Section 30260, since there is a feasible, less environmentally damaging alternative to the proposed project that could be constructed in a different location.

Test 2: Would denying the project adversely affect the public welfare?

The Staff Report agrees there is a "clear need" for additional water supply to serve the Monterey Peninsula region and concludes that there is a "feasible and less environmentally damaging alternative that can supply sufficient water to allow Cal-Am to meet its legal obligations and to supply its customers for the coming decades."[14]

The Staff Report concluded that the costs of the proposed desalination project are substantially higher than other water sources, including the PWM Expansion, and would be borne by ratepayers and visitors to this coastal area.

From an environmental justice perspective the Staff Report notes, "Several communities of concern would be burdened by Cal-Am's project due to the higher costs for water it would impose or due to expected or potential impacts resulting from the construction and operation of some project components in areas of sensitive habitat or that provide public access to the shoreline."[15]

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[12] Staff Report (pp. 5-6)

[13] Staff Report (p.6)

[14] Staff Report (p.6)

[15] Staff Report (p.6)

The Staff report concluded that Cal-Am's proposed desalination project would "result in adverse effects to coastal resources – for example, sensitive habitat areas – that would diminish the public benefit from those coastal resources. The alternative project would entirely avoid those coastal resource impacts."[16]

Test 3: Are the project impacts mitigated to the maximum extent feasible?

Here the Staff Report concludes that "because the proposed project does not meet either of the first two tests of Section 30260, there is no need to determine whether it meets the third test. Nonetheless, Commission staff have determined that the proposed project's impacts are not mitigated to the maximum extent feasible. For example, the project could adversely affect up to several dozen acres of sensitive habitat, but the mitigation proposed thus far would result in a net loss of that sensitive habitat. Similarly, the proposed project would result in adverse effects to coastal water quality, but those effects, and the measures needed to avoid or minimize them, are not yet known."[17]

Feasible Alternative that Meets All or Most Objectives

The November 2019 California Coastal Commission staff review considered new information about water supplies and demands that were not available for the 2018 CPUC decision. The Coastal Commission staff found that there is less need for water from new sources than previously determined. Significantly, another project alternative – the Pure Water Monterey project – has progressed from being too "speculative" for the CPUC to consider as a viable alternative, to now being a feasible, well-developed alternative. This Pure Water Monterey Expansion would occur entirely outside of the coastal zone and would cause far fewer environmental impacts than Cal-Am's proposed project.

The Pure Water Monterey Expansion along with revised water supply and demand information were considered and included in the Staff Report of October 28, 2019 which concluded based on data and analyses, "that there is a feasible and less environmentally damaging alternative that would meet all or most of the proposed project's objectives in a timely manner."[18]

This conclusion relies on three core components:

1) A feasible alternative exists.[19]
2) The alternative is less environmentally damaging.
3) The alternative would meet all or most of the proposed project's objectives in a timely manner.

[16] Staff Report (p.6)

[17] Staff Report (pp.6-7)

[18] Staff Report (p. 7)

[19] The Coastal Act Section 30108 states "'Feasible' means capable of being accomplished in a successful manner with a reasonable period of time, taking into account economic, environmental, social, and technological factors."

The Staff Report relied on analyses and opinions contained in reports and applications prepared by the Monterey Peninsula Water Management District (MPWMD) as they relate to future water supply and water demand of the Cal-Am on the Monterey Peninsula.

Cal-Am Monterey System

The Cal-Am Monterey water system serves most of the population on the Monterey Peninsula, located along the coast of Central California. The Monterey Main system encompasses greater than 90-percent of the Monterey County District service area and is the area to be served with the proposed desalination plant. The Monterey Main system and includes the incorporated cities of Carmel-by-the-Sea, Del Rey Oaks, Monterey, Pacific Grove, Sand City, and Seaside as well as unincorporated communities of Pebble Beach, Carmel Valley East and West, Carmel Highlands, and the Presidio of Monterey.[20]

Cal-Am also serves a number of unincorporated satellite systems, including the communities of Hidden Hills, Ryan Ranch, Bishop, Ambler, Ralph Lane, Chualar, Garrapata, and Toro. These satellite systems encompassed an area greater than 7,000 acres and service a total population of 5,313 in 2010. Other than Garrapata, Ralph Lane and Chualar, the satellite systems border the Monterey Main system. By 2022, Hidden Hills, Ryan Ranch, and Bishop will be interconnected to the Monterey Main system.

A map delineating the service area of Cal-Am Monterey prepared by the MPWMD is shown in Figure 1.

[20]Cal-Am 2010 Urban Water Management Plan. 9/7/2012. Water Systems Consulting, Inc.

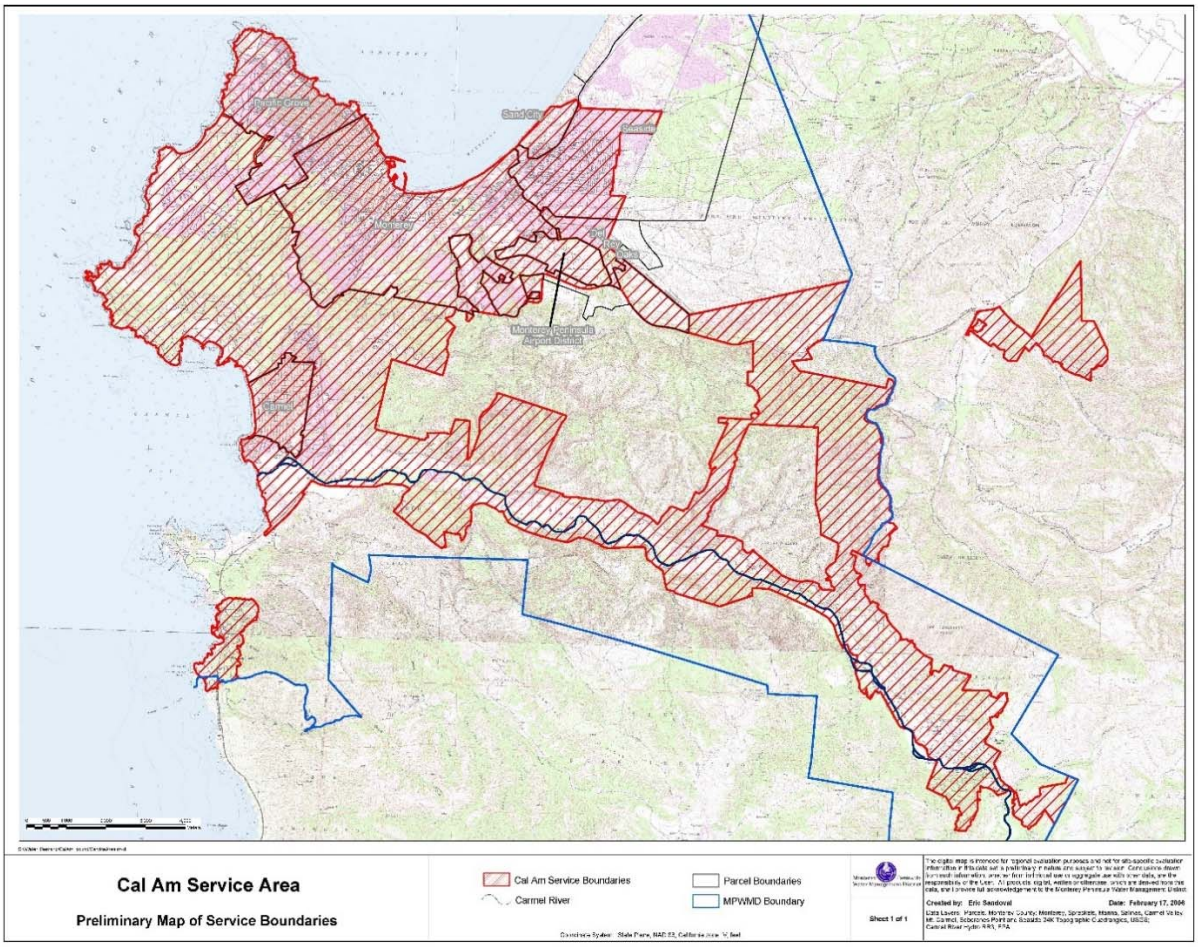

Figure 1: Cal-Am Monterey service area boundaries[21]

Population Served

The Association of Monterey Bay Area Governments (AMBAG) prepares regional population and growth forecasts for the region. The most recently available forecast, the AMBAG 2018 Regional Growth Forecast, estimates the 2020 service area population of the Cal-Am Monterey Main service area to be 91,884.[22] This population is forecast to increase to 100,814 in 2040. These population estimates include Monterey, Pacific Grove, Carmel-by-the-Sea, Sand City, Seaside, Del Rey Oaks, and portions of the unincorporated County.[23] The MPWMD Report notes that the population estimates likely overstates growth to 2040 because portions of the cities of

[21] Monterey Peninsula Water Management District. Map created by Eric Sandoval. 2/17/2006

[22] Association of Monterey Bay Area Governments. 2018 Regional Growth Forecast. Table 8, page 32.

[23] Unincorporated county estimates based on Cal-Am service area population reported to the State Water Resources Control Board June 2014 – September 2019 Urban Water Supplier Monthly Reports (Raw Dataset), minus urban areas, escalated at 5%.

Monterey, Seaside, and Del Rey Oaks within the Fort Ord Buildout will be served water by the Marina Coast Water District.[24]

Water Production and Demand

Annual Production

Annual water production for the Monterey System from 2000 – 2019 are shown in Figure 2 along with shaded periods added to indicate the influence of mandatory drought restrictions and recession. For this purposes of this report, total water production is assumed to be equivalent to the total annual water demand in the system inclusive of all water use, non-revenue water, and treatment losses.

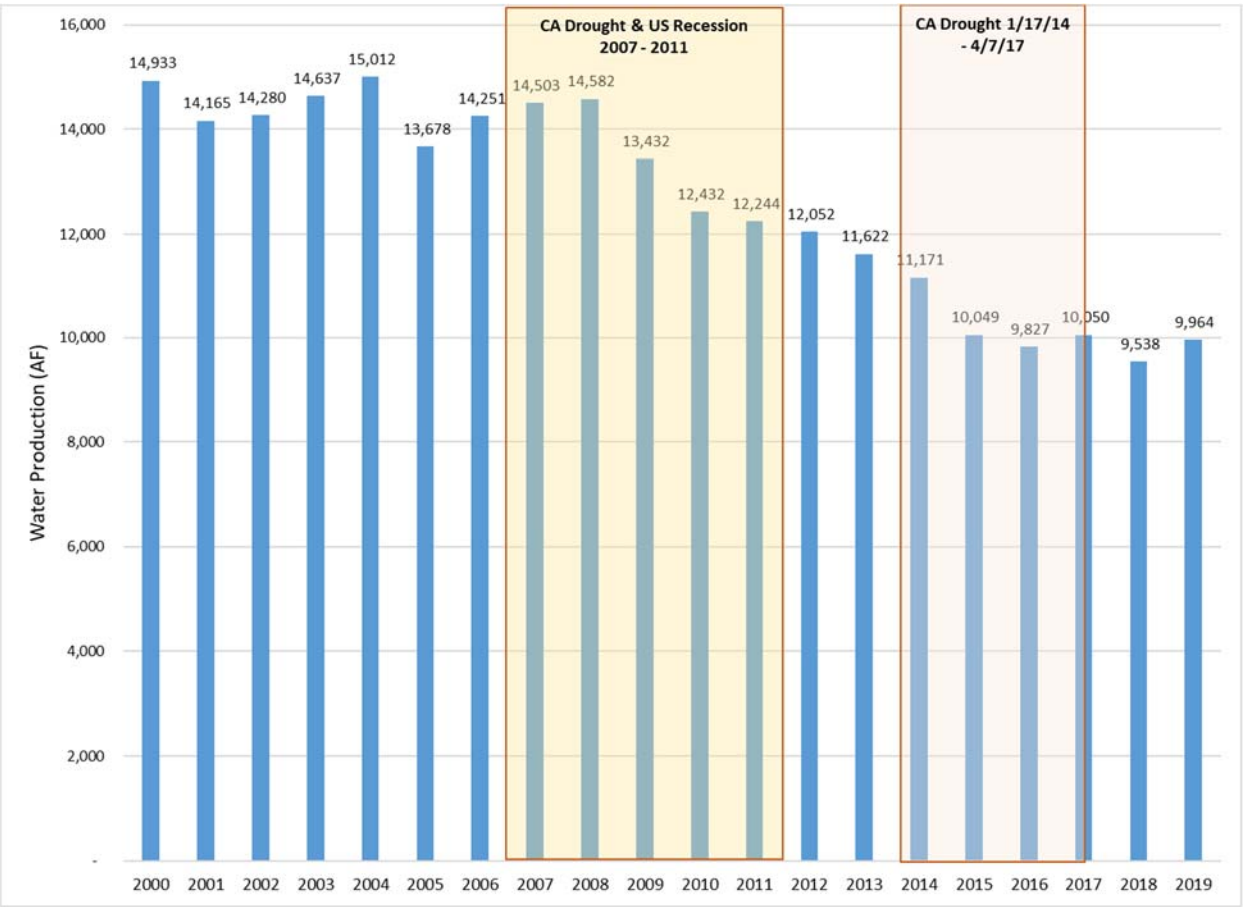

Figure 2: Cal-Am Monterey Main water production, 2000 - 2019[25]

[24] Monterey Peninsula Water Management District. 2020. Supply and Demand for Water on the Monterey Peninsula prepared by David Stoldt, General Manager. Appendix A.

[25] 2017 – 2019 From Cal-Am quarterly reports to the California State Water Resources Control Board. 2000 – 2016 From Monterey Peninsula Water Management District. 2019. Supply and Demand for Water on the Monterey Peninsula prepared by David Stoldt, General Manager. Figure 1.

From Figure 2 it is evident water production in the Monterey System was reasonably steady from 2000 – 2008, with the exception of the steep decline in 2005. In 2009 production began to steadily decrease and the decline didn't stop until 2016. During this 8-year period, steep demand reductions occurred during years when California was in an officially declared drought paired with an economic recession, but production reductions also occurred in 2012 and 2013 which were non-drought and recession influenced years. Over the most recent five-year period, 2015 – 2019, water production in the Monterey Main service area averaged 9,885 AF per year.

Comment on Data Sources

Cal-Am publishes and regularly updates monthly and annual water deliveries for Monterey Main, Hidden Hills, Ryan Ranch & Bishop on its website for the desalination project.[26] Monthly data going back to 2007 are available from the testimony of Ian Crooks (2012)[27]. I compared these published records with the production data set used in the MPWMD Report and (for 2017-19) with Cal-Am's quarterly and annual reports to the California State Water Resources Control Board.

The monthly data published on Cal-Am's website and in Ian Crooks testimony, while very similar was generally lower than the annual values in the MPWMD Report. Production from Cal-Am's quarterly and annual reports to the California State Water Resources Control Board for the three most recent years (2017-2019) was higher than either the delivery values published on Cal-Am's web site or the values in the MPMWD Report.

For the purposes of the demand forecasts prepared in this report, WaterDM used the higher production values reported to the State Water Resources Control Board and the higher production values from the MPMWD Report to establish the starting point for the demand forecast, rather than the lower delivery values from Cal-Am. WaterDM's forecasts are therefore conservative in that they are based on the highest published values of annual water production for the Monterey Main System.

Monthly Deliveries

While not relied upon as the starting point for WaterDM's demand forecasts, Cal-Am's published delivery data were used to analyze the seasonality of demand on the Monterey Main System. Monthly production is shown in Figure 3 with the period of recent drought declaration highlighted. A linear trendline is also added.

[26] https://www.watersupplyproject.org/system-delivery (accessed 3/25/2020)

[27] Direct Testimony of Ian Crooks Before the Public Utilities Commission of the State of California. Application 12-04-019 (Filed April 23, 2012) (p.9)

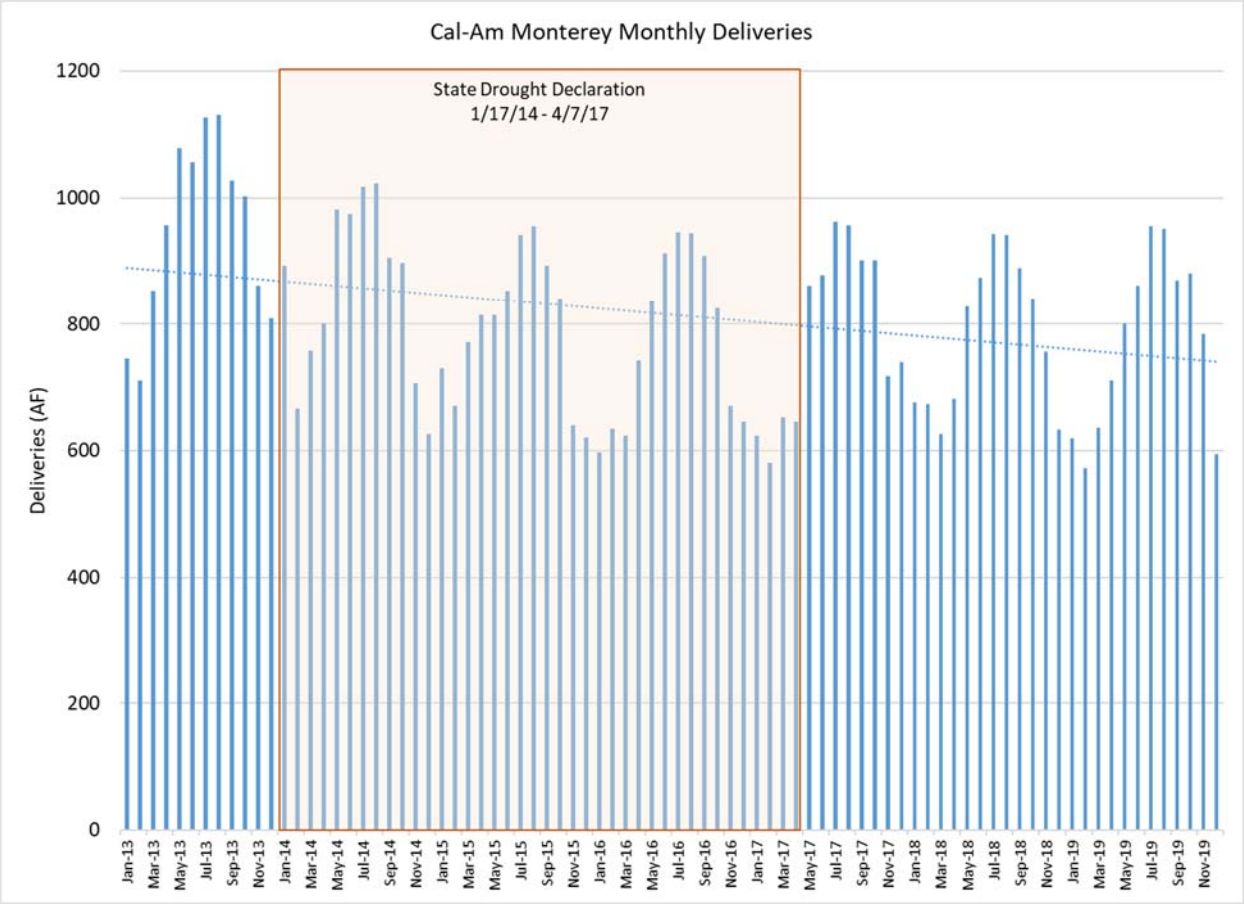

Figure 3: Cal-Am Monterey monthly deliveries

Using these published monthly data, I found the minimum and maximum month of delivery for each year. The average annual non-seasonal (predominantly indoor) deliveries for each year was calculated as the average water use in January, February, November and December multiplied by 12. Seasonal production for each year was calculated by subtracting non-seasonal from total production. These data and results are shown in as a chart in Figure 4 and in Table 1.

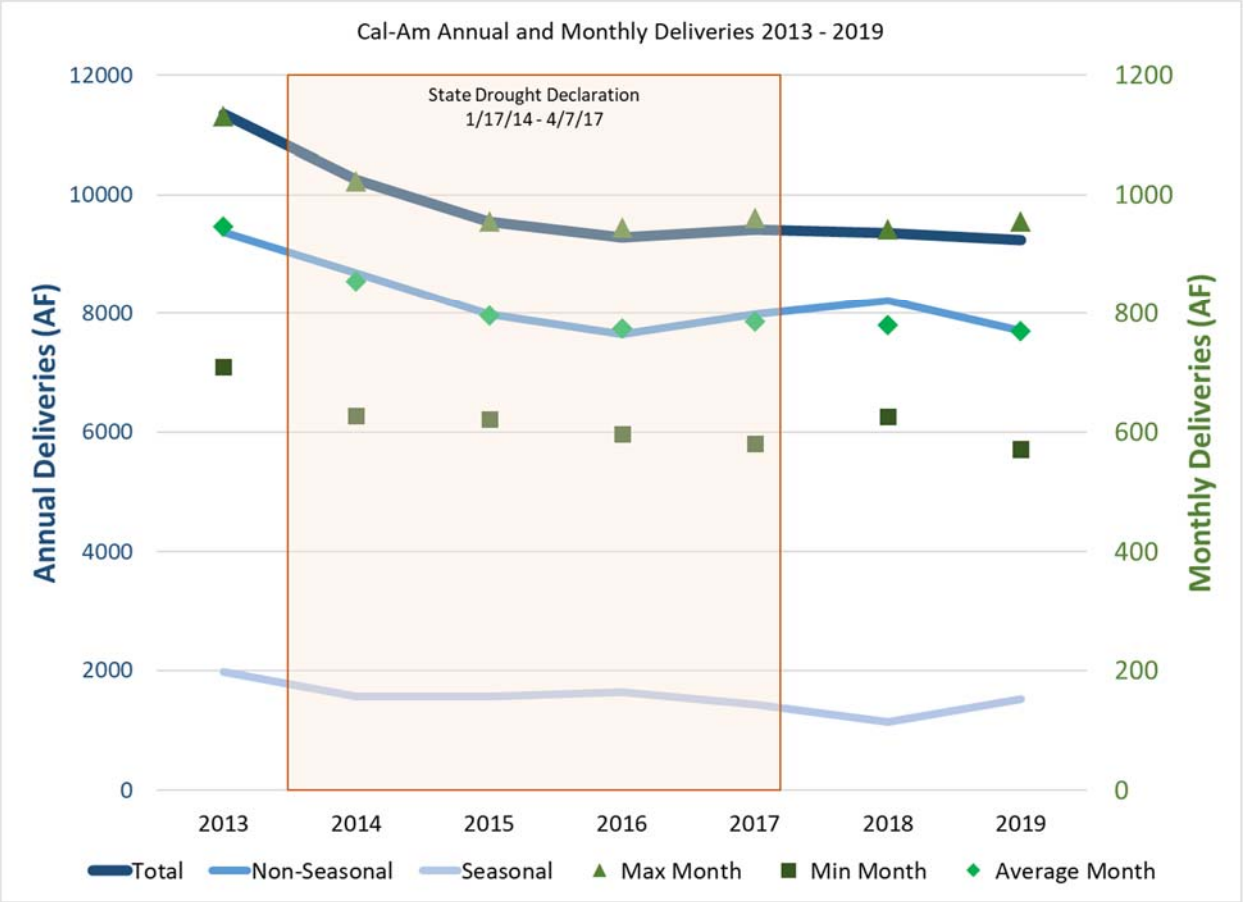

Figure 4: Cal-Am Monterey annual and Monthly Deliveries, 2013 - 2019[28]

Seasonal deliveries provide an estimate of summertime demand including outdoor irrigation and summertime tourism use. Non-seasonal deliveries provide an estimate of baseline indoor use and non-revenue water that occur throughout the year.

On average, seasonal deliveries accounted for 15.8% of Cal-Am's total across these seven years and ranged between 12.3% and 17.7%. Non-seasonal deliveries accounted for between 82.3% and 87.7% of usage from 2013 – 2019.

This analysis shows that the demand reductions achieved from 2013 - 2016 were largely in the non-seasonal (predominantly indoor use) category. Seasonal demand did decline during this period, but not nearly as much as non-seasonal demand.

Both the minimum and the maximum month deliveries for each year has also been declining since 2013. The minimum month of delivery in 2019 was the lowest of any of the past seven years. Notably, 2019 also had the higher annual precipitation in the region than any of the other years shown.

[28] From production data published at: https://www.watersupplyproject.org/system-delivery (accessed 3/25/2020)

Table 1: Cal-Am monthly deliveries and annual statistics[29]

Month	2013	2014	2015	2016	2017	2018	2019	2020
Jan	745	893	730	597	624	676	620	628
Feb	710	667	671	635	581	673	572	650
Mar	853	757	771	623	653	626	636	
Apr	957	800	814	742	645	682	710	
May	1079	982	814	836	861	828	801	
Jun	1056	975	853	912	878	874	861	
Jul	1127	1018	942	946	962	943	955	
Aug	1131	1023	956	944	957	941	951	
Sep	1027	906	893	909	902	889	870	
Oct	1002	897	840	826	901	841	881	
Nov	861	707	640	670	717	756	784	
Dec	809	627	621	646	740	633	594	
Total Annual Deliveries	11,356	10,250	9,545	9,285	9,421	9,362	9,234	
Maximum Month	1131	1023	956	946	962	943	955	
Minimum Month	710	627	621	597	581	626	572	
Average Month	946.4	854.3	795.4	773.8	785.1	780.2	769.6	
Annual Non-Seasonal	9,375	8,682	7,986	7,644	7,986	8,214	7,710	
Annual Seasonal	1,981	1,568	1,559	1,641	1,435	1,148	1,524	
%Seasonal	17.4%	15.3%	16.3%	17.7%	15.2%	12.3%	16.5%	
Total Annual Production (from Figure 2)	11,622	11,171	10,049	9,827	10,050	9,538	9,964	
Difference between Production and Deliveries	266	921	504	542	629	176	730	
% Difference	2.3%	8.2%	5.0%	5.5%	6.3%	1.8%	7.3%	

Note on Data Differences

The volume of water produced by Cal-Am annually as shown in Figure 2 are based on Cal-Am's quarterly and annual reports to the State Water Resources Control Board (2017-2019) and the

[29] From delivery data published at: https://www.watersupplyproject.org/system-delivery (accessed 3/25/2020) Includes: Monterey Main, Hidden Hills, Ryan Ranch & Bishop.

MPWMD Report and are higher than the delivery values reported on Cal-Am's website (Figure 3, Figure 4, and Table 1).

As noted above, for the purposes of forecasting future production reflecting the needs of the community, WaterDM used the higher values reported to the State Water Resource Control Board for 2017, 2018, and 2019. For Years 2000- 2016 WaterDM used the MPWMD Report values (also higher than Cal-Am's monthly reports) so that the highest reported baseline production values were used to consider baseline consumption.

Per Capita Water Use

WaterDM prepared an independent calculation of per capita water use based on the production volumes shown in Figure 2 and population data from AMBAG. System per capita use is calculated as the total volume of water produced at the source divided by the service area population and the number of days in the year. This calculation of system per capita use is based on production and thus inclusive of all water use, non-revenue water, and treatment losses.

System per capita use in the Cal-Am Monterey Main System in 2010 was 127.0 gpcd. This was highest level of gpcd over the past 10 years. In 2019, system per capita use was 97.3 gpcd and in 2018 it was 93.6 gpcd. Ten years of daily system per capita use for the Monterey Main System in shown in Table 2.

Table 2: Per capita water use, 2010 - 2019

Year	Population	Production	Per Capita	Source of Production Data
2010	87,419	12,432	127.0	MPMWD Report
2011	87,866	12,244	124.4	MPMWD Report
2012	88,312	12,052	121.8	MPMWD Report
2013	88,759	11,622	116.9	MPMWD Report
2014	89,205	11,171	111.8	MPMWD Report
2015	89,652	10,049	100.1	MPMWD Report
2016	90,098	9,827	97.4	MPMWD Report
2017	90,545	10,050	99.1	SWRCB Quarterly Reports
2018	90,991	9,538	93.6	SWRCB Quarterly Reports
2019	91,438	9,964	97.3	SWRCB Quarterly Reports

Water Demand by Sector

Cal-Am's 2019 water demand by sector is shown as a pie chart in Figure 5, based on data presented in 2019 testimony.[30] As shown in Figure 2, 2019 was not a drought year nor was it

[30] Direct Testimony of David Mitchell Before the Public Utilities Commission of the State of California. Application 19-07-004 (Filed July 1, 2019)

impacted by economic recession. Residential use including single- and multi-family customers used 58% of the total produced in 2019. Commercial and industrial customers used 30%, the public / other sector used 5%, and non-revenue was 7%. Non-revenue water includes real and apparent water loss as well as authorized and unauthorized uses for which the utility does not collect revenue.[31]

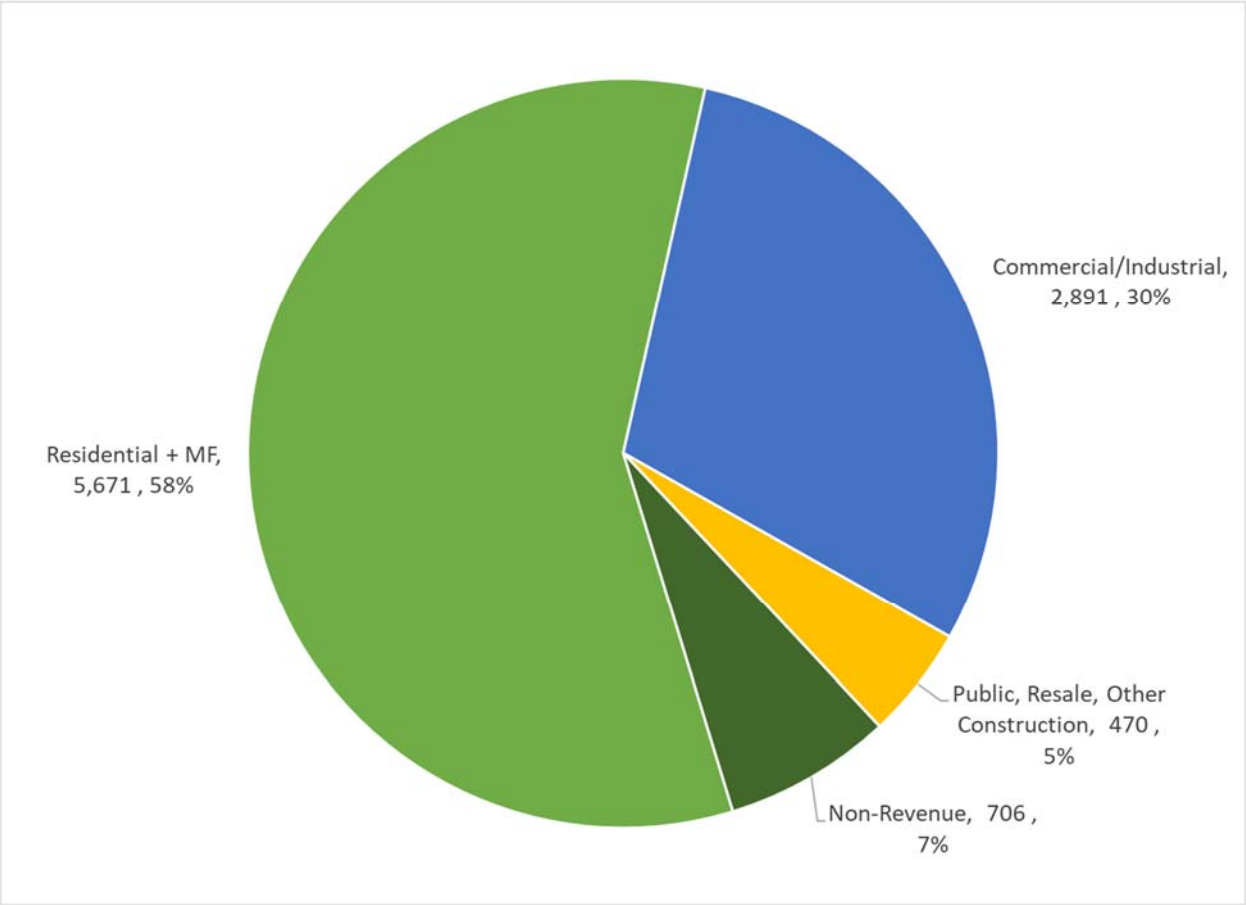

Figure 5: 2019 Cal-Am Monterey Main System demand by sector[32]

[31] In 2009 the residential sector used 59%, commercial/industrial sector 22%, non-revenue 9%, public/other 8%, golf course irrigation 2%.

[32] Direct Testimony of David Mitchell Before the Public Utilities Commission of the State of California. Application 19-07-004 (Filed July 1, 2019)

Water Demand Management

Water demand management includes five core components:[33]

1. **Technical efficiency** - reducing the quantity or quality of water required to accomplish a specific task (e.g. a high-efficiency toilet).
2. **Behavioral efficiency** - Adjusting the nature of the task so it can be accomplished with less water or lower quality water (e.g. take a shorter shower).
3. **Water loss and leakage control** - Reducing losses in movement from source through use to disposal including reducing leakage in the distribution system and customer-side leaks.
4. **Peak management** - Shifting time of use to off-peak periods.
5. **Drought response** - Increasing the ability of the system to operate during droughts.

Both Cal-Am and the Monterey Peninsula Water Management District implement active, far-reaching, and effective water demand management programs that address all five of these core components. The water demand data presented in the previous section of this report and in particular Figure 2 show a steady reduction in water demand in the Cal-Am Monterey Main system which was achieved through the active and intentional water demand management efforts implemented in the region. The reduction in per capita use over the past 10 years shown in Table 2 is further indication of increased water use efficiency.

The Monterey region has been regarded as a model for water conservation programs for many years. Cal-Am and the Monterey Peninsula Water Management District implement an array of effective demand management policies and programs that are likely to extend water efficiency gains. Cal-Am implements an active water conservation program including a steeply inclining five-tier block rate pricing structure and customer incentives for installing drought tolerant landscapes and high-efficiency fixtures and appliances. Cal-Am also implements a rigorous utility-scale water loss control program aimed at reducing real losses in its distribution system. Local development regulations ensure that all new and remodeled buildings are equipped with high-efficiency fixtures and appliances.

Cal-Am acknowledged the level of effort, significance, and impact of this conservation program in recent testimony. “California American Water has expended significant effort and resources to encourage conservation in the Monterey County District through a variety of methods. Most important has been the tiered rate design, which features steeply inclining block rates to encourage efficient water use.” – Direct Testimony of Christopher Cook, July 1, 2019.

Mr. Cook’s testimony is backed up by testimony from Stephanie Locke, Water Demand Manager for the Monterey Peninsula Water Management District, and the significant financial resources Cal-Am continues to apply toward water conservation in the region. In its most

[33] Adapted from Brooks, D.B. 2007. An Operational Definition of Water Demand Management. International Journal of Water Resources Development. Volume 22, 2006 - Issue 4

recent General Rate Case, Cal-Am proposed a $1.845 million three-year budget ($615,132 per year) to fund water conservation programs in the Monterey service area. Locke's testimony notes that many of the conservation programs budgeted in the General Rate Case and in the prior Cal-Am rate filings focus on reductions in outdoor water use, on reductions in demand areas that have not previously been extensively targeted, and on maintaining the current low water use fixtures that have been installed to date.

Cal-Am's local efforts are in parallel to broader policy measures at the state level, designed to further increase efficiency. The State of California has implemented a series of laws and directives to ensure future water efficiency across the state including Assembly Bill 1668 and Senate Bill 60 which effectively mandate an ongoing reduction in per capita use. Cal-Am's continued compliance with these regulations and its active efforts to reduce customer water demand in the future are likely to gradually further decrease per capita water use across the service area.

Peak demand management to shift the timing to off peak periods is already being practiced to some degree in the Cal-Am service area but could be expanded and adjusted if necessary. Peak demand days usually occur during the hot and dry part of the year when outdoor irrigation occurs simultaneously across the service area. Currently Cal-Am restricts outdoor irrigation between 9 a.m. and 5 p.m. on any day. Irrigation is only permitted on two specific days per week (Wednesdays and Saturdays) unless the customer is equipped with a weather-responsive "smart" controller that automatically adjusts irrigation to meet prevailing climate conditions. These are all effective measures but focusing some irrigation demand on Wednesdays and Saturdays could have the unintended impact of creating peaks on those particular days. Cal-Am does not report measured peak day demand data so it was not possible to determine if this is in fact the case.

Should peak demands become a concern, Cal-Am could choose to implement low-cost peak day and peak hour demand management measures such as requiring automatic irrigation to be scheduled at certain times or on certain days by re-assigning irrigation days of the week to distribute the summertime peak. If smart irrigation controllers are widespread, then more sophisticated approaches to irrigation scheduling and timing could also be employed to harmonize demand with water production and finished water storage conditions (Mayer et. al. 2018).

Water Demand Forecasts

WaterDM prepared two forecasts for the Cal-Am Monterey Main System to estimate future average annual production, inclusive of treatment losses and non-revenue water. The growth rate in each forecast is based on AMBAG's anticipated population increase from 2020 to 2040.[34]

[34]This likely over-estimates Cal-Am's future growth because it includes new population in portions of the cities of Monterey, Seaside, and Del Rey Oaks within the Fort Ord Buildout that will be served water by the Marina Coast Water District.

Each component of Cal-Am's demand – residential, commercial, public/other/re-sale, non-revenue water, and treatment losses was increased each year proportionally to the increase in population to produce a forecast of future average annual production, inclusive of treatment losses and non-revenue water.

- The "Current gpcd" forecast assumes the current rate of daily per person water usage continues into the future, without any increases in efficiency or conservation reductions.
- The "Continued efficiency" forecast includes the impacts of ongoing efficiency improvements by applying an indoor reduction factor.

These annual demand projections were built up from the analysis of historical production and deliveries presented above. The year 2020 is the first year of the projection, which then continues for 20-years to produce average annual demands in 2040. Over the most recent five-year period, 2015 – 2019, water production in the Monterey Main service area averaged 9,885 AF per year. This level of production was the starting point for the WaterDM forecasts.

Production was split out by sector and future demand was increased proportionally with population increases to 2040. The four sectors included in the model are:

- Residential (single-family + multi-family)
- Commercial and industrial
- Public, resale, other, construction
- Non-revenue water

The summed annual demand of these four categories equals the estimated water supply requirement under average future conditions. The model allows specific factors to be applied to the non-seasonal or seasonal component of annual demand for each demand category, to simulate the impacts of water efficiency and conservation programs.

The two forecasts prepared by WaterDM – "Current gpcd" and "Continued efficiency" are shown in Figure 6 along with the forecast demands included in Cal-Am's filings provided to the CPUC. Notably, WaterDM's 2020 – 2022 forecasts are higher than the forecasts Cal-Am General Rate Case Application forecast which estimated demand for 2021 and 2022 at 9,789 acre-feet per year.

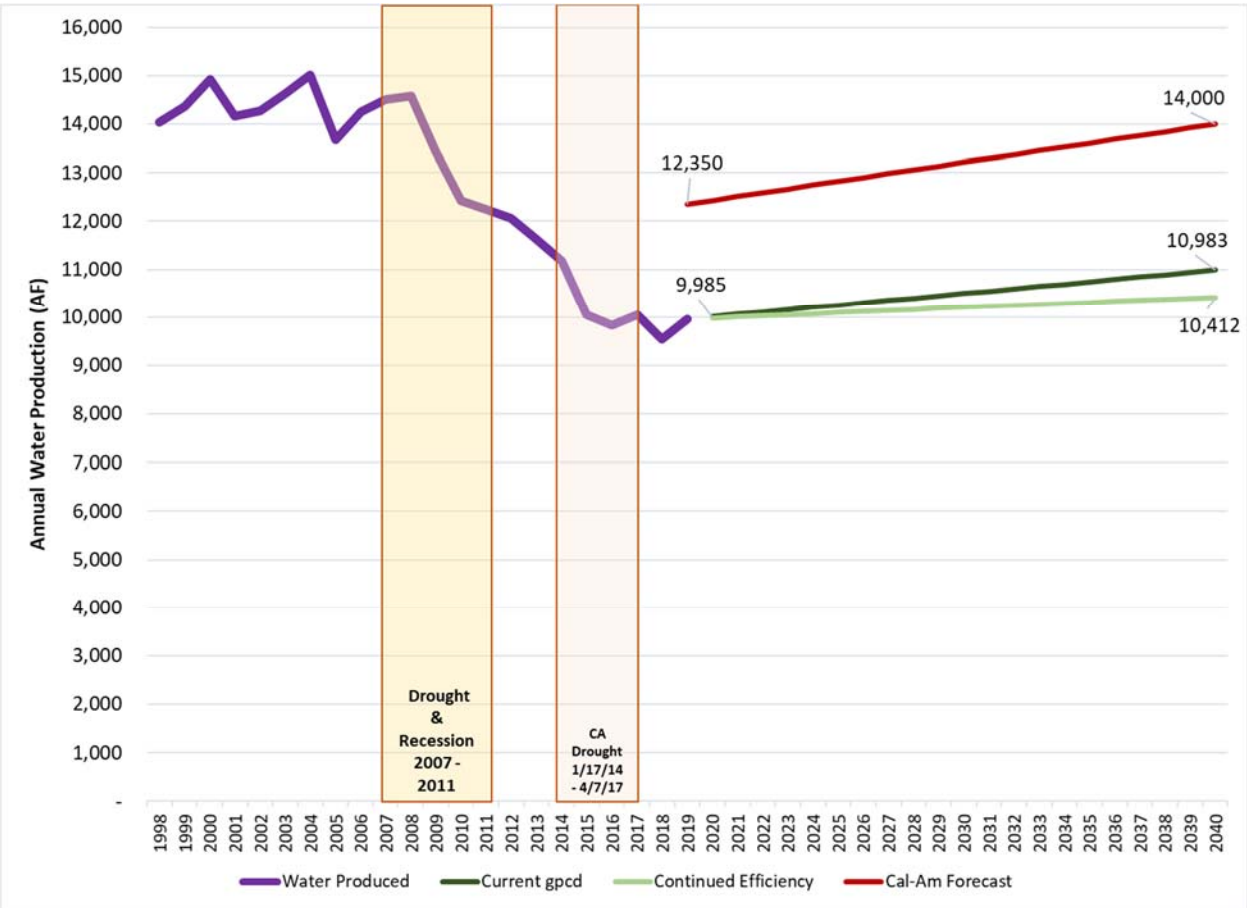

Figure 6: WaterDM forecasts of future average annual production

Current GPCD Forecast

The "Current gpcd" forecast includes ongoing conservation efforts only at levels required to maintain current per-capita water use with no additional savings. This forecast results in a future per-capita water use that is identical to the current level. The 2020 and 2040 statistics for the forecast are shown in Table 3.

Table 3: Current GPCD Forecast

	2020	2040
Population	91,884	100,814
Production Forecast	9,985 AF	10,983 AF
Per Capita Use Forecast	97.3	97.3

Continued Efficiency Forecast

The "Continued efficiency" forecast represents future production assuming slow, steady ongoing demand reductions from existing conservation activities relative to current per-capita use. This forecast results in a per-capita water use in 2040 that is 5.2% lower than current level.

Specifically, the "Continued efficiency" forecast includes the anticipated impacts of continuing the long-term water conservation program measures described in published documents and recent testimony from Cal-Am and MPWMD. It does not assume any drought restrictions or mandatory demand curtailments are applied.

The "Continued efficiency" forecast incorporates a modest level of increased efficiency of about 0.26% per year over 20 years. In my professional judgement, the "Continued efficiency" forecast represents the most likely forecast of future average annual production, inclusive of treatment losses and non-revenue water.

Table 4: Continued Efficiency Forecast

	2020	2040
Population	91,884	100,814
Production Forecast	9,985 AF	10,412 AF
Per Capita Use Forecast	97.3 gpcd	92.2 gpcd

Cal-Am Demand Forecast

The demand forecast provided to the CPUC as part of Cal-Am's application for the proposed desalination plant are included with the AMBAG population forecast and per capita use for comparison. The Cal-Am forecast includes an estimate of "current" demand and a forecast of demand in 2040.

Table 5: Cal-Am Forecast

	2020	2040
Population	91,884	100,814
Production Forecast	12,350 AF	14,000 AF
Per Capita Use Forecast	120.0 gpcd	124.0 gpcd

Water delivery patterns have changed substantially in the region and perhaps as a result, Cal-Am has produced conflicting forecasts. The Cal-Am forecast submitted to the CPUC differs substantially from Cal-Am's own more recent General Rate Case Application forecast which estimated demand for 2021 and 2022 at 9,789 acre-feet per year.[35] The magnitude of the changes in demand and the differences in the forecasts is significant and has implications for water planning. Cal Am's own most recent forecast estimates 2022 demand to be 20% lower than "current" demand in the CPUC decision.

The Cal-Am forecast also results in an inflated value for gpcd. Using the "current" Cal-Am forecast of 12,350 AF and the current AMBAG population results in a calculated current gpcd of

[35] California-American Water Company. 2019. (U-210-W) Update to General Rate Case Application, A.19-07-004.

120.0 which is 23% higher than WaterDM's fully inclusive calculation of Cal-Am Monterey Main system gpcd in 2019 which was 97.3 gpcd. This forecast doesn't square with Cal-Am's stated intent to spend more than $1.8 million over three years on its water conservation programs and with state regulations and policies that incentivize demand reductions. The Cal-Am forecast doubles down on the problem an inflates per capita use up to 124 gpcd in the year 2040.

A 2040 level of 124 gpcd is extremely unlikely and such a dramatic and remarkable reversal in water use efficiency is inconsistent with the state and local directives and contradicts recent sworn testimony from Cal-Am in its current General Rate Case. Customers in the Cal-Am Monterey service area are among the most water efficient in the state. The outdated Cal-Am forecast unreasonably assumes that these customers will go from being the most efficient to becoming among the least water efficient in California over the next 20 years.

Water Supply

Introduction

The November 2019 California Coastal Commission staff analysis considered new information about water supplies (and demands) that were not available for the 2018 CPUC decision. As a result of this new information, the Coastal Commission staff found that there is less need for water from new sources than previously determined and that a project alternative – the expansion of the above-referenced Pure Water Monterey project – had progressed from being too "speculative" for the CPUC to consider as a viable alternative, to being a feasible, well-developed alternative. This Pure Water Monterey Expansion would occur entirely outside of the coastal zone and would cause far fewer environmental impacts than Cal-Am's proposed project.

The recently developed Pure Water Monterey Expansion along with revised water supply and demand information were considered and included in the Staff Report[36] of October 28, 2019 in which the Staff report recommended denying Cal-Am's permit request to construct elements of the desalination project in the coastal zone due to its inconsistencies with the Coastal Act and the Local Coastal Program's habitat protection and hazards policies, its failure of the three tests of Coastal Act Section 30260, and its failure of the alternatives consideration of Section 30233.

I considered the available, reliable water supply sources for Cal-Am Monterey to utilize out to the year 2040 including the existing Pure Water Monterey project and its expansion. Based on this analysis I agree with the conclusions in the 2019 Staff Report. With the addition of the Pure Water Monterey Expansion providing an additional 2,250 acre-feet per year of supply to Cal-Am, the combination of Cal-Am's available and projected water resources total 11,650 acre-feet of reliable supply. This provides sufficient supply potential to meet annual future demand in 2040 by more than 1,200 acre-feet above WaterDM's most-likely "Continued efficiency" forecast.

[36] Staff Report: Recommendation on Appeal Substantial Issue & De Novo Hearing and Consolidated Coastal Development Permit, California Coastal Commission, Application 9-19-0918 / Appeal A-3-MRA-19-0034 (California American Water Co.). (p 7)

Water Supply for the Monterey Main System

Cal-Am delivers water to its Monterey Main system from a diverse collection of water sources. This will remain true into the future, even with the Pure Water Monterey Expansion or the proposed desalination plant. Figure 7 shows historic and projected deliveries in the Monterey Main system including the Pure Water Monterey projects along with the two water demand forecasts prepared by WaterDM. All of the supply sources shown in Figure 7 and are documented in Table 6. The anticipated available reliable water supply in 2040 from each source is included and the total is 11,650 AF. Each source of water and the volume of available reliable supply is described in detail in the sections below.

Cal-Am has historically relied heavily on withdrawals from the Carmel River water and Seaside Basin groundwater to provide water to the Monterey Main system. In the future withdrawals from both sources must be reduced. Cal-Am must carefully manage its supply portfolio in the coming years regardless of the Coastal Commission's ruling regarding the desalination project. Even under the best of circumstances it will be at least 2022 before either the Pure Water Monterey Expansion or the proposed desalination project are online.

The focus of the Coastal Commission staff analysis and recommendations was on the availability of sufficient water supply to meet the community needs twenty years from now in 2040, and less on how Cal-Am will manage the transition from its reliance on the Carmel River in 2022. The water supply analysis summarized in Figure 7 indicates that with the addition of the full Pure Water Monterey project Cal-Am does have available water supply both in the near term (2020 – 2025) and twenty years from now in 2040. In keeping with the Staff Report, the primary focus of the WaterDM analysis was on the determining the volume of reliable supply available in 2040.

The Pure Water Monterey project with the expansion would provide enough available supply to meet the likely 20-year requirements, but it is still reasonable to expect Cal-Am may need to seek to secure additional supplies in the future beyond 2040. Much will depend upon what happens to the local economy and climate over the coming decade. Over-building infrastructure such as desalination (at its current size) would be an expensive error. The future is uncertain and the impact of COVID 19 and other economic unknowns could well be to reduce future demand in the Monterey Main System from current levels, lessening or eliminating the need for securing additional supply.

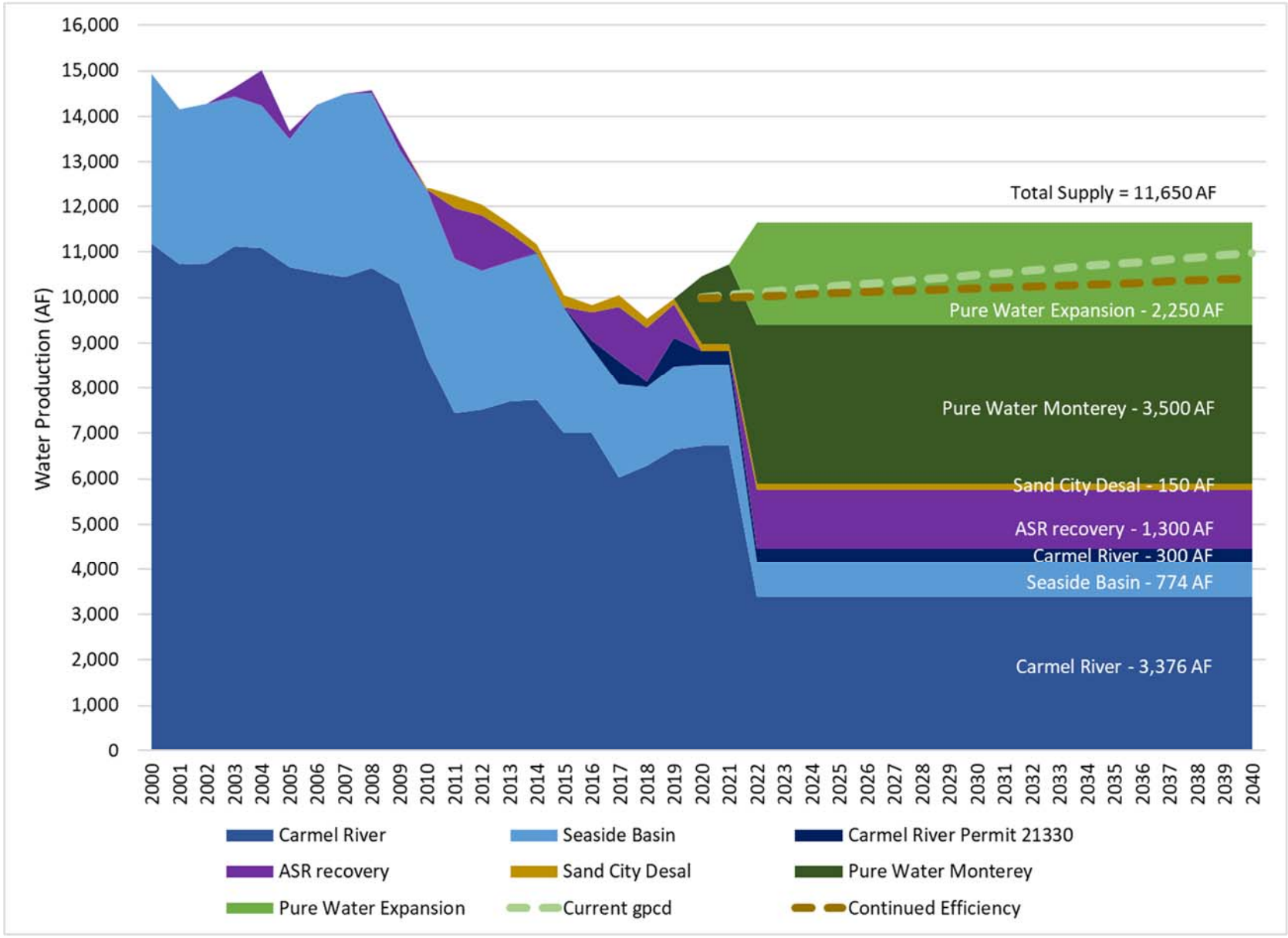

Figure 7: Cal-Am historic water production (2000 – 2019) and future water supply and demand (2020 – 2040)

Table 6: Cal-Am Monterey Main System water supply sources

Water Source	AF/Year	Notes	Regulator	Data Source
Carmel River – Cease and Desist Order	3,376 AF.	2,179 AF from License 11866; 1,137 AF of pre-1914 appropriative rights; and 60 AF of riparian rights.	SWRCB Order 2016-0016	Cal-Am reports to the SWRCB
Carmel River – Permit 21330	300 AF	Only available Dec. – May.	SWRCB	Cal-Am reports to the SWRCB
Seaside Basin Native Groundwater	774 AF	Reflects Cal-Am's 25-year obligation to leave 700 AF of the 1,474 AF it is entitled.	Seaside Basin Watermaster	Watermaster's annual reports.
ASR Recovered Water	1,300 AF	Based on long-term historical precipitation and streamflow, ASR system may be capable of recovering an average of 1,920 AF per year.	SWRCB Water Rights Permits 20808A & C	Cal-Am reports to the SWRCB
Sand City Desalination Plant	150 AF	300 AF capacity. Has averaged 209 AF over life of plant.	SWRCB Order 2016-0016 & Division of Drinking Water	Cal-Am reports to the SWRCB
Pure Water Monterey	3,500 AF	Withdrawals prior to 2022 will reduce Effective Diversion Limit from the Carmel River.	Division of Drinking Water & Seaside Basin Watermaster	TBD
Pure Water Monterey Expansion	2,250 AF		Division of Drinking Water & Seaside Basin Watermaster	TBD
TOTAL	**11,650 AF**			

Carmel River

Withdrawals from the Carmel River, Cal-Am's primary water source, must be reduced in accordance with a cease-and-desist order from the State Water Resources Control Board. The original order, issued in 1995, determined that Cal-Am was extracting over 14,000 acre-feet per year from the river when it had a legal right to 3,376 acre-feet. The State Water Resources Control Board determined that these excess withdrawals were adversely affecting the river's population of federally threatened Central Coast steelhead and riparian habitat. The Board ordered Cal-Am to develop or purchase alternative water supplies so it could end its excess withdrawals. Subsequent orders issued by the Board have included additional requirements, with Cal-Am currently required to end its excess withdrawals and be able to rely on a new source of water by December 2021.

Figure 7 and Table 6 show Carmel River production reducing to the mandated 3,376 AF in 2022. This is the volume to which Cal-Am has a legal right and is comprised of 2,179 AF from License 11866; 1,137 AF of pre-1914 appropriative rights; and 60 AF of riparian rights.[37]

Figure 7 also shows an additional 300 AF of Carmel River supply based on Permit 21330.[38] Cal-Am's annual reports to the State Water Resources Control Board show that it has withdrawn an average of 428 AF per year from 2017-2019 under this permit.

Seaside Groundwater Basin – Native Groundwater

Along with the Carmel River, the withdrawals of native groundwater from the Seaside Groundwater Basin must also be reduced soon which impacts Cal-Am Monterey. The Seaside Basin was over pumped for many years prior to the issuance of the 2006 Seaside Groundwater Basin adjudication which imposed triennial reductions in operating yield until the basin's "Natural Safe Yield" is achieved. For Cal-Am, the last reduction will occur in 2021 and Cal-Am will have rights to 1,474 acre-feet per year.

Figure 7 and Table 6 show 774 AF of supply available from the Seaside Basin from 2022 – 2040. This reflects the agreement with the Watermaster to leave 700 AF per year of the 1,474 AF it is entitled to for at least 25 years as payback for Cal-Am's over-pumping in the Seaside Basin. For the purposes of this analysis it was assumed that this obligation is triggered once Cal-Am obtains a permanent replacement supply of water (e.g. Pure Water Monterey Expansion or the proposed desalination project).

[37] MPWMD Report (p.3)

[38] "In 2013, Cal-Am received Permit 21330 from the State Water Board for 1,488 AFA from the Carmel River. However the permit is seasonally limited to December 1 through May 31 each year and subject to instream flow requirements." MPWMD Report (p.3)

The Seaside Basin Watermaster states Cal-Am's "payback amount is currently estimated to be 18,000 acre-feet", thus 25.7 years of 700 AF per year re-payments would complete the payback.[39]

The Seaside Basin Watermaster's 2019 report to the Court overseeing the groundwater adjudication states that the total usable storage space in the entire Seaside Groundwater Basin is 52,030 AF. The report also describes the current allocation of that usable storage space among the Seaside Basin pumpers and Cal-Am is allocated 28,733 acre-feet.[40] The annual report aligns with the Watermaster's January 2020 letter regarding the Pure Water Monterey Expansion which reiterates the importance of the groundwater payback program. The letter also notes the direct ties between the Seaside Basin and the Pure Water Monterey Expansion project and identifies that "on the order of 25,000 acre-feet of additional storage would need to be injected and left in the Seaside Basin over a period of years in order to achieve protective elevations along the coastline."[41]

After the payback is complete, Cal-Am will be able to produce the full 1,474 AF if needed. During a drought or in the event another supply became impaired, Cal-Am could (with permission from the Seaside Basin Watermaster) utilize its full 1,474 AF in any year or series or years and then extend the payback period.

Aquifer Storage and Recovery

Cal-AM participates in an aquifer storage and recovery (ASR) project that allows for the capture of excess Carmel River winter flows through wells along the river. This river water is then transferred through existing conveyance facilities, including the new Monterey Pipeline and Pump Station, and stored in the Seaside Groundwater Basin for later extraction. This project operates with four ASR well sites capable of both injection and extraction. Ownership and operation of this source water project has various components split between Cal-Am and the Monterey Peninsula Water Management District.[42]

There are two water rights that support the ASR system: Permit 20808A which allows maximum diversion of 2,426 AF and Permit 20808C which allows up to 2,900 AF for a total potential maximum annual diversion of 5,326 AF.[43] But in reality Cal-Am will only be able to divert, inject, and store the maximum permitted volume in the wettest of years.

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[39] Seaside Basin Watermaster Jan. 8, 2020 Letter to Rachel Gaudion. Subject: Draft Supplemental Environmental Impact Report for the Proposed Modifications to the Pure Water Monterey Groundwater Replenishment Project (Draft Supplemental EIR)

[40] Seaside Basin Watermaster Annual Report – 2019, December 5, 2019

[41] Seaside Basin Watermaster Jan. 8, 2020 Letter to Rachel Gaudion.

[42] California-American Water Company. 2019. (U-210-W) Update to General Rate Case Application, A.19-07-004. Direct Testimony of Christopher Cook. (p.7)

[43] MPWMD Report (p.3)

Based on long-term historical precipitation and streamflow data, the ASR system is designed to allow an average of 1,920 AF per year to be recovered. Figure 7 and Table 6 assume a more conservative 1,300 AF of ASR production per year for 2020 – 2030 as does the MPWMD Report. With the addition of the Pure Water Expansion, Cal-Am will have additional opportunity to inject and store water in the Seaside Groundwater Basin which may allow for increased annual recovery over time.

Cal-Am is allocated 28,777 AF of total storage in the Seaside Groundwater Basin.[44] Careful management of the Seaside Groundwater Basin and optimizing the storage opportunities it provides will help ensure a long-term reliable supply for the Cal-Am Monterey service area. Once the storage reserve is established, Cal-Am could withdraw 1,920 AF (or more) on a regular basis.

Sand City Desalination Plant

Cal-Am has an operating agreement for the Sand City Desalination Plant, a small facility designed to produce 300 acre-feet of water per year. Due to source water quality issues and discharge permit requirements to date the Sand City plant has never produced the full 300 AF and the maximum that is has ever produced was 276 AF in 2011. Over the life of the plant it has averaged 209 AF of production per year but it has only averaged 188 AF per year of production from 2016 – 2019.[45] Figure 7 and Table 6 conservatively includes 150 AF per year of production well below the long-term average of 209 AF per year.

Pure Water Monterey

Monterey One Water in partnership with the Monterey Peninsula Water Management District developed the Pure Water Monterey Groundwater Replenishment Project to create a reliable source of water supply to replace existing water supply sources for the Monterey Peninsula.

The primary objective of the Pure Water Monterey Project is to replenish the Seaside Groundwater Basin with 3,500 acre-feet per year of purified recycled water to compose a portion of Cal-Am's water supply and to assist in complying with the State Water Resources Control Board orders. The source water for the Pure Water Monterey Project is wastewater flows from the members of Monterey One Water.

The Pure Water Monterey Project (as initially approved and constructed) includes a 4 million gallon per day capacity water purification facility for treatment and production of purified recycled water that is conveyed and stored in the Basin using a series of shallow and deep injection wells. Project conveyance facilities include ten miles of pipeline from the purification facility to injection wells in the Seaside Groundwater Basin. This pipeline is owned and operated by the Marina Coast Water District.

[44] Seaside Basin Watermaster Annual Report – 2019, December 5, 2019

[45] MPWMD Report

Once injected, the purified recycled water augments existing groundwater supplies and is capable of providing 3,500 acre-feet per year of water for extraction. Pure Water Monterey is operational in 2020 and Figure 7 includes 3,500 AF per year from the Pure Water Monterey project starting in 2022.

Pure Water Monterey Expansion

Monterey One Water and the MPWMD have proposed expansion of the Pure Water Monterey project to increase the capacity available to Cal-Am. The Pure Water Monterey Expansion is expected to provide an additional 2,250 acre-feet per year to augment existing groundwater supplies.

The source water for the Pure Water Monterey Expansion is municipal wastewater and agricultural drainage water. Analysis of the water sources under four conditions including drought concluded that the project can reliably produce water under each circumstance.[46]

The analysis concluded Monterey One Water would have rights to a sufficient quantity of source water to produce the yield in advanced treated, product water that is anticipated to be produced by the Pure Water Monterey Expansion regardless of whether or not the conditions precedent are met and whether or not it is a dry or drought year or a normal or wet year.[47]

The analysis shows that the Pure Water Monterey Expansion can reliably produce water as proposed. Figure 7 includes 2,250 acre-feet per year from the Pure Water Monterey Expansion project becoming available to Cal-Am in 2022.

With the addition of the Pure Water Monterey Expansion project providing an additional 2,250 acre-feet per year of supply to Cal-Am, the combination of Cal-Am's available and projected water resources total 11,650 acre-feet of reliable supply. This provides sufficient supply potential to meet annual future demand in 2040 by more than 1,200 acre-feet than WaterDM's most-likely "Continued efficiency" demand forecast.

Peak Capacity

Peak capacity planning is typically based on metered measurements of peak day and peak hour production maintained by the water provider. To my knowledge, Cal-Am does not publicly report its actual peak day or peak hour demands for the Monterey system. Rather than producing actual measurements, Cal-Am relies on a calculated approach to estimate future peak day usage. This approach was described and carried out in both the MPWMD Report and the MPWMD response, using slightly different assumption.

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[46] April 11, 2020. Source Water Operational Plan Technical Memorandum. Prepared by Bob Holden, PE, and Alison Imamura, PE, Monterey One Water

[47] April 2020. Comments on Water Supply and Source Water Availability. FINAL Supplemental Environmental Impact Report for the Proposed Modifications to the Pure Water Monterey Groundwater Replenishment Project. P 3-8

Analyses in the MPWMD Report and MPWMD Response show that Cal-Am has the ability to produce 19.41 million gallons per day and 0.81 million gallons per hour. Calculations of future Maximum Daily Demand (MDD) and Peak Hour Demand (PHD) show that Cal-Am must support an MDD of 19.01 MG/day and a PHD of 0.792 MG/hour (based on a July 2012 maximum month demand). Revised analysis in the MPWMD Response and Final analysis using slightly different demand data showed that Cal-Am must support an MDD of 16.13 MG/day and a PHD of 0.672 MG/hour (based on an August 2014 maximum month demand). Under either demand assumption, from an infrastructure standpoint alone, Cal-Am has sufficient capacity to meet future peak day and peak hour demands even under the highly conservative assumptions embedded in the calculated approach.

If managing the peak day or peak hour becomes an issue in the future, Cal-Am has several options it has yet to implement. From an infrastructure standpoint, Cal-Cam could increase pumping capacity and add finished water storage. Cal-Am could also choose to implement low-cost peak day and peak hour demand management measures such as prohibiting automatic irrigation at certain times or on certain days or by re-assigning irrigation days of the week to distribute the summertime peak. Sophisticated approaches using smart irrigation controllers could also be employed to ensure optimal irrigation scheduling (Mayer et. al. 2018).

The Hazen Peer Review Report

As part of my investigation I was asked to review and comment on a peer review report prepared by Hazen and Sawyer (Hazen Report) which critiqued the MPWMD Report and the subsequent MPWMD Response.

- *California American Water Peer Review of Supply and Demand for Water on the Monterey Peninsula prepared by Kevin Alexander, P.E. and Cindy Miller, P.E., Hazen and Sawyer (Hazen Report)*
- *MPWMD's March 6 response to the Hazen Report including supporting exhibits prepared by David Stoldt (MPWMD Response)*

The Hazen & Sawyer peer review report is rife with misleading statements leading to incorrect conclusions regarding California codes, Cal-Am's likely water demand in 2040, and the availability and reliability of future water supply sources. MPWMD's March 6 response to the Hazen Report identifies line by line these errors and misleading statements. In this report I focus on the following problems:

Water Planning

The Hazen Report repeatedly confuses and conflates peak demand and annual demand planning requirements and offers numerous misleading statements about California codes and standards and AWWA water planning guidance.

Throughout the Hazen Report the authors confuse and conflate requirements for meeting the peak demand and annual demand planning practices. Planning the infrastructure and treatment capacity requirements for a community to meet the peak day and peak hours of

demand is distinctly different from planning for an adequate long-term water supply for the same community. In my judgement, the MPWPD Report and Response adhered to all applicable codes and industry standards and practices.

I will specifically address the Hazen Report's assertions regarding the following:

- California Code of Regulations (CCR) section 64554
- California Health and Safety Code (CHSC) section 116555
- California Water Code (CWC) sections 10635 and 10631
- American Water Works Association "Water Resource Planning" guidance M50

CCR §64554

On page 3 the Hazen Report states, "CCR §64554(b), establishes the requirements that California water utilities must use to project demands. This regulation requires that the public water system identify the day, month, and year with 'the highest water usage during at least the most recent ten years of operation.'"[48]

CCR §64554 specifically establishes the requirements for "New and Existing Source Capacity" and provides methods for calculating the Maximum Daily Demand (MDD) for a water system. MDD or peak capacity planning is typically based on metered measurements of peak day and peak hour production maintained by the water provider and 64554 states that, "If daily water usage data are available, identify the day with the highest usage during the past ten years to obtain MDD".[49]

To my knowledge, Cal-Am does not publicly report its actual peak day or peak hour demands for the Monterey system. Rather than producing actual measurements, Cal-Am relies on the calculated approach (method 2 in CCR 64554) to estimate future peak day usage. This approach was described and carried out in both the MPWMD Report and the MPWMD Response, using slightly different assumptions. I reviewed these calculations and under both sets of assumptions Cal-Am has sufficient capacity to meet MDD.

If peak day or peak hour demands were to increase in the Cal-Am system over the next 20 years, additional pumping and local storage capacity could be added to the system to meet the requirements of CCR §64554.

The Hazen Report repeatedly confuses the peak capacity calculation of MDD as specified in CCR §64554 with the very different task of planning for an adequate future water supply on an annual basis. CCR 64554 does not make any provisions for estimating current annual demand or future annual demand. The Hazen Report improperly connects 64554 with annual demand

[48] Hazen Report (p. 3).

[49] CCR §64554(b)(1)

planning on page 3 and page 6 and lacks proper specificity when referring to peak vs. annual supply and demand.

CHSC 116555

California Health and Safety Code section 116555 states simply that California water suppliers must provide, "a reliable and adequate supply of pure, wholesome, healthful, and potable water."[50]

The MPWMD Report correctly concluded that either project could provide the reliable water supply for the region. The MPWMD's revised analysis shows that even under conservative, randomized climate assumptions, ASR storage will build up a sufficient reserve to meet a 5-year drought.[51]

CWC Sections 10635 and 10631

Section 10635 of the California Water Code states that, "every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the long-term total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and a drought lasting five consecutive water years."

Section 10631 reiterates this requirement in the plan and also requires analysis by the utility of (i) Water waste prevention ordinances; (ii) Metering; (iii) Conservation pricing; (iv) Public education and outreach; (v) Programs to assess and manage distribution system real loss; (vi) Water conservation program coordination and staffing support; and (vii) Other demand management measures.[52]

The Hazen Report implies that the Pure Water Monterey Expansion is speculative and unproven and suggests it should not be considered "as a permanent reliable water source" and instead should be considered a "backup" supply.[53] There are many problems with this analysis specifically:

i. The Hazen Report notably fails to apply the same scrutiny regarding reliability to the proposed desalination project. Frequently desalination delivers less supply than promised at a higher cost than anticipated.[54]
ii. The Hazen Report considers unrealistic and unsubstantiated current and future demand projections based on outdated demand information.

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[50] CHSC 116555 https://codes.findlaw.com/ca/health-and-safety-code/hsc-sect-116555.html

[51] MPWMD Response (Note 15)

[52] http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=WAT&sectionNum=10631

[53] Hazen Report (p.8)

[54] https://www.voiceofsandiego.org/topics/science-environment/desal-plant-producing-less-water-promised/

iii. Revised analysis from the MPWMD, which I have confirmed, shows that even under conservative, randomized climate assumptions, ASR storage will be built-up and sufficient to deliver forecast volumes through a 5-year drought. If Pure Water Monterey Expansion is completed there will likely be additional water available for injection and carryover storage.

iv. The Hazen Report fails to take into consideration Cal-Am's compliance with Section 10631 and implementation of effective efficiency and conservation measures that have successfully reduced demands and will continue to do so in the future.

American Water Works Association (AWWA)[55] Manual M50, Water Resource Planning

The Hazen Report repeatedly asserts that analysis in the MPWMD Report is inconsistent with "engineering best-practices" published in the AWWA Manual M50 Water Resources. The M50 is planning guidance manual which offers a broad range of approaches and invites utilities to choose the one that best fits their needs, requirements, and available data. As it strains to defend Cal-Am's outdated "current demand" forecast, the Hazen Report manages to mis-represent both the framework and content of the M50 manual. The Hazen Report assertions are incorrect and misleading for the following reasons.

First, the Hazen Report misrepresents the M50 as a set of "engineering best practices."[56] AWWA Manuals are not "best-practices" documents, but rather are "Manuals of Water Supply Practices" which are distinct and different from "best-practices" in that they offer utilities a wide range of solutions rather than a single "best" approach. AWWA Manuals are "consensus documents focused on providing strategies and steps for water system optimization. They are written, reviewed and approved by members of AWWA volunteer committees."[57]

Second, the Hazen Report cites an old and outdated version of the M50. The most current AWWA Manual M50 Water Resources, 3rd edition was published in 2017, but the citations in the Hazen Report are from the discontinued 2nd edition published in 2007.

Third, regardless of the outdated citation, the Hazen Report critically misinterprets and misrepresents identical guidance provided in the both versions of the M50 manual. Both editions of M50 include the same following language regarding the need for a variety of methods to forecast demand:

> *"No single method of forecasting will satisfy the varied needs of all utilities. The forecasting method used and the data needed to correctly apply the method depend on the situation.*

[55] The American Water Works Association (AWWA) is an international non-profit, scientific and educational association founded to improve water quality and supply. Established in 1881, it has a membership (as of 2012) of around 50,000 members worldwide, including the author of this report.

[56] Hazen Report (p.3)

[57] https://www.awwa.org/Publications/Manuals-of-Practice

For example, when a forecast of average annual demand is the primary requirement, a simple per capita approach might be sufficient."[58]

Both versions of the M50 describe the same six approaches to preparing a demand forecast. Based on my review, the MPWMD Report incorporated four of the accepted methods to some degree:

- per capita models
- extrapolation models
- disaggregate water use models
- land-use models

The forecast prepared by WaterDM described earlier in this report also incorporate three of these approaches:

- per capita models
- extrapolation models
- disaggregate water use models

Similar forecasting approaches are regularly employed by Cal-Am as described in sworn Testimony from Ian Crooks.[59]

Finally, the Hazen Report asserts that the M50 manual specifies a 10-year or even 20-year retrospective analysis to establish a demand baseline for a forecast. The Hazen Report then uses this unfounded notion to defend Cal-Am's "current demand" forecast of 12,350 AF submitted to the CPUC in support of the desalination plant application. The quote cited in the Hazen Report in support of this approach[60] appears only in the 2007 edition and was not included in the current edition of M50. Furthermore, the Hazen Report misinterprets the meaning which does not specify a calculation method or planning period, but instead recommends the analysis of 10 years or more of historic data to understand trends and drought impacts.

Water Conservation and Demand Management

The Hazen Report makes incorrect statements about water conservation programs and planning and without offering data or analysis and even suggests that per capita water use will increase substantially despite Cal-Am's demand management efforts and prevailing state policy and regulations.

[58] American Water Works Association (2017, 2007) Manual of Water Supply Practices-M50, Third Edition

[59] Direct Testimony of Ian Crooks Before the Public Utilities Commission of the State of California. Application 12-04-019 (Filed April 23, 2012) (p.7)

[60] Hazen Report (p.3)

Starting on page 1, the Hazen Report makes factually incorrect statements about water conservation programs and policies in California and the Monterey region. The Hazen report states, "MPMWD staff also assumes continued implementation of tiered rates, conservation restrictions, and enforced water use reductions ... all of which have the potential to do continuing harm to the area's businesses and residential customers."[61]

This sentence confuses and conflates on-going water conservation measures such as tiered rates with mandatory curtailment measures that are only implemented when necessary during a declared drought. This error is repeated throughout the Hazen Report.

The MPWMD Report correctly assumed the continuation of tiered water rates and water conservation programs as described earlier in my report. These are ongoing features of the local water supply system and are mandated by California state law. Tiered rates have been implemented by Cal-Am in the Main system and across its other Cal-Am systems (and throughout California) for many years and the Hazen Report presents no evidence in support of the notion that continued implementation of tiered rates will cause "continuing harm" to the community.

The Hazen Report is also incorrect regarding "restrictions" and "enforced reductions". Neither the MPWMD Report or the demand forecasts I prepared for in this report assumed demand restrictions or enforcement beyond the measures Cal-Am already implements during a normal year. Mandatory curtailment is typically only necessary during a declared drought such as 2014 -2017 and was not considered in the WaterDM forecasts or in the MPWMD Report.

On page 4 the Hazen Report repeats the error and includes additional unsupported and incorrect statements:

> *"The conservation and moratorium measures that were implemented in response to drought conditions, including tiered rates, conservation restrictions, and enforced water use reductions, were effective in lowering demand. However, no additional methods are presented in the memo to indicate how further reductions in demands would occur; absent any* ***, it is reasonable to assume everything has already been done on the demand side to reduce levels and further reductions should not be considered in demand forecasting for determining water supply sufficiency****."*[62]

The Hazen Report is again incorrect regarding "restrictions" and "enforced reductions". Neither the MPWMD Report or the demand forecasts I prepared for in this report assumed demand restrictions or enforcement beyond the measures Cal-Am already implements during a normal year. The moratorium on new connections was implemented in response to the cease and desist order. It can be lifted once Cal-Am certifies (and the State Water Resources Control Board concurs) that it has a sufficient permanent replacement supply for its illegal Carmel River diversions.

[61] Hazen Report (p.1)

[62] Hazen Report (p.4) *emphasis added.*

The Hazen Report remarkably ignores the extensive on-going water conservation program being implemented across the Monterey Peninsula and California and the impact these measures are likely to have into the future. Both Cal-Am and the Monterey Peninsula Water Management District implement active, far-reaching, and effective water demand management programs that address all five of these core components outlined earlier in this report. The Monterey region has been regarded as a model for water conservation programs for many years.

Cal-Am acknowledged the level of effort, significance, and impact of this conservation program in recent testimony. "California American Water has expended significant effort and resources to encourage conservation in the Monterey County District through a variety of methods. Most important has been the tiered rate design, which features steeply inclining block rates to encourage efficient water use." – Direct Testimony of Christopher Cook, July 1, 2019.

Mr. Cook's testimony is backed up by testimony from Stephanie Locke, Water Demand Manager for the Monterey Peninsula Water Management District, and the significant financial resources Cal-Am continues to apply toward water conservation in the region. In its most recent General Rate Case, Cal-Am proposed a $1.845 million three-year budget ($615,132 per year) to fund water conservation programs in the Monterey service area. Locke's testimony notes that many of the conservation programs budgeted in the General Rate Case and in the prior Cal-Am rate filings focus on reductions in outdoor water use, on reductions in demand areas that have not previously been extensively targeted, and on maintaining the current low water use fixtures that have been installed to date.

Cal-Am's local efforts are in parallel to broader policy measures at the state level, designed to further increase efficiency. The State of California has implemented a series of laws and directives to ensure future water efficiency across the state including Assembly Bill 1668 and Senate Bill 60. These laws and directives effectively mandate an ongoing reduction in per capita use. Cal-Am's continued compliance with these regulations and its active efforts to reduce customer water demand in the future are likely to gradually further decrease per capita water use across the service area.

Current Annual Demand

The Hazen Report asserts that "current" demand in the Cal-Am Main System must be assumed to be 12,350 acre-feet per year. This is far higher than actual current demand and contradicts Cal-Am's own most recent General Rate Case filing which forecasts 2022 demand to be 9,789 acre-feet per year.

The Hazen Report criticizes the MPWMD Report for developing a demand forecast based on a starting point (aka current annual demand) significantly lower than the value proposed by Cal-

Am to the CPUC.[63] As shown in Figure 6, the Cal-Am "current annual demand" forecast of 12,350 acre-feet is about 2,500 acre-feet higher than Cal-Am's actual annual demand. Based on demand trends in the region 12,350 acre-feet is a gross over-estimate of the actual demand in the Monterey Main System. The authors of the MPWMD Report has good reason to choose a different starting point for the demand forecast and there is nothing incorrect or wrong about their approach.

The "Current Annual Demand" section of the Hazen Report is another place where the authors confuse and conflate requirements for meeting the peak demand and annual demand planning practices as explained earlier in this section. Planning the infrastructure and treatment capacity requirements for a community to meet the peak day and peak hours of demand is distinctly different for planning for an adequate long-term water supply for the same community. In my judgement, the MPWPD Report and Response adhered to all applicable codes and industry standards and practices.

The Hazen Report fails to mention that Cal-Am, in its most recent General Rate Case Application, forecast demand for 2021 and 2022 at 9,789 acre-feet per year.[64] Thus Cal Am's own most recent forecast estimates 2022 demand to be 20% lower than "current" demand in the CPUC decision. Independent estimates of demand developed for the MPWMD Report and developed separately for this report, align closely with Cal Am's recent rate case forecast.

Water Supply Reliability

The Hazen Report mischaracterizes the likely future reliability of water supplies available to Cal-Am and in particular the beneficial impacts of the ASR system over time. The Hazen Report ignores the future reliability (and cost) of desalination

The Hazen Report expresses "concern" about the reliability of the ASR system which it seeks to dismiss as merely "an alternative or backup supply source" and not a reliable long-term supply and it also describes the Pure Water Monterey Expansion as "speculative".[65] The Hazen Report contains inaccuracies and mischaracterizations and notably neglects to apply similar scrutiny to potential reliability issues and construction delays that could be part of the proposed desalination project.

ASR

Cal-AM participates in an aquifer storage and recovery project that allows for the capture of excess Carmel River winter flows through wells along the river. WaterDM assumed a conservative 1,300 AF of ASR production per year for 2020 – 2030 like the MPWMD Report. The system has already proven capable of producing near this volume. Cal-Am chose to recover 1,196 acre-feet from the ASR system in 2017, 1,210 acre-feet in 2018, and 744 AF in 2019. Cal-

[63] Hazen Report (p.3)

[64] California-American Water Company. 2019. (U-210-W) Update to General Rate Case Application, A.19-07-004.

[65] Hazen Report (pp.6-9)

Am ended 2019 with 1,317 acre-feet in ASR storage. With the addition of the Pure Water Monterey Expansion supply in many years Cal-Am will be able to inject and store additional carryover water through this system.

ASR systems, when managed properly, improve groundwater basin management by acting like an underground reservoir where water can be stored during periods of excess supply and withdrawn during periods of short supply.[66] Analysis in the MPWMD Response, confirmed by WaterDM, shows that a build-up of ASR storage based on historical data including wet, normal, and dry years would be sufficient to allow Cal-Am to recover at least 1,300 acre-feet each year during a hypothetical 5-year drought.[67] This analysis is further supported by a Technical Memorandum prepared by Montgomery Associates in late 2019.[68]

During 2020 and 2021 Cal-Am must prepare to wean itself of reliance on the Carmel River and must manage its system differently as it comes to rely on the recently completed Pure Water Monterey supply. The ASR system provides Cal-Am the ability to store excess supply for the future. If the Monterey Peninsula were simultaneously to experience drought during the "buildup period" following the completion of new water supply and assuming the cease and desist order is lifted, ASR might be delayed in building up a drought reserve.[69] However, in reviewing the ASR system, the Hazen Report neglected to consider the impact of the Pure Water Monterey Expansion and the additional water it will make available for injection. Available excess water for injection from the Pure Water Monterey Expansion will enable Cal-Am to store additional water in the Seaside Basin.[70] The proper management of this storage potential and the water supply from the expansion could provide drought-resilience to the Monterey Peninsula for years to come.[71]

Pure Water Monterey Expansion

The sources of water for the Pure Water Monterey Expansion are municipal wastewater and agricultural drainage water which are currently discharged to the ocean. The mix of these sources may vary from year to year thus Monterey One Water prepared examples showing the likely annual mixes of source water. In one example the source water consisted of discharge

[66] American Water Works Association (2017) Manual of Water Supply Practices-M50, Third Edition

[67] MPWMD Response (Note 15)

[68] Montgomery and Associates. 2019. Technical Memorandum. Expanded PWM/GWR Project SEIR: Groundwater Modeling Analysis

[69] MPWMD Response (Note 15)

[70] The Seaside Basin Watermaster's 2019 report to the Court overseeing the groundwater adjudication states that the total usable storage space in the entire Seaside Groundwater Basin is 52,030 AF. The report also describes the current allocation of that usable storage space among the Seaside Basin pumpers and Cal-Am is allocated 28,733 acre-feet.

[71] This finding is confirmed by the Montgomery and Associates 2019 memo which demonstrates, ASR is drought-resilient and Pure Water Monterey Expansion provides an additional factor of safety against drought impacts to ASR.

from the Regional Treatment Plant (54%), the Reclamation Ditch (5%), Blanco Drain (10%), wastewater outside the prior M1W boundaries (30%), and summer water rights from the County Water Resource Agency (1%).[72]

The Hazen Report questions the reliability of the Monterey Pure Water Expansion project and ignores analysis by the staff of Monterey One Water. This analysis shows that none of the source water for expansion of Pure Water Monterey is speculative, nor comes from Salinas-area wastewater or Salinas valley sources for which Monterey One Water doesn't already have rights.[73]

The source water for the Pure Water Monterey Expansion is municipal wastewater and agricultural drainage water. Analysis of the water sources under four conditions including drought concluded that the project can reliably produce water under each circumstance.[74] The analysis concluded Monterey One Water would have rights to a sufficient quantity of source water to produce the yield in advanced treated, product water that is anticipated to be produced by the Pure Water Monterey Expansion regardless of whether or not the conditions precedent are met and whether or not it is a dry or drought year or a normal or wet year.[75]

The Hazen Report was prepared prior to the release of the April Final Supplemental Environmental Impact Statement for the Monterey Pure Water Expansion and thus the authors may not have had accesses to the full analysis of the reliability of supplies available.

Reliability and Cost of Desalination Not Considered

The Hazen Report applies intense scrutiny to the future reliability of the Pure Water Monterey Expansion yet fails to consider the future reliability and cost of the desalination facility Cal-Am has proposed.

Recent desalination projects in California have sometimes failed to produce expected volumes[76] and there many examples world-wide of production problems associated with desalination projects. Cal-Am need look no farther than the local Sand City Desalination plant on which it relies for an example of a facility that has failed to produce at its designed capacity. WaterDM's forecast includes only 150 acre-feet of annual production from the Sand City facility designed to produce 300 acre-feet annually.

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[72] November 12, 2019 M1W presentation to the Monterey County Farm Bureau and the Grower-Shipper Association and the September 30-2019 M1W board meeting

[73] MPWMD Response (Note 19).

[74] April 11, 2020. Source Water Operational Plan Technical Memorandum. Prepared by Bob Holden, PE, and Alison Imamura, PE, Monterey One Water

[75] April 2020. Comments on Water Supply and Source Water Availability. FINAL Supplemental Environmental Impact Report for the Proposed Modifications to the Pure Water Monterey Groundwater Replenishment Project. P 3-8

[76] https://www.voiceofsandiego.org/topics/science-environment/desal-plant-producing-less-water-promised/

Desalination is also the most expensive supply option currently available on the Monterey Peninsula and water from Cal-Am's proposed desalination project would cost at least three times as much as water from the Pure Water Monterey Expansion. The economic track record of desalination is problematic. Desalination plants must be paid for even if they do not produce any water. Victoria Australia's desalination facility, built in response to an intense drought, resulted in ongoing annual service payments of $649 million (Australian dollars), and "annual service payments rise every year, even if no water is ordered."[77]

The Hazen Report chooses to ignore the economic realities of desalination and is disingenuous when it asserts the recycled water proposal is less reliable than the desalination proposal without applying similar levels of scrutiny to both supplies.

Erroneous Findings in the Hazen Report

The Hazen Report reaches erroneous conclusions regarding the reliability of future water supplies based on inflated hypothetical demands, misleading statements about planning requirements, and inaccurate characterization of future water supply reliability.

The Hazen Report includes numerous misleading statements leading to incorrect conclusions regarding California codes, Cal-Am's likely water demand in 2040, and the availability and reliability of future water supply sources. MPWMD's March 6 response to the Hazen Report identifies line by line these errors and misleading statements. In this report I focused on the following problems:

- The Hazen Report repeatedly confuses and conflates peak demand and annual demand planning requirements and offers numerous misleading statements about California codes and standards and AWWA water planning guidance.
- The Hazen Report makes incorrect statements about water conservation programs and planning and without offering data or analysis, and it even suggests that per capita water use will increase substantially despite Cal-Am's demand management efforts and state policy requirements and regulations.
- The Hazen Report asserts that "current" demand in the Cal-Am Main System must be assumed to be 12,350 acre-feet per year. This is far higher than actual current demand and contradicts Cal-Am's own most recent General Rate Case filing which forecasts 2022 demand to be 9,789 acre-feet per year.
- The Hazen Report mischaracterizes the likely future reliability of water supplies available to Cal-Am and in particular the beneficial impacts of the ASR system over time.
- The Hazen Report applies intense scrutiny to the future reliability of the Pure Water Monterey yet fails to consider the future reliability and cost of the desalination facility Cal-Am has proposed.

[77] https://www.dailymail.co.uk/news/article-5749621/Melbourne-desalination-plant-costs-tax-payers-eye-watering-649-million-year-operate.html

Conclusions

WaterDM conducted an analysis of the historic production trends in the Cal-Am service area and forecast growth in the service area. WaterDM developed an independent forecast of future water requirements based on the Associated Monterey Bay Area Governments (AMBAG) 2018 forecast of future population growth for the Cal-Am service area.

The WaterDM analysis supports the conclusions in the Staff Report projecting 2040 demands in the Cal-Am service area to be much lower than the CPUC's certificating decision. California Coastal Commission staff have correctly concluded that the Pure Water Monterey Expansion project provides an available, feasible water supply alternative for Cal-Am.

With the addition of the Pure Water Monterey Expansion project providing an additional 2,250 acre-feet per year of supply to Cal-Am, the combination of Cal-Am's available and projected water resources provides sufficient supply potential to meet annual future requirements in 2040 by more than 1,200 acre-feet (an 11.9% surplus).

The CPUC, in its September 2018 Decision accepted that Cal-Am's "current" demand was 12,350 acre-feet per year and the future demand in 2040 will be approximately 14,000 acre-feet per year. This appears outdated and therefore unreasonably high based on my analysis, the MPWMD Report and Cal Am's most recent forecasts. Cal-Am, in its most recent General Rate Case Application, forecast demand for 2021 and 2022 at 9,789 acre-feet per year. Cal Am's own most recent forecast estimates 2022 demand to be 20% lower than "current" demand in the CPUC decision. Independent estimates of demand developed for the MPWMD Report and developed separately for this report, align closely with Cal Am's recent rate case forecast.

The Pure Water Monterey Expansion provides enough available supply to meet the likely 20-year demands, but it is still reasonable to expect Cal-Am may need to seek to secure additional supplies in the future to meet demand beyond 2040. Much will depend upon what happens to the local economy and climate over the coming decade and over-building infrastructure such as the proposed desalination facility (at its current size) would be an expensive error. The future is uncertain and the impact of COVID 19 and other economic unknowns could well be to reduce future demand in the Monterey Main System from current levels, lessening or eliminating the need for securing additional supply.

Cal-Am's existing peak capacity is sufficient to meet anticipated future maximum daily demand (MDD) and peak hour demand (PHD) and Cal-Am has yet to avail itself of additional low/no-cost peak demand management measures that could reduce future peaks, if necessary.

Analyses in the MPWMD Report and MPWMD Response show that Cal-Am has the ability to produce 19.41 million gallons per day and 0.81 million gallons per hour. Calculations of future Maximum MDD and PHD show that Cal-Am must support an MDD of 19.01 MG/day and a PHD of 0.792 MG/hour (based on a July 2012 maximum month demand). Revised analysis in the

MPWMD Response using slightly different demand data showed that Cal-Am must support an MDD of 16.13 MG/day and a PHD of 0.672 MG/hour (based on an August 2014 maximum month demand). Under either demand assumption, from an infrastructure standpoint alone, Cal-Am has sufficient capacity to meet future peak day and peak hour demands even under the highly conservative assumptions embedded in the calculated approach.

If managing the peak day or peak hour becomes an issue in the future, Cal-Am has several options it has yet to implement. From an infrastructure standpoint, Cal-Cam could increase pumping capacity and add finished water storage. As an option, Cal-Am could also choose to implement low-cost peak day and peak hour demand management measures such as prohibiting automatic irrigation at certain times or on certain days or by re-assigning irrigation days of the week to distribute the summertime peak. Sophisticated approaches using smart irrigation controllers could also be employed to ensure optimal irrigation scheduling (Mayer et. al. 2018).

The Hazen Report contains numerous errors, mischaracterizations, and incorrect conclusions regarding Cal-Am's likely demand in 2040 and the availability and reliability of future water supply sources.

The WaterDM analyses show that the staff of the California Coastal Commission correctly utilized more recent information on available future water supplies and likely future demands in its analysis. Cal-Am's per capita use is likely to decrease between now and 2040 due to ongoing conservation program implementation, conservation pricing, and statewide policy directives to reduce indoor and outdoor use and improve utility water loss control measures. I agree with the staff findings that concluded there exists an available, feasible water supply alternative to Cal-Am's proposed desalination project.

Appendix A – Materials Considered[78]

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Monterey One Water. April 2020. FINAL Supplemental Environmental Impact Report for the Proposed Modifications to the Pure Water Monterey Groundwater Replenishment Project.

Monterey One Water. April 11, 2020. Source Water Operational Plan Technical Memorandum. Prepared by Bob Holden, PE, and Alison Imamura, PE.

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Appendix B - Summary of Qualifications and Experience - Peter Mayer, P.E.

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WORK EXPERIENCE

Principal, WaterDM - 2013-present. (Registered Professional Engineer, Colorado, PE 0038126)
- Vice President, Partner, and Senior Project Engineer, Aquacraft, Inc. 1995-2012
- Editor, Calvert Independent, 1988-1990
- Coordinator, University of Wisconsin, College Year in India Program, Madurai, India 1991-92
- Educator-Fellow, Oberlin Shansi Memorial Association, Madurai, India 1986-88
- Station Manager, WOBC-FM, Oberlin, Ohio 1985-86

AFFILIATIONS

American Water Works Association
- Associate Editor AWWA Water Science
- Member– Customer Metering Practices Committee, Distribution and Plant Operations Division
- Chair – M22 manual 3rd and 4th ed. re-write sub-committee
- Member – M6 manual 6th ed. Re-write sub-committee
- Former Trustee – Water Conservation Division

American Water Resources Association
American Society of Civil Engineers
Alliance for Water Efficiency
Colorado River Water Users Association
Colorado Water Wise
Colorado Water Congress

EDUCATION

Master of Science, 1995, Water Resources Engineering, Department of Civil, Environmental and Architectural Engineering, University of Colorado, Boulder.

Bachelor of Arts, 1986, Oberlin College, Oberlin Ohio. Anthropology (Honors).

SELECTED PROJECTS

City of Tucson Water Conservation and Integrated Water Resources Plan (2019-2020)

Peter Mayer is working with Tucson staff to develop a 10-year water conservation implementation plan to integrate this work with the City's long-term integrated water resources plan being conducted by a large consulting team.

California DWR Research and Development of Indoor Residential Water Use Standards (2019-2021)

Peter Mayer is advising the California Department of Water Resources on a series of research projects to investigate indoor residential per capita use for the purpose of reporting to the legislature on future efficiency standards.

Metropolitan Water District of Southern California Demand Management Cost Functional Assignment (2018 – 2019)

Peter Mayer developed an analysis of Metropolitan's demand management and local resources development programs for the purpose of functional cost assignment in the ratemaking process.

New York City Integrated Water Resources Plan (2018 – 22)

Peter Mayer is leading the water conservation task of this five-year planning project awarded to a team lead by Hazen and Sawyer.

Northglenn Colorado Integrated Water Resources Plan (2019-20)

WaterDM is teamed with ELEMENT Water Consulting to prepare an integrated water resources plan for the City of Northglenn, a suburb of Denver.

Northern Water Conservation Program Planning (2017-18)

Peter Mayer worked closely with the Northern Colorado Water Conservancy District to plan for the future of their regional conservation program.

Westminster Rate and Fee Cost of Service Study (2017-18)

Peter Mayer was a member of the Raftelis Consulting team which developed this extensive cost of service analysis for this Colorado utility.

Rachio Water Management Implementation and Research (2016 –18)

Peter Mayer served as an expert advisor and technical consultant to the Rachio irrigation control and technology company. Together, they implemented peak day water management programs.

FL v. GA, 142, Original (2016)

Peter Mayer testified as an expert witness on municipal and industrial water use on behalf of the State of Georgia at the US Supreme Court trial held in November 2016. Peter prepared an expert report, expert testimony, testified at the trial, and was deposed in this case.

Water Resource Foundation #4689 Assessing Water Demand Patterns to Improve Sizing of Water Meters and Service Lines (2016-20)

Peter Mayer was the Principal Investigator for this research study taking place in Colorado and Arizona that closely examined meter and service line sizing.

Austin Water Integrated Water Resources Plan (2016-17)

Peter Mayer was an expert advisor to the CDM/Smith team on water demand and conservation and assisted in preparation of the Austin Integrated Water Resources Plan.

Colorado State Water Supply Initiative (2009-10, 2016-19)
Peter Mayer was part of a team that prepared technical analysis of future water demands and requirements in Colorado as part of the State's ongoing planning efforts.

New York City Water Board Water Demand Management Planning (2014 – 2019)
Peter Mayer was the lead for this project that prepared ten water conservation plans for wholesale customers of the NYC Water Board located in Westchester County and other upstate NY locations.

Outdoor Water Savings Initiative, Alliance for Water Efficiency (2014 – present)
Peter Mayer is the director of research for the Alliance for Water Efficiency's Outdoor Water Savings Initiative. Peter completed a literature review project in 2015, managed the landscape transformation study (2019) and is currently managing the drought response and water savings study (2020).

Residential End Uses of Water Study Update, Water Research Foundation (2010 – 2016)
Peter Mayer was the co-principal investigator of this research study that measured residential water use in 25 cities across he US and Canada. Final report is available from the Water Research Foundation.

Hilton Head PSD Water Demand Management Plan (2015)
Peter Mayer lead a team that prepared a long term water demand management plan for this coastal island community.

City of Arvada Expert Witness Services (2016)
Peter Mayer was hired as an expert witness on municipal and industrial water demands by the City of Arvada. Peter prepared and submitted an expert report in preparation for trial. The report was accepted by both sides and deposition and testimony were not required.

City of Arvada Water Supply and Demand Study (2014 –2016)
Peter Mayer led a team that evaluated future water supply and demands for this Denver suburb, under climate change conditions.

Roaring Fork Regional Water Conservation Planning (2014 - 2015)
Working with ELEMENT Water Consulting, Peter Mayer prepared a series of water conservation plans for Aspen, Basalt, Carbondale, and Glenwood Springs, Colorado and a regional conservation plan for the entire Roaring Fork Valley. An important goal of these plans was to ensure adequate environmental flows in local rivers and creeks.

City of Louisville Water Conservation Plan (2015)

Peter Mayer worked with CH2M to prepare a state approved water conservation plan for the City of Louisville Colorado.

City of Greeley Water Conservation Plan and Avoided Cost Analysis (2014 –2015)
Peter Mayer worked closely with the City of Greeley staff to update their water conservation plan for the next 7 years and to complete an avoided cost analysis that evaluates the impact of Greeley's water efficiency efforts since 1992 on customer water rates.

Senior Technical Advisor, Alliance for Water Efficiency (2007 – 2019)
The Alliance for Water Efficiency is a national NGO focused on promoting water conservation and efficiency. Peter Mayer helped found the organization and now served as a senior technical advisor and the newsletter editor for 12 years.

G480 Water Conservation Program Operation and Management Standard (2011-2013, 2018-19)
The G480 is a voluntary water conservation program operation and management standard approved by AWWA and ASNSI in 2013. Peter Mayer chaired the subcommittee that created the standard and was a key author of the document. He is a member of the subcommittee developing version 2.0.

Eastern Municipal Water District – Water Efficient Guidelines for New Development (2012-13)
Peter Mayer prepared a set of detailed, voluntary water efficiency guidelines for new construction in the Eastern Municipal Water District that go beyond current building codes and standards to increase water use efficiency.

City of Westminster Residential Demand Study and Conservation Plan Preparation (2012)
Peter Mayer and Aquacraft conducted a residential end use study in Westminster, Colorado to determine water use patterns and the level of water efficiency achieved. This information was then used in support of preparation of new water conservation plan for the City.

Northern Water Conservation Survey and Plan Development (2011)
The Northern Colorado Water Conservancy District hired Peter Mayer and Aquacraft to conduct a survey of its' 45 municipal members. The results of the survey were used to update Northern's water conservation plan for the Bureau of Reclamation.

Colorado Water Supply Initiative Municipal and Industrial Conservation Strategies (2010)
In support of the Statewide Water Supply Initiative (SWSI), the Interbasin Compact Committee (IBCC), and other water conservation efforts throughout the state, the CWCB contracted with Peter Mayer and Aquacraft to develop the conservation strategies section of the 2010 SWSI update.

Best Practices Guide for Colorado Water Conservation (2010)

Colorado Water Wise contracted with Peter Mayer and Aquacraft to research and produce a guidebook on water conservation best practices for Colorado. The guide was published in 2010 and is available for free download.

Evaluation of California Weather-Based "Smart" Irrigation Controller Programs (2005-2009)
Smart irrigation controllers that use prevailing weather conditions to adapt water applications to the actual needs of plants represent a significant advancement. Peter Mayer was the principal investigator on this study for the California Department of Water Resources, the California Urban Water Conservation Council, and approximately 30 participating water agencies examined the impact of 3,112 smart controllers on water use in northern and southern California.

Water Conservation: Customer Behavior and Effective Communications (2006 – 2009)
Peter Mayer and Aquacraft subcontracted to ICF International on this AwwaRF research project which examined water conservation social marketing programs and measured the impact of utility outreach efforts on customer behavior. The study examined water conservation communication campaigns in terms of customer recognition, attitudinal changes, behavior modification, and verifiable water use reductions and recommended the most effective methods and techniques for designing and implementing water conservation social marketing campaigns.

Water Budgets and Rate Structures: Innovative Management Tools (2005-2007)
Water budget rate structures are an innovative and increasingly popular tool for water utilities trying to convey an effective water efficiency message. This AwwaRF Tailored Collaboration project co-lead by Aquacraft and A&N Technical Services examined all aspects of water budgets and how they fit into the pantheon of water rate structures.

Water Conservation Plan Development and Demand Forecasting (2006–2010)
The State of Colorado requires that utilities seeking loans file a water conservation plan that includes detailed demand forecasts that incorporate water conservation. Aquacraft has developed conservation plans and demand forecasts for the cities of Aurora, Fort Collins, Glenwood Springs, Westminster, and Greeley, Colorado. In addition, Peter Mayer was contracted by the Colorado Water Conservation Board to review submitted conservation plans for compliance with statute.

Expert Testimony NEORSD Wastewater Case (2008)
Working with the Department of Justice, Peter Mayer developed a detailed research plan for the City of Cleveland to help them determine the contribution of wastewater flows from single-family, multi-family, and non-residential customers.

US EPA National Water Efficiency Market Enhancement Program (2004-2005)
The EPA is interested in starting a water efficiency program comparable the Energy STAR program. This project involves investigating potential product categories and product lines that

improve water efficiency and could be including the EPA program, such as weather-based irrigation control technology.

City of Carnation Water Conservation Demand Analysis (2004-2005)
In late 2004 Peter Mayer worked with the Pacific Institute, Carollo Engineers, and King County, Washington to determine the conservation potential evaluate the cost-effectiveness of water conservation in new and existing homes and businesses in the City of Carnation. Carnation is a small town that is currently not sewered. The County and the City are working together to provide a sanitary sewer system and treatment facility.

National Multiple Family Submetering and Allocation Billing Program Study (2002-2004)
Charging residents in multi-family house separately for water is growing trend in the United States. Peter Mayer was the principal investigator for this study which looked at the entire phenomena of submetering and allocation billing techniques and examined the potential water savings, regulatory issues, utility concerns, water rates, and regulatory climate.

Tampa Retrofit Project (2002-2003)

Colorado Department of Human Services Water Rights Study (2003)

Pinellas County Utilities Water Conservation Opportunities Study, (2002)
Virtual Water Efficient Home Web Site, (2001-2002)

East Bay MUD Conservation Retrofit Study, (2001-02)

CII Demand Assessment and Conservation Plan, Westminster, CO, (2000-01)

Seattle Home Water Conservation Study, Seattle Public Utilities and EPA, (1999-2000)

Commercial and Institutional End Uses of Water, AWWARF, (1998-2000)

Water Conservation Plan, City of Thornton, CO, (1998-2000)

Demand Analysis for the University of Colorado, (2000)

Water Conservation Futures Study, City of Boulder, CO, (1998-1999)

Water Efficiency in Water Wise and Standard New Homes, (1999-2000)

Residential End Uses of Water Study, AWWARF, (1996-1999)

Comparison of Demand Patterns among CI and SF Customers, Westminster, (1997-1998)

Analysis of Southern Nevada Xeriscape Project, (1998-2000)

Westminster, Peak Use Study, (1996)

Westminster Residential Water Use Study, (1995-1996)

PUBLICATIONS AND PRESENTATIONS

Rupprecht, C., M.M. Hamilton, and P.W. Mayer. 2020. Tucson Examines the Rate Impacts of Increased Water Efficiency and Finds Customer Savings. Journal of the American Water Works Association. January 2020, pp. 33-39. https://awwa.onlinelibrary.wiley.com/doi/10.1002/awwa.1429

Mayer, P.W., S. Davis, S. Buchberger, C. Douglas. 2020. Assessing Water Demand Patterns to Improve Sizing of Water Meters and Service Lines. Final Report of Project 4689. Water Research Foundation, Denver, Colorado. https://www.waterrf.org/research/projects/assessing-water-demand-patterns-improve-sizing-water-meters-and-service-lines

Douglas, C., S. Buchberger, and P. Mayer. Systematic Oversizing of Water Meters. 2019. AWWA Water Science Journal. December 2019. https://awwa.onlinelibrary.wiley.com/doi/abs/10.1002/aws2.1165

Mayer, P.W. 2019. Water Demand Trends, Efficiency and the Future of American Water Use. Keynote Address. University Council on Water Resources (UCOWR) Annual Conference. Snowbird, UT.

Mayer, P.W. 2018. Water Management's Quiet Hero – the Water Meter. Contractor Magazine. November, 2018.

Mayer, P.W., et. al. 2018. Peak Day Water Demand Management Study Heralds Innovation, Connection, Cooperation. Journal of the American Water Works Association. May 2018 110:5.

Mayer, P.W. 2018. Water Demand Trends, Efficiency and the Future of Urban Water Use. Keynote Address. Next Generation Water Summit 2018. Santa Fe, NM.

Mayer, P.W., and R. Smith. 2017. Peak Day Water Demand Management Study. Alliance for Water Efficiency. Chicago, IL.

Mayer, P.W., et. al. 2017. Peer Review of the Water Conservation Programs of the Metropolitan Water District of Southern California. Alliance for Water Efficiency. Chicago, IL.

Mayer, P.W. 2017. Water Conservation Keeps Rates Low in Tucson, Arizona. Alliance for Water Efficiency. Chicago, IL.

Mayer, P.W. 2017. Water Conservation Keeps Rates Low in Gilbert, Arizona. Alliance for Water Efficiency. Chicago, IL.

Mayer, P.W. 2016. Water Research Foundation Study Documents Water Conservation Potential and More Efficiency in Households. Journal of the American Water Works Association. October 2016 108:10.

Mayer, P.W. 2016. American Water Demand Trends and the Future of Conservation. Keynote Address- Gulf Coast Water Conservation Symposium, Houston, TX.

DeOreo, W.B., P. Mayer, J. Kiefer, and B. Dziegielewski. 2016. Residential End Uses of Water, Version 2. Water Research Foundation. Denver, CO.

Shimabuku, M., D. Stellar, and P. Mayer. 2016. Impact Evaluation of Residential Irrigation Audits on Water Conservation in Colorado. Journal of the American Water Works Association. May 2016, 108:5. Denver, Colorado.

Mayer, P.W., P. Lander, and D. Glenn. 2015. *Outdoor Water Use: Abundant Savings, Scant Research.* Journal of the American Water Works Association. February 2015, 107:2. Denver, Colorado.

Mayer, P.W. 2015. American Water Use Trends 1995-2015 and Future Conservation Potential. WaterSmart Innovations Conference. Las Vegas, NV.

Mayer, P.W. 2015. Introducing AWWA's New M22 Manual - Sizing of Water Service Lines and Meters. Proceedings of the AWWA Annual Conference and Exposition. Anaheim, CA. and North American Water Loss Conference. Atlanta, GA.

Mayer, P.W. et. al. 2014. *Conservation Efforts Limit Rate Increases for Colorado Utility*. Journal of the American Water Works Association. April 2014, 106:4. Denver, Colorado.

Mayer, P.W. et. al. 2013. Conservation Limits Rate Increases for a Colorado Utility. Alliance for Water Efficiency, Chicago, IL.

Mayer, P.W. 2013. Residential Water Use Trends in North America: Results from the Residential End Uses of Water Study Update. Proceedings of the AWWA Annual Conference and Exposition. Denver, Colorado.

ANSI/AWWA. 2013. G480 *Water Conservation Program Operation and Management* Standard (First Edition). American Water Works Association. Denver, CO.

Suero F., P.W. Mayer, and D. Rosenberg. 2012. *Estimating and Verifying United States Households' Potential to Conserve Water*. Journal of Water Resources Planning and Management. 138(3), 299–306.

DeOreo, W., & P.W. Mayer. 2012. *Insights into Declining Single Family Residential Water Demands*. Journal of the American Water Works Association. June 2012. Vol. 104, No. 6.

Mayer, P.W. and S. Feinglas. 2012. Evaluating Changes in Water Use and Conservation Effectiveness. WaterSmart Innovations Conference. Las Vegas, NV.

Maddaus. M. and P.W. Mayer. 2011. Demand Hardening: Assessing Potential Impacts with End Use Models. WaterSmart Innovations Conference. Las Vegas, NV.

Mayer, P.W. and M. Dickinson. 2011. The Alliance for Water Efficiency's Home Water Works Website. WaterSmart Innovations Conference. Las Vegas, NV.

Mayer, P.W. 2010. Demand Hardening: Big Myth, Small Reality. WaterSmart Innovations Conference. Las Vegas, NV.

Mayer, P.W. 2010. Guidebook of Best Practices for Municipal Water Conservation in Colorado. WaterSmart Innovations Conference. Las Vegas, NV.

Mayer, P.W., et. al. 2010. *Improving Urban Irrigation Efficiency By Using Weather-Based "Smart" Controllers.* Journal of the American Water Works Association. February 2010. Vol. 102, No. 2.

Mayer, P.W. 2009. Do Weather-Based Irrigation Controllers Save Water? Results from a large field study in California. American Water Works Association 2009 Annual Conference and Exposition. San Diego, CA.

Mayer, P.W. et. al. 2009. Water Efficiency Benchmarks for New Single-Family Homes. WaterSmart Innovations Conference. Las Vegas, NV.

Mayer, P.W. et. al. 2009. Evaluation of California Weather-Based "Smart" Controller Programs Results and Perspective on a Large Field Study. WaterSmart Innovations Conference. Las Vegas, NV.

Mayer, P.W. 2009. Benefit-Cost Analysis for Water Conservation Planning. Colorado Water Wise Annual Event. Denver, CO.

Mayer, P.W. et. al. 2009. Evaluation of California Weather-Based "Smart" Irrigation Controller Programs. California Department of Water Resources, Sacramento, CA.

Mayer, P.W., et. al. 2008. *Water Budgets and Rate Structures: Innovative Management Tools*. American Water Works Association Research Foundation. Denver, CO.

Mayer, P.W. et. al. 2008. The California Water Smart Irrigation Controller Project Results and Perspective on a Large Field Study of an Important Emerging Technology. WaterSmart Innovations Conference. Las Vegas, NV.

Mayer, P.W. et. al. 2008. *Water Budgets and Rate Structures: Innovative Management Tools*. Journal of the American Water Works Association. May 2008. Vol. 100, No. 5.

Mayer, P.W., et. al. 2008. Cost Effective Conservation Programs. Proceedings of the AWWA Water Sources Conference. Reno, NV.

Mayer, P.W., et. al. 2008. Water Use in New and Existing Single-Family Homes - Update on EPA Benchmarking Study. Proceedings of the AWWA Water Sources Conference. Reno, NV.

Mayer, P.W., et. al. 2007. Water Budgets and Rate Structures – Innovative Management Tools. Proceedings of the AWWA Annual Conference, Toronto, Ontario.

Mayer, P.W. 2007. *Saving Water Indoors.* Home Energy Magazine. Special Issue.

Mayer, P.W., et. al. 2006. *Third-party Billing of Multifamily Customers Presents New Challenges to Water Providers.* Journal AWWA. August 2006, Vol. 98, No. 8.

Mayer, P.W. 2006. Submetering Billing Programs in Multi-Family Housing. Proceedings of the Water Sources Conference 2006, Albuquerque, NM.

Mayer, P.W. 2006. WaterWiser - Progress and Change, Benefits and Capabilities of an On-Going On-Line Resource. Proceedings of the Water Sources Conference 2006, Albuquerque, NM.

Mayer, P.W. 2005. End Uses of Water: Practical Data Collection, Analysis, and Utility. Arab Water World. May/June 2005.

Mayer, P.W, et. al. 2004. National Submetering and Allocation Billing Program Study – Project Overview and Preliminary Results. Proceedings of the Water Sources Conference 2004, Austin, TX., Proceedings of the AWWA Annual Conference, Orlando, FL.

Towler, E., P.W. Mayer, et. al. 2004. *Completing the Trilogy – Impact and Acceptance of Retrofit Conservation Products.* Proceedings of the Water Sources Conference 2004, Austin, TX.

Chesnutt, T.W., and P.W. Mayer, 2004. *Water Budget-Based Rate Structures: A New Look at an Old Idea.* Proceedings of the Water Sources Conference 2004, Austin, TX.

DeOreo, W.B., M. Gentili, and P.W. Mayer, 2004. *Advanced Cooling Water Treatment Pays for Itself in Urban Supermarkets.* Proceedings of the Water Sources Conference 2004, Austin, TX.

Mayer, P.W., W. DeOreo, and W. West, 2003. *Conservation Opportunities - A Florida Community Takes Stock*. Proceedings of the AWWA Annual Conference Anaheim, CA.

Mayer, P.W. et. al. 2002. *Great Expectations – Actual Water Savings with the Latest High-Efficiency Residential Fixtures and Appliances.* Proceedings of the Water Sources Conference 2002, Las Vegas, NV.

Mayer, P.W., W.B. DeOreo, & D. Kaunisto. 2002. *Raw Water Irrigation – System Sizing Poses an Interesting Problem.* AWWA Annual Conference Proceedings. Denver, CO.

Mayer, P.W., W.B. DeOreo, A. Dietemann, and T. Skeel. 2001*. Residential Efficiency: The Impact of Complete Indoor Retrofits*. AWWA Annual Conference Proceedings, Washington, D.C.

Maddaus, L.A., & P.W. Mayer. 2001 *Splash or Sprinkler? Comparing Water Use of Swimming Pools and Irrigated Landscapes.* AWWA Annual Conference Proceedings, Washington D.C.

W.B. DeOreo, A. Dieteman, T. Skeel, P. Mayer, et. al. 2001. *Retrofit Realities.* Journal American Water Works Association, March 2001.

DeOreo, W.B., P.W. Mayer, J. Rosales, et.al. 2000. *Impacts of Xeriscape on Single Family Residential Water Use.* Proceedings of Fourth Decennial National Irrigation Symposium, Phoenix, AZ.

Mayer, P.W., K. DiNatale, and W.B. DeOreo. 2000. *Show Me the Savings: Do New Homes Use Less Water?* AWWA Annual Conference Proceedings. Denver, CO.

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Mayer, P.W. and W.B. DeOreo. 1999. *Conservation Potential in Outdoor Residential Water Use.* AWWA Annual Conference Proceedings. Chicago, IL.

Dziegielewski, B., W.Y. Davis, and P.W. Mayer. 1999. *Existing Efficiencies in Residential Indoor Water Use.* AWWA Conserv99 Proceedings. Monterey, CA.

Mayer, P.W., W.B. DeOreo, et. al. 1998. *Residential End Use Study Progress Report: Year 2*. AWWA Annual Conference Proceedings. Dallas, TX.

Mayer, P.W., W.B. DeOreo, R. Allen, et. al. 1997. *North American Residential End Use Study: Progress Report*. AWWA Annual Conference Proceedings. Atlanta, GA.

Mayer, P.W., J.P. Heaney and W.B. DeOreo. 1996. *Conservation Retrofit Effectiveness: A Risk Based Model Using Precise End Use Data.* AWWA Conserv96 Proceedings.

DeOreo, W.B., P. Lander, and P.W. Mayer. 1996. *New Approaches in Assessing Water Conservation Effectiveness*. AWWA Conserv '96 Proceedings.

DeOreo, W.B., J.P. Heaney, and P.W. Mayer. 1996. *Flow Trace Analysis to Assess Water Use.* Journal of the American Water Works Association. Vol.88, No. 1, Jan.

Mayer, P.W. and W.B. DeOreo. 1995. *A Process Approach for Measuring Residential Water Use and Assessing Conservation Effectiveness*. AWWA Annual Conference Proceedings. Anaheim, California.

Mayer, P.W. 1995. *Residential Water Use and Conservation Effectiveness: A Process Approach*. Master's Thesis. University of Colorado, Boulder.

AWARDS

- 2019 AWE Distinguished Service Award – "In Recognition and with Appreciation for His 12 Years as Editor of the Water Efficiency Watch Newsletter 2007 – 2019).
- 2013 AWWA Water Conservation Division Best Paper Award – "Insights into Declining Single Family Residential Water Demands."
- 2013 Quentin Martin Best Research-Oriented Paper Award, ASCE-EWRI Journal of Water Resources Planning and Management, March 2013. Awarded for "Estimating and Verifying United States Households' Potential to Conserve Water" by Franciso J. Suero, A.M.ASCE;

Peter W. Mayer; David E. Rosenberg, A.M.ASCE

- 2010 AWWA Water Conservation Division Best Paper Award – "Improving Urban Irrigation Efficiency by using Weather-Based 'Smart' Irrigation Controllers."
- 2008 AWWA Water Conservation Division Best Paper Award – "Water Budgets and Rate Structures: Innovative Management Tools."
- 2006 AWWA Water Conservation Division Best Paper Award – "Third Party Billing of Multi-family Customers Presents New Challenges to Water Providers"
- 1996 Montgomery-Watson Master's Thesis Award, Second Place
- 1996 American Water Works Association Academic Achievement Award, Honorable Mention

Water management expert concludes expansion of Pure Water Monterey provides feasible, reasonable, and reliable alternative to Monterey Peninsula Water Supply Project desalination proposal

Marina Coast Water District asked Peter Mayer of WaterDM[1] to analyze the water supply and demand conclusions set forth in the October 28, 2019 California Coastal Commission Staff Report. He was also asked to evaluate whether the proposed expansion of the Pure Water Monterey (PWM) project would provide the California-American Water Company (Cal-Am) with a sufficient and reliable supply of water as an alternative to the Monterey Peninsula Water Supply Project desalination proposal.

Specifically, the WaterDM report demonstrates that the Pure Water Monterey Expansion, together with Cal-Am's existing lawful sources, would provide an ample supply to meet anticipated water demand in Cal-Am's Monterey district by more than 1,200 acre-feet annually through at least 2040. The report concludes that, with implementation of Pure Water Monterey Expansion, Cal-Am's reliable supply sources will be capable of providing at least 11,650 acre-feet per year beginning in 2022. This level of supply security would permit compliance with the State Water Resources Control Board's cease-and-desist order, and it would also allow an to end the moratorium on new water connections.

Mr. Mayer's analysis and conclusions are based on widely-accepted water management methodologies and conservative assumptions. To avoid any dispute regarding data sources, Mr. Mayer based his projections upon production data set forth in Cal-Am's own reports to the State Water Resources Control Board for the years 2017-2019, as well as data Cal-Am provided to the California Public Utilities Commission in its latest general rate case (filed in 2019) and his review of decades of historic data from the Monterey Peninsula Water Management District. These data support a higher, and therefore more conservative, level of current demand based upon actual production than either the Monterey Peninsula Water Management District's analysis, upon which Coastal Commission staff relied, or Cal-Am's own monthly and annual "system delivery" data. Accordingly, Mr. Mayer's report assumed total production for customer demand of 9,885 acre-feet in calendar year 2020.

WaterDM prepared two demand forecasts for the Cal-Am Monterey Main service area, using population growth rates based on AMBAG's anticipated increase through 2040 and the water usage of all sectors – residential, commercial, public and re-sale and non-revenue water. For each forecast, demand in all sectors was increased each year proportionally based on AMBAG's projected increase in population. The first, "Current gpcd," forecast assumes the current rate of gallons used per person per day will continue into the future without any increase in efficiency or additional conservation reductions. The second, "Continued efficiency," forecast accounts for the likely impacts of ongoing efficiency improvements, consistent with California laws and directives

[1] Peter Mayer is a recognized urban water management expert. He has worked with and advised hundreds of water providers and organizations such as the U.S. EPA; the U.S. Department of Justice; California Department of Water Resources; Metropolitan Water District of Southern California; and many others. He recently testified as an expert witness on municipal and industrial water use at the U.S. Supreme Court on behalf of the State of Georgia.

to ensure future water efficiency across the state, as well as Cal-Am's own existing and planned future programs to further reduce per capita use. Under either forecast approach, Mr. Mayer's report concludes that Coastal Commission staff correctly determined Pure Water Monterey Expansion would provide a feasible, reasonable, and reliable supply to meet future demand.

Additional WaterDM conclusions

WaterDM determined that per capita use in Cal-Am's Monterey district is likely to further decrease between now and 2040 due to ongoing conservation program implementation, continued conservation pricing, and statewide policy directives to reduce indoor and outdoor use and improve utility water loss control measures. The report concluded that Cal-Am's existing peak supply capacity is sufficient to meet anticipated future maximum daily and peak hourly demands. It also concluded that, even without any further decrease in per capita water consumption, Cal-Am's portfolio of available, reliable supplies will exceed average annual demand through at least 2040.

Mr. Mayer's analysis assumed that Cal-Am would reduce its withdrawals of Seaside Groundwater Basin native groundwater by 700 acre-feet per year for at least 25 years beginning in 2022, as payback for prior over-pumping. Mr. Mayer concluded that concurrent implementation of the Pure Water Monterey Expansion could enable Cal-Am to take advantage of additional storage capacity in the Seaside Groundwater Basin as a buffer against future drought years. Furthermore, with the capability of storing excess supply in the Seaside Groundwater Basin for future use through ASR and PWM operations as well as Pure Water Monterey Expansion, Cal-Am will be able to significantly improve the drought-resilience of its system. ASR systems, when managed properly, can improve groundwater basin management, acting much like an underground reservoir where water can be stored during periods of excess supply and withdrawn during periods of short supply.

The WaterDM report also explains that the Hazen Report (prepared for Cal-Am) reaches erroneous conclusions regarding the reliability of future water supplies, based on inflated hypothetical demands, misleading statements about planning requirements, and inaccurate characterizations of future water supply reliability. The report discusses the following errors in the Hazen Report:

- The Hazen Report repeatedly confuses and conflates peak demand and annual demand planning requirements, and it offers numerous misleading statements about California codes and standards and AWWA water planning guidance.
- The Hazen Report makes incorrect statements about water conservation programs and planning without offering supporting data or analysis, and it states that per capita water use will increase substantially despite Cal-Am's ongoing demand management efforts and prevailing state policy and regulations.
- The Hazen Report asserts that "current" demand in the Cal-Am Main System must be assumed to be 12,350 acre-feet per year, which is far higher than actual current demand as reported by Cal-Am and which contradicts Cal-Am's most recent general rate case filing that forecasts 2022 demand will be 9,789 acre-feet per year.
- The Hazen Report mischaracterizes the likely future reliability of water supplies available to Cal-Am, including the future benefits of the ASR system.

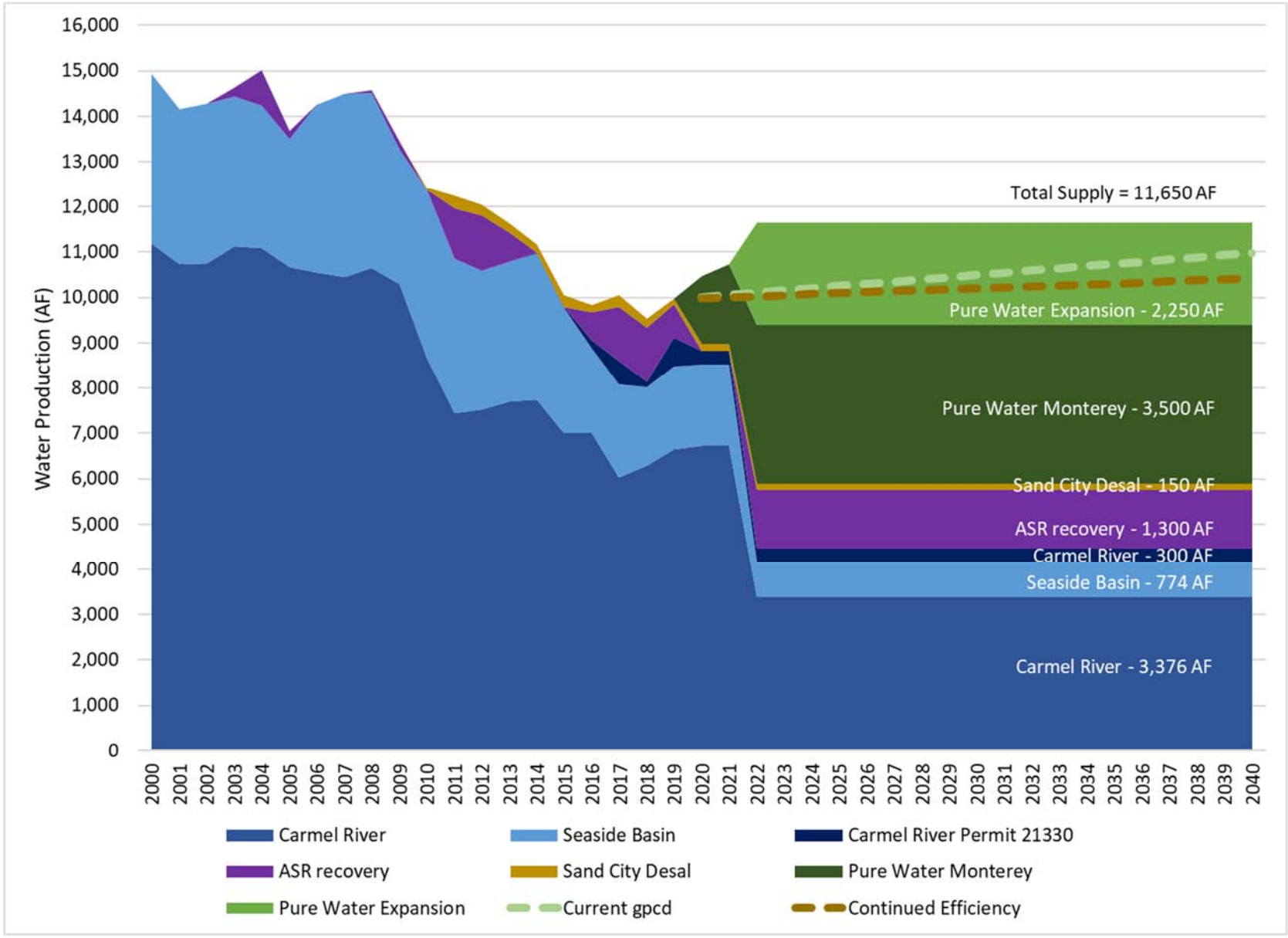


Figure 7: Cal-Am historic water production (2000 – 2019) and future water supply and demand (2020 – 2040)

CALIFORNIA Water Boards

GAVIN NEWSOM
GOVERNOR

JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

May 8, 2020

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

John.Ainsworth@coastal.ca.gov

RE: Application No. 9-19-0918 and Appeal No. A-3-MRA-19-0034 (California American Water Company)

Dear Mr. Ainsworth:

I write to express the State Water Resources Control Board's (State Water Board) interests in the Coastal Commission's timely action on the above-referenced proceedings, regarding California American Water Company's (Cal-Am) consolidated application and appeal for a coastal development permit for its proposed 6.4-million-gallon-per-day desalination project, the Monterey Peninsula Water Supply Project (Project). As I explained in oral comments to the Coastal Commission at the November 14, 2019 meeting, the State Water Board's efforts to resolve long-standing problems caused by excessive diversions from the Carmel River depend on prompt resolution of Cal-Am's application and appeal. We therefore urge the Coastal Commission to act on the permit at its meeting in August 2020.

Background on Long-standing Unlawful Diversions from the Carmel River

As summarized in the Coastal Commission's staff report dated October 28, 2019, the State Water Board has ordered Cal-Am to terminate its unauthorized diversions from Carmel River no later than December 31, 2021. The State Water Board is concerned not only about longstanding and continuing violations of state water rights law but also the diversions' negative impacts on public trust resources of Carmel River, which provides habitat for the federally threatened South-Central California Coast Steelhead Distinct Population Segment, the federally threatened California red-legged frog, and the candidate western pond turtle, and which also supports coastal wetlands and riparian vegetative communities.

Since 1995, Cal-Am has been required to "diligently implement . . . actions to terminate its unlawful diversions," and its inadequate progress led the State Water Board to issue a cease and desist order in 2009 requiring Cal-Am's full compliance by the end of 2016. (State Water Board Order WR 95-10, p. 40; State Water Board Order WR 2009-0060, p. 57.) Most recently, after additional setbacks in the development of a local water supply project to replace Cal-Am's continuing unauthorized Carmel River diversions, the State Water Board extended the compliance deadline to the end of 2021. At the same time, the State Water Board established enforceable interim milestones and effective diversion limits to ensure "that the State Water Board will not again find itself in the same position of again extending the compliance deadlines . . . ." (State Water Board Order WR 2016-0016, pp. 9, 19-24 [Order WR 2016-0016].) The State Water Board identified the Project, together with the 3,500-acre-feet-per-year Pure Water Monterey project and Cal-Am's existing rights to Carmel River and the Seaside Basin, as a viable path to ending Cal-Am's unlawful diversions from Carmel River by the end of 2021.

The State Water Board set milestones based on development of the Pure Water Monterey project and the Project accordingly, and it indicated that it would consider modifying the order's milestones if another feasible, larger-scale water supply project were to emerge to terminate Cal-Am's unauthorized diversions by the end of 2021. (Order WR 2016-0016, pp. 15-16 & 20, fn. 17.) But the State Water Board has also established conditional reductions in Cal-Am's interim effective diversion limit, to ensure that "diversion limits are ratcheted down such that unlawful diversion end by December 31, 2021 regardless of whether Cal-Am meets the milestones." (*Id.*, p. 13.) The cease and desist order, including the prohibition against new service connections and against certain increased water deliveries to existing service connections, will only be resolved or "lifted" after Cal-Am satisfactorily demonstrates that it has "obtained a *permanent* supply of water that has been substituted for water illegally diverted from the Carmel River." (*Id.*, ordering paragraph 15 [p. 27], italics added.)

Cal-Am has satisfied all milestones to date and in recent years obtained important approvals to construct the Project, including the Public Utilities Commission's certification of the final environmental impact report (Final EIR)[1] and issuance of a certificate of public convenience and necessity, as well as the County of Monterey's issuance of a development permit for the desalination plant. This trend shifted beginning in the later part of 2019.

Recent Developments Have Caused Delay

[1] Because a portion of the Project is proposed within the Monterey Bay National Marine Sanctuary (MBNMS), the Public Utilities Commission and the National Oceanic and Atmospheric Administration (NOAA), the lead agency under the National Environmental Policy Act, prepared a joint Final EIR and Environmental Impact Statement (EIS). MBNMS Superintendent Paul Michel stated at the Coastal Commission's November 19, 2019 meeting that NOAA worked with the Public Utilities Commission and the consultant team to "ensure that the Final EIR/EIS identified all potential impacts and met all levels of NEPA sufficiency."

Since the Commission's November 14, 2019 meeting in Half Moon Bay, the scheduled date for completion of the hearing and Coastal Commission action on the Project application and appeal has shifted from March 2020, to June 2020, and now given extensions related to the COVID-19 emergency, to August or September 2020. Coastal Commission staff has indicated a continued desire for Cal-Am to withdraw its application, thereby removing any deadline for Coastal Commission action on the Project, until after Coastal Commission completes an extended review and investigation of various issues, including the Project's groundwater impacts and the Monterey Peninsula's projected water supply and demand.

The Coastal Commission states that the delay is due to a need to resolve these remaining technical questions. But these issues have already been resolved by the Public Utilities Commission, after extensive environmental review and consideration of evidence and testimony over a multi-year adjudicative proceeding. (See Public Utilities Commission Decision 18-09-017 & Decision 19-01-051. See also *Marina Coast Water District v. Public Utilities Commission*, review den. Dec. 12, 2018, S251935; *City of Marina and Marina Coast Water District v. Public Utilities Commission*, review den. Aug. 28, 2019, S253585.) Importantly, several of the Coastal Commission staff's recommendations and findings from November 2019 regarding the Project are contrary to the Public Utilities Commission's determinations. Coastal Commission staff suggests the Public Utilities Commission acted on either incomplete or outdated information regarding these issues. The State Water Board does not agree.

State Water Board staff has reviewed the existing hydrogeologic studies and reports, including Weiss Associates' independent hydrogeological review of more recent data and studies dated November 1, 2019 (Coastal Commission, Items Th8a & Th9a, Exhibit 7) and Weiss Associates' proposed scope of work for an additional "aquifer impacts" analysis dated March 11, 2020. State Water Board staff has concluded that the North Marina Groundwater Model already conducted, revised, and relied upon by the Public Utilities Commission as part of its certified Final EIR (see, e.g., Section 4.4, Section 5.5.4, and Appendices E2 and E3), provides a conservative overprediction of the volume of shallow, inland water that the Project would capture during full operation.

The Project's test slant well was operated for over two years and has shown minimal impacts to groundwater levels approximately 2,100 ft from the well (at MW-4) and little to no impacts to groundwater levels further inland (at MW-7). The existing model predicts hydraulic impacts much farther inland than has been observed during actual operation. Efforts to calibrate the model to better match observed data would result in an increase in the simulated extraction of seawater and *less* simulated capture of inland groundwater compared to existing modeling results. Accordingly, even if the additional investigation, monitoring, and modeling could provide some instructive data or information, any new information obtained from this work would not undermine or substantially change the current understanding of the hydrogeologic system. State Water Board staff's opinion remains that the groundwater impacts of the Project will not be any greater than those stated, analyzed, and mitigated under the Public Utilities Commission's certified Final EIR.

Furthermore, the additional groundwater analysis proposed to be conducted by Weiss Associates would focus on an area of approximately two square miles, which is approximately 1% of the area covered by the existing model. Refinement of the model in this relatively small area would not result in substantial differences in the model output. Given that the additional information will not further inform the Coastal Commission's decision regarding the Project's alleged "depletion of ground water supplies" (Pub. Resources Code, § 30231)[2], the additional six months (or more) this work is expected to take is not necessary.

State Water Board staff has also reviewed the available documents regarding Monterey Peninsula water supply and demand and has discussed drinking water requirements, including standards for new and existing water source capacity, with Coastal Commission staff and other parties. Even though actual water use within Cal-Am's Monterey District service area in recent years has been lower than the Public Utilities Commission's estimated current demand, State Water Board staff does not have a basis to conclude that the Public Utilities Commission's prior analysis and determinations regarding the water demand, sizing, reliability, or diversity of supply were unreasonable, invalid, or outdated.

The delays in proceedings before the Coastal Commission and the resulting effects on other proceedings, including the State Land Commission's processing of Cal-Am's general lease application and the Superior Court of Monterey County's prolonged stay of the County's issued development permit, will almost certainly prevent Cal-Am from meeting the 2020 and 2021 milestones for construction and completion of the Project under Order WR 2016-0016. In the State Water Board's observation, further Coastal Commission delay will also limit Cal-Am's ability or willingness to consider and pursue, let alone fund and construct, other short-term or long-term water supply alternatives to terminate unauthorized diversions from Carmel River as required no later than December 31, 2021.

For example, the proposed schedule for implementing a 2,250 acre-foot-per-year Pure Water Monterey expansion has itself already been delayed well beyond December 31, 2021, and requires approvals and funding for which the details are uncertain and the timeline is indefinite. In practice, Pure Water Monterey expansion appears to be viewed by the Coastal Commission and others not merely as a "back-up" to, but rather as a potential full substitute for, the Project. It is uncertain whether or when the proposed

[2] Despite Coastal Commission staff's reliance on section 30231 of the California Coastal Act of 1976 in its November 4, 2019 addendum as the basis for recommending additional groundwater modeling, it is unclear whether Coastal Commission staff asserts, or has any factual basis for asserting, that the Project could potentially impact groundwater resources in a manner that would affect the coastal resources protected by that provision. The statute specifies the Coastal Commission shall maintain and, if feasible, restore the "biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate *to maintain optimum populations of marine organisms and for the protection of human health . . .*" (Pub. Resources Code, § 30231, italics added.)

Pure Water Monterey expansion project may proceed beyond its currently pending environmental review, but significant additional progress appears unlikely while the Project is still pending.

Furthermore, as the NOAA Fisheries Central Coast Branch Chief publicly commented before the Coastal Commission in March, there could be dire consequences for the steelhead and other public trust resources if a reliable and sustainable water supply allowing Cal-Am to terminate its unlawful diversions is not promptly developed. For all of these reasons, the State Water Board urges the Coastal Commission to consider whether it actually requires additional information or investigation regarding the Project, and to then promptly complete any additional work so it can issue a final decision on Cal-Am's application and appeal no later than is currently planned at the August 2020 meeting.

We appreciate your attention to these important issues and remain available to discuss any of this with you or your staff if further discussion would be helpful.[3]

Sincerely,

Eileen Sobeck, Executive Director
State Water Resources Control Board

cc: **[via email only]**
Alison Dettmer, Senior Deputy Director, Coastal Commission
Kate Huckelbridge, Deputy Director of Energy, Ocean Resources, & Federal Consistency, Coastal Commission
Tom Luster, Senior Environmental Scientist, Coastal Commission
Rich Svindland, President, California American Water
Layne Long, City Manager, City of Marina

[3] These comments regard technical and legal matters that are within the State Water Board's purview and expertise. They should not be interpreted by the Coastal Commission or any other parties as support for or opposition to the Project, Pure Water Monterey expansion, or any other efforts that will permanently end Cal-Am's unauthorized diversion from Carmel River as soon as possible. The Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board) also has permitting authority over the Project, and will apply subdivision (b) of section 13142.5 of the Water Code and the California Ocean Plan in the exercise of that authority. These comments may not necessarily reflect the positions of the Central Coast Water Board.

Return to Agenda

Marina Coast Water District
Groundwater Sustainability Agency
Agenda Transmittal

Agenda Item: 9-A Meeting Date: May 18, 2020

Prepared By: Patrick Breen Approved By: Keith Van Der Maaten

Agenda Title: Consider Adoption of Resolution No. 2020-GSA02 to Approve Amendment 2 to the Professional Services Agreement with EKI Environment & Water, Inc. for Groundwater Sustainability Planning

Staff Recommendation: The Board of Directors is requested to consider:

1. Adoption of Resolution No. 2020-GSA02 to Approve Amendment 2 to the Professional Services Agreement with EKI Environment & Water, Inc. for a total not-to-exceed amount of $880,000 for Groundwater Sustainability Planning; and,
2. Authorize the General Manager to take all actions and execute all documents as may be necessary or appropriate to give effect to this resolution.

Background: *Strategic Plan, Mission Statement – To provide our customers with high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner*.

The Board of Directors awarded a Professional Services Agreement to EKI Environment & Water, Inc. (EKI) for Stakeholder Coordination and initial Groundwater Sustainability Plan (GSP) preparation on August 7, 2017 in the amount of $209,000. The agreement was subsequently augmented via amendment by the Board on April 16, 2018 to conduct foundation GSP development efforts, develop Basin Setting Information, and Program Management and Grant Administration in the amount of $566,000.

This proposed amendment amount is $880,000 to complete Tasks 1 through 3 (listed below), of which $465,000 will be reimbursed by State Grant funding applied for and secured through the efforts of EKI and District staff.

EKI has been acting in the capacity of the MCWDGSA hydrogeological technical advisor, coordinator, and developer of the MCWD Groundwater Sustainability Plan(s) for the MCWDGSA. If approved, this amendment will allow EKI to continue to provide services through the majority of the Monterey Subbasin GSP process and be prepared for public review and comment by summer of 2021.

The MCWDGSA Monterey Subbasin Groundwater Sustainability Plan is due to be submitted by January 31, 2022.

Discussion/Analysis: As mentioned above, the overall GSP development effort for the Monterey subbasin will continue for the next year and a half with submittal of the GSP by the statutory deadline of January 31, 2022. In order to meet the deadline and complete the GSP for the Monterey subbasin EKI has developed the proposed scope of work below and corresponding attachments.

PROPOSED SCOPE OF WORK

The scope of work proposed herein for each task is based on the corresponding grant application work plans.

Task 1 – Development of Monterey Subbasin GSP Pursuant to Proposition 1 Grant Scope

Task 1 aligns with the effort required to develop a GSP as more fully described in the attached Round 2 grant Work Plan (Attachment A). The proposed scope of work includes tasks scheduled to occur during between May 2020 and June 2021. Substantial GSP development is anticipated to complete by June 2021 to allow for public review through to the GSP submittal deadline of 31 January 2022. These tasks generally include efforts under Phases 2 and 3 of the Round 2 Work Plan, listed below.

- Grant Administration;
- Project Management;
- Assess Groundwater Conditions and Develop Hydrogeologic Conceptual Model;
- Develop/Refine Numerical Groundwater Model;
- Develop Study Area and Basin-Wide Water Budget;
- Assess Existing Monitoring Programs and Develop SGMA-Compliant Monitoring Network;
- Evaluate Potential Management Areas;
- Develop Sustainable Management Criteria;
- Identify Projects and Management Actions;
- Create GSP Implementation Plan;
- Finalize Monitoring Network and Protocols;
- Conduct Stakeholder Engagement; and
- Participate in Intra-basin and Inter-basin Coordination Efforts.

Detailed scope of work and budget that itemize the proposed technical tasks are included herein (Attachment A).

Task 2 – Development of Monterey Subbasin GSP Pursuant to Proposition 68 Grant Scope

Task 2 aligns with the effort required to develop a GSP as more fully described in the attached Round 3 grant Work Plan (Attachment B). The proposed scope of work includes tasks scheduled to occur during between May 2020 and June 2021. These tasks generally include efforts under the entire Round 3 Work Plan, listed below.

- Grant Agreement Administration;
- Project Management;
- Intra- and Inter-basin Coordination;
- Subbasin Coordination Committee
- Development of Refined-Basin Specific Numerical Groundwater Model
- Coordination of Modeling Efforts; and
- AEM Data Collection and Analysis.

Detailed scope of work and budget that itemize the proposed technical tasks are included herein (Attachments B).

Task 3 – Recycled Water Feasibility Study

Task 3 aligns with the effort required to prepare a Recycled Water Feasibility Study as more fully described in the attached SWRCB Recycled Water grant application, as listed below.

- Develop Background Information and Identify Study Design Criteria and Goals;
- Preparation and Documentation of Groundwater Flow Model;
- Analysis of IPR Recycled Water Alternatives;
- Develop Conceptual Design, Implementation Plan, Financing Plan and Revenue Program for Recommended Project;
- Prepare Draft and Final Reports and Submit to SWRCB Division of Financial Assistance; and
- Meetings and Project Management

Detailed scope of work and budget that itemize the proposed technical tasks are included in Attachment C.

PROJECT SCHEDULE

Efforts under the proposed scope of work of this Work Authorization is anticipated to occur between May 2020 and June 2021. Substantial GSP development is anticipated to complete by June 2021 to allow for public review through to the GSP submittal deadline of 31 January 2022. Efforts for the Recycled Water Feasibility Study is anticipated to begin upon authorization and be completed within nine months.

PROPOSED PROJECT BUDGET

The proposal for consulting services by EKI would be on a time and expense reimbursement basis in accordance with our current Schedule of Charges. On the basis of previous authorizations and the consultant budget planned under respective grant applications, the proposed budget of $880,000 for Tasks 1 through 3 will not be exceeded without additional authorization.

Tasks	**Budget**	**Estimated Grant Reimbursement**
Task 1 - GSP Development Pursuant to Proposition 1 Grant Scope	$420,000	$200,200
Task 2 - GSP Development Pursuant to Proposition 68 Grant Scope	$310,000	$189,800
Task 3 - Recycled Water Feasibility Study	$150,000	$75,000
TOTAL	**$880,000**	**$465,000**

Detailed budget estimate is included within the respective grant applications in Attachments A, B, and C. The approved grant amount for each technical task has been identified on the budget table for reference.

Environmental Review Compliance: None required.

Financial Impact: ___X___Yes _____No Funding Source/Recap: Funding for this work is included in the proposed FY 2020/2021 Water Resources Department Consultants Budget.

Other considerations: The Board can decide to approve the contract amendment with EKI Environment & Water, Inc., or reject EKI's proposals and advertise for professional services.

Material Included for Information/Consideration: Resolution No. 2020-GSA02; Exhibit A - Scope of Work (including Attachments A-D).

Action Required: ___X___Resolution _____Motion _____Review
(Roll call vote is required.)

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

May 18, 2020

Resolution No. 2020-GSA02
Resolution of the Board of Directors
Marina Coast Water District Groundwater Sustainability Agency
Approving Amendment 2 with EKI Environment & Water, Inc.
for Groundwater Sustainability Planning

RESOLVED by the Board of Directors ("Directors") of the Marina Coast Water District Groundwater Sustainability Agency ("District"), at a meeting duly called and held on May 18, 2020, via a videoconference pursuant to Gov. Newsom's Executive Order N-29-20, as follows:

WHEREAS, the Sustainable Groundwater Management Act (SGMA) of 2014, Water Code Sections 10720-10736.6 was signed into law September 16, 2014; and,

WHEREAS, the District formed Groundwater Sustainability Agencies for the Central Marina and Ord Community Service Areas in portions of the Monterey Subbasin and the 180/400 Subbasin in conformance with the SGMA; and,

WHEREAS, SGMA gives local agencies, such as the District, additional authorities and powers to manage groundwater; and,

WHEREAS, SGMA requires a coordinated Groundwater Sustainability Plan (GSP) or GSPs among or between adjacent GSAs and adjacent subbasins be submitted by January 31, 2022; and,

WHEREAS, GSP development requires collaboration amongst GSAs and other local or regional water management groups at the groundwater subbasin level and encourages collaboration across groundwater subbasin boundaries; and,

WHEREAS, GSP development requires consideration of beneficial uses and engagement with beneficial users, stakeholders and interested parties with opportunities, both formal and informal, to provide input to the District throughout the process of developing, operating, and implementing the GSA and GSP; and,

WHEREAS, such opportunities include, but are not limited to, public comment periods required by SGMA (e.g., Water Code Section 10728.4); opportunities for public comment during regular and special board meetings; and at other times to be determined and noticed pursuant to Water Code section 10727.8 (a); and,

WHEREAS, the District engaged EKI Water and Environment to assist in performing services to achieve the aforementioned SGMA planning and implementation process including stakeholder engagement, Proposition 1 & 68 Grant implementation, and as-needed technical support and project management during development of a GSP; and,

WHEREAS, EKI Environment & Water, Inc. staff is familiar with the Marina Coast Water District and has demonstrated extensive knowledge related to Groundwater Resources and Planning; and District staff believes that the monetary resource proposed herein is reasonable given the complexities of the work.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Marina Coast Water District does hereby authorize the General Manager to execute Amendment 2 with EKI Environment & Water, Inc. for preparing the GSP and to take all actions and execute all documents as may be necessary or appropriate to give effect to this resolution, the total dollar amount not-to-exceed $880,000 subject to approval of the FY 2020-2021 Water Resources Budget for consultant services.

PASSED AND ADOPTED on May 18, 2020 by the Board of Directors of the Marina Coast Water District by the following roll call vote:

Ayes: Directors_____

Noes: Directors_____

Absent: Directors_____

Abstained: Directors_____

_____
Thomas P. Moore, President

ATTEST:

_____
Keith Van Der Maaten, Secretary

CERTIFICATE OF SECRETARY

The undersigned Secretary of the Board of the Marina Coast Water District hereby certifies that the foregoing is a full, true and correct copy of Resolution No. 2020-GSA02 adopted May 18, 2020.

_____
Keith Van Der Maaten, Secretary

EXHIBIT A –SCOPE OF WORK

Professional Services
Groundwater Sustainability Plan Development and Recycled Water Feasibility Study
(Through End of Fiscal Year 2020 - 2021)
Marina Coast Water District

EKI Environment & Water, Inc. ("EKI"; formerly known as Erler & Kalinowski, Inc.) is pleased to provide Marina Coast Water District ("MCWD" or District) this scope of work for (1) MCWD Groundwater Sustainability Plan ("GSP") development in the Monterey Subbasin and (2) Recycled Water Feasibility Study preparation efforts. This scope of work covers the period between 15 May 2020 and the end of Fiscal Year 2020-2021 (i.e. 30 June 2021).

BACKGROUND

GSP Development in Monterey Subbasin

The MCWD submitted an application for a Proposition 1 Sustainable Groundwater Planning Grant – Round 2 ("Round 2 grant") for GSP development in the Monterey Subbasin by the MCWD and the Salinas Valley Basin Groundwater Sustainability Agency ("SVBGSA"). The application includes a detailed scope of work for GSP development in the Monterey Subbasin. The estimated budget for completion of this scope of work is $1,754,000 for efforts to be implemented by MCWD, with a grant request of $836,000, and a cost share of $918,000 by MCWD (per Proposition 1 cost share requirement of 50%)[1]. MCWD was awarded full funding and successfully entered into a grant agreement with DWR in November 2018. On 27 April 2018, MCWD authorized a total of $566,697 for EKI to support the initial phases of GSP development pursuant to the Round 2 grant scope of work. Accounting for monies authorized for EKI and other consultants for GSP foundational work prior to 2018, approximately $458,950 remains in consultant budget pursuant to the District's Round 2 grant scope of work.

In November 2019, MCWD submitted an application for a Proposition 68 Sustainable Groundwater Planning Grant – Round 3 ("Round 3 grant)" to address data gaps and conduct additional analyses identified during GSP development. The application includes a detailed scope of work that includes numerical groundwater modeling and additional coordination efforts with

[1] The entire Round 2 grant scope of work includes $1,754,000 of efforts to be implemented by MCWD and $337,000 to be implemented by SVBGSA, with a grant request of $1 million.

SVBGSA and other stakeholders in support of GSP development in the Monterey Subbasin. The estimated budget for completion of the identified scope of work is $735,000 for efforts to be implemented by MCWD, with a grant request of $450,000 and a cost share of $185,000 by MCWD (per Proposition 68 cost share requirement of 25%)[2].. On 18 March 2020, California Department of Water Resources ("DWR") announced Final Awards and awarded the full funding to MCWD. The Round 3 grant funding will be implemented as a grant agreement amendment to the existing Round 2 grant. The MCWD staff is currently working with DWR to enter into the amended grant agreement.

Recycled Water Feasibility Study

On 7 August 2019, MCWD submitted a Recycled Water Feasibility Study grant application to the California State Water Resources Control Board ("SWRCB"). The study scope is to assess the possibility of implementing an indirect potable reuse ("IPR") project within MCWD's Central Marina Service Area or Ord Community Service Area, which is anticipated to be one of the potential projects for groundwater augmentation within the GSP for the Monterey Subbasin. The estimated budget for completion of the scope of work is $150,000. The grant award is $75,000 with a requirement of $75,000 in matching funds by MCWD. MCWD entered into a grant agreement with the SWRCB on 4 February 2020.

The GSP development and Recycled Water Feasibility Study efforts are closely related and planned to occur concurrently. The basin numerical model development and analyses as part of GSP development will provide a foundation for site-specific, refined modeling of the Recycled Water Feasibility Study. Findings of the Recycled Water Feasibility Study will in turn inform Projects and Management Actions planning within the Monterey Subbasin.

PROPOSED SCOPE OF WORK

The grant applications identified in the background section above were prepared by EKI with significant input from MCWD. Each of these applications include a detailed work plan, which are included as Attachments A through C. The scope of work proposed herein for each task is based on the corresponding grant application work plans.

[2] The entire Round 3 grant scope of work includes approximately $635,000 of efforts to be implemented by MCWD and $425,000 to be implemented by SVBGSA, with a grant request of $1 million.

Task 1 – Development of Monterey Subbasin GSP Pursuant to Proposition 1 Grant Scope

Task 1 aligns with the effort required to develop a GSP as more fully described in the attached Round 2 grant Work Plan (Attachment A). The proposed scope of work includes tasks scheduled to occur during between May 2020 and June 2021. Substantial GSP development is anticipated to complete by June 2021 to allow for public review through to the GSP submittal deadline of 31 January 2022. These tasks generally include efforts under Phases 2 and 3 of the Round 2 Work Plan, listed below.

- Grant Administration;
- Project Management;
- Assess Groundwater Conditions and Develop Hydrogeologic Conceptual Model;
- Develop/Refine Numerical Groundwater Model;
- Develop Study Area and Basin-Wide Water Budget;
- Assess Existing Monitoring Programs and Develop SGMA-Compliant Monitoring Network;
- Evaluate Potential Management Areas;
- Develop Sustainable Management Criteria;
- Identify Projects and Management Actions;
- Create GSP Implementation Plan;
- Finalize Monitoring Network and Protocols;
- Conduct Stakeholder Engagement; and
- Participate in Intra-basin and Inter-basin Coordination Efforts.

A summary of grant scope of work and budget that itemize the proposed technical tasks are included herein (Attachments A).

Task 2 – Development of Monterey Subbasin GSP Pursuant to Proposition 68 Grant Scope

Task 2 aligns with the effort required to develop a GSP as more fully described in the attached Round 3 grant Work Plan (Attachment B). The proposed scope of work includes tasks scheduled to occur during between May 2020 and June 2021[3]. These tasks generally include efforts under the entire Round 3 Work Plan, listed below.

- Grant Agreement Administration;
- Project Management;

[3] Except for an $30,000 effort that was previously approved for supporting the District's 2019 AEM Study.

- Intra- and Inter-basin Coordination;
- Subbasin Coordination Committee
- Development of Refined-Basin Specific Numerical Groundwater Model
- Coordination of Modeling Efforts; and
- AEM Data Collection and Analysis.

Detailed scope of work and budget that itemize the proposed technical tasks are included herein (Attachments B).

Task 3 – Recycled Water Feasibility Study

Task 3 aligns with the effort required to prepare a Recycled Water Feasibility Study as more fully described in the attached SWRCB Recycled Water grant application, as listed below.

- Develop Background Information and Identify Study Design Criteria and Goals;
- Preparation and Documentation of Groundwater Flow Model;
- Analysis of IPR Recycled Water Alternatives;
- Develop Conceptual Design, Implementation Plan, Financing Plan and Revenue Program for Recommended Project;
- Prepare Draft and Final Reports and Submit to SWRCB Division of Financial Assistance; and
- Meetings and Project Management

Detailed scope of work and budget that itemize the proposed technical tasks are included in Attachment C.

PROJECT SCHEDULE

We are prepared to begin work immediately on this project upon receipt of MCWD authorization to proceed. Efforts under the proposed scope of work of this Work Authorization is anticipated to occur between May 2020 and June 2021. Substantial GSP development is anticipated to complete by June 2021 to allow for public review through to the GSP submittal deadline of 31 January 2022. Efforts for the Recycled Water Feasibility Study is anticipated to begin upon authorization and be completed within nine months.

PROPOSED PROJECT BUDGET

We propose that compensation for consulting services by EKI be on a time and expense reimbursement basis in accordance with our current Schedule of Charges. On the basis of previous authorizations and the consultant budget planned under respective grant applications, we propose a

budget of $880,000 for Tasks 1 through 3 which will not be exceeded without additional authorization.

Tasks	Budget	Estimated Grant Reimbursement[4]
Task 1 - GSP Development Pursuant to Proposition 1 Grant Scope	$420,000	$200,200
Task 2 - GSP Development Pursuant to Proposition 68 Grant Scope	$310,000	$189,800
Task 3 - Recycled Water Feasibility Study	$150,000	$75,000
TOTAL	**$880,000**	**$465,000**

Detailed budget estimate is included within the respective grant applications in Attachments A, B, and C. The approved grant amount for each technical task has been identified on the budget table for reference. However, it should be recognized that MCWD will be responsible for submittal of invoices for reimbursement to DWR and SWRCB pursuant to the provisions of the grants. EKI will work with MCWD to provide invoices in a format that is compatible with grant requirements; however, MCWD will be responsible for payment of EKIs services pursuant to the terms of its agreement with EKI.

As the services to be provided by EKI may evolve, EKI will inform MCWD whenever the existing budget is anticipated to need augmentation to accomplish requested work; such additional budgets will be established by mutually agreeable work authorizations.

ATTACHMENTS

Attachment A Round 2 Grant Application Work Plan Summary

Attachment B Round 3 Grant Applicant Scope of Work

Attachment C Recycled Water Feasibility Study Grant Application Scope of Work

Attachment D 2020 Schedule of Charges

[4] Based on proportionate share of grant award for the entire project.

ATTACHMENT A

Round 2 Grant Application Work Plan Summary

PROJECT OVERVIEW

For the purposes of this Proposition 1 Grant Application, the "Project" is the development of a SGMA-compliant GSP by MCWD GSA for the MCWD Study Area of the Basin.[1,2] The MCWD Study Area covers the Marina and Ord Subareas, where MCWD is the water service provider (Figure 1).

It has been agreed that SVBGSA will develop a GSP for the Corel de Tierra Subarea, and that the two coordinated GSPs prepared respectively by MCWD GSA and SVBGSA will cover the entire Basin. A separate project for GSP Development for the Corral De Tierra subarea which will be coordinated by SVBGSA is also included in this Proposition 1 application. The costs for that separate project are not included in the budget of this Work Plan.

This GSP Development Project Work Plan (Work Plan) describes the scope of work for development of a SGMA-compliant GSP by and for the MCWD GSA.

PROJECT OBJECTIVES

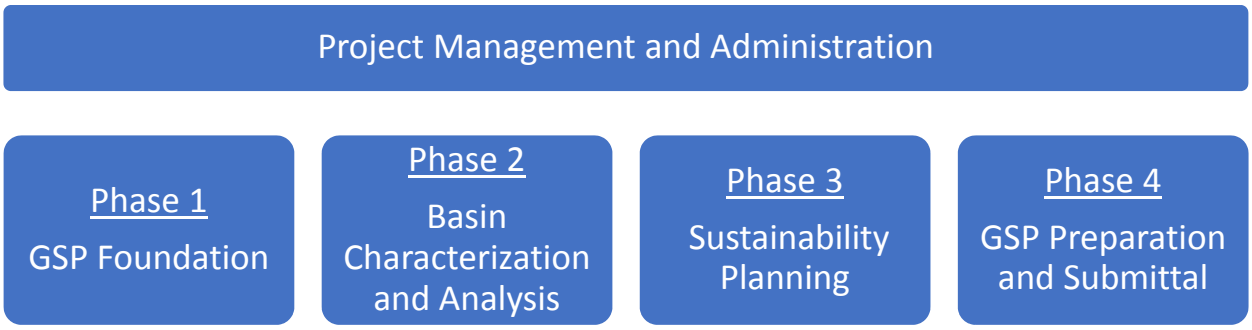
The main objective of this Project is to develop a complete GSP covering the MCWD Study Area of the Basin that will comply with and meet all requirements of the GSP Emergency Regulations (23-CCR §350-358.4) and will provide a reasonable path forward for achieving sustainable groundwater management in the Basin by the SGMA implementation deadline of 2042. The Project is designed to meet all requirements for a Category 2, Tier 2 project described in the Sustainable Groundwater Planning (SGWP) Groundwater Sustainability Plans and Projects Proposal Solicitation Package (PSP).

[1] This Work Plan and the accompanying Project schedule and budget were developed assuming that two GSPs will be developed covering the entire Basin and coordinated pursuant to California Water Code (CWC) §10727(b)(3). It is assumed that the Basin GSAs would coordinate in the development of all Basin-wide GSP components outlined as requirements of a GSP Coordination Agreement "to ensure that the Plans are developed and implemented using the same data and methodologies, and that elements of the Plans necessary to achieve the sustainability goal for the basin are based upon consistent interpretations of the basin setting" (California Code of Regulations, Title 23 [23-CCR] §354.7). As such, the incremental costs associated with developing separate GSPs are expected to be relatively minor. While not currently anticipated, if the Basin GSAs ultimately chooses to prepare and adopt a single GSP for the Basin, many of the data collection, development, and synthesis efforts and other stakeholder outreach and intra- and interbasin coordination efforts outlined and described in this Work Plan will be applicable to that effort.

[2] A portion of the Ord Subarea is federal land not subject to SGMA. The MCWD, through an agreement, provides water services to and regulates groundwater use in this area.

PROJECT PHASING

The Work Plan divides the overall GSP development effort into four phases, with a Project Management and Administration Phase (PM Phase) covering the entire process. As shown below, the four phases are: (1) GSP Foundation, (2) Basin Characterization and Analysis, (3) Sustainability Planning, and (4) GSP Preparation and Submittal. Each phase builds off efforts and results of the previous phases. The PM Phase includes tasks related to general management, including (1) grant management and administration, (2) project management, and (3) quality assurance/quality control (QA/QC).



As shown in the attached GSP Development Project Schedule, the four phases overlap temporally in cases where activities in a later phase can be initiated while activities in a previous phase are still ongoing. The work efforts of Phase 1, Phase 2 and portions of Phase 3 are accelerated with the objectives of:

- **Keeping pace with SGMA efforts in adjacent subbasins,** i.e., the 180/400 Foot Aquifer Subbasin (DWR 3-004.01), which is in critical overdraft conditions and subject to an accelerated SGMA-compliance schedule; and
- **Supporting effective interbasin coordination**, particularly with respect to critical factors such as the water budget and numerical groundwater model development (Phase 2) and the development and vetting of sustainability criteria (Phase 3).

The 180/400 Foot Aquifer Subbasin is hydraulically connected to the Basin. Overdraft conditions in the 180/400 Foot Aquifer Subbasin are causing groundwater to flow further inland within the Basin. Therefore, careful coordination with the 180/400 Foot Aquifer Subbasin will be required to stop further saltwater intrusion within the Basin. The MCWD GSA and the SVBGSA also cover the 180/400 Foot Aquifer Subbasin, and will be coordinating regarding GSP development for that subbasin.

INTERIM WORK PRODUCTS

The Work Plan will be implemented in a transparent and collaborative fashion such that all Basin stakeholders have ample opportunity to provide timely input. Specifically, the work effort of each task described herein will be documented as follows:

- **Technical Presentations** will be made by technical specialists on a regular and as-needed basis to the MCWD GSA and Basin stakeholders to provide for an open and transparent process and significant opportunity for input as key elements of the GSP are being developed. This approach

ensures that there will be "no surprises" when the Draft Technical Memoranda (see below) are reviewed and will streamline the review and revision process as major issues will have been vetted during the development stage by all parties; and

- **Draft Technical Memoranda** (TM) and associated tables and figures will be submitted to MCWD GSA and in some cases additional key stakeholders for review and comment. The Draft TMs will reflect input received during the related technical presentations and will be drafted to support key elements of the GSP. The Draft TMs will not be finalized; rather, suggested revisions to the Draft TMs will be incorporated as appropriate into chapters of the Draft GSP.

Selected work products, resources and underlying data will be made available for public review on the MCWD GSA website (http://www.mcwd.org/gsa_about.html).

PROJECT DELIVERABLES

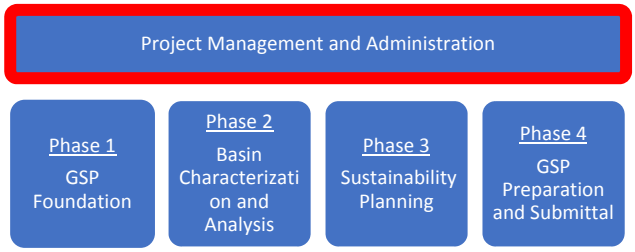
The deliverable for this Project is a complete and fully SGMA-compliant GSP reflective of MCWD GSA's efforts under this Project, including any associated Coordination Agreement(s), data and informational components (i.e., a functional Data Management System containing all preliminary data and a bibliography of sources used to develop the GSP; numerical model input/output files and documentation, project feasibility studies, etc.), submitted to the DWR. Additionally, the Project Applicant (i.e., the MCWD GSA) will submit all required grant administration-related reports to DWR, including quarterly progress reports and a final report, as established in the Grant Agreement that will be entered into by the Project Applicant and DWR.

SUMMARY WORK PLAN FOR GRANT ADMINISTRATION PURPOSES

Although the Project Work Plan has been developed in significant detail, it is assumed that, for purposes of grant administration, the Project Applicant will work with DWR to manage the grant at the Phase level. As such, a brief summary Work Plan that describes each Phase and the associated Tasks and associated work products and deliverables is provided below. This information supports and is consistent with the level of detail presented in the Project Budget and Schedule.

A more detailed description of each Phase and Task follows thereafter in the "Detailed Project Work Plan".

PM PHASE - PROJECT MANAGEMENT AND ADMINISTRATION



The Project Management and Administration Phase (PM Phase) includes tasks related to general management of the entire GSP development process (i.e., through planned submission by January 2022)[3]. The PM Phase efforts will be carried out concurrently with the execution of Phases 1 through 4, and includes the following Tasks consistent, where applicable, with the grant administration requirements outlined in the PSP Grant Agreement Template and the technical and reporting standards outlined in the GSP Regulations (23-CCR §352-352.6):

Task 1. Proposition 1 Grant (Grant) Management, Administration, and Reporting
Task 2. Project Management
Task 3. Quality Assurance/Quality Control

Anticipated work products under the PM Phase will include:

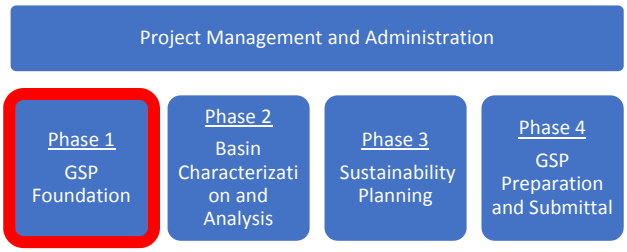
- Meeting agendas, minutes and presentations, as applicable;
- Project schedule, budget tracking and other management tools; and
- Draft and Final QA/QC Plan.

Deliverables to DWR under the PM Phase will include all submittals required by Proposition 1 grant requirements and agreed to in the Grant Agreement, including:

- Quarterly progress and accountability reports;
- A final Project Completion Report;
- A Grant Completion Report; and
- A Coordination Agreement (*as necessary*).

[3] The MCWD GSA may choose to accelerate GSP development efforts in order to submit the Final GSP to DWR ahead of the January 2022 deadline.

PHASE 1 – GSP FOUNDATION



Phase 1 of the Work Plan involves the following Tasks consistent, where applicable, with portions of Articles 3, 4, 5-1, 5-2, and 8 of the GSP Regulations (23-CCR §352-354.18, §357-357.4):

Task 4. Conduct Preliminary GSP Development Efforts
Task 5. Provide Initial Notification of GSP Development
Task 6. Select or Design Data Management System (DMS)
Task 7. Gather Available Data and Compile into DMS
Task 8. Compile Information on the Plan Area and Basin Management Activities
Task 9. Conduct Data Gaps Assessment
Task 10. Evaluate Numerical Groundwater Modeling Options
Task 11. Develop GSP Development Funding Plan
Task 12. Develop Stakeholder Communication and Engagement Plan (SCEP)
Task 13. Conduct Stakeholder Engagement Related to the GSP Foundation Phase
Task 14. Participate in Intrabasin and Interbasin Coordination Efforts

Efforts under Phase 1 will prepare MCWD GSA with the data, information, technical tools (i.e., a selected numerical model), and funding and outreach plans needed to successfully perform the subsequent Basin Characterization and Analysis efforts under Phases 2 and 3. Anticipated work products from Phase 1 efforts include:

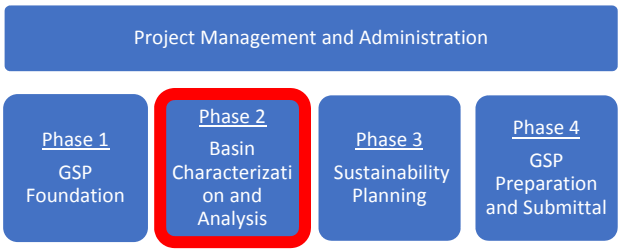
- A functional DMS containing all preliminary data and a living bibliography;
- Draft TM #1 – Data Management System Evaluation and Selection;
- Draft TM #2 – Data Compilation and Data Gaps Assessment;
- Draft TM #3 – Numerical Groundwater Model Evaluation and Selection;
- Draft TM #4 – GSP Development Funding Plan; and
- Draft TM #5 – Stakeholder Communication and Engagement Plan

Phase 1 will extend from the grant award date through June 2018[4]. One or more focused technical presentations will be made to MCWD GSA to present the data, methodology, and results from each task, and to solicit feedback prior to drafting and submitting each Draft TM for review.

[4] Cost-sharing activities associated with Phase 1 efforts will encompass relevant work undertaken by GSAs in the Basin since January 2015 (the effective date of SGMA).

PHASE 2 - BASIN CHARACTERIZATION AND ANALYSIS

Phase 2 of the Work Plan focuses on technical analysis of Basin conditions, and includes the following Tasks consistent, where applicable, with portions of the Basing Setting and Monitoring Network sections of the GSP Regulations (23-CCR §354.12-18, §354.32-40):



Task 15. Implement Plans for Filling Data Gaps Needed for GSP Preparation
Task 16. Assess Groundwater Conditions and Develop Hydrogeologic Conceptual Model
Task 17. Develop/Refine Numerical Groundwater Model
Task 18. Develop Study Area and Basin-Wide Water Budget
Task 19. Assess Existing Monitoring Programs and Develop SGMA-Compliant Monitoring Network
Task 20. Conduct Stakeholder Engagement Related to the Basin Characterization and Analysis Phase
Task 21. (Continue to) Implement GSP Development Funding Plan
Task 22. (Continue to) Participate in Intrabasin and Interbasin Coordination Efforts

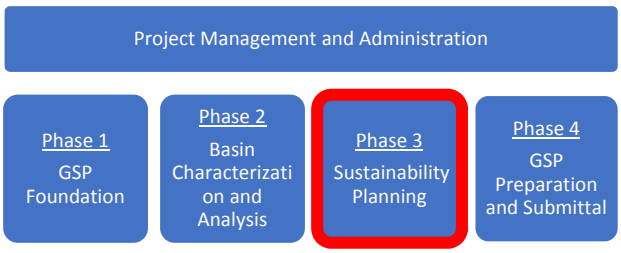
Efforts under Phase 2 will build towards a complete and coherent understanding of the Basin that will serve as the foundation for sustainability planning efforts under Phase 3. Anticipated work products from Phase 2 efforts include:

- Draft TM #6 – Groundwater Conditions and Hydrogeologic Conceptual Model;
- Draft TM #7 – Model Development and Calibration;
- Draft TM #8 – Water Budget and Preliminary Estimate of Sustainable Yield; and
- Draft TM #9 – Summary of Monitoring Network Assessment and Preliminary Monitoring Plan.

Phase 2 will extend from July 2018 through June 2019. One or more focused technical presentations will be made to MCWD GSA to present the data, methodology, and results from each task and to solicit feedback prior to drafting and submitting each Draft TM for review.

PHASE 3 - SUSTAINABILITY PLANNING

Phase 3 of the Work Plan focuses on planning for the sustainable management of the Basin, and includes the following Tasks consistent, where applicable, with portions of the Basin Setting, Sustainable Management Criteria, Monitoring Network, and Project and Management Actions sections of the GSP Regulations (23-CCR §354.20-44):



Task 23. Evaluate Potential Management Areas
Task 24. Develop Sustainable Management Criteria
Task 25. Identify Projects and Management Actions
Task 26. Create GSP Implementation Plan

Task 27. Finalize Monitoring Network and Protocols
Task 28. Conduct Stakeholder Engagement Related to Sustainability Planning
Task 29. (Continue to) Implement GSP Development Funding Plan
Task 30. (Continue to) Participate in Intrabasin and Interbasin Coordination Efforts

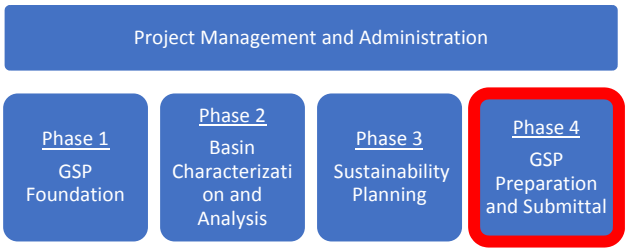
Anticipated work products from Phase 3 efforts include:

- Draft TM #10 – Delineation of Management Areas;
- Draft TM #11 – Establishment of Sustainability Criteria;
- Draft TM #12 – Proposed Projects and Management Actions;
- Draft TM #13 – GSP Implementation Plan; and
- Draft TM #14 – Proposed Monitoring Network and Protocols.

Phase 3 will extend from July 2019 through June 2020. One or more focused technical presentations will be made to MCWD GSA to present the data, methodology, and results from each task and to solicit feedback prior to drafting and submitting each Draft TM for review.

PHASE 4 - GSP PREPARATION AND SUBMITTAL

Phase 4 of the Work Plan involves preparation of the GSP for submittal to DWR, and includes the following Tasks consistent, where applicable, with requirements for GSP submission outlined in the GSP Regulations and in the California Water Code (CWC §10727-10728.6):



Task 31. Compile Complete Draft GSP
Task 32. Distribute Draft GSP and Revise (if necessary) Per Stakeholder Feedback
Task 33. Submit Final GSP to DWR
Task 34. (Continue to) Participate in Intrabasin and Interbasin Coordination Efforts

Final deliverables to DWR from Phase 4 efforts will include:

- A Final (written) GSP for the MCWD Study Area;
- Coordination Agreements (as applicable);
- A Data Management System, integrated with all existing data; and
- Numerical Model Inputs/Outputs

It is anticipated that Phase 4 will extend from July 2020 through the GSP submission deadline of 31 January 2022. The MCWD GSA may choose to accelerate Phase 4 efforts in order to submit the Final GSP to DWR ahead of the January 2022 deadline.

Project Budget

Table 4 – Project Budget

Proposal Title: __Groundwater Sustainability Planning for the Monterey Subbasin_____
Project Title: _Marina Coast Water District Study Area Groundwater Sustainability Planning_____
Project serves a need of a DAC?: ☑ Yes ☐ No
Cost Share Waiver request?: ☐ Yes ☑ No

Tasks[1]		(a) Requested Grant Amount	(b) Cost Share: Non-State Fund Source2	(c) Other Cost Share	(d) Total Cost
Phase PM - Project Management and Administration (Tasks 1 - 3)		**$ 72,937**	**$ 80,085**	**$ 7,148**	**$ 160,170**
(a)	Task 1. Proposition 1 Grant Mgmt., Admin, & Reporting	$ 32,312	$ 35,479	$ 3,167	$ 70,958
(b)	Task 2. Project Mgmt.	$ 34,541	$ 37,926	$ 3,385	$ 75,853
(c)	Task 3. Quality Assurance/Quality Control	$ 6,083	$ 6,680	$ 596	$ 13,359
Phase 1 - GSP Foundation (Tasks 4 - 14)		**$ 283,444**	**$ 311,223**	**$ 27,779**	**$ 622,446**
(d)	Task 4. Conduct Preliminary GSP Development Efforts	$ 190,008	$ 208,630	$ 18,622	$ 417,261
(e)	Task 5. Provide Initial Notification of GSP Development	$ 842	$ 925	$ 83	$ 1,849
(f)	Task 6. Select or Design Data Management System	$ 8,315	$ 9,130	$ 815	$ 18,259
(g)	Task 7. Gather Available Data & Compile into DMS	$ 8,238	$ 9,045	$ 807	$ 18,090
(h)	Task 8. Compile Information on the Plan Area & Basin Management Activities	$ 6,357	$ 6,980	$ 623	$ 13,960
(i)	Task 9. Conduct Data Gaps Assessment	$ 18,793	$ 20,634	$ 1,842	$ 41,269
(j)	Task 10. Evaluate Numerical Groundwater Modeling Options	$ 9,731	$ 10,684	$ 954	$ 21,369
(k)	Task 11. Develop GSP Development Funding Plan	$ 4,671	$ 5,129	$ 458	$ 10,257
(l)	Task 12. Develop Stakeholder Communication & Engagement Plan	$ 7,911	$ 8,686	$ 775	$ 17,372
(m)	Task 13. Conduct Stakeholder Engagement Related to GSP Foundation	$ 5,672	$ 6,228	$ 556	$ 12,456
(n)	Task 14. Participate in Intrabasin & Interbasin Coordination Efforts	$ 22,907	$ 25,152	$ 2,245	$ 50,304
Phase 2 - Basin Analysis and Characterization (Tasks 15 - 22)		**$ 244,532**	**$ 268,497**	**$ 23,966**	**$ 536,994**
(o)	Task 15. Implement Plan for Filling Data Gaps Needed for GSP Preparation	$ 57,370	$ 62,992	$ 5,623	$ 125,984
(p)	Task 16. Assess Groundwater Conditions & Develop Hydrogeologic Conceptual Model	$ 31,747	$ 34,858	$ 3,111	$ 69,716
(q)	Task 17. Develop/Refine Numerical Groundwater Model	$ 65,510	$ 71,931	$ 6,420	$ 143,861
(r)	Task 18. Develop Study Area and Basin-Wide Water Budget	$ 27,876	$ 30,608	$ 2,732	$ 61,216
(s)	Task 19. Assess Existing Monitoring Programs & Develop SGMA-Compliant Monitoring Network	$ 19,996	$ 21,956	$ 1,960	$ 43,911

Project Budget

(t)	Task 20. Conduct Stakeholder Engagement Related to Basin Characterization	$ 5,379	$ 5,906	$ 527	$ 11,812
(u)	Task 21. Implement GSP Development Funding Plan	$ 3,112	$ 3,417	$ 305	$ 6,834
(v)	Task 22. Participate in Intrabasin & Interbasin Coordination Efforts	$ 33,542	$ 36,830	$ 3,287	$ 73,660
Phase 3 - Sustainability Planning (Tasks 23 - 30)		**$ 149,046**	**$ 163,654**	**$ 14,607**	**$ 327,308**
(w)	Task 23. Evaluate Potential Management Areas	$ 9,678	$ 10,627	$ 949	$ 21,253
(x)	Task 24. Develop Sustainable Management Criteria	$ 27,160	$ 29,822	$ 2,662	$ 59,644
(y)	Task 25. Identify Projects & Management Actions	$ 33,084	$ 36,327	$ 3,242	$ 72,654
(z)	Task 26. Create GSP Implementation Plan	$ 20,076	$ 22,044	$ 1,968	$ 44,087
(aa)	Task 27. Finalize Monitoring Network & Protocols	$ 14,988	$ 16,457	$ 1,469	$ 32,913
(ab)	Task 28. Conduct Stakeholder Engagement Related to Sustainability Planning	$ 9,569	$ 10,506	$ 938	$ 21,013
(ac)	Task 29. Implement GSP Development Funding Plan	$ 1,380	$ 1,515	$ 135	$ 3,030
(ad)	Task 30. Participate in Intrabasin & Interbasin Coordination Efforts	$ 33,112	$ 36,357	$ 3,245	$ 72,714
Phase 4 - GSP Preparation and Submittal (Tasks 31 - 34)		**$ 86,153**	**$ 94,597**	**$ 8,444**	**$ 189,194**
(ae)	Task 31. Compile Complete Draft GSP	$ 17,854	$ 19,604	$ 1,750	$ 39,207
(af)	Task 32. Distribute Draft GSP & Revise per Stakeholder Feedback	$ 16,332	$ 17,933	$ 1,601	$ 35,866
(ag)	Task 33. Submit Final GSP	$ 1,403	$ 1,541	$ 138	$ 3,081
(ah)	Task 34. Participate in Intrabasin & Interbasin Coordination Efforts	$ 50,564	$ 55,520	$ 4,956	$ 111,040
(ai)	**Grand Total (Sum rows (a) through (ai) for each column)**	**$ 836,112**	**$ 918,056**	**$ 81,944**	**$ 1,836,112**

[1] Refer to Work Plan for description of tasks. Tasks are organized by Work Plan phase and subtotals are shown for each phase.

[2] Local Cost Share will be provided by MCWD GSA (per Resolution No. 2017-GSA04, adopted 16 October 2017). The total for Column B is exactly 50% of the total project cost, and Column C is the additional cost share that the MCWD GSA is opting to contribute beyond the minimum requirement.

Budget Description

This detailed budget table was developed to reflect estimated Project costs on a Task and Phase basis and is commensurate with the level of detail included in the Project Work Plan and Schedule. We anticipate that the grant will be managed at the Phase level.

For each Phase (and Task), estimated costs are reported for each of the entities (i.e., Technical Consultant and GSA staff) that will be involved in Project development. The costs are inclusive of the expected contributions of all staff within each respective entity and are developed based on: (1) records of hours or dollars spent to date for tasks already completed, and/or (2) professional experience performing similar work efforts. Total costs for each Phase (and Task) include the expected labor associated with completing the technical, facilitation, and/or administrative work efforts and preparing the associated presentations, technical memoranda, and all other interim work products and deliverables identified in the Project Work Plan.

Labor hours for each Phase (and Task) are translated into Project costs based on the billing/hourly rates and an assumed distribution of labor for each of the entities involved in Project development. Certain labor hours and costs (e.g., those related to GSA staff effort) are associated with in-kind services and will be applied towards Project cost share. Total requested grant amount is exactly 50% of the total Technical Consultant fees and the other direct costs (ODCs).

This budget estimate includes ODCs for field equipment, laboratory/analytical charges, and specialized software usage charges (i.e., CADD and GIS), wherever any ODCs are anticipated to occur. These ODCs were estimated based on typical current unit costs for each individual item multiplied by the anticipated quantity as described in the Project Work Plan. The level of effort and corresponding budget assumed for each Phase (and Task) reflects currently known or anticipated availability of technical information, tools, and other resources to support the Project, as described in the Project Work Plan.

Phase	Task		Costs by Category			Cost Totals	
			Technical Consultant	GSA Staff	ODCs	Task TOTAL	Rounded Phase TOTAL
PM Phase	Task 1.	Proposition 1 Grant Management, Administration, & Reporting	*$40,952*	*$30,007*	*$0*	**$70,958**	**$160,170**
	Task 2.	Project Management	*$39,749*	*$36,104*	*$0*	**$75,853**	
	Task 3.	Quality Assurance/Quality Control	*$7,519*	*$5,680*	*$160*	**$13,359**	
Phase 1 GSP Foundation	Task 4.	Conduct Preliminary GSP Development Efforts	*$383,159*	*$34,102*	*$0*	**$417,261**	**$622,446**
	Task 5.	Provide Initial Notification of GSP Development	*$1,389*	*$460*	*$0*	**$1,849**	
	Task 6.	Select or Design Data Management System	*$17,633*	*$626*	*$0*	**$18,259**	
	Task 7.	Gather Available Data & Compile into DMS	*$13,726*	*$4,044*	*$320*	**$18,090**	
	Task 8.	Compile Information on the Plan Area & Basin Management Activities	*$12,544*	*$1,096*	*$320*	**$13,960**	
	Task 9.	Conduct Data Gaps Assessment	*$40,629*	*$0*	*$640*	**$41,269**	
	Task 10.	Evaluate Numerical Groundwater Modeling Options	*$21,129*	*$0*	*$240*	**$21,369**	
	Task 11.	Update GSP Development Funding Plan	*$6,405*	*$3,852*	*$0*	**$10,257**	
	Task 12.	Develop Stakeholder Communication & Engagement Plan	*$12,162*	*$5,210*	*$0*	**$17,372**	
	Task 13.	Conduct Stakeholder Engagement Related to GSP Foundation	*$8,310*	*$4,146*	*$0*	**$12,456**	
	Task 14.	Participate in Intrabasin & Interbasin Coordination Efforts	*$30,828*	*$19,476*	*$0*	**$50,304**	

Budget Description

Phase	Task		Costs by Category			Cost Totals	
			Technical Consultant	GSA Staff	ODCs	Task TOTAL	Rounded Phase TOTAL
Phase 2 Basin Characterization & Analysis	Task 15.	Implement Plan for Filling Data Gaps Needed for GSP Preparation	*$92,489*	*$8,595*	*$24,900*	**$125,984**	**$536,994**
	Task 16.	Assess Groundwater Conditions & Develop Hydrogeologic Conceptual Model	*$64,463*	*$3,973*	*$1,280*	**$69,716**	
	Task 17.	Develop/Refine Numerical Groundwater Model	*$143,861*	*$0*	*$0*	**$143,861**	
	Task 18.	Develop Study Area and Basin-Wide Water Budget	*$58,178*	*$2,878*	*$160*	**$61,216**	
	Task 19.	Assess Existing Monitoring Programs & Develop SGMA-Compliant Monitoring Network	*$38,588*	*$5,003*	*$320*	**$43,911**	
	Task 20.	Conduct Stakeholder Engagement Related to Basin Characterization and Analysis	*$9,052*	*$2,760*	*$0*	**$11,812**	
	Task 21.	Implement GSP Development Funding Plan	*$1,198*	*$5,636*	*$0*	**$6,834**	
	Task 22.	Participate in Intrabasin & Interbasin Coordination Efforts	*$58,596*	*$15,064*	*$0*	**$73,660**	
Phase 3 Sustainability Planning	Task 23.	Evaluate Potential Management Areas	*$19,637*	*$1,456*	*$160*	**$21,253**	**$327,308**
	Task 24.	Develop Sustainable Management Criteria	*$55,128*	*$4,036*	*$480*	**$59,644**	
	Task 25.	Identify Projects & Management Actions	*$61,612*	*$10,402*	*$640*	**$72,654**	
	Task 26.	Create GSP Implementation Plan	*$32,683*	*$11,004*	*$400*	**$44,087**	
	Task 27.	Finalize Monitoring Network & Protocols	*$31,027*	*$1,406*	*$480*	**$32,913**	
	Task 28.	Conduct Stakeholder Engagement Related to Sustainability Planning	*$18,741*	*$2,272*	*$0*	**$21,013**	
	Task 29.	Implement GSP Development Funding Plan	*$1,340*	*$1,690*	*$0*	**$3,030**	
	Task 30.	Participate in Intrabasin & Interbasin Coordination Efforts	*$58,596*	*$14,118*	*$0*	**$72,714**	
Phase 4 - GSP Prep & Submittal	Task 31.	Compile Complete Draft GSP	*$27,535*	*$11,192*	*$480*	**$39,207**	**$189,194**
	Task 32.	Distribute Draft GSP & Revise per Stakeholder Feedback	*$21,206*	*$14,660*	*$0*	**$35,866**	
	Task 33.	Submit Final GSP to DWR	*$1,905*	*$1,176*	*$0*	**$3,081**	
	Task 34.	Participate in Intrabasin & Interbasin Coordination Efforts	*$57,302*	*$53,738*	*$0*	**$111,040**	
					TOTAL ESTIMATED PROJECT COSTS:	***$1,836,112***	

ATTACHMENT B

Round 3 Grant Applicant Scope of Work

PROJECT DETAILS

D. Scope of Work and Deliverables

a. Scope of Work

The Project Work Plan is split into a total of three components, which coincide with the components in *Attachment 4 – Project Budget* and *Attachment 5 – Project Schedule*. Within each component there are a series applicable categories and sub-tasks which are necessary to develop a comprehensive GSP.

Basin stakeholders and the general public will be informed of the status and results of these tasks during public GSA Board meetings, Subbasin Coordination Committee meetings, Public Workshop(s), direct outreach, and the Public Hearing to Adopt the GSP. All GSA Board meeting packets and workshop presentations are posted to the GSAs' websites ((https://www.mcwd.org/gsa_about.html; https://svbgsa.org/). Finally, the Draft GSP will be available on the GSAs' website for a 90-day public comment period per the GSP Regulations. Once all public comments have been addressed, the GSAs will hold Public Hearing(s) to adopt the GSP, and the final adopted GSP will be uploaded to DWR's SGMA portal as well as the GSA's website. Annual reports will also be submitted on DWR's SGMA portal.

Component 1 Grant Administration

Category (a) Grant Agreement Administration includes all work efforts needed to comply with Grant reporting and administration requirements, including accounting of expenditures of allocated grant monies, preparation of Quarterly Progress Reports, invoices, and associated documentation, and as-needed communications with DWR Sustainable Groundwater Planning (SGWP) grant administration staff. Grant Administration will be conducted throughout the entire Project timeframe (i.e., one quarter following the January 2022 GSP submission deadline [April 2022]), as it requires tracking the Project progress, budget, and schedule. As the Proposition 68 Grant requires separate grant reporting and invoicing, this task is not duplicative with the previously funded (Round 2) Grant Agreement Administration task.

Category (a). Grant Agreement Administration

Task 1. Grant Agreement Administration

Task 1 includes all work efforts needed to prepare and submit Grant reporting and invoicing documents to DWR. These documents include Quarterly Progress Reports, invoices and associated backup documentation, and quarterly cost share reconciliation.

Component 2 GSP Development by MCWD GSA

This component consists of GSP development activities to be implemented by MCWD GSA for the Basin GSP.

Category (a). Component Administration

Task 1. Project Management

Task 1 includes project management activities, including budget tracking, schedule management, staff assignments, subconsultant/subcontractor management, contract compliance, etc.

Category (b). Stakeholder Engagement / Outreach

Task 1. Intra- and Inter-basin Coordination

Task 1 includes additional work efforts required to continue the current level of intra- and inter-basin coordination implemented by MCWD GSA through January 2022. Existing Round 2 funding is anticipated to support MCWD GSA's intra- and inter-basin coordination activities through early 2020.

Task 2. Subbasin Coordination Committee

MCWD GSA, in collaboration with SVBGSA, will establish a Subbasin Coordination Committee for GSP development within the Monterey Subbasin. The Committee will include members from each GSA as well as key stakeholders within the Basin to provide an avenue for input and deliberation regarding the Monterey Subbasin GSP, Membership of Subbasin Committee will be determined in early 2020. Members will assist the GSAs with communication to stakeholder groups and be expected to represent their respective groups so that the GSP reflects local stakeholder preferences. The Subbasin Committee will provide input for the MCWD GSA Board of Directors. The Subbasin Committee will discuss GSP content, seawater intrusion control, and projections and management actions within the Subbasin.

This task includes additional stakeholder engagement efforts for MCWD GSA to administer the Subbasin Committee and hold public committee meetings. Existing Round 2 funding is also anticipated to support this process.

Category (c). GSP Development

Category (c) GSP Development includes additional work efforts required to develop numerical tools and fill data gaps identified during GSP foundational work efforts that are crucial for developing a comprehensive GSP that meets all regulatory and technical guidance provided by DWR and others. Category (c) GSP Development will include critical supplemental tasks to GSP development currently under way supported by the Basin's Round 2 funding, and focuses on two tasks as detailed below. These work efforts are not duplicative work efforts currently underway as part of the Round 2 funding efforts.

Task 1. Development of Refined Basin-Specific Numerical Groundwater Model

The entire scope for development of a refined Basin-specific numerical groundwater model is described under this task. However, as described above and in Attachment 4, this grant application only requests for the level-of-effort that was not anticipated in the Basin's Round 2 GSP work plan, which was developed assuming refining and applying the SVIHM for GSP development. The scope of work for modeling consists of four major tasks, consistent with the general modeling process outlined in DWR's Modeling Best Management Practices document (DWR, 2016):

1. Model Development, including data compilation and synthesis, model code selection, model construction, model parameterization, boundary and initial conditions, and transport processes;
2. Model Calibration, including sensitivity analysis, model calibration, and model validation;
3. Model Application, including running the model for specific SGMA-related purposes;
4. Model Documentation, including identification of model uncertainties and potential future steps.

The model to be developed, calibrated, applied, and documented under this effort will be a local model of the Monterey Subbasin, and will thus be known as the Monterey Subbasin Groundwater Model (MSGM).

Task 1.1 Model Development

Task 1 Model Development involves building a numerical model that represents the physical system in and around the Monterey Subbasin, based, to the extent possible, on the best available information and science. Model development will include incorporating information and data from existing models, as well as new information and data that has been recently collected and compiled for the AOI. The model will be constructed with the following modeling objectives and applications in mind:

- Supporting the development of water budget information for inclusion in the Monterey Subbasin GSP, including for historical, current and projected conditions, and including evaluation of sustainable yield;
- Supporting analysis of Sustainable Management Criteria, including assessment of the occurrence (location and timing) of conditions that may lead to undesirable results;
- Supporting assessment of Projects and Management Actions that may be included in the Monterey GSP to ensure that undesirable results are avoided, and that sustainable management is achieved in the subbasin; and
- Supporting evaluation of additional projects, not specifically included in the Monterey Subbasin GSP, that may be implemented in the subbasin or in neighboring areas and which may potentially impact groundwater conditions and either aid or hinder the subbasin's ability to achieve sustainable management.

The first step in model development will be to compile and synthesize the various datasets already gathered to support the basin Hydrogeologic Conceptual Model (HCM) (i.e., geology, hydrogeology, groundwater conditions, land use, soils, etc.) into a single unified framework (e.g., consistent coordinate system) which can then be converted into a numerical representation of the system. One dataset that will be key to this modeling effort is the recently acquired AEM data collected by MCWD in 2017, over most of the coastal portion of the subbasin. These data, which consist of high spatial resolution measurements of the groundwater's electro-physical properties, depict the occurrence of fresh water and seawater and will be used to inform model layering and existing conditions. As discussed in Task 3 below, a second round of AEM data was collected in 2019 and the information from these two snapshots in time will facilitate analysis of freshwater recharge from infiltration of rainfall, a key component of the sustainably yield.

The second step in model development will be to select an appropriate modeling code/software environment. The model code will be selected from amongst the MODFLOW family of groundwater model software tools to ensure that it will be compatible with the USGS's regional SVIHM. As stated earlier, it is anticipated that the refined information developed with

the MSGM will eventually be incorporated into that regional model. The MSGM model will be developed to be compatible with variable-density flow models such as SEAWAT to allow for future extension of this feature, which may be required to ultimately design potential basin projects such as an extraction barrier.

The next step in model development is to construct the spatial model domain, grid, and layering, and set up the temporal scheme. The MSGM model domain will be specified to include the entire Monterey Subbasin and will extend some distance into the adjacent areas. Specifying the model domain to be larger than the Monterey Subbasin will reduce the effects of uncertain boundary conditions on simulated conditions within the subbasin. The model grid will be developed with consideration of available information and groundwater use, with higher resolution in areas of greater groundwater use. The model domain will be divided vertically into layers corresponding to the primary aquifer and aquitard units, based on the detailed HCM information, including the recently acquired AEM data. The temporal scheme (i.e., timesteps and overall simulation duration) will be developed based on available data and in conjunction with the water budget modeling objectives.

Once the spatial grid and temporal scheme of the model are set up, the model will be parameterized based on the best available data. Parameterization will draw on data from other existing models of the area (e.g., the USGS's SVIHM, the Army's Fort Ord model, the Seaside Subbasin model, and others), as well as incorporation of available data from aquifer tests and other sources, as applicable.

The next step in model development will be the development and assignment of boundary conditions and initial conditions. Boundary conditions include the sea level along the western boundary, no flow conditions at the model bottom and along certain lateral boundaries, specified head values along certain other lateral boundaries, and groundwater pumping. The boundary condition at the land surface will be recharge, including recharge from rainfall as well as managed recharge (if developed in the future) and deep percolation of applied irrigation water. Recharge rates will be estimated *a priori* using independent methods based on climate, land use, soil properties using the Integrated Water Flow Model (IWFM) Demand Calculator (IDC) or similar public domain code. The recharge estimates will be calibrated through examination of their effect on groundwater levels in the shallow Dune Sand Aquifer, as well as with the AEM-derived recharge volume estimates developed from the 2017 and 2019 AEM datasets. Surface water systems will be incorporated through use of specialized boundary conditions that account for stream stage, streambed properties, and vertical gradients between surface water and underlying groundwater. Initial conditions will be assigned based on historical groundwater elevation contour maps. The model's temporal scheme will include a "warm-up" period to allow potential inaccuracies from initial conditions to dissipate prior to the start of the actual period of interest.

The model will be capable of simulating transient groundwater flow processes within its domain. Next the model will be extended to include advective transport processes using particle tracking. This extension will allow for simulation of the movement of conservative solutes, such as total dissolved solids, to assess the rate of movement of the seawater intrusion front. The use of transport processes will be essential to understanding the potential role of Projects and Management Actions in avoiding undesirable results in the subbasin.

Task 1.2 Model Calibration

Task 2 Model Calibration involves the refinement of model parameters and boundary conditions from their initial specified values in order to improve the model's ability to simulate observed conditions (i.e., model performance) and decrease overall error. Calibration will include three steps: sensitivity analysis, model parameter adjustment, and model validation. Each of these three steps will be conducted for both steady-state and transient conditions.

Sensitivity analysis is used to identify which parameters have a significant influence on the model results, thereby allowing subsequent model calibration to focus on those parameters. This analysis involves adjusting selected parameters in a controlled manner and analyzing the change in output variables. Sensitivity analysis can be performed using automated software (e.g., PEST), given the complexity of the model domain.

Once the most sensitive parameters are identified, those parameters will be adjusted within reasonable ranges, based on available data and scientific understanding, to attempt to improve the overall model performance for a given time period (i.e., the calibration period). Certain observed data will be selected as calibration targets, and the goal of calibration will be to reduce model error with respect to those targets. Model calibration data will include hydraulic head (water level) measurements in wells, and also electrical conductance data from the recent AEM studies as a surrogate for groundwater salinity levels.

Model validation is similar to model calibration; however, it entails running the model with calibrated parameters over a separate validation period to assess model performance. Satisfactory model performance during the model validation period gives confidence that the calibrated model can simulate other non-calibration periods with reasonable accuracy.

Task 1.3 Model Application

The calibrated model will be used for analysis of several key components of the Monterey Subbasin GSP: water budgets, Sustainable Management Criteria (SMC) development, and Project / Management Action (P/MA) evaluation.

Under Task 3.1, the calibrated model will be used to develop the water budget information required under the GSP Regulations (CCR § 354.18). A water budget is a quantitative accounting, using mass balance principles, of all of the water inflows to and outflows from a given spatial domain, a task for which groundwater models such as the MSGM are implicitly well-suited. The model-based estimates will be presented along with information on measured values, when available, and with discussion of their range of uncertainty.

The water budgets required in GSPs include three time period: historical, "current", and projected (future). Historical and current time periods rely on information for various components based on actual data whereas the projected period requires estimation/projection of those components. Projected water budgets require development of new input datasets that incorporate projected changes in land use and water use within the Monterey Subbasin, as well as the effects of climate change which may include changes to precipitation and potential evapotranspiration as well as sea level rise. Projected water budgets will be developed for Baseline, Urban Growth and Urban Growth with Climate Change scenarios. Uncertainty in projected water budgets will be quantified in terms of the parameter sensitivity information (see Task 2.1 above), as well as by comparison of the projected scenarios which themselves encompass a range of uncertain outcomes. Results will help inform the development of projects and management actions to address any potential negative projected change in storage.

GSP water budgets require an estimate of "sustainable yield", a term which is defined in relation to the locally-defined undesirable results as the amount of pumping that can be sustained over the long-term without causing such undesirable results. When the undesirable results are defined, the model will be used to assess the amount of pumping that is possible whilst avoiding those undesirable results.

The MSGM model will be used to evaluate the effects of projected land and water use on groundwater conditions, relative to the relevant sustainability indicators. This analysis will guide the development of SMCs, including Minimum Thresholds, Measurable Objectives, and Interim Milestones. The model will be a valuable tool for assessing how, where, and when the proposed SMCs might be met or exceeded.

The model will also be used to simulate how the groundwater conditions would change as a result of implementation of planned P/MAs. These results will guide the P/MA implementation planning and will help in coordinating with adjacent basins in their P/MAs. Regional projects would likely extend beyond the boundaries of the MSGM, and thus will likely require coordinated modeling efforts with SVBGSA.

Task 1.4 Model / Modeling Documentation

Task 1.4 entails preparing documentation of the MSGM model development, calibration, and application. Documentation will include preparation of one Technical Memorandum (TM) describing the model development and calibration under Tasks 1.1 and 1.2, respectively, and a second TM describing the model application for purposes of GSP water budget analysis, SMC analysis, and P/MA evaluation under Task 1.3.

Task 2. Coordination of Modeling Efforts

This task will include time spent by MCWD GSA developing a modeling coordination agreement with SVBGSA and subsequent modeling coordination efforts. These modeling coordination efforts will include:

(a) Providing information to SVBGSA and its technical consultant during MCWD GSA's development of the refined Basin-Specific numeral model including model input parameters, structure, and calibration results.

(b) Responding to questions/concerns expressed by SVBGSA and incorporating input from SVBGSA into the refined Basin-Specific numeral model.

(c) Providing information to SVBGSA and its technical consultant regarding comparisons of water budgets developed the refined Basin-Specific numeral model and SVIHM.

(d) Reviewing and providing feedback to SVBGSA and its technical consultant regarding information provided during SVBGSA's development of a Basin-specific and regional variable-density model identified under Component 3 herein, including modeling of regional projects and management actions on conditions within the Basin.

Task 3. AEM Data Collection and Analysis

This task includes efforts associated with acquiring AEM data over the specified project area, performing quality assurance and quality control protocols (QA/QC), database development, and review of hydrogeologic and geologic conditions for the area. The 2019 AEM survey covered areas previously flown during 2017 as well as additional/modified flight lines. Additional flight lines were added to inland areas of the Monterey Subbasin and Seaside Subbasin. The AEM survey was flown over the project area at a spacing appropriate to capture the groundwater quality of the area. Approximately 531 line-miles of AEM survey was flown in May 2019.

Data collected from the survey will be used to create a hydrogeologic framework of the project area. Technical consultants will process and numerically invert the AEM data and derive 2D and 3D electrical resistivity models of the surveyed area. A hydrogeologic framework of the area will be developed that will include maps of aquifer(s), map of aquifer(s) relationship to current test holes and production groundwater wells, a comparison of the change in nature and extent from 2017 with the 2019 data, and a map of estimated seawater intrusion areas in the surveyed area.

Category (d). Monitoring / Assessment

Not applicable

Component 3 GSP Development by SVBGSA

This component consists of GSP development activities to be implemented by SVBGSA for the MCWD Subbasin GSP.

Category (a). Component Administration

Task 1. Project Management

Developing the Seawater Intrusion Model will entail coordination between technical staff that work on modeling, GIS map development, GSP development, and projects and management actions. Project management will ensure that all activities that are affected by the Seawater Intrusion Model work in a consistent manner.

Task 2. Grant Administration Support

This task includes the SVBGSA portion of grant administration, including invoicing, contract management, and contributions to quarterly and final reports. MCWD GSA will combine all grant administration and deliver reports and deliverables to DWR.

Category (b). Stakeholder Engagement / Outreach

Task 1. Inter- and Intra-Basin Coordination

Coordination within the Monterey Subbasin and between subbasins is critical to ensure an integrated approach to groundwater sustainability in the Salinas Valley. This task includes coordination with MCWD GSA within the Monterey Subbasin and with other Salinas Valley subbasins on all topics relating to GSP development and implementation.

Task 2. Subbasin Coordination Committee

The SVBGSA will assist MCWD GSA with convening a Subbasin Committee for the Monterey Subbasin. The subbasin Committee will involve a diverse mix of stakeholders so as to provide an avenue for input and deliberation regarding the Monterey Subbasin GSP. Membership of Subbasin Committee will be determined in early 2020. Members will assist the GSAs with communication to stakeholder groups and be expected to represent their respective groups so that the GSP reflects local stakeholder preferences. The Subbasin Committee will provide input for the SVBGSA valley-wide Advisory Committee and Board of Directors. The Subbasin Committee will discuss GSP content, seawater intrusion, and projects and management actions within the subbasin.

Category (c). GSP Development

Task 1. Seawater Intrusion Model Development

The SVBGSA, working with its technical consultant, will develop a seawater intrusion model to assess the impacts of projects and management actions on the rate and extent of seawater intrusion. Seawater intrusion is one of the main groundwater problems in the Monterey Subbasin and a model is needed to identify a strategy to reduce intrusion. The model will be a simplified variable density model to represent the differing densities between seawater and fresh groundwater, and will build off the SVIHM and MCWD GSA's MSGM. To be consistent with these models, a three-dimensional variable density

modeling code will be selected that is compatible with the MODFLOW modeling platform, such as SEAWAT or the MODFLOW Sea Water Intrusion (SWI) package. The seawater intrusion model will add the variable density components to MCWD GSA's MSGM and evaluate how it alters flows. If the densities impact the calibration, it would be recalibrated to better match measured water levels and salinity. This is a complex and time-intensive modeling process because salinity varies throughout the aquifer and affects groundwater flow and seawater intrusion. Data available from MCWRA for seawater intrusion, as well as MCWD's geophysical data, will be assessed and incorporated into the model as appropriate.

Task 2. Coordination of Modeling Efforts

This task will include time spent by SVBGSA developing a modeling coordination agreement with SVBGSA and subsequent modeling coordination efforts. These modeling coordination efforts will include:

(a) Reviewing MCWD GSA's refined Basin-specific model identified under Component 2 herein, providing questions/concerns to MCWD GSA and its technical consultant on model, and reaching agreement on technical specifications.

(b) Providing information to MCWD GSA and its technical consultant during SVBGSA's development of the seawater intrusion model, including input parameters, structure, and calibration, and modeling of regional projects and management actions on conditions within the Basin.

(c) Responding to MCWD GSA's feedback on SVBGSA's development of the variable density model.

Task 3. Coordination of Seawater Intrusion Model between Monterey Subbasin and Other Subbasins

To address seawater intrusion in the Monterey Subbasin and the Salinas Valley, it is critical to coordinate data and models of seawater intrusion. As such, this task anticipates substantial time spent coordinating the seawater intrusion model developed for the Monterey Subbasin with the other Salinas Valley subbasins that are impacted by seawater intrusion. This will provide the opportunity to refine the model taking into account the best data available, and it will result in a shared model to assess the effects of projects and management actions throughout the Salinas Valley on seawater intrusion.

Category (d). Monitoring / Assessment

Task 1. Check Monitoring Network Consistency with the Salinas Valley Groundwater Basin

It is important that the monitoring networks between the Monterey Subbasin and 180/400-Foot Subbasin are consistent and there is coordination between them. To address this, the SVBGSA will compare monitoring networks to identify any inconsistencies or data gaps.

b. Project Deliverables

Component 1 Grant Administration

Category (a) Deliverables *(0% complete)*:

- Executed Grant Agreement, including Amendment(s) (if necessary)
- Quarterly Progress Reports
- Quarterly invoices and all required backup documentation
- Draft and Final Grant Completion Report
- Environmental Information Form (EIF)

Environmental Compliance and Permitting

No environmental compliance and permitting is required under Category (a)

Component 2 GSP Development by the MCWD GSA

(a) Component Administration	
Task 1. Project Management	**Project Status**: 0% **Deliverables**: Summary of project management on quarterly reports
(b) Stakeholder Engagement / Outreach	
Task 1. Inter- and Intra-Basin Coordination	**Project Status**: 0% **Deliverables**: Summary of coordination on quarterly reports

Task 2. Subbasin Coordination Committee	**Project Status**: 0% **Deliverables**: Meeting agendas, meeting materials, and minutes
(c) GSP Development	
Task 1. Development of Refined Basin-Specific Numerical Groundwater Model	**Project Status**: 0% **Deliverables**: Draft GSP Appendix – Groundwater Flow Model documentation
Task 2. Coordination of Modeling Efforts	**Project Status**: 0% **Deliverables**: Model Coordination Agreement (as necessary), meeting agendas, meeting materials, and minutes
Task 3. AEM Data Collection and Analysis	**Project Status**: 80% **Deliverables**: AEM Survey Hydrogeologic Framework Report
(d) Monitoring / Assessment	
Not applicable	

Environmental Compliance and Permitting

No environmental compliance and permitting is required for Component 2.

Component 3 GSP Development by the SVBGSA

(a) Component Administration	
Task 1. Project Management	**Project Status**: 0% **Deliverables**: Summary of project management on quarterly reports
Task 2. Grant Administration Support	**Project Status**: 0% **Deliverables**: Quarterly invoices and progress reports, and final report
(b) Stakeholder Engagement / Outreach	
Task 1. Inter- and Intra-Basin Coordination	**Project Status**: 0% **Deliverables**: Summary of coordination on quarterly reports
Task 2. Subbasin Coordination Committee	**Project Status**: 0% **Deliverables**: Meeting agendas, meeting materials, and minutes
(c) GSP Development	
Task 1. Seawater Intrusion Model Development	**Project Status**: 0% **Deliverables**: Seawater intrusion model documentation
Task 2. Coordination of Modeling Efforts	**Project Status**: 0% **Deliverables**: Model Coordination Agreement (as necessary), meeting agendas, meeting materials, and minutes
Task 3. Coordination of Seawater Intrusion Model between Monterey Subbasin and Other Subbasins	**Project Status**: 0% **Deliverables**: Summary of seawater intrusion model coordination efforts between the Monterey Subbasin and other subbasins
(d) Monitoring / Assessment	
Task 1. Check Monitoring Network Consistency with the Salinas Valley Groundwater Basin	**Project Status**: 0% **Deliverables**: Summary of monitoring network consistency check.

Environmental Compliance and Permitting

No environmental compliance and permitting is required for Component 3.

ATTACHMENT 4

GRANT PROPOSAL SUMMARY BUDGET – TEMPLATES

Table 5B – Grant Proposal Summary Budget (Multiple Components)

Grant Proposal Title: **GSP Development Activities in the Monterey Subbasin**

Applicant: **Marina Coast Water District GSA**

Grant Proposal serves a need of a DA?: ☒ Yes ☐ No

Local Cost Share requested: ☒ 25% ☐ 15% ☐ 10% ☐ 0%

Budget Categories	(a) Requested Grant Amount	(b) Local Cost Share: Non-State Fund Source[2]	(c) Total Cost	(d) % Local Cost Share (Col (b)/ Col (c))
Component 1 Grant Administration	$23,000	$8,000	$31,000	25%
Component 2: GSP Development by MCWD GSA	$527,000	$177,000	$704,000	25%
Component 3: GSP Development by SVBGSA	$450,000	$175,320	$625,320	25%
Grand Total *Sum rows (1) through (n) for each column*	**$1,000,000**	**$360,320**	**$1,360,320**	**25%**

[1] List sources of funding: *Local Cost Share will be provided by Marina Coast Water District Groundwater Sustainability Agency (MCWD GSA) and Salinas Valley Basin Groundwater Sustainability Agency (SVBGSA) for their respective project components. Local Cost Share is calculated based on the total project cost (grant amount plus match),* ***not*** *the grant amount. Total project cost x %Local Cost Share = required match.*

ATTACHMENT 4

PROPOSAL/COMPONENT DETAILED BUDGET – TEMPLATE

Table 6B – Proposal/Component Detailed Budget (Multiple Components)

Grant Proposal Title: GSP Development Activities in the Monterey Subbasin

Applicant: Marina Coast Water District GSA

Component Title: Component 1: Grant Administration

Budget Categories [1]	(a) Requested Grant Amount	(b) Local Cost Share: Non-State Fund Source[2]	(c) Total Cost
(a) Grant Administration	**$23,000**	**$8,000**	**$31,000**
Task 1: Grant Administration	$23,000	$8,000	$31,000
Grand Total *Sum rows in Category (a) for each column*	**$23,000**	**$8,000**	**$31,000**

[1] Only these Budget Categories shall be used. Tasks should be added for more detail.
[2] List sources of funding: *Local Cost Share will be provided by MCWD GSA. Local Cost Share is calculated based on the total project cost (grant amount plus match),* ***not*** *the grant amount. Total project cost x %Local Cost Share = required match.*

ATTACHMENT 4

PROPOSAL/COMPONENT DETAILED BUDGET – TEMPLATE

Table 6B – Proposal/Component Detailed Budget (Multiple Components)

Grant Proposal Title: GSP Development Activities in the Monterey Subbasin

Applicant: Marina Coast Water District GSA

Component Title: Component 2: GSP Development by MCWD GSA

Budget Categories [1]	(a) Requested Grant Amount	(b) Local Cost Share: Non-State Fund Source[2]	(c) Total Cost
(a) Component Administration	**$14,000**	**$5,000**	**$19,000**
Task 1. Project Management	$14,000	$5,000	$19,000
(b) Stakeholder Engagement / Outreach	**$79,000**	**$27,000**	**$106,000**
Task 1. Inter- and Intra-Basin Coordination	$52,000	$18,000	$70,000
Task 2. Subbasin Coordination Committee	$27,000	$9,000	$36,000
(c) GSP Development	**$434,000**	**$145,000**	**$579,000**
Task 1. Development of Refined-Basin Specific Numerical Groundwater Model	$137,000	$46,000	$183,000
Task 2: Coordination of Modeling Efforts	$52,500	$17,500	$70,000
Task 3. AEM Data Collection and Analysis	$244,500	$81,500	$326,000
(d) Monitoring / Assessment	**--**	**--**	**--**
Grand Total *Sum rows (a) through (d) for each column*	**$527,000**	**$177,000**	**$704,000**

[1] Only these Budget Categories shall be used. Tasks should be added for more detail.

[2] List sources of funding: *Local Cost Share will be provided by MCWD GSA. Local Cost Share is calculated based on the total project cost (grant amount plus match),* ***not*** *the grant amount. Total project cost x %Local Cost Share = required match.*

ATTACHMENT 4

PROPOSAL/COMPONENT DETAILED BUDGET – TEMPLATE

Table 6B – Proposal/Component Detailed Budget (Multiple Components)

Grant Proposal Title: GSP Development Activities in the Monterey Subbasin

Applicant: Marina Coast Water District GSA

Component Title: Component 3: GSP Development by SVBGSA

Budget Categories [1]	(a) Requested Grant Amount	(b) Local Cost Share: Non-State Fund Source[2]	(c) Total Cost
(a) Component Administration	**$15,000**	**$45,460**	**$60,460**
Task 1. Project Management	$10,000	$34,000	$44,000
Task 2. Grant Administration Support	$5,000	$11,460	$16,460
(b) Stakeholder Engagement / Outreach	**$33,000**	**$49,970**	**$82,970**
Task 1. Inter- and Intra-Basin Coordination	$15,000	$35,500	$50,500
Task 2. Subbasin Coordination Committee	$18,000	$14,470	$32,470
(c) GSP Development	**$400,000**	**$79,890**	**$479,890**
Task 1. Seawater Intrusion Model Development	$300,000	$42,390	$342,390
Task 2. Coordination of Modeling Efforts	$70,000	--	$70,000
Task 3. Coordination of Seawater Intrusion Model between Monterey Subbasin and Other Subbasins	$30,000	$37,500	$67,500
(d) Monitoring / Assessment	**$2,000**	**--**	**$2,000**
Task 1. Check Monitoring Network Consistency with the Salinas Valley Groundwater Basin	$2,000	--	$2,000
Grand Total *Sum rows (a) through (e) for each column*	**$450,000**	**$175,320**	**$625,320**

[1] Only these Budget Categories shall be used. Tasks should be added for more detail.

[2] List sources of funding: *Local Cost Share will be provided by SVBGSA. Local Cost Share is calculated based on the total project cost (grant amount plus match), **not** the grant amount. Total project cost x %Local Cost Share = required match.*

ATTACHMENT C

Recycled Water Feasibility Study Grant Application Scope of Work

outside the Seaside and North Marina model boundaries, these models therefore cannot reliably simulate the planned IPR operations. Finally, the Salinas Valley Integrated Hydrologic Model ("SVIHM"). The SVIHM represents the entire Salinas Valley Basin and can provide insight into the relationships between inland recharge and extraction activities and groundwater conditions in the Monterey Subbasin. However, detailed review of the SVIHM is needed to evaluate its utility to simulate the injection/extraction operations being considered by MCWD and IPR project feasibility.

The MCWD is in active negotiations for access to the SVIHM to support their groundwater sustainability efforts in the Monterey Subbasin. Accordingly, this access will also provide the opportunity to evaluate SVIHM's utility to assess IPR feasibility. However, the timing of SVIHM availability to MCWD is uncertain, and alternative plans may be needed to ensure MCWD has a model that can adequately support completion of their Groundwater Management Plan (GMP) and evaluate the IPR project for the Monterey Subbasin. Therefore, unless access to the SVIHM model can be obtained in a timely manner, the most effective option will be to utilize the abundance of geohydrologic information available in the existing Fort Ord, Seaside, and North Marina models to construct a custom model that represents the Monterey Subbasin and supports GSP development and IPR feasibility.

4. STUDY SCOPE

As described above, this feasibility study aims to identify a preferred project for injection of purified recycled water into the Monterey Subbasin for future extraction by MCWD's municipal production wells and for protection of these production wells from seawater intrusion. A groundwater-flow model is needed to evaluate the feasibility of IPR to accomplish these goals. It is also needed to assess retention times within the aquifer of injected advanced treated recycled water prior to extraction at the nearest production well. State Water Resources Control Board ("SWRCB") regulations for groundwater replenishment under Title 22 of the California Code of Regulations ("Recycled Water Regulations"), require minimum aquifer retention times for injected recycled water for pathogen microorganism control.

A numerical, three-dimensional, transient model is required that characterizes the multi-aquifer system, simulates seasonal extraction and injection operations, and calculates the potential water retention time between injection and extraction. For example, recycled water availability for injection will likely be greater during winter and early spring when CSIP irrigation water demand is low, whereas recycled water availability will be relatively less during the summer and early fall when CSIP water demand is high. The groundwater-flow model is needed to quantitatively evaluate the complex relationships between the seasonal injection/extraction schedules, injection/extraction well locations, the resulting spatial distribution of groundwater levels and storage, and recycled water aquifer retention time.

As such, a large portion of this feasibility study will be the preparation and use of a groundwater-flow model to asses a variety of well siting, operational, and flow rate scenarios that will then be screened for final evaluation. A draft feasibility study outline is included as Exhibit 2 and the tasks anticipated to be included for this feasibility study are as follows:

4.1 Task 1 – Develop Background Information and Identify Study Design Criteria and Goals

This task includes preparation of Sections 1, 2, 3, and 4.1 as shown in the draft feasibility study outline (Exhibit 2). These sections will include identification of study goals; a description of the study area; a discussion of existing water supplies and infrastructure, existing wastewater facilities, and existing recycled water users; and development of planning and design criteria that will be used to evaluate the selected alternatives.

4.2 Task 2 – Preparation and Documentation of Groundwater-Flow Model

Due to the limited geographic scope of the existing models cited above, and the uncertain availability of the SVIHM which is still under development. It is anticipated that, an area-specific model for the Monterey Subbasin will be developed to evaluate IPR feasibility, if the SVIHM model cannot be obtained in a timely manner. The Monterey Subbasin model can be efficiently constructed by leveraging the abundance of geohydrological, climatological, and land and water use data archived in the existing models. Moreover, MCWD's parallel groundwater data compilation and analysis activities supporting GSP development provide additional cost-effective information to construct the model.

The U.S. Geological Survey Groundwater-Flow Model (MODFLOW) will be used to assemble the model input data and simulate groundwater conditions in the Monterey Subbasin, and its post-processor MODPATH shall be employed to calculate groundwater pathlines and time-of travel between injection and extraction wells. A detailed scope of model construction is included as Exhibit 3. Sensitivity testing conducted on the model can be conducted to identify input data having the greatest influence on simulated injection/extraction results and for improving model reliability through future monitoring and data collection efforts.

This task also includes documenting the model construction, calibration, and sensitivity, which will be included as part of the feasibility study.

4.3 Task 3 – Analysis of IPR Recycled Water Alternatives

The groundwater-flow model will be employed to simulate time-varying injection/extraction operations, the resulting groundwater levels, and calculated groundwater pathlines and

underground retention time (time-of-travel). For purposes of the modeling analysis, the historical recharge and pumping data set will be repeated, and the monthly injection and extraction rates based on seasonal and climatic variability. Hence, simulated injection rates can represent both seasonality as well as multi-year wet and dry periods reflected in the 1987-2008 historical record. The post-processor MODPATH will be employed to track the movement of purified recycled water in the groundwater system injection wells to the extraction wells and evaluate the time-of-travel for groundwater influenced by this purified recycled water to be extracted.

The model will be used to consider at least two IPR injection scenarios. Each scenario will be analyzed using multiple simulations that seek to optimize injection well locations and quantitatively characterize model uncertainty. Variable well locations will be evaluated to test their effectiveness to maintain seaward gradients west of the extraction wells and form a hydraulic barrier to saltwater intrusion from the Pacific Ocean. Moreover, well locations will be evaluated to maximize underground retention times of purified recycled water and enhance the potable water supply. The sensitivity of model-derived well locations and simulated retention times to reasonable ranges in specified aquifer parameters and boundary conditions will be quantified to characterize model uncertainty.

The two IPR injection alternatives identified through modeling will be further evaluated based on a variety of factors, including but not limited to technical feasibility, cost, energy requirements, benefits to stakeholders, and whether they meet project goals. For each alternative, feasibility-level cost and energy use estimates will be prepared.

Non-recycled water alternatives, such as desalination or water conservation, will not be evaluated as part of this feasibility study, as they would not accomplish the goal of protecting MCWD's productions wells from seawater intrusion.

Based on the alternative's analysis, a recommended project will be selected for further development as part of Task 4.

4.4 Task 4 – Develop Conceptual Design, Implementation Plan, Financing Plan and Revenue Program for Recommended Project

The recommended project will be further developed into a conceptual design, including conceptual site plans and proposed pipeline alignments, as appropriate, as well as a discussion of operations and maintenance requirements. Based on the conceptual design, a more refined cost estimate will be and will include additional detail on operations and maintenance costs (e.g. electrical power, SCADA, chemical storage, staffing, and land acquisition, if needed).

Task 4 also includes development of a project implementation plan and schedule, which will include bidding and construction, coordination with stakeholders, California Environmental Quality Act ("CEQA") compliance, SWRCB and Regional Water Quality Control Board ("RWQCB") permitting, and other local permitting requirements (easements, etc.).

Finally, a projection of annual costs and revenues will be prepared by MCWD, and a financing plan developed to demonstrate cash flow during project implementation and to determine sources of funds for the recommended project. This analysis will evaluate whether changes to MCWD's rates and charges may be required to fund the project.

4.5 Task 5 – Prepare Draft and Final Reports and Submit to SWRCB Division of Financial Assistance ("DFA")

Evaluation performed under Tasks 1 through 4 will be compiled into a complete draft feasibility study report and submitted to the SWRCB DFA for review. Following receipt of comments from the SWRCB DFA, a response to comments will be prepared and the final report submitted to the SWRCB DFA for approval.

4.6 Task 6 – Quality Assurance/Quality Control ("QA/QC") and Project Management

Throughout preparation of the feasibility study, QA/QC reviews will be conducted by consultant senior staff, MCWD staff, and various stakeholders (e.g. M1W). All critical analyses will be reviewed for technical accuracy according to industry best practices.

Additionally, this task will include up to 3 meetings, including a study kick-off meeting, one stakeholders meeting, and one meeting with SWRCB DFA staff following submittal of the draft feasibility study report.

This task also includes coordination, communication and general project management between the consultant and MCWD staff throughout the project.

5. STAKEHOLDER ENGAGEMENT

Marina Coast Water District will provide updates on the feasibility study work to the community through MCWD's website. The MCWD Board will periodically receive project updates allowing opportunity for public input. MCWD will also coordinate with M1W during the feasibility study process to discuss the project benefits and opportunities, and implementation planning.

6. FEASIBILITY STUDY BUDGET

Estimated costs for tasks involved in the preparation of the study are as follows:

Task	Description	Budget
1	Develop Background Information and Identify Study Design Criteria and Goals	$6,000
2	Preparation and Documentation of Groundwater-Flow Model	$64,000
3	Analysis of IPR Recycled Water Alternatives	$50,000
4	Develop Conceptual Design, Implementation Plan, Financing Plan and Revenue Program for Recommended Project	$15,000
5	Prepare Draft and Final Reports and Submit to SWRCB	$7,000
6	QA/QC and Project Management	$8,000
	Total	**$150,000**

6.1 Funding Sources for Feasibility Study

MCWD plans to fund 50% of the recycled water feasibility study costs through the grant funds, and 50% of the study costs through the MCWD water fund budget. MWCD has an ample water fund balance to manage cash flow changes through the project duration as project costs are encumbered and grant reimbursements received during the study period.

ATTACHMENT D

2020 Schedule of Charges

Client/Address: Marina Coast Water District
2840 4th Avenue
Marina, CA 93933

Proposal/Agreement Date: **EKI Project # B60094.xx**

SCHEDULE OF CHARGES FOR EKI ENVIRONMENT & WATER, INC. **2 January 2020**

Personnel Classification	Hourly Rate
Officer and Chief Engineer-Scientist	301.60
Principal Engineer-Scientist	291.20
Supervising I, Engineer-Scientist	280.80
Supervising II, Engineer-Scientist	270.40
Senior I, Engineer-Scientist	260.00
Senior II, Engineer-Scientist	249.60
Associate I, Engineer-Scientist	239.20
Associate II, Engineer-Scientist	223.60
Engineer-Scientist, Grade 1	208.00
Engineer-Scientist, Grade 2	195.52
Engineer-Scientist, Grade 3	179.92
Engineer-Scientist, Grade 4	160.16
Engineer-Scientist, Grade 5	140.40
Engineer-Scientist, Grade 6	123.76
Technician	113.36
Senior GIS Analyst	145.60
CADD Operator / GIS Analyst	128.96
Senior Administrative Assistant	142.48
Administrative Assistant	112.32
Secretary	92.56

Direct Expenses

Reimbursement for direct expenses, as listed below, incurred in connection with the work will be at cost plus ten percent (10%) for items such as:

a. Maps, photographs, reproductions, printing, equipment rental, and special supplies related to the work.
b. Consultants, soils engineers, surveyors, drillers, laboratories, and contractors.
c. Rented vehicles, local public transportation and taxis, travel and subsistence.
d. Special fees, insurance, permits, and licenses applicable to the work.
e. Outside computer processing, computation, and proprietary programs purchased for the work.

Reimbursement for company-owned automobiles, except trucks and four-wheel drive vehicles, used in connection with the work will be at the rate of sixty cents ($0.60) per mile. The rate for company-owned trucks and four-wheel drive vehicles will be seventy-five cents ($0.75) per mile. There will be an additional charge of thirty dollars ($30.00) per day for vehicles used for field work. Reimbursement for use of personal vehicles will be at the federally allowed rate plus ten percent (10%).

CADD Computer time will be charged at twenty dollars ($20.00) per hour. In-house material and equipment charges will be in accordance with the current rate schedule or special quotation. Excise taxes, if any, will be added as a direct expense.

Rate for professional staff for legal proceedings or as expert witnesses will be at a rate of one and one-half times the Hourly Rates specified above.

The foregoing Schedule of Charges is incorporated into the Agreement for the Services of EKI Environment & Water, Inc. and may be updated annually.

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Marina Coast Water District
Agenda Transmittal

Agenda Item: 11 Meeting Date: May 18, 2020

Prepared By: Paula Riso Approved By: Keith Van Der Maaten

Agenda Title: Consent Calendar

Staff Recommendation: The Board of Directors approve the Consent Calendar as presented.

Background: *Strategic Plan Mission Statement – We provide our customers with high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner.*

Consent calendar consisting of:

A) Receive and File the Check Register for the Month of April 2020
B) Receive the Quarterly Financial Statements for January 1, 2020 to March 31, 2020
C) Approve the Draft Minutes of the Regular Joint Board/GSA Meeting of April 20, 2020
D) Approve the Draft Minutes of the Regular Board Meeting/Budget Workshop of April 28, 2020
E) Consider Adoption of Resolution No. 2020-28 Proclaiming the Week of May 17-23, 2020 National Public Works Week

Discussion/Analysis: See individual transmittals.

Environmental Review Compliance: None required.

Other Considerations: The Board of Directors can approve these items together or they can pull them separately for discussion.

Material Included for Information/Consideration: Check Register for April 2020; Quarterly Financials; draft minutes of April 20, 2020; draft minutes of April 28, 2020; and, Resolution No. 2020-28.

Action Required: _____Resolution ___X___Motion _____Review
(Roll call vote is required.)

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

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Marina Coast Water District
Agenda Transmittal

Agenda Item: 11-A Meeting Date: May 18, 2020

Prepared By: Kelly Cadiente Approved By: Keith Van Der Maaten

Agenda Title: Receive and File the Check Register for the Month of April 2020

Staff Recommendation: The Board of Directors receive and file the April 2020 expenditures totaling $1,846,494.71.

Background: *Strategic Plan, Objective No. 3 – Our objective is to manage public funds to assure financial stability, prudent rate management and demonstrate responsible stewardship. Our fiscal strategy is to forecast, control and optimize income and expenditures in an open and transparent manner. We will efficiently use our financial resources to assure availability to fund current and future demands.*

Discussion/Analysis: These expenditures were paid in April 2020 and the Board is requested to receive and file the check register.

Environmental Review Compliance: None required.

Financial Impact: _____Yes __X__No Funding Source/Recap: Expenditures are allocated across the six cost centers; 01-Marina Water, 02-Marina Sewer, 03- Ord Water, 04- Ord Sewer, 05-Recycled Water, 06-Regional Water.

Other Consideration: None.

Material Included for Information/Consideration: April 2020 Summary Check Register.

Action Required: _____Resolution ___X___Motion _____Review
(Roll call vote is required.)

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

APRIL 2020 SUMMARY CHECK REGISTER

DATE	CHECK #	CHECK DESCRIPTION	AMOUNT
04/08/2020	WIRE	Friedman & Springwater LLP	64,011.76
04/08/2020	69052 - 69092	Check Register	910,186.28
04/21/2020	69093 - 69121	Check Register	326,188.14
04/22/2020	69122 - 69123	Check Register	58,375.76
04/03/2020	ACH	State of California - EDD	9,205.12
04/03/2020	ACH	Internal Revenue Service	43,985.80
04/03/2020	ACH	CalPERS	24,400.22
04/03/2020	ACH	MassMutual Retirement Services, LLC	12,378.01
04/03/2020	500732 - 500735	Payroll Checks and Direct Deposit	103,976.54
04/03/2020	500736 - 500737	Check Register	1,472.27
04/06/2020	500738 - 500741	Check Register	24,341.07
04/08/2020	500742	Check Register	75,358.47
04/17/2020	ACH	CalPERS	24,418.94
04/17/2020	ACH	MassMutual Retirement Services, LLC	11,542.75
04/17/2020	ACH	State of California - EDD	8,838.80
04/17/2020	ACH	Internal Revenue Service	42,193.77
04/17/2020	500743 - 500746	Payroll Checks and Direct Deposit	102,529.61
04/17/2020	500747	Check Register	606.27
04/23/2020	500748 - 500752	Check Register	2,345.90
04/29/2020	ACH	Internal Revenue Service	139.23
		TOTAL DISBURSEMENTS	**1,846,494.71**

Check No	Invoice Date	Check Date	Vendor Name	Description	Amount
WIRE	03/20/2020	04/08/2020	Friedman & Springwater LLP	Legal Fees - MCWD v CPUC, RPD Superior Court Damages Cases 02/2020	64,011.76
69052	03/31/2020	04/08/2020	Ace Hardware	General Supplies	2,203.84
69053	03/20/2020	04/08/2020	Quinn Company	(3) Gensets - B/C Booster, Wells 31 and 34	340,117.10
69054	03/24/2020	04/08/2020	Monterey Peninsula Unified School District	Water Conservation Education 02/2020	3,355.81
69055	03/26/2020	04/08/2020	Insight Planners	Hosting, Web Development/ Maintenance 03/2020	1,373.00
69056	03/25/2020	04/08/2020	Grainger	General Supplies	12.81
69057	03/23/2020	04/08/2020	MBS Business Systems	Copier Maintenance Fee 02/2020 - 05/2020	125.36
69058	03/27/2020	04/08/2020	Owen Equipment	Vactor Truck	474,618.06
69059	03/31/2020	04/08/2020	Peninsula Welding & Medical Supply, Inc.	Gas Cylinder Tank Rental Fee - Welding Supplies	12.90
69060	03/24/2020	04/08/2020	Monterey Bay Analytical Services	Laboratory Testing	360.00
69061	03/31/2020	04/08/2020	Monterey One Water	Sewer Treatment Charge 03/2020 - 04/2020	132.50
69062	03/18/2020	04/08/2020	Verizon Wireless	Cell Phone Service 03/2020	1,180.59
69063	03/11/2020	04/08/2020	Commercial Truck Co.	BIT Inspection, Air/ Brake Line Repair - Vehicle #0801	721.11
69064	03/26/2020	04/08/2020	Quinn Rental Services	Generator Rental - Ord Village LS	3,259.47
69065	03/27/2020	04/08/2020	American Supply Company	Janitorial Supplies	378.46
69066	03/27/2020	04/08/2020	Fastenal Industrial & Construction Supplies	General Supplies	504.99
69067	03/28/2020	04/08/2020	O'Reilly Automotive Stores, Inc.	Auto/ General Supplies	72.66
69068	03/20/2020	04/08/2020	Don Chapin Co., Inc	Main Line Repair - Warrelman Ct; Generator Pads - Crescent LS, B/C and Marina Booster, Wells 31 and 34	41,931.47
69069	03/24/2020	04/08/2020	Univar Solutions USA, Inc.	Chlorine - Intermediate Reservoir, Wells 10 and 11	2,159.96
69070	03/26/2020	04/08/2020	Sturdy Oil Company	Dyed Diesel - B/C and Marina Booster, Wells 31 and 34; Clear Diesel - Convault Tank/ O&M Yard	7,674.46
69071	03/31/2020	04/08/2020	First Choice Service	Coffee Supplies	189.54
69072	03/26/2020	04/08/2020	Sherwin-Williams Co.	Paint for Wells	372.06
69073	03/24/2020	04/08/2020	Voyager Fleet Systems, Inc.	Fleet Gasoline	3,130.08
69074	03/27/2020	04/08/2020	Green Rubber-Kennedy AG, LP	General Supplies	131.42
69075	03/21/2020	04/08/2020	Graniterock Company	3.69 tons Cold Mix	725.64
69076	03/31/2020	04/08/2020	ICONIX Waterworks (US), Inc.	10" Flex Check - Well 11, (6) Mega Lug Kits, (6) Couplings, General Supplies	5,904.56
69077	03/31/2020	04/08/2020	Peninsula Messenger LLC	Courier Service 04/2020	165.00
69078	03/28/2020	04/08/2020	AT&T	Phone/ Alarm Line Services 03/2020	202.12
69079	04/01/2020	04/08/2020	Simpler Systems, Inc.	UB Datapp Maintenance 04/2020	500.00
69080	03/31/2020	04/08/2020	Marina Coast Water District (BLM)	BLM Water, Sewer, Fire Service 03/2020	413.22
69081	04/01/2020	04/08/2020	Pure Janitorial, LLC	BLM Janitorial Services 03/2020	1,850.00
69082	04/01/2020	04/08/2020	Customer Service Refund	Refund Check - 199 Linde Cir	41.58

Check No	Invoice Date	Check Date	Vendor Name	Description	Amount
69083	03/30/2020	04/08/2020	Customer Service Refund	Refund Check - 7693 Monterey/ CDC	3,244.84
69084	04/01/2020	04/08/2020	Customer Service Refund	Refund Check - 368 Buttercup Blvd	26.95
69085	04/01/2020	04/08/2020	Customer Service Refund	Refund Check - 316 Kalborn Rd	168.15
69086	04/01/2020	04/08/2020	Customer Service Refund	Refund Check - 3063 Phillip Cir	25.49
69087	04/01/2020	04/08/2020	Customer Service Refund	Refund Check - Hydrant Meter	1,664.63
69088	04/01/2020	04/08/2020	Customer Service Refund	Refund Check - 18703 Mc Clellan Cir	81.05
69089	04/01/2020	04/08/2020	Customer Service Refund	Refund Check - 122 Lakewood Dr	101.48
69090	04/01/2020	04/08/2020	Customer Service Refund	Refund Check - 16246 East Garrison Dr	81.05
69091	04/01/2020	04/08/2020	Customer Service Refund	Refund Check - 282 Beach Rd	145.75
69092	04/01/2020	04/08/2020	Customer Service Refund	Refund Check - Irrigation Meter	10,827.12
69093	04/08/2020	04/21/2020	Quinn Company	Generator Repair - Watkins Gate Well and Airport LS, Genset - Marina Booster	87,569.89
69094	03/31/2020	04/21/2020	City of Marina	Franchise Tax Fee 01/2020 - 03/2020	33,455.11
69095	03/31/2020	04/21/2020	Fort Ord Reuse Authority	Franchise Tax Fee 01/2020 - 03/2020	121,952.12
69096	03/27/2020	04/21/2020	Home Depot Credit Services	General Supplies	2,195.10
69097	04/02/2020	04/21/2020	Grainger	General Supplies	4.77
69098	04/08/2020	04/21/2020	Area Communications	Answering Service 03/2020	139.00
69099	04/06/2020	04/21/2020	MBS Business Systems	(2) Copier Maintenance Fees 01/2020 - 03/2020	1,774.72
69100	04/07/2020	04/21/2020	Monterey Bay Analytical Services	Laboratory Testing	780.00
69101	04/05/2020	04/21/2020	Staples Credit Plan	Office Supplies	382.21
69102	04/09/2020	04/21/2020	Cypress Coast Ford	Resurface Rotors, Coolant Fluid Exchange, Oil Change - Vehicle #1235	759.87
69103	04/01/2020	04/21/2020	Maynard Group	NEC Phone Equipment Maintenance, AT&T Wireless Backup, eMVS Cloud, VoIP Services 04/2020	3,176.89
69104	04/03/2020	04/21/2020	Koff & Associates	Compensation Study	150.00
69105	03/31/2020	04/21/2020	DataProse, LLC	Customer Billing Statements 03/2020	4,917.54
69106	04/06/2020	04/21/2020	J&F Lockwood, Inc.	General Supplies	26.48
69107	04/01/2020	04/21/2020	Fastenal Industrial & Construction Supplies	General Supplies	108.13
69108	03/31/2020	04/21/2020	Mobile Modular	Modular Office - Water Resources 04/2020	743.69
69109	04/08/2020	04/21/2020	TJC and Associates, Inc.	Bid Period Assistance - Generator Project	51.25
69110	02/13/2020	04/21/2020	Lamassu Utility Services, Inc.	8" Sewer Pipe Okinawa CIPP Project	37,460.00
69111	04/08/2020	04/21/2020	Green Rubber-Kennedy AG, LP	Parts - Wells 10, 11, Watkins Gate; General Supplies	854.79

Check No	Invoice Date	Check Date	Vendor Name	Description	Amount
69112	04/06/2020	04/21/2020	U.S. Bank Corporate Payment Systems	ACWA 2020 Spring Conference/ Exhibition, Airfare for 2020 SNUG Conference, ZipRecruiter Subscription, Cloud Hosted Server - CityWorks/ ESRI, Premiere Global Service, LogMeIn Yearly Subscription, Splashtop Remote Desktop - Business Access, VNC Connect - Telemetry/ SCADA, General Supplies	6,142.89
69113	04/06/2020	04/21/2020	Marina Tire & Auto Repair	Tire Repair - Vehicle #1702	50.00
69114	04/10/2020	04/21/2020	Richards, Watson & Gershon	Legal Fees - Opp to CalAm Asserted Water Rights to CEMEX Prop, Regional Project Litigation 03/2020	7,131.52
69115	04/06/2020	04/21/2020	Edges Electrical Group, LLC	General Supplies	884.63
69116	04/16/2020	04/21/2020	Access Media Productions	Filming and Production 03/2020	460.00
69117	03/31/2020	04/21/2020	Western Exterminator Company	Pest Control - Beach Office 03/2020	91.50
69118	04/06/2020	04/21/2020	TIAA Commercial Finance, Inc.	(3) Office Copiers, eCopy ScanStation Leases 04/2020	1,163.67
69119	04/03/2020	04/21/2020	Fieldman, Rolapp & Associates, Inc.	Liquidity Facility Renewal 03/2020	561.91
69120	04/01/2020	04/21/2020	Verizon Connect NWF, Inc.	GPS Service - (2) Meter Reader Trucks 03/2020	38.00
69121	03/31/2020	04/21/2020	City of Seaside	City Utility Tax 01/2020 - 03/2020	13,162.46
69122	04/09/2020	04/22/2020	Pitney Bowes (Lease)	Postage Machine Lease 02/2020 - 04/2020	649.44
69123	04/13/2020	04/22/2020	PG&E	Gas and Electric Service 03/2020	57,726.32
ACH	04/03/2020	04/03/2020	State of California - EDD	Payroll Ending 03/27/20	9,205.12
ACH	04/03/2020	04/03/2020	Internal Revenue Service	Payroll Ending 03/27/20	43,985.80
ACH	04/03/2020	04/03/2020	CalPERS	Payroll Ending 03/27/20	24,400.22
ACH	04/03/2020	04/03/2020	MassMutual Retirement Services, LLC	Payroll Ending 03/27/20	12,378.01
500732-500735	04/03/2020	04/03/2020	Payroll Checks and Direct Deposit	Payroll Ending 03/27/20	103,976.54
500736	04/03/2020	04/03/2020	General Teamsters Union	Payroll Ending 03/27/20	866.00
500737	04/03/2020	04/03/2020	WageWorks, Inc.	Payroll Ending 03/27/20	606.27
500738	04/02/2020	04/06/2020	ACWA Joint Power Ins Authority	Workers Compensation Insurance 01/2020 - 03/2020	20,009.81
500739	03/25/2020	04/06/2020	AFLAC	Employee Paid Benefits 03/2020	2,649.40
500740	03/17/2020	04/06/2020	Transamerica Life Insurance Company	Employee Paid Benefits 03/2020	1,047.64
500741	03/31/2020	04/06/2020	Cintas Corporation No. 630	Uniforms, Towels, Rugs 03/2020	634.22
500742	04/02/2020	04/08/2020	ACWA/ JPIA	Medical, Dental, Vision, EAP Insurance 05/2020	75,358.47
ACH	04/17/2020	04/17/2020	CalPERS	Payroll Ending 04/10/20	24,418.94
ACH	04/17/2020	04/17/2020	MassMutual Retirement Services, LLC	Payroll Ending 04/10/20	11,542.75
ACH	04/17/2020	04/17/2020	State of California - EDD	Payroll Ending 04/10/20	8,838.80
ACH	04/17/2020	04/17/2020	Internal Revenue Service	Payroll Ending 04/10/20	42,193.77

Check No	Invoice Date	Check Date	Vendor Name	Description	Amount
500743-500746	04/17/2020	04/17/2020	Payroll Checks and Direct Deposit	Payroll Ending 04/10/20	102,529.61
500747	04/17/2020	04/17/2020	WageWorks, Inc.	Payroll Ending 04/10/20	606.27
500748	04/17/2020	04/23/2020	Becks Shoe Store, Inc. - Salinas	Boot Benefit - O&M	200.00
500749	04/10/2020	04/23/2020	CWEA - Monterey Bay Section	CWEA Membership Renewal	192.00
500750	04/05/2020	04/23/2020	LegalShield	Employee Paid Benefits 04/2020	25.90
500751	04/15/2020	04/23/2020	WageWorks, Inc.	FSA Admin Fees 03/2020	152.00
500752	03/31/2020	04/23/2020	Liebert Cassidy Whitmore	Legal Fees - General Matters 03/2020	1,776.00
ACH	03/20/2020	04/29/2020	Internal Revenue Service	Payroll Ending 03/27/20	139.23
				Total Disbursements for April 2020	**1,846,494.71**

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Marina Coast Water District
Agenda Transmittal

Agenda Item: 11-B Meeting Date: May 18, 2020

Prepared By: Kelly Cadiente Approved By: Keith Van Der Maaten

Agenda Title: Receive the Quarterly Financial Statements for January 1, 2020 to March 31, 2020

Staff Recommendation: The Board receives the Quarterly Financial Statements for January 1, 2020 to March 31, 2020.

Background: *District Strategic Plan, Strategic Element No. 3.2 – Regular Financial Updates to Policymakers and Managers.*

Discussion/Analysis: All figures reported for the quarter are based on accrual basis accounting. The District's consolidated financial statement for the quarter includes operating revenues of $4.052 million and expenses of $3.211 million, resulting in a net gain from operations of $0.841 million. The District budget projected net gain from operations of $0.504 million for the same period.

The difference between the actual net gain from operations for the quarter from the budget gain expectation is $0.337 million due to the timing of when revenues are earned and expenses are accrued producing different results than those in which the annual budget amounts are divided evenly by quarter.

Summary of Cost Centers:

Description	Actual Qtr	Budget Qtr	Actual FYTD	Budget FYTD
Marina Water				
Revenue	968,061	1,076,064	3,046,802	3,228,192
Expenses	818,909	921,569	2,379,420	2,764,702
Net Gain/(Loss)	149,152	154,495	667,382	463,490
Marina Sewer				
Revenue	371,995	367,757	1,078,501	1,103,270
Expenses	158,908	208,721	538,663	626,162
Net Gain/(Loss)	213,087	159,036	539,838	477,108
Ord Community Water				
Revenue	1,890,779	2,183,863	6,398,014	6,551,587
Expenses	1,726,312	2,149,876	5,724,807	6,449,626
Net Gain/(Loss)	164,467	33,987	673,207	101,961
Ord Community Sewer				
Revenue	821,032	750,490	2,356,308	2,251,470
Expenses	472,268	488,400	1,396,211	1,465,199
Net Gain/(Loss)	348,764	262,090	960,097	786,271

Recycled Water Project				
Revenue	-	50	105	150
Expenses	34,725	105,252	232,064	315,757
Net Gain/(Loss)	-34,725	-105,202	-231,959	-315,607
Regional Project				
Revenue	-	-	-	-
Expenses	-	-	-	-
Net Gain/(Loss)	-	-	-	-
Consolidated Cost Centers				
Revenue	**4,051,867**	**4,378,224**	**12,879,730**	**13,134,669**
Expenses	**3,211,122**	**3,873,818**	**10,271,165**	**11,621,446**
Net Gain/(Loss)	**840,745**	**504,406**	**2,608,565**	**1,513,223**

As of March 31, 2020, the District had $24.558 million in liquid investments. The District also had $0.855 million of 2010 refunding bond proceeds for debt reserve purposes in the bank and $19.577 million of 2019 Revenue Certificates of Participation Project Funds.

The District owed $17.735 million for the new 2019 Revenue Certificates of Participation which closed December 19, 2019, $27.045 million for the 2015 Senior Revenue Refunding Bonds Series A as well as $1.735 million for the 2010 Subordinate Revenue Refunding Bonds, $2.533 million to Holman Capital Corporation for the conversion of the Rabobank N.A. construction loan for the BLM building, and $5.423 million to BVAA Compass Bank Line of Credit for the Regional Urban Water Augmentation Project as of March 31, 2020.

Environmental Review Compliance: None required.

Financial Impact: _____Yes ___X___No Funding Source/Recap: None

Other Considerations: None

Material Included for Information/Consideration: Quarterly Financial Statements, Investments and Debt Summary Statements.

Action Required: _____Resolution _____Motion ___X___Review

Board Action

Motion By_____ Seconded By_____No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

MARINA COAST WATER DISTRICT
INCOME STATEMENT
JANUARY 1, 2020 TO MARCH 31, 2020
(UNAUDITED)

CONSOLIDATED

	CURRENT QUARTER				YEAR-TO-DATE			
	2019/2020	2018/2019	$ VARIANCE	% VARIANCE	2019/2020	2018/2019	$ VARIANCE	% VARIANCE
REVENUES								
WATER SALES	2,515,303	2,338,300	177,003	7.57%	8,600,425	7,990,943	609,482	7.63%
SEWER SALES	1,140,244	1,074,447	65,797	6.12%	3,331,014	3,108,628	222,386	7.15%
INTEREST INCOME	128,487	56,170	72,317	128.75%	290,589	158,880	131,709	82.90%
OTHER REVENUE	267,833	212,824	55,009	25.85%	657,702	638,853	18,849	2.95%
TOTAL REVENUES	4,051,867	3,681,741	370,126	10.05%	12,879,730	11,897,304	982,426	8.26%
EXPENSES								
ADMINISTRATIVE	1,336,994	1,375,499	(38,505)	(2.80%)	4,316,014	3,635,142	680,872	18.73%
OPERATING & MAINTENANCE	963,430	812,951	150,479	18.51%	2,783,490	2,625,066	158,424	6.04%
LABORATORY	87,831	63,091	24,740	39.21%	252,559	198,169	54,390	27.45%
CONSERVATION	63,623	63,290	333	0.53%	247,682	210,210	37,472	17.83%
ENGINEERING	256,258	293,005	(36,747)	(12.54%)	794,899	750,192	44,707	5.96%
WATER RESOURCES	237,990	-	237,990	100.00%	603,539	-	603,539	100.00%
INTEREST EXPENSE	109,589	173,630	(64,041)	(36.88%)	753,052	415,613	337,439	81.19%
FRANCHISE FEE	155,407	101,466	53,941	53.16%	519,930	762,176	(242,246)	(31.78%)
TOTAL EXPENSES	3,211,122	2,882,932	328,190	11.38%	10,271,165	8,596,568	1,674,597	19.48%
NET GAIN (LOSS) FROM OPERATIONS	840,745	798,809	41,936	5.25%	2,608,565	3,300,736	(692,171)	(20.97%)
CAPACITY FEE/ CAPITAL SURCHARGE	720,142	1,050,464	(330,322)	(31.45%)	2,561,391	3,200,184	(638,793)	(19.96%)
CONTRIBUTIONS/ GRANT REVENUE	-	4,251,265	(4,251,265)	(100.00%)	879,173	4,251,265	(3,372,092)	(79.32%)
NON-OPERATING REVENUE	123,560	97,678	25,882	26.50%	372,638	346,464	26,174	7.55%
CAPITAL IMPROVEMENT PROJECT	6,600,864	1,741,970	4,858,894	278.93%	8,989,165	8,584,117	405,048	4.72%
DEVELOPER REVENUE	97,231	100,831	(3,600)	(3.57%)	280,394	322,713	(42,319)	(13.11%)
DEVELOPER EXPENSES	102,670	109,141	(6,471)	(5.93%)	279,942	349,314	(69,372)	(19.86%)

MARINA COAST WATER DISTRICT
STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES
JANUARY 1, 2020 TO MARCH 31, 2020
(UNAUDITED)

CONSOLIDATED

	MW FUND		MS FUND		OW FUND		OS FUND		RW FUND		RP FUND		CONSOLIDATED		CONSOLIDATED (YTD)	
	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET
REVENUES																
WATER SALES	892,947	1,048,647	-	-	1,622,356	1,975,184	-	-	-	-	-	-	2,515,303	3,023,831	8,600,425	9,071,493
SEWER SALES	-	-	355,361	360,447	-	-	784,883	740,769	-	-	-	-	1,140,244	1,101,216	3,331,014	3,303,646
INTEREST INCOME	30,023	15,142	14,371	6,635	56,139	21,125	27,954	6,271	-	50	-	-	128,487	49,223	290,589	147,669
OTHER REVENUE	45,091	12,275	2,263	675	212,284	187,554	8,195	3,450	-	-	-	-	267,833	203,954	657,702	611,861
TOTAL REVENUES	968,061	1,076,064	371,995	367,757	1,890,779	2,183,863	821,032	750,490	-	50	-	-	4,051,867	4,378,224	12,879,730	13,134,669
EXPENSES																
ADMINISTRATIVE	379,302	286,250	52,854	57,773	776,000	748,555	128,822	146,827	16	300	-	-	1,336,994	1,239,705	4,316,014	3,719,114
OPERATING & MAINTENANCE	212,941	288,257	84,987	107,811	415,684	533,753	249,818	181,511	-	-	-	-	963,430	1,111,332	2,783,490	3,333,995
LABORATORY	25,678	25,389	-	-	62,153	66,785	-	-	-	-	-	-	87,831	92,174	252,559	276,520
CONSERVATION	23,360	37,544	-	-	40,263	74,246	-	-	-	-	-	-	63,623	111,790	247,682	335,368
ENGINEERING	61,747	73,692	15,081	20,822	144,241	181,682	35,189	58,834	-	-	-	-	256,258	335,030	794,899	1,005,089
WATER RESOURCES	94,924	165,356	-	-	143,066	248,033	-	-	-	-	-	-	237,990	413,389	603,539	1,240,165
INTEREST EXPENSE	20,957	45,081	5,986	22,315	37,454	197,706	10,483	64,256	34,709	104,952	-	-	109,589	434,310	753,052	1,302,932
FRANCHISE FEE	-	-	-	-	107,451	99,116	47,956	36,972	-	-	-	-	155,407	136,088	519,930	408,263
TOTAL EXPENSES	818,909	921,569	158,908	208,721	1,726,312	2,149,876	472,268	488,400	34,725	105,252	-	-	3,211,122	3,873,818	10,271,165	11,621,446
NET GAIN (LOSS) FROM OPERATIONS	149,152	154,495	213,087	159,036	164,467	33,987	348,764	262,090	(34,725)	(105,202)	-	-	840,745	504,406	2,608,565	1,513,223
CAPACITY FEE/ CAPITAL SURCHARGE	9,052	104,188	5,133	71,226	497,402	499,823	208,555	179,397	-	-	-	-	720,142	854,634	2,561,391	2,563,901
CONTRIBUTIONS/ GRANT REVENUE	-	38,283	-	-	-	75,940	-	-	-	250,000	-	-	-	364,223	879,173	1,092,668
NON-OPERATING REVENUE	34,597	36,895	9,885	10,542	61,780	65,884	17,298	18,448	-	-	-	-	123,560	131,769	372,638	395,307
CAPITAL IMPROVEMENT PROJECT	352,844	-	190,440	-	1,543,323	-	161,706	-	48,288	-	4,304,263	-	6,600,864	-	8,989,165	-
DEVELOPER REVENUE	7,009	-	640	-	51,821	100,000	37,761	26,250	-	-	-	-	97,231	126,250	280,394	378,750
DEVELOPER EXPENSES	4,653	5,375	-	550	62,948	90,000	35,069	26,250	-	-	-	-	102,670	122,175	279,942	366,525

MARINA COAST WATER DISTRICT
INCOME STATEMENT
JANUARY 1, 2020 TO MARCH 31, 2020
(UNAUDITED)

MARINA WATER FUND

	CURRENT QUARTER				YEAR-TO-DATE			
	ACTUAL	BUDGET	$ VARIANCE	% VARIANCE	ACTUAL	BUDGET	$ VARIANCE	% VARIANCE
REVENUES								
WATER SALES	892,947	1,048,647	(155,700)	(14.85%)	2,905,335	3,145,942	(240,607)	(7.65%)
SEWER SALES	-	-	-	-	-	-	-	-
INTEREST INCOME	30,023	15,142	14,881	98.28%	64,270	45,425	18,845	41.49%
OTHER REVENUE	45,091	12,275	32,816	267.34%	77,197	36,825	40,372	109.63%
TOTAL REVENUES	968,061	1,076,064	(108,003)	(10.04%)	3,046,802	3,228,192	(181,390)	(5.62%)
EXPENSES								
ADMINISTRATIVE	379,302	286,250	93,052	32.51%	1,106,166	858,749	247,417	28.81%
OPERATING & MAINTENANCE	212,941	288,257	(75,316)	(26.13%)	631,060	864,771	(233,711)	(27.03%)
LABORATORY	25,678	25,389	289	1.14%	72,587	76,166	(3,579)	(4.70%)
CONSERVATION	23,360	37,544	(14,184)	(37.78%)	70,423	112,631	(42,208)	(37.47%)
ENGINEERING	61,747	73,692	(11,945)	(16.21%)	183,545	221,076	(37,531)	(16.98%)
WATER RESOURCES	94,924	165,356	(70,432)	(42.59%)	240,600	496,067	(255,467)	(51.50%)
INTEREST EXPENSE	20,957	45,081	(24,124)	(53.51%)	75,039	135,242	(60,203)	(44.52%)
FRANCHISE/MEMBERSHIP FEES	-	-	-	-	-	-	-	-
TOTAL EXPENSES	818,909	921,569	(102,660)	(11.14%)	2,379,420	2,764,702	(385,282)	(13.94%)
NET GAIN (LOSS) FROM OPERATIONS	149,152	154,495	(5,343)	(3.46%)	667,382	463,490	203,892	43.99%
CAPACITY FEE/ CAPITAL SURCHARGE	9,052	104,188	(95,136)	(91.31%)	141,619	312,563	(170,944)	(54.69%)
CONTRIBUTIONS/ GRANT REVENUE	-	38,283	(38,283)	(100.00%)	-	114,849	(114,849)	(100.00%)
NON-OPERATING REVENUE	34,597	36,895	(2,298)	(6.23%)	104,339	110,686	(6,347)	(5.73%)
CAPITAL IMPROVEMENT PROJECT	352,844	-	352,844	100.00%	566,025	-	566,025	100.00%
DEVELOPER REVENUE	7,009	-	7,009	100.00%	33,508	-	33,508	100.00%
DEVELOPER EXPENSES	4,653	5,375	(722)	(13.43%)	26,571	16,125	10,446	64.78%

MARINA COAST WATER DISTRICT
INCOME STATEMENT
JANUARY 1, 2020 TO MARCH 31, 2020
(UNAUDITED)

MARINA SEWER FUND

	CURRENT QUARTER				YEAR-TO-DATE			
	ACTUAL	BUDGET	$ VARIANCE	% VARIANCE	ACTUAL	BUDGET	$ VARIANCE	% VARIANCE
REVENUES								
WATER SALES	-	-	-	-	-	-	-	-
SEWER SALES	355,361	360,447	(5,086)	(1.41%)	1,039,882	1,081,340	(41,458)	(3.83%)
INTEREST INCOME	14,371	6,635	7,736	116.59%	34,165	19,905	14,260	71.64%
OTHER REVENUE	2,263	675	1,588	235.26%	4,454	2,025	2,429	119.95%
TOTAL REVENUES	371,995	367,757	4,238	1.15%	1,078,501	1,103,270	(24,769)	(2.25%)
EXPENSES								
ADMINISTRATIVE	52,854	57,773	(4,919)	(8.51%)	180,354	173,318	7,036	4.06%
OPERATING & MAINTENANCE	84,987	107,811	(22,824)	(21.17%)	275,833	323,432	(47,599)	(14.72%)
LABORATORY	-	-	-	-	-	-	-	-
CONSERVATION	-	-	-	-	-	-	-	-
ENGINEERING	15,081	20,822	(5,741)	(27.57%)	46,854	62,466	(15,612)	(24.99%)
WATER RESOURCES	-	-	-	-	-	-	-	-
INTEREST EXPENSE	5,986	22,315	(16,329)	(73.17%)	35,622	66,946	(31,324)	(46.79%)
FRANCHISE/MEMBERSHIP FEES	-	-	-	-	-	-	-	-
TOTAL EXPENSES	158,908	208,721	(49,813)	(23.87%)	538,663	626,162	(87,499)	(13.97%)
NET GAIN (LOSS) FROM OPERATIONS	213,087	159,036	54,051	33.99%	539,838	477,108	62,730	13.15%
CAPACITY FEE/ CAPITAL SURCHARGE	5,133	71,226	(66,093)	(92.79%)	120,966	213,679	(92,713)	(43.39%)
CONTRIBUTIONS/ GRANT REVENUE	-	-	-	-	-	-	-	-
NON-OPERATING REVENUE	9,885	10,542	(657)	(6.23%)	29,811	31,625	(1,814)	(5.74%)
CAPITAL IMPROVEMENT PROJECT	190,440	-	190,440	100.00%	357,024	-	357,024	100.00%
DEVELOPER REVENUE	640	-	640	100.00%	4,799	-	4,799	100.00%
DEVELOPER EXPENSES	-	550	(550)	(100.00%)	1,250	1,650	(400)	(24.24%)

MARINA COAST WATER DISTRICT
INCOME STATEMENT
JANUARY 1, 2020 TO MARCH 31, 2020
(UNAUDITED)

ORD COMMUNITY WATER FUND

	CURRENT QUARTER				YEAR-TO-DATE			
	ACTUAL	BUDGET	$ VARIANCE	% VARIANCE	ACTUAL	BUDGET	$ VARIANCE	% VARIANCE
REVENUES								
WATER SALES	1,622,356	1,975,184	(352,828)	(17.86%)	5,695,090	5,925,551	(230,461)	(3.89%)
SEWER SALES	-	-	-	-	-	-	-	-
INTEREST INCOME	56,139	21,125	35,014	165.75%	148,970	63,375	85,595	135.06%
OTHER REVENUE	212,284	187,554	24,730	13.19%	553,954	562,661	(8,707)	(1.55%)
TOTAL REVENUES	1,890,779	2,183,863	(293,084)	(13.42%)	6,398,014	6,551,587	(153,573)	(2.34%)
EXPENSES								
ADMINISTRATIVE	776,000	748,555	27,445	3.67%	2,567,011	2,245,666	321,345	14.31%
OPERATING & MAINTENANCE	415,684	533,753	(118,069)	(22.12%)	1,296,662	1,601,260	(304,598)	(19.02%)
LABORATORY	62,153	66,785	(4,632)	(6.94%)	179,972	200,354	(20,382)	(10.17%)
CONSERVATION	40,263	74,246	(33,983)	(45.77%)	177,259	222,737	(45,478)	(20.42%)
ENGINEERING	144,241	181,682	(37,441)	(20.61%)	453,099	545,045	(91,946)	(16.87%)
WATER RESOURCES	143,066	248,033	(104,967)	(42.32%)	362,939	744,098	(381,159)	(51.22%)
INTEREST EXPENSE	37,454	197,706	(160,252)	(81.06%)	310,208	593,119	(282,911)	(47.70%)
FRANCHISE/MEMBERSHIP FEES	107,451	99,116	8,335	8.41%	377,657	297,347	80,310	27.01%
TOTAL EXPENSES	1,726,312	2,149,876	(423,564)	(19.70%)	5,724,807	6,449,626	(724,819)	(11.24%)
NET GAIN (LOSS) FROM OPERATIONS	164,467	33,987	130,480	383.91%	673,207	101,961	571,246	560.26%
CAPACITY FEE/ CAPITAL SURCHARGE	497,402	499,823	(2,421)	(0.48%)	1,587,815	1,499,468	88,347	5.89%
CONTRIBUTIONS/ GRANT REVENUE	-	75,940	(75,940)	(100.00%)	-	227,819	(227,819)	(100.00%)
NON-OPERATING REVENUE	61,780	65,884	(4,104)	(6.23%)	186,319	197,653	(11,334)	(5.73%)
CAPITAL IMPROVEMENT PROJECT	1,543,323	-	1,543,323	100.00%	2,063,806	-	2,063,806	100.00%
DEVELOPER REVENUE	51,821	100,000	(48,179)	(48.18%)	141,741	300,000	(158,259)	(52.75%)
DEVELOPER EXPENSES	62,948	90,000	(27,052)	(30.06%)	169,487	270,000	(100,513)	(37.23%)

MARINA COAST WATER DISTRICT
INCOME STATEMENT
JANUARY 1, 2020 TO MARCH 31, 2020
(UNAUDITED)

ORD COMMUNITY SEWER FUND

	CURRENT QUARTER				YEAR-TO-DATE			
	ACTUAL	BUDGET	$ VARIANCE	% VARIANCE	ACTUAL	BUDGET	$ VARIANCE	% VARIANCE
REVENUES								
WATER SALES	-	-	-	-	-	-	-	-
SEWER SALES	784,883	740,769	44,114	5.96%	2,291,132	2,222,306	68,826	3.10%
INTEREST INCOME	27,954	6,271	21,683	345.77%	43,079	18,814	24,265	128.97%
OTHER REVENUE	8,195	3,450	4,745	137.54%	22,097	10,350	11,747	113.50%
TOTAL REVENUES	821,032	750,490	70,542	9.40%	2,356,308	2,251,470	104,838	4.66%
EXPENSES								
ADMINISTRATIVE	128,822	146,827	(18,005)	(12.26%)	462,370	440,481	21,889	4.97%
OPERATING & MAINTENANCE	249,818	181,511	68,307	37.63%	579,935	544,532	35,403	6.50%
LABORATORY	-	-	-	-	-	-	-	-
CONSERVATION	-	-	-	-	-	-	-	-
ENGINEERING	35,189	58,834	(23,645)	(40.19%)	111,401	176,502	(65,101)	(36.88%)
WATER RESOURCES	-	-	-	-	-	-	-	-
INTEREST EXPENSE	10,483	64,256	(53,773)	(83.69%)	100,232	192,768	(92,536)	(48.00%)
FRANCHISE/MEMBERSHIP FEES	47,956	36,972	10,984	29.71%	142,273	110,916	31,357	28.27%
TOTAL EXPENSES	472,268	488,400	(16,132)	(3.30%)	1,396,211	1,465,199	(68,988)	(4.71%)
NET GAIN (LOSS) FROM OPERATIONS	348,764	262,090	86,674	33.07%	960,097	786,271	173,826	22.11%
CAPACITY FEE/ CAPITAL SURCHARGE	208,555	179,397	29,158	16.25%	710,991	538,191	172,800	32.11%
CONTRIBUTIONS/ GRANT REVENUE	-	-	-	-	-	-	-	-
NON-OPERATING REVENUE	17,298	18,448	(1,150)	(6.23%)	52,169	55,343	(3,174)	(5.74%)
CAPITAL IMPROVEMENT PROJECT	161,706	-	161,706	100.00%	584,619	-	584,619	100.00%
DEVELOPER REVENUE	37,761	26,250	11,511	43.85%	100,346	78,750	21,596	27.42%
DEVELOPER EXPENSES	35,069	26,250	8,819	33.60%	82,634	78,750	3,884	4.93%

MARINA COAST WATER DISTRICT
INCOME STATEMENT
JANUARY 1, 2020 TO MARCH 31, 2020
(UNAUDITED)

RECYCLED WATER FUND

	CURRENT QUARTER				YEAR-TO-DATE			
	ACTUAL	BUDGET	$ VARIANCE	% VARIANCE	ACTUAL	BUDGET	$ VARIANCE	% VARIANCE
REVENUES								
WATER SALES	-	-	-	-	-	-	-	-
SEWER SALES	-	-	-	-	-	-	-	-
INTEREST INCOME	-	50	(50)	(100.00%)	105	150	(45)	(30.00%)
OTHER REVENUE	-	-	-	-	-	-	-	-
TOTAL REVENUES	-	50	(50)	(100.00%)	105	150	(45)	(30.00%)
EXPENSES								
ADMINISTRATIVE	16	300	(284)	(94.67%)	113	900	(787)	(87.44%)
OPERATING & MAINTENANCE	-	-	-	-	-	-	-	-
LABORATORY	-	-	-	-	-	-	-	-
CONSERVATION	-	-	-	-	-	-	-	-
ENGINEERING	-	-	-	-	-	-	-	-
WATER RESOURCES	-	-	-	-	-	-	-	-
INTEREST EXPENSE	34,709	104,952	(70,243)	(66.93%)	231,951	314,857	(82,906)	(26.33%)
FRANCHISE FEE	-	-	-	-	-	-	-	-
TOTAL EXPENSES	34,725	105,252	(70,527)	(67.01%)	232,064	315,757	(83,693)	(26.51%)
NET GAIN (LOSS) FROM OPERATIONS	(34,725)	(105,202)	70,477	(66.99%)	(231,959)	(315,607)	83,648	(26.50%)
CAPACITY FEE/ CAPITAL SURCHARGE	-	-	-	-	-	-	-	-
CONTRIBUTIONS/ GRANT REVENUE	-	250,000	(250,000)	(100.00%)	879,173	750,000	129,173	17.22%
NON-OPERATING REVENUE	-	-	-	-	-	-	-	-
CAPITAL IMPROVEMENT PROJECT	48,288	-	48,288	100.00%	850,311	-	850,311	100.00%
DEVELOPER REVENUE	-	-	-	-	-	-	-	-
DEVELOPER EXPENSES	-	-	-	-	-	-	-	-

MARINA COAST WATER DISTRICT
INCOME STATEMENT
JANUARY 1, 2020 TO MARCH 31, 2020
(UNAUDITED)

REGIONAL PROJECT FUND

	CURRENT QUARTER				YEAR-TO-DATE			
	ACTUAL	BUDGET	$ VARIANCE	% VARIANCE	ACTUAL	BUDGET	$ VARIANCE	% VARIANCE
REVENUES								
WATER SALES	-	-	-	-	-	-	-	-
SEWER SALES	-	-	-	-	-	-	-	-
INTEREST INCOME	-	-	-	-	-	-	-	-
OTHER REVENUE	-	-	-	-	-	-	-	-
TOTAL REVENUES	-	-	-	-	-	-	-	-
EXPENSES								
ADMINISTRATIVE	-	-	-	-	-	-	-	-
OPERATING & MAINTENANCE	-	-	-	-	-	-	-	-
LABORATORY	-	-	-	-	-	-	-	-
CONSERVATION	-	-	-	-	-	-	-	-
ENGINEERING	-	-	-	-	-	-	-	-
WATER RESOURCES	-	-	-	-	-	-	-	-
INTEREST EXPENSE	-	-	-	-	-	-	-	-
FRANCHISE FEE	-	-	-	-	-	-	-	-
TOTAL EXPENSES	-	-	-	-	-	-	-	-
NET GAIN (LOSS) FROM OPERATIONS	-	-	-	-	-	-	-	-
CAPACITY FEE/ CAPITAL SURCHARGE	-	-	-	-	-	-	-	-
CONTRIBUTIONS/ GRANT REVENUE	-	-	-	-	-	-	-	-
NON-OPERATING REVENUE	-	-	-	-	-	-	-	-
CAPITAL IMPROVEMENT PROJECT	4,304,263	-	4,304,263	100.00%	4,567,380	-	4,567,380	100.00%
DEVELOPER REVENUE	-	-	-	-	-	-	-	-
DEVELOPER EXPENSES	-	-	-	-	-	-	-	-

MARINA COAST WATER DISTRICT
SCHEDULE OF INVESTMENTS SUMMARY
JANUARY 1, 2020 TO MARCH 31, 2020
(UNAUDITED)

ACCOUNT	ACCT TYPE	YIELD APR	12/31/2019 BALANCE	QUARTERLY ACTIVITIES TRANSACTION TYPE	AMOUNT	3/31/2020 BALANCE
LAIF ACCOUNT		2.03%	12,512,727	INTEREST 01/15/2020	71,882	12,584,609
				TRANSFERS	-	12,584,609
SAVINGS ACCOUNT	MM	0.20%	274,589	INTEREST 01/01/20 - 03/31/20	137	274,726
				TRANSFERS	-	274,726
CPFCA DEPOSIT ACCOUNT	MM	0.05%	100,519	INTEREST 01/01/20 - 03/31/20	12	100,531
RESTRICTED FUNDS	MM	0.16%	5,218,689	INTEREST 01/01/20 - 03/31/20	2,082	5,220,771
				TRANSFERS	-	5,220,771
RUWAP LOC PROCEEDS	CK		4,810	DEPOSITS	-	4,810
				WITHDRAWALS	-	4,810
CHECKING ACCOUNT	CK		6,875,795	QUARTERLY DEPOSITS & CREDITS	5,220,217	12,096,012
				QUARTERLY CHECKS & DEBITS	(5,723,506)	6,372,506
				TRANSFERS	-	6,372,506

SUMMARY	As of March 31 2019	2020
LAIF ACCOUNT	7,583,306	12,584,609
SAVINGS ACCOUNT	2,171,295	274,726
CPFCA DEPOSIT ACCOUNT	100,431	100,531
RESTRICTED FUNDS	6,322,398	5,220,771
RUWAP LOC PROCEEDS	4,970	4,810
CHECKING ACCOUNT	6,941,982	6,372,506
TOTAL INVESTMENT	**23,124,382**	**24,557,953**

RESERVES DETAIL (LAIF ACCOUNT)	As of March 31 2019	2020
MW GEN OP RESERVE	519,645	858,556
MW CAPACITY REVENUE FUND	490,837	619,930
MW CAP REPL RESERVE FUND	1,329,936	1,171,220
MS GEN OP RESERVE	1,295,559	1,302,854
MS CAPACITY REVENUE FUND	147,074	108,664
MS CAP REPL RESERVE FUND	1,938	200,228
OW GEN OP RESERVE	323,797	174,565
OW CAPITAL/CAPACITY REVENUE FUND	2,377,701	6,812,045
OW CAP REPL RESERVE FUND	195,105	292,453
OS GEN OP RESERVE	283,455	48,650
OS CAPITAL/CAPACITY REVENUE FUND	616,593	895,432
OS CAP REPL RESERVE FUND	1,665	100,012
TOTAL	**7,583,305**	**12,584,609**

MARINA COAST WATER DISTRICT
SCHEDULE OF INVESTMENTS SUMMARY - BOND PROCEEDS
JANUARY 1, 2020 TO MARCH 31, 2020
(UNAUDITED)

ACCOUNT	ACCT TYPE	YIELD APR	12/31/2019 BALANCE	QUARTERLY ACTIVITIES TRANSACTION TYPE	AMOUNT	3/31/2020 BALANCE
RESERVE FUND	TFUND	0.20%	851,876	INTEREST 01/01/20 - 03/31/20	3,187	855,063
2010 REFUNDING BOND				FUNDS TRANFER	-	855,063
PROJECT FUND	MM	0.33%	19,500,000	FUNDS TRANFER	77,052	19,577,052
2019 SERIES BOND						

MARINA COAST WATER DISTRICT
SCHEDULE OF DEBT SUMMARY
JANUARY 1, 2020 TO MARCH 31, 2020
(UNAUDITED)

PRINCIPAL AMOUNT	FIRST PAYMENT	FINAL PAYMENT	RATE	12/31/2019 BALANCE	QUARTERLY ACTIVITIES TRANSACTION TYPE	AMOUNT	3/31/2020 BALANCE
HCC - BLM INSTALLMENT LOAN							
2,799,880	07/20/2017	01/20/2037	5.750%	2,597,590	PAYMENT - PRINCIPAL	(44,013)	2,553,577
					INTEREST PAYMENT	(74,681)	
2010 REFUNDING BOND - CLOSING DATE 12/23/2010							
8,495,000	06/01/2011	06/01/2020	4.340%	1,735,000	PAYMENT - PRINCIPAL	-	1,735,000
					INTEREST PAYMENT	-	
2015 SERIES A REFUNDING BOND - CLOSING DATE 07/15/2015							
29,840,000	12/01/2015	06/01/2037	3.712%	27,045,000	PAYMENT - PRINCIPAL	-	27,045,000
					INTEREST PAYMENT	-	
2019 SERIES REVENUE BOND - CLOSING DATE 12/19/2019							
17,725,000	06/01/2020	06/01/2049	2.990%	17,725,000	PAYMENT - PRINCIPAL	-	17,725,000
					INTEREST PAYMENT	-	
BVAA COMPASS RUWAP LOC							
		08/01/2020	2.528% *	5,423,325	ADVANCES	-	5,423,325
					PAYMENT - PRINCIPAL	-	5,423,325
					INTEREST PAYMENT	(34,709)	

*Line of Credit interest calculated on a variable basis (65.01% of the 30-Day Monthly LIBOR plus 1.50%). Amount represents interest rate at 03/02/2020.

SUMMARY

HCC - BLM INSTALLMENT LOAN	2,553,577
2010 REFUNDING BOND	1,735,000
2015 REFUNDING BOND SERIES A	27,045,000
2019 SERIES REVENUE BOND	17,725,000
BVAA COMPASS RUWAP LOC	5,423,325
TOTAL DEBT	**54,481,902**

Return to Agenda

Marina Coast Water District
Agenda Transmittal

Agenda Item: 11-C Meeting Date: May 18, 2020

Prepared By: Paula Riso Approved By: Keith Van Der Maaten

Agenda Title: Approve the Draft Minutes of the Regular Joint Board/GSA Meeting of April 20, 2020

Staff Recommendation: The Board of Directors approve the draft minutes of the April 20, 2020 regular joint Board meeting.

Background: *Strategic Plan, Mission Statement – We Provide high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: The draft minutes of April 20, 2020 are provided for the Board to consider approval.

Environmental Review Compliance: None required.

Financial Impact: _____Yes ___X___No Funding Source/Recap: None

Other Considerations: The Board can suggest changes/corrections to the minutes.

Material Included for Information/Consideration: Draft minutes of April 20, 2020.

Action Required: _____Resolution ___X___Motion _____Review

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

Marina Coast Water District

Regular Board Meeting/Groundwater Sustainability Agency Board Meeting
Via Zoom Teleconference
April 20, 2020

Draft Minutes

1. Call to Order:

President Moore called the meeting to order at 6:35 p.m. on April 20, 2020 via Zoom teleconference in Marina, California.

2. Roll Call:

Board Members Present:

Thomas P. Moore – President
Jan Shriner – Vice President
Herbert Cortez
Peter Le
Matt Zefferman

Board Members Absent:

None

Staff Members Present:

Keith Van Der Maaten, General Manager
Roger Masuda, District Counsel
Kelly Cadiente, Director of Administrative Services
Derek Cray, Operations and Maintenance Manager
Michael Wegley, District Engineer
Teo Espero, IT Administrator
Rose Gill, HR/Risk Administrator
Don Wilcox, Senior Engineer
Paula Riso, Executive Assistant/Clerk to the Board

Audience Members:

Andrew Sterbenz, Schaaf & Wheeler
Steve Matarazzo, UCMBEST
Howard Kranther, Marina Resident
Sarah Babcock, Marina Resident
Shawn Storm, Marina Resident

3. Public Comment on Closed Session Items:

There were no comments.

The Board entered into closed session at 6:38 p.m. to discuss the following items:

4. Closed Session:

   A. Pursuant to Government Code 54956.9
      Conference with Legal Counsel – Existing Litigation

      1) Marina Coast Water District vs California-American Water Company, Monterey County Water Resources Agency; and, California-American Water Company, Monterey County Water Resources Agency vs Marina Coast Water District, San Francisco Superior Court Case Nos. CGC-15-547125, CGC-15-546632 (Complaint for Damages, Breach of Warranties, etc.)

      2) Bay View Community DE, LLC; Bryan Taylor; Greg Carter; and Brooke Bilyeu vs Marina Coast Water District; Board of Directors of Marina Coast Water District; County of Monterey and Does 1-25, inclusive, Monterey County Superior Court Case No. 18CV000765 (Petition for Writ of Mandate or Administrative Mandate, and Complaint for Declaratory and Injunctive Relief and Breach of Contract)

      3) Marina Coast Water District, and Does 1-100 v, County of Monterey, County of Monterey Health Department Environmental Health Bureau, and Does 101-110, Monterey County Superior Court Case No. 18CV000816 (Petition for Writ of Mandate and Complaint for Injunctive Relief)

      4) Marina Coast Water District, and Does 1-100 v, County of Monterey, Monterey County Board of Supervisors, and Does 101-110 (California-American Water Company, Real Property in Interest), Monterey County Superior Court Case No. 19CV003305 (Petition for Writ of Mandate and Complaint for Injunctive Relief)

   B. Pursuant to Government Code 54956.9(d)(4)
      Conference with Legal Counsel – Anticipated Litigation
      Initiation of Litigation – Two Potential Cases

Mr. Roger Masuda, District Counsel, did not participate in closed session. The Board ended closed session at 7:12 p.m.

President Moore reconvened the meeting to open session at 7:13 p.m.

5. Reportable Actions Taken during Closed Session:

President Moore reported that a motion was made and unanimously approved to make a change in the settlement agreement with regards to Agenda Item 4-A3.

6. Pledge of Allegiance:

Mr. Keith Van Der Maaten, General Manager, led everyone present in the pledge of allegiance.

7. Oral Communications:

President Moore noted that anyone participating via telephone would need to press *9 to raise their hand to speak. Ms. Paula Riso, Executive Assistant/Clerk to the Board, stated that that she received one written public comment earlier in the day. That comment was from Mr. Shawn Storm and it reads:

Dear MCWD Board: April 20, 2020

Wasteful MCWD's customers increase both cost and rates. A conserving customer must not subsidize a wasteful resident or business. I strongly encourage MCWD to work with city/county governments and regulatory agencies to enact the following excellent conservation opportunities:

1) Tiered Rates: Multiple tier rate structures is the best method to catalyze conservation. Marina's 2nd rate tier is 10ccf/month, which is double other providers; soquel creek water's is 6ccf and CalAmerican's is 4ccf. MCWD needs multiple tiers to promote conservation, Cal-American has five tiers.

2) Sustainable Code: Develop and phase in retrofit-code regulation to be required prior to a property's remodel permit approval and sale. The code shall require the following conservation retrofits:

a) Native Landscape:
) Remove lawns, bushes and sprinklers, only allow low-use plant direct low-flow drip.
) Require modern controller systems with rain sensor, flow sensors and master valve control. System detects waste, alerts and allows remote control to stop waste until repair.

b) Submetering
) Homes and apartments that share a common meter must be required to submeter each residence. Valley water's submeter study saved 15% per residence.

d) Smartmeters/AMR: Alerts MCWD and home owner immediately to correct waste.

e) Ultra High Efficiency (UHE) appliances: Only allow UHE: toilets, urinals and washers.

f) Main Pressure Reduction Valve (PRV): Reduce home and business pressure to conserve. These initiatives' savings would keep Marina's water sustainable: high quality and rates low.

Best Regards, Shawn Storm, P.E.

8. Presentation:

   A. Consider Adoption of Resolution No. 2020-18 in Recognition and Appreciation of Thomas Barkhurst and to Adjourn the Meeting in his Memory:

Mr. Derek Cray, Operations and Maintenance Manager, introduced this item and expressed the District's deep grief over the loss of Thomas Barkhurst. He then shared his thoughts and fond memories of Thomas.

President Moore made a motion to adopt Resolution No. 2020-18 in recognition and appreciation of Thomas Barkhurst and to adjourn the meeting in his memory. Vice President Shriner seconded the motion. The motion was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Cortez	-	Yes	President Moore	-	Yes
Director Le	-	Yes			

President Moore read the narration into the record.

9. Consent Calendar:

Director Le requested to pull items A, B, and D from the Consent Calendar. Director Zefferman said he also wanted to pull item B from the Consent Calendar.

Vice President Shriner made a motion to approve the Consent Calendar consisting of: C) Consider Adoption of Resolution No. 2020-19 to Authorize a Notice of Completion for the Inter-Garrison Road Water Distribution Pipeline Project be Filed with the Monterey County Recorder; and E) Approve the Draft Minutes of the Regular Joint/Board Meeting of March 16, 2020. Director Zefferman seconded the motion. The motion was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Cortez	-	Yes	President Moore	-	Yes
Director Le	-	Yes			

   A. Receive the Check Register for the Month of March 2020:

Director Le asked clarifying questions regarding the payment to Calcon.

Vice President Shriner made a motion to receive the check register for the month of March 2020. Director Zefferman seconded the motion. The motion was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Cortez	-	Yes	President Moore	-	Yes
Director Le	-	Yes			

B. Consider Approval of the 2019 Consumer Confidence Report for the Marina Coast Water District Water System, Central Marina and Ord Community:

Director Zefferman and Director Le made suggested changes to the 2019 Consumer Confidence Report (CCR). Director Le asked for the location of the positive coliform samples. Mr. Cray answered that they were on Okinawa Road, Eichelberger Court, and Nijmegen Road.

Vice President Shriner made a motion to approve the 2019 Consumer Confidence Report for the Marina Coast Water District Water System, Central Marina and Ord Community with changes to the first page by moving the text under the Production Summary Graph so it was easier to follow in the previous paragraph, making the Production Summary Graph in million gallons only and dropping the acre-feet, stating that Board meetings are normally held the third Monday, and a better map showing the District's jurisdiction. Director Zefferman seconded the motion. The motion was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Cortez	-	Yes	President Moore	-	Yes
Director Le	-	Yes			

D. Consider Adoption of Resolution No. 2020-20 Ordering an Election, Requesting County Elections to Conduct the Election, and Requesting Consolidation of the Election Set for November 3, 2020:

Director Le asked if the Elections Code Section 10401 was correct in the Resolution and other clarifying questions including if the District was informing Ord customers they can run for the Board. Director Zefferman called a point of order stating that the question was outside of the Agenda Item. Mr. Masuda answered that the Elections Code should be 10400.

Vice President Shriner made a motion to adopt Resolution No. 2020-20 ordering an election, requesting County Elections to conduct the election, and requesting consolidation of the election set for November 3, 2020 with the change to the Election Code to 10400. President Moore seconded the motion. The motion was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Cortez	-	Yes	President Moore	-	Yes
Director Le	-	Yes			

10. Action Items:

A. Consider Adoption of Resolution No. 2020-21 to Approve a Water Supply Assessment for the Marina Downtown Vitalization Specific Plan:

Mr. Michael Wegley, District Engineer, introduced this item. The Board asked clarifying questions and made suggested edits.

Agenda Item 10-A (continued):

Vice President Shriner made a motion to adopt Resolution No. 2020-21 to approve a Water Supply Assessment for the Marina Downtown Vitalization Specific Plan and have staff double checking the numbers and figures in tables 2-3, 2-5, 3-6, and 4-1. Director Cortez seconded the motion. President Moore suggested a better title for Figure 1-1, edits to able 3-2, and, Appendix A, Section 4 bullets 1 and 7. Vice President Shriner amended her motion to include President Moore's edits. Director Cortez seconded the amended motion. The motion was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Le	-	No	President Moore	-	Yes
Director Cortez	-	Yes			

B. Consider Adoption of Resolution No. 2020-22 to Approve a Water Supply Assessment and Written Verification of Supply for the Marina Municipal Airport Business and Industrial Park / UCMBEST Center:

Mr. Wegley introduced this item. Mr. Steve Matarazzo, UCMBEST, thanked staff for their hard work on this Water Supply Assessment. The Board asked clarifying questions and Director Zefferman suggested that a Director could include a motion to carryover the edits made on Agenda Item 10-A. Director Le suggested correcting the date in Section 2.2.5 to 2021 and removing Well 12 from the production list.

Mr. Shawn Storm, Marina resident, commented that he was surprised by the comment that 3,000 acre feet of water use is sustainable, and he suggested there be stronger language in Section 4.2.3 such as he addressed in his public comment letter that was reported earlier in the meeting.

Vice President Shriner made a motion to adopt Resolution No. 2020-22 to approve a Water Supply Assessment and Written Verification of Supply for the Marina Municipal Airport Business and Industrial Park / UCMBEST Center with the similar edits to Item 10-A and the additional edits made in the discussion. Director Cortez seconded the motion. The motion was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Le	-	Yes	President Moore	-	Yes
Director Cortez	-	Yes			

C. Consider Adoption of Resolution No. 2020-23 to Approve Amendment No. 8 to the Professional Services Agreement with Carollo Engineers for Design of the Regional Urban Water Augmentation Project Distribution Mains Project:

Mr. Don Wilcox, Senior Engineer, introduced this item. The Board asked clarifying questions and Director Le suggested that the completion date be changed.

Vice President Shriner made a motion to adopt Resolution No. 2020-23 approving Amendment No. 8 to the Professional Services Agreement with Carollo Engineers for design of the Regional Urban Water Augmentation Project Distribution Mains Project. The Board asked more clarifying questions. Director Zefferman seconded the motion. Discussion followed.

Agenda Item 10-C (continued):

The motion was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Le	-	No	President Moore	-	Yes
Director Cortez	-	No			

D. Consider Adoption of Resolution No. 2020-24 to Approve a Building Removal Funding Agreement between Marina Coast Water District and the Fort Ord Reuse Authority:

Mr. Van Der Maaten introduced this item. The Board asked clarifying questions.

President Moore made a motion to adopt Resolution No. 2020-24 approving a Building Removal Funding Agreement between Marina Coast Water District and the Fort Ord Reuse Authority. Vice President Shriner seconded the motion. The motion was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Le	-	Yes	President Moore	-	Yes
Director Cortez	-	Yes			

E. Consider Adoption of Resolution No. 2020-25 to Approve a New Classification, Job Description and Salary Range for an Administrative Analyst for the Operations and Maintenance Department:

Ms. Rose Gill, Human Resources/Risk Administrator, introduced this item. The Board asked clarifying questions.

Vice President Shriner made a motion to adopt Resolution No. 2020-25 to approve a new classification, job description and salary range for an Administrative Analyst for the Operations and Maintenance Department. President Moore seconded the motion. The motion to was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Cortez	-	Yes	President Moore	-	Yes
Director Le	-	Yes			

F. Consider Adoption of Resolution No. 2020-26 to Approve the Restructuring of the Accounting Department and the New Classification, Job Description and Salary Range for an Accountant:

Ms. Gill introduced this item. The Board asked many questions about the proposed restructure.

Noting the time was 10:00 p.m., Director Zefferman made a motion to continue past 10:00 p.m. to complete Items 10-F, 10-G, and Item 12, while postponing Item 11 to a special meeting of the Board. Director Cortez seconded the motion.

Agenda Item 10-F (continued):

Director Zefferman amended his motion to include a five-minute break. Director Cortez seconded the amended motion.

Mr. Storm questioned if new accounting technologies had been looked into to make the position more efficient without the need for overtime.

The motion to continue past 10:00 p.m. was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Le	-	Yes	President Moore	-	Yes
Director Cortez	-	Yes			

Mr. Van Der Maaten noted that the District does use modern technologies and it is not a matter of technology, but a matter of needing more bodies to complete the work. He added that the District is always trying to stay up to date up with the newest technology.

Vice President Shriner made a motion to bring this item back for discussion at the budget workshop. Director Zefferman seconded the motion. Director Cortez asked for an amendment to include taking this proposed restructure to the Union first and then the Budget and Personnel Committee prior to bringing it back to the Board. Vice President Shriner made amended her motion to include bringing this item to the Union and Budget and Personnel Committee prior to bringing it back to the Board. Director Zefferman seconded the amended motion. The amended motion was passed with the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Le	-	Yes	President Moore	-	Yes
Director Cortez	-	Yes			

President Moore recessed the meeting from 10:13 p.m. to 10:20 p.m.

G. Consider Providing Direction to the Board President Regarding the Election of One Special District Representative to the Local Agency Formation Commission of Monterey County:

Vice President Shriner made a motion to elect Director Le for the one Special District representative to the Local Agency Formation Commission of Monterey County. Director Cortez seconded the motion. The motion was passed with the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Le	-	Yes	President Moore	-	Yes
Director Cortez	-	Yes			

12. Informational Items:

A. General Manager's Report:

1. Receive an Update on the District's Procedures Regarding Shut-Offs for Delinquent Accounts:

Mr. Van Der Maaten gave a brief update noting that the District has halted late fees and shut-offs for delinquent accounts. He added that there had been a question as to if a Declaration of Emergency was needed by the District for any reason, but he said that a Declaration of Emergency would only be needed if the District was short on resources or he needed to procure or move forward on an expenditure before Board approval. Mr. Van Der Maaten said this was already part of the District policy and there was not a need to do so at this point. He also advised the Board that the City of Marina and Monterey County have agreed to put a temporary hospital facility at the Joby Airplane site located at the Marina airport and have approached the District for help getting water and sewer set up within a two-week period.

Director Cortez suggested sending out a message of support from the District regarding Covid-19. Director Zefferman suggested discussing this at the Outreach Committee.

Director Le asked for a report at the next meeting on how many accounts didn't pay and how much they owe. He added that there were agencies the did declare an emergency and were able to apply for FEMA and he suggested the District should think about it for next time.

Vice President Shriner asked if someone was documenting the accounts that can't pay due to Covid or layoffs and if ACWA has insurance for agencies that are not able to collect their normal fees.

Mr. Masuda said that for FEMA funding the Board doesn't have to declare a disaster because the President already did.

15. Adjournment:

The meeting was adjourned in Thomas Barkhurst's memory at 10:37 p.m.

APPROVED:

_____
Thomas P. Moore, President

ATTEST:

_____
Paula Riso, Deputy Secretary

Return to Agenda

Marina Coast Water District
Agenda Transmittal

Agenda Item: 11-D Meeting Date: May 18, 2020

Prepared By: Paula Riso Approved By: Keith Van Der Maaten

Agenda Title: Approve the Draft Minutes of the Regular Board Meeting/Budget Workshop of April 28, 2020

Staff Recommendation: The Board of Directors approve the draft minutes of the April 28, 2020 regular Board meeting/budget workshop.

Background: *Strategic Plan, Mission Statement – We Provide high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: The draft minutes of April 28, 2020 are provided for the Board to consider approval.

Environmental Review Compliance: None required.

Financial Impact: _____Yes ___X___No Funding Source/Recap: None

Other Considerations: The Board can suggest changes/corrections to the minutes.

Material Included for Information/Consideration: Draft minutes of April 28, 2020.

Action Required: _____Resolution ___X___Motion _____Review

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

Marina Coast Water District

Regular Board Meeting/Budget Workshop
Via Zoom Teleconference
April 28, 2020

Draft Minutes

1. Call to Order:

President Moore called the meeting to order at 6:30 p.m. on April 28, 2020 via Zoom teleconference in Marina, California.

2. Roll Call:

Board Members Present:

Thomas P. Moore – President
Jan Shriner – Vice President
Herbert Cortez
Peter Le
Matt Zefferman

Board Members Absent:

None

Staff Members Present:

Keith Van Der Maaten, General Manager
Roger Masuda, District Counsel – via telephone
Michael Wegley, District Engineer
Derek Cray, Operations and Maintenance Manager
Kelly Cadiente, Director of Administrative Services
Rose Gill, Human Resources/Risk Administrator
Patrick Breen, Water Resources Manager
Teo Espero, IT Administrator
Paula Riso, Executive Assistant/Clerk to the Board

Audience Members:

Andy Sterbenz, Schaaf & Wheeler

3. Pledge of Allegiance:

Vice President Shriner led everyone present in the pledge of allegiance.

4. Public Comment on Closed Session Items:

President Moore noted that there is a need to take immediate action on the following closed session item and that the need for action came to the attention of the District subsequent to the agenda being posted. A two-thirds vote of the Board members present, or, if less than all the Board members are present, a unanimous vote of the Board members present is required to add the closed session item.

Vice President Shriner made a motion to add the closed session item to the agenda. Director Zefferman seconded the motion. The motion was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Cortez	-	Yes	President Moore	-	Yes
Director Le	-	Yes			

There were no public comments.

The Board entered into closed session at 6:37 p.m. to discuss the following item:

5. Closed Session:

   A. Pursuant to Government Code 54956.9(d)(4)
      Conference with Legal Counsel – Anticipated Litigation
      Initiation of Litigation – One Potential Case

The Board ended closed session at 7:19 p.m. President Moore reconvened the meeting to open session at 7:24 p.m.

President Moore stated that there were no reportable actions taken in closed session.

6. Oral Communication:

There were no comments made.

7. Action Item:

   A. Consider Adoption of Resolution No. 2020-26 to Approve the Restructuring of the Accounting Department and the New Classification, Job Description and Salary Range for an Accountant:

Ms. Kelly Cadiente, Director of Administrative Services, introduced this item and clarified the classification and salary questions from the last meeting. The Board asked more clarifying questions.

Agenda Item 7-A (continued):

Vice President Shriner made a motion to adopt Resolution No. 2020-26 to approve the restructuring of the accounting department and the new classification, job description and salary range for an accountant. Director Cortez seconded the motion. The motion was passed by the following vote:

Director Zefferman	-	Yes	Vice President Shriner	-	Yes
Director Cortez	-	Yes	President Moore	-	Yes
Director Le	-	Yes			

8. Budget Workshop:

   A. Receive Presentation on Draft District FY 2020-2021 Budget, Rates, Fees and Charges for the Marina and Ord Community Service Areas and Provide Direction Regarding Preparation of the Final Budget Documents:

Ms. Cadiente gave a presentation on the draft FY 2020-2021 Budget for the Marina and Ord Community service areas.

Mr. Keith Van Der Maaten, General Manager, discussed the upcoming administrative goals.

Ms. Cadiente discussed the customer service, finance, and information technology goals.

Ms. Rose Gill, Human Resources/Risk Management, discussed the goals for Human Resources.

Mr. Derek Cray, Operations and Maintenance Manager, reviewed proposed operations and maintenance improvement projects for FY 2020-2021, and laboratory requirements.

Mr. Patrick Breen, Water Resources Manager, discussed conservation priorities and water resources goals for FY 2020-2021.

Mr. Michael Wegley, District Engineer, discussed goals for the engineering department, and CIP projects for FY 2020-2021.

Ms. Cadiente wrapped up the presentation with a summary of the draft budget.

The Board asked clarifying questions throughout the presentation.

Vice President Shriner asked to add to the prior year accomplishments. She suggested adding that the lawsuit is settled; the AEM 2.0 survey; negotiating good contracts for employee without dispute; and, all the work that has taken place for FORA's sunset.

Director Le asked to add a reference of where to find the GSA information in the budget memo. Director Le also asked questions regarding Monterey One Water; when the rate study would be complete; and, what the District was planning to charge for recycled water.

Agenda Item 8-A (continued):

Director Shriner inquired into the amount budgeted for Board member training. Discussion to add enough funds for each Board member to attend one conference followed.

B. Receive District Draft Five-Year Capital Improvements Projects Budget for the Marina and Ord Community Service Areas and Provide Direction Regarding Preparation of the Final CIP Budget Documents:

Mr. Michael Wegley, District Engineer, introduced this item and reviewed the draft five-year CIP.

Director Le asked for a footnote to explain how the District determined the cost split for the General Water and General Sewer projects. He also inquired about the status of Well 12 and suggested retiring it from service. Discussion followed.

9. Board Member Requests for Future Agenda Items:

President Moore noted that the Board members can email in their requests. Director Le asked when his previous requests would be discussed, i.e. RUWAP costs and information; and, discussing District elections.

Director Zefferman asked for a monthly update of Covid-19 impacts to the District and ratepayers.

10. Director's Comments:

Director Le, Director Zefferman, Vice President Shriner, and President Moore made comments.

11. Adjournment:

The meeting was adjourned at 9:45 p.m.

APPROVED:

_____
Thomas P. Moore, President

ATTEST:

_____
Paula Riso, Deputy Secretary

Return to Agenda

Marina Coast Water District
Agenda Transmittal

Agenda Item: 11-E Meeting Date: May 18, 2020

Prepared By: Michael Wegley Approved By: Keith Van Der Maaten

Agenda Title: Consider Adoption of Resolution No. 2020-28 Proclaiming the Week of May 17-23, 2020 National Public Works Week

Staff Recommendation: The Board of Directors consider adoption of Resolution No. 2020-28 in recognition of National Public Works Week.

Background: *Strategic Plan Mission Statement – We provide our customers with high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner.*

Discussion/Analysis: Public works infrastructure, facilities and services including the water and wastewater collection systems of the Marina Coast Water District are of vital importance to sustainable communities and to the health, safety and well-being of the people of this community. Such facilities and services could not be provided without the dedicated efforts of public works professionals, engineers, managers and employees from State and local units of Government and the private sector, who are responsible for and must plan, design, build, operate, and maintain the water supply, waste water, transportation and solid waste systems, public buildings, and other structures and facilities essential to serve our citizens.

This year in particular, the staff of MCWD are performing essential functions during our response to COVID-19. It is a privilege that we can still go to work and serve our community. For staff that fulfill this vital function, staying at home is not an option.

The health, safety and comfort of this community greatly depends on these facilities and services. It is in the public interest for the citizens, civic leaders and children in the United States of America to gain knowledge of and maintain a progressive interest and understanding of the importance of public works and public works programs in their respective communities.

2020 marks the 60th annual National Public Works Week sponsored by the American Public Works Association.

Environmental Review Compliance: None required.

Financial Impact: _____Yes ___X___No Funding Source/Recap: None.

Other Consideration: None.

Material Included for Information/Consideration: Resolution No. 2020-28.

Action Required: ___X____Resolution _____Motion _____Review
(Roll call vote is required.)

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

May 18, 2020

Resolution No. 2020-28
Resolution of the Board of Directors
Marina Coast Water District
Proclaiming the Week of May 17-23, 2020
National Public Works Week

RESOLVED by the Board of Directors ("Directors") of the Marina Coast Water District ("District"), at a meeting duly called and held on May 18, 2020, via a videoconference pursuant to Gov. Newsom's Executive Order N-29-20, as follows:

WHEREAS, public works professionals focus on infrastructure, facilities and services are of vital importance to sustainable communities and to the public health, safety, high quality of life and well-being of the people of Marina Coast Water District; and,

WHEREAS, the health, safety and comfort of this community greatly depends on essential water and wastewater facilities and services; and,

WHEREAS, such facilities and services could not be provided without the dedicated efforts of public works professionals, engineers, managers and employees at all levels of government and the private sector, who are responsible for rebuilding, improving, operating, maintaining and protecting the water supply, wastewater, public buildings, and other structures and facilities essential to serve our citizens; and,

WHEREAS, it is in the public interest for the citizens, civic leaders and children in the Marina Coast Water District to gain knowledge of and maintain a progressive interest and understanding of the importance of public works and public works programs in their respective communities; and,

WHEREAS, the year 2020 marks the 60th annual National Public Works Week sponsored by the American Public Works Association.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Marina Coast Water District does hereby proclaim the week of May 17-23, 2020 as National Public Works Week; and urge all our people to join with representatives of the American Public Works Association and government agencies in activities and ceremonies designed to pay tribute to our public works professionals, engineers, managers and employees and to recognize the substantial contributions they make to protecting our national health, safety, welfare and quality of life.

PASSED AND ADOPTED on May 18, 2020, by the Board of Directors of the Marina Coast Water District by the following roll call vote:

Ayes: Directors_____

Noes: Directors_____

Absent: Directors_____

Abstained: Directors_____

_____
Thomas P. Moore, President

ATTEST:

_____
Keith Van Der Maaten, Secretary

CERTIFICATE OF SECRETARY

The undersigned Secretary of the Board of the Marina Coast Water District hereby certifies that the foregoing is a full, true and correct copy of Resolution No. 2020-28 adopted May 18, 2020.

_____
Keith Van Der Maaten, Secretary

Return to Agenda

Marina Coast Water District
Agenda Transmittal

Agenda Item: 12-A Meeting Date: May 18, 2020

Prepared By: Michael Wegley Approved By: Keith Van Der Maaten

Agenda Title: Consider Adoption of Resolution No. 2020-29 to Accept the April 2020 Final Draft Marina Coast Water District Sewer, Water and Recycled Water Master Plans

Staff Recommendation: The Board of Directors consider adoption of Resolution No. 2020-29 to accept the April 2020 Final Draft Marina Coast Water District Sewer, Water and Recycled Water Master Plans.

Background: *Strategic Plan Mission Statement 2.0 – Our objective is to provide a high-quality water distribution system and an efficiently operating wastewater collection system to serve existing and future customers. Through the master planning process, our infrastructure strategy is to carefully maintain our existing systems and ensure future additions and replacements will meet District Standards*.

Detailed Description: The Board of Directors is requested to consider acceptance of the April 2020 Final Draft Marina Coast Water District Sewer, Water and Recycled Water Master Plans. The master plans document:

- existing sewer, water and recycled water facilities.
- acceptable hydraulic performance criteria.
- projected sewer, water and recycled water demands.
- the development of the District's GIS-based sewer, water and recycled water models.
- the capacity evaluation of the existing sewer and water systems with improvements to mitigate existing deficiencies.
- recommended improvements to serve future sewer, water and recycled water customers.
- the Capital Improvement Program with an opinion of probable cost allocations to meet AB1600.

Discussion/Analysis: The Board of Directors approved Resolution No. 2016-66 for a Professional Services Agreement with Akel Engineering Group, Inc. (Akel) to prepare the Sewer, Water and Recycled Water Master Plan studies. Akel commenced with the project work. Early on, several changes in the progress and scope of the work extended the master planning schedule. Master planning work had to be set aside to update capital improvement cost estimates of the existing Capital Improvement Program for the rate study to approve new rates.

Preliminary design of future water system improvements to service ambitious growth projections based on the Urban Water Management Plan led to larger pipelines, pumps, and tanks. In response, Akel was directed to use a lower straight-line growth projection of three percent. The District's fire flow criteria also contributed to larger infrastructure. Area fire Departments did not want to reduce fire flow criteria so no reductions were gained in that respect but Akel was able to reduce operational storage capacity to 25% and still achieve the requisite 50% emergency storage capacity.

Review of an early draft of the sewer master plan discovered pump station data used for sewer modelling and master planning was outdated. District pump station records were researched to update the pump station inventory. The information was provided to Akel to update the sewer model and masterplan.

The Fort Ord Reuse Authority (FORA) Base Reuse Plan and General Plans by the County of Monterey, City of Marina, and City of Seaside, provide the underlying basis for the master plans in the Ord Community service area. One aspect affecting the master plan capital improvements and capacity fees in the Ord Community is the cap on new residential units until 18,000 new jobs are created on Fort Ord per the Base Reuse Plan. The FORA Capital Improvement Program for Fiscal Years 2018-19 through 2028-29 reflects the 6,160 residential unit cap in the development forecast.

Akel presented draft planning information and capital improvements to the FORA Water and Wastewater Oversight Committee (WWOC) on August 15, 2018. FORA staff and WWOC Committee members provided comments and information on planned land uses that were not reflected on some of the land use jurisdictions General Plan maps. For example, the County swapped development and habitat preserve lands between East Garrison and Parker Flats. Based on the review comments from staff and the WWOC, future land uses and allowable growth projections were updated; additional Equivalent Dwelling Unit Analysis and meetings with the FORA WWOC; and updating water and sewer system evaluations for recommended improvements in the Capital Improvement Program.

Development Capacity Fees for the Ord Community were a major concern to stakeholders. Staff considered several different ways to mitigate capacity fee increases on development. One potential solution considered was to evaluate a fee structure for a near-term development capital improvement program (CIP) horizon rather than for full buildout.

Staff level reviews of the master plans and capacity fees led to multiple revisions in the capital improvement projects, cost estimates and capacity fees for each enterprise fund prior to release of the April 2019 Draft Master Plans and Capacity Fee Study. This carried into an evaluation of fee calculation methodologies and multiple revisions and adjustments that went into the Draft Capacity Fee Study. Staff worked with the consultants reviewing capacity fee calculation methodologies leading to the selection of the Hybrid Buy-In + Marginal Future cost methodology.

Additional stakeholder meetings were held to better inform the community about the Master Plans and Capacity Fee Study. Reviews of the draft master plans and capacity fees at all levels led to further revisions and refinements in the capital improvement projects, cost estimates and capacity fees. Akel then prepared September 2019 Final Draft Master Plans based on comments received on the April 2019 Draft Sewer, Water, and Recycled Water Master Plans and Capacity Fee Study.

Additional meetings were held with stakeholders and the Fort Ord Reuse Authority Water and Wastewater Oversite Committee. In addition, a technical review meeting was held to review the September 2019 Final Draft Master Plans and capacity fees. Stakeholders were deeply concerned because the master plans for near-term development and the fee methodology led to steep fee increases.

In the time it took to develop the Master Plans, four new developments were acknowledged and needed to be included in the Plans, so the Plans were further updated. Those four developments are:

- Campus Town in the City of Seaside
- Amended Main Gate in the City of Seaside
- The Downtown Vitalization Plan in the City of Marina
- The Marina Airport Business Park in the City of Marina

Akel updated the master plans to include these four specific plans. Akel's scope of tasks to update the master plans included revising:

- the original land us assumptions to incorporate the specific plans,
- the future system evaluation for near term and buildout conditions
- the capital improvement program
- proposed capacity fees

The attached April 2020 Final Draft Master Plans incorporate the four specific plans with project costs prepared for the intermediate term development horizon. The net effect is that while the specific plans add system demands and increase the capital improvement costs, they also spread those costs over a larger equivalent dwelling unit base and a longer development horizon so that the capacity fee increases are not nearly as severe.

Once the Master Plans are approved, the consultants will conclude the proposed capacity fee study to reflect the master plan revisions. A stakeholder meeting will be held to share the results of the capacity fee study before new proposed Capacity Fees are brought before the Board for consideration.

Environmental Review Compliance: None required. California Environmental Quality Act (CEQA) review is part of the individual projects and not part of the Sewer, Water and Recycled Water Master Plans.

Financial Impact: _____Yes ___X__No Funding Source/Recap: Funding for this item comes from the Engineering Consultants budget line.

Other Considerations: The Board may desire to consider other alternatives to adopting the motion as recommended by staff including:

1. Modifying or conditioning the action; or,
2. Direct further staff work; or,
3. Deny the action.

Material Included for Information/Consideration: Resolution No. 2020-29; and, April 2020 Final Draft Sewer, Water and Recycled Water Master Plans (provided separately).

Action Required: ___X___Resolution _____Motion _____Review
(Roll call vote is required.)

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

May18, 2020

Resolution No. 2020-29
Resolution of the Board of Directors
Marina Coast Water District
Accepting the Marina Coast Water District
Sewer, Water and Recycled Water Master Plans

RESOLVED by the Board of Directors ("Directors") of the Marina Coast Water District ("District"), at a regular meeting duly called and held on May 18, 2020, via a videoconference pursuant to Governor Newsom's Executive Order N-29-20, as follows:

WHEREAS, preparing Sewer, Water and Recycled Water Master Plans is consistent with the goals and objectives stated in the District's Strategic Plan; and,

WHEREAS, the Directors awarded a Professional Services Agreement with Akel Engineering Group for the Sewer, Water and Recycled Water Master Plan studies by Resolution No. 2016-66; and,

WHEREAS, the master plans document existing sewer, water and recycled water facilities, acceptable hydraulic performance criteria, and projected sewer, water and recycled water demands; and,

WHEREAS, the master plans document the development of the District's GIS-based sewer, water and recycled water models; and,

WHEREAS, the master plans document the capacity evaluation of the existing sewer and water systems with improvements to mitigate existing deficiencies; and,

WHEREAS, the master plans document recommended improvements to serve future sewer, water and recycled water customers; and,

WHEREAS, the master plans document the Capital Improvement Program with an opinion of probable cost allocations to meet AB1600; and,

WHEREAS, workshops were held with stakeholders and the Fort Ord Water/Wastewater Oversight Committee to review the master plan documents as the basis for capacity fees.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Marina Coast Water District hereby accepts the April 2020 Final Draft Marina Coast Water District Sewer, Water and Recycled Water Master Plans.

PASSED AND ADOPTED on May 18, 2020, by the Board of Directors of the Marina Coast Water District by the following roll call vote:

Ayes: Directors_____

Noes: Directors_____

Absent: Directors_____

Abstained: Directors_____

_____
Thomas P Moore, President

ATTEST:

_____
Keith Van Der Maaten, Secretary

CERTIFICATE OF SECRETARY

The undersigned Secretary of the Board of the Marina Coast Water District hereby certifies that the foregoing is a full, true and correct copy of Resolution No. 2020-29 adopted May 18, 2020.

_____
Keith Van Der Maaten, Secretary

Return to Agenda

Marina Coast Water District
Agenda Transmittal

Agenda Item: 12-B Meeting Date: May 18, 2020

Prepared By: Don Wilcox Approved By: Keith Van Der Maaten
Reviewed By: Michael Wegley

Agenda Title: Consider Adoption of Resolution No. 2020-30 to Approve Amendment No. 8 with Denise Duffy & Associates under their RUWAP On-Call Professional Services Agreement to provide Environmental Services for the Regional Urban Water Augmentation Project Distribution Mains Project

Staff Recommendation: Staff recommends that the Board of Directors consider adoption of Resolution No. 2020-30 approving Amendment No. 8, which includes Task Orders 8a & 8b, to the Professional Services Agreement with Denise Duffy & Associates for additional work and adding the amount of $68,535 to the contract for a new not-to-exceed total contract amount of $587,961 for all Regional Urban Water Augmentation Projects (RUWAP).

Background: *Strategic Plan Mission Statement – To provide our customers with high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner*.

MCWD's RUWAP Distribution Pipelines Project has had two recent developments which will add additional environmental work to the project.

The first issue is the need to transfer the new Imjin Parkway potable and recycled water pipelines from the City of Marina's Imjin Parkway Road Widening Project to the District's RUWAP Distribution Pipelines Project. The pipelines and all associated costs are being paid for by the District but were going to be constructed as part of the City of Marina's Imjin Road Project. Fortunately, Denise Duffy & Associates (DDA) was performing environmental work on the Imjin Road Project for the City of Marina (with a proportionate share being billed to the District) so DDA's work can now be transferred and billed directly to the RUWAP and water line projects. This amendment re-directs the costs for environmental work associated with the pipelines directly to the RUWAP project instead of through the City of Marina.

The second issue is the need to add seven additional pressure reducing/backflow prevention stations to the project as necessary to provide recycled water to CSUMB (5), Bayonet-Blackhorse Golf Course and Patton Parkway landscaping. This amendment covers the increase in costs for environmental work associated with twelve PRS locations instead of five.

Discussion and Analysis: Staff from Denise Duffy & Associates have provided environmental services throughout the planning and design of both phases of the RUWAP and have provided excellent support since the projects beginning. The scope of work for environmental compliance for DDA includes mitigation monitoring and reporting, pre-construction biological surveys to update prior planning surveys, contractor education and training and any changes in permitting conditions. The construction phase will require a biologist to monitor on-going construction activities to ensure implementation of mitigation measures and best management practices, especially near sensitive habitats. Compliance documentation will be generated, maintained and

communicated to keep the project team updated with compliance requirements, action items and responsibilities.

On September 11, 2012 the District approved Resolution No. 2012-56 authorizing a Professional Services Agreement with Denise Duffy and Associates for On-Call Environmental Services for the RUWAP projects, and on September 16, 2019 the Board authorized Resolution No. 2019-64 for Amendment No. 7 in the amount of $142,547 for environmental compliance and mitigation monitoring services for the RUWAP Distribution Pipelines Project. This Amendment No. 8 in the amount of $68,535 authorizes additional quantities as described above of the same work authorized in Resolution No. 2019-64 for a total of $211,082 for the Distribution Mains Project. Staff is recommending that the Board adopt Resolution No. 2020-30 to amend the DDA Professional Service Agreement as described above.

Environmental Review Compliance: The MCWD Environmental Impact Report establishing Mitigation Monitoring and Environmental Compliance for the RUWAP Projects meets both the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) requirements.

Financial Impact: ___X___Yes _____No Funding Source/Recap: Funding for this project comes from the FORA contribution to RUWAP and the CA Water Resources Control Board State Revolving Fund loan proceeds.

Other Considerations: The Board may desire to consider other alternatives to adopting the motion as recommended by staff including:

1. Modifying or conditioning the action; or,
2. Direct further staff work; or,
3. Deny the action.

Material Included for Information/Consideration: Resolution No. 2020-30; and, DDA Proposals (Amendments 8a, and 8b).

Action Required: ___X___Resolution _____Motion _____Review
(Roll call vote is required.)

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

May 18, 2020

Resolution No. 2020-30
Resolution of the Board of Directors
Marina Coast Water District
Approving Amendment No. 8 to the Professional Services Agreement with
Denise Duffy & Associates for Environmental Compliance for the
Regional Urban Water Augmentation Project Distribution Mains

RESOLVED by the Board of Directors ("Directors") of the Marina Coast Water District ("District"), at a regular meeting duly called and held on May 18, 2020, via a videoconference pursuant to Governor Newsom's Executive Order N-29-20, as follows:

WHEREAS, the District has the need to transfer the Imjin Parkway potable and recycled water pipelines from the City of Marina's Imjin Parkway Road Widening Project plans to the District's Regional Urban Water Augmentation Project Distribution Mains Project plans; and,

WHEREAS, the District also has the need to add seven additional pressure reducing/backflow prevention stations to the project in order to be ready to serve recycled water users that have been identified as most likely to connect as soon as a point of connection is available including CSUMB (5), Bayonet-Blackhorse Golf Course and Patton Parkway landscaping; and,

WHEREAS, these additional quantities of work items will result in an increased level of effort necessary to provide environmental compliance and mitigation monitoring services for the project; and,

WHEREAS, on September 11, 2012, the District approved Resolution No. 2012-56 authorizing a Professional Services Agreement with Denise Duffy and Associates for RUWAP On-Call Environmental Services; and,

WHEREAS, on September 16, 2019, the District approved Resolution No. 2019-64 authorizing Amendment No. 7 to the Professional Services Agreement with Denise Duffy and Associates for RUWAP On-Call Environmental Services for the RUWAP Distribution Pipelines Project; and,

WHEREAS, Denise Duffy & Associates has submitted the attached scope and fee estimate proposals for the total not-to-exceed dollar amount of $68,535 for On-Call Services to cover the above additional services for the RUWAP Distribution pipeline Project, and staff agrees that the proposal is reasonable; and,

WHEREAS, Staff is recommending that the Board amend the Professional Service Agreement to cover this additional work.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Marina Coast Water District does hereby approve Amendment No. 8 to the Professional Services Agreement with Denise Duffy & Associates to add the amount of $68,535 for additional services necessary and for a new not-to-exceed total amount of $211,082 for the RUWAP Distribution Pipelines Project.

PASSED AND ADOPTED on May 18, 2020, by the Board of Directors of the Marina Coast Water District by the following roll call vote:

Ayes: Directors_____

Noes: Directors_____

Absent: Directors_____

Abstained: Directors_____

_____
Thomas P Moore, President

ATTEST:

_____
Keith Van Der Maaten, Secretary

CERTIFICATE OF SECRETARY

The undersigned Secretary of the Board of the Marina Coast Water District hereby certifies that the foregoing is a full, true and correct copy of Resolution No. 2020-30 Adopted May 18, 2020.

_____
Keith Van Der Maaten, Secretary

Denise Duffy & Associates, Inc.
PLANNING AND ENVIRONMENTAL CONSULTING

Amendment 8a
Marina Coast Water District Regional Urban Water Augmentation Project – Distribution Laterals Construction Compliance
Amendment to Existing Agreement

To: Don Wilcox, District Engineer
Date: May 6, 2020
Client: Marina Coast Water District (MCWD)
From: Matt Johnson, Denise Duffy & Associates (DD&A)
Ref: 2019-19
Subject: Amendment for Services for the Regional Urban Water Augmentation Project – *Distribution Laterals Construction Compliance, Additional PRS*

Purpose: This letter requests and, if acceptable, authorizes DD&A, Inc. to perform the work described below for the budget allocated. This additional scope of work and budget is an amendment to the original agreement, as of the date shown below. If the additional work specified is deemed acceptable, please sign below and return to DD&A.

Discussion: Denise Duffy & Associates, Inc. (DD&A) will provide environmental services for the Water Distribution Laterals Construction Compliance (project) of the Regional Urban Water Augmentation Project (RUWAP). This SOW includes compliance with the Mitigation Monitoring and Reporting Program (MMRP) approved by the MCWD Board of Directors on October 27, 2004 and the Biological Opinion (BO) issued by the US Fish and Wildlife Service (USFWS) on November 24, 2009. This Amendment is specific to an email request from MCWD to provide construction compliance support on additional Pressure Reducing Stations (PRS, Attachment A). The request was received on March 23, 2020.

Terms: All other terms and conditions of the original agreement shall remain unchanged.

Submitted by: _____ 5/6/2020
DD&A Project Manager Date

Accepted by: _____ _____
MCWD Date

Marina Coast Water District
Regional Urban Water Augmentation Project – Distribution Laterals Construction Compliance
Amendment 8a

Denise Duffy & Associates (DD&A) is currently under contract with the Marina Coast Water District (MCWD) to provide biological/construction monitoring support and environmental compliance services for the Regional Urban Water Augmentation Project (RUWAP) – Distribution Laterals Construction Compliance. This document provides a Scope of Work (SOW) and Cost Estimate for environmental compliance and mitigation monitoring services for the project. Where appropriate, this SOW identifies the various project deliverables that will be completed for clarification purposes. This SOW includes compliance with the Mitigation Monitoring and Reporting Program (MMRP) approved by the MCWD Board of Directors on October 27, 2004 and the Biological Opinion (BO) issued by the US Fish and Wildlife Service (USFWS) on November 24, 2009. The SOW also includes the preparation of an environmental compliance overview document and compliance monitoring. A description of the tasks and assumptions used to develop the Cost Estimate is provided below. This SOW and corresponding Cost Estimate provide funding specific to an email request from MCWD to provide construction compliance support on additional Pressure Reducing Stations (PRS). The request was received on March 23, 2020. If it is determined that the construction phase extends beyond one year or that post-construction services are required for compliance, an additional SOW and Cost Estimate may be required.

TASK 1: Pre-Construction Phase

As part of this task DD&A would be responsible for developing a program to document compliance with the various mitigation measures and compliance with the BO. Additionally, DD&A would be responsible for providing the format, process, and templates for compliance verification, as well as templates for specific technical reports to be prepared by others (i.e., Contractor) as detailed below. DD&A proposes to provide biological surveys, construction contractor education training, and pre-construction monitoring services. This SOW assumes that the DD&A Natural Resource Division (NRD) will be responsible for providing the biological services necessary to ensure compliance with the MMRP and the BO. In addition, DD&A NRD would also be responsible for providing technical guidance and ensuring that the applicable protocols are followed.

1.1 Project Initiation/Environmental Compliance Overview

As part of this initial task, DD&A will meet with MCWD to refine the scope, confirm roles, and discuss initial agency and consultant coordination regarding mitigation monitoring and condition compliance. DD&A will compile mitigation measures and supporting documentation to create a comprehensive Mitigation Matrix. This matrix will be used for the purposes of monitoring and documenting compliance with the mitigation measures identified in the MMRP and measures identified in the BO. The matrix will also identify measures according to their temporal (e.g., pre-construction, on-going, etc.) and spatial requirements.

DD&A will also conduct an initial pre-construction site visit with the Contractor, and other technical sub-consultants to confirm project assumptions and work plan, as well as identify applicable MMRP and BO

requirements (in mapping format and database format, if necessary). On-going coordination is a critical component of ensuring that the applicable mitigation measures have been satisfied in accordance with the requirements of the MMRP and the BO. DD&A will provide one point of contact for on-going communication. DD&A will prepare any required CEQA documentation for the PRS that were not included in the original project description. DD&A will determine if additional CEQA documentation is needed to remain in compliance and prepare the documentation for MCWD approval.

- *1.1.1 Project Initiation - It is anticipated that DD&A will participate in the kick-off meeting with the construction Contractor. As part of this task, the obligations of each party (i.e., MCWD, DD&A, Construction Manager, and Contractor) will be identified. In addition, this task includes identifying and confirming specific mitigation measures and conditions that apply to this project component.*
- *1.1.2 Environmental Compliance Plan (ECP) Overview - DD&A will prepare an overview document for this project component that will include a summary of required environmental compliance activities and plan submittals and a summary of the approach to management of environmental compliance activities and reporting. The ECP document will also include the excel database of all MMRP and BO requirements (the Matrix described above) specific to the project. Important contact information for the project will also be included in this document. The ECP and the Matrix will provide guidance for MCWD and Contractors, as well as information on agency and project contacts. After review by MCWD and DD&A will update the ECP and compile in a booklet or binder format for MCWD and Contractors.*

Deliverables: Matrix, Draft and Final Environmental Compliance Plan Overview, including two hardcopies of the ECP Overview

1.2 Employee Education Program

DD&A will implement an Employee Education Program. Prior to mobilization and other ground disturbing activities, DD&A will conduct an Employee Education Program to educate personnel involved in the project about the biological resources that occur or potentially occur on the site. The education program will include: 1) the appropriate access route(s) in and out of the construction area and the review of project boundaries; 2) how a biological monitor will examine the area and agree upon a method which would ensure the safety of the monitor during such activities; 3) the special-status species that may be present; 4) the specific mitigation measures that will be incorporated into the construction effort; 5) the general provisions and protections afforded by the USFWS; and 6) the proper procedures if a special-status species is encountered within the site. The Employee Education Program will identify specific biological requirements applicable to the project. A project pamphlet or fact sheet conveying this information will be prepared for distribution and a sticker will be given to each worker that receives training. This task assumes that DD&A will be responsible for conducting the Employee Education Program as part of initiation prior to the start of construction-related activities. Additional Employee Education Programs that may be required during the course of the construction phases will be included as part of task 2.1 Construction Phase Monitoring.

Deliverables: Employee Education Program (Project Pamphlet or Fact Sheet)

1.3 Pre-Construction Biological Surveys, Meetings, and PM

Pre-construction clearance surveys shall be conducted by a qualified biologist for component-specific species and habitats as directed by the MMRP and the BO. Survey methodology will be consistent with the requirements of the environmental documentation. Pre-construction survey reports describing the results of the surveys shall be provided to the project proponents prior to any ground disturbing activities. The report shall include but is not limited to: 1) a description of the species observed, if any; 2) map of the location, if observed; and 3) recommended avoidance and minimization measures, if applicable. The sub-tasks below provide a description of the necessary biological surveys for the PRS.

This task will involve periodic coordination and strategy calls with MCWD and project partners to coordinate information exchange, discuss/refine project submittal information, and work with the internal team to address project needs.

- *1.3.1 Pre-construction special-status plant surveys (Mitigation Measure 4.4-R1)*
- *1.3.2 Pre-construction raptor, coast horned lark, and loggerhead shrike nest survey (Mitigation Measure 4.4-R5, Mitigation Measure 4.4-R6).*
- *1.3.3 Pre-construction burrowing owl surveys (Mitigation Measure 4.4-R2)*

Deliverables: Pre-construction survey reports (one draft and one final).

1.4 Preparation and Review of MMRP Compliance Plans

Although the following Plans are included in Amendment 7 for this project, they have also been included in this amendment to cover the additional scope and budget necessary to cover the additional PRS. DD&A does not intend to prepare the plans described below as stand-alone documents specific to the additional PRS's.

- *1.4.1 Traffic Control Plan Review and Approval*

DD&A will be responsible for reviewing supporting documentation prepared by the Contractor on behalf of MCWD. Documents prepared by others will be reviewed by DD&A and compliance memoranda will be issued to document compliance. Pursuant to the requirements of the MMRP, a Traffic Control and Safety Assurance Plan must be prepared and submitted to MCWD for review and approval.

- *1.4.2 CDFW Memorandum of Understanding*

Mitigation Measure 4.4-R18 requires that a Memorandum of Understanding (MOU) with CDFW shall be obtained for a qualified biologist to remove and relocate black legless lizards, coast horned lizards, and globose dune beetles from the construction area if encountered during construction activities. DD&A will prepare and submit the MOU materials to CDFW for approval prior to the start of construction. The MOU shall include, but is not limited to, the methods of capture and an estimation of the number of individuals expected to be captured and handled, the duration of capture and handling, and a description of the established relocation area.

- *1.4.3 Revegetation Plan*

DD&A will prepare a Revegetation Plan in accordance with the requirements of the MMRP to revegetate and restore impacted habitat. This plan will include a list of appropriate species, planting specifications, monitoring procedures, success criteria, and contingency plan if success criteria are not met.

- *1.4.4 Rare Plant Restoration Plan (If Necessary)*

If the results of the pre-construction survey effort determine that a Rare Plant Restoration Plan is necessary to remain in compliance, DD&A will prepare the plan for MCWD approval. The plan shall include, but is not limited to, the following:

- a description of the baseline conditions of the habitats within the area of impact, including the presence of any special-status plant species, its locations, and densities;
- procedures to control non-native species invasion and elimination of existing non-native species within the area of impact;
- provisions for ongoing training of maintenance personnel in implementation of the plan;
- a detailed description of on-site and off-site restoration areas, salvage of seed and/or soil bank, plant salvage, seeding and planting specifications; and
- a monitoring program that describes annual monitoring efforts which incorporate success criteria and contingency plans if success criteria are not met.

Deliverables: Compliance memoranda; CDFW MOU materials, Revegetation Plan (Draft and Final).

Optional deliverable: Rare Plant Restoration Plan (Draft and Final).

TASK 2: Construction Phase

This task would entail construction monitoring as well as on-going documentation of the status of MMRP and BO requirements using the matrix. This task also includes DD&A's management of the contract, scope, Cost Estimate, and schedule with MCWD for all the work completed. This also includes overall coordination with larger interagency and community teams, specifically, those not involved in mitigation monitoring and environmental compliance directly. DD&A will prepare regular progress status reports throughout the duration of the project. This task includes additional DD&A services to respond to various requests for information, confirmation of project area, mitigation, and miscellaneous services tasks. Each sub-task is individually discussed below.

2.1 Construction Phase Biological Monitoring, Meetings, and PM

As part of this task, DD&A biologists will be responsible for on-going monitoring during construction activities near sensitive habitats, including habitats for special-status species, to ensure implementation of mitigation measures and construction best management practices. The DD&A biologist will survey the work area prior to construction activities to identify if any sensitive biological resources are present before equipment mobilizes. DD&A will consult with all applicable environmental documentation prior to the initiation of construction activities to determine the necessary measures (fencing installation, clearance surveys, flagging, nest deconstruction, establishment of avoidance buffers, etc.). During initial ground disturbance, if not already on site, DD&A biologist will be contacted if special-status species are located in the project area by construction personnel. If construction personnel observe special-status species in the work area, work in the immediate area shall cease and personnel will contact the DD&A biologist or quickly relay the information through approved channels (e.g., through the construction foreman). The DD&A biologist will have authority to stop construction activities and develop alternative work practices,

in consultation with construction personnel and resource agencies, if construction activities are likely to impact special-status species or other sensitive biological resources.

This task will involve periodic coordination and strategy calls with the MCWD and project partners to coordinate information exchange, discuss/refine project submittal information, and work with the internal team to address project needs.

Deliverables Monthly Biological Monitoring Work Logs

2.2 Condition Compliance Documentation (Construction Phase)

Throughout the construction phase, DD&A will generate compliance memoranda to document that all MMRP and BO requirements have been met. In addition, DD&A will maintain and update the matrix developed in **Task 1.1** during construction. This will entail compiling monitoring logs and weekly reporting data, as well as documenting material submitted on behalf of the MCWD. This information will be disseminated into the matrix and consolidated to enable consistent and reliable external reporting. DD&A will review, update, and manage the compliance plan matrix as needed to assess the compliance status of individual requirements and identify action items and responsibility on a daily basis.

Deliverables: Updated Matrix, Compliance Memoranda

TASK 3: Compliance with State Revolving Fund Requirements

3.1 Compliance with State Revolving Fund Requirements

The project is being partially funded by the State Revolving Fund (SRF) program, which is implemented by the by the State Water Resources Control Board (SWRCB). SRF requirements include oversight of mitigation compliance by SWRCB staff. As part of this task DD&A will:

- Coordinate with SWRCB staff;
- Create a file sharing site for the transmission of condition compliance documentation to SWRCB staff and SRF compliance personnel;
- Provide Quarterly Environmental Compliance Reports to MCWD for submittal to SWRCB; and
- Respond to periodic questions and requests for assistance from agencies.

Assumptions for Water Distribution Laterals Project

The following assumptions were used in preparing this SOW and Cost Estimate:

- All the tasks and sub-tasks identified within the scope will involve periodic coordination and strategy calls with the MCWD and project partners to coordinate information exchange, discuss/refine project submittal information, and work with the internal team to address project needs.
- The areas of impact/affect and project descriptions will not change such as that new or revised biological resources investigations would be required.
- A portion of the RUWAP biological monitoring tasks relies on data and mapping provided by MCWD and engineers. This scope and proposed schedule assume timely review by MCWD; and submittal of needed information. DD&A assumes that we will have timely receipt of review comments within a one to 14-day period of request for review of document, depending upon the length of the

document. Timely responses to information requests are assumed to be within three to four working days or to be within requested timeframes in order to meet critical construction schedule.

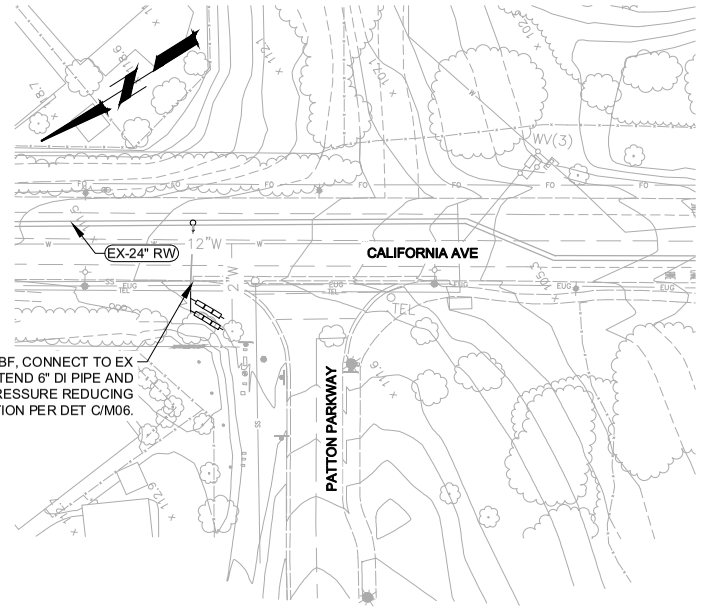
- Technical analyses and responses assumed to be prepared by consultants or agency staff members that are not under contract to DD&A are assumed adequate. Delays in providing these documents could cause delay in the completion and/or submittal of DD&A deliverables.
- DD&A reserves the right to reallocate labor and/or direct expenditures between tasks to ensure the successful completion of the scope of work.
- Since the construction for each PRS is not expected to begin on the same date DD&A has budgeted for multiple pre-construction survey efforts for the start of each geographically separated lateral component of the larger project.
- The above SOW covers work from for a construction phase up to one year. Biological monitoring beyond one year may require a Cost Estimate amendment.
- DD&A assumes that pre-construction surveys will only be conducted once, lapses in project inactivity that result in the need for multiple pre-construction survey efforts will require a Cost Estimate amendment.
- Post-construction environmental support may be required if the optional Rare Plant Restoration Plan is required or as part of the Revegetation Plan. Any post-construction environmental services may require a budget amendment.
- DD&A assumes that mitigation measures listed above will be sufficient to cover all PRS areas. However, if during initial survey additional mitigation measures, with additional survey requirements are required to remain in compliance a budget amendment may be required.

Cost Estimate

Attachment B provides the cost estimate to provide planning and environmental services for the pre-construction and construction phases of the project specific to the additional PRS described above.

Attachment A

PRS Locations



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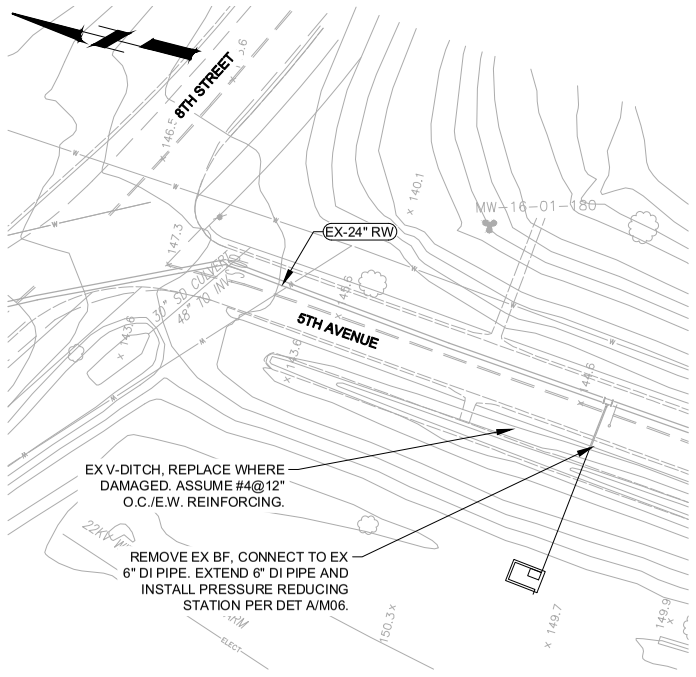

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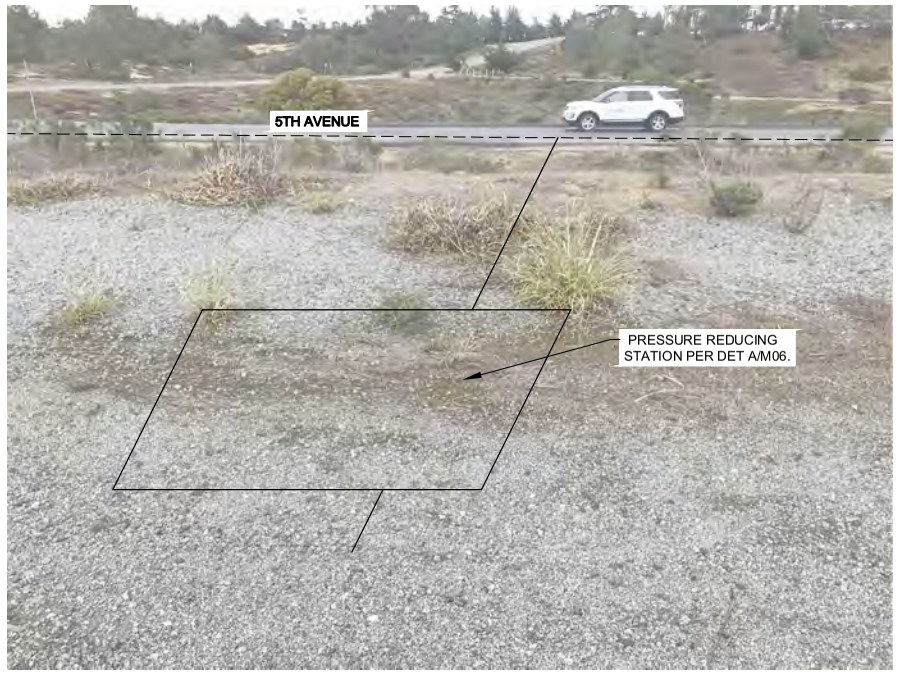

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B 5TH AVENUE TURNOUT

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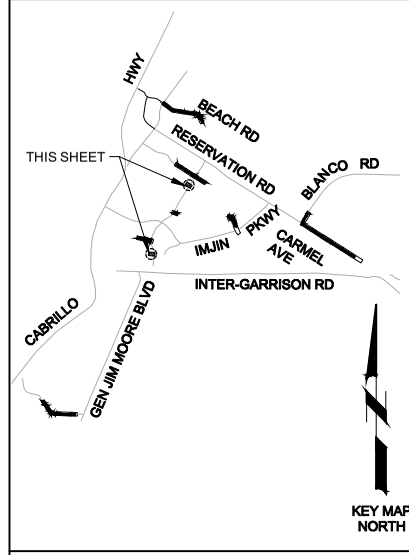
GENERAL NOTES:

1. FIELD SURVEY AND MARK CORERS OF ALL VAULTS / CONCRETE PADS. CONFIRM WITH OWNER AND ENGINEER IN THE FIELD THE FINAL LOCATION OF THE STATIONS PRIOR TO INSTALLING STATIONS OR ADJACENT FACILITIES.
2. CONTRACTOR SHALL FIELD VERIFY LOCATION OF EXISTING TURNOUTS PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES ADJACENT TO THE PROPOSED IMPROVEMENTS PRIOR TO CONSTRUCTION IN ACCORDANCE WITH SPECIFICATION SECTION 01350. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER OF ANY CONFLICTS AND PROPOSE REVISED LOCATIONS FOR IMPROVEMENTS FOR APPROVAL.
4. ANTICIPATE LOCAL IRRIGATION SYSTEM WILL NEED TO BE REMOVED/REPLACED.

811 Know what's below. Call before you dig.

KEY MAP



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1	3/19/20	JPM	CHANGED PER ADDENDUM NO. 3

BID DOCUMENTS

DESIGNED JPM/KMM
DRAWN AL/BWH
CHECKED AP
DATE JANUARY 2020

No. 73265

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Contact Info: Carollo Engineers, Inc.
Date: 2020.03.19 16:51:04-08'00'

carollo

MARINA COAST WATER DISTRICT

Marina Coast Water District

REGIONAL URBAN WATER AUGMENTATION PROJECT

RECYCLED WATER DISTRIBUTION MAINS

CIVIL DISTRIBUTION MAIN

YARD PIPING PLANS - 4

VERIFY SCALES
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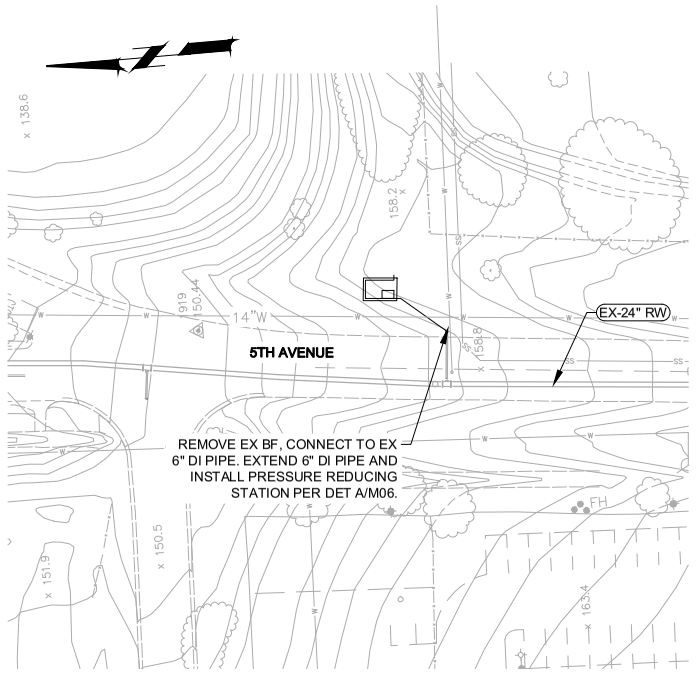

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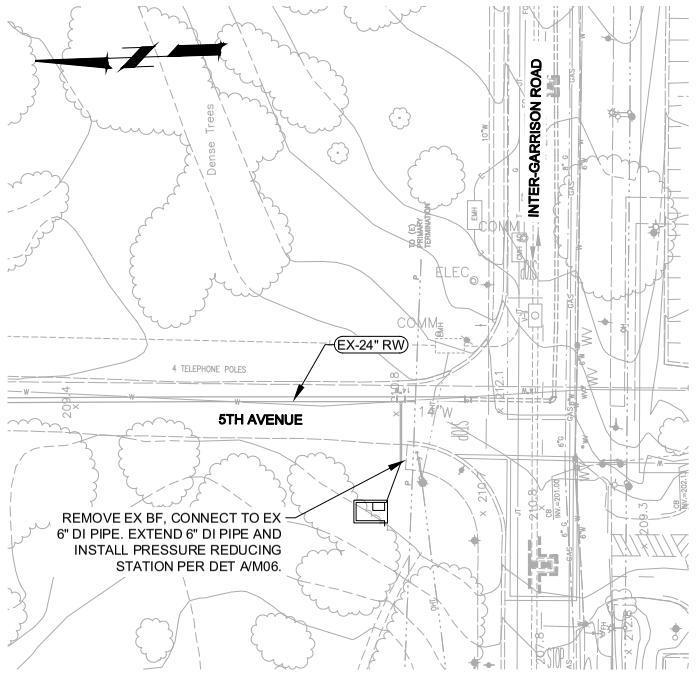

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B - 5TH AVENUE TURNOUT (3)

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GENERAL NOTES:

1. FIELD SURVEY AND MARK CORERS OF ALL VAULTS / CONCRETE PADS. CONFIRM WITH OWNER AND ENGINEER IN THE FIELD THE FINAL LOCATION OF THE STATIONS PRIOR TO INSTALLING STATIONS OR ADJACENT FACILITIES.
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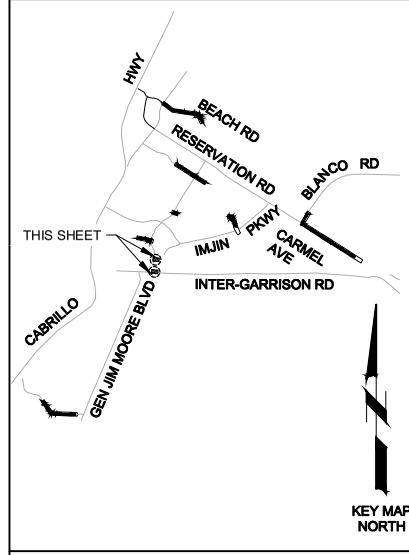
4. ANTICIPATE LOCAL IRRIGATION SYSTEM WILL NEED TO BE REMOVED/REPLACED.
5. ARBORISTS SHALL BE PRESENT FOR ALL WORK NEAR TREES PER SPECIFICATION SECTION 01562 IN AREAS WHERE THE ARBORIST DETERMINES THAT TREE ROOT EXCAVATION WILL DAMAGE NEARBY TREES.

811 Know what's below. Call before you dig.

KEY MAP



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DATE JANUARY 2020

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Marina Coast Water District

REGIONAL URBAN WATER AUGMENTATION PROJECT
RECYCLED WATER DISTRIBUTION MAINS
CIVIL DISTRIBUTION MAIN
YARD PIPING PLANS - 5

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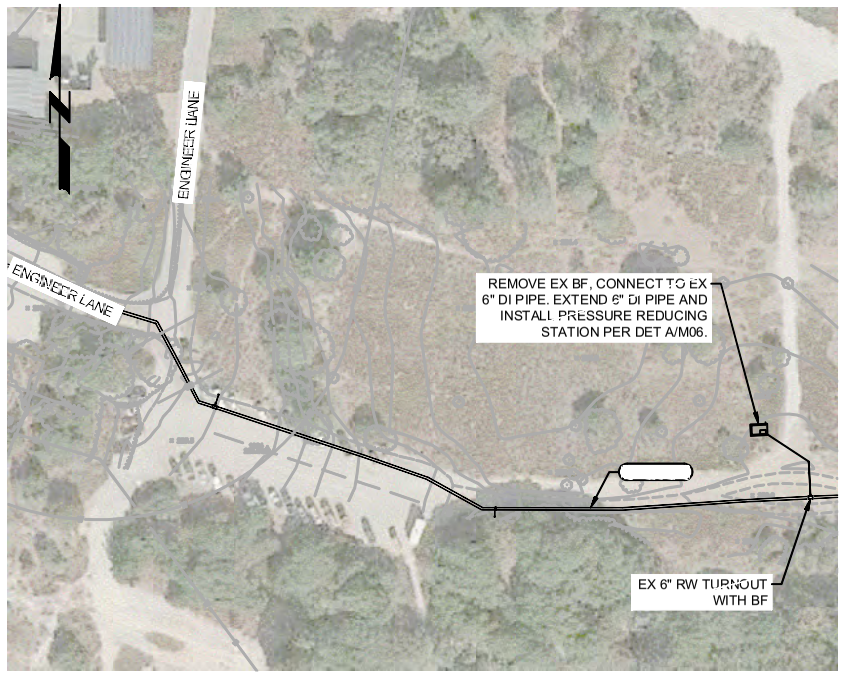

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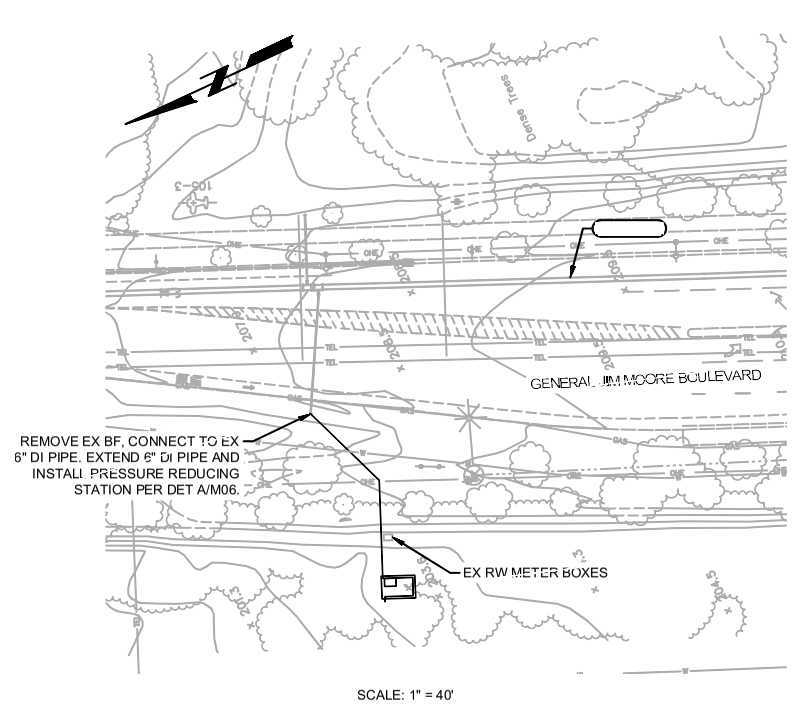

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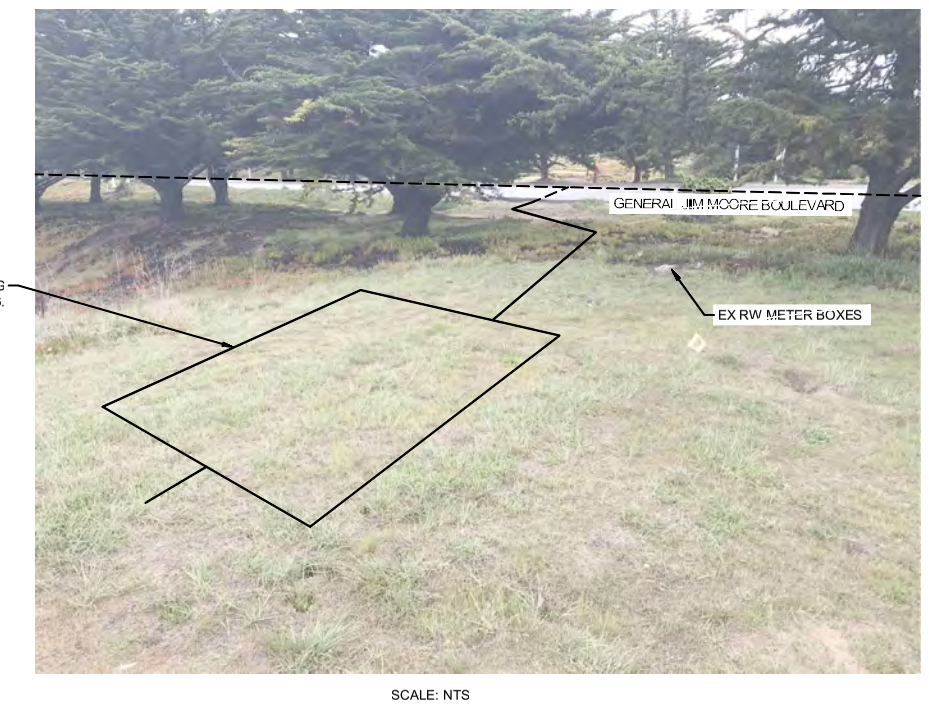

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B - GENERAL JIM MOORE BOULEVARD TURNOUT

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GENERAL NOTES:

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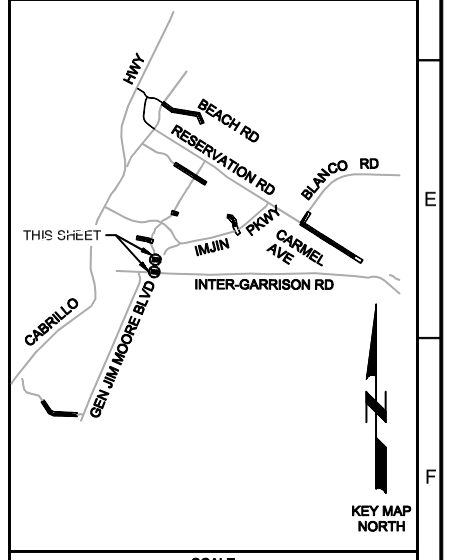
811
Know what's below.
Call before you dig.

KEY MAP



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DATE JANUARY 2020

REGISTERED PROFESSIONAL ENGINEER JONATHON P. MARSHALL No. 73265 CIVIL STATE OF CALIFORNIA

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Date: 2020.03.19 16:51:04-08'00'

carollo

Marina Coast Water District

REGIONAL URBAN WATER AUGMENTATION PROJECT
RECYCLED WATER DISTRIBUTION MAINS
CIVIL DISTRIBUTION MAIN
YARD PIPING PLANS - 6

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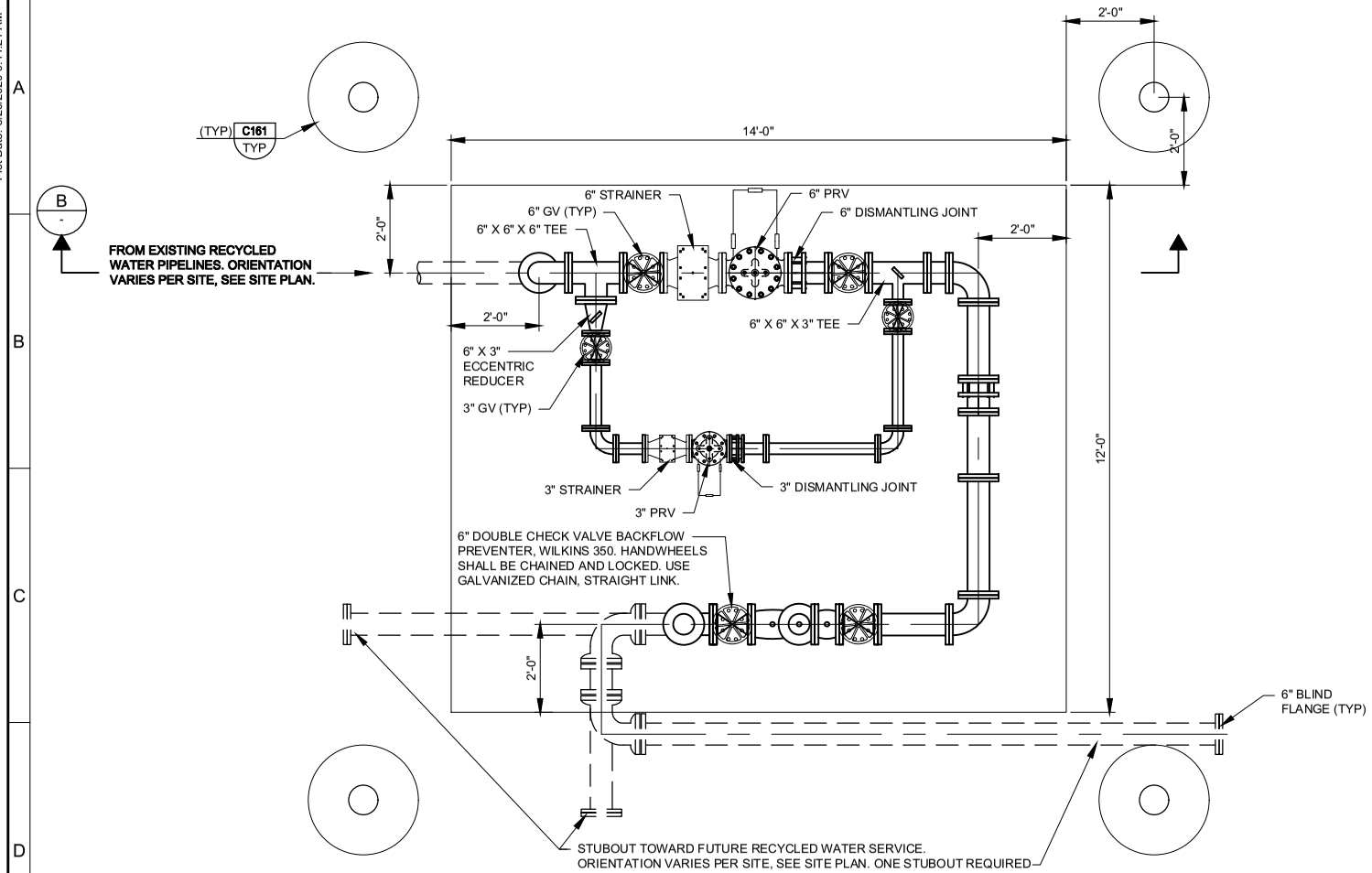
GENERAL NOTES:

1. **PRIOR TO PREPARING PAD CONTRACTOR SHALL FIELD LOCATE WITH PAINT ALL PIPING, VAULT, AND CONCRETE PAD LAYOUTS, INCLUDING DIMENSIONS, AND CONFIRM LOCATION WITH ENGINEER, CONSTRUCTION MANAGER, AND OWNER PRIOR TO INSTALLATION.**



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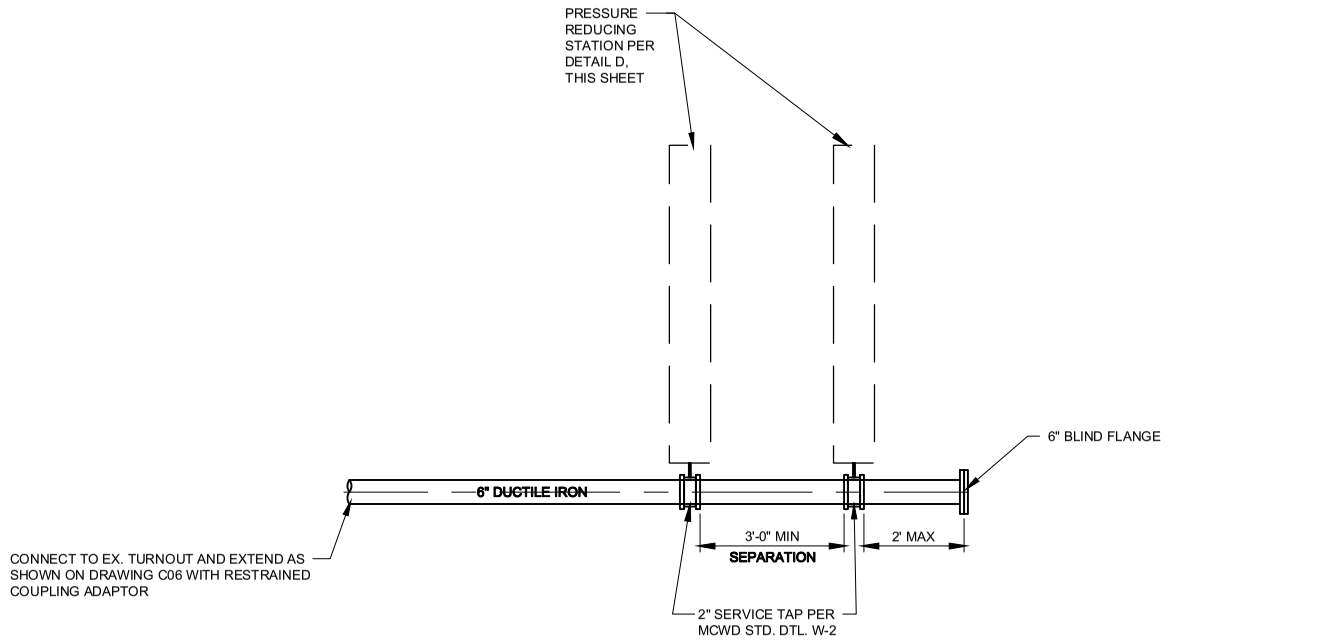

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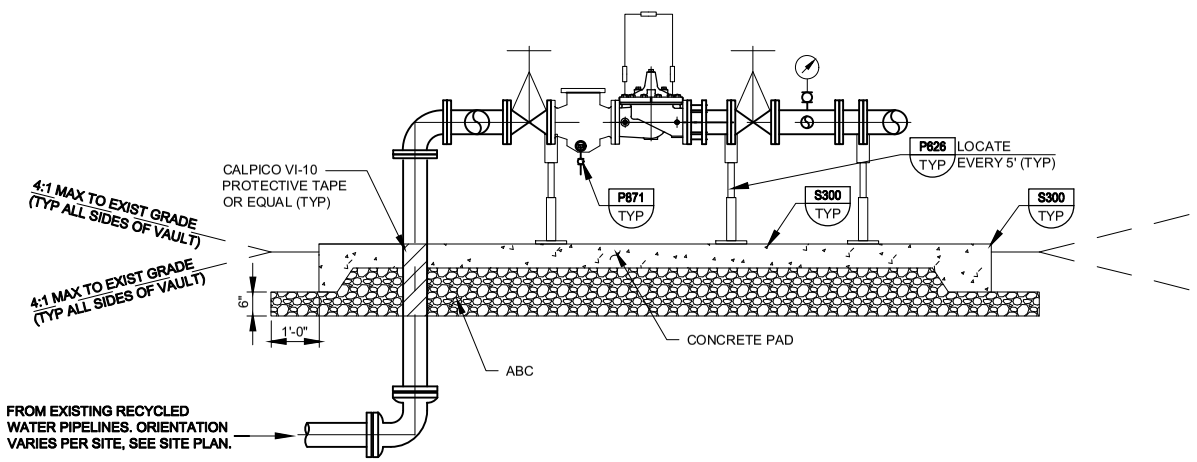

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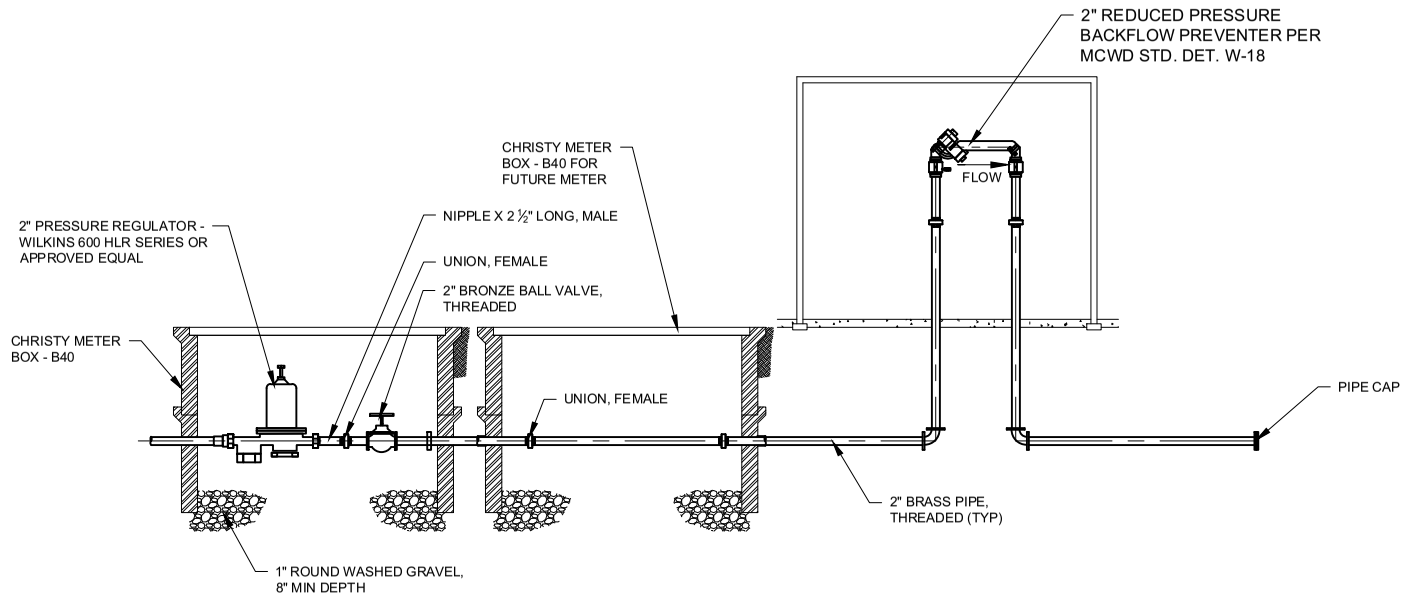

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DATE JANUARY 2020

No. 73265

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Date: 2020.03.19 16:51:06 -07'00'

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Marina Coast Water District

REGIONAL URBAN WATER AUGMENTATION PROJECT
RECYCLED WATER DISTRIBUTION MAINS
MECHANICAL
TYPICAL PRESSURE REDUCING VALVE VAULTS

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Attachment B

Cost Estimate

Denise Duffy & Associates' Cost Estimate for RUWAP Distribution Laterals Construction Compliance (CSUMB PRS)

		DD&A Labor Costs	Principal	Senior Environmental Planner/Scientist	Associate Planner/Scientist	Assistant Scientist	GIS Specialist II	Graphics	Admin		Expenses		Task Total
			$ 225	$150	$108	$97	$103	$79	$63			*Subtask*	
1.0	**Pre-Construction Phase**												**$ 23,670**
1.1	**Project Initiation/Environmental Compliance Plan**	--	--	--	--	--	--	--	--		$ -	**$ 3,079**	
1.1.1	Project Initiation	$ 964	1	2	2	1			2		$ 50		
1.1.2	Environmental Compliance Plans (ECP) Overview	$ 2,015	1	2	12	2					$ 50		
1.2	**Employee Education Program**	$ 1,794	2		6	4	1	1	2		$ 100	**$ 1,894**	
1.3	**Pre-Construction Biological Surveys, Meetings, and PM**	--	--	--	--	--	--	--	--		--	**$ 12,290**	
1.3.1	Pre-construction special-status plant surveys	$ 4,370		4	16	16	2	2	2		$ 100		
1.3.2	Pre-construction raptor, coast horned lark, and loggerhead shrike nest survey	$ 4,220		3	16	16	2	2	2		$ 100		
1.3.3	Pre-construction burrowing owl surveys	$ 3,400		3	12	12	2	2	2		$ 100		
1.4	**Preparation and Review of MMRP Compliance Plans**	--	--	--	--	--	--	--	--		--	**$ 6,407**	
1.4.1	Traffic Control Plan Review and Approval	$ 1,039	1	2		4			2		$ 50		
1.4.2	CDFW Memorandum of Understanding	$ 1,631	1	2	2	2	4	2	2		$ 50		
1.4.3	Revegtation Plan	$ 2,031	1	2	2	4	6	2	2		$ 100		
1.4.4	Rare Plant Restoration Plan (If Necessary)	$ 1,406		2	2	2	4	2	2		$ 100		
2.0	**Construction Phase**												**$ 10,012**
2.1	**Construction Phase Biological Monitoring, Meetings, and PM***	$ 8,380	4	20	10	30	2	2	2		$ 200	**$ 8,580**	
2.2	**Condition Compliance Documentation (Construction Phase)**	$ 1,382		2	2	6		2	2		$ 50	**$ 1,432**	
3.0	**Compliance with State Revolving Fund Requirements**												**$ 2,613**
3.1	**Compliance with State Revolving Fund Requirements**	$ 2,513	2		10	2		6	5		$ 100	**$ 2,613**	
	TOTAL		**13**	**44**	**92**	**101**	**23**	**23**	**27**		**$ 1,150**		**$ 37,445**

Denise Duffy & Associates, Inc.
PLANNING AND ENVIRONMENTAL CONSULTING

Amendment 8b
Marina Coast Water District Regional Urban Water Augmentation Project – Distribution Laterals Construction Compliance
Amendment to Existing Agreement

To: Don Wilcox, District Engineer
Date: May 6, 2020
Client: Marina Coast Water District (MCWD)
From: Matt Johnson, Denise Duffy & Associates (DD&A)
Ref: 2019-19
Subject: Amendment for Services for the Regional Urban Water Augmentation Project – *Distribution Laterals Construction Compliance, Bayonet Blackhorse Golf Course PRS and Imjin Parkway Potable/Recycled Water Pipelines*

Purpose: This letter requests and, if acceptable, authorizes DD&A, Inc. to perform the work described below for the budget allocated. This additional scope of work and budget is an amendment to the original agreement, as of the date shown below. If the additional work specified is deemed acceptable, please sign below and return to DD&A.

Discussion: Denise Duffy & Associates, Inc. (DD&A) will provide environmental services for the Water Distribution Laterals Construction Compliance (project) of the Regional Urban Water Augmentation Project (RUWAP). This SOW includes compliance with the Mitigation Monitoring and Reporting Program (MMRP) approved by the MCWD Board of Directors on October 27, 2004 and the Biological Opinion (BO) issued by the US Fish and Wildlife Service (USFWS) on November 24, 2009. This Amendment is specific to an email request from MCWD to provide construction compliance support on a Pressure Reducing Station (PRS) located at Bayonet and Blackhorse Golf Course, as well as a recycled water and potable water pipeline in Imjin Parkway from Abrams Drive to Reservation Road (Attachment A). The request was received on April 9, 2020.

Terms: All other terms and conditions of the original agreement shall remain unchanged.

Submitted by: _____ 5/6/2020
DD&A Project Manager Date

Accepted by: _____ _____
MCWD Date

Marina Coast Water District
Regional Urban Water Augmentation Project – Distribution Laterals Construction Compliance
Amendment 8b

Denise Duffy & Associates (DD&A) is currently under contract with the Marina Coast Water District (MCWD) to provide biological/construction monitoring support and environmental compliance services for the Regional Urban Water Augmentation Project (RUWAP) – Distribution Laterals Construction Compliance. This document provides a Scope of Work (SOW) and Cost Estimate for environmental compliance and mitigation monitoring services for a Pressure Reducing Station (PRS) located at Bayonet and Blackhorse Golf Course, as well as a recycled water and potable water pipeline in Imjin Parkway from Abrams Drive to Reservation Road (Attachment A). These additions to the original project description were requested by MCWD. Where appropriate, this SOW identifies the various project deliverables that will be completed for clarification purposes. This SOW includes compliance with the Mitigation Monitoring and Reporting Program (MMRP) approved by the MCWD Board of Directors on October 27, 2004 and the Biological Opinion (BO) issued by the US Fish and Wildlife Service (USFWS) on November 24, 2009. The SOW also includes the preparation of an environmental compliance overview document and compliance monitoring. A description of the tasks and assumptions used to develop the Cost Estimate is provided below. This SOW and corresponding Cost Estimate provide funding specific to an email request from MCWD to provide construction compliance support received on April 9, 2020. If it is determined that the construction phase extends beyond one year or that post-construction services are required for compliance, an additional SOW and Cost Estimate may be required.

TASK 1: Pre-Construction Phase

As part of this task DD&A would be responsible for developing a program to document compliance with the various mitigation measures and compliance with the BO. Additionally, DD&A would be responsible for providing the format, process, and templates for compliance verification, as well as templates for specific technical reports to be prepared by others (i.e., Contractor) as detailed below. DD&A proposes to provide biological surveys, construction contractor education training, and pre-construction monitoring services. This SOW assumes that the DD&A Natural Resource Division (NRD) will be responsible for providing the biological services necessary to ensure compliance with the MMRP and the BO. In addition, DD&A NRD would also be responsible for providing technical guidance and ensuring that the applicable protocols are followed.

1.1 Project Initiation/Environmental Compliance Overview

As part of this initial task, DD&A will meet with MCWD to refine the scope, confirm roles, and discuss initial agency and consultant coordination regarding mitigation monitoring and condition compliance. DD&A will compile mitigation measures and supporting documentation to create a comprehensive Mitigation Matrix. This matrix will be used for the purposes of monitoring and documenting compliance with the mitigation measures identified in the MMRP and measures identified in the BO. The matrix will also identify measures according to their temporal (e.g., pre-construction, on-going, etc.) and spatial requirements.

DD&A will also conduct an initial pre-construction site visit with the Contractor, and other technical sub-consultants to confirm project assumptions and work plan, as well as identify applicable MMRP and BO requirements (in mapping format and database format, if necessary). On-going coordination is a critical component of ensuring that the applicable mitigation measures have been satisfied in accordance with the requirements of the MMRP and the BO. DD&A will provide one point of contact for on-going communication. DD&A will prepare any required CEQA documentation for the additional components of the project that were not included in the original project description. DD&A will determine if additional CEQA documentation is needed to remain in compliance and prepare the documentation for MCWD approval.

- *1.1.1 Project Initiation - It is anticipated that DD&A will participate in the kick-off meeting with the construction Contractor. As part of this task, the obligations of each party (i.e., MCWD, DD&A, Construction Manager, and Contractor) will be identified. In addition, this task includes identifying and confirming specific mitigation measures and conditions that apply to this project component.*
- *1.1.2 Environmental Compliance Plan (ECP) Overview - DD&A will prepare an overview document for this project component that will include a summary of required environmental compliance activities and plan submittals and a summary of the approach to management of environmental compliance activities and reporting. The ECP document will also include the excel database of all MMRP and BO requirements (the Matrix described above) specific to the project. Important contact information for the project will also be included in this document. The ECP and the Matrix will provide guidance for MCWD and Contractors, as well as information on agency and project contacts. After review by MCWD and DD&A will update the ECP and compile in a booklet or binder format for MCWD and Contractors.*

Deliverables: Matrix, Draft and Final Environmental Compliance Plan Overview, including two hardcopies of the ECP Overview

1.2 Employee Education Program

DD&A will implement an Employee Education Program. Prior to mobilization and other ground disturbing activities, DD&A will conduct an Employee Education Program to educate personnel involved in the project about the biological resources that occur or potentially occur on the site. The education program will include: 1) the appropriate access route(s) in and out of the construction area and the review of project boundaries; 2) how a biological monitor will examine the area and agree upon a method which would ensure the safety of the monitor during such activities; 3) the special-status species that may be present; 4) the specific mitigation measures that will be incorporated into the construction effort; 5) the general provisions and protections afforded by the USFWS; and 6) the proper procedures if a special-status species is encountered within the site. The Employee Education Program will identify specific biological requirements applicable to the project. A project pamphlet or fact sheet conveying this information will be prepared for distribution and a sticker will be given to each worker that receives training. This task assumes that DD&A will be responsible for conducting the Employee Education Program as part of initiation prior to the start of construction-related activities. Additional Employee Education

Programs that may be required during the course of the construction phases will be included as part of task 2.1 Construction Phase Monitoring.

Deliverables: Employee Education Program (Project Pamphlet or Fact Sheet)

1.3 Pre-Construction Biological Surveys, Meetings, and PM

Pre-construction clearance surveys shall be conducted by a qualified biologist for component-specific species and habitats as directed by the MMRP and the BO. Survey methodology will be consistent with the requirements of the environmental documentation. Pre-construction survey reports describing the results of the surveys shall be provided to the project proponents prior to any ground disturbing activities. The report shall include but is not limited to: 1) a description of the species observed, if any; 2) map of the location, if observed; and 3) recommended avoidance and minimization measures, if applicable. The sub-tasks below provide a description of the necessary biological surveys for the PRS and pipelines described above.

This task will involve periodic coordination and strategy calls with MCWD and project partners to coordinate information exchange, discuss/refine project submittal information, and work with the internal team to address project needs.

- *1.3.1 Pre-construction special-status plant surveys (Mitigation Measure 4.4-R1)*
- *1.3.2 Pre-construction raptor, coast horned lark, and loggerhead shrike nest survey (Mitigation Measure 4.4-R5, Mitigation Measure 4.4-R6).*
- *1.3.3 Pre-construction burrowing owl surveys (Mitigation Measure 4.4-R2).*

Deliverables: Pre-construction survey reports (one draft and one final).

1.4 Preparation and Review of MMRP Compliance Plans

These Plans are included in Amendment 7 for this project, they are included in this amendment to cover the additional scope and budget necessary to cover the additional project components described above.

- *1.4.1 Traffic Control Plan Review and Approval*

DD&A will be responsible for reviewing supporting documentation prepared by the Contractor on behalf of MCWD. Documents prepared by others will be reviewed by DD&A and compliance memoranda will be issued to document compliance. Pursuant to the requirements of the MMRP, a Traffic Control and Safety Assurance Plan must be prepared and submitted to MCWD for review and approval.

- *1.4.2 CDFW Memorandum of Understanding*

Mitigation Measure 4.4-R18 requires that a Memorandum of Understanding (MOU) with CDFW shall be obtained for a qualified biologist to remove and relocate black legless lizards, coast horned lizards, and globose dune beetles from the construction area if encountered during construction activities. DD&A will prepare and submit the MOU materials to CDFW for approval prior to the start of construction. The MOU shall include, but is not limited to, the methods of capture and an estimation of the number of individuals expected to be captured and handled, the duration of capture and handling, and a description of the established relocation area.

- *1.4.3 Revegetation Plan*

DD&A will prepare a Revegetation Plan in accordance with the requirements of the MMRP to revegetate and restore impacted habitat. This plan will include a list of appropriate species, planting specifications, monitoring procedures, success criteria, and contingency plan if success criteria are not met.

- *1.4.4 Rare Plant Restoration Plan (If Necessary)*

If the results of the pre-construction survey effort determine that a Rare Plant Restoration Plan is necessary to remain in compliance, DD&A will prepare the plan for MCWD approval. The plan shall include, but is not limited to, the following:

- a description of the baseline conditions of the habitats within the area of impact, including the presence of any special-status plant species, its locations, and densities;
- procedures to control non-native species invasion and elimination of existing non-native species within the area of impact;
- provisions for ongoing training of maintenance personnel in implementation of the plan;
- a detailed description of on-site and off-site restoration areas, salvage of seed and/or soil bank, plant salvage, seeding and planting specifications; and
- a monitoring program that describes annual monitoring efforts which incorporate success criteria and contingency plans if success criteria are not met.

Deliverables: Compliance memoranda; CDFW MOU materials, Revegetation Plan (Draft and Final).

Optional deliverable: Rare Plant Restoration Plan (Draft and Final).

TASK 2: Construction Phase

This task would entail construction monitoring as well as on-going documentation of the status of MMRP and BO requirements using the matrix. This task also includes DD&A's management of the contract, scope, Cost Estimate, and schedule with MCWD for all the work completed. This also includes overall coordination with larger interagency and community teams, specifically, those not involved in mitigation monitoring and environmental compliance directly. DD&A will prepare regular progress status reports throughout the duration of the project. This task includes additional DD&A services to respond to various requests for information, confirmation of project area, mitigation, and miscellaneous services tasks. Each sub-task is individually discussed below.

2.1 Construction Phase Biological Monitoring, Meetings, and PM

As part of this task, DD&A biologists will be responsible for on-going monitoring during construction activities near sensitive habitats, including habitats for special-status species, to ensure implementation of mitigation measures and construction best management practices. The DD&A biologist will survey the work area prior to construction activities to identify if any sensitive biological resources are present before equipment mobilizes. DD&A will consult with all applicable environmental documentation prior to the initiation of construction activities to determine the necessary measures (fencing installation, clearance surveys, flagging, nest deconstruction, establishment of avoidance buffers, etc.). During initial ground disturbance, if not already on site, DD&A biologist will be contacted if special-status species are located in the project area by construction personnel. If construction personnel observe special-status species in

the work area, work in the immediate area shall cease and personnel will contact the DD&A biologist or quickly relay the information through approved channels (e.g., through the construction foreman). The DD&A biologist will have authority to stop construction activities and develop alternative work practices, in consultation with construction personnel and resource agencies, if construction activities are likely to impact special-status species or other sensitive biological resources.

This task will involve periodic coordination and strategy calls with the MCWD and project partners to coordinate information exchange, discuss/refine project submittal information, and work with the internal team to address project needs.

Deliverables Monthly Biological Monitoring Work Logs

2.2 Condition Compliance Documentation (Construction Phase)

Throughout the construction phase, DD&A will generate compliance memoranda to document that all MMRP and BO requirements have been met. In addition, DD&A will maintain and update the matrix developed in **Task 1.1** during construction. This will entail compiling monitoring logs and weekly reporting data, as well as documenting material submitted on behalf of the MCWD. This information will be disseminated into the matrix and consolidated to enable consistent and reliable external reporting. DD&A will review, update, and manage the compliance plan matrix as needed to assess the compliance status of individual requirements and identify action items and responsibility on a daily basis.

Deliverables: Updated Matrix, Compliance Memoranda

TASK 3: Compliance with State Revolving Fund Requirements

3.1 Compliance with State Revolving Fund Requirements

The project is being partially funded by the State Revolving Fund (SRF) program, which is implemented by the by the State Water Resources Control Board (SWRCB). SRF requirements include oversight of mitigation compliance by SWRCB staff. As part of this task DD&A will:

- Coordinate with SWRCB staff;
- Create a file sharing site for the transmission of condition compliance documentation to SWRCB staff and SRF compliance personnel;
- Provide Quarterly Environmental Compliance Reports to MCWD for submittal to SWRCB; and
- Respond to periodic questions and requests for assistance from agencies.

Assumptions for Water Distribution Laterals Project

The following assumptions were used in preparing this SOW and Cost Estimate:

- All the tasks and sub-tasks identified within the scope will involve periodic coordination and strategy calls with the MCWD and project partners to coordinate information exchange, discuss/refine project submittal information, and work with the internal team to address project needs.
- The areas of impact/affect and project descriptions will not change such as that new or revised biological resources investigations would be required.
- A portion of the RUWAP biological monitoring tasks relies on data and mapping provided by MCWD and engineers. This scope and proposed schedule assume timely review by MCWD; and submittal of needed information. DD&A assumes that we will have timely receipt of review comments within a one to 14-day period of request for review of document, depending upon the length of the document. Timely responses to information requests are assumed to be within three to four working days or to be within requested timeframes in order to meet critical construction schedule.
- Technical analyses and responses assumed to be prepared by consultants or agency staff members that are not under contract to DD&A are assumed adequate. Delays in providing these documents could cause delay in the completion and/or submittal of DD&A deliverables.
- DD&A reserves the right to reallocate labor and/or direct expenditures between tasks to ensure the successful completion of the scope of work.
- Since the construction for each component is not expected to begin on the same date DD&A has budgeted for multiple pre-construction survey efforts for the start of each geographically separated lateral component of the larger project.
- The above SOW covers work from for a construction phase up to one year. Biological monitoring beyond one year may require a Cost Estimate amendment.
- DD&A assumes that pre-construction surveys will only be conducted once, lapses in project inactivity that result in the need for multiple pre-construction survey efforts will require a Cost Estimate amendment.
- Post-construction environmental support may be required if the optional Rare Plant Restoration Plan is required or as part of the Revegetation Plan. Any post-construction environmental services may require a budget amendment.
- DD&A assumes that mitigation measures listed above will be sufficient to cover all components However, if during initial survey additional mitigation measures, with additional survey requirements are required to remain in compliance a budget amendment may be required.

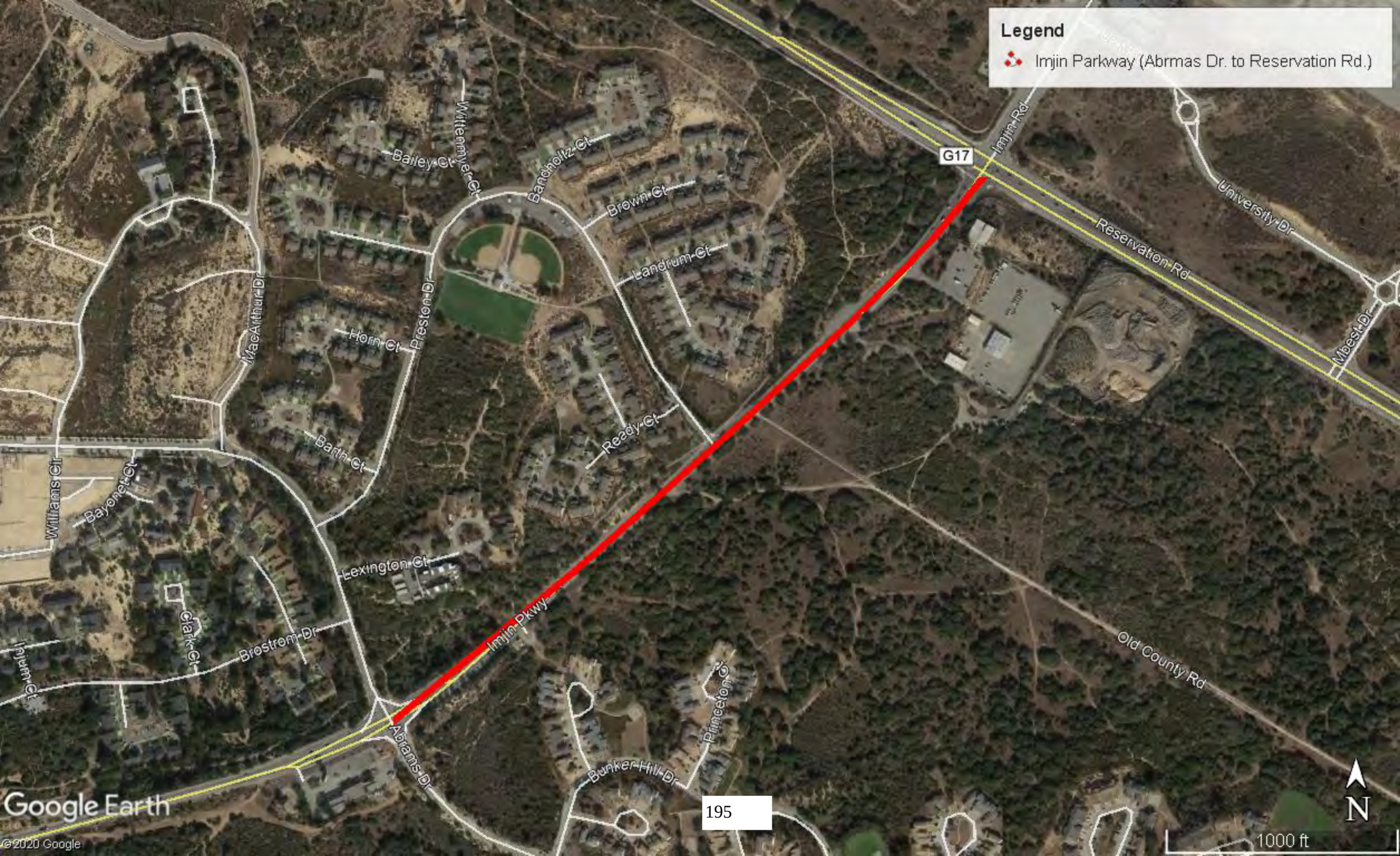
Cost Estimate

Attachment B provides the cost estimate to provide planning and environmental services for the pre-construction and construction phases of the project specific to the additional components described above.

Attachment A

Project Component Locations


Golf Course CXN


Legend
Imjin Parkway (Abrmas Dr. to Reservation Rd.)
G17
Imjin Rd
Reservation Rd
University Dr
Mbest Dr
Old County Rd
Imjin Pkwy
Abrams Dr
Bailey Ct
Wittenmyer Ct
Bancholtz Ct
Brown Ct
Leandrum Ct
Ready Ct
Horn Ct
Preston Dr
MacArthur Dr
Barth Ct
Williams Cir
Bayonet Ct
Lexington Ct
Clark Ct
Brostrom Dr
Quinn Ct
Bunker Hill Dr
Princeton Dr
Google Earth
©2020 Google
195
N
1000 ft

Attachment B

Cost Estimate

Denise Duffy & Associates' Cost Estimate for RUWAP Distribution Laterals Construction Compliance (Bayonent/Blackhorse PRS/Imjin Parkway Pipelines)

		DD&A Labor Costs	Principal	Senior Environmental Planner/Scientist	Associate Planner/Scientist	Assistant Scientist	GIS Specialist II	Graphics	Admin		Expenses		Task Total
			$ 225	$150	$108	$97	$103	$79	$63			*Subtask*	
1.0	**Pre-Construction Phase**												**$ 19,443**
1.1	**Project Initiation/Environmental Compliance Plan**	--	--	--	--	--	--	--	--		$ -	**$ 3,079**	
1.1.1	Project Initiation	$ 964	1	2	2	1			2		$ 50		
1.1.2	Environmental Compliance Plans (ECP) Overview	$ 2,015	1	2	12	2					$ 50		
1.2	**Employee Education Program**	$ 1,344			6	4	1	1	2		$ 100	**$ 1,444**	
1.3	**Pre-Construction Biological Surveys, Meetings, and PM**	--	--	--	--	--	--	--	--		--	**$ 9,643**	
1.3.1	Pre-construction special-status plant surveys	$ 3,573	1	4	8	16	2		2		$ 100		
1.3.2	Pre-construction raptor, coast horned lark, and loggerhead shrike nest survey	$ 2,453	1	2	4	12	2		2		$ 100		
1.3.3	Pre-construction burrowing owl surveys	$ 3,317	1	2	12	12	2		2		$ 100		
1.4	**Preparation and Review of MMRP Compliance Plans**	--	--	--	--	--	--	--	--		--	**$ 5,277**	
1.4.1	Traffic Control Plan Review and Approval	$ 1,039	1	2		4			2		$ 50		
1.4.2	CDFW Memorandum of Understanding	$ 1,219	1	2	2	2		2	2		$ 50		
1.4.3	Revegtation Plan	$ 1,413	1	2	2	4		2	2		$ 50		
1.4.4	Rare Plant Restoration Plan (If Necessary)	$ 1,406		2	2	2	4	2	2		$ 50		
2.0	**Construction Phase**												**$ 8,842**
2.1	**Construction Phase Biological Monitoring, Meetings, and PM***	$ 7,210	4	5	20	30	2	2	2		$ 200	**$ 7,410**	
2.2	**Condition Compliance Documentation (Construction Phase)**	$ 1,382		2	2	6		2	2		$ 50	**$ 1,432**	
3.0	**Compliance with State Revolving Fund Requirements**												**$ 1,755**
3.1	**Compliance with State Revolving Fund Requirements**	$ 1,655	2		6	2		3	2		$ 100	**$ 1,755**	
	TOTAL		**14**	**27**	**78**	**97**	**13**	**14**	**24**		**$ 1,050**		**$ 31,090**

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Marina Coast Water District
Agenda Transmittal

Agenda Item: 12-C | Meeting Date: May 18, 2020

Prepared By: Don Wilcox | Approved By: Keith Van Der Maaten
Reviewed By: Michael Wegley

Agenda Title: Consider Adoption of Resolution No. 2020-31 to Approve Task Order 18 with Harris & Associates under their On-Call Professional Services Agreement to Provide Construction Support Services for the Lower Stilwell Neighborhood Improvements Project, Phase 1

Staff Recommendation: The Board of Directors adopt Resolution No. 2020-31 Approving Task Order 18 with Harris & Associates under their On-Call Professional Services Agreement to provide Construction Support Services for the Lower Stilwell Neighborhood Development, Phase 1 Demolition Project.

Background: *Strategic Plan, Element No. 2 Infrastructure – Our objective is to provide a high-quality water distribution system and an efficiently operating wastewater collection system to serve existing and future customers. Through the master planning process, our infrastructure strategy is to carefully maintain our existing systems and ensure future additions and replacements will meet District standards*.

Monterey Bay Military Housing (MBMH) is preparing to begin construction of their Lower Stilwell Neighborhood, Phase 1 Project for which the MCWD Board approved an Infrastructure Agreement on November 18, 2019. The project will occur on approximately 55 acres and will include 151 new units replacing 180 existing units of military housing. Improvement Plans for the new development are currently under review by MCWD staff and consultants.

Infrastructure constructed by developers with the intent of being dedicated to the District requires full time inspection to ensure that construction means, methods and materials are in compliance with the plans approved by the District and District standards prior to acceptance of the infrastructure by the District. Staff previously solicited proposals from qualified civil construction inspection firms resulting in the Board of Directors adopting Resolution No. 2017-66 on November 20, 2017, authorizing an On-Call Professional Services Agreement with Harris & Associates (Harris) to provide engineering consulting services, construction management support and on-call inspections for new and ongoing MCWD projects.

Discussion/Analysis: The Developer and MCWD staff agree that contract inspection and construction support is warranted due to the large but temporary workload needed to cover all construction work on this project. Therefore, staff requested from Harris a Task Order Proposal to provide construction support services for the Lower Stilwell Neighborhood, Phase 1 Project. Harris provided Task Order 18 in the amount of $171,436 that is to be paid for entirely by the Developer (Monterey Bay Military Housing, LLC). District staff have reviewed the proposed scope of work and fee estimate and find that the scope is reasonable. The rates are comparable and competitive with other engineering firms providing services to MCWD based on general industry standards.

Prior to Harris & Associates performing any work under this amendment, the Developer will be required to have the full amendment amount, or a substantial percentage thereof, on deposit with MCWD. At no time will payments be made to Harris without corresponding resources in-hand from the Developer to cover the expense.

Environmental Review Compliance: Not Applicable; this action amending a Professional Services Agreement is not a "project" under the California Environmental Quality Act (CEQA).

Financial Impact: _____Yes ___X___No Funding Source/Recap: There is no financial impact to the MCWD from this action; the Developer will be required to fund the entire amount through deposited funds with MCWD in advance of payment to Harris & Associates.

Other considerations: None.

Material Included for Information/Consideration: Resolution No. 2020-31, location map, Harris & Associates Task Order 18.

Action Required: ___X___Resolution _____Motion _____Review
(Roll call vote is required.)

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

May 18, 2020

Resolution No. 2020-31
Resolution of the Board of Directors
Marina Coast Water District
Amending the Professional Services Agreement with Harris & Associates to Include
Task Order 18: Inspection and Construction Support Services for the
Lower Stilwell Neighborhood Improvements Project, Phase 1

RESOLVED by the Board of Directors ("Directors") of the Marina Coast Water District ("District"), at a regular meeting duly called and held on May 18, 2020, via a videoconference pursuant to Governor Newsom's Executive Order N-29-20, as follows:

WHEREAS, Monterey Bay Military Housing, LLC., ("Developer") have coordinated with MCWD on their Lower Stilwell Neighborhood Improvements Project, Phase 1, consisting of the new construction and related infrastructure on approximately 55 acres and will include 151 new units replacing 180 existing units of military housing within Monterey County, CA; and,

WHEREAS, the District and the Developer are working cooperatively regarding proposed water, recycled water and sewer system improvements and the District and the Developer have entered into an Infrastructure Agreement for this development project; and,

WHEREAS, the District and the Developer agree that outside assistance for inspection and construction support labor is warranted to achieve the objective of transferring ownership of infrastructure to the District and that the Developer will pay for the inspection services as required by the Infrastructure Agreement; and,

WHEREAS, the Board of Directors adopted Resolution No. 2017-66 on November 20, 2017, authorizing an On-Call Professional Services Agreement with Harris & Associates (Harris) to provide engineering consulting services, construction management support and on-call inspections for new and ongoing MCWD projects; and,

WHEREAS, District staff finds that the Harris & Associates current scope and fee proposal to conduct the work is reasonable.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Marina Coast Water District does hereby authorize the General Manager to execute an amendment to the Professional Services Agreement with Harris & Associates for Task Order 18 to provide inspection and construction support services for Lower Stilwell Neighborhood Development, Phase 1 Demolition Project, and to take all actions and execute all documents as may be necessary or appropriate to give effect to this resolution, the total dollar amount not-to-exceed $171,436.

PASSED AND ADOPTED on May 18, 2020 by the Board of Directors of the Marina Coast Water District by the following roll call vote:

Ayes: Directors_____

Noes: Directors_____

Absent: Directors_____

Abstained: Directors_____

_____
Thomas P. Moore, President

ATTEST:

_____
Keith Van Der Maaten, Secretary

CERTIFICATE OF SECRETARY

The undersigned Secretary of the Board of the Marina Coast Water District hereby certifies that the foregoing is a full, true and correct copy of Resolution No. 2020-31 adopted May 18, 2020.

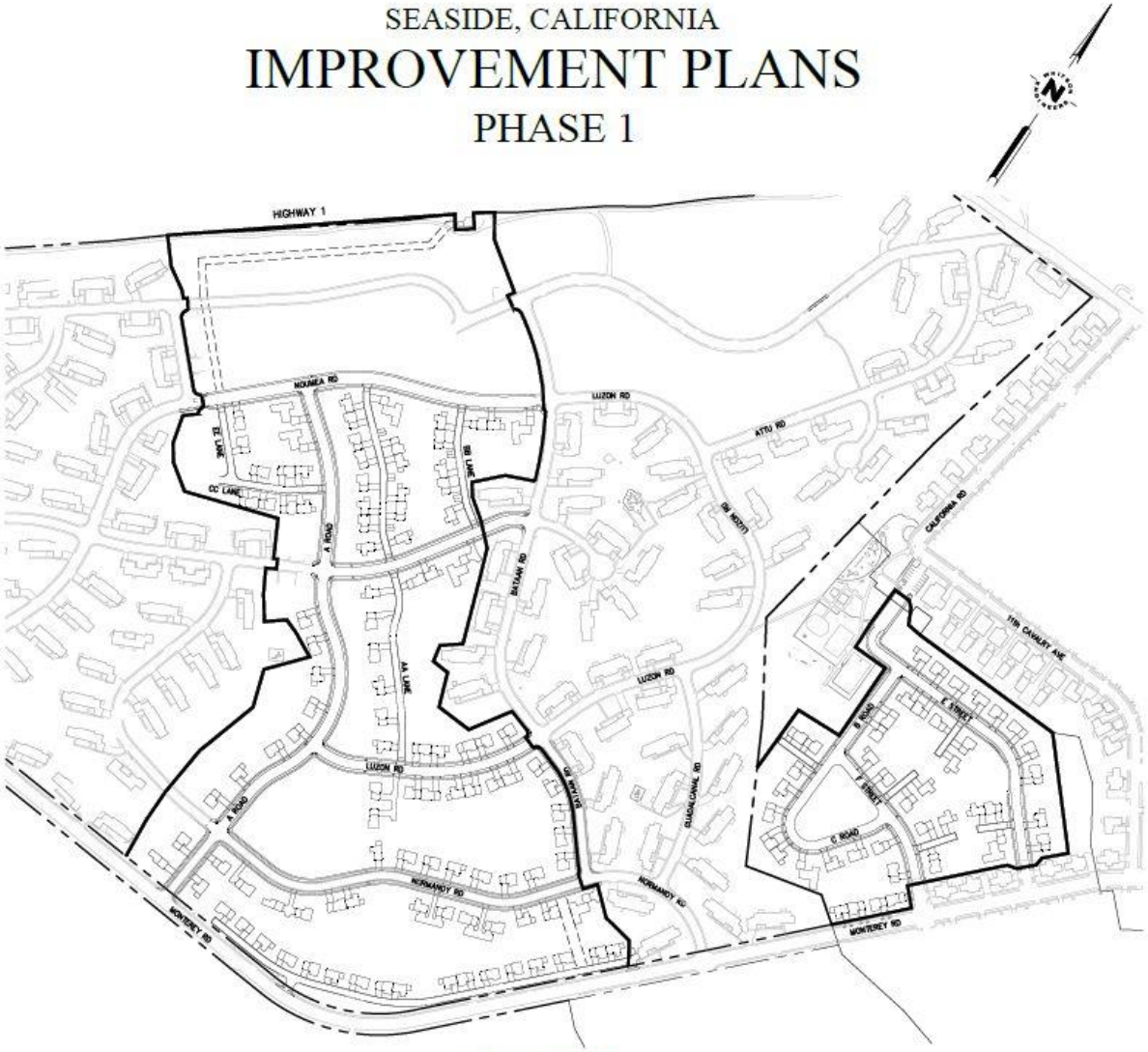
_____
Keith Van Der Maaten, Secretary

LOWER STILWELL NEIGHBORHOOD

SEASIDE, CALIFORNIA

IMPROVEMENT PLANS

PHASE 1



SITE PLAN

Harris & Associates

May 5, 2020

Marina Coast Water District
Don Wilcox, Project Manager
2840 4th Avenue
Marina, CA 93933

CONSTRUCTION SUPPORT SERVICES
LOWER STILLWELL – PHASE II – PERMANENT IMPROVEMENTS

Don:

At the District's request, we submitting a proposal to provide construction support services under our existing on-call contract. We are requesting a task order to oversee the developer installation of water distribution and wastewater collection systems related to the Lower Stillwell development. Our scope will include:

- Submittal & RFI review
- Inspection of construction activities related to District infrastructure for conformance to approved plans and specifications
- Weekly report of the developer's construction daily activities (including photos)
- Review of proposed testing plans
- Observation and documentation of testing related to District facilities (e.g. hydrostatic pressure testing of water & sewer lines)
- Review of developer redlines/as-built
- Review of documents related to transfer of improvements to the District (Bill of sale, warranty bond, easements, construction cost estimates)

Our level of effort is based on the construction schedule provided by the developer and will be provided on an "hourly not-to-exceed" basis as shown in the attached Exhibit A. Additional efforts unforeseen at the time of this proposal will be discussed with the District and provided under a subsequent authorization.

Please contact Dana Van Horn directly at (831) 419-7234 with any questions regarding this scope and fee.

Regards,

HARRIS & ASSOCIATES, Inc.

Frank S. Lopez, PE, QSD, CFM

Senior Director, Engineering Services

Dana Van Horn, PE

Senior Construction Manager

450 Lincoln Avenue, Suite 103, Salinas, CA 93901 ■ (831) 233-9242 ■ WeAreHarris.com

MARINA COAST WATER DISTRICT - TASK ORDER 18 - LOWER STILLWELL
PHASE 2 - PERMANENT IMPROVEMENTS

EXHIBIT A - CONSTRUCTION SUPPORT SERVICES

		2020								
	Rate	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Days	Total
		22	23	21	21	22	19	22		
		176	184	168	168	176	152	176	Hours	
Dana Van Horn Construction Manager	$ 200.00	8	8	6	6	8	6	8	50	$ 10,000
Patrick Imperatrice Inspector - PW	$ 183.00	88	92	84	84	88	76	40	552	$ 101,016
Patrick Imperatrice Inspector - PW - meters	$ 183.00				22	42	60	80	204	$ 37,332
Patrick Imperatrice Inspector non-PW - meters	$ 144.00				11	21	30	40	102	$ 14,688
TBD Admin Support	$ 100.00	4	4	4	4	4	4	60	84	$ 8,400
Hours/month		100	104	94	127	163	176	228		
									992	**$ 171,436**

Assumptions:

1. The inspection estimate of hours is for the period June through November 2020 for approximately 20 hours/week.
2. The budget for meters is based on 96 single-family and 54 duplex units
3. Standard 8 hour work day, 5 days per week; no holidays have been included
4. Overtime hours, if necessary, to be determined; may require task order amendment/additional task order.
5. Vehicles, equipment, supplies and incidental costs included in hourly rate

Return to Agenda

Marina Coast Water District
Agenda Transmittal

Agenda Item: 12-D Meeting Date: May 18, 2020

Prepared By: Kelly Cadiente Approved By: Keith Van Der Maaten

Agenda Title: Receive the Revised Draft FY 2020-2021 District Budget and Update on the Budget Process

Staff Recommendation: The Board receive the Revised Draft FY 2020-2021 Budget and update on the FY 2020-2021 District Budget Process.

Background: *Strategic Plan, Objective No. 3 – To manage public funds to assure financial stability, prudent rate management, and demonstrate responsible stewardship. Our fiscal strategy is to forecast, control and optimize income and expenditures in an open and transparent manner. We will efficiently use our financial resources to assure availability to fund current and future demands.*

On March 16, 2020, the Board originally set the date for the FY 2020-2021 Budget Workshop for April 6, 2020. The workshop was re-scheduled to the April 20, 2020 regular Board meeting due to the need to implement remote meeting capability in order to meet with the Shelter in Place Orders in relation to COVID-19. Due to time constraints at the April 20, 2020 meeting, the budget workshop was rescheduled and held on April 28, 2020.

Discussion/Analysis: The Draft 2020-2021 District Budget was distributed to the Board on April 15, 2020 for review in preparation for the budget workshop. Based on Board actions and discussion from the April 28th Budget Workshop and further review by the Budget and Personnel Committee on May 6, 2020, staff has revised the Draft FY 2020-2021 Budget. A detailed list of line item revisions has been included for the Board's consideration.

Environmental Review Compliance: None.

Financial Impact: _____Yes ___X___No Funding Source/Recap: None

Materials Included for Information/Consideration:; List of Revisions to the Draft FY 2020-2021 District Budget; and, Revised Draft FY 2020-2021 District Budget (provided separately).

Action Required: _____Resolution ___X___Motion _____Review

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

MARINA COAST WATER DISTRICT
CHANGES INCLUDED IN FISCAL YEAR 2020-2021 REVISED DRAFT BUDGET

Pages 6, 7, 8: Budget Memo Updates

GSA Expenses/Activity

Projected expenses include the District's Groundwater Sustainability Agency activity which is tracked under the Water Resources Department.

AEM 2.0

In May 2018, the District performed its second Aerial Electromagnetic Survey of the groundwater basin to further its sustainable groundwater management efforts. The survey was following two-years of normal rainfall to assess how conditions may have changed following the historic drought conditions that preceded the first AEM. The second AEM was also expanded into areas that were not originally covered in the prior AEM work. The final AEM report from the second survey was completed this past year which confirmed significant volumes of water south of the Salinas River that must be protected as part of our groundwater sustainability plan. Additionally, the new AEM data is being used to develop aquifer storage and recovery projects and to identify future well site locations that will be a part of the District's Groundwater Sustainability Plans.

Successful Negotiations with Employee Groups

This past year, the employees and management were successful in negotiating new four-year contracts for both the Teamsters Union and the Employee Association. The working relationship between the employees and management continues to be healthy and strong and the new contracts will provide continued stability for the next four-years.

Regional Desal Settlement

MCWD is firmly committed to the idea that the only way we will achieve a sustainable water supply for our region is if we work together. That is why the District worked with Monterey One Water on a cooperative project to build the necessary pipes to deliver additional supplies to the region, has cooperative agreements with the Salinas Valley Basin Groundwater Sustainability Agency to build the plans to better manage our groundwater supplies, and is actively involved with regional purveyors to identify workable regional solutions to our water supply needs through the expansion of the Pure Water Monterey Project. This year MCWD entered into a settlement with Cal Am that ends past disagreements over the Regional Desal Plant. As a result, MCWD's is now more focused on moving forward on cooperative regional water supply efforts.

Sunset of FORA/Service Agreements

On July 1, 2020, FORA will be officially terminated. In preparation, MCWD staff has been working over the past year to secure Service Agreements with all the jurisdictions that were allocated water supplies through FORA. While there has been significant progress made this past year on the Agreements, we foresee this process continuing into the upcoming FY 2020-2021. Once approved, the Agreements will help solidify water allocations, clarify the relationship of groundwater sustainability efforts on allocations, and clarify the requirements for moving forward on future water supply augmentation efforts.

Pages 12, 13, 14, 23, 25, 27, 29, 33, 99: Board Conference Budget Increase from $6,000 to $9,800

Based on Budget & Personnel Committee recommendation, staff revised the draft budget to include:
1 – Conference attendance per Board member estimated at $1,800 per conference = $9,000
4 – SDA meetings per Board member at $40 per meeting (4 x $40) x 5 = $800.00

Page 102: Updated Organization Chart

Organization Chart was updated based on Approved Changes in Accounting and Operations & Maintenance Departments
Accounting: Replace Accountant I/II Classification with Accountant and increase Accounting Technician to 2 positions
Operations & Maintenance: Add Operations & Maintenance Administrative Analyst

Page 111 - 112: Updated Salary Schedules

Salary schedules have been updated based on Approved Changes in Accounting and Operations & Maintenance Departments
Accounting: Accounting Technician from Range 13 to Range 15, delete Accountant I/II Range 17, add Accountant Range 21
Operations & Maintenance: Add Operations & Maintenance Administrative Analyst Range 18

Return to Agenda

Marina Coast Water District
Agenda Transmittal

Agenda Item: 12-E Meeting Date: May 18, 2020

Prepared By: Keith Van Der Maaten Approved By: Keith Van Der Maaten

Agenda Title: Consider Establishment of a Marina Coast Water District Customer Assistance Program

Staff Recommendation: The Board of Directors discuss the establishment of a Customer Assistance Program and provide direction to staff and committees.

Background: *Strategic Plan Mission Statement – To provide our customers with high quality water, wastewater collection and conservation services at a reasonable cost, through planning, management and the development of water resources in an environmentally sensitive manner*.

Due to the COVID-19 pandemic and the financial hardship the pandemic is causing on many individuals, MCWD has temporarily suspended shut-offs due to non-payment of water bills. While this action is helpful in these difficult times, there is likely a need for additional financial assistance to our customers as a result of this pandemic, or for future financial hardships once the pandemic is behind us.

The Board is requested to discuss the possibility of establishing a Customer Assistance Program (CAP) that would be funded entirely from voluntary donations. Due to Proposition 218, MCWD is prohibited from using rate payer funds to contribute to this program, so this program would be funded entirely through voluntary donations.

If the Board authorizes staff to proceed with establishing the CAP, then this item may be referred to the Budget and Personnel Committee to establish the program requirements, procedures, and policies that would come back to the Board for approval in the near future. The Outreach Committed could also work on messaging for the program including recognition for those that donate.

Environmental Review Compliance: None required.

Financial Impact: __ ___Yes __X___No Funding Source/Recap: If the Board directs this matter to committee, there is no financial impact at this time. If this program is eventually approved in a format that requires staff to administer, then there would be financial impacts from staff time spent on administering the program.

Other Considerations: None.

Material Included for Information/Consideration: None.

Action Required: _____Resolution ___X___Motion _____Review

Board Action

Motion By_____ Seconded By_____ No Action Taken_____

Ayes_____ Abstained_____

Noes_____ Absent_____

Staff Reports

Return to Agenda

Marina Coast Water District
Staff Report

Agenda Item: 13-A Meeting Date: May 18, 2020

Prepared By: Kelly Cadiente Approved By: Keith Van Der Maaten

Agenda Title: Fiscal Impact of COVID-19 Report

Summary: At a previous Board meeting, the Board of Directors requested a report on the impact to the District's finances due to COVID-19.

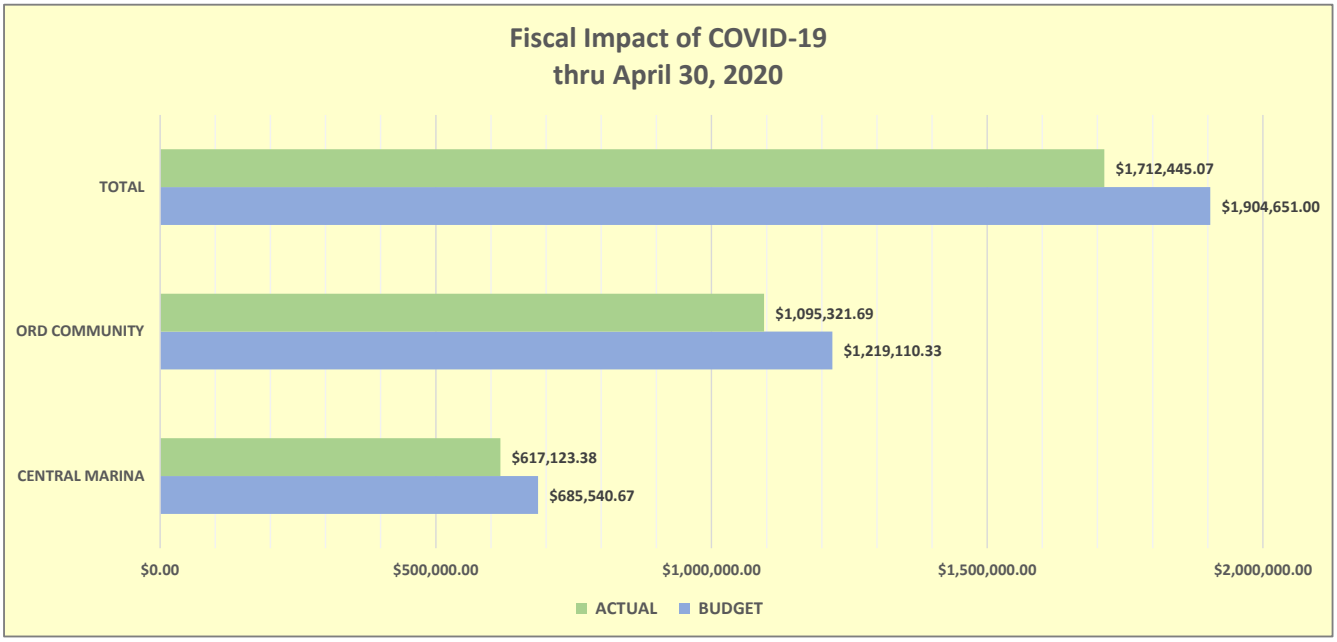
The Fiscal Impact Report provides a comparison of budget and actual water revenue for the months of March and April 2020. Because sewer collection fees are fixed monthly fixed fee, COVID-19 has no impact on sewer revenues. For the two months, Central Marina water revenues are down 9.98% and Ord Community water revenues are down 10.15%. Through quarter ended March 31, 2020, Central Marina water revenues 7.65% less than budgeted and Ord Community water revenues are 3.89% less than budgeted.

Not all differences between budgeted and actual revenues are due to COVID-19. Central Marina revenue for multi-residential users has been lower than budgeted all fiscal year. The actual decrease in that budget category in April is much less than in March which can be attributed to COVID-19 as an increase in usage would take place with more residents at home for the full month of April as a result of the Shelter in Place Order.

In the Ord Community, the large differences in the Residential and Multiples revenue categories are a result of database scrubbing that staff performed in which account categories were corrected however the rate codes were not changed. Staff is updating the rate codes to eliminate the differences in these categories going forward.

MARINA COAST WATER DISTRICT
FISCAL IMPACT OF COVID-19
THROUGH APRIL 30, 2020

	MARCH			APRIL			TOTAL
	BUDGET	ACTUAL	DIFFERENCE	BUDGET	ACTUAL	DIFFERENCE	DIFFERENCES
CENTRAL MARINA							
WATER SALES - RESIDENTIAL	169,923.42	166,956.53	(2,966.89)	169,923.42	184,263.74	14,340.32	11,373.44
WATER SALES - BUSINESS	56,172.17	51,839.34	(4,332.83)	56,172.17	49,101.90	(7,070.27)	(11,403.09)
WATER SALES - MULTIPLES	94,097.25	71,831.26	(22,265.99)	94,097.25	86,182.79	(7,914.46)	(30,180.45)
WATER SALES - GOVERNMENT	21,077.50	2,082.69	(18,994.81)	21,077.50	2,199.53	(18,877.97)	(37,872.78)
PENALTIES	1,500.00	2,492.47	992.47	1,500.00	173.13	(1,326.87)	(334.40)
	342,770.33	295,202.29	(47,568.04)	342,770.33	321,921.09	(20,849.24)	(68,417.29)
ORD COMMUNITY							
WATER SALES - RESIDENTIAL	377,030.00	323,154.92	(53,875.08)	377,030.00	350,070.24	(26,959.76)	(80,834.84)
WATER SALES - BUSINESS	176,175.67	77,760.83	(98,414.84)	176,175.67	66,012.14	(110,163.53)	(208,578.36)
WATER SALES - MULTIPLES	38,659.58	127,466.37	88,806.79	38,659.58	134,402.07	95,742.49	184,549.27
WATER SALES - GOVERNMENT	9,356.58	7,781.96	(1,574.62)	9,356.58	6,348.33	(3,008.25)	(4,582.88)
PENALTIES	8,333.33	2,142.87	(6,190.46)	8,333.33	181.96	(8,151.37)	(14,341.84)
	609,555.17	538,306.95	(71,248.22)	609,555.17	557,014.74	(52,540.43)	(123,788.64)



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Marina Coast Water District
Staff Report

Agenda Item: 13-B Meeting Date: May 18, 2020

Prepared By: Michael Wegley Approved By: Keith Van Der Maaten

Agenda Title: Receive a Report on Current Capital Improvement Projects

Staff Recommendation: The Board of Directors is requested to receive a report on current capital improvement projects.

Background: *Strategic Plan Mission Statement 2.0 – Our objective is to provide a high-quality water distribution system and an efficiently operating wastewater collection system to serve existing and future customers*.

The FY 2019-2020 Budget approved by the Board of Directors includes improvements and expansion plans for existing water delivery and wastewater collection systems. The annual Capital Improvement Projects (CIP) are prioritized and listed based on the 5-year Capital Improvement Program which is also updated annually with the budget. The Board requested to receive a report on current CIPs.

Discussion/Analysis: The attached Capital Improvement Project Status Report lists the active projects with the project number, title, description, justification and status of progression through design and construction. Also attached for reference is a map of the 2019-2020 Capital Improvement Projects to assist with the report.

Project No.	Title	Description	Justification	Status
MW-0111	Beach Road Pipeline - Del Monte Blvd. to DeForest Rd.	New 12" parallel pvc pipeline in Beach Road from DeForest Road to Del Monte Ave.	Adresses Fire Flow Deficiencies in Central Marina	Combined with RW-0174 projects. See RW-0174 for status.
MW-0302	Crescent Ave Connector to Reservoir 2	New 12" pvc pipeline in Beach Road from Reservoir 2 to Crescent Ave.	Adresses Fire Flow Deficiencies in Central Marina	Combined with RW-0174 projects. See RW-0174 for status.
GW-0112	A1 & A2 Zone Tanks and B/C Booster Sta. - On CSUMB northwest of Inter-Garrison Rd and 6th Ave	Two 1.6 MG A-Zone storage tanks , B-Zone and C-Zone Booster Pump Station, and associated piping and facilities. Architectural treatments not to exceed 10% of tank cost.	This project will provide water storage for Zone A in the Ord Community and Central Marina. The B and C booster pumps will pump water from the A Zone tanks to Zones B and C tanks. The booster pump station replaces dilapidated facilities that have been in service long beyond their useful life.	60% plans submitted to CSUMB for review. Design schedule is: July 2020 for for 90% plans with architectural and environmental; Oct. 2020 bid opening; Construction 540 days.
GW-0305	California Avenue and Imjin Parkway Pipeline	Construction of approximately 2,550 feet of 24" diameter pipeline in Imjin Parkway and California Avenue from Abrams Drive to Marina-Heights Drive.	Reroutes A Zone transmission around the Sand Tank when the booster pumps are relocated to the new A Zone tanks.	Part of GW-0112 project; tracked as part of GW-0112.
OS-0152	Hatten, Neeson, Booker LS Improvements	Replacement or refurbishment of lift stations.	Smaller lift stations beyond their useful life and in need of repair.	Neeson lift station refurbished in-house with new pumps and motor control center. Booker wet and dry pits will be replaced with submersible pump station as part of Sea Haven Ph 3 infrastructure by Wathen-Castanos.
OS-0205	Imjin Lift Sta Improvements - Ph 1	First Phase is to construct new wetwell, electrical and controls. Reuse 2 existing pumps and install new 3rd pump. 2nd Phase is replace the force main.	The existing lift station is not operating efficiently and is undersized. The second phase will be needed to accommodate long-term growth.	Project awarded to GSE 3/16/20. Working on contracts to schedule preconstruction meeting and issue notice to proceed. 90 days for construction following approval of submitals, procurement of equipment and materials.
OS-0147	Ord Village LS & FM	Relocate lift station east of Hwy 1 and reconstruct force main in new alignment. Reuse 2016 replacement pumps.	Sanitary sewer overflows from force main. Relocating the lift station eliminates two highway crossings and restores environmentally sensitive State Parks land.	Seaside Easements Recorded. Working on Seaside Planning/ Building Approval, Army NHPA Permit and abandonment permits from CSP, Caltrans, TAMC (UPRR), CCC & Army.
OW-0193	Imjin Pkwy Water Main Pipeline - Reservation Rd to Abrams Dr	2,800 LF of 12-inch pipeline	Improves conncectivity within the B-zone between the Airport/UCMBest and Abrams/Preston Park area.	Combined with RW-0174 projects. See RW-0174 for status.
OW-0202	South Boundary Rd Pipeline	7,300 LF of 24-inch pipeline	Serves Del Rey Oaks and Monterey. Project sequenced to coincide with the FORA South Boundary Road project.	Working on water main sizing to serve DRO & Monterey. Whitson has Design Notice To Proceed

Project No.	Title	Description	Justification	Status
OW-0206	Inter-Garrison Road Pipeline Upsizing	Construct 1700-LF of 18-inch water main between East Garrison and Abrams Drive	For commercial Fire flow in East Garrison.	Board of Directors approved filing a Notice of Completion on 4/20/20.
RW-0174	RUWAP - Distribution Mains	5 miles of recycled water pipe, 5 PRV's, paving & Jack & Bore Intersection crossing	Implement Recycled Water as a water source to meet the needs of MCWD's customers & to augment the current groundwater supply source for FORA.	Bid opening 5/27/19. Contract time - 300 calendar days for substantial completion and 335 days to final completion.
RW-0306	Imjin Pkwy Recycled Water Main Pipeline - Reservation Rd to Abrams Dr	Construction of approximately 2,800 LF of 12-inch PVC recycled water pipeline	This project is sequenced to coincide with the City of Marina Project to widen Imjin Parkway.	Combined with RW-0174 projects. See RW-0174 for status.

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MW-0111 Beach Road Pipeline Del Monte Blvd to DeForest

MS-0143 Replace Lift Station No. 6 (Crescent)

OS-0152 Booker Lift Station

GW-0305 California and Imjin Parkway Pipeline

MW-0302 Crescent Ave Connector to Reservoir 2

OS-0152 Neeson Lift Station

OW-0193 Imjin Parkway Pipeline Resv. Rd to Abrams Dr.

RW-0306 RUWAP Imjin Parkway

OW-0206 Inter-Garrison Road Pipeline Upsizing

OS-0205 Imjin Lift Station Improvements- Phase 1

GW-0112 A1 & A2 Zone Tanks & B/C Booster Station

OW-0306 D Zone Booster Pump Replacement

OS-0147 Ord Village LS & Force Main Improvements

OS-0152 Hatten Lift Station

OW-0202 South Boundary Road Pipeline

Legend

RW-0174 Recycled Water Distribution

Existing Recycled Water Pipelines

Marina Coast Water District
11 Reservation Road
Marina, CA 93933

2019-2020 Capital Improvement Projects

Drawn By:

Jaron Hollida

Date:

02/27/2019

Return to Agenda

Marina Coast Water District
Staff Report

Agenda Item: 13-C Meeting Date: May 18, 2020

Prepared By: Kelly Cadiente Approved By: Keith Van Der Maaten

Agenda Title: 1st Quarter 2020 District Water Consumption Report

Summary: The Board of Directors is requested to receive the 1st Quarter 2020 District Water Consumption Report. The report is a ten-year comparative report that is provided to the Board on a quarterly basis. Quarterly water consumption reports of the Ord Community have been submitted to the Board since 2006 and are organized by land-use jurisdiction. Reports submitted since 2016 include the consumption information for Central Marina as well as an analysis of variances between current-year projected consumption and prior-year consumption. However, a variance report has not been submitted with this report due to nearly all jurisdictions quarterly consumption annualized amounts having a 10% or greater variance from 2019. In addition, two graphs of the data in the consumption report are included; 1) 10-Year Comparison of Annual Usage of Central Marina and the Ord Community; and 2) 10-Year Comparison of Annual Usage of the Ord Community by Jurisdiction.

Informational annotations for the data included in the report are as follows:

- The rainfall total for the 1st quarter of 2020 (January, February, March) in Marina was 5.59” inches. Because of light rain in January and no rain in February, the quarterly rainfall amount was only 65% of the historical average of 8.54” inches. The rain year (July-June) to date precipitation total is 7.56” inches, which is 57% of the historical average of 13.37” inches.

- Because of clear skies for much of January and February, the first quarter measured evapotranspiration rate in South Salinas was an elevated 7.82” inches. This measurement was 0.60” inches above the historic quarterly average reading of 7.22” inches.

Marina Coast Water District

10 Year Annual Consumption as of March 31, 2020

Note: Boundary = Jurisdiction

Criteria: Group = Boundary; Aggregate = Boundary,SubDiv; Compare = Reading_Year_AF; Account Status = *; Read Year = 2011..2020; Subdivision = *

Subdivision	2011 Consumption	2012 Consumption	2013 Consumption	2014 Consumption	2015 Consumption	2016 Consumption	2017 Consumption	2018 Consumption	2019 Consumption	As of 03/31/20 2020 Consumption	Water Allocation	3 months Water Allocation	% of Allocation Used
Boundary: Central Marina													
Central Marina	1,619.58	1,684.30	1,696.33	1,599.61	1,389.33	1,327.55	1,349.97	1,401.11	1,315.57	284.31			
East Ridge	10.34	10.67	11.03	10.15	8.16	7.92	8.04	8.18	9.30	1.73			
MarinaConstruction	-	-	-	-	-	-	-	-	3.33	0.01			
MB Estates II	13.00	13.67	14.48	12.27	9.74	9.40	9.61	10.66	9.10	1.66			
MB Estates III	3.99	5.29	4.47	3.86	3.17	2.73	2.95	3.46	4.00	0.88			
Sea Breeze	9.76	10.65	11.24	10.27	9.02	8.81	8.80	8.91	7.92	1.56			
Total Central Marina	**1,656.67**	**1,724.57**	**1,737.56**	**1,636.16**	**1,419.42**	**1,356.41**	**1,379.37**	**1,432.31**	**1,349.22**	**290.15**			
Boundary: FOArmy													
Army (unmetered)	410.00	377.00	377.00	200.75	205.80	224.64	190.94	52.17	10.52	0.14			
Army	35.91	24.80	27.53	22.84	19.39	25.05	24.51	26.59	27.30	5.40			
ArmyConstruction	0.13	-	-	-	-	-	-	-	-	-			
Fitch Park	78.02	70.23	80.05	66.31	60.20	56.97	97.06	101.43	103.71	18.20			
Hayes Park	78.31	74.79	77.32	71.18	53.40	46.78	53.24	59.12	53.65	6.24			
Marshall Park	-	-	-	-	-	-	5.66	56.31	59.42	13.48			
Ord Kidney	83.39	95.54	104.17	80.47	71.44	70.02	70.14	83.27	108.33	15.85			
Stilwell Park	0.82	26.65	44.01	28.44	33.74	23.91	21.47	32.21	50.33	10.74			
Total FOArmy	686.58	669.01	710.07	470.00	443.97	447.37	463.02	411.08	413.28	70.05	1,577.00	394.25	17.77%
Boundary: FOCounty													
County	5.93	5.35	9.75	3.00	3.17	5.40	8.78	4.91	7.24	0.22			
CountyConstruction	4.33	1.71	0.57	-	-	0.68	-	0.86	-	-			
EastGarrison	1.13	2.80	5.56	35.21	71.62	65.92	136.90	175.55	202.19	35.01			
Total FOCounty	11.38	9.85	15.89	38.21	74.79	72.00	145.68	181.32	209.43	35.23	710.00	177.50	19.85%
Boundary: FOCSUMB													
CSUMB	150.28	156.05	176.63	152.68	104.04	97.61	128.61	130.90	113.71	18.02			
Frederick Park	109.95	93.13	93.21	63.02	65.91	67.34	63.52	56.50	42.83	9.49			
Schoonover I	140.73	127.43	123.49	105.32	102.44	97.96	98.39	103.86	99.17	19.76			
Schoonover II	33.73	28.88	32.10	23.92	20.69	20.15	23.84	26.73	21.77	4.64			
Total FOCSUMB	434.68	405.50	425.43	344.95	293.08	283.06	314.36	317.98	277.48	51.91	1,035.00	258.75	20.06%

Marina Coast Water District

10 Year Annual Consumption as of March 31, 2020

Note: Boundary = Jurisdiction

Criteria: Group = Boundary; Aggregate = Boundary,SubDiv; Compare = Reading_Year_AF; Account Status = *; Read Year = 2011..2020; Subdivision = *

Subdivision	2011 Consumption	2012 Consumption	2013 Consumption	2014 Consumption	2015 Consumption	2016 Consumption	2017 Consumption	2018 Consumption	2019 Consumption	As of 03/31/20 2020 Consumption	Water Allocation	3 months Water Allocation	% of Allocation Used
Boundary: FOMarina													
Abrams HAuthor	13.49	10.31	12.14	8.98	8.39	9.43	10.77	12.02	5.90	1.21			
Abrams Interim	5.33	5.12	5.42	4.92	3.89	3.75	4.12	4.56	3.43	1.48			
Abrams Park	51.56	62.12	56.35	56.92	44.20	39.54	50.92	54.50	52.45	8.40			
Dunes CHOMP	11.04	8.19	7.14	9.12	8.58	6.77	5.41	6.88	6.42	1.22			
Dunes Comm	14.28	15.12	16.81	14.28	12.71	14.06	30.12	32.89	30.66	6.58			
Dunes on MB Res	-	-	-	0.10	4.69	24.69	45.20	64.16	64.39	16.87			
Dunes UV Apts	23.69	10.76	9.13	28.85	33.97	20.23	23.56	23.86	23.85	4.86			
Dunes UVSpecPlan	3.07	3.44	5.06	3.52	1.98	2.45	3.24	2.25	1.34	0.30			
Dunes VA DOD	-	-	-	-	-	0.09	5.42	2.08	2.61	0.41			
Imjin Office Park	1.81	2.30	1.28	1.60	2.03	4.89	4.61	2.47	7.93	1.57			
Marina	10.60	11.78	17.81	13.80	16.99	31.61	31.54	36.65	36.42	8.45			
MarinaAirport	6.90	5.26	4.08	2.75	2.30	2.03	2.77	7.50	3.45	0.76			
MarinaConstruction	7.26	8.56	16.55	35.13	25.33	39.64	42.83	25.28	35.63	11.11			
MarinaRecreation	-	-	-	-	-	-	0.05	-	-	-			
Preston Park	95.49	103.14	101.17	83.30	51.93	51.63	56.31	61.31	55.97	13.00			
Preston Shelter	7.70	6.39	6.63	5.85	5.43	6.63	5.83	5.92	5.06	0.90			
School	3.88	3.23	4.26	3.34	4.54	1.93	1.95	2.27	2.72	0.26			
SeaHaven	9.41	8.97	13.61	7.49	7.34	10.02	23.37	37.67	61.92	10.68			
Total FOMarina	265.52	264.68	277.44	279.97	234.28	269.40	348.02	382.28	400.15	88.05	1,325.00	331.25	26.58%
Boundary: FOSeaside													
Bay View	65.41	85.15	91.10	79.48	44.24	46.43	57.97	51.60	46.94	11.39			
GolfCourse	429.66	265.42	457.47	524.88	139.06	1.18	1.11	1.16	0.19	0.06			
Marina Coast Water District	-	-	-	-	-	-	-	-	0.04	0.00			
School	77.97	79.34	102.72	39.80	50.02	48.91	30.95	43.57	44.06	5.32			
Seaside	4.69	13.38	5.65	4.17	3.91	7.08	5.97	8.06	2.24	0.47			
Seaside Resort	0.13	0.31	0.45	0.63	0.51	0.89	0.98	1.23	1.21	0.31			
Seaside Soper	11.15	6.86	11.38	12.70	9.58	9.30	8.50	9.12	8.13	0.83			
SeasideConstruction	24.23	13.38	10.00	11.39	18.86	14.39	13.41	13.65	8.64	1.53			
SeasideHighland	154.51	146.57	158.76	134.27	123.69	109.28	114.89	126.20	116.47	23.87			
Sun Bay	69.17	66.54	64.40	44.95	48.70	57.89	58.66	54.20	59.13	13.81			
Total FOSeaside	836.93	676.95	901.94	852.27	438.57	295.35	292.44	308.78	287.04	57.59	1,012.50	253.13	5.46%

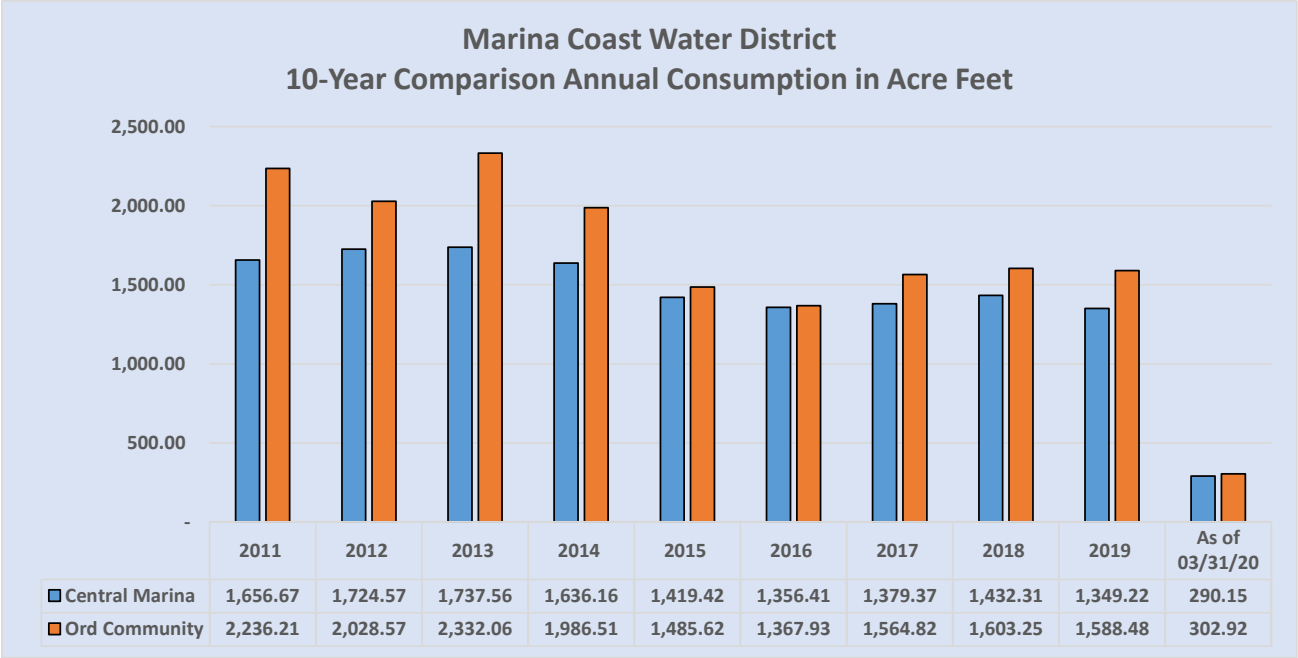
Marina Coast Water District

10 Year Annual Consumption as of March 31, 2020

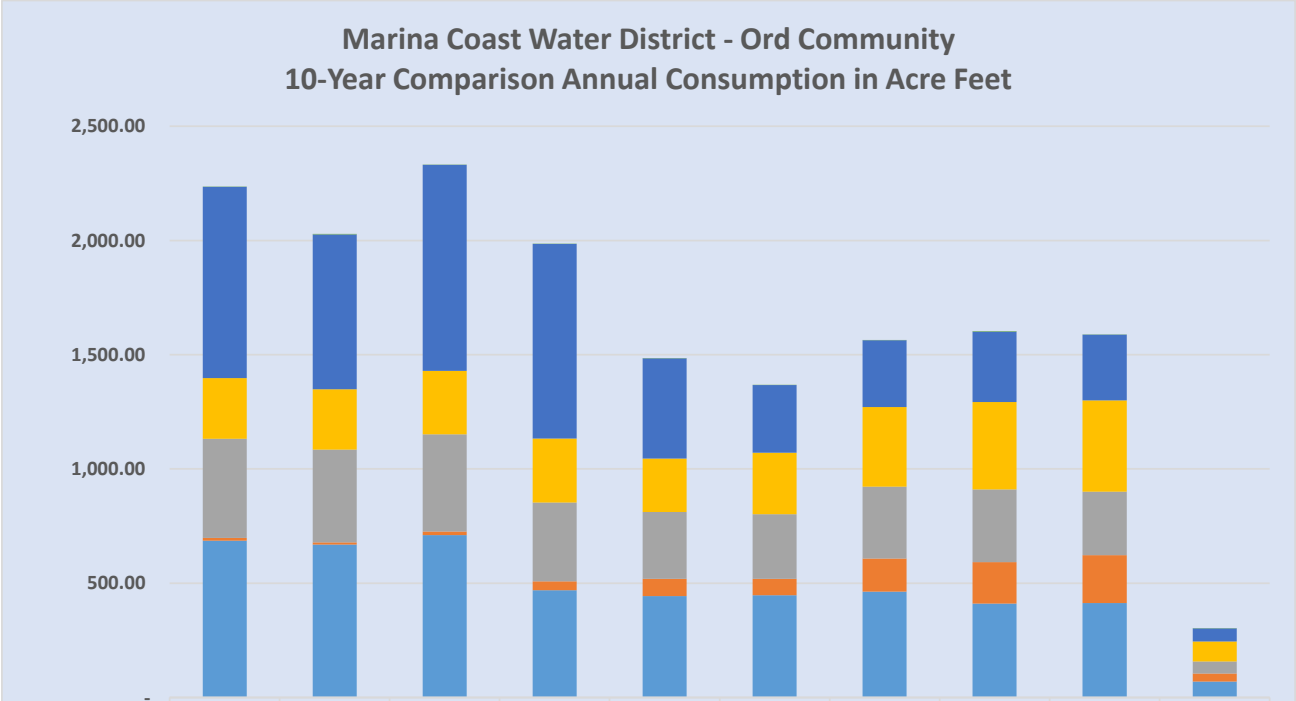
Note: Boundary = Jurisdiction

Criteria: Group = Boundary; Aggregate = Boundary,SubDiv; Compare = Reading_Year_AF; Account Status = *; Read Year = 2011..2020; Subdivision = *

Subdivision	2011 Consumption	2012 Consumption	2013 Consumption	2014 Consumption	2015 Consumption	2016 Consumption	2017 Consumption	2018 Consumption	2019 Consumption	As of 03/31/20 2020 Consumption	Water Allocation	3 months Water Allocation	% of Allocation Used
Boundary: FOUCMBES													
UCMBest	1.12	2.57	1.29	1.11	0.94	0.75	1.30	1.80	1.10	0.08			
Total FOUCMBES	1.12	2.57	1.29	1.11	0.94	0.75	1.30	1.80	1.10	0.08	230.00	57.50	0.14%
Total Ord Community	**2,236.21**	**2,028.57**	**2,332.06**	**1,986.51**	**1,485.62**	**1,367.93**	**1,564.82**	**1,603.25**	**1,588.48**	**302.92**	**5,889.50**	**1,472.38**	**0.01%**
Grand Total	**3,892.88**	**3,753.14**	**4,069.62**	**3,622.66**	**2,905.03**	**2,724.34**	**2,944.18**	**3,035.56**	**2,937.71**	**593.07**			



	2011	2012	2013	2014	2015	2016	2017	2018	2019	As of 03/31/20
Central Marina	1,656.67	1,724.57	1,737.56	1,636.16	1,419.42	1,356.41	1,379.37	1,432.31	1,349.22	290.15
Ord Community	2,236.21	2,028.57	2,332.06	1,986.51	1,485.62	1,367.93	1,564.82	1,603.25	1,588.48	302.92



	2011	2012	2013	2014	2015	2016	2017	2018	2019	As of 03/31/20
FOUCMBES	1.12	2.57	1.29	1.11	0.94	0.75	1.30	1.80	1.10	0.08
FOSeaside	836.93	676.95	901.94	852.27	438.57	295.35	292.44	308.78	287.04	57.59
FOMarina	265.52	264.68	277.44	279.97	234.28	269.40	348.02	382.28	400.15	88.05
FOCSUMB	434.68	405.50	425.43	344.95	293.08	283.06	314.36	317.98	277.48	51.91
FOCounty	11.38	9.85	15.89	38.21	74.79	72.00	145.68	181.32	209.43	35.23
FOArmy	686.58	669.01	710.07	470.00	443.97	447.37	463.02	411.08	413.28	70.05

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Marina Coast Water District
Staff Report

Agenda Item: 13-D Meeting Date: May 18, 2020

Prepared By: Kelly Cadiente Approved By: Keith Van Der Maaten

Agenda Title: 2020 Sewer Flow Report for Quarter ended March 31, 2020

Summary: The Board is requested to receive the 2020 Sewer Flow Report for the 1st quarter of 2020 ended March 31, 2020. This staff report includes tracking information on sewer flows through the Monterey One Water Agency's (M1W) Fort Ord and Marina pump stations.

M1W provides flow data for the Marina Pump Station monthly through an automated report. Central Marina sanitary sewer flows for the quarter ended March 31, 2020 were 96.390-million-gallons or 295.810 Acre Feet (AF) which yielded an average daily sewer flow of 1.071-million-gallons-per-day (MGD) or 3.287 AF per day.

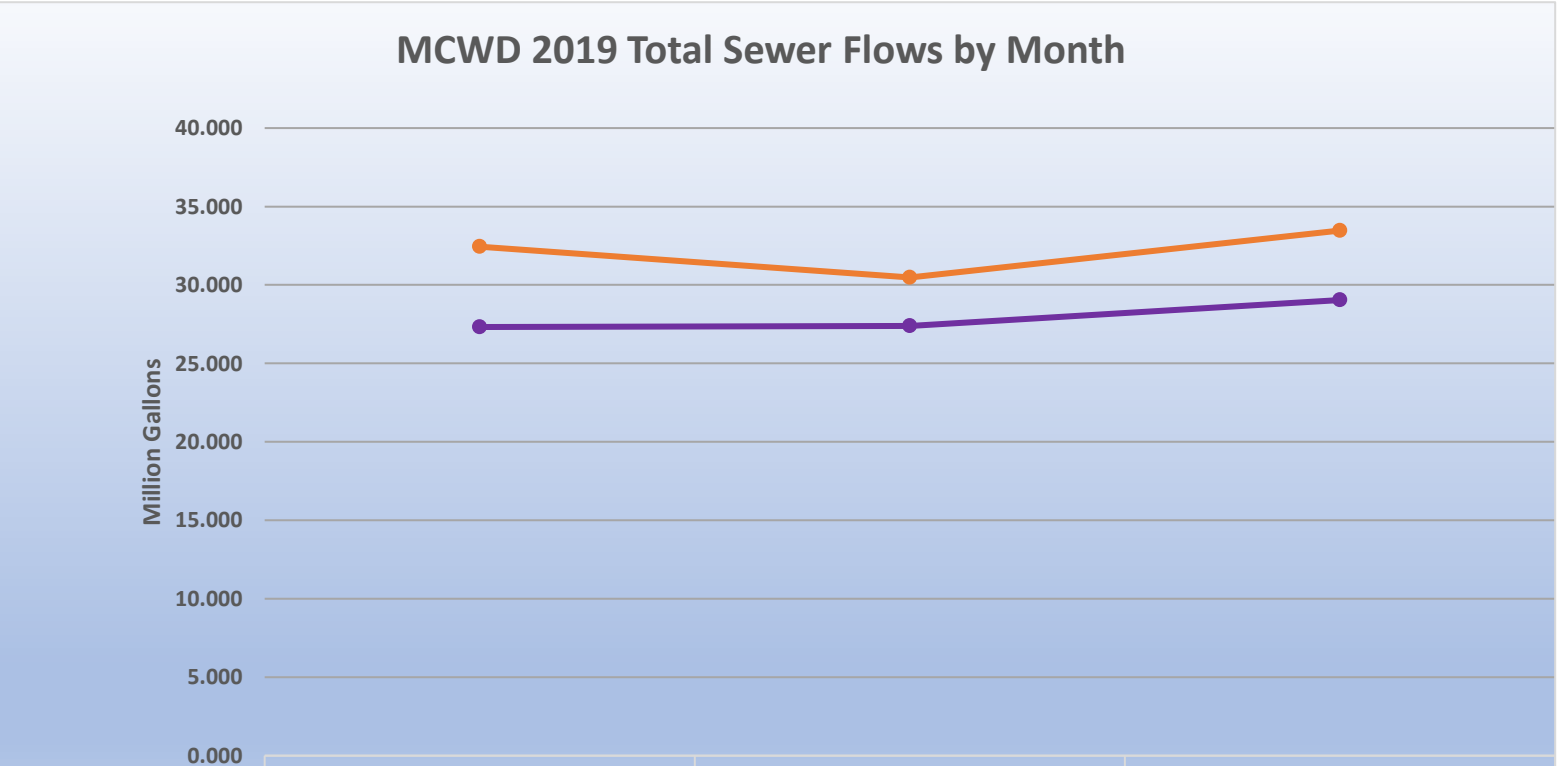
The Ord Community's sanitary sewer flow to the M1W interceptor system is measured by a District flume structure located adjacent to the retired Main Garrison wastewater treatment plant. M1W also provides the flow data for the District flume through an automated report. The Ord Community sanitary sewer flows for the quarter ended March 31, 2020 was 83.740-million-gallons or 256.989 AF, which yielded an average daily sewer flow of 0.930 MGD or 2.854 AF per day.

This staff report also includes charts for January – March 2020 average daily flows and the total flows by month.

MCWD 2019 Average Daily Sewer Flows by Month

	JAN	FEB	MAR
ORD COMMUNITY	0.881	0.944	0.937
CENTRAL MARINA	1.046	1.051	1.080

MCWD 2019 Total Sewer Flows by Month



	JAN	FEB	MAR
ORD COMMUNITY	27.320	27.380	29.040
CENTRAL MARINA	32.440	30.480	33.470